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Emerging Markets

Hong Kong

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Emerging Economic Perspectives

The Emerging Crisis Handbook

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This is the installment #3 of our Emerging Market Perspectives series

- *How did we get here?*
- *How bad is the situation today?*
- *Can emerging markets survive a G3 downturn?*
- *Can they survive a "sudden stop" in financial flows?*
- *Can China save emerging growth?*
- *Is this inflationary or deflationary?*
- *Is it the end of emerging surpluses?*

Introduction and summary

EM fundamentals were sound coming into the current turmoil …

Emerging economic fundamentals were relatively sound coming into the current turmoil – with the broad exception of Eastern Europe. On the whole, EM countries had very strong and even excessively high growth, but also historically low external debt, an unprecedented net creditor position against the developed world, balanced trade positions, relatively few deficits … and surprisingly low gearing.

… with the exception of Eastern Europe

The main exception is Eastern Europe, where the underlying macro position was much weaker: rapid domestic leverage growth, large current account deficits and high dependence on external financing in many economies in the region. And needless to say, this is where we saw the highest risks as the global crisis unfolded.

On the other hand, we had excessive positioning across financial markets

On the financial market side, however, we saw excessive positioning in every asset class. The situation in financial markets was very different, with one-directional and excessive gains in nearly every asset class over the past few years, including commodities. This pointed to stronger market risks to come, although even here one surprise is the asset market action actually showed up as net capital inflows into EM countries.

Then came four big shocks

Then came four big shocks. Since the middle of last year the emerging world has been hit by three successive shocks: (i) the initial pull-out from risky assets, (ii) the commodity market capitulation, and finally (iii) the very recent round of "manic deleveraging" with global investors exiting all EM markets and asset classes. By contrast, the fourth (i.e., the real G3 slowdown) has yet to show up in full force in emerging export data; in our view this shock will hit with greater urgency at the end of the year and going into 2009.

Where we are today: the Great Divergence

Where we are today: the Great Divergence. For the time being, following the "sudden stop" of the past few weeks, there is a gaping difference between what's priced into global equity and bond markets and what is happening in domestic financial markets. So far the actual damage to growth and credit availability has been relatively moderate, limited to higher-risk cases in Eastern Europe and elsewhere.

The longer this goes on the worse it will get

But the longer this goes on the worse it will get. Our main concern for EM is not the coming G3 growth slowdown, but rather the risk of continued global panic, deleveraging and liquidity shortages. There is a large "middle group" of countries who are not collapsing today and should do well if investment risk appetite and access to global finance return – but will face sharply increasing risks if the recent absolute shortage environment persists.

Do we need the IMF?

Do we need the IMF? In our baseline scenario it's not clear that emerging markets would need significant financial support from the IMF and official other agencies. But in the alternative case there is clearly a stronger need for a global "lender of last resort".

Watch China and Russia

Watch China, and Russia. The return of Chinese construction and commodity demand is one of our key themes for 2009, and this could have significant positive implications for market sentiment. On the other hand, we have been

surprised by the sudden and potentially severe domestic banking system fragilities in Russia – and the economy bears watching as a potential downside factor as well.

Near-term deflationary, long-term inflationary

Is this inflationary or deflationary? We look for a considerable drop in headline EM inflation in the near term, due both to slower growth and commodity price retrenchment – but still expect a more inflationary medium-term environment.

Is this the end of EM surpluses

Is this the end of EM surpluses? Not necessarily. A sharp slowdown in emerging markets is usually associated with a *rising* trade balance as import demand falls. And, we might add, it's not clear whether global investors should hope for EM surpluses to stay … or go.

Part 1 – The structural backdrop

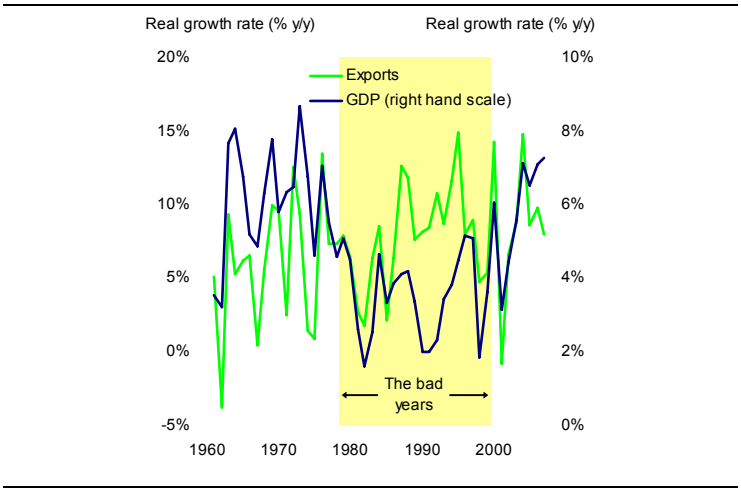
- *On the whole, EM economic balance sheets looked very good coming into the current turmoil: very high growth, yes, but also low debts, balanced trade, few deficits and surprisingly low gearing.*
- *The main exception is Eastern Europe, where the underlying fundamentals are much weaker; not surprisingly, this is where most of the crisis risks lie.*

Good and bad years

Look at the growth path since 1960

Perhaps the best place to begin this report is Chart 1, which highlights the growth history of the emerging world since 1960 as well as the relationship between growth and developed country import demand.

Chart 1: The structural story



Source: IMF, World Bank, Haver, UBS estimates

Three long-cycle phases in the past 50 years

The blue bars in the chart show the growth rate of overall EM real GDP, measured by the right hand scale.[1] As you can see, emerging markets have essentially gone through three "long-cycle" phases over the past 50 years.

The "good years" from 1960-80

The first, which lasted from the early 1960s through 1980, was a period of rapid development and high growth, with average GDP increasing by 6% y/y or more in real terms.

The "bad years" from 1980-2000

The next phase ran from roughly 1980 through the end of the 1990s, and can be labeled the "bad years". The emerging world careened from one crisis to the next; aggregate real growth never exceeded 5% y/y during the entire 20-year

[1] Specifically, the line shows EM growth weighted by constant-price GDP for the year in question, converted using 2005 real exchange rates. Please see *Do Emerging Markets Now Run the World?* (*EM Perspectives, 24 July 2008*) for further details on EM growth calculations.

period, and often fell to 2% or below, for a paltry average of only 3% y/y over the cycle.

And now back to the good years

Finally, in the seven years since the 2001 global IT downturn EM growth has rebounded significantly back to near-record highs of 6% to 7% y/y. Until now, at least, the emerging world has clearly been back in a "good" growth track.

How important is the rest of the world?

How important are exports and global demand?

Now for a crucial question: What role has the rest of the world played in emerging market growth? And in particular, how important are developed country trade and import demand in driving EM momentum?

In the short term, very important

In a very short-term sense, the answer is "very important". The green line in Chart 1 above shows the annual growth rate of emerging market exports in real terms, also back to 1960, and as you can see there is a close correlation in year-on-year growth volatility between the two indicators. A 5pp drop in real export growth momentum generally leads to an immediate decline of nearly 1pp in GDP growth.

But in a structural sense, much less so

Looking at longer structural cycles, however, our answer is "hardly important at all". In the "good years" from 1960-80, average EM export growth was around 6% y/y in real terms and average real GDP growth was 6% as well. However, over the next 20 years export growth actually *increased* substantially, to nearly 10% y/y on average, and in fact 1985-95 saw the longest emerging export boom on record … while EM real growth collapsed to below 3% during the same period.

And despite the fact that export performance has been no different in the current decade than, say, the previous one, real emerging growth again soared back to 7% y/y.

The crucial role of domestic fundamentals

What accounts for the shift from "good" to "bad" and back again?

What, then, accounted for the big 20-year structural shifts between the favorable growth years in 1960-80, the "bad years" from 1980-2000, and then back to the present day?

The answer is domestic EM fundamentals

As it turns out, the answer is not the external environment, but rather domestic fundamentals in the emerging world itself. The 1980s and 1990s were a succession of EM crises and collapses brought on by debts, deficits, domestic overleverage and external imbalances (and, of course, the historic fall of the Soviet Union). And as we laid out in *Do Emerging Markets Now Run the World?* (*EM Perspectives, 24 July 2008*), the best explanation for the return to record-high growth in the current decade is post-crisis recovery across most emerging regions, supported by favorable external positions and cleaner national balance sheets.

High fiscal deficits played a key role in EM crisis cycles

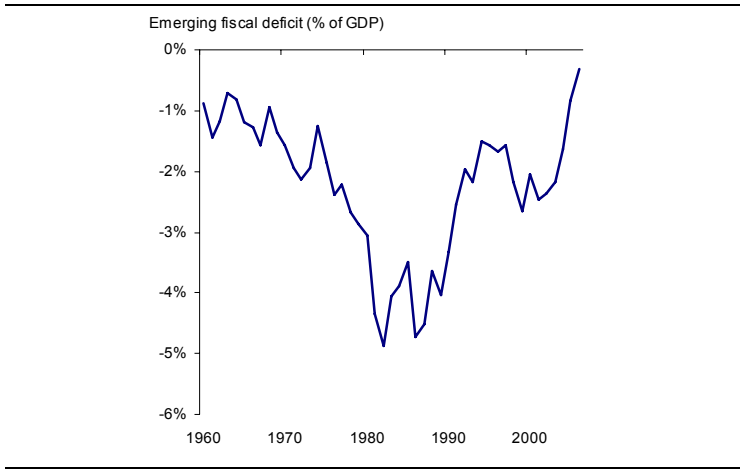
Let's explain what we mean with a review of emerging balance sheets from the earlier Perspectives report. Chart 2 shows the average general government budget position for emerging economies, and you can see the sharp deterioration between 1970 and the early 1980s, when fiscal deficits blew out from around

2% of GDP to nearly 5% of GDP; this was true for nearly every EM region and sub-region as well, initiating the first round of emerging debt crises in the 1980s.

But the EM world is back to a balanced budget today

By the 1990s, however, most emerging countries were forced to pull back on budgetary spending and consolidate revenues, which led to an equally dramatic fall in deficits – and over the past seven years the emerging world has essentially moved to a balanced budget, with fiscal balance only slightly below zero as of 2007, the single best year on record.

Chart 2: Fiscal deficits

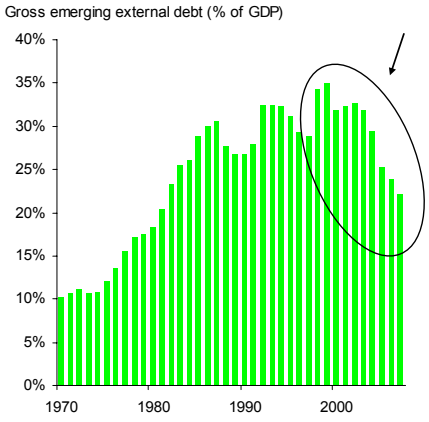


Source: World Bank, Haver, UBS estimates

The same is true for external debt

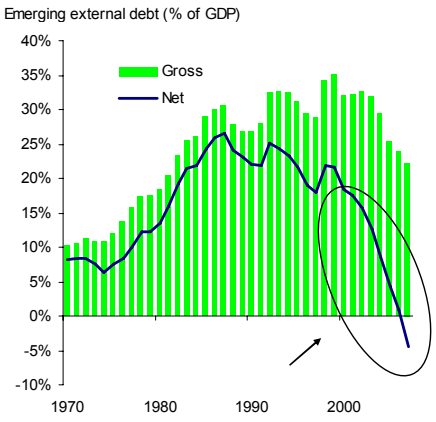
The same trend is very evident in Charts 3 and 4 showing gross and net external debt positions in emerging economies. The green bars in the two charts are gross external liabilities, including both public and private (and short- and long-term) debt positions, while the line in Chart 4 shows gross external debt less official foreign exchange reserves.

Chart 3: Gross external debt



Source: World Bank, Haver, UBS estimates

Chart 4: Net external debt



Source: World Bank, Haver, UBS estimates

Debts were high in the 1980s and 1990s – but the EM world is a creditor today

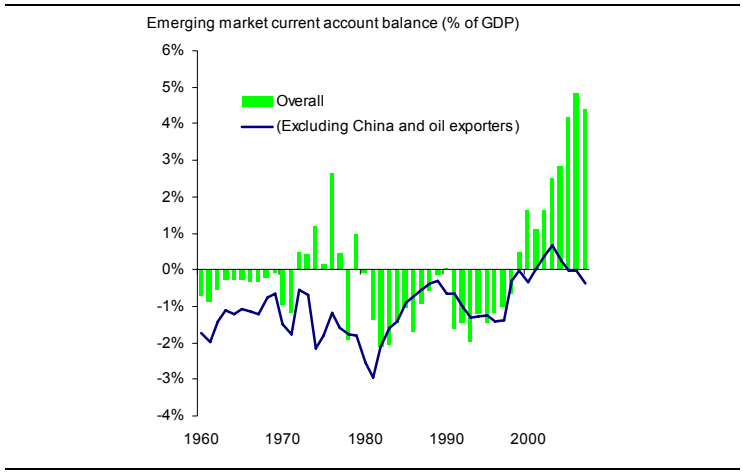
You can see the dramatic increase in external indebtedness from 1975 through 1990 – but despite investor concerns about open foreign positions today, these have clearly dropped significantly over the past decade. Moreover, once we include official FX reserves it turns out that the emerging world as a whole is a net *creditor* vis-à-vis developed countries. And keep in mind that Chart 4 does

not even take account of *net private* asset positions; it only includes gross public and private liabilities less official FX assets. If we had sufficient data on the latter, the resulting overall net creditor position would be much higher still.

This is due to the sharp turnaround from external deficit to surplus

This trend, in turn, makes perfect sense when we look at the change in current account balances over the past few decades (Chart 5). When measured in the aggregate, emerging markets ran a relatively balanced external trade and current account position in the 1960s and 1970s, and then saw a sharp move into deficits in the 1980s and 1990s (which was of course associated with the significant worsening of fiscal positions and rising external debts).

Chart 5: Current account balance

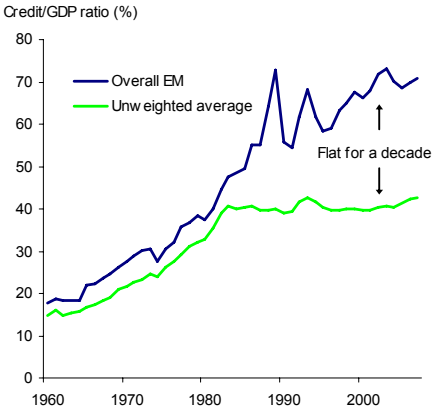


Source: IMF, Haver, UBS estimates

This is true even excluding China and oil exporters

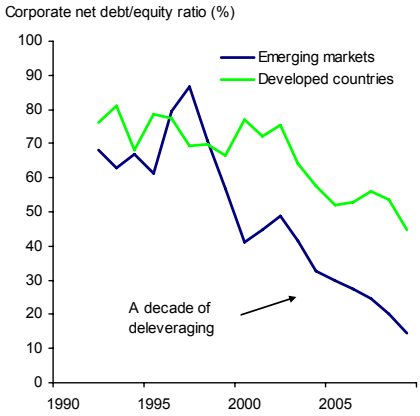
Since the beginning of the current decade, by contrast, the EM world has run by far the largest net surplus position on record. Much of this is due to China and emerging oil exporters – but even when we strip these two groups out of the data, the remaining emerging countries have also posted record-high surpluses since 2000.

Chart 6: Credit/GDP ratio



Source: World Bank, Haver, UBS estimates

Chart 7: Corporate gearing



Source: UBS Equity strategy

Credit and leverage ratios grew sharply from 1965-90

The same positive finding is true when we look at domestic credit and leverage conditions. The earlier period from roughly 1965 through the late 1980s was one of uninterrupted debt creation in emerging markets … and debt creation of truly

massive proportions, as the banking system credit/GDP ratio went from around 15% to more than 70% for the EM world *as a whole* in the space of just over 20 years (Chart 6 above).

But have been essentially flat since then

Since then, however, the EM credit/GDP ratio has been essentially flat. As of end-2007 the aggregate ratio was still lower than the late 1980s peak, and only slightly higher than it was at the beginning of the decade. And this trend is even more visible if we use the unweighted country average (the green line in the chart).

In fact, EM companies have been deleveraging on a bottom-up basis

Indeed, when we look at bottom-up corporate data we find that the last 10 years have been one of the greatest *deleveraging* periods in emerging history. Chart 7 comes from our UBS EM equity strategy team, and shows average net debt/equity ratios for listed companies under coverage in emerging markets and the developed world. Of course the trend rise in profit/GDP ratios has led to a gradual decline in corporate gearing in developed countries – but the drop in overall gearing in emerging markets has been simply stunning (which jibes exactly with our findings from the earlier Perspectives reports above, i.e., that much of the emerging world was in post-crisis deleveraging mode in the late 1990s and the first half of the current decade).

