

## *On the Colliding Economic and Financial Tectonic Plates*

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***Bottom line:** 2012 will be an important year, as the aggregate size of EM economies (in PPP-adjusted terms) is projected by the IMF to match that of DM economies. Another important watershed was the year 2001, when China was admitted to the WTO, which in our view marked one key turning point in the global economy. This economic rise of EM relative to DM is a secular trend that will likely persist in the years ahead. Importantly, however, this economic catch-up of EM to DM is not matched by an evolving global financial system. Specifically, EM suffers from a shortage of financial assets and an underdeveloped financial and monetary system. We believe that the misalignment of the global economic and financial tectonic plates was one key factor that made the global financial crisis of 2008 as severe as it was. But the macro policies implemented around the world so far have focused on containing the damage from the quake and strengthening the ‘building codes’ to better withstand future quakes, but not to reduce the probability of future quakes. Unless and until the world finds ways to reform the global financial system – in particular developing EM’s financial and monetary systems, future financial crises seem likely.*

**Two different tectonic plates.** The secular trends in the global economy – the relative economic performances between DM (developed markets) and EM (emerging markets) – are evident. But the global financial system is incompatible with these underlying trends. Part of the reason for this mis-match between the world’s real economies and its financial system is an underdeveloped financial sector in EM: a shortage in the supply of ‘safe assets’ being an example of this. We visualize this conflict as two tectonic plates sitting on top of each other, with the ‘financial plate’ above not moving fast enough, while the ‘economic plate below will continue to be propelled by secular forces. The end result is a series of earthquakes, most probably causing more breakages in the global financial system. This discussion goes beyond the fragility of the global financial system in the aftermath of the global financial crisis of 2008. Instead, we propose that the global financial crisis of 2008 was a

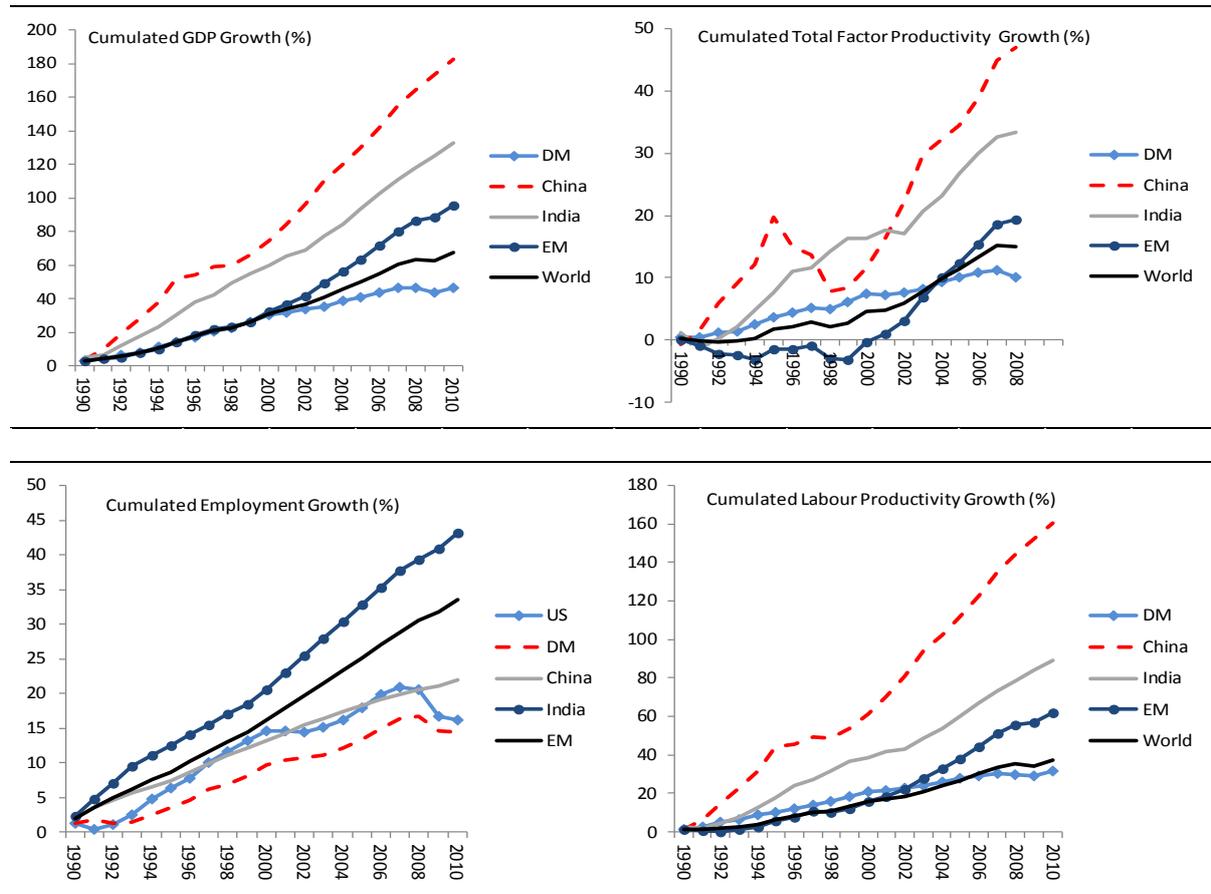
*result* of these shifting tectonic plates, at least it would not have been as severe as it was had it not been for these structural pressures. The counter-cyclical policies (monetary easy, fiscal stimulus) that have been implemented around the world to avert a repeat of the Great Depression only contained the damage but will not prevent future ‘quakes’. Also, the regulatory steps taken essentially tighten the ‘building codes’ so that the economies can better withstand future quakes, but do little to prevent future crises.

