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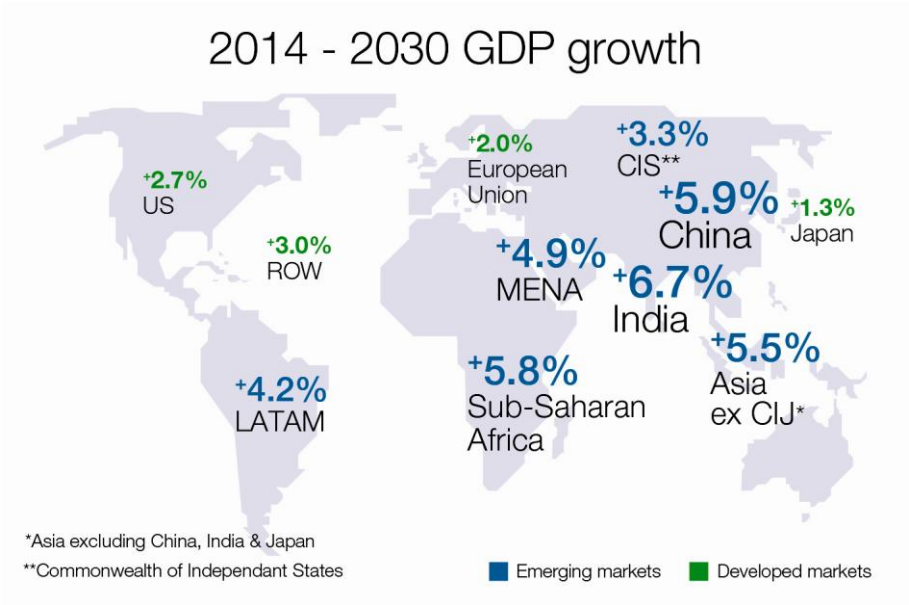
The super-cycle lives: EM growth is key



Highlights

- In 2010 we argued that fast growth in emerging markets (EM) and their increasing weight in world GDP was driving an economic super-cycle. We have lowered our forecasts for China, India and others, but the case broadly still holds (see Part 1).
- We expect global growth to pick up in 2014-17 as emerging markets implement reforms and developed markets (DM) finish restoring balance sheets. Global growth is set to average 3.5% for 2000-30, well above the 3.0% rate for 1973-2000.
- In emerging markets, concerns over the middle-income trap, Asian leverage, 'broken growth models' and rising US interest rates appear exaggerated. These challenges can be met, though they will require reforms (see Part 2).
- China is leading the way on reform and its success will be critical. We forecast that China's growth will average 7% for 2013-20 and 5.3% for 2021-30.
- US private-sector balance sheets have been largely fixed; Europe and Japan still face major challenges. Slower labour-force growth will damp long-term growth, but slow-growing DM countries have a dwindling share of global GDP (see Part 3).
- The super-cycle is transforming the world economy. The EM share of world GDP, currently 38%, could rise to 63% by 2030, including 39% in Asia ex-Japan. China's GDP may surpass the US' in 2022 (we previously projected 2020). World trade could quadruple in value terms to USD 75tn by 2030. Urbanisation and the growth of the middle classes, especially in Asia, are driving forces (see Part 4).
- Emerging-country financial markets will expand rapidly, led by China and India as the authorities gradually deepen and open up these markets. We project the size of FX, rates and equities markets to 2030 (see Part 5).

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Overview

The super-cycle re-assessed (see Part 1)

The world has seen waves of fast economic development; we may be in the middle of the third wave

Three years ago we argued that the world may be in the midst of a third economic 'super-cycle', comparable with the periods 1870-1913 and 1946-73, which also saw unusually rapid world economic development (see '*The Super Cycle Report*'). In this report we review our long-term forecasts to see if the super-cycle framework still makes sense.

Optimism on the long-term outlook is currently uncommon; the prevailing opinion is that developed countries are enjoying a weak cyclical upswing amid serious long-term headwinds, while emerging markets face a structural slowdown due to the exhaustion of previous growth models and the lack of reform. Yet, revisiting our analysis, we find that the prospects for global growth out to our 2030 horizon are still quite buoyant on reasonable assumptions, despite major challenges.

Our optimism is largely due to the increasing scale of the fast-growing emerging world. For example, the countries and regions with growth rates of 4% or more accounted for 20% of the world economy in 1980; that share has risen to 37% today and is set to reach 56% on our forecasts by 2030 (Figure 1). All our numbers are at market exchange rates. In purchasing power parity (PPP) terms emerging markets are already the largest share.

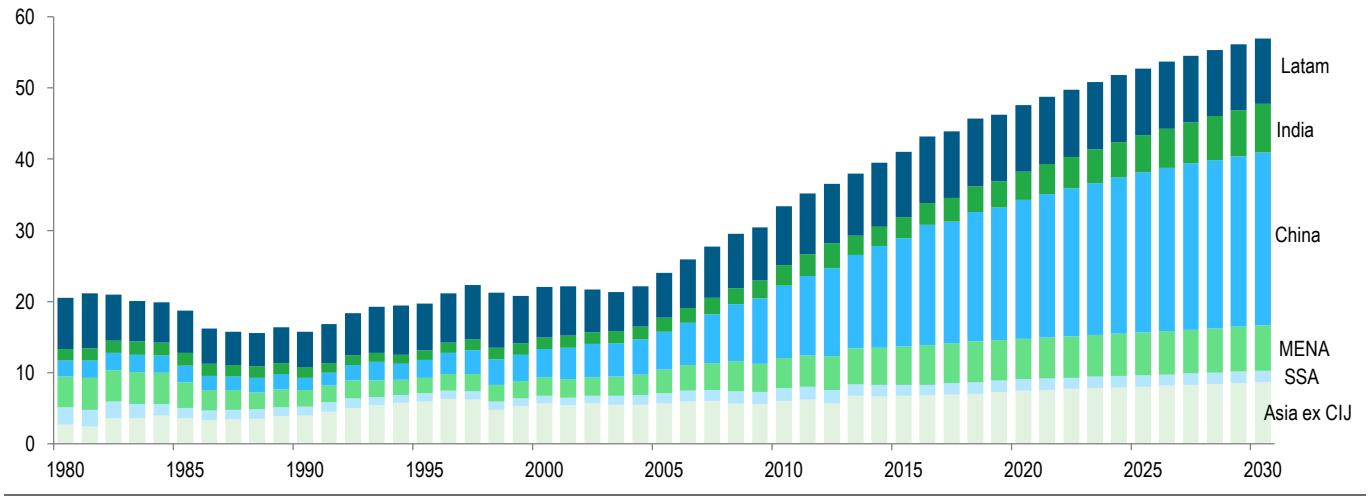
Definition, shape and drivers

We define a super-cycle as "a period of historically high global growth, lasting a generation or more, driven by the opening up of new markets, increasing trade and high rates of investment, urbanisation and technological innovation". Our view is that the super-cycle is still a good framework:

- We project that global GDP for 2000-30 will average 3.5% p.a., significantly higher than the 3.0% recorded in 1973-2000, when emerging countries were a much smaller part of the world economy and faced a series of crises.

Figure 1: Fast-growing countries account for a rising share of global GDP

Share of world GDP of regions growing at 4% or more



Source: Standard Chartered Research

- Trade will likely continue to expand faster than GDP, supported by new regional and bilateral agreements, and boosted by the effects of globalisation and the internet which are encouraging trade in services as well as goods. Despite fears, the Great Recession has not led to widespread protectionism.
- Strong investment will be a key driver; high-investing economies in Asia are an increasing share of the world economy and urbanisation has much further to go in China and other EM economies.
- The connected digital economy (computers, mobile phones and the web) represents a new 'network technology', comparable with the railway or electricity. It is driving profound change in the nature of production, work and leisure.
- Emerging countries will continue to achieve high catch-up growth rates, even though some, like China will slow further over time while others, such as India, Indonesia and Brazil, need significant reforms to realise their potential.

Challenges to growth in emerging markets (see Part 2)

While countries face many challenges, we believe current pessimism is exaggerated

We forecast slower growth in emerging countries than we did three years ago, but remain positive on the outlook. Some of the recent sharp slowdown is cyclical and some, while structural, can be met and reversed with reforms, which we believe are attainable, given time. We address six key concerns:

1. Countries may face a middle-income trap

The biggest concern is that China, a key driver of the super-cycle, could slow down very sharply. But the literature on middle-income traps (the tendency sometimes for growth to slow sharply at a certain level of development), suggests that China is in a good position. China has a relatively educated population, a high share of high-tech exports and an appreciating real exchange rate, compared with countries falling into the trap in the past. We forecast an average growth rate of 7% for China from 2013-20 and 5.3% from 2021 to 2030, already a major slowdown from past trends.

China faces serious major structural challenges, including over-investment in some sectors; high leverage in banks, SOEs and the government; and a frothy real estate sector. Reforms are needed and we believe the signs are very positive. Many other large emerging markets, including India, Vietnam and Nigeria, are still well below the level at which the middle-income trap looms and have plenty of catch-up growth before they face it. However, some large emerging countries including Brazil, Mexico, Turkey and Russia are vulnerable and will also need reforms.

Figure 2: Our growth projections

Real GDP growth, % p.a.

Updated	China	India	Asia ex-CIJ	SSA	MENA	Latam	CIS	US	EU-27	Japan	ROW	World
1980-99	9.9%	5.6%	6.9%	2.4%	2.9%	2.5%	-1.8%	3.2%	2.1%	2.9%	2.8%	3.0%
2000-12	10.0%	6.9%	5.5%	5.5%	5.2%	3.5%	5.6%	1.9%	1.3%	0.9%	2.7%	3.0%
2013-20	7.0%	6.3%	5.7%	5.6%	4.6%	4.2%	3.4%	2.8%	1.9%	1.5%	2.9%	3.9%
2021-30	5.3%	6.9%	5.4%	5.8%	5.0%	4.1%	3.1%	2.5%	1.8%	1.2%	3.0%	3.8%
2000-30	7.7%	6.8%	5.5%	5.6%	5.0%	3.8%	4.2%	2.3%	1.6%	1.1%	2.9%	3.5%

Note: We have revised our methodology slightly so these numbers are not directly comparable with our 2010 Super-cycle Report. Using either method, world growth is projected to increase in 2000-30 compared with the earlier period. Source: Standard Chartered Research

2. Asian leverage is high and US interest rates will rise

The debt picture is mixed and not all bad; the Fed will be cautious about raising rates

Our research has shown that Asian leverage has risen considerably in the last few years in some sectors, but government and foreign debt are mostly still benign, reducing the risk of crisis; while household debt in China, India and Indonesia is low with the potential to increase, supporting growth. Still, countries will need to find ways to grow without such rapid leverage growth; China managed it the 2000-07 period. Since most emerging-market (EM) countries can achieve a nominal GDP growth rate of 7-10% (including 3-5% inflation as is normal for an EM) it is not so hard to manage high leverage.

Faster US growth is a prerequisite for the Fed to raise interest rates and will help many countries through stronger exports and firmer commodity prices. Only a handful of countries are heavily dependent on capital inflows and may face a difficult adjustment. Over the long run we expect 10Y UST yields to move up to about 4.5%; the surge in the middle of this year from around 1.6% to 3.0% was about half of that overall move. There was plenty of volatility, but most EM countries coped well. The Federal Reserve is expected to be more careful in managing expectations in future and low US inflation should enable it to move very gradually.