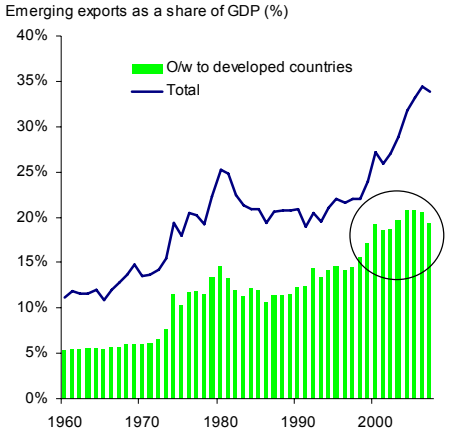
I.e., corporate balance sheets look surprisingly solid

The EM strategy team recently examining bottom-up corporate debt, leverage and cash-flow exposures from a number of angles in emerging markets, and concludes that both banks and non-financial companies have surprisingly solid balance sheets (see *Emerging Markets Should Be Resilient To Tighter Credit, UBS EM Equity Strategy, 2 October 2008*).

Headline export ratios have risen sharply

Finally, we need to address the question of rising export exposures. Looking you look at the blue line in Chart 8 showing the overall export/GDP ratio for the emerging world, it's easy to see why this issue comes up: total headline ratios have grown considerably over the past decade, from only 20% of GDP in the mid-1990s to around 35% today, which seems to point to a dramatic rise in emerging dependency on global market demand.

Chart 8: Export exposure



Source: IMF, Haver, UBS estimates

But final export value added has not

But then consider the path of the green bars in the chart, which shows the value of final shipments to developed countries as a share of emerging GDP. This ratio

has also been rising on trend, but has barely budged over the past ten years, i.e., the level of developed country exposure today is more or less what it was at the end of the 1990s.

This is explained by the rise of processing trade

And as we discussed in the earlier Perspectives report, this is the indicator that really matters. With the rise of China and other low-cost export processing centers in the global economy, the EM world has seen a strong increase in throughput trade that pushes up the headline import and export volume figures – but in a manner that is to a large extent fictitious. The more relevant measure is the value of final spending on emerging goods and services, and from the chart above this has been a much less impressive rise.

The odd region out

There is one region where the above trends don't apply – Eastern Europe

The above conclusions might be true for the emerging world as a whole – but they do not necessarily hold for every country and region within our EM coverage. And in fact, there is one part of the world that stands out glaringly from the rest in terms of both domestic and external economic imbalances: Central and Eastern Europe.

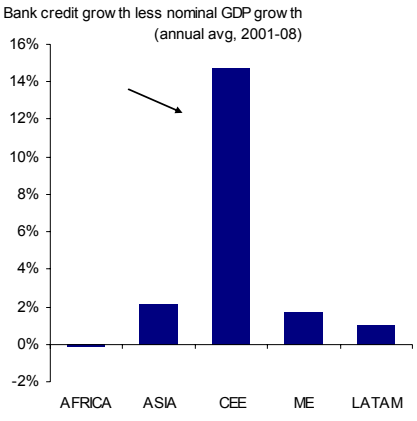
Most emerging regions have not seen excessive credit growth

It only takes a couple of very simple charts to highlight the dramatic differences between the emerging European countries (including the former Soviet Union) and the remaining emerging markets. Start with domestic credit and leverage trends in Chart 9; the chart shows the average annual pace of bank lending growth since 2001 less the average pace of nominal GDP growth, i.e., a rudimentary measure of "excess" credit creation.

But in Eastern Europe credit outpaced GDP dramatically

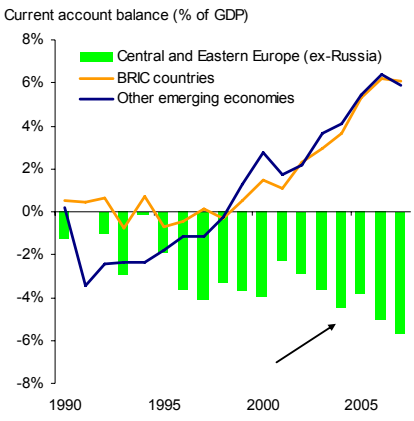
As it turns out, for Africa, Asia, Latin America and even the Middle East there has been very little sign of excessive leverage build-up … while in emerging Europe and the former Soviet Union countries overall credit growth has outpaced nominal GDP growth by a stunning 15 percentage points per year.

Chart 9: Excess credit growth by region



Source: Haver, CEIC, UBS estimates

Chart 10: Current account balance by region



Source: IMF, World Bank, Haver, UBS estimates

Eastern Europe ex-Russia is the only sizeable deficit region in EM

Now turn to the behavior of the external current account. The orange line in Chart 10 shows the current account balance as a share of GDP in the four BRIC economies (Brazil, Russia, India, China); the blue line shows the balance for other EM countries in Africa, Asia, Latin America and the Middle East. Finally,

the green bars highlight the trend in the remaining Central and Eastern European markets.

With a corresponding dependence on foreign capital flows

Notice any difference? Once again Central and Eastern Europe stand out dramatically from the rest of the EM world, with large and rising current account deficit positions and a corresponding increase in dependence on foreign capital flows throughout the past 10 years.

Systemic risk indices

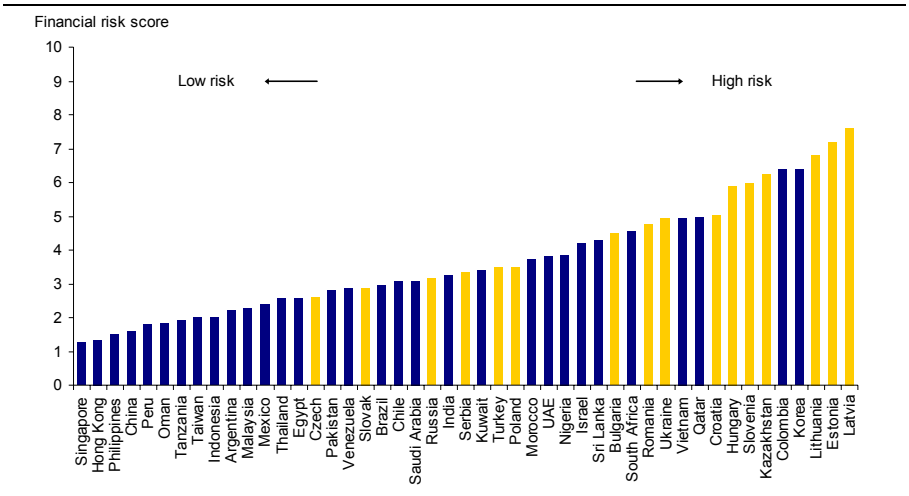
We looked at EM fragilities in a more systematic way as well

Of course the above charts show very simplistic measures; in order to look at emerging market imbalances and fragilities in a more systematic manner, we created a series of EM risk indices that encompass a wider range of indicators for 45 emerging countries (please see *A More Systemic Look at EM fragilities, EM Focus, 9 October 2008* for complete details).[2] As we discuss below, these are certainly not the "last word" in emerging market risk, but they do represent the best top-down view we have using available comparative data for a large number of markets.

The financial risk index measures domestic leverage and debt

The first is our financial risk index, comprising four detailed measures: (i) the banking system loan/deposit ratio, (ii) the increase in the loan/deposit ratio over the past five years, (iii) the increase in the credit/GDP ratio over the past five years, and (iv) gross public debt as a share of GDP. This is a relative rather than absolute index, i.e., a score of zero represents the lowest possible score among the observed range in EM countries for each measure, while a score of 10 represents the highest observed level.

Chart 11: Financial risk index



Source: CEIC, Haver, World Bank, IMF, UBS estimates

[2] The indices shown here are slightly different from those published in the earlier Focus report; we have corrected a few data errors, and where possible we have also adjusted for gross fiscal asset positions where possible, such as in Singapore and selected Middle East countries.

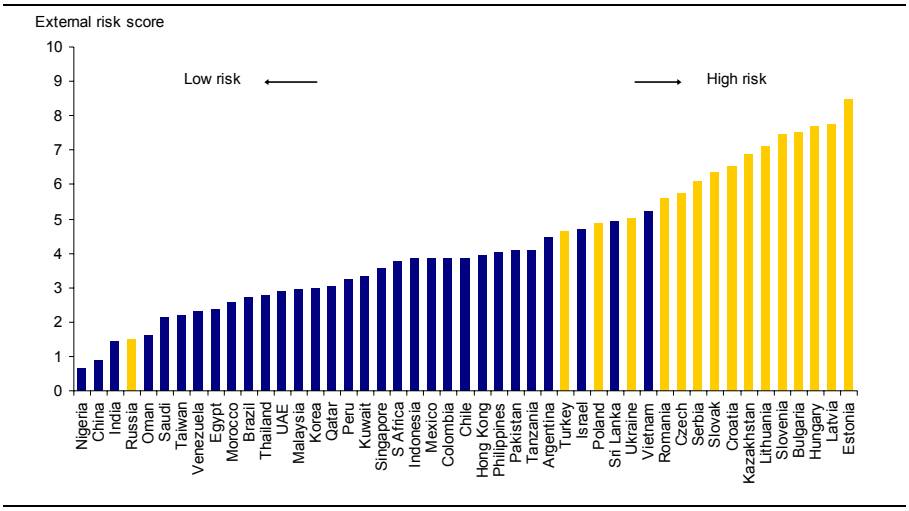
As you can see from Chart 11, Central and Eastern European countries (highlighted in orange) generally scored at the higher risk end of the scale, including 10 of the top 15 high-risk countries (Korea and Colombia were the only non-European countries to make it into the top ten).

Eastern Europe scores very high on the scale

Next up is the external risk index, comprising (i) the export/GDP ratio, (ii) the current account balance as a share of GDP (iii) gross (public and private) external debt as a share of GDP, (iv) official FX reserve cover relative to gross external debt. Here the picture is overwhelming: nearly all of the top 20 high-risk countries were from emerging Europe, including all of the top ten (Chart 12).

The external risk index measures export and external finance exposure

Chart 12: External risk index

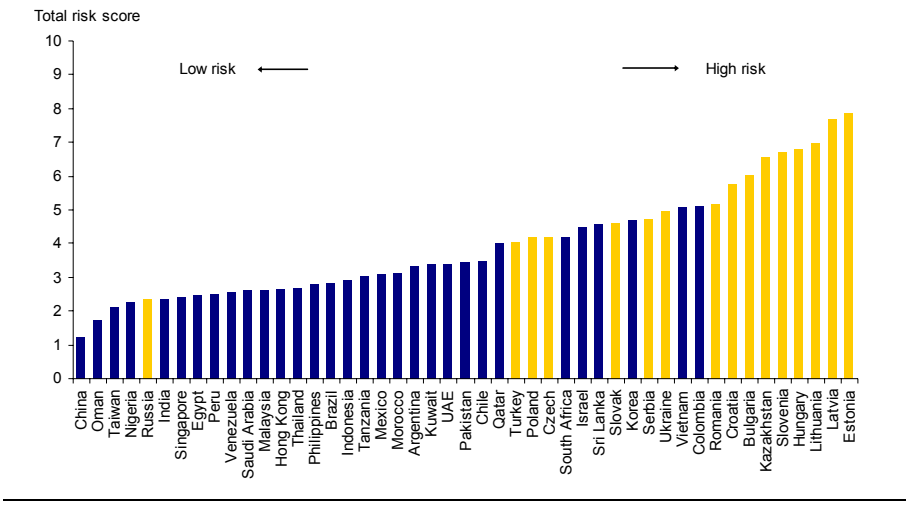


Source: CEIC, Haver, World Bank, IMF, UBS estimates

Finally, we compiled both indices into an equal-weighted "total risk index" – again highlighting the general fragility of emerging European economies, together with selected other emerging markets such as Colombia, Vietnam, Korea, and to a lesser extent Sri Lanka, Israel and South Africa (Chart 13).

The "total risk index" is an average of the two

Chart 13: Total risk index



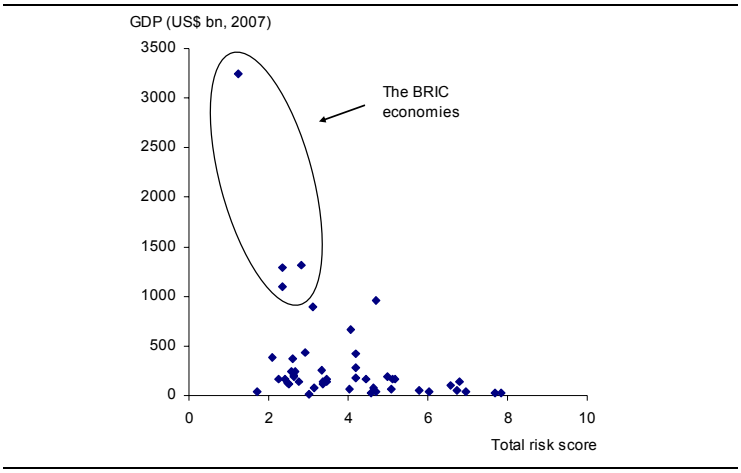
Source: CEIC, Haver, World Bank, IMF, UBS estimates

The larger the better

The largest EM "BRIC" countries are all at the low end of the risk scale

Another important point to note is that all the BRIC countries (i.e., Brazil, Russia, India and China, the four largest emerging economies) are near the lowest end of the risk spectrum, as are other larger EM countries such as Nigeria, Egypt, Indonesia and Mexico. In fact, looking at a scatter plot of scores against GDP, only one large emerging market received a risk score above the average, and that is Korea (Chart 14).

Chart 14: The larger the better



Source: CEIC, Haver, World Bank, IMF, UBS estimates

Summing up

Again, it's not global downturns per se that get EM into trouble ….

In summary, we would stress again three key points. First, historically it isn't global downturns or falling exports that get emerging markets into "serious" trouble; rather, it's the underlying fragilities at home. Second, when we look at the state of domestic and external balance sheets across the EM world, we find them in surprising health, particularly in the larger emerging markets. And third, the strong exception is Eastern Europe, where high deficits, rising debt and excessive leverage at home put many countries at risk.

… but rather underlying fragilities at home

All in all, however, the main conclusion so far is that if we had to go through a global downturn and credit crisis, from the perspective of emerging markets as a whole we couldn't think of a better time to do it.

Now we need to turn to financial markets

Now, this is not the last word, of course. The indicators we discussed in this section are very broad, and as we will see below there is still plenty of room for individual country specifics and problems to raise their heads. And even more important, remember that so far we have only looked at macroeconomic balance sheets; we haven't yet discussed the state of financial markets – and here things look a bit different.

Part 2 – The market backdrop

- *The situation in financial markets was very different, with one-directional and excessive gains in nearly every asset class over the past few years.*
- *Even here, though, the surprise is how little of this asset market action actually showed up as net capital inflows into EM countries. The one exception was Eastern Europe, which borrowed heavily and continuously from abroad.*

The economic fundamentals may look good

In the previous section we looked at the underlying structural fundamentals in emerging market economies, including credit and leverage, debt positions and external balances, and concluded that the broader EM world came into 2008 in relatively good health. However, although this finding is very important for overall economic trends going forward, it is still only part of the story – and for most investors, probably not even the most crucial part.

But asset market positioning looked less healthy

The remaining issue, of course, is asset market positioning, i.e., equities, fixed income, currencies and commodities. And generally speaking, we have two conclusions on the asset front: First, both global and emerging market trends of the past few years looked rather less healthy in these areas, with excessive risk-taking and overly optimistic valuations. On the other hand, however, even here the news is not quite as bad as it seems at first glance, since in most countries asset market bubbles were not driven by strong onshore capital inflows and financing.

Equity trends

Our global team compiles an equity risk index

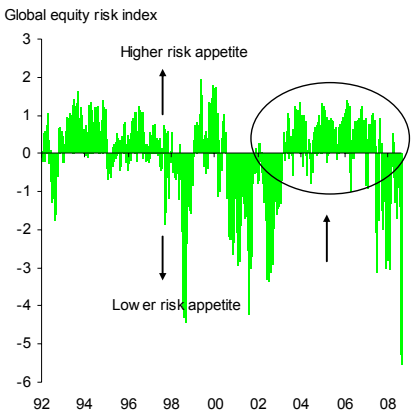
Let's start with equity markets. Our global equity strategy team compiles a daily "equity risk index", which is essentially a measure of risk appetite and market positioning in equities. The index comprises three broad categories: (i) measures of cyclical versus defensive performance on a regional and sectoral basis, (ii) implied volatility as reflected in options pricing, and (iii) a basket of credit and FX indicators including credit and swap spreads as well as currency options.[3]

And 2003-07 was the highest and longest period of risk appetite

The resulting index is shown in Chart 15; a positive reading indicates higher risk appetite while a negative number shows a move to greater risk aversion. As you can see, the period from mid-2003 through late 2007 was the strongest and most protracted episode of high global equity risk appetite since the index began in the early 1990s.