**Focus on 2001.** We have stressed in the past that many econometric relationships between various macro variables show a structural break in 2001: e.g., global trade, the relationship between crude oil prices and the dollar, reserve accumulation, ... etc. Our hypothesis is that China being admitted to the WTO as a full member in 2001 was a monumental event that altered the global economy, as it effectively doubled the global labour force. Stylistically, one could think of the change as follows: the world had labour and capital of (L, K) before 2001; but after China joined the WTO, the world suddenly had (K, 2L). This led to a protracted period of a high return on capital relative to labour, and a period of intense capital deepening (building up of K to match the doubling of L), especially in EM. Intensified labour disputes in the developed West, debates on entitlement spending in DM, and super-easy monetary policies in the West justified by low wage inflation can all be considered in this context.

**Massive productivity gains in EM since 2001.** In terms of the Solow decomposition of growth, a country’s potential growth could be described as  $A \cdot F(K, L)$ , i.e., growth is a function of technology or the total factor productivity (A), and a production function that utilizes capital (K) and labour (L).

The four charts below, based on the data from the US Conference Board, show the basic trends of these variables. The top left panel shows, unsurprisingly, the dramatic out-performance of the Chinese economy, and the under-performance of DM, *especially after 2001*. The top right panel shows, more importantly, that most of the economic growth in EM and China came from TFP (total factor productivity) growth, i.e., a big portion of the economic growth in China and EM came from factors that cannot be explained by the ‘measured’ labour and capital stocks. Our view is that the full access to the global economy by China in 2001 was the turning point, as it permitted China to better achieve its economic potential. The bottom right panel shows how capital deepening in

China (investment or the build-up of  $K$ ) has made Chinese labour much more productive.<sup>1</sup>