3. The commodity boom is over

Commodity prices cut both ways

Commodity-exporting countries had it fairly easy in the last decade. Commodity prices have fallen back from highs but most are still elevated compared with a decade ago, which allows new exploration and investment. We forecast most commodity prices to firm in the next few years as global growth picks up, though the massive rise in prices from 2000-08 is very unlikely to be repeated. The exception is oil, which we forecast to move slightly lower in real terms. This will help keep inflation low and boost growth prospects, not just in the developed markets (DM) but many EM countries including China and India. Overall, a more-stable trend for commodity prices is good for Asia, the main driver of the super-cycle.

4. The export-led growth model is finished

The trend towards freer trade remains intact, with new trade pacts under negotiation

It is true that few emerging countries will be able to enjoy a sustained rise in net exports (exports minus imports), since developed countries such as the US and Japan are determined to keep their currencies low. But rising net exports is not really the export-led model anyway. For exports to drive growth, there needs to be an expanding export (and import) share in GDP, which drives specialisation and competition, thereby raising efficiency and generating growth. This model received a big lift with China's accession to the WTO in 2001, which encouraged the emergence of an extended Asian production chain.

We do not think the trend towards freer trade is over. There is a raft of new regional trade agreements under negotiation, and although it would be better to have a global agreement, these regional agreements will boost trade, particularly when they involve large countries or regions. Meanwhile, technology is boosting trade in services.

5. Ageing EM populations will slow growth

In fact, the Indian subcontinent and much of Africa will still see rapidly rising populations over the next couple of decades so, to the extent rapid population boosts growth, the impetus is still there. For countries like China, where the labour force is set to decline, the news is not all bad. Wages will likely rise, which should encourage firms to invest in higher value-added products and processes, as we are already

seeing. Moreover, ageing helps generate a more experienced workforce, a plus for productivity. Even in China there are still many people in rural areas who will move to cities in the next decade, and urbanisation has a lot further to go.

6. Economic reform has stalled

Tough decisions will be required, but there are reasons for optimism

This is the most critical issue. The question is whether politics will allow the necessary reforms or block them; each country has its own story. We identify a number of models or mechanisms for reform including 'strong leadership' (China), 'crisis and desperation' (e.g., India in 1991), 'post-election window' (India, Indonesia and Brazil in 2014), 'opening to the outside' (new trade pacts as when China joined the WTO in 2001) and 'competing provinces' models (China, India).

Many countries enjoyed fast growth over the last decade and it was easy to avoid tough decisions. Now, with growth slower and globalisation making populations increasingly demanding, we believe governments will be under huge pressure to respond, though the process is complex. China is key, both for its absolute size in the world economy and for its regional role in the production chain.

Challenges to growth in developed markets (see Part 3)

Recent slow growth reflects temporary factors; improving balance sheets point to faster growth

We identify eight separate concerns about the outlook for developed countries. We conclude that weak growth in recent years is not a long-term "new normal" but a temporary phase caused by the double shocks of the Lehman crisis and then the euro crisis. But countries do eventually escape the effects of major financial crises as balance sheets are repaired and confidence recovers. US private-sector balance sheets are now largely fixed; balance sheets are in reasonable shape in Japan as well as Germany. There are still serious issues in other countries in Europe that will hold back growth for a while, but will not preclude recovery. We think the acute phase of the euro crisis is over and balance sheet corrections are underway.

In 2014 significant relaxation of austerity is planned for the US and Europe while monetary policy will remain stimulatory. This points to a continuing upswing, which should help to lift business confidence. With plenty of spare capacity, developed countries should be able to grow above-trend for a while later this decade. Japan, however, faces severe fiscal tightening in coming years, which points to the likelihood of prolonged low interest rates and the need for new reforms.

Figure 3: 10 largest economies by decade

USD tn

	1990	USD tn	2000	USD tn	2010	USD tn	2020	USD tn	2030	USD tn
1	US	5.9	US	10.3	US	15.0	US	23.5	China	53.8
2	Japan	3.1	Japan	4.7	China	5.9	China	21.9	US	38.5
3	Germany	1.7	Germany	1.9	Japan	5.5	Japan	6.1	India	15.0
4	France	1.2	UK	1.5	Germany	3.3	Germany	5.1	Japan	9.3
5	Italy	1.1	France	1.3	France	2.5	India	4.5	Germany	7.4
6	UK	1.0	China	1.2	UK	2.3	Brazil	3.9	Brazil	6.3
7	Canada	0.6	Italy	1.1	Italy	2.0	France	3.9	UK	5.8
8	Spain	0.5	Canada	0.7	Brazil	2.1	UK	3.7	France	5.7
9	Brazil	0.5	Brazil	0.6	Canada	1.6	Italy	2.7	Indonesia	4.7
10	China	0.4	Mexico	0.6	Russia	1.5	Russia	2.6	Russia	4.6

Source: Standard Chartered Research

People will work longer, while more experienced workers and higher wages will encourage productivity growth

Longer-term, developed countries face slowing labour-force growth and ageing populations, putting immense pressure on pension and health-care costs. Our forecasts assume that this is partly offset by an increase in older people working and by improved productivity growth, driven by higher labour costs and new technologies. Still, our projections of a 2.5% long-term trend for the US, 1.8% for the EU and 1.2% for Japan (after a few faster catch-up years in the middle of this decade) are lower than past rates and, we believe, achievable. We view ongoing reforms in labour markets and pensions, together with the new trade and development pacts, as vitally important.

Implications of the super-cycle (see Part 4)

Here are some of the most important implications of the super-cycle:

- Emerging markets, led by China and India, will increasingly shape the world. We think the EM share of global GDP will rise to 63% by 2030 from 38% in 2010, including 39% in Asia ex-Japan. 70% of global economic growth between now and 2030 will come in emerging countries.

- China's GDP could exceed that of the US in 2022 (previously we forecast 2020). But China's per-capita income will likely still be less than one-third of the US'.

- We forecast world trade to reach USD 75tn by 2030, or 34% of world GDP, up from USD 17.8tn in 2012. South-south trade (i.e., between EM countries) is likely to grow to 40% of world trade from 18% today.

- Most of the 1.1bn population increase by 2030 will be in emerging countries. While China and Russia will see declining labour forces, most other EM countries, particularly in South Asia and Africa will see big further increases.

- By 2030, 60% of the world's population could live in urban areas, up from 52% in 2011, with most of the growth in Asia and Africa. Rapid urbanisation is a key driver and consequence of the super-cycle.

- The global middle class is expected to expand rapidly, with most of the new members in Asia. This represents an enormous opportunity for global companies, though an increasing proportion of large companies will be EM companies as Western leadership fades.

- Knowledge production will remain a key advantage of developed economies, but their share should drop as Asia's new universities and companies take on more of this role.

- There will be strong demand for resources driven by rising per-capita incomes, urbanisation and industrialisation. The resources are there, but environmental damage will be an increasing issue.

- Rising per-capita incomes and ageing populations will help drive a huge expansion of financial markets in EM countries, especially Asia. The Chinese yuan (CNY) will gradually take its place among the leading international currencies.

Sizing financial markets in 2030 (see Part 5)

Equity markets

Increasing capital requirements and a structural shift to savings will drive growth in EM equity markets

From a supply-side perspective, continuing growth in market capitalisation will be driven by several powerful structural forces. The first and broadest is simply a general need of corporates in developing economies for capital to fund growth. Another classic by-product and driver of development is the privatisation of state-owned enterprises. The investor base, too, will continue to accommodate this hunger for equity capital. As economies develop, investors tend to become more sophisticated and yield-oriented. We provide estimates for equity market capitalisation in 2030 and predict that China and India will continue to lead the growth in market capitalisation and sharply increase their share of global equity markets.

FX markets

The dramatic rise of the CNY poses a major challenge for the rest of the EM world

There is an important link between economic output and FX turnover, but the real delta is in the opening up of the capital account rather than the current account. The pace of China's capital-account liberalisation will be a critical influence on CNY growth. We expect the CNY to remain the fastest-growing currency in average daily turnover. The dramatic rise of the CNY on the back of CNY internationalisation and capital-account liberalisation poses a major challenge for the rest of the EM world. They will need to open up the capital account further and risk greater market volatility or potentially lose competitiveness to China. In our view the gradual opening up of China's capital account, and more specifically the emergence of the offshore CNY (CNH), will lead to a parallel opening up of AXJ capital accounts to maintain competitiveness, acceleration in local currency turnover – and the eventual elimination of Asian NDF markets, including the CNY NDF markets.

Local markets

We use our forecasts of nominal GDP per capita to project the size of the local investor base in 2030

As GDP per capita rises, the importance of local investors increases as life insurance, pension schemes and mutual funds grow. Based on this relationship, we use our forecasts of nominal GDP per capita for 19 emerging markets and footprint economies to project the size of the local investor base in 2030. The diversification of investors and growing size of markets creates greater liquidity and lower transaction costs as the likelihood of herd behaviour diminishes. Also, the term structure of interest rates will become more dynamic, with short-term interest rates becoming less of a driver.

Part 1: The Super-cycle re-assessed

Our definition of a super-cycle is "a period of historically high global growth, lasting a generation or more, driven by the opening up of new markets, increasing trade and high rates of investment, urbanisation and technological innovation".

The first super-cycle: 1870-1913

The opening up of the Americas and new network technologies drove the first super-cycle

The first super-cycle started in the late 19th century after the American Civil War and lasted up to the First World War. Global growth increased significantly, averaging a full 1ppt more per annum than the previous half-century. The drivers were the opening up and expansion of the United States and Latin America, with the help of the new network technologies of the railway, steamship and telegraph, together with the spread of the industrial revolution to Germany and other countries in Europe.

Network technologies are critical because they are not just investment opportunities in themselves, but also open up new areas for development and trade and transform the nature of production, work and leisure. Free trade is another key element for a super-cycle. In this period Britain championed free trade; financial flows were also relatively free, and labour moved around actively with great waves of emigration to the New World. This was the first era of globalisation.