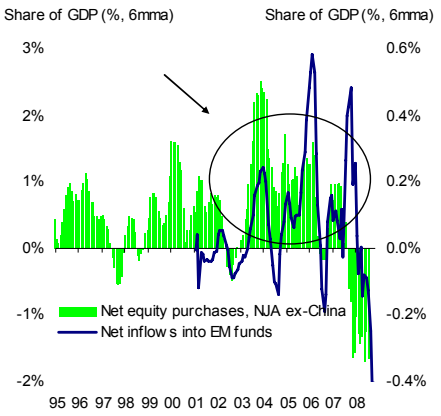
[3] The detailed make-up is as follows: (i) the VIX options volatility index, (ii) EURUSD and USDJPY three month 25-delta implied volatilities; (iii) gold prices in euros and in US dollars; (iv) correlation indices between stock and bond markets; (v) the equity performance differential between the financials and utilities sectors; (vi) JP Morgan EMBI+ emerging market sovereign spreads, and (vii) US high-yield corporate bond spreads.

Chart 15: UBS equity risk index



Source: UBS Global Equity Strategy

Chart 16: EM equity flow measures



Source: CEIC, UBS EM Equity Strategy

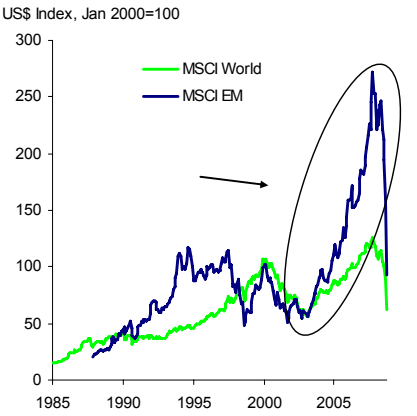
Against this backdrop, and taking into account the return to strong real growth in the emerging world since 2001 as well, and it should come as no surprise that this period also saw the biggest net equity inflows into emerging markets.

The same is true for equity inflows into EM countries

Chart 16 above shows two measures of equity flows: The green bars are taken from various Asian stock exchanges, which provide good data on overall foreign purchases and sales, and show monthly net foreign inflows as a share of (emerging Asia ex-China) GDP. The blue line show net inflows into dedicated EM equity funds – a subset of overall net flows, to be sure, but still a reasonably indicative measure – as a share of overall EM GDP. In either case, the 2003-07 period was also the largest and most protracted episode of net equity inflows into emerging markets as well.

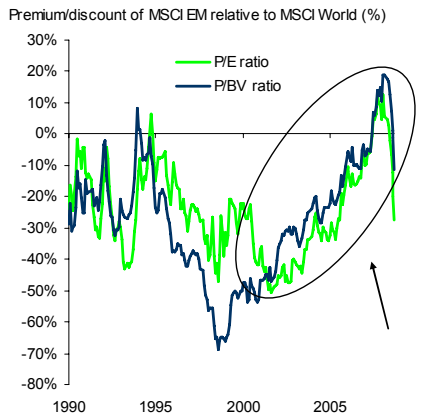
Whether measured on a total basis or through EM funds

Chart 17: Developed vs. EM – index levels



Source: Datastream, Bloomberg

Chart 18: Developed vs. EM – valuation



Source: Datastream, Bloomberg

What did this mean for emerging equity indices and valuation metrics? The short answer is: "a dramatic stock market boom". If we use January 2000 as a benchmark of 100, then both the MSCI World (which covers developed markets) and the MSCI Emerging Markets indices began the year 2003 at an index level of just over 50 in US dollar terms. By late 2007 the MSCI World peaked at a level of around 125, a respectable doubling in a four-year period –

This, in turn, led to a dramatic equity boom

while the Emerging Markets index had risen to a dizzying 275, a five-fold increase in the same length of time (Chart 17 above).

Relative valuations went from strong discount to outright premium

Of course some of this outperformance was due to underlying differentials in earnings growth – after all, as we showed earlier, this was also the first time in 25 years that EM countries returned back to near-record GDP growth levels – but it was more than just this factor. Chart 18 shows relative valuation levels between the World and Emerging Markets indices based on PE and P/BV ratios; for much of the past two decades emerging equities have traded at a sizeable valuation discount to developed markets, but over the course of the past five years, for the first time since MSCI began tracking markets, both metrics rose to a significant outright premium.

Fixed income and currency markets

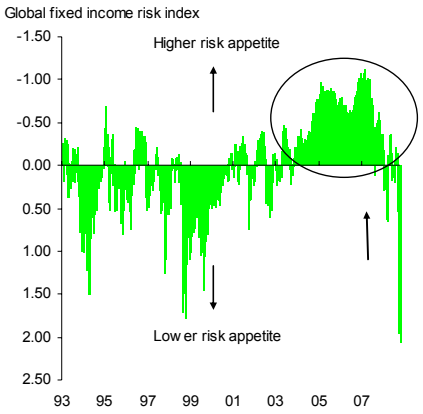
We also compile a fixed income risk index, with an even bigger risk reading

Our global fixed income strategy team also compiles a "fixed income risk index", incorporating four broad measures of the global risk premium on debt instruments: (i) implied interest rate volatility, (ii) swap spreads, (iii) yield curve slope, and (iv) implied equity volatility.[4] As you can see from Chart 19, this index showed an even bigger boom in risk appetite between 2003 and 2007.

In FX, as well, 2003-07 saw an unprecedented fall in volatility

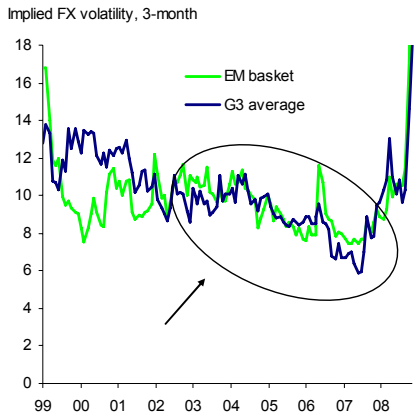
On the currency front, perhaps the best measure of risk appetite is implied currency volatility in the options markets. And here as well, the last five years saw an unprecedented, sustained fall in volatility – which generally corresponds to a rise in risk appetite and positioning – on both G3 and "tradable" emerging currency markets (Chart 20).[5]

Chart 19: UBS fixed income risk index



Source: UBS Fixed Income Strategy

Chart 20: Implied currency volatility



Source: UBS Fixed Income Strategy

[4] More specifically, the index uses four indicators: (i) swap curves (2-10 year spread), (ii) swap spreads (10-year benchmark spreads), (iii) implied swaption volatility (1y10y), and (iv) implied equity volatility (3mth), each measured across four currencies: the USD, EUR, GBP and JPY. Because each of these measures is quoted in different units, in order to compare them they are first normalized by subtracting the historical mean and dividing by the historical standard deviation.

[5] The blue line in the chart shows the average 3-month volatility for EURUSD and USDJPY; the green line shows the average for USDMXN, USDZAR, USDKRW and USDINR.

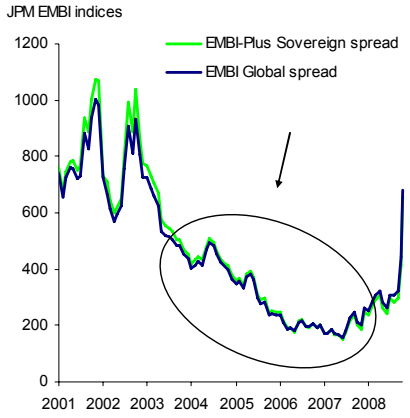
EM bond prices rose and rose

What did this mean for markets? As with equities, emerging bond prices simply rose and rose. The easiest place to see this is the JP Morgan EMBI indices, which measure the spread on emerging foreign-currency sovereign (and in some cases high-grade corporate) yields vs. US and European government yields; from end-2002 through mid-2007 emerging debt spreads fell steadily and sharply – and again to unprecedented lows for the whole period of EMBI index coverage (Chart 21).

And currencies were unusually stable

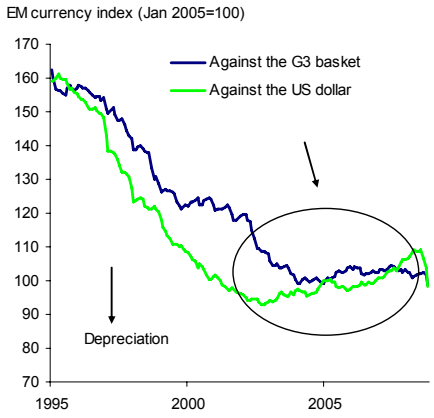
For currencies, it's important to note that this environment did *not* lead to wild appreciation of emerging exchange rates – but it did lead to a very rare period of almost absolute stability against the trade-weighted developed basket, as central banks accumulated FX reserves at an historic record pace while maintaining a *de facto* G3 basket peg (the blue line in Chart 22).

Chart 21: Emerging bond spreads



Source: Bloomberg

Chart 22: A rare period for EM currencies



Source: Bloomberg

EM FX strengthened outright against the dollar

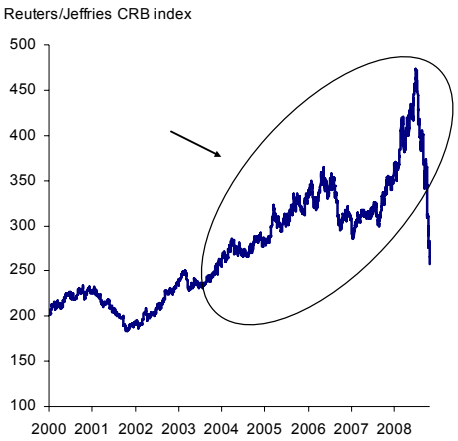
And equally important, given that the US dollar was weakening against the euro for the entire period 2003-07, this meant that emerging currencies were steadily strengthening against the dollar for the entire period as well (the green line in the chart). With trend bilateral appreciation, falling implied volatility and onshore interest rates that were almost uniformly above US levels given Fed easing, this meant four to five years of very high and predictable "carry/vol" ratios … which in turn led to a sizeable build-up of long positions in a number of EM currencies, particularly through options and NDF markets.

Commodities

We also saw a "great commodity bubble"

This process was aided by what can only be described as a "great commodity bubble", particularly in its last legs from mid-2007 through the summer of this year. Overall commodity prices (as measured by the Reuters/Jeffries CRB index) rose continuously for most of the decade, doubling between the 2001 trough and the middle of 2006 and then increasing another 60% in the latest rally from 2007 through mid-2008 (Chart 23). As discussed further below, this increase was fueled in part by global liquidity and speculative conditions – but also to a very large degree reflected the uninterrupted rise of Chinese demand, as the mainland economy grew by more than 10% y/y during 2003-07 and net imports of crude oil, other fuels and minerals increased at a faster pace still.

Chart 23: Commodity prices



Source: Bloomberg

The good news

However, despite aggressive positioning ...

So far the asset market picture was one of unusually low volatility, abnormally high risk appetite and thus overly aggressive positioning in many cases.

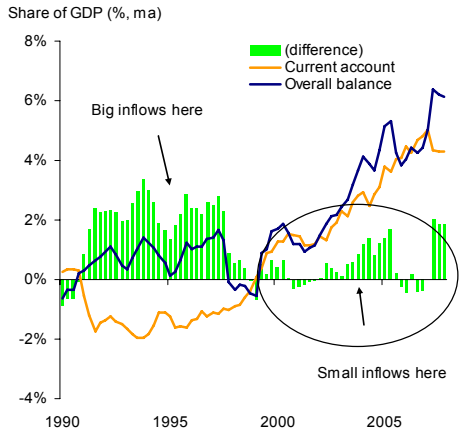
... EM countries still didn't record heavy onshore inflows

However, for emerging markets there is still one piece of good news in all of this: As paradoxical as it might sound, going back to the underlying balance of payments data the last five years were *not* a period of significant capital inflows – in other words, the EM world as a whole has *not* been building up net foreign liability positions.

If we compare current account data with FX reserve accumulation

Let us explain what we mean. The orange line in Chart 24 shows the level of the current account balance for the emerging world as a whole as a share of GDP, from the beginning of the 1990s through the end of last year. The blue line, in turn, shows the path of the "overall" balance of payments, i.e., total FX reserve accumulation by emerging central banks.

Chart 24: Where are the capital inflows?



Source: Haver, CEIC, UBS estimates

Then we find a big gap in 1991-98

The residual difference between the two is implied net capital inflows (or outflows). Take the 1990s as an example. From 1991 through 1998 the EM

world ran a collective current account deficit of up to 2% of GDP; during the same period, however, emerging central banks were actually accumulating FX reserves at a pace of around 1% of GDP per year.

This means strong, positive capital inflows in those years

Mathematically, this means that overall capital inflows – including net foreign equity purchases, foreign-currency borrowing by emerging corporates and banks, net FDI and any "unidentified" flows – were strong and positive, on the order of 3% of GDP per year. And given this heavy, continuous buildup of foreign liabilities, it was perhaps no surprise that a large part of the emerging universe underwent crises at the end of the decade.

But there were virtually no net inflows in 2000-07

Now look at the situation since 2000. Official FX reserve accumulation has jumped sharply over the course of the decade, to nearly 6% of GDP in the past two years, but virtually all of this has come from a rising trade and current account surplus. If we look at the residual (the green bars in the chart), the implied net capital position was barely positive. And we know from the data that net equity inflows were substantial over the last five years – which in turn implies that onshore fixed income, currency and corporate-related flows were either negligible or outright *negative* for most of the period (which helps explain the build-down of external positions in Charts 3 and 4 above).

How can this be?

How can this be, especially in view of those record-high equity inflows and the strong pricing we saw in other asset classes as well? In our view, this is not such a contradiction as it seems at first glance.

To begin with, equity flows are small relative to debt-related transactions

To begin with, as impressive as the foreign equity inflows in Chart 16 would appear, they are still very small indeed compared with the historical magnitude and volatility of net debt-related capital flows. It's hard to find more than one or two examples in the EM world where net equity flows have played a key role in overall balance of payments financing.

Bonds were financed mostly on domestic markets

On the debt side, remember that the big drop in emerging spreads discussed earlier is generally for externally traded FX-denominated bonds; domestic onshore rates and yields fell as well, but the swing was not nearly as dramatic in these categories – and most of the financing came from local markets, as a natural result of the stabilization or decline of private-sector leverage ratios and the disappearance of fiscal deficits. This will prove very important below when we look at the large gap between current pricing on domestic and external instruments.

And many FX positions were in derivatives or NDFs

As we also show, although net EM currency positioning was very intense in some cases this primarily affected seven or eight favored trading currencies; the situation in other economies was much quieter. And in these highly-traded cases much of the action was in currency derivative products and/or on NDF markets, i.e., it did not necessarily show up as a large inflow on the balance of payments.

The Eastern European exception

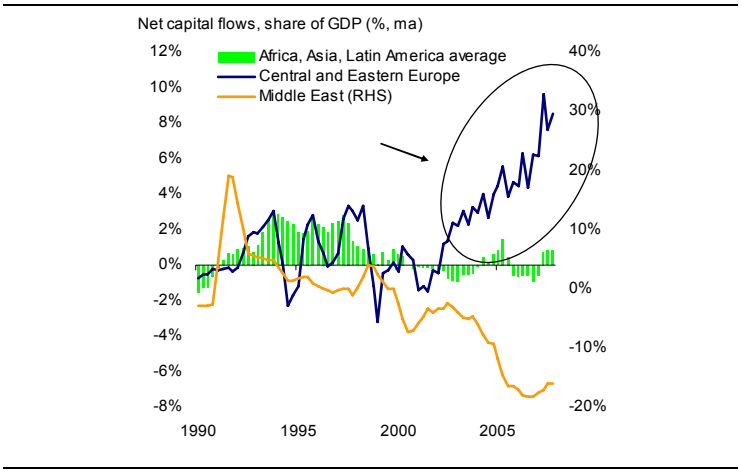
Again, the main exception was Eastern Europe

Finally, and once again, these findings may hold for the emerging world as a whole but they do not apply to every region equally. After all, many countries in Central and Eastern Europe ran extremely large current account deficits for most of the past decade, and these deficit positions needed to be financed.

Sure enough, looking at Chart 25, emerging Europe borrowed heavily in external markets, with high and rising net capital inflows from 2001 right up through 2008, reaching a peak of more than 8% of GDP last year.

This region borrowed heavily all through the decade

Chart 25: .... Here they are



Source: Haver, CEIC, UBS estimates

By contrast, in addition to their growing official FX reserves the Middle East also exported more than 15% of GDP worth of capital abroad in other forms (including sovereign wealth funds and other investment vehicles). And for Asia, Latin America and Africa, the green bars in the chart still show a very balanced capital position.

The rest of EM was either stable or a big net lender (the Middle East)

Part 3 – Then came the shocks

- *So far emerging markets have been hit by three successive shocks: the initial pull-out from risky assets, the commodity market capitulation, and then the recent round of "manic deleveraging" with global investors selling all EM markets.*
- *By contrast, the real G3 slowdown has yet to show up in full force in emerging export data; in our view this shock will hit with greater urgency at the end of the year and going into 2009.*

Four big shocks

Now we turn to the current global crisis

Having examined the general economic and financial backdrop in the run-up to the current crisis, we now turn to the crisis itself, to try and make some sense of what has happened over the past few quarters.