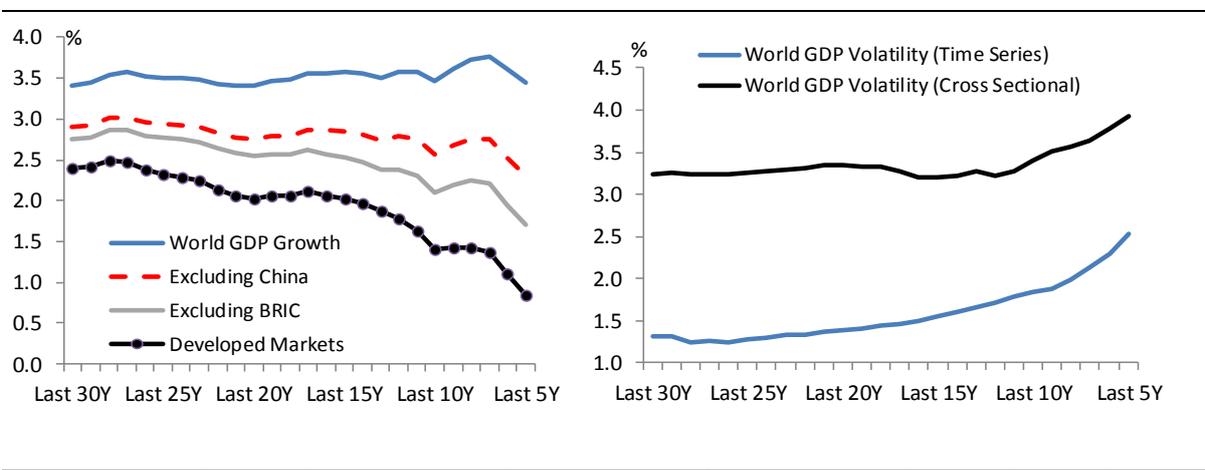


**Supply side not demand side changes.** The Solow concept and the variables  $A$ ,  $K$ , and  $L$  are all ‘supply’ side notions, i.e., they measure the productive capacity of economies and not the adequacy of demand of these economies. The upshot of the above paragraph is that EM economies have experienced a dramatic improvement in its productivity capacity since 2001. In contrast, DM economies have experienced stagnant labour productivity since 2006 and unremarkable TFP since 2005. One key question is whether DM should pay more attention to the productive capacity of their economies, rather than the adequacy of demand, as the Fed thinks is the main problem plaguing the US.

**Cross-sectional and time-series growth volatility.** The abovementioned supply-side factors have led to some peculiar trends in global economic growth. First, while it is well-recognised that DM growth has trended lower while EM growth has trended higher in the past decades, it may not be as well appreciated

<sup>1</sup> The bottom left panel does not show a dramatic increase in the total stock of workers, mainly because the time series does not capture the labour migration between agricultural and industrial sectors. If we measure only the industrial sector, there has been a dramatic increase in labour supply, akin to the L-to-2L point above.

that the overall global economic growth rate has been remarkably stable over the past 30 years. The chart on the left below shows the period average growth rates of different groups of countries in the world.<sup>2</sup> The blue line (the line at the top) shows how stable the world's aggregate growth rate has been in the last 30 years: no meaningful change in global growth in three decades. Second, despite the relatively stable global growth, there has been an increase in (i) cross-sectional and (ii) time series growth volatility (the chart on the right below). These two observations validate the prevalent view that, in thinking about the global economic outlook, it is increasingly important to refrain from being fixated on the growth rate of the US, and instead consider the multi-speed nature of the world.<sup>3</sup>



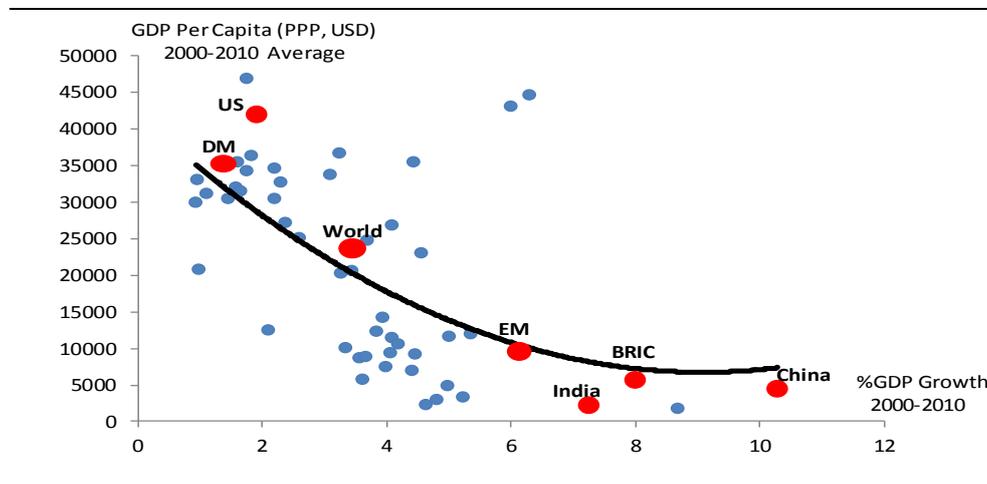
**These economic tectonic trends have a long way to go.** Poor countries tend to grow faster, and rich countries tend to grow slower. The chart below shows this fundamental inverse relationship between the income level and the incomes growth rate.<sup>4</sup> While in the coming years, EM economies will surely encounter challenges in continuing to achieve rapid growth rates, but from a multi-decade perspective, the capacity of EM economies to continue to catch up to the DM