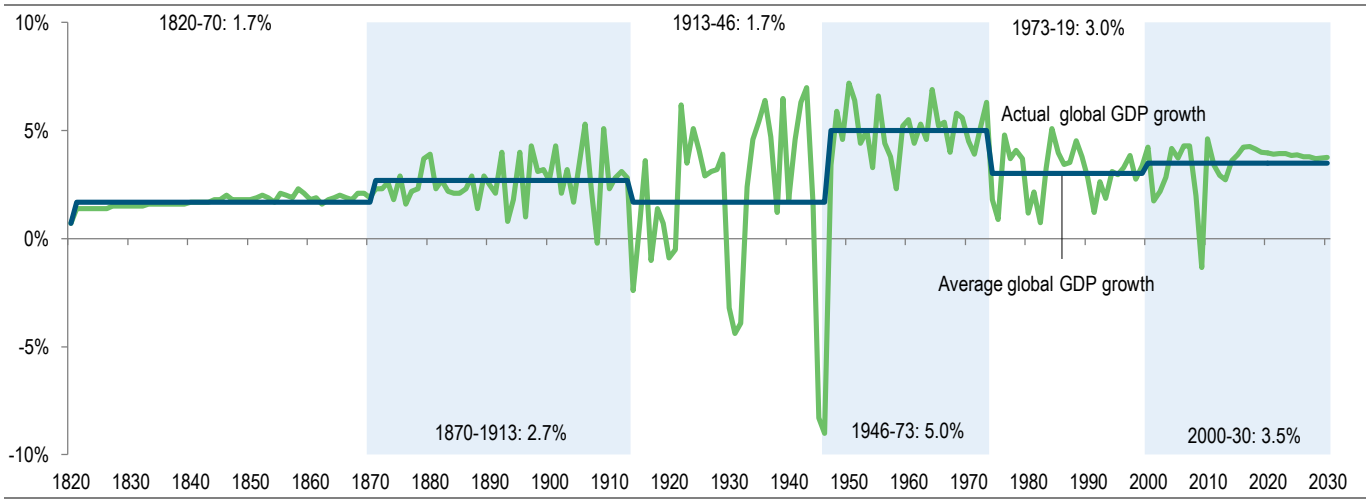
The First World War severely restricted free trade and brought an abrupt end to globalisation. World trade picked up after the war, but in the 1930s the US Smoot-Hawley act and the economic slump led to a new collapse. Overall, the period 1914-45 saw two major wars, political turmoil in Europe and the Great Depression. Average global growth during 1914-45 went back to the pre-1870 pace of just 1.7%.

The second super-cycle: 1946-73

The second super-cycle saw the world recover from WW2

The super-cycle from 1946-73 was mainly about Europe's recovery from the Second World War and the wide application of network technologies, including electricity, cars, the telephone and aviation. The United States championed free trade and a series of trade rounds under the auspices of the GATT (precursor to the WTO) helped trade in goods to expand enormously. Services and finance were still largely confined within national borders.

Figure 4: Super-cycles – Global GDP growth



Source: Angus Maddison, IMF, Standard Chartered Research

Among emerging countries, Japan did well during this period as it recovered strongly from the war (though Japan was already relatively advanced in 1941). The East Asian tigers began to perform strongly and Russia and Eastern Europe grew rapidly for a while. Brazil and a handful of other countries also performed well at this time. China and India were mired in sluggish growth and barely part of the global economy. Overall, emerging countries were less important in the second super-cycle, though Japan and Russia did make a difference to the overall growth performance.

Slower world growth 1974-2000

In the 1970s the world was hit by the oil crisis and growth in developed countries slowed. Developed countries picked up after 1982, but not to the pre-1973 growth rates. Japan and Russia slowed sharply. Emerging countries were racked by repeated crises, beginning with the Latin American debt crisis in the early 1980s, followed by the melt-down of the Soviet bloc in the early 1990s and the Asian financial crisis in 1997-98. There were positive developments, however. China opened up starting in 1978 and India liberalised in the early 1990s. But China's economy was too small to have much effect on world growth.

The third super-cycle 2000 onwards

We date the start of the current super-cycle from around 2000

We believe a new super-cycle began around the year 2000. We have projected growth out as far as 2030, though this does not imply that we expect the super-cycle to end at that point; most of the world's population will still be at only a fraction of developed countries' income levels. The expected increase in growth to an average 3.5% during 2000-30, compared with 3.0% in the 1973-1999 period represents a significantly better performance over the long term.

Of course reaching these averages requires much faster growth than in recent years and we project an average growth rate for the 2013-30 period at 3.8%, as the developed countries recover and as fast-growing emerging countries continue to increase as a share of world GDP. Our forecasts are lower than in our initial '*Super Cycle Report*' in 2010 (about 0.4ppt p.a. for global growth, on a comparable basis) and so this is a leaner super-cycle than we had initially argued for. But it still represents a significant acceleration from the prior period and the drivers and the consequences of the super-cycle are still mostly intact.

The changing shape of the world economy

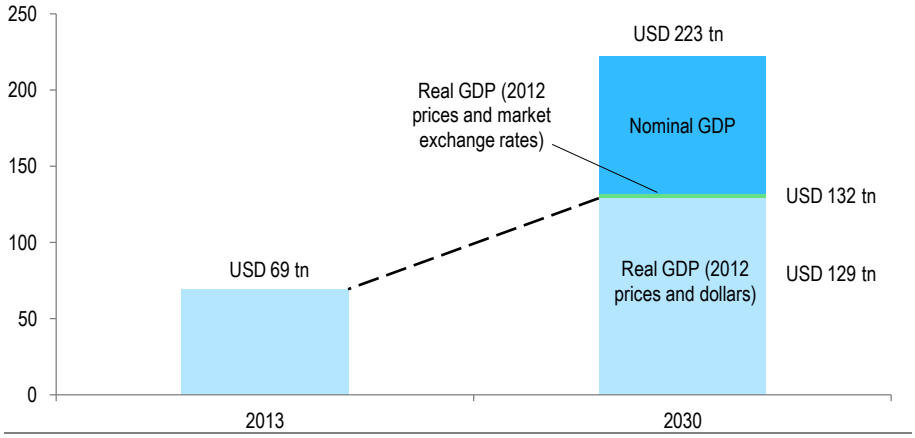
The expanding world

Global GDP is set to almost double in real terms by 2030

We forecast that global GDP in real terms will almost double to USD 129tn by 2030 (Figure 5). This total is derived by extrapolating growth forward, assuming that real exchange rates do not change. We also adjust our forecasts for slight increases in real exchange rates in some EM countries (as is normal during development). Allowing for inflation takes nominal world GDP to USD 223tn. The size of nominal GDP determines the value of world trade and, together with the level of GDP per capita, the size of financial assets.

Figure 5: The world economy is set to double in real terms, triple in nominal

USD tn



Source: IMF, Standard Chartered Research

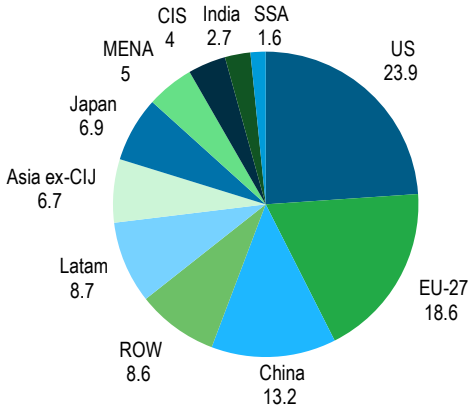
Rising living standards

By 2030 China will have reached living standards equivalent to Chile's today

With the world's population set to rise by 18% by 2030, the doubling of real GDP suggests an average increase in living standards of 63%, although this will not be evenly distributed. Per capita incomes could rise as much as 170% in China and India as they experience catch-up growth. Developed countries will also see higher per-capita incomes as productivity rises, albeit at a much slower rate. Living standards will continue to converge between countries, as they have for the last few decades.

Figure 6: Nominal global GDP in 2013, USD 69tn

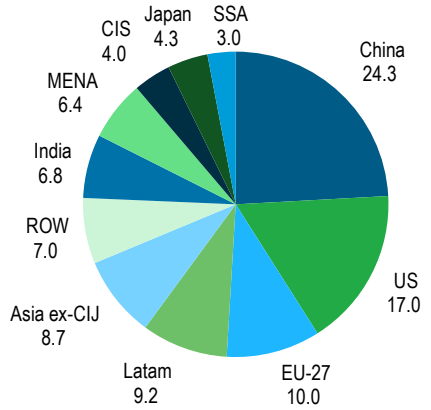
% of global



Source: IMF, Standard Chartered Research

Figure 7: Nominal global GDP in 2030, USD 223tn

% of global



Source: IMF, Standard Chartered Research

There will still be big differences between countries – we expect China's per-capita income to be just over one-third of the US' and India's to be less than one-tenth. Nevertheless, by 2030 China will have reached the approximate average standard of living of Taiwan or Portugal today, while India will have caught up with China's level today.

The rise of emerging markets, especially Asia

We expect the US, Europe and especially Japan to shrink as a proportion of the world economy, while China, India, Africa and emerging countries in general will expand. Emerging markets will surpass 50% of the world economy in 2018 while China's economy will surpass that of the US in 2022. In 2010 we forecast that this would happen in 2020; we have mildly lowered our real GDP growth forecast for China, (mostly reflecting our scaled-back expectations of real-exchange-rate appreciation). Asia excluding Japan will account for 40% of the world economy by 2030, up from 23% in 2013.

Drivers of the super-cycle

The increasing scale of emerging markets

Growth in the emerging countries was boosted by a slew of reforms in the 1990s and early 2000s

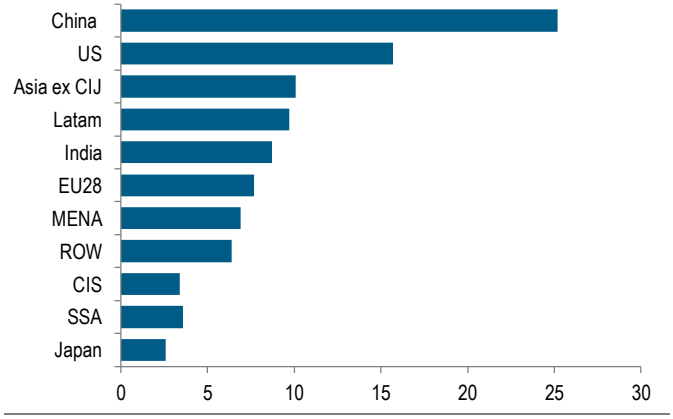
The main driver of the current super-cycle is the increasing scale of emerging markets, especially China, together with their better performance overall than prior to 2000. China started growing rapidly in the 1980s and over the last decade or so an increasing number of emerging countries have performed better than pre-2000, in Latin America, Africa and the ex-Soviet bloc as well as Asia.

Between 1990 and the early 2000s a wave of reforms opened up new growth opportunities. China reformed SOEs and joined the WTO, India dismantled the 'licence raj', Eastern Europe and the ex-Soviet Union reformed and began to recover from the collapse of communism, Latin America defeated hyper-inflation and even Africa – widely written off as a lost continent – began to show policy improvements, assisted by new debt relief. The number of emerging countries with major vulnerabilities such as low FX reserves, large current account deficits and high foreign debt dwindled.

High growth in emerging markets significantly increased their share of the global economy, which surpassed 25% in 2000 (all in market exchange rates) and had reached 38% by 2012. China was a significant driver of this increase and continues to

Figure 8: EM growth to drive two-thirds of global growth

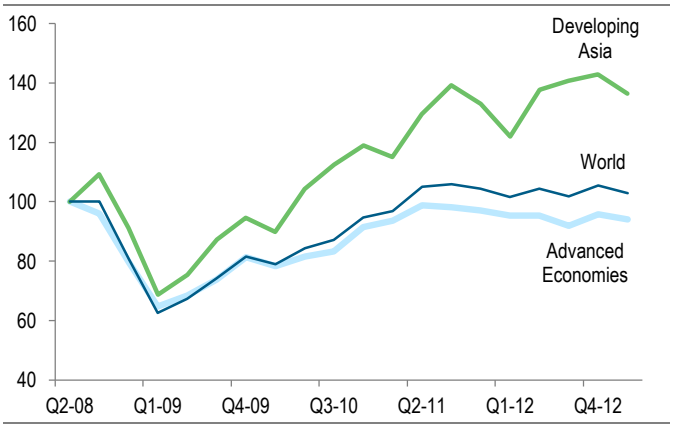
% of total 2012-30 (based on real 2012 prices and dollars)



Source: IMF, Standard Chartered Research

Figure 9: World trade has recovered, led by Asia

Export volumes, indexed to pre-recession peak



Source: IMF DOTS, Standard Chartered Research

be – its share of world GDP rose from 3.9% in 2000 to 13.2% today, and we project that it will rise to 24.3% by 2030. The economy has grown so much in recent years that, in USD terms, China's forecast 7.6% growth in 2013 is equivalent to the 10.4% recorded in 2010 and exceeds the 12.6% gain in 2006.