For EM, there were four main shocks:

Untangling the web of causes and linkages behind the recent events is a difficult and controversial task – and one, we might add, that has been done much more effectively by our own global economics team (see for example UBS Senior Economic Adviser George Magnus' ongoing *Minsky Moment* series). However, at risk of gross oversimplification, when looking at emerging markets specifically we find it useful to think in terms of the following four shocks:

1. The initial risk turnaround

1. The initial risk turnaround (fall 2007 through spring 2008). The US housing market downturn and the subsequent unwinding of mortgage-related asset and derivative positions served as the first catalyst for a more general shift in risk appetite, one that mainly affected global and EM equity positions as well as US credit markets.

2. The commodity collapse

2. The commodity collapse (summer 2008). The rapid downturn in Chinese construction and material demand helped burst the extended commodity rally, which in turn led to a second round of equity and selected currency market pressures in emerging countries.

3. "Manic deleveraging"

3. *"Manic deleveraging" (late September and October 2008).* Over the past four to five weeks, with the failure of large global financial institutions, the ongoing deleveraging in the developed world finally hit emerging markets with a vengeance, with the first true systemic pullout of currency, bond and swap positions – as well as contagion in domestic EM financial markets.

4. The real growth downturn

4. The real growth downturn (now underway). As usual, financial markets have adjusted well ahead of the real economy; although domestic demand momentum in the G3 economies has slowed significantly since the middle of last year, our current forecasts put the trough of the global cycle in the first half of 2009 with a painful recession in the US and EU and a relative contraction in Japan as well.

Let's go through each of these in turn.

The initial risk turnaround

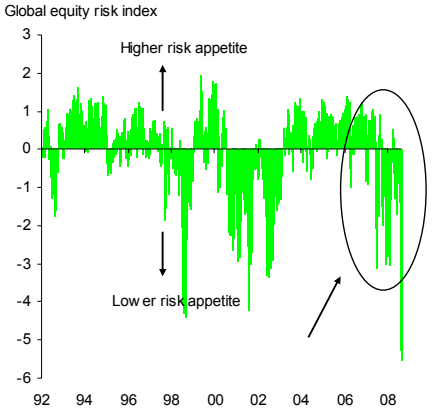
Equity markets were the first to go - everywhere

In the emerging world, equity markets were the first to go – which in retrospect should come as no surprise. As we saw above, equities were the one asset class that saw significant onshore foreign inflows, and almost uniformly had the highest foreign ownership shares among asset markets (at least in those markets where it is possible to measure). Moreover, the EM equity boom was also by far the most broad-based, with virtually every country seeing the same upside and downward trends; just look at the identical path of the simple average and weighted average EM stock market in Chart 28 further below.

This was underway already in 2007

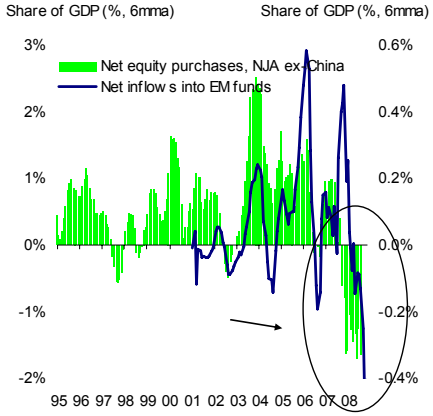
So when the US housing market downturn and the subsequent unwinding of mortgage-related asset and derivative positions first came to the fore in the fall of 2007, equity risk appetite turned south almost immediately – as did net real flows in the emerging world, which had already shifted to large outflows well before the beginning of 2008 (Charts 26 and 27).

Chart 26: UBS equity risk index



Source: UBS Global Equity Strategy

Chart 27: EM equity flow measures

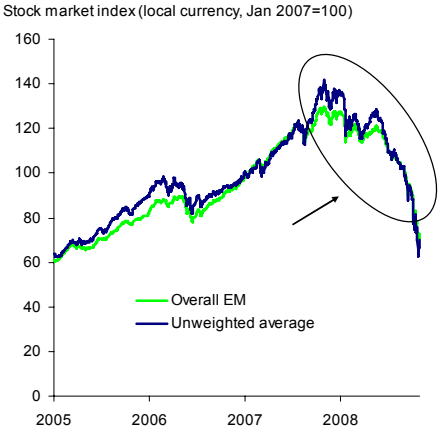


Source: CEIC, UBS EM Equity Strategy

And it was across the board

And this led to a sharp initial drop in virtually every EM stock market, as shown in Chart 28.

Chart 28: Stock market retrenchment



Source: Haver, CEIC, UBS estimates

By contrast, with a few exceptions emerging currency and debt markets remained largely untouched – despite a sharp and sudden run-up in domestic CPI inflation across the emerging world as a result of the ongoing commodity boom.

By contrast, most debt and currency markets were largely untouched

The commodity collapse

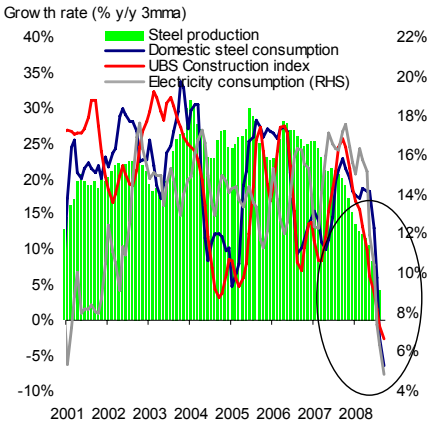
The next domino to fall, so to speak, was the commodity market. As we discussed earlier, crude oil, minerals, metals and grains paradoxically continued to rally hard all through the latter part of 2007 and well into 2008, reaching an all-time high in the middle of the year – despite the fact that global equity markets were falling sharply, developed country liquidity was drying up and the US slowdown was well underway.

The next domino to fall was the commodity market

There are a number of potential explanations for this behavior, but as far as emerging markets are concerned only one makes real sense, and that is China. As shown in Chart 29, the second half of 2007 and the first quarter of 2008 were an outright boom for most commodity-related demand indicators in the Chinese economy: electricity consumption reached 17% y/y, the property construction sector was in vibrant recovery after the last mid-2006 downturn and domestic steel usage growth was also running in excess of 20% y/y.

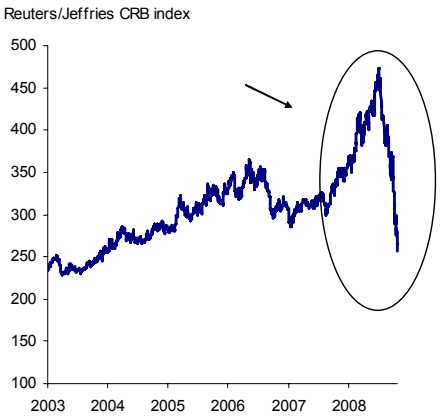
And China was a key catalyst here

Chart 29: The China downturn



Source: CEIC, UBS estimates

Chart 30: The commodity collapse



Source: Bloomberg

However, by the second quarter of the year it was clear that mainland demand was weakening in all these areas … and by the third quarter the data showed an absolute rout, with construction activity and steel production contracting outright as of August and electricity consumption falling to low single-digit growth.

As the construction boom suddenly turned to bust

We'll discuss the reasons for this sudden fall and the forward-looking outlook further below, but in our view it's no coincidence that commodity markets peaked in July and then capitulated across the board. Between early July and late October the CRB index lost a full 50% of its value (Chart 30).

Between June and October the CRB index lost 50%

"Manic deleveraging"

It wasn't until the end of September that markets really began to blow

For many investors, the combination of the sudden turnaround in the Chinese economy and the ongoing commodity market capitulation effectively removed the single biggest support for the emerging market "decoupling" argument. EM equities began to sell off even more heavily and commodity-related currencies began to weaken … however, it wasn't until the end of September that markets really began to blow.

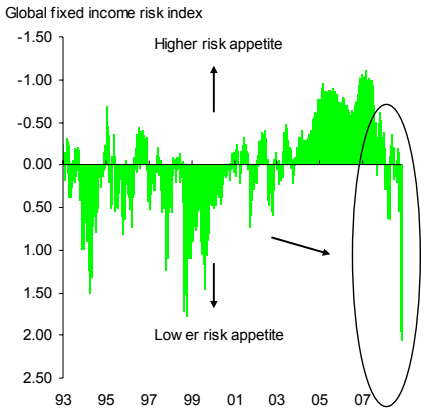
The initial catalyst was the wave of G3 bankruptcy and nationalization

With the emergency nationalization of Fannie Mae and Freddie Mac, the US Treasury's decision to let Lehman Brothers fail, the threat of bankruptcy in one of the world's largest insurers and the remaining independent broker-dealers seemingly tottering on the edge, the rush for liquidity and "manic deleveraging" that had engulfed many developed markets finally found its way to the emerging world.

Risk appetite simply disappeared, and sovereign and CDS spreads blew out

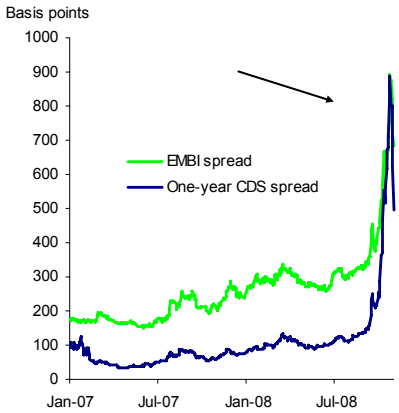
And the reaction was both massive and swift. The UBS fixed income risk index, which had held up relatively well all through 2008, suddenly fell to risk aversion levels never before seen in the history of the calculations (Chart 31). In the space of less than two weeks emerging dollar sovereign bond spreads more than doubled, and sovereign CDS spreads blew out nearly four-fold (Chart 32).

Chart 31: UBS fixed income risk index



Source: UBS Fixed Income Strategy

Chart 32: Bond and CDS spreads



Source: Bloomberg

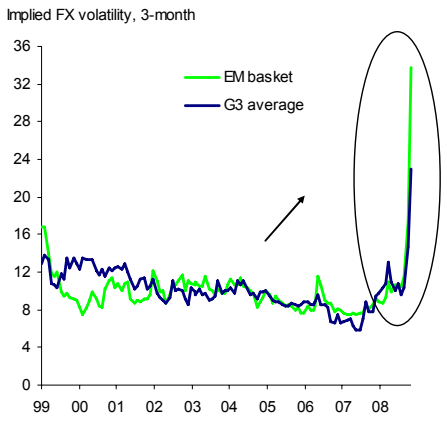
EM currencies came under coordinated attack as well

Suddenly emerging currencies came under a more coordinated attack as well. The blue line in Chart 33 shows average 3-month implied volatility for EURUSD and USDJPY, and the green line shows the similar calculation for four major EM currencies (the Mexican peso, the Korean won, the South African rand and the Indian rupee).

Implied volatility skyrocketed

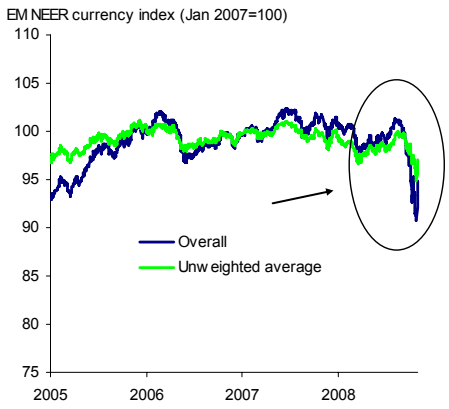
Volatility levels had already been rising since the middle of 2007, but at the end of September implied vols simply skyrocketed, reaching near-record highs in the G3 currencies and absolutely unprecedented levels for the above EM composite. As a result, currencies like the rand, the peso, the won and the Brazilian real sold off heavily, losing anywhere from 20% to 40% of their value against the US dollar in the space of a few weeks, and the broader basket of emerging exchange rates began to depreciate visibly on a trade-weighted basis for the first time since the early part of the decade (Chart 34).

Chart 33: Implied currency volatility



Source: Bloomberg

Chart 34: EM currencies

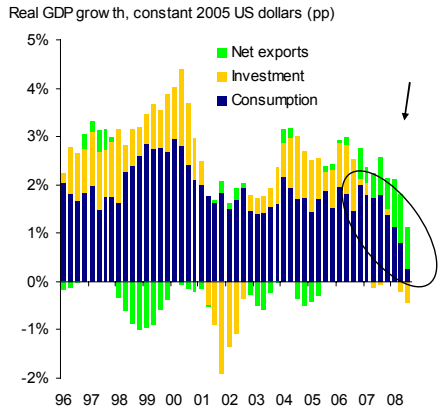


Source: Bloomberg, CEIC, UBS estimates

It was only this last week that currencies and bond spreads began to rein back in – and then only after a substantial loss of FX reserves by many EM central banks, not to mention a significant show of official support from the global community, with the IMF announcing US$15-25 billion programs for Hungary and the Ukraine and the US Fed pledging US$30 billion each in swap arrangements with Mexico, Brazil and Korea.

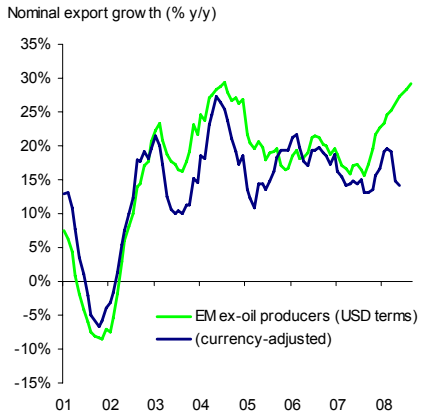
It was only this last week that things began to calm, after official support

Chart 35: G3 growth



Source: Haver, CEIC

Chart 36: Emerging export growth



Source: IMF, Haver

Real growth

By contrast, the one shock that has yet to show a serious impact on emerging countries is the real slowdown in the developed world. As you can see from Chart 35 above, we estimate that aggregate domestic demand (consumption plus investment) growth in the US, EU and Japan is already crossing the zero line.[6] However, even when we exclude major oil producers to minimize the impact of recent commodity price swings, overall EM export growth actually accelerated

By contrast, the growth shock has not yet had a serious impact

[6] The bar for 3Q2008 includes the actual outturn for the US and UBS estimates for Japan and the EU.

in US dollar terms over the past six months and has remained more or less stable in currency-adjusted terms.[7]

[7] The blue-line in the chart shows total shipment growth from EM countries as reported by partner countries in local-currency terms. Unfortunately, we do not have good estimates for volume export growth from the emerging world.

Part 4 – Where we are, and who's been hurt so far

- *As we write, there is a gaping difference between what's "priced in" on global equity and bond markets and what is happening in domestic financial markets. So far the actual damage to growth and credit availability has been relatively minimal, limited to the highest-risk cases.*
- *As expected, the main victims of real imbalances and contagion so far have been in Eastern Europe, including the Baltics, Kazakhstan, Ukraine and Hungary. Russia has also seen significant domestic liquidity problems. Elsewhere the list of the most serious affected includes the UAE, Pakistan and Venezuela.*

Is it a crisis?

Is this a full-blow crisis?

Now for one of the main questions of this report: Is this a full-blown emerging market crisis?

In external markets, yes …

Our answer is: "It depends on what you mean by a crisis". Again, looking at international asset markets the speed and magnitude of the recent sell-off has been virtually unprecedented in the emerging world: global yield and CDS spreads blowing out, stock and commodity markets capitulating day by day, emerging currencies starting to give way in one "accident" after another. And as we will discuss further below, the potential implications of these violent global market swings could be quite serious for EM countries.

… but in most domestic markets, no

On the other hand, when we examine the actual impact on emerging markets to date we have to conclude that global asset markets are heavily exaggerating the current state of affairs. Simply put, we're not "there" yet; local money and currency markets have been comparatively well-behaved, with performance much more strongly aligned to underlying economic fundamentals. And if we turn to the most crucial indicators of all for the health of the emerging world, i.e., banking systems, credit availability and real growth, there have only been a small number of disaster cases so far – which helps explain why official policy responses in most countries have been relatively muted as well.

The Great Divergence

And this is what we call the Great Divergence

For lack of a better name, what we see now is a "great divergence" in financial markets. One the one hand, as we showed above, asset classes that depend primarily on *global* liquidity conditions – mainly equities, FX-denominated bonds and related CDS instruments – have been devastated by the recent wave of panicked deleveraging, often with very little regard for local fundamentals.

Local-currency markets have generally held up much better

By contrast, asset markets that depend on *domestic* conditions, such as local-currency money and debt markets, corporate credit and even (for the most part) exchange rates, have held up much better in EM countries as a whole. And performance here has also been sharply differentiated by underlying economic conditions in individual markets.

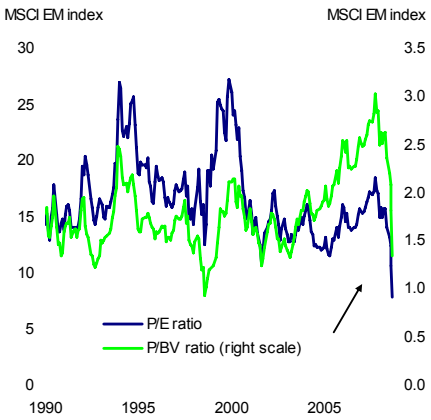
Let's walk through the various indicators in turn.

What are equity markets telling us?