<sup>2</sup> These charts are based on data from the IMF's World Economic Outlook dataset.

<sup>3</sup> The discussion so far is related to the decoupling versus coupling debate. In the years leading up to and the first year into the global recession of 2008, there was a fierce debate on whether the emerging market (EM) economies had successfully decoupled from the developed markets (DM). It may be useful to consider the concept of de-coupling as the 'beta' between EM and DM economic growth, while the 'alphas' of these two groups of countries could, and indeed were, dramatically different. In other words, if there is a double-dip in the DM economies in the coming years, EM economies will most probably also falter (i.e., the high-beta effect). However, the 'alphas' of the EM economies are sufficiently high that their economic growth rates will likely continue to diverge on a trend basis between DM and EM.

<sup>4</sup> While China has indeed impressed with their economic growth rate in recent years, and for having surpassed Japan as the second-largest economy in the world, in the diagram above, China is not quite an outlier relative to the basic relationship between the income levels and the income growth rates. By the way, the two outliers to the northeast of the curve (countries with very high per capita income levels, as well as high economic growth rates) are Singapore and the UAE.

economies is immense, and the process could last a long time. In terms of the chart below, EM countries will likely continue to climb up, over time, toward the northwest corner of the curve. The gap in the per capita incomes of EM and DM is still so substantial that the catch up phase is likely to last a long time.



**The global financial tectonic plate has barely moved.** In 2000, China’s foreign reserves were USD165 billion. They are now USD3.0 trillion. These massive foreign reserves are both a sign of strength as well as a sign of weakness. They are a positive because the foreign reserves provide a cushion against a ‘sudden stop’ in capital inflows or a capital flight. At the same time, they are a sign of weakness because they reflect China’s continued reliance on the de facto currency peg, and, in turn, the Fed’s monetary policy. The disparate levels of economic and financial development in EM economies are akin to a man with a Mr Universe upper body but a 12 year-old-boy’s legs. The dominance of the US dollar as an international currency, should the Fed be the central bank for the world, and the mounting pressures on the EMU and the de facto dollar zone are all derivatives of a global *financial* tectonic plate not keeping in step with the moving *economic* tectonic plate.

**The Global Financial Crisis of 2008 was a result of these economic tectonic shifts.** In our view, a post-mortem on the financial crisis of 2008 should be carried out from a global and not a local perspective. The low interest rate environment that had prevailed prior to the crisis was a result of the ‘globalisation dividends’ since 2001, as the addition of China’s labour force had yielded an ‘inflation tailwind’ for the rest of the world. The aggressive accumulation of foreign reserves further distorted the yield curves of the developed countries. We are by no means putting the blame on the EM economies. But in our view the global financial crisis would not have been

possible had the global financial system evolved with the rapidly changing global economy.