Trade will help drive growth

The recent slowdown in trade growth is mainly linked to the European recession

World trade growth collapsed in 2009, but recovered strongly in 2010-11. Trade growth has been disappointing in 2012-13, expanding only about 2% each year in volume terms, less than GDP growth, which is unusual. There is concern that this slowdown is structural, linked to a deceleration in the expansion of the global production chain (which had been turbo-charged by China's WTO accession in 2001), or creeping protectionism since the financial crisis. While there may be elements of truth here, we believe the slowdown is mainly cyclical. Europe comprises a large share of world trade (partly because trade between European countries is large) so the region's recession has made a large dent. Moreover, the European recession brought a general slowdown in manufacturing worldwide as an inventory correction occurred. Manufacturing still dominates global trade.

Longer-term, we are optimistic that world trade will resume faster growth and return to its usual pattern of outstripping GDP growth. Although the Doha trade round failed, there is now considerable impetus behind bilateral and regional trade agreements. This is not optimal – a global deal would be better – but the new agreements should allow continued trade growth. In many cases proposed agreements go far beyond trade in manufactured goods, focusing on services as well as areas such as investment, copyright and procurement.

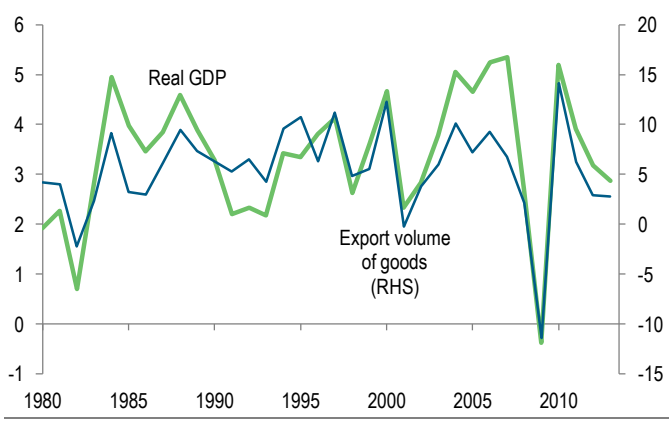
Investment and infrastructure

As fast-growing countries become larger they pull up average global investment rates

High rates of investment are a key driver of fast growth. Fast-growing Asian economies, such as China and India, have particularly high rates of investment in GDP. So, as their GDP rises, so does world investment. In many countries currently, business caution is holding back investment. In developed countries this reflects concerns over lack of demand; we expect confidence to grow in coming years. In emerging countries it often reflects failure to reform.

Figure 10: Growth in world exports vs. world GDP

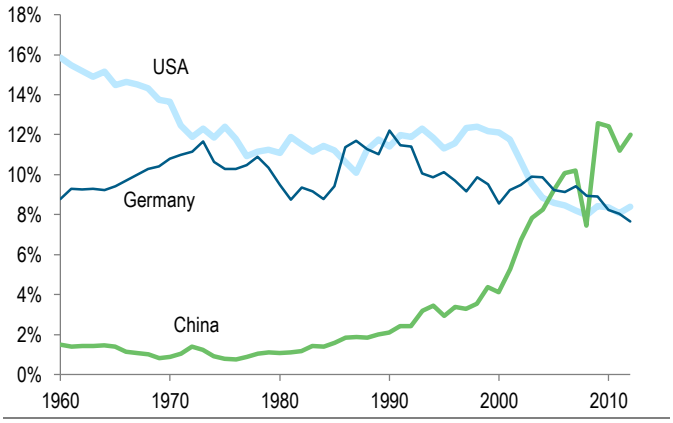
%y/y, constant prices



Source: IMF WEO

Figure 11: China, the leading trade powerhouse

% of world exports



Source: IMF DOTS, Standard Chartered Research

Infrastructure is a good example of the need for reforms. Outside of China, almost every emerging country is desperate for improved infrastructure. While governments are often strapped for finance, the private sector globally has substantial funds available either locally or from international sources. However, there is a shortage of financeable projects. Viable projects require governments to provide a structure where land and environmental permissions can be obtained in a reasonable time-frame and where reliable income streams can be assured. This is hard to do.

The need for improved infrastructure is intense. McKinsey has estimated that the total spending needed globally from 2013-30 is in the region of USD 57tn. The largest component is roads (USD 16.6tn) followed by power (USD 12.2tn), water (USD 11.7tn) and telecoms (USD 9.5tn). Other transport facilities such as railways, airports and seaports make up the rest. The global growth estimate of 3.3% p.a. used in the McKinsey study is lower than our 3.8% forecast, which suggests that investment will need to be even greater. In Western countries ageing infrastructure urgently needs repair. Budget pressures will continue to make this difficult near-term, but we expect these pressures to ease in coming years.

Population growth is still a driver

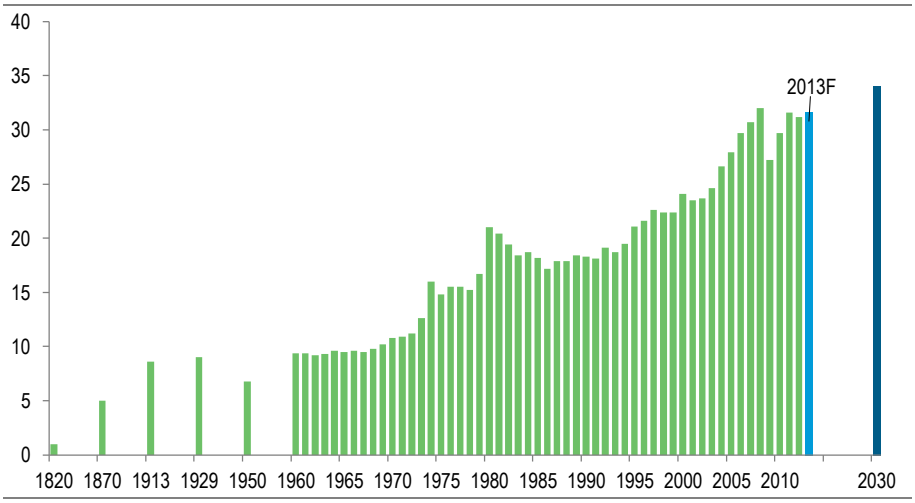
The world is split between countries with rapid labour growth and those seeing declines

The world population is set to rise to 8.3bn in 2030 from 7.1bn in 2013, a slower pace than the last 17 years, but still a hefty increase. The biggest increases are expected to come in Africa and in South and Southeast Asia. The world is split between countries that are still seeing rapid labour-force growth and those where the labour force is stable or falling, led by Japan and Europe, with China close behind.

What this split means for growth prospects is uncertain. On the face of it, rapid labour-force growth is a source of economic growth, but only if these workers can be effectively employed. One factor in the Arab Spring has been the difficulty of absorbing huge increases in the number of young people. An important trend that is already evident and likely to continue is the gradual westward migration of low-cost manufacturing from China's coastal to inland regions and increasingly to South and Southeast Asia. Eventually it may also play a big role in Africa.

Figure 12: The world is more open than ever

World exports-to-GDP ratio



Source: Angus Maddison, IMF WEO, Standard Chartered Research

Meanwhile, the ageing populations in the West and in East Asia mean fewer employees and higher old-age dependency ratios, placing a burden on government budgets and potentially on growth. Partly offsetting this, more people are expected to work to an older age and the average experience level in the work-force will rise. Moreover, to the extent that slower labour force growth pushes up wages, investment in greater efficiency will increase. This effect is already obvious and is an important reason why we argue that China will not suffer greatly from the middle-income trap.

Technology as a driver of growth

In each super-cycle, growth is mainly led by technologies invented decades before

As we emphasised in 2010, the most recent discoveries are unlikely to be those that drive fast growth, any more than inventions such as the car (1889) drove the first super-cycle or computers were the driver of the 1945-73 cycle. Super-cycles are typically driven by inventions that are already decades old, as computers (1940s), the internet (1969) and mobile phones (1977) are today. What will drive fast growth is the adoption of Western life-styles by more people in emerging countries, as they acquire consumer goods, modern housing and the services that go with them, from travel to financial services.

But technology is a vital ingredient in two ways. First, the nexus between the computer, mobile phone and the internet is a network technology that is transforming the world. Second, technology is critical to sustaining growth in developed countries as labour-force growth slows. Exciting advances in areas such as robotics, genetic engineering, nanotechnology and 3-D printing will generate increasing investment dollars and bring new products to the market. Nevertheless a 'new knowledge world order' is gradually unfolding as universities and company researchers proliferate in emerging countries, especially Asia. More and more of these new developments will come from China and other emerging countries as the world changes.

What has changed since 2010

The euro crisis has damped world growth in the last three years, but some other developments are positive

We published our original '*Super Cycle Report*' in 2010. Global growth since then has been slower than we expected, mainly due to the European recession. Other major developments since 2010 have been mixed (see Figure 13). The effects of the Arab Spring have been the most worrisome, bringing civil wars and unrest to several countries, causing a regional slowdown in growth, and keeping oil prices high. The polarisation of US politics has been much-remarked upon, though the US fiscal picture has improved more than expected and the shale gas boom, already evident in 2010, has spread to shale oil.

Another positive development is the markedly increased urgency to complete bilateral and regional trade pacts. Although some believe this reflects strategic tensions between the major economies, we nevertheless think such agreements will

Figure 13: What has changed since October 2010

Positives	Negatives
New urgency for trade pacts	European recession
New promise of reform in China/ Mexico	US politics more polarised
Abenomics in Japan	Arab Spring and Mid-East turmoil
Internationalisation of the RMB	China and India slowed down
US shale oil boom	New pessimism on EM outlook
Sharp improvement in the US fiscal outlook	Robert Gordon pessimism on technology

Source: Standard Chartered Research

help growth. We are also encouraged by improved prospects for reform in China, Japan and Mexico.

During the boom years of the mid-2000s few imagined that a severe crisis was imminent. Today after the worst Western downturn in 80 years, including a double-dip in Europe, and with two years of disappointment in emerging markets, pessimism is prevalent. There is always a tendency to extrapolate recent trends. But cycles, even deep ones, turn. Our view is that the outlook is much better than recent pessimism suggests and that a slightly modified super-cycle is still intact. We address the challenges and concerns in Parts 2 and 3.

Reference

McKinsey, *Infrastructure productivity: How to save $1 trillion a year.* McKinsey Global Institute, 2013.