Equity ratios have sunk to record lows

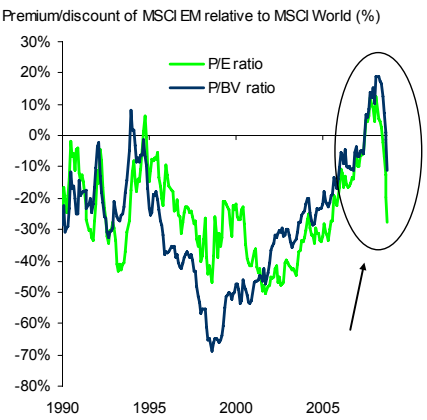
On an absolute basis, of course, equity markets have clearly seen the worst buffeting of all. Trailing PE ratios for emerging stocks have sunk to record lows – and the trough is now far beyond anything previously seen in the history of the MSCI indices (Chart 37). For P/BV indicators the situation is not as dire, but even here valuations have come down close to 1998 levels.

Chart 37: Emerging valuation indicators



Source: Datastream, Bloomberg

Chart 38: Relative valuation indicators



Source: Datastream, Bloomberg

On a relative basis, however, things look different

On a *relative* basis, however, the story is rather different. Looking at comparative valuations in Chart 38, emerging equity markets have moved back to a sizeable discount on PE measures, but still well above historical crisis lows. And on a P/BV basis the emerging world is barely trading at a discount at all.

I.e., it's not clear whether equities are saying anything specific about EM

In short, it's not clear whether global equity markets are telling us anything specific about the state of the emerging world, or just telling us about the state of the world as a whole. And from a macro point of view we would not rush to read too much into stock market movements as a gauge of "decoupling" or "recoupling"; as we noted above, investors have effectively treated EM countries indiscriminately in both boom and bust cycles, and the markets are a much better gauge of global risk appetite than they are of emerging economic trends *per se*.

What are fixed income markets telling us?

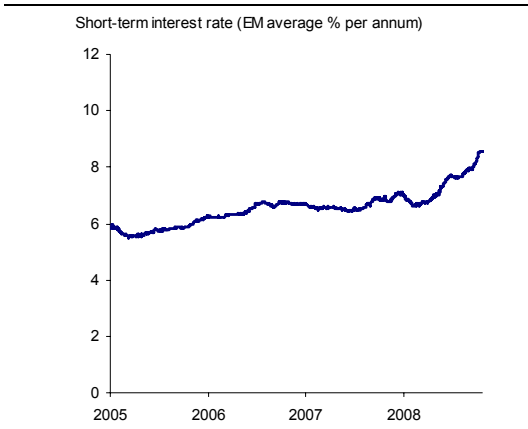
But foreign participation is much higher in equities

And once we turn away from equity markets, where foreign investors and global risk trends have had a disproportionate effect, we start to see much clearer signs of the Great Divergence at work.

Local-currency short-term rates have risen only gradually

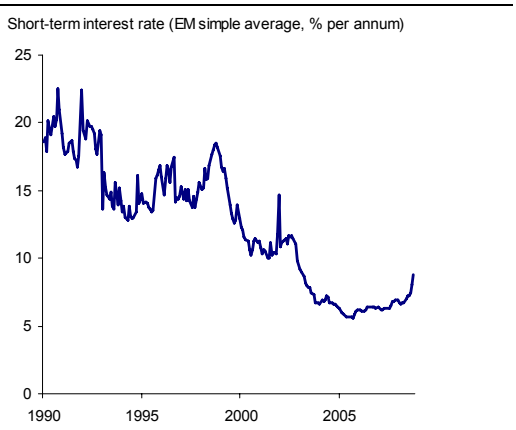
Look for example at the behavior of short-term local-currency money markets in Chart 39, usually one of the most reliable indicators of liquidity conditions in the emerging world. One- to three-month rates have clearly risen over the past 12 months on average, but in a relatively gradual manner and only by around 150 basis points to date – far less, in fact, than the headline rise in CPI inflation over the same period. Compared to previous spikes in short-term EM rates, this is hardly a picture of widespread onshore panic or crisis (Chart 40).

Chart 39: Short-term interest rates



Source: CEIC, Haver, Bloomberg, UBS estimates

Chart 40: ... and the same since 1990



Source: CEIC, Haver, Bloomberg, UBS estimates

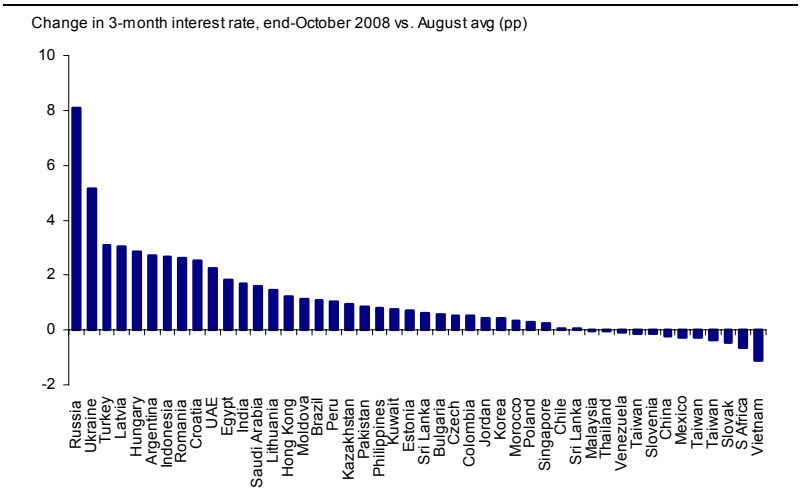
And most of the action is in a few individual countries

Moreover, on a country-by-country basis most of the action is concentrated in a few individual economies. If we look at the net change in short-term rates over the past three months, then only Russia and the Ukraine have seen "big" moves (more than 300 basic points) indicative of outright financial stress (Chart 41). Another group, including Turkey, Hungary, Argentina, Indonesia and Romania, saw money market rates rise by 200-250 basis points; in most cases this was a response to exchange rate pressures (about which more below).

In the rest real rates have actually fallen

As for the rest, there has been very little movement at all, i.e., no obvious signs of sharp financial stress, with real interest rates in fact continuing to fall in the face of recent inflation pressures.

Chart 41: Short-term rate change by country



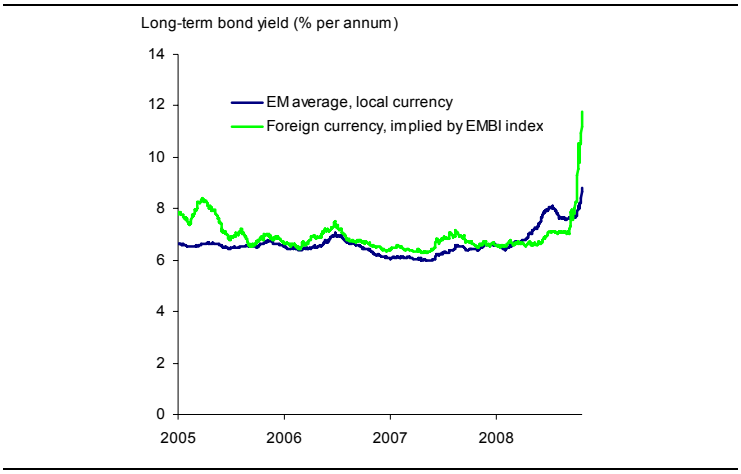
Source: Bloomberg, Haver, CEIC, UBS estimates

The same is true for long yields

Exactly the same is true for long-term bond yields. The green line in Chart 42 shows the average yield on foreign-currency sovereign debt, as implied by EMBI spreads, while the blue line shows the EM average for domestic-currency sovereign bond yields. As you can see, the two indicators normally track very closely – except for the past few weeks, when foreign-currency spreads have blown out more than 300 basis points wider than their local counterparts. Local-

currency yields have risen, but more gradually and generally in line with the movements on the short end of the curve.

Chart 42: Long-term bond yields

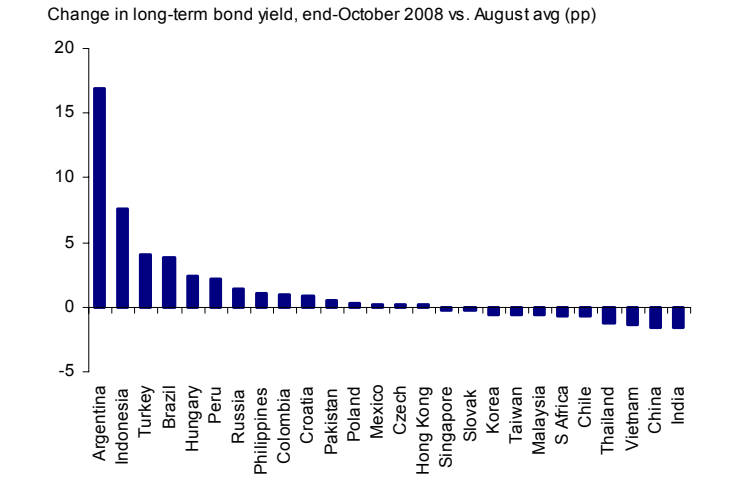


Source: Bloomberg, Haver, CEIC, UBS estimates

Once again, a few cases dominate the action

And once again, looking by country only a few specific cases dominate all the action. Over the past three months only two countries (Argentina and Indonesia) have seen anything close to "panic" selling onshore, with a further but smaller spike in yields in Turkey and Brazil. In the remaining EM economies, the local markets have been surprisingly quiet (Chart 43).

Chart 43: Change in long yields by country



Source: Bloomberg, Haver, CEIC, UBS estimates

What are corporate credit markets telling us?

What about corporate credit?

Now, it's one thing to talk about money markets and sovereign debt yields, but in the developed world the most crushing impact of the recent credit crisis (after the financial sector) has fallen on private companies; credit spreads have widened sharply and corporate borrowers in the medium- to high-yield space have had severe difficulties attracting new financing at all.

Dollar spreads have widened sharply

If we look at widely quoted indicators of corporate spreads in the emerging world, such as the JP Morgan EMBI corporate indices, it's clear that these have blown out at least as much as the sovereign side (see Chart 44 below). But once again, remember that these are spreads on globally traded FX-denominated debt, i.e., they're not necessarily telling us anything about corporate credit conditions at home.

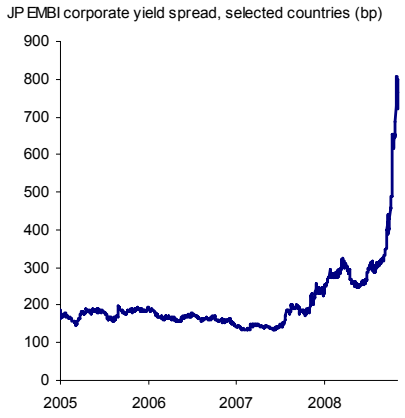
We found a few consistent local-currency series in EM

Unfortunately, it's very difficult to get consistent data on local-currency corporate yields for the broad emerging market group. Some EM countries have a few listed bonds and bills; many have none at all. In our databases, we identified six economies whose exchanges publish a consistent time series index on corporate yields: India, South Africa, Korea, Malaysia, Slovakia and Thailand.

And they don't show the same pressures

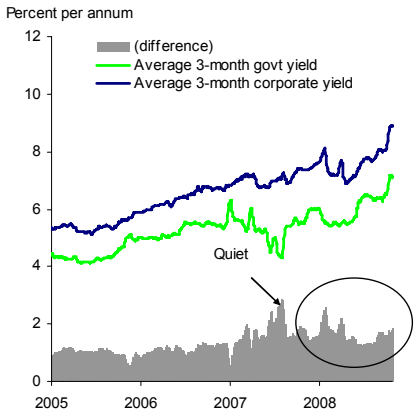
The results are shown in Chart 45 (in some cases yields were reported across all grades; in others we took the average of AAA and single-B where available). As you can see, average reported short-term corporate yields have clearly risen somewhat in the past six months – mostly due a sharper jump in India – but as of the end of October, they have remained exactly in line with local government bond markets, with no visible increase in spreads.

Chart 44: EM corporate spreads (FX debt)



Source: Bloomberg

Chart 45: EM corporate spreads (local debt)



Source: CEIC, Haver, UBS estimates

Again, individual economies have had more serious problems

This does not mean that there is no corporate stress in the emerging world, of course. To begin with, if we look at individual corporate names in the local markets, two countries stand out glaringly from the rest: Russia and the Ukraine, where yields and spreads have shot up rapidly and implied default rates are now quite high. The Baltic countries and parts of the Middle East also report more sharply rising corporate yields as well.

We also need to look at volumes

And second, just as in the developed world the real question for emerging markets may not be the *price* of credit *per se*, but whether companies can find financing *at all*; in other words, we want to know what's happening to credit volumes as well. As we will see below, this does not seem to have been an issue for EM countries as of the middle of 2008, but after the market panic of the past few weeks this certainly remains an open question going forward.

What are currency movements telling us?

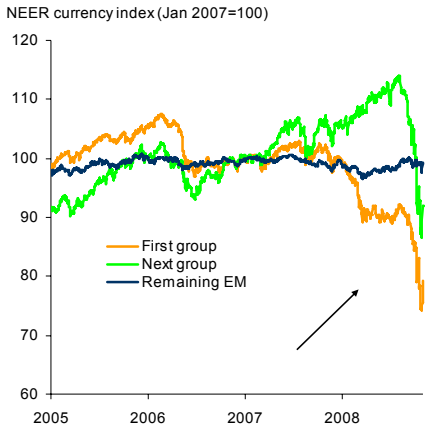
EM currency markets have been particularly volatile

Emerging currency markets have been one of the volatile parts of the financial story this year – and, of course, a collapse in the exchange rate is one of the traditional hallmarks of EM crises over the past 50 years – so it's worth paying close attention to the events of the past few months.

The first to go were the "trend weakeners"

At risk of a bit of oversimplification, we find it useful to divide emerging currencies into three general baskets, as shown in Chart 46 below. The first is what we might call the "trend weakeners", i.e., countries who saw their exchange rates depreciate from the beginning of the global credit crisis; this group consists of South Africa, Pakistan, India, Korea and Romania. On a trade-weighted basis, all of these currencies have lost more than 25% of their value from the beginning of 2007, and most were hit hard again over the past three weeks during the global deleveraging round. For the most part these were deficit countries, or in the case of Korea countries that had recently moved into deficit, and at least three were "trading" currencies that had seen significant but not overwhelming positioning interest in the preceding one or two years.

Chart 46: Recent currency movements by group



Source: Haver, CEIC, Bloomberg, UBS estimates

Followed by the "sudden reversal" group

The second group is the "sudden reversal" currencies, including Brazil, Chile, Colombia, Hungary, Mexico, Ukraine, Turkey and Poland. Nearly all of the countries in this basket had at least one of two things in common: either (i) they were heavily related to commodity prices (Brazil, Chile, Colombia and to some extent Mexico), or (ii) as discussed above, they were the primary destinations for the emerging "carry trade", with very high net positioning (Hungary, Turkey, Mexico, to some extent Poland, and also Korea from the first group). This group includes some of the larger current account deficit countries (Turkey, Ukraine, Hungary, Poland), but also economies with small deficits or outright surpluses.

These had high gains through most of 2008, then suddenly dropped

As you can see, these currencies actually had extremely strong *gains* through the 2007-08 global credit crisis, gaining more than 15% on a trade-weighted basis over the period. It wasn't until commodity prices collapsed and global investors began a panicked pull-out from emerging positions in the third quarter of 2008 that this group finally gave way, losing more than 20% of value in the past eight weeks.

It was only this group that needed official financial support

Crucially, it is only this group of countries that has gone to the global community for financing support to date: Hungary and Ukraine to the IMF and EU, Brazil, Mexico and Korea to the US Fed (although keep an eye on Pakistan, Turkey and Romania, about which more below). By contrast, for major "trend weakeners" such South Africa and India this has been a rather more orderly depreciation.

For the rest of the EM world, very little has happened

And once we exclude these two groups, there has been very little action so far in the rest of the emerging world. Virtually none of the remaining 75 or so currencies we follow saw more than 5% to 10% swings over the past 12 months on a trade-weighted basis – and as you can see from the blue line above, the average move has been effectively zero.

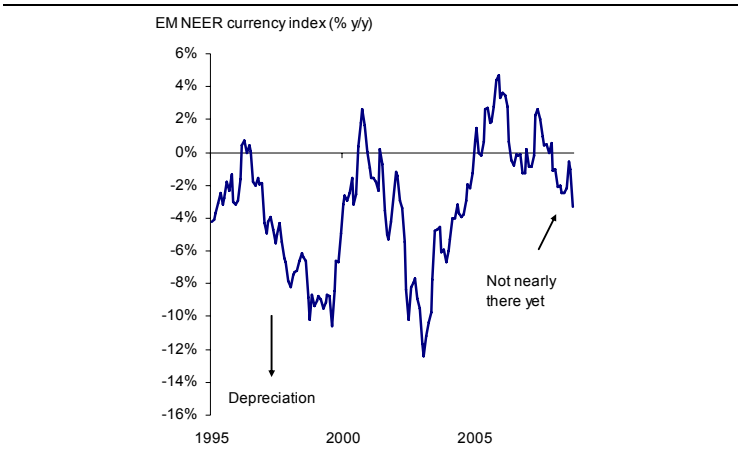
Although many countries have been selling reserves

This doesn't mean, of course, that there haven't been stronger pressures on other countries' exchange rates; over the past month many central banks have been selling substantial amounts of FX reserves into the market to avoid a stronger depreciation. We won't know the magnitude of the total reserve drain for a while yet, but as we discuss further below, for the most part we don't expect big currency moves in this remaining group.