**What now?** We have these thoughts and concerns.

- **Concern 1. Inflation targeting.** We believe the inflation targeting (IT) framework needs to be critically re-examined. IT is a fundamentally ‘local’ concept, i.e., the monetary authorities react only to measures of local inflation. However, if we are right with the above analysis, that the developed West enjoyed an ‘inflation tailwind’ from the EM economies in the 2000s that would not last forever, then IT should be considered a guilty accomplice in fuelling the asset bubbles in the late-2000s, as central banks misread the cause and the durability of the Great Moderation, and failed to understand the implications of the capital flows from EM.
- **Concern 2. Fixed exchange rate regimes.** Both the EMU and the de facto dollar zone will not survive in their current forms. These two currency zones provided tremendous microeconomic efficiencies in the 2000s, but also fostered devastatingly serious macroeconomic distortions. The appreciation of the Asian currencies in recent months is a good sign – not because stronger Asian currencies would help export some of the inflationary pressure but because greater currency flexibility would permit tighter monetary policies. But we are concerned that the EMU is becoming increasingly brittle the longer they underwrite the Ponzi scheme.
- **Concern 3. The Fed’s QEII.** We’ve been critics of QEII. First of all, based on the information we now have on Q4, QEII was unnecessary: it’s like applying defibrillators on a patient who is trying to get out of his sick bed. Second, it does not seem consistent for the Fed to take credit for the rally in risk assets but to refute being responsible for the commodity price inflation. This criticism of ours is related to our concern about inflation targeting in general, that many of the macroeconomic policies are formulated on not just domestic variables but also in a ‘domestic context,’ i.e., with little consideration for how domestic policies could have international side-effects or how international forces could affect domestic considerations. An example of the latter is the explosive rise in commodity prices, and how that makes the Fed’s stimulative policies, beyond a certain point, self-defeating.

- Concern 4. The US policy makers may be overly focused on aggregate demand and insufficiently mindful of aggregate supply.** This is related to the debate on Keynesian stimulus. The US is in its eight consecutive quarter of economic expansion, yet both monetary and fiscal stimluses are at their maximum intensity. The problem with Keynesian stimulus goes beyond whether the US could afford to pay down its public debt or the side effects of QEII, of which there are many. The more relevant question is whether the US should have paid more attention to the ‘supply’ side considerations, such as what can be done to make the US more competitive and more efficient. Fundamental to this question is the debate whether the cause of the crisis was cyclical or structural, and whether the labour market has suffered a cyclical or a structural shock. Our own bias is that both the causes of the financial crisis and the nature of the US unemployment are more structural than cyclical, and that the US policy makers stand out as being fixated on demand when the rest of the world is enhancing their supply capacity.
- Concern 5. Little has been done to alter the global financial tectonic plate.** Since the financial crisis, most of the official efforts have been directed toward damage limitation: similar to what the Japanese government is still trying to do in the aftermath of the earthquakes. However, little has been done or said about how to reduce the probability of further financial earthquakes. If we are right on the perspective in thinking about the world, either the global economic tectonic plate should be slowed or the global financial tectonic plate should be guided in the right direction to keep step with the economic plate. The former is unlikely and probably wrong to do, while, for the latter, little has been done or discussed. We reiterate that we are not putting the blame for the crisis on EM. But until the global financial tectonic plate is made to evolve, the risks of future shocks seem quite likely.

**Implications for the markets.** The first implication is that the pressures arising from the structural growth divergences across countries and the pent-up inflation pressures will lead to high volatility in exchange rates in the years ahead. In fact, the greater the cross-sectional and time-series growth volatility, the higher should currency volatility be. The second risk we see is rising political and economic tensions arising from the grating of these two tectonic plates: Asia and the oil exporters will continue to rise, economically, but be ‘forced’ to direct most of this wealth into DM. It’s hard to see how this would

not lead to disputes. Third, the combination of a hyper-active Fed and a remarkably inactive US Treasury suggests that QEIII cannot be ruled out, if the US economy enters another soft patch. The short-termism of the Fed's liquidity-centred strategy will only lead to financial market volatility.

**Bottom line.** We propose that the mis-alignment of the global economic and financial tectonic plates was one key cause of the global financial crisis of 2008. The economic plate will continue to drift while the financial plate remains frustratingly stagnant. Since these plates remain fundamentally mis-aligned, future financial crises seem likely.

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