Part 2: Challenges to growth in EM

Structural versus cyclical slowdown

In 2009 the global economy was battered by its worst crisis since the Great Depression. However, emerging economies proved resilient and on the back of fiscal and monetary stimulus were growing rapidly when our original super-cycle report was published in 2010. Since then, however, concerns have grown around the sustainability of a strong emerging market (EM) growth story as the larger EM countries have slowed.

Part of the EM growth slowdown is cyclical; medium-term, we expect enough reforms to keep growth at relatively high levels

Part of this slowdown is cyclical. Inflation concerns led authorities across the EM world to tighten monetary policy as well as reduce fiscal stimulus. And the European recession damaged exports, hitting the manufacturing sector worldwide in 2012-13. However, the slowdown has been more pronounced than can be explained by cyclical factors alone. Compared to our original forecasts, India's growth performance has been most disappointing, though growth has also slowed more than we expected in China and Brazil over the last three years.

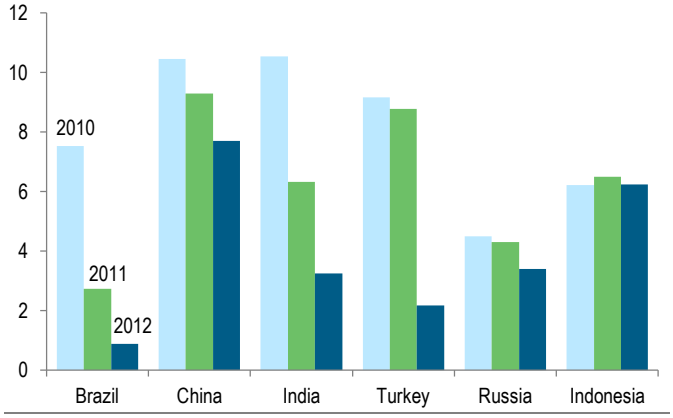
Lack of progress on reforms in these (and other) EM countries has hit growth and weighed heavily on investor sentiment. China's slow growth in 2013 mainly reflects the authorities' reluctance to provide a major new fiscal or monetary stimulus, as they design new reforms to help rebalance the economy. Elsewhere structural rigidities have led to an unhealthy cocktail of slowing growth and stubborn inflation.

Our forecasts take an optimistic view of the outlook. We see EM countries managing enough reform over time to keep economic growth at relatively high levels. China still slows on our projections, down to 6.5% at the end of the current decade and 4.5% by 2030, but we see India's growth recovering from the recent slowdown, returning to a 7-7.5% trend over coming years before slowing again later. Similarly, Indonesia and a range of other EM countries should broadly maintain their recent growth rates rather than slow further.

However, the absence of economic reforms has raised concerns that EM countries are facing their own version of the 'middle-income trap' and are heading for an extended period of weaker growth, compounded by structural factors such as high and rising leverage, ageing populations and a waning of the export-led growth model. Here we address some of the main objections to our view.

Figure 14: EM growth has slowed since 2010

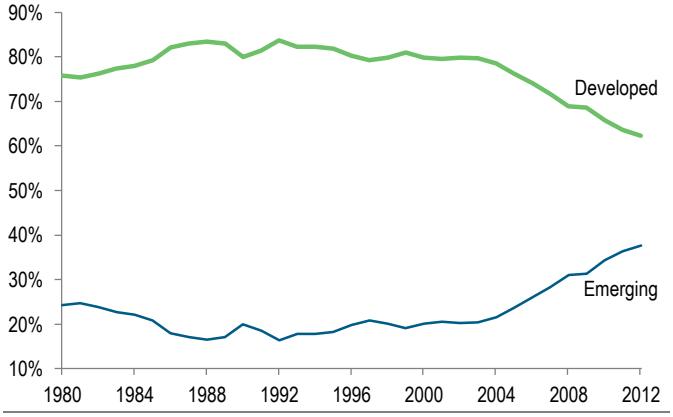
Real GDP growth % y/y



Source: IMF, Standard Chartered Research

Figure 15: Emerging markets are on the rise

% of world nominal GDP



Source: IMF, Standard Chartered Research

Concern 1: Countries face a 'middle-income trap

The middle-income trap arises when a fast-growing economy is unable to maintain strong enough growth to transition from a middle-income to high-income country.

In their widely cited paper, Eichengreen et al (2013) analyse more than 30 countries which have suffered a significant sustained slowdown (at least seven years of slower growth), including some that have slowed more than once. Their findings suggest countries can slow abruptly at any level of income but they also find two nodes (clusters) where several have slowed, one at around USD 10,000-11,000 and another at USD 15,000-16,000 (measured in 2005 purchasing power parity USD).

China has reached the first level associated with a middle-income trap; but education, high value-added exports and currency revaluation should help ensure a soft landing

China has already reached the first level and will reach the second later this decade. But the Eichengreen definition of a slowdown is economic growth 2ppt slower than before. China's growth averaged 10.2% over the last 10 years so a slowdown of somewhat more than that is already in our forecasts for this decade, with a further similar slowdown in the 2020s as growth declines to 5.0% by 2027.

Moreover, Eichengreen et al also find that the likelihood of slowdown is reduced in countries with high levels of secondary and tertiary education (China scores above average here), a higher share of high-tech products in exports (China's is 27.5% versus 24% in the slowdown cases) and in those that do not have an undervalued exchange rate (in recent years policy has been directed towards the CNY's gradual appreciation). It is believed that these three factors help countries climb the value-added scale more successfully.

On the negative side, the study notes that growth slowdowns are more likely in cases where the investment ratio has been particularly high and countries with high old-age dependency ratios, both true of China (though we also believe that China's investment rate is overstated, see below). Overall, we see a slowdown in China's growth as inevitable and the evidence from analysis of the middle-income trap supports this, but China looks to be in a relatively good position in structural terms and this evidence alone does not suggest a really bearish scenario.

India, together with a swathe of poorer countries, including Bangladesh, Nigeria, the Philippines, Vietnam and Indonesia, still have per-capita incomes well below the first node where growth slows. These countries can still benefit from an extended period of 'catch-up' with the developed world just by moving people from the land into cities and industry and by adopting the technology and best practices already available in developed countries.

Another group of large EM countries are in the middle-income range, including Brazil, Mexico, Russia and Thailand. Arguably they are already in the trap and will need to work hard to get out, though Thailand for one is still able to grow its economy at an average of about 4.0% and Mexico has recently embarked on a reform programme. Our forecasts broadly assume that these countries continue on their recent trend.

Countries in East Asia such as Japan, South Korea, Taiwan, Singapore and Hong Kong have successfully made the transition from middle-income to high-income countries using some variant of what is sometimes thought of as the 'Asian growth model'. In truth there are substantial differences in the model in each country, though one common factor is an emphasis on exports of manufactured goods. Their success

in growing past the middle income trap seems to lie in their ability to push through policies that boost total factor productivity (TFP) growth and move up the value-added chain. Those countries that have not only reformed the structure of their economies but also spent more on education, improving skills and research and development seem better able to cope with the transition.

Concern 2: Asian leverage is high and US rates to rise

The pain of the debt crisis in the developed world remains a fresh memory. This has turned the spotlight on whether some emerging markets might be facing a similar debt shake-up in the near future. Undoubtedly, EM growth, especially in recent years, has been fuelled by rising levels of leverage, turbo-charged by easy monetary conditions globally and rapid capital flows into these economies.

Rising leverage in emerging markets also reflects 'financial deepening', with greater access to formal sources of credit

The risk now, according to EM sceptics, is that this growth source could falter as EM countries have limited room to further increase leverage and capital inflows dry up as the developed world withdraws monetary stimulus, starting with the Fed 'tapering' its quantitative easing programme.

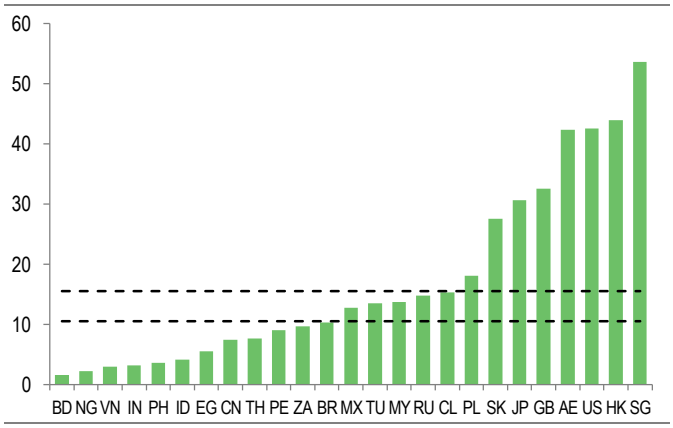
But rising leverage is not necessarily a reflection of debt unsustainability. Some of this rise can be attributed to 'financial deepening' in the developing world (Figure 17). As emerging countries have grown, their financial markets have evolved as well, allowing the private sector to access credit from the formal rather than the informal sector. There are also more assets available for collateral and more value in enterprises.

We are not suggesting that problems do not exist. Some pockets in the EM space, especially in Asia, have seen a very rapid accumulation of debt. Our Asia team has carried out a detailed analysis of leverage across Asian economies in July (for details see *SCout, 1 July 2013, 'Asia leverage uncovered'*).

The report finds that corporate indebtedness is high in China while South Korea's high leverage spans the economy. Some large Indian corporations also appear to be relatively highly indebted while households in parts of Southeast Asia have high debt ratios associated with strong housing markets. But the increasing focus on macro-prudential measures should reduce the possibility of these issues becoming a full-blown crisis, while strong economic growth itself helps.

Figure 16: Trying to avoid the middle-income trap

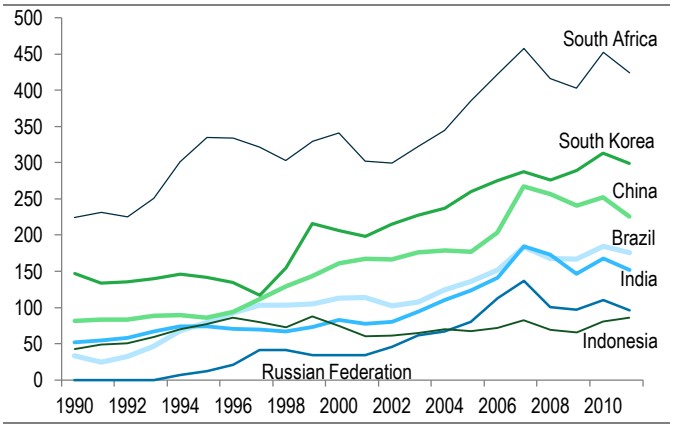
2011 GDP per capita (2005 PPP USD '000)



Source: World Bank, Standard Chartered Research

Figure 17: Financial deepening is underway

Stocks, bank and other FI credit and bonds, % of GDP



Source: World Bank FDSD, Standard Chartered Research

Leverage is not uniformly high; household leverage is still relatively low in Asia, especially in China and India

Also leverage is not uniformly high. Household leverage is still relatively low in Asia, especially in China, India and Indonesia. This represents a growth opportunity as residential sectors expand, a natural accompaniment to economic development. Importantly, government balance sheets are also healthier than their western counterparts (Figure 18) in most cases, with India perhaps the only serious concern (more for its deficit than its debt). Also, foreign debt is generally moderate while FX reserves are mostly strong so that countries are not as vulnerable as in the 1990s.