The cumulative depreciation is still far less than in earlier crisis rounds

And despite the depreciation to date in the first two groups, this still leaves us with a far smaller cumulative shock than in, say, 1997-98 or 2001-02 (see Chart 47). In other words, in terms of currency pressures there's still no comparison between the current environment and previous EM crisis rounds.

Chart 47: Not nearly there yet



Source: Haver, CEIC, Bloomberg, UBS estimates

In fact, only nine countries weakened against the 2005-07 average

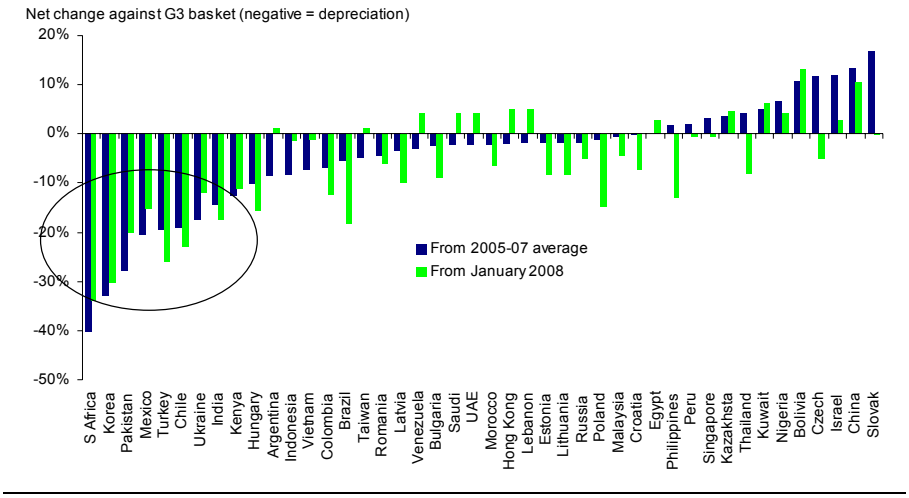
In fact, for most of the countries mentioned above, and in particular those in the "sudden reversal" group, currencies have only weakened back to their general level in the first half in 2005. Within the major economies in our EM sample there are only nine countries where the currency actually lost more than 10% against the 2005-07 average: South Africa, Korea, Pakistan, Mexico, Turkey, Chile, Ukraine, India and Kenya (Chart 48 below).

And only a couple were in our high-risk camp

And keep in mind that among these, only Ukraine and to a lesser extent Turkey showed up with high scores on our external risk index above, i.e., despite the near-term impact on trading, derivate positions and corporate profits from a

large currency move, few of these economies have more fundamental economic concerns regarding external debt sustainability or external financing.

Chart 48: Which way have currencies gone on a longer basis?



Source: Haver, CEIC, Bloomberg, UBS estimates

Real growth and the credit cycle

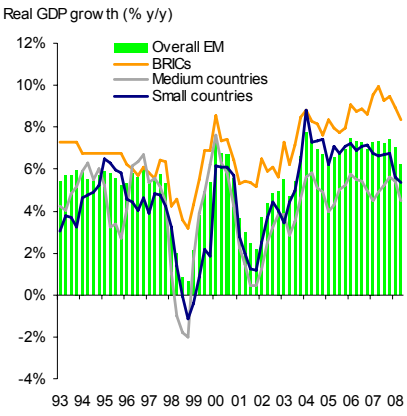
We now come to most important issue of this section: What has happened to real growth momentum and the credit cycle?

What has happened to real growth?

Looking at the charts below, the answer is "not much" – although we fully agree that the real challenges still lie ahead. We only have GDP data through June 2008, and as shown in Chart 49 growth in EM as a whole slowed only marginally in the first half of the year, from around 7.2% y/y in 2007 to 6.6% y/y (this should not come as a great surprise, given the continued buoyant trade numbers in Chart 36 above).

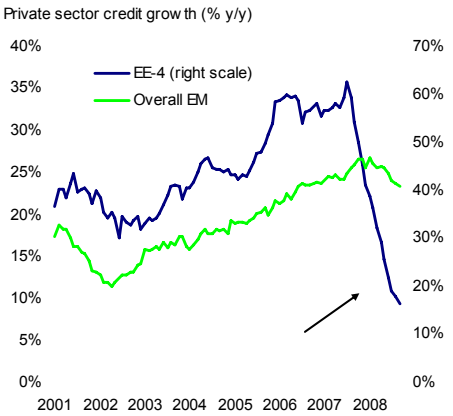
As of mid-year, not much

Chart 49: EM GDP growth



Source: Haver, CEIC, UBS estimates

Chart 50: EM credit growth



Source: Haver, CEIC, UBS estimates

We do have somewhat more timely banking system and credit data, up through August 2008 for most countries, and here as well the numbers look very calm

More recent credit data also look calm

indeed: overall EM bank lending growth peaked at 26% y/y in January but as of the most recent figures was still running at 24% y/y (Chart 50).

Only six countries have seen sharply slowing credit growth

In fact, to date there are only six countries in the emerging world where bank credit growth has slowed by more than ten percentage points over the past year, and where real GDP data generally point to a sharp slowdown as well: Kazakhstan, the three Baltic countries (Estonia, Latvia, Lithuania), Guatemala and Venezuela. In Chart 50 we show what the credit figures look like for Kazakhstan and the Baltics – an absolutely precipitous drop, which points to an equally painful further collapse in the growth numbers ahead. But again, for the rest of emerging markets growth momentum has remained very strong so far.

The real challenge will come when we see export slowdown

This is good news, of course, but to reiterate our earlier point the real challenges will likely come once we see exports slowing more significantly, and once we have a chance to see the impact of the recent market panic and global liquidity pull-out on domestic credit availability in the emerging world.

Where do we see problems with credit markets?

Where do we see problems with credit markets today? We need to be careful in our answer here, since over the past few weeks many EM countries experienced severe problems with *dollar* liquidity as trading bids on emerging currencies simply dried up and central banks were forced to step in to provide support. However, the key question is whether this has spilled over into *domestic* liquidity troubles as well. And this brings us right back to the indicators we discussed above, i.e., money market rates, credit spreads, bond yields and overall credit growth as well as other anecdotal evidence on the state of local financial markets.

We see stress in the Baltics, Kazakhstan, Ukraine, Russia and others

In this regard we would summarize the current state of affairs as follows: Over the past 12 months the Baltics and Kazakhstan have clearly seen both domestic and (in the former case) foreign financing dry up as credit growth slowed significantly. More recently we have seen clear signs of significant stress in money and corporate credit markets over the past month or two in Russia and the Ukraine; in the case of Russia, the central bank was forced to come in and provide sizeable amounts of outright liquidity to commercial banks, and the same is true in the United Arab Emirates (we note Korea has also promised a sizeable package for bank and corporate debt restructuring). As noted above, credit growth also dropped visibly in Venezuela and Guatemala. Pakistan has been forced to shut down trading in a number of assets, and access to new external market financing is effectively closed. In all of these cases, we see heightened risks of structural banking system stress and thus further adverse growth shocks going forward.

Investors have targeted debt concerns in Argentina and Indonesia

We should also mention Argentina and Indonesia, where underlying fundamentals look better across most metrics but investors have specifically targeted sovereign debt concerns, resulting in a sharp rise in long yields and CDS spreads. Neither of these economies is highly levered and we don't necessarily expect severe domestic credit stress as a result, but an outright cut-off of external financing could easily lead to significant further troubles at home as well.

Other markets have fared much better

And in other markets, again, things still look much better to date, with far fewer signs of onshore banking system or credit stress.

The policy response

What have EM central banks done? What have global institutions done?

A final question concerns the official policy response. What have EM central banks and governments done to address the recent market pressures? And what have global institutions done to date to assist emerging countries?

We've discussed a number of these issues already, so we'll restrict ourselves to four quick points here:

The global response has been limited

First, so far the global response has been essentially limited to the five deals we mentioned above, i.e., two new Fund arrangements and the three bilateral US Fed swap agreements, although IMF discussions are underway with selected other countries.

Central banks have been selling reserves

Second, over the past month many central banks have been selling substantial amounts of FX reserves in support of currencies.

Most banks have been cutting rates or easing liquidity access

Third, to the extent that EM central banks have reacted to the liquidity shortages, most have cut interest rates and lowered reserve requirements in order to ease domestic contagion fears. A smaller number of banks have provided funds directly to the domestic market by widening access to liquidity windows – and only a very few have injected significant amounts through deposit or loan facilities to address acute banking system problems.

"Sudden reversal" banks have kept rates high or even hiked

Some central banks have been forced to hike interest rates (or at very least keep them at peak levels following earlier tightening rounds), but as a general rule this list is restricted to the "sudden reversal" countries we discussed above, where recent currency movements were far more aggressive than the average.

Part 5 – Where do we go from here?

- *The main worry is not the coming growth slowdown, but rather the risk of further global panic, deleveraging and liquidity shortages. There is a large "middle group" of countries that should do well if investment risk appetite and access to global finance return – but who could also come down much harder if the recent shortage environment persists.*
- *In our baseline scenario it's not clear that we would need significant official financial support from the IMF and other agencies. But in the alternative case there is a stronger need for a global "lender of last resort".*
- *The return of Chinese construction and commodity demand is one of our key themes for 2009, and this could have significant implications for markets.*

It's not growth – it's liquidity

Liquidity, not growth

This takes us up to the present day. Now, what can we expect to see going forward? If we had to summarize in one phrase, we would say: It's not about growth – it's about liquidity.

Of course the coming slowdown will be painful

We don't mean that the coming global slowdown is not important. Quite the opposite, the prospect of four quarters of unabated developed country contraction on a y/y basis (which is what we now have in our global forecasts) is a painful enough prospect for the emerging world, especially for those smaller and medium-sized countries who will naturally bear the main impact.

But this is still manageable for the EM world

Rather, what we want to say is that the effect of the growth slowdown itself can be generally calculated and has already made its way into our current EM forecast numbers. Moreover, as we laid out in the very first section of this report, the favorable economic fundamentals and strong growth momentum in the emerging world coming into 2008 would normally imply more resilience to a developed country recession than in the past. And indeed, our baseline forecasts look for aggregate emerging real growth of 3.5% y/y in 2009, a significant drop compared to the peak of more than 7% in 2007, but still above previous recession troughs of 2% y/y or less for the EM world (Chart 51).

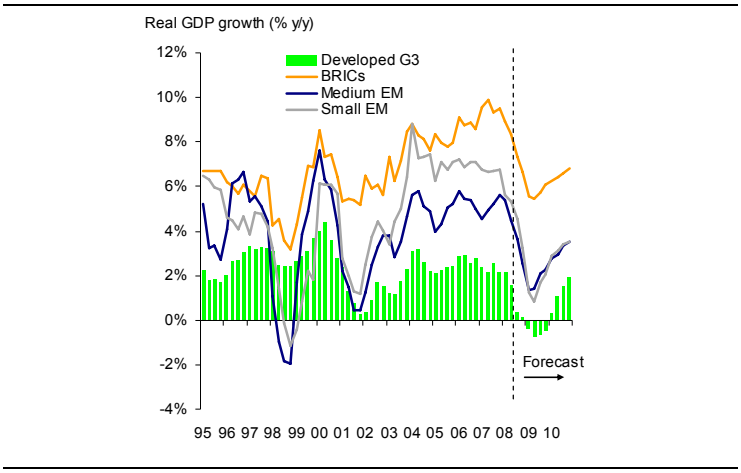
The real risks come from global liquidity

But as we stressed, the difference between and orderly downturn and a "rout" in the emerging world depends on the health of underlying balance sheets. And in the current environment, it's not the state of emerging countries themselves that poses the major risk, but rather the state of global liquidity.

Our baseline scenario is that financial markets calm down

Our baseline scenario implicitly assumes that the trends we saw in the very last week of October continue going forward, i.e., global financial markets calm down, CDS spreads and bond yields come off, volatility levels fall and dollar liquidity gradually returns to FX and credit markets. We still expect tight liquidity in the next few quarters, to be sure, but we also look for an end to the outright panic and capitulation that characterized the end of September and the first half of October. And this still leaves room for further upside surprise if markets actually stage a rebound and risk appetite returns in larger magnitudes.

Chart 51: EM growth forecasts



Source: Haver, CEIC, UBS estimates

But we also have to consider the continued "manic deleveraging" case

The alternative scenario, however, is one where the world returns to the "manic deleveraging" of early October: spreads and yields blow out again and liquidity disappears outright, with no private external financing and a continued sharp unwinding of any and all overseas positions. This in turn, eventually spreads into the domestic economy, forcing deleveraging at home and putting banking and financial systems at risk.

In our view the difference is enormous

How significant is the difference between these two scenarios? In our view, the difference is simply enormous.

Three country groups

One group would have seen instability in any global scenario

Consider the following three groups of countries. The first contains those economies where a sharp downturn and financial instability were likely inevitable in any global scenario. These are essentially the top group from our risk indices above, mostly in Central and Eastern Europe: the Baltics, Kazakhstan, Ukraine, Romania, Bulgaria, Hungary, Slovakia and a number of the former Yugoslav states; we could also add a few of the smaller Latin American countries to the list.

The next is more insulated and resilient

The second, opposing group are those countries which would be relatively immune to scenario changes; of course they would still suffer a real growth slowdown in a recessionary world, but have more limited exposure to a global financial meltdown. In this camp we would put China, Brazil, to a large extent India, most Asian surplus economies, probably Chile and Mexico (despite the recent currency volatility), and a number of Middle East countries.

But there's a large middle ground of risker countries that face two-way risk

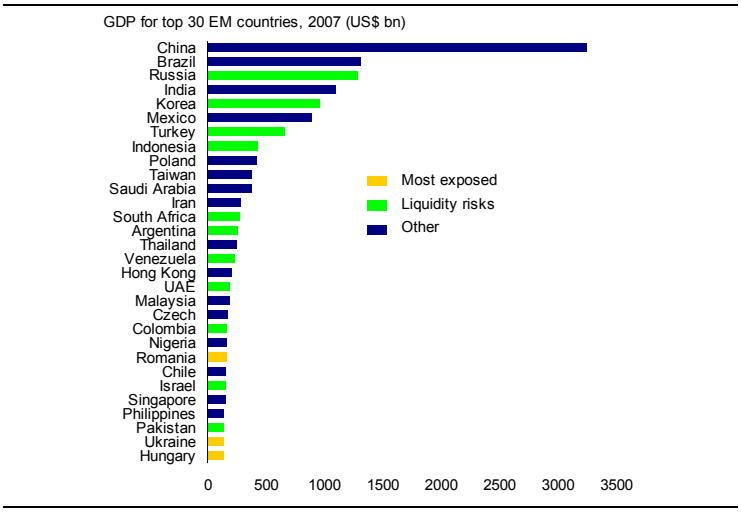
And then, crucially, there's a broad "middle ground" group of countries that could easily go either way. These are economies with decent underlying fundamentals and often more limited trade exposures, but who are also more dependent on external capital flows and would be significantly impacted from a protracted withdrawal of global finance: Turkey, Argentina, Indonesia, South Africa, Pakistan, Colombia, Israel and Vietnam. In addition we should include countries that much stronger external balance sheets but also more fragile and overstretched banking systems at home, i.e., where contagion and sentiment

shocks can have a very meaningful impact: here we would highlight Russia, Korea and the UAE, and perhaps Venezuela as well.

This group is around one-third of the EM world

As you can see, the list of "middle ground" list is quite long and includes a number of large EM economies. The first group of highest-risk countries only accounts for perhaps 7% of total emerging GDP – but the latter easily makes up one-third of the emerging world (see Chart 52).

Chart 52: Who's at risk – by size



Source: World Bank, UBS estimates

And this is why we say that global liquidity conditions are the single most important swing factor for the rest of the year and going into 2009.

What role for the IMF?

What role for the IMF?

When couched in this light, it becomes much easier to address the common question of what role the IMF (together with developed central banks) can play in emerging markets going forward, and whether the Fund will be called upon to commit enormous resources in order to "save" the EM world.

In the baseline scenario, still relatively limited

The short answer is that in our baseline scenario we would likely see a few more IMF programs along the way – but remember from Part 1 above that today's EM world is both a surplus world and a delevered world. If normal finance channels are operative, then we would expect further official support mostly in smaller and more marginal markets (again concentrating on Eastern Europe but also including more exposed countries elsewhere; Pakistan is a good example) and not as meaningful in size as the Fund programs or Fed swap arrangements already announced (although Turkey could prove an exception to this statement).

In the alternative scenario, much more significant

By contrast, in the alternative "absolute global illiquidity" scenario we could easily foresee an environment in which the Fund and other global institutions would be forced to intervene in greater magnitudes.