Even though they may be less vulnerable, limited ability to push debt/GDP ratios too much higher in some sectors and countries could constrain growth. Certainly it may constrain 'easy' growth, such as China substantially expanding infrastructure spending once again or, say, Thailand encouraging a housing boom, financed by easy credit. But with nominal GDP rising between 7-12% on average in most countries (real growth plus inflation) there is still room for debt to increase, provided that it does not increase too much faster than GDP. China grew very rapidly from 2000-08 without any increase in overall leverage, showing that it can be done. The key is reforms to open up new sources of growth.

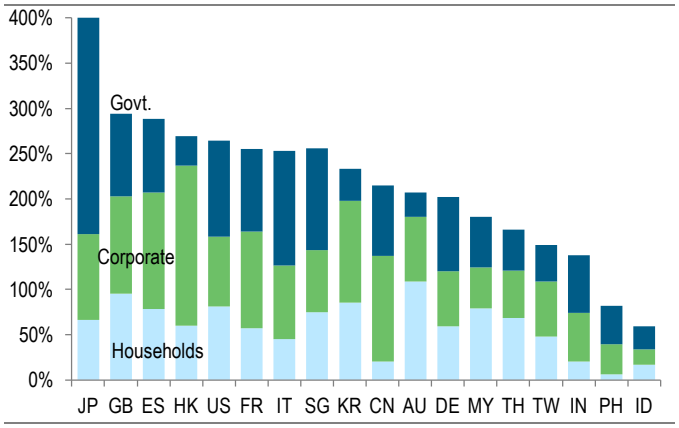
Concern 3: The commodity boom is over

Some analysts worry about the end of the commodity bull-run and the impact on the growth potential of commodity-exporting countries, especially in the Middle East, Latin America and Africa. Global commodity prices have either moderated or shown only modest appreciation over the last couple of years (Figure 19). In contrast, the first decade of this century saw a boom in almost all commodity prices, which rose 2-4 times in most cases. As well as stimulating a major exploration boom, this also brought windfall gains to many government budgets, as well as driving up real exchange rates and supporting consumption.

In our original super-cycle report in 2010 we argued that high economic growth would inevitably mean high commodity prices. But a commodity super-cycle does not imply uninterrupted price appreciation over the entire period. A look at previous commodity super-cycles shows that commodity prices tend to be elevated but also very volatile, with several mini-cycles (Figure 20). This partly relates to the global economic cycle but also reflects demand-supply dynamics within commodity markets. Greater demand and higher prices encourage greater investment and a stronger supply response, leading to periods of price moderation as well.

Figure 18: Asia leverage – household debt is mostly low

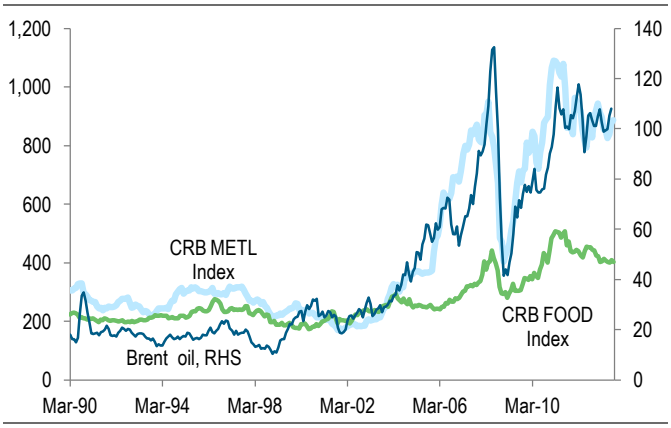
Debt/GDP, %



Source: Standard Chartered Research

Figure 19: Commodity prices up sharply in last decade

Indices from CRB and Brent oil price, USD/barrel



Source: Bloomberg, Standard Chartered Research

There will be winners and losers from stable commodity prices; large EM commodity importers will benefit while exporters will have to focus on reforms

We expect prices to firm for most commodities over the next five years as economic growth accelerates. Oil, gold and rice are the main exceptions, where we see prices roughly stable. This will leave prices below the 2007-08 peaks but in most cases still elevated compared with levels a decade ago, supported by rising global demand. According to the United Nations, over 1.5bn more people are expected to move to cities (joining the middle classes) by 2030. Urbanisation is a very commodity-intensive process and will support commodity demand as well as provide a floor to prices, even with supply increases and technology advancements.

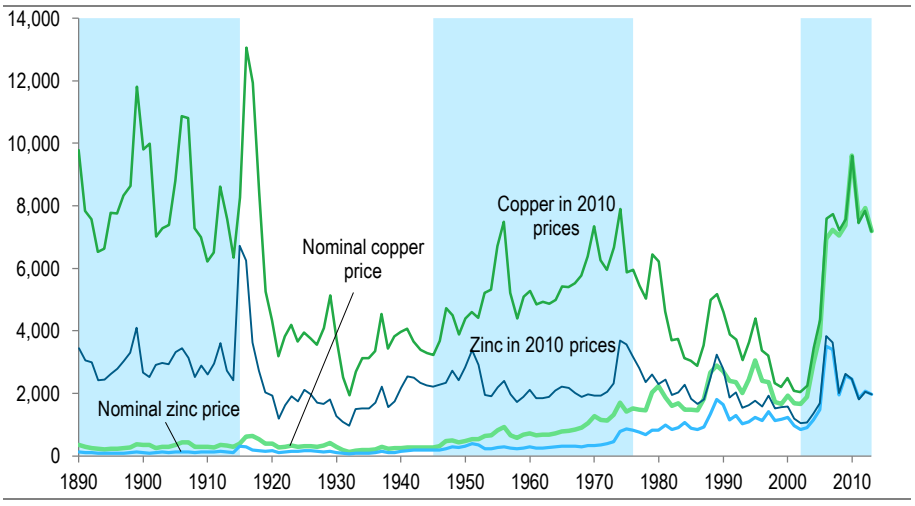
With EM countries dominating both exports and imports of commodities, more moderate price appreciation will bring winners and losers among the developing economies. History provides many examples of countries that have suffered on account of being too dependent on commodity exports – a problem commonly known as the 'Dutch disease'. The new environment should encourage commodity-rich countries to diversify their economies. Countries such as Saudi Arabia and Jordan are already making progress on this front, but most others still need to do more.

Many large emerging markets will benefit from more stable commodity prices, especially energy prices. Large commodity importers such as China, India and Turkey saw deterioration in their current account positions as well as inflationary pressures build as commodity prices surged. More stable commodity prices will reduce inflationary pressures, raise real purchasing power and improve the balance of payments position, all of which in turn will support greater investment, demand and growth. A number of EM countries are also struggling with the burden of high energy and food subsidies on their fiscal accounts as they try to protect consumers. More stable prices will make it easier to unwind these subsidies, helping to reduce fiscal deficits and/or free up funds for government investment.

Concern 4: The export-led growth model is finished

Weak domestic demand and high debt levels in the West, including the UK and most of the euro-area periphery, are seeing policy makers in these economies push for an export-led recovery. Both the US dollar and Japanese yen are being held down by vigorous quantitative easing. This has led to concerns about currency wars and rising trade protectionism and increased calls for emerging markets to rebalance their

Figure 20: Commodity prices have been volatile even in past super cycles
Super-cycles shaded



Source: Standard Chartered Research

economies away from exports towards domestic demand. According to this argument, since not every country can be a net exporter, emerging markets will find it increasingly difficult to continue to export their way to growth.

At the same time, the lack of progress in global trade talks (the Doha round of negotiations) also threatens to reverse the benefits to global growth that has been derived from increasing trade openness and globalisation since the 1980s.

There are still gains to be had from an export-led model that pushes companies to improve efficiency in the face of international competition and move up the value chain

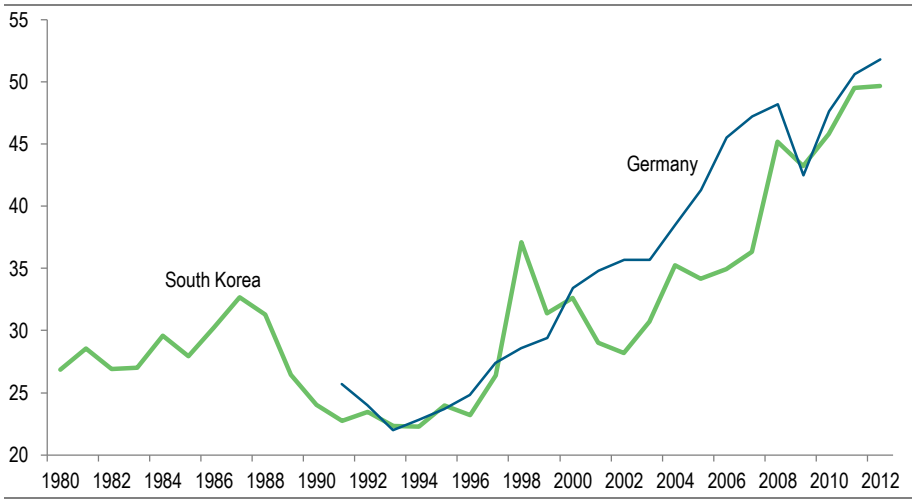
In our view neither of these concerns is valid. The first confuses achieving growth via a strong contribution from net exports with the issue of raising the export share of GDP. The former can be enjoyed for a limited period as a country's current account surplus rises but the essence of the export-led model is that by emphasising export growth and increasing specialisation, governments push companies to improve efficiency in the face of international competition and thus move up the value chain. In this model imports can rise just as fast as exports, keeping the current account position stable. Indeed, rising imports are a normal counterpart for those countries that increasingly rely on imports of goods in which they are not specialised, especially capital goods in the early stages of development.

Germany provides a very good example of a country that has been able to sustain export-led growth for several decades. In the EM world, increasing specialisation and a move towards higher value added exports have allowed countries such as South Korea, Singapore and Israel to enjoy the benefits of export-led growth (Figure 21).

While progress on global trade talks has practically stalled, there has been a proliferation of free trade agreements (FTAs) on a bilateral and multilateral basis. Since 2010, nearly all of the FTAs signed have involved an emerging country as a counterparty. An impressive list of multilateral deals is currently under negotiation, many of which go beyond simple goods trade and include services, investment and procurement.

There is still no consensus in academic circles on whether the rise of FTAs is beneficial or not for global trade and growth. Critics argue that the focus on bilateral trade agreements is hampering progress on global trade negotiations that would

Figure 21: Germany and South Korea have maintained export-led growth
Nominal exports/nominal GDP



Source: Standard Chartered Research

benefit larger parts of the world. In addition, they suggest that bilateral agreements could reduce overall benefits of trade by 'diverting' trade away from more efficient to less efficient trade partners.

FTAs can foster trade by paving the way for progress on multilateral agreements and supporting synergies between countries

There is growing evidence, however, that bilateral agreements could be as useful as multilateral pacts in fostering trade. For one thing, countries agree to such deals only when they find the process mutually beneficial through synergies in terms of products, etc. For another, provided the size of the economies involved is large – and many involve the US or EU or China – the cost of trade diversion is reduced. Finally, bilateral trade deals could eventually pave the way for progress on multilateral agreements by establishing standards and processes and by lowering domestic political opposition to such deals.

Concern 5: Ageing EM populations will slow growth

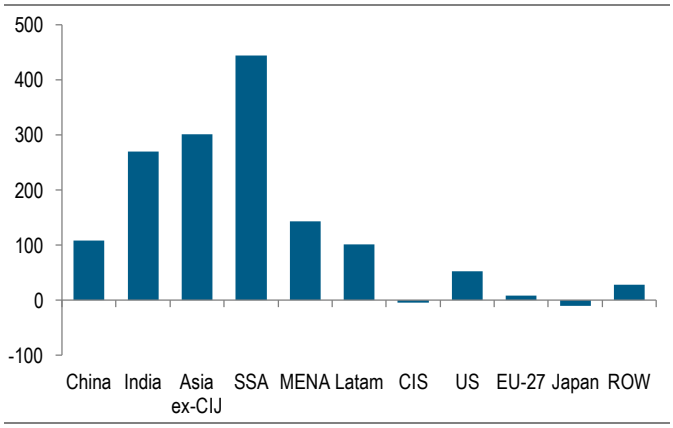
In some ways it is ironic that slower population growth is regarded as a problem: over-rapid population growth has often been cited as a challenge to development because of the need to absorb large numbers of young people into work and the pressures on land and resources. Nevertheless there is the concept of the 'demographic dividend', a period during which fertility rates fall while longevity and health improve, leading to a temporary boost in the ratio of working age to dependent population. East Asia was a particular beneficiary of the demographic dividend during 1980-2010 largely due to the rapid drop in fertility in China associated with the one-child policy. The ratio is now falling, though it will remain well above the US and Europe for the next few decades. But South Asia still has most of the demographic dividend ahead of it and Africa's is only just starting.

The demographic dividend is thought to boost growth via four mechanisms: (1) Increased labour supply due to a greater proportion of working-age people and more women working, though, as noted, a rapid increase in working-age population can be difficult to absorb. (2) Increased savings as families have lower expenses related to children. (3) Greater family spending on health and education for their fewer children, raising labour force quality. (4) Greater domestic demand from higher GDP per capita and more earners.

Some EM economies face similar demographics to those in the developed world. Countries in emerging Europe have a profile very similar to their western counterparts. Concerns about China 'becoming older before it becomes richer' are

Figure 22: Population change by region, 2010-30

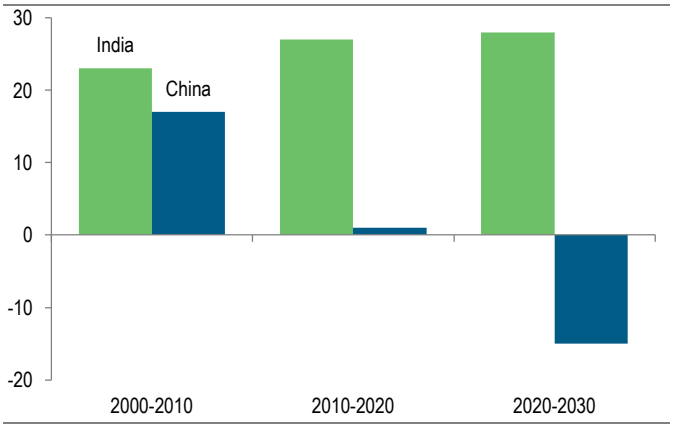
mn



Source: UN, Standard Chartered Research

Figure 23: Diverging population trends in India and China

Change in population as a % of global increase



Source: UN, Standard Chartered Research

also repeated often, implying a slower potential growth rate as the size of the working-age population starts to decline in the next couple of years.

Many EM countries have yet to gain from the first demographic dividend; others can look forward to the benefits of the second

Still, even these countries can benefit from the improving health and increased longevity of their populations – the 'second demographic dividend'. As people live and work longer they save more, which in turn can be used to fund investment and foster growth. Moreover, the end of the demographic dividend, as well as the approaching exhaustion of rural labour supplies that can be enticed to cities (the so-called Lewis Turning Point), will push up wages and encourage companies to climb the value chain.

The move up the value chain will not happen automatically. If companies fail to invest to move upwards for some reason – perhaps because of lack of confidence in the economy or policy, or because they are able to secure protection or a monopoly to carry on as they are – then the country will fall into the middle-income trap. In the crucial case of China there is already plenty of evidence that companies are investing to move up the value chain *(On the Ground, 14 March 2013, 'China - More than 300 clients talk wages in the PRD')*.

Many countries in the emerging world have yet to fully reap the rewards of the first demographic dividend. India, Indonesia, the Philippines and most countries in the Middle East and North Africa have relatively young populations and will see the size of their working-age populations rise. According to the OECD, potential employment growth in India averages a strong 0.8% p.a. for the period 2010-30. Improving health and life expectancy should also enhance the demographic profile for African countries, with South Africa's potential employment expected to rise by 0.6% p.a. over the same period.

Concern 6: Economic reform has stalled

Economic reform stalled when times were good; now governments need to respond

Lack of reforms is probably the biggest factor driving pessimism on growth expectations for countries in the EM space. In the face of the challenges already described, many governments in EM countries have been unable to push through essential reforms either due to political paralysis at home, complacency about strong growth fuelled by ultra-accommodative global liquidity conditions or disillusionment around inequalities that accompany market-oriented reforms. We highlighted this issue in our study on reforms (*Special Report, 10 October 2012, 'Economic reform: the unfinished agenda*').

With the Fed set to take away the punch bowl before long, financial markets have been unforgiving in singling out countries they feel have fallen behind (India and Indonesia for example); those that have shown more progress on reforms, such as Mexico, have been relatively rewarded (Figure 24).

Developing countries could be losing between 1-3ppt of GDP growth due to lack of reforms

In our report referred to above we estimated that emerging countries could be losing between 1-3ppt of GDP growth due to the failure to push through reforms. History is littered with examples where a lack of reforms and poor socio-economic management of an economy have left its inhabitants trapped in poverty or stagnation at best. Korea is the extreme example. Although they were once the same country, the fate of North and South Korea could not have been more different, with per capita income in South Korea currently at USD 22,670 while that in North Korea languishes well below a meagre USD 1,000.

In the 1930s, Canada and Argentina were at a similar level of development when measured in terms of income per head. They also had similar attributes – abundant natural resources, productive agricultural sectors and European investment and immigration inflows. Yet while Canada pursued continuous reforms, Argentina failed to do so, with sharply differing results (Figure 25).

There is no secret about what is needed

The World Bank's Growth Commission produced a list in 2010 that lists the areas on which progress is essential to boost growth

Extensive research on what has worked in different countries means there is a broad consensus on the types of economic reforms that are needed to secure strong economic growth in emerging markets. The World Bank's Growth Commission produced a list in 2010 and, while there are plenty of nuances among experts in the field and questions over sequencing, few doubt that progress in these areas will help to boost growth (Figure 26). The Growth Commission also provided a list of 'bad ideas' (Figure 27) most of which will be familiar to observers of emerging markets (and many developed markets too).

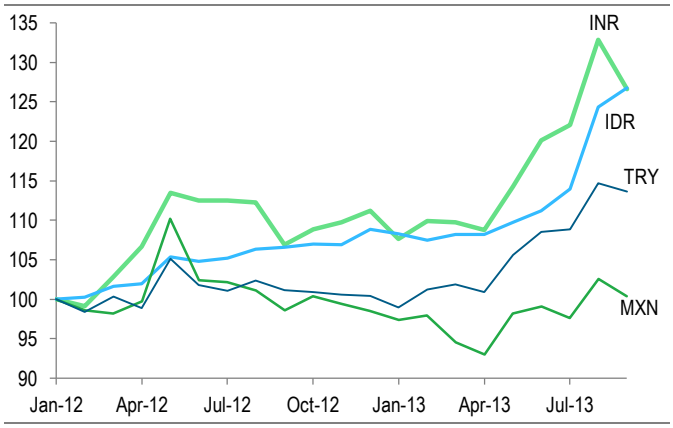
However, implementing reforms is often very difficult. It frequently hurts economic growth in the short run, even though it boosts growth in the long run. It will nearly always be a significant negative for one or more interest groups while the benefits are either spread across the population as a whole or might be enjoyed by new companies either small or not yet in existence.

Moreover, it is not always in the interests of an 'extractive regime', to pursue vigorous reform, to use the terminology of Acemoglu and Robinson, from their recent book (Acemoglu 2012). In an extractive regime the elite do just fine owing to their control over resources and production and fear the 'creative destruction' of reforms that would open the economy to greater competition and trade. Such regimes may be willing to undertake certain reforms that help generate economic growth for a while but such growth is unlikely to be inclusive and the government will tend to resist the development of inclusive political institutions. If the economy hits limits, perhaps the middle-income trap or a slowdown in commodity prices, growth will tend to slow and new reforms may be difficult to come by.

Arguably most systems are extractive in some ways, whether they are dictatorships in commodity-producing countries, 'crony capitalism' in North Africa, or rigid trade unions that insist on employment protection to protect organised workers in European democracies. It is a matter of degree and it is hard to change.

Figure 24: FX markets punish countries needing reform

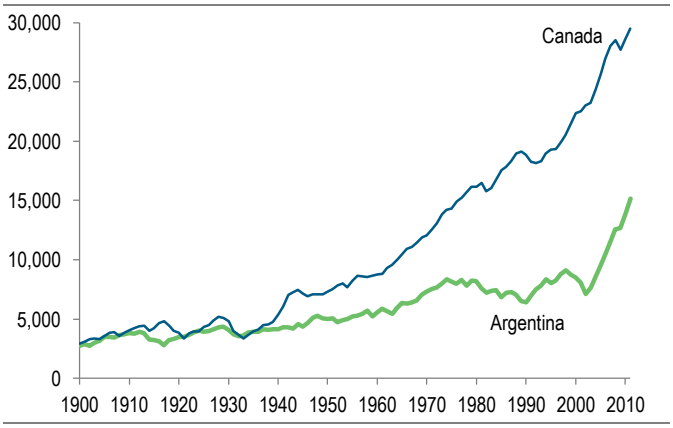
Exchange rate against USD, Jan 2012= 100



Source: Bloomberg, Standard Chartered Research

Figure 25: Impact of prudent management on growth

Real GDP per capita (1990 PPP dollars)



Source: Bloomberg, Standard Chartered Research

Governments in emerging countries can employ several models to push through reforms

If reform is so difficult, how is it ever achieved? There are several routes. One is the strong centralised leadership model used by South Korea, Singapore and China. We are hopeful that this will enable China to make progress in coming years and it has also been very effective in some Indian states. The 'crisis and desperation' model often works, such as in India in 1991. Although recent market turmoil has been more of a mini crisis than a desperate one in India, we hope that it will spur some change.

There is the 'post-election window' model where a new government implements change for a while, hopeful that the positive results emerge before it has to face the electorate again. A number of EM countries have elections in 2014 which could open this window, including again India, Indonesia, Brazil and Turkey. There is the 'opening to outside' model where the central government opens up via a new trade agreement or similar, forcing big changes on both business and government. China used this in 2001 when it joined the WTO and we are hopeful that the current spate of trade and investment agreements under negotiation could help.