We can measure short-term external debt needs against FX reserves

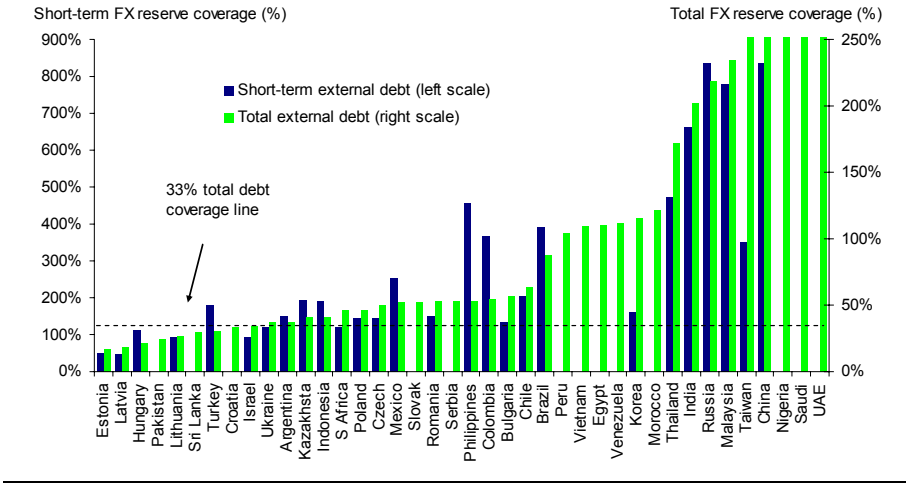
Perhaps the most simple and straightforward gauge of potential financing needs is to estimate for external debt falling due over the next, say, 12 months, and compare it to the current level of official foreign exchange reserves. And this is precisely what we have done in the blue bars in the chart below, which show the

ratio of outstanding FX reserves (as of August 2008) to reported levels of short-term external debt (as of end-2007 or mid-2008, depending on the source), measured by the left-hand scale.[8]

Eastern Europe generally shows up as the weakest

The Baltic countries generally have the lowest reserve coverage, with insufficient resources to cover even a portion of current outstanding short-term debt. Unsurprisingly, Hungary and Ukraine also show up on the low side, with reserves barely sufficient to cover near-term liabilities. Other countries such as Pakistan, Israel, South Africa, Argentina and Bulgaria also show up as higher risks. By contrast, Russia, India, China, the Middle East and a host of other economies have very comfortable reserve coverage by this measure.

Chart 53: Who needs the IMF?



Source: National central banks, World Bank, UBS Economics

However, definitions of short-term debt vary

But here's where things get a bit complicated. To begin with, not all countries report short-term external debt; as you can see there are a number of gaps in the data in the chart above. Moreover, it's not clear how comparable the short-term debt figures are; some countries may only report debt on an original maturity basis (i.e., liabilities with an original maturity of less than one year), while others show the full set of liabilities coming due within the period (on a so-called residual maturity basis). In this environment, it's probably best to think about the numbers in the chart as a lower-bound estimate.

So it's useful to think about total external debt as well

For this reason we also provide figures for *total* FX reserve coverage in the chart, as shown by the green bars; this is the stock of official reserves divided by total external debt, where the data are generally more standardized (as measured by the right-hand scale). This also brings Turkey, Kazakhstan and Indonesia into the lower end of the chart, all countries where reported short-term debt coverage is solid but where FX reserves are still only around one-third of the total stock of external debt.

[8] Where possible, we have adjusted the official reserves data to include sovereign wealth funds and other accumulated government reserves as well.

Gross private asset positions also matter – not shown in the chart

Next up is the problem of assets. The chart compares total debt in the economy with official reserve assets – but clearly we don't want to be looking just at the liability side of the private-sector balance sheet; countries with more developed financial markets often tend to have higher gross short-term external debt positions, but this would normally be offset by higher private asset positions as well. For this reason, while economies like Korea, South Africa or Israel may look similar to Romania or Ukraine at first glance, in fact we have to think about exposures in a different way. In particular, this helps explain why we believe Korea's external troubles should be broadly resolved with a currency swap arrangement, while Ukraine will need a more involved IMF adjustment program.

And we have to consider the special role of currency boards

Finally, think about the example of the Baltic countries; given that Estonia and Latvia have by far the lowest reserve coverage on all debt measures, why weren't they the first to come to the IMF for financing? The answer is that they have hard currency-board arrangements, which means that there was essentially no carry on offer for short-term investors and thus fewer truly speculative inflows; in addition, a large part of their external liabilities take the form of intra-bank transfers on the part of foreign institutions. To put it simply, there was no run on their currencies. And as we saw above, the Baltic states' financing needs are currently being resolved through a different route, i.e., a very sharp and painful drop in economic growth and thus import demand.

As well as currency trading positions

Hungary, by contrast, was one of the more favored "carry/vol" trades in the EM world, with larger speculative positioning, and saw a very sharp sell-off over the past few weeks as the currency took a big hit. Together with the relatively exposed FX reserves position (and the fact that Hungary's overall external debt as a share of *GDP* is much higher than its neighbors, another indicator for investors to watch) it was also the threat of further unwinding and illiquidity in the swaps market that brought the government to the table for IMF and EU support. In the Ukraine it was as much the nature of short-term finance needs as the absolute size, together with the perceived threat of speculative flows, that led to the IMF discussions as well.

So in an illiquid world official institutions have a strong role to play

So once again, if global financing simply dries up and disappears then we would likely see a steady stream of emerging countries coming to multilateral institutions for external support (perhaps in roughly the order of short-term or total debt exposures in the above chart). And here the Fund would clearly play a very important role as an international "lender of last resort".

Whereas if the recent panic subsides, many more countries can manage

On the other hand, if financial markets stabilize and the recent panic subsides, then we're back to a world where a more nuanced look at credit quality, underlying economic fundamentals and market positioning becomes just as important as the simple reserves/debt mathematics above. And in this scenario it's still not clear whether we would see more than a moderate stream of new support arrangements coming on line.

Two important "swing" economies (1): Can China save the day?

China is the least risky EM country by our metrics

If you go back to our summary EM risk index in Chart 13 above, you will note that China is the single least exposed economy of all the countries in our sample: moderate export exposure, a closed capital account, very low and falling bank loan-deposit ratios, an absolute decline in the overall credit/GDP ratio since

2004, negligible public and private external debt, one of the world's highest trade surpluses and the world's highest stock of FX reserves.

So why the sharp property downturn

At the same time, we saw that the outright collapse of Chinese construction and material demand was one of the primary causes of the overall drop in commodity markets this summer. If it wasn't external exposure and fragility that brought on the mainland downturn, why did growth rates come off so suddenly in the middle of the year?

In fact, this had little to do with global fragility

The bad news is that China's property retrenchment has very little to do with external liquidity or export growth trends and everything to do with domestic factors, including the earlier monetary tightening in response to higher inflation as well as clear property bubbles in some of the higher-end mainland markets. The combination of insufficient financing and a reversal of excessive price gains in luxury markets had a very sharp impact on housing sales, construction activity and steel demand – and the Olympics-related shutdowns of both construction and heavy industry in key northern regions in the third quarter didn't help either. And as a result, it really doesn't matter if the global situation improves of not; we still expect China to have troubled property markets and construction declines through the end of this year and perhaps beyond.

We expect much better construction demand in 2009

The good news, however, is that the outlook for next year as a whole is much better, and we look for a rebound in construction and property activity and thus in commodity demand through 2009, beginning perhaps in the first or second quarter. The combination of slowing exports and weaker overall investment spending still points to a trend slowdown, but in our view a property recovery and net government stimulus also guarantee that China can stabilize growth at 8% or above in the second half of 2009. This may not "save" emerging markets but it could provide a significant boost to beleaguered commodity markets – which, in turn, played an important role in the emerging currency and liquidity capitulation of the past months.

Four reasons not to look for a multi-year recession

We've written on China demand themes repeatedly in the past, but to reiterate our views, there are four key reasons why we believe the property sector will not careen into a US-style multi-year contraction.

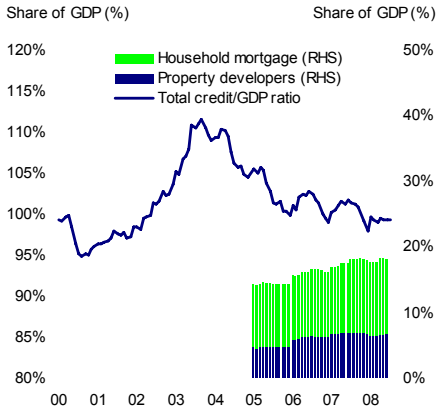
1. Housing and construction leverage has been flat

To begin with, virtually every housing bubble in post-war history has been associated with an increase in debt and leverage, both housing-specific and usually in the overall economy as well; however, when we look at China this is not the case. Aggregate mainland credit growth has been far slower than the emerging average for most of the decade (Chart 54), the overall credit/GDP ratio has fallen significantly since 2004, and developer and mortgage exposure has essentially been flat as a share of the economy (Chart 55).

Chart 54: Loan growth – China vs. EM

Source: Haver, CEIC, UBS estimates

Chart 55: Leverage trends in China

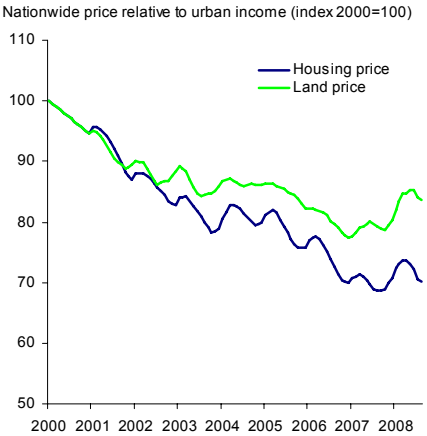


Source: CEIC, UBS estimates

Second, although most readers are aware of the clear evidence for housing bubbles in certain high-end segments of the Chinese property sector, where prices might have risen anywhere from 30% to 70% during 2007 alone, this is not true for the nationwide market. In fact, the average housing price in the economy has risen far less than urban incomes in this decade (Chart 56), i.e., housing affordability has actually risen steadily since 2000. Again, this stands in sharp contrast to every housing bubble we've seen in the past.

2. Nationwide affordability has been rising

Chart 56: Chinese housing price/income ratio

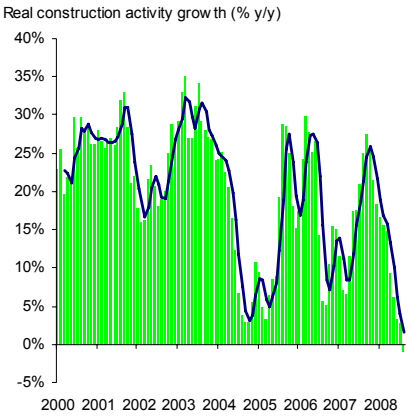


Source: CEIC, UBS estimates

A similar point holds on the housing supply side. Many investors are under the impression that China has had a massive, uninterrupted construction boom for the past seven years, but looking at Chart 57 the real boom was from 2000 through the end of 2003. Since 2004 the mainland has actually seen three construction recessions, including the current downturn.

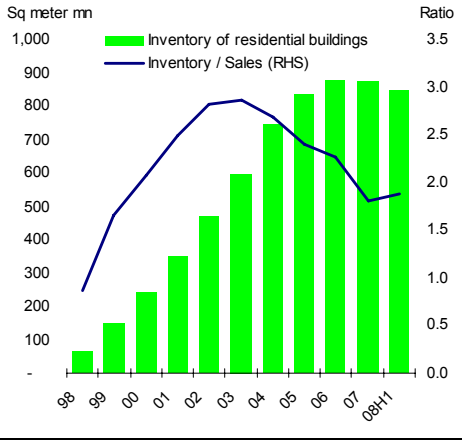
3. Aggregate supply growth has been muted

Chart 57: Not the first construction recession



Source: CEIC, UBS estimates

Chart 58: No growth in inventories



Source: CEIC, UBS estimates

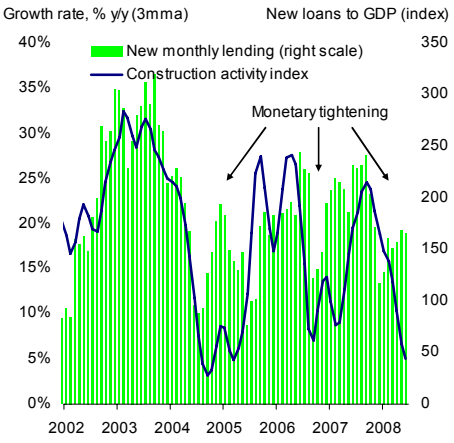
And inventories have been stable

And while it's certainly true that the outstanding stock of apparent inventories (defined as cumulative housing completions less housing sales) is very high by international standards, it's also true that the absolute level of inventories has not growth since 2005 – and the inventory/sales ratio has fallen considerably over the last five years (Chart 58). In other words, high market supply is hardly a recent phenomenon.

4. Monetary tightening played a key role in the slowdown …

Finally, if you compare the growth rate of real construction activity with monthly new lending in the economy, you will note that each construction downturn was initiated by a drop in bank credit, which in turn was invariably a result of official monetary tightening as the central bank imposed more stringent credit quotas on the banking system. The last 12 months were no different; the People's Bank of China began lowering credit targets in the fourth quarter of 2007, which corresponds exactly to the peak of the most recent construction cycle (Chart 59).

Chart 59: Policy matters



Source: CEIC, UBS estimates

… which means that monetary easing can speed the recovery

The key point here is that each of the construction downturns also ended with an easing in credit policies, as banks began to lend back to developers and construction enterprises in greater amounts. And this highlights the role of

government policy stimulus going forward, as we expect more significant easing on both the monetary and fiscal fronts by end-year.

There are no guarantees, of course

There are no guarantees, of course, and obviously the failure of Chinese construction demand to recovery next year would be a big issue for global commodity markets. But in our view the relatively balanced structural conditions in the overall property sector make near-term recovery a good probability.

See Tao Wang's publications for further reference

UBS China economist **Tao Wang** has written about these issues at length; for more information we would recommend the following: *All About China's Property Sector Downturn* (*Asian Economic Perspectives, 8 September 2008*), *So Again, Why Is This Not a Collapse?* (*EM Focus, 15 October 2008*), and *A Bigger External Shock Requires a Stronger Policy Response* (*China Focus, 31 October 2008*).

Two important "swing" economies (2): Will Russia hold up?

Note: The following text comes from UBS Russia economics and strategy head ***Clemens Grafe****, and was originally published in EMEA Crisis – A Primer (EMEA Economic Perspectives, 22 October 2008).*

Russia's domestic vulnerability has surprised

That Russia is vulnerable is somewhat surprising at first sight. The country has US$527 billion of external debt, but also US$540 billion of reserves, and the share of external debt in GDP (33%) is the second lowest in the EMEA countries we look at. The country has run consistently large fiscal surpluses and has accumulated fiscal savings of US$280 billion, or 15% of GDP. Bank loans as a share of GDP are low at 32%, and household debt accounts for only 9.5% of GDP. Yet four out of the top 40 banks have had to be taken over by the state, the market is speculating on rapid currency depreciation, companies are complaining about a credit freeze, and depositors are withdrawing deposits from the banking system.

The key factors are the weak financial system and commodity dependence

In our view, there are two main vulnerabilities for Russia: its weak domestic financial system and its dependence on commodity prices. While the market and, to some extent, the population believe the ruble should fluctuate with commodity prices, the authorities have in the past resisted this idea – to avoid "Dutch disease" on the upturn, and now on the downturn because they are not sure the financial sector can withstand it. Russia still has around 1200 banks, most of which are very small and often have little capital. Trust in the banking system is low because the population has lost its savings twice in the past 20 years, and this is why any sign of vulnerability leads to withdrawals of deposits.

The main risk is an escalation of deposit withdrawals

The main short-term risk in Russia, therefore, is an escalation of withdrawals leading to more failures in the banking system. The financial system is also able to deleverage far more quickly than those of many other countries because the leverage is built through marketable instruments. With yields on the corporate bonds of banks having shot up to between 14% and 50%, banks are unlikely to lend even if they have funds because it is more lucrative for them to buy back their own debt. We believe this is why lending has been affected more in Russia than in other countries even though the size of the leverage is low.

The good news is that Russia will deleverage early

On the positive side, as long as Russia avoids a financial meltdown, and we think it most likely will, the financial system will complete its deleveraging far more quickly than other countries. The timeframe of these vulnerabilities will depend on when we have a clearer idea of the future path of oil prices. If oil prices fall much further and stay there, the ruble will ultimately have to weaken significantly – a transition that is difficult to manage given the lack of trust in the financial system. We think the ruble is currently fairly valued for oil prices at around US$80 per barrel.

Growth in 2009 will depend on oil prices

Growth in real terms will slow to somewhere between 4% and 6% in 2009, in our view, depending on oil prices and what happens to cross-border capital flows. While this still sounds good, consumption and investment in US dollar terms will grow far less quickly than the 30-40% annually we have seen in the past – by 20% at best, almost flat at worst – which should lead to large revisions to earnings growth forecasts. The authorities have so far been reasonably pro-active in addressing the problems in the financial sector, providing liquidity support, making sure that companies are able to repay foreign debt, and providing liquidity.

Is this a temporary or permanent shock?

However, the main vulnerability – i.e., further runs on deposits and a growing lack of trust in the ruble – are not addressed by those measures. While the current situation is difficult, the fundamental question for both investors and the authorities remains whether the commodity price weakness is temporary, or whether we are ultimately in for another period akin to the Asian crisis. The latter scenario involves demand in emerging markets being destroyed, commodity prices falling sharply, and for a number of years.

We believe temporary, but watch the ruble

The UBS view is that the weakness is temporary, but if cross-border capital flows collapse the alternative is also clearly possible. While Russia is far better placed than in the 1990s to withstand such a period, it would have to allow the ruble to depreciate very significantly. In theory, the CBR has the ability to ensure that any such a depreciation occurs gradually, given the control that it exercises over the FX market, but trends in asset prices will crucially depend on how successfully the depreciation is managed.

See Clemens Grafe's publications for further reference

Clemens has written at length on Russian issues; for further reference please see *Seven Years of Good Times Are Not Always Followed By Seven Years of Bad* (*Russian Economic Comment, 18 September 2008*), *Answers on Russia* (*EM Focus, 25 September 2008*), as well as the *EMEA Crisis* report referenced above.

And the rest

See also the "cheat sheets" in the Appendix

For easy reference, we have included a set of "EM Vulnerability Cheat Sheets" (first initiated in the *EMEA Crisis* report) at the end of this report; these tables show key economic vulnerabilities to global financial deleveraging, export slowdown as well as domestic fragilities for EM countries under UBS coverage.

Part 6 – Other themes to watch

- *Is the current shock inflationary or deflationary for EM countries?*
- *Are EM surpluses falling hard – and what does this mean for the world?*

What about inflation and EM surpluses?

In the final section of this report we turn briefly to a couple of popular remaining questions. First, is the current shock inflationary or deflationary for the emerging world? And second, does this presage the end of EM surpluses (and their recycling into US and European Treasury instruments)?

Inflationary or deflationary?

Is this shock inflationary or deflationary?

On the one hand, a significant slowdown in growth is normally considered deflationary (or at least disinflationary) in any economy. On the other, the experience of emerging markets shows that financial crises usually lead to much higher inflation as a result of dramatic currency devaluation and frantic monetary easing by central banks. So which is it today.

We expect deflationary in the near term

In our view, the current shocks should clearly be deflationary in the near term. To begin with, as discussed earlier, we haven't seen nearly as much currency weakness to date as in previous EM crisis rounds – and one of the main tenets of our report is that we may not get there. And although central banks are easing we still expect bank credit growth to slow considerably in aggregate; it's one thing to provide base money liquidity and quite another to have real demand for this liquidity in a slowing environment, particularly when we don't see the kind of quasi-fiscal deficit financing pressures that characterized earlier crisis rounds.

Especially given the recent movements in commodity prices

Another important factor is commodity prices; as we highlighted in *Inflation … And So What?* (*EM Perspectives, 12 August 2008*), global food prices in particular led to a dramatic rise in overall CPI inflation in emerging countries since the middle of 2007. And now that traded commodity prices have dropped heavily, including food as well as oil and other fuels, base effects alone should bring headline inflation rates down by anywhere from 300 to 400 basis points in the next few quarters; this process may not occur in every individual case but should very pronounced indeed across the broader EM world.

In the medium term we still look for higher inflation

In the medium term, however – i.e., once we have come through the global slowdown and expansion momentum recovers in emerging countries in the coming few years – we still see stronger reflationary pressures ahead, again for the reasons we laid out in the *Inflation … And So What?* report. With stronger balance sheets and good longer-term growth fundamentals, additional near-term pump-priming and even lower interest rates would set the stage for a more accommodative pricing stance going forward.

As in other areas, Eastern Europe is the wild card here

Put another way, we don't expect growth to come off so hard that medium-term inflation prospects disappear – at least not across the Asian and Latin American economies. For Eastern Europe, the question of both near-term and medium-term inflation prospects is a much more difficult one, and we will have to revisit this in the months and quarters ahead.

The end of EM surpluses?

Is this the end of EM surpluses?

And this brings us to our second question: Is this the end of EM surpluses? And if so, what does it mean for the rest of the world. As it turns out, we will be devoting an entire upcoming Perspectives report to this topic, so let us just give a bullet-point outline of our answers here and leave the full analysis for the next publication:

Maybe not so soon

First, we do expect emerging current account balances and thus excess savings to fall over the medium term – but it's not at all clear how fast this process will occur. Of course falling commodity prices reduce net balances for commodity exporters, but in part this also shows up as a rising surplus for emerging commodity importers. And keep in mind that slowing EM growth means slower imports; in fact, historically emerging surpluses have jumped significantly in earlier crisis scenarios.

There are lots of myths about surpluses and money supply

Second, in our experience most investors have a general misconception about the monetary impact of emerging surpluses. In fact, they have *not* led to significantly higher money growth either at home or abroad; instead, they are at heart a global portfolio allocation shock, as financial assets are transferred at an ever-faster pace from net borrowers to net savers. So higher net EM surpluses meant a higher-than-usual bid for liquid sovereign and quasi-sovereign assets (and thus provided a "liquidity stimulus" in the form of lower-than-usual rates) – but again, they didn't actually have a big impact on local or global money supply.

It's not clear whether falling surpluses are a good or bad thing for the G3

Third, while investors tend to view a sharp decline in emerging surpluses as a potential source of global (and usually US dollar) panic, it's not really clear whether developed economies are better off if surpluses stay … or go. If emerging surpluses remain high, then the G3 should see continued support for Treasury markets, but EM countries would not be providing a net outlet for developed country exports. On the other hand, if EM surpluses fall sharply, Treasury yields could rise, but the resulting emerging net import expansion would also allow the G3 to achieve deleveraging at higher income growth rates than would otherwise be possible.

Again, we will provide further details in the upcoming report, so please stay tuned.

Table 1: EMEA vulnerability cheat sheet

	Russia	Ukraine	Kazakhstan	Hungary	Baltics	Romania	Bulgaria	Turkey	South Africa
Underlying problem	Weak financial system, exposure to commodity prices	Weak institutions, weak politics, exposure to commodity prices, rising external deficit	Overextended banking system, exposure to commodity prices	FX lending, high government and external debt, FX loans important for CAD financing	FX lending, high current account deficit, high external debt, foreign banks finance most of deficit	FX lending, high current account deficit, mostly financed by foreign banks, lax fiscal policy	FX lending, high current account deficit, financed through foreign bank lending	Sizeable current account deficit, increasingly financed through portfolio capital and corporate debt	Sizeable current account deficit, financed largely through portfolio capital
Reflection of current crisis	Sharp sell-off in stock market, deposit withdrawals, credit spreads have exploded	UAH has weakened beyond official target range	Sharp sell-off in bonds and increase in NPLs	Sell-off in FX, equity and bond markets	Rising money-market and CDS rates	Rising money-market and CDS rates, currency weakness	Rising money-market and CDS rates	Sell-off in TRY and equity markets, higher TRY yields	Sell-off in ZAR and equity markets, higher ZAR yields
Risk of escalation	Short term: withdrawals of deposits from banks to lead to more failures, government bailing out companies; long term: oil price expectations moving far below US$80 barrel	FX depreciation, growing problems in banking sector	Oil prices permanently moving much lower than US$80 per barrel. Asset quality in banks to deteriorate much further than the 15% of NPLs known	Halt of bank lending, further FX weakness	Banks no longer financing external deficit, loss of confidence in local currency, fixed exchange rate breaking	Banks no longer financing external deficit, sharp currency depreciation	Banks no longer financing external deficit, loss of confidence in LEV, currency board breaking	TRY losses could trigger rate hikes, sell-off in financial markets, reduced corporate access to foreign borrowing	Further ZAR weakness could trigger rate hikes, further sell-off in financial markets
Potential damage	Slowdown in growth, also depending on oil prices, which could lead to need for weaker ruble	Sharp slowdown in growth, depreciation of exchange rate	FX depreciation if oil prices move permanently much lower	Slowdown in growth, problems with FX loans	Deep recession, problems on FX loans	Sharp slowdown in growth, problems on FX loans	Sharp slowdown in growth, problems on FX loans	Further reduction in GDP growth	Further reduction in GDP growth
Potential for spillover	Financial contagion to other emerging markets, losses in trading partner growth	Contagion mainly through foreign banks; CIS affected through sentiment	Low, mostly to Ukraine	Contagion to other CEE countries, including Romania	Very strong intra-regional contagion, could affect Bulgaria due to the similar FX regimes	Contagion to and from Bulgaria, also to a lesser extent Hungary	Contagion to and from Bulgaria/Baltics	Financial contagion to other emerging markets, given active involvement of foreign investors	Financial contagion to other emerging markets, given active involvement of foreign investors
Is help on the way?	Government has been pro-active, providing liquidity support and capital, and starting to liquidate failing banks	IMF support announced	Government is talking about substantial fund to support growth and buy problem assets from banks	IMF and EU support announced; have also seen fiscal retrenchment and central bank liquidity support		Currently lack of domestic liquidity on the interbank market keeps RON strong	Government measures to help interbank market	Talk of a new IMF program	
What is special about the country?	Sound macroeconomic conditions; large current account and fiscal surplus; large fiscal savings	Institutional weaknesses and dependence on commodities, excessive leverage in financial sector	Kazakh banking sector has seen sharp deceleration last year already, which helps reduce future vulnerability	Short-term debt is mainly due to foreign banks from their subsidiaries, no real estate bubble, fairly conservative loan-to-values on mortgages	Banking system mainly owned by Scandinavian banks, easier supervisory coordination between parties, but also concentrated risks	Banking system mainly owned by several EU countries, more difficult supervisory coordination between parties, but also less concentrated risks	Banking system mainly owned by several EU countries, more difficult supervisory coordination between parties, but also less concentrated risks	Banking sector appears sound	Bankings sector sound, little affected by global credit crisis

Table 1: EMEA vulnerability cheat sheet, continued

	Russia	Ukraine	Kazakhstan	Hungary	Baltics	Romania	Bulgaria	Turkey	South Africa
Vulnerability to global liquidity	Low	High	Low	High	High	High	High	Medium/High	Medium
Vulnerability to exports	Low	Low	Low	High	Medium	Low	Medium	Low	Low
Vulnerability to domestic imbalances	High	High	High	Medium/High	High	High	Medium/High	Low/Medium	Medium

Note: we would rate the overall scores of Poland, the Czech Republic, Slovakia and Israel as Low/Medium; Source: UBS

Table 2: Latin America vulnerability cheat sheet

	Brazil	Mexico	Argentina	Chile	Colombia	Eduador	Peru	Venezuela
Underlying problem	Overly strong growth and high currency exposure to commodities	Strong one-way positioning in the MXN and high export exposure to US	No official access to credit, high inflation, large export dependence on commodities	High commodity exposure to economy and currency, levered banking system	Very high commodity exposure to the currency, high domestic leverage growth	Extremely high oil dependency	Low export exposure, but very high skew towards commodities	Oil accounts for 90% of exports and 50% of fiscal revenues, high domestic oil subsidies
Reflection of current crisis	Strong sell-off in BRL, dollar spreads widening	Strong sell-off in MXN, dollar liquidity shortage	Sharp increase in bond yields and CDS spreads, weakening currency	Sell-off in FX, equity and bond markets, dollar liquidity	Sell-off in currency, rising bond and CDS spreads	Sharply rising CDS spreads	Rising CDS rates	Falling current account and budget surpluses
Risk of escalation	Currency weakness and dollar unwind leads to corporate fragility at home	Currency weakness and dollar unwind leads to corporate fragility at home	Falling soy and commodity prices could worsen fiscal and balance of payments positions	Further declines in commodity prices could harm growth prospects	Loss of external financing could put stronger adjustment pressures on domestic banking system	Falling prices could hurt external and fiscal positions	Falling mineral prices could affect profitability	Falling oil prices hurt economic growth prospects
Potenial damage	More significant slowdown in growth, weaker currency	More significant slowdown in growth, weaker currency	Higher default risks could hurt the economy significantly	Slowing growth, weaker currency	Much slower growth	Much slower growth, long-term worries on debt service	Slower growth	Further reduction in GDP growth, long-term worsening of debt service potential
Potential for spillover	Moderate financial contagion in neighboring markets	Moderate financial contagion in neighboring markets	Large contagion for a default event	Moderate financial contagion in neighboring markets	Limited	Limited	Limited	Moderate financial contagion in neighboring markets
Is help on the way?	US Fed has provided currency swap funds	US Fed has provided currency swap funds	Government is attempting to shore up fiscal financing, but recent pension system nationalization was ill-received by investors	Central bank has been providing US dollar financing to companies				Venezuela has large accumulated sovereign reserves
What is special about the country?	Relatively balanced external position, healthy banking system, large FX reserve coverage	Relatively balanced external position, with exposure to falling oil prices, generally healthy banking system; but strong US exposures	Low overall leverage exposure, fiscal surpluses and still a strong current account position	External current account and fiscal position strong, good reserve position	The sizeable external deficits make Colombia a broad exception among Latin American markets	Ecuador uses the US dollar, and thus has limited room for domestic macro adjustment	Fiscal and current account surpluses, healthy banking and credit indicators	Banking sector appears sound
Vulnerability to global liquidity	Low/Medium	Medium	Medium	Low/Medium	Medium/High	High	Low	Low
Vulnerability to exports	Low	Medium	Low	Medium	Low	Medium	Low/Medium	Medium
Vulnerability to domestic imbalances	Low/Medium	Low	High	Low	High	Medium	Low	Low/Medium

Source: UBS

Table 3: Asia vulnerability cheat sheet

	China	India	Korea	Indonesia	Philippines	Taiwan	Other exporters 1/	Pakistan
Underlying problem	Currently in a sharp domestic property downturn	Very rapid GDP and credit growth, strong role of foreign portfolio flows, large fiscal deficit	Very high levels of domestic debt and leverage, with one-way currency positioning	Large and strongly foreign-investment debt market and historically volatile foreign capital and FX	Net foreign portfolio inflows, historically volatile debt and currency markets			High fiscal deficit, current account deficit, high inflation and low reserve cover
Reflection of current crisis	Property prices falling in a number of areas, construction and steel demand now negative	INR weakening, FX reserves sales, high CDS spreads, local wholesale rates up	Sharp KRW weakening, shortages of dollar liquidity	Sell-off in IDR and sharp increase in bondspreads	PHP has sold off, and dollar spreads have widened			Currency, dollar bonds and CDS all sold off
Risk of escalation	Main risk is a continuing property recession through 2009, plus the potential impact of slowing external demand	Continued portfolio outflows and tighter credit at home lead to much slower growth	The currency unwind could spill over into the domestic banking system, cause domestic deleveraging	Could trigger IDR rush on the part of domestic savers	Sharp reversal of portfolio flows leads to further FX reserve losses			IMF deal fails, debt moratorium, much higher inflation from monetization, very large FX depreciation
Potenial damage	Significant slowdown in growth	Sharp slowdown in growth, further INR depreciation	Growth slowdown, much tighter credit conditions	Slower growth, weaker currency	Tighter credit conditions at home			Growth stagnates
Potential for spillover	Clear impact on global commodity markets and exporters	Contagion mostly through EM FX sentiment	Mostly to other North Asian markets	Contagion mostly through EM FX sentiment	Contagion mostly through EM FX sentiment			Substantial political risk
Is help on the way?	The government has now moved to significant monetary easing and is considering fiscal measures	Central bank has been easing to provide wholesale liquidity support	US Fed has announced currency swap arrangement	Central bank has been easing access to liquidity		Central bank has been easing gradually	Central banks have generally been easing gradually	IMF-led package under discussion, US Treasury and Saudi financing agreed
What is special about the country?	Sound overall macro conditions, mild credit growth, high profitability, low export exposure and insulated financial markets - and good underlying supply/demand in property in our view as well	Low export exposure and high FX reserves, large pool of domestic savings; high deficits leave little room for big fiscal easing	Korea is a net creditor economy with a balance current account, falling oil prices could move back to surplus	Relatively balanced external position, low leverage ratios at home, low budget financing needs for next year - but again, historically volatile and fragile debt and currency markets	The economy runs a low fiscal deficit and a current account surplus; domestic leverage is not a significant issue	Taiwan runs an external surplus, does not have high leverage growth at home - the biggest risk is the high exposure to exports	These economies run external surpluses and generally do not have high leverage growth at home - the biggest risk is the high exposure to exports	Oil below US$65 eliminates fiscal subsidies, inflation mostly due to deregulation, potential for future natural gas investment and development
Vulnerability to global liquidity	Low	Medium	Low/Medium	Medium	Low/Medium	Low	Low	High
Vulnerability to exports	Low	Low	Low/Medium	Low	Low	High	High	Low
Vulnerability to domestic imbalances	Low/Medium	Medium	Medium/High	Low/Medium	Low	Low	Low	Low/Medium

1/ Other exporters are Singapore, Hong Kong, Malaysia and Thailand; Source: UBS

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