Finally, there is the 'competing states or provinces' model, where there is enough leeway in a large country for some states to 'show the way' by opening up and encouraging investment on their own. This has played a role in both China and India

Figure 26: Growth Commission – How to achieve 7% p.a. growth

Maintain a high rate of investment	At least 25% of GDP, including 7% in physical infrastructure Another 7-8% of GDP in education, training and health
Encourage rapid technology transfer	FDI is usually an important channel; foreign education, especially university education
Embrace, do not resist, competition and structural change	Encourage new entrants and do not protect existing firms, "protect people not jobs"
Encourage labour mobility	From farm to factory, and between factories; special economic zones may help
Expect rapid export growth to be key	Role of government in promoting it is controversial; best if role is limited in both scope and time
Maintain a competitive exchange rate, especially early in development	
Open up to capital flows gradually	
Maintain macroeconomic stability	Keep inflation in single digits, not necessarily ultra-low; keep budget deficit at sustainable levels, not necessarily ultra-low; government investment spending is very important
Promote a high domestic saving rate, since relying on foreign inflows is risky	
Develop the financial sector	Needs good regulation; FDI in this sector is very useful
Embrace urbanisation, but spend on housing, sanitation, etc.	
Promote both equality of opportunity and equity	Rural vs. urban, regional and gender inequalities should be addressed; some redistribution of income is good to reduce poverty and promote cohesion
Take care of the environment	
Effective government is very important	

Source: Distilled from the Growth Commission Report, Part 2, pages 33-67, World Bank, 2010

over the years and continues to be relevant. Often governments can encourage the process artificially by setting up special economic zones, e.g., the new Shanghai Free Trade Zone. One model that very rarely seems to achieve a good combination of stability and reform, at least for a long time, is revolution.

Overall, we think it is premature to give up on reform. For most of the last decade economies were growing fast and governments may have felt it was not necessary. Now that it is, we expect a response, though the outcome will vary considerably from country to country.

Underlying improvements in health and education

Most of the concerns about a structural slowdown in EM countries are valid, but we would argue overblown. Moreover, important areas of progress – particularly in health and education – are often overlooked. Most EM countries are making substantial investments in health and education (Figures 28 and 29). Citizens too are often investing their own resources in private schooling and coaching.

We highlighted in the original super-cycle report that this rise in working age populations presents an opportunity but can by no means be taken as an unqualified blessing. Growing ranks of youth could quickly turn into a socioeconomic headache for governments unless these ranks are armed with skills and employment opportunities. The Arab spring of 2010 and recent protests in Turkey and Brazil are reminders that education, infrastructure and job creation are essential elements if the rise in the working-age population is expected to power economic transformations.

The Standard Chartered Development Index shows that most developing countries have made progress on issues such as education, health and life expectancy

It is encouraging that most developing countries have made progress on issues such as education, health and life expectancy that will ensure more sustainable growth over the coming decades. The Standard Chartered Development Index (SCDI) measures changes in GDP per capita, years of education, life expectancy, environmental health and ecosystem vitality (see *Special Report, 18 September 2013, 'Measuring Sustainable Development*'). It shows that compared with 2000, countries across the EM spectrum saw significant improvement on many of these issues in 2012. No single region has dominated this improvement, with the top 10 performers of the SCDI including Ghana, Uganda, Korea, Bangladesh, Singapore, Egypt, Nigeria, India, Brazil and Indonesia.

Figure 27: The Growth Commission's 'bad ideas'

Subsidising energy
Relying on the civil service as 'employer of last resort'
Reducing fiscal deficits by cutting infrastructure spending
Providing open-ended protection of sectors, industries, firms or jobs
Imposing price controls to stem inflation
Banning exports to keep domestic prices lower
Resisting urbanisation and under-investing in urban infrastructure
Treating environmental protection as an 'unaffordable luxury'
Measuring education improvement solely by the number of schools or enrolment
Underpaying civil servants
Poor regulation of the banking system and too much intervention
Allowing the FX rate to rise too much before the economy matures

Source: Growth Commission Report Part 2 pages 68-69, World Bank 2010

Simply because these economies are starting from a relatively low base on most of the indicators does not guarantee that improvements will come easily. Countries such as South Africa, Saudi Arabia and Russia perform poorly on the SCDI, underlining the urgent need to focus on reforms in general.

China: Rebalancing is underway for more sustained growth

China's performance is critical to the super-cycle

The big risk to our EM and global growth forecasts over the next 17 years comes from China's potential failure to achieve its own target of rebalancing the structure of its economy away from an export- and investment-led to a domestic- and consumption-led growth model with slower growth in leverage. China is already the world's second-largest economy and any sharp drop in its growth would seriously undermine the possibility of global growth meeting our projections.

Those bearish about China's prospects voice several concerns. These include over-investment as well as unproductive investment, high leverage levels of banks and the government, a frothy real-estate sector, risks of over-reliance on an export-led growth model in the absence of reforms.

Our current forecasts do not differ much from those made in 2010. We had already factored in a moderating growth profile for China (Figure 30) as it grows in size and importance *and as population growth slows*. We remain cautiously optimistic on China's growth prospects. First, unlike some other EM countries where policy makers have been loath to undertake reforms, the new Chinese administration seems to be putting reforms at the heart of its economic strategy.

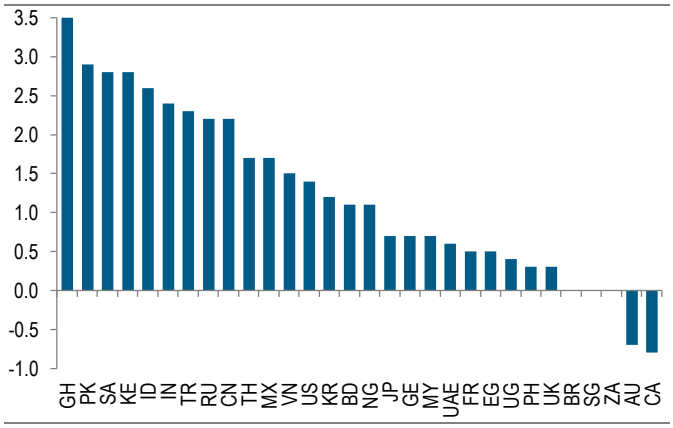
China's slowdown has been partly driven by policy makers; China is also not as imbalanced as official statistics show – consumption is much higher than estimated

China's growth slowdown has been partly at the behest of government as it has focussed on reforms rather than targeting a growth number. The Hu-Wen government has boosted the social security system and overseen significant growth. The external imbalance has been reduced greatly (the current account surplus was above 10% of GDP in 2007, but below 2% of GDP in 2012). We also tend to agree with some academic papers that suggest that consumption is under-counted in China, so China is not as dependent on investment as the world seems to think (see *On the Ground, 24 September 2013, 'Masterclass – China is not really that imbalanced*').

According to research work done by Zhu Tian of the China-Europe International Business School (CEIBS) and Zhang Jun of Fudan University, China's official

Figure 28: More education everywhere

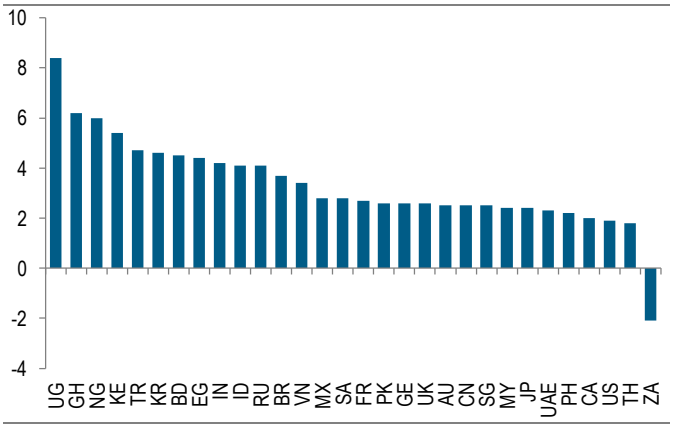
Change in expected years of education at age five, 2000-12



Source: Standard Chartered Research

Figure 29: Longer life

Change in life expectancy at birth 2000-11



Source: Bloomberg, Standard Chartered Research

investment and consumption statistics do not properly measure 'imputed rents'. This is critical, as almost 90% of apartments in China are owner-occupied, making the rental market very small. If imputed rents were to be estimated correctly, then total residential rent would increase consumption estimates by 6ppt to 12% of GDP. The scholars also argue that if 'grey income' was properly classified and benefits properly included in wage calculations, then China's household consumption would stand at 49.8% of GDP, rather than 35.3% as official estimates show, implying a lower share of investment in GDP (Figure 31).

In addition, per-capita capital stock in China is only around 10% of the levels seen in the US or Japan. As a result, we believe that much of the investment of the last few years will be good for the economy, as China still has to catch up not only with the West but also its Southeast Asian neighbours both in terms of urbanisation as well as per capita income levels. Only 52% of China's population lives in urban areas, compared to 60-70% for Korea and Japan. Having said this, clearly greater progress can be made to support income growth, the *sine qua non* of consumption growth. We find that many in the leadership understand these challenges very well. The 12th Five Year Plan includes many initiatives that should help; we expect to see more detail on their implementation over the next few months (*On the Ground, 2 September 2013, 'China – The Third Plenum: Your briefing pack*').

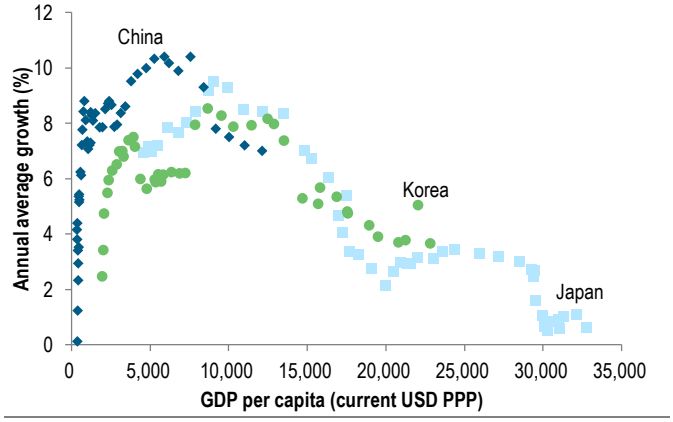
China's total government debt is between 70-90% of GDP, much lower than in developed countries; a high nominal growth rate would help keep this debt at sustainable levels

China bears also point towards the rising level of non-performing loans on banks' balance sheets and growing government debt as possible impediments to sustained growth. Total government debt, which includes central and local government debt, Ministry of Railway debt and old NPLs, is in the range of 70-90%. This is high but well below the levels seen in the West. It is also possible that some of the bank loans to local government investment vehicles will have to be taken onto the government's own balance sheet. For now though, the centre is forcing local governments to deal with the problem on their own, which is triggering asset sales. This could prove a blessing in disguise in terms of helping the private sector at local level. At the same time, strong nominal growth of more than 10% p.a. over the next two decades would help to keep this debt at sustainable levels (Figure 32).

Finally, the rise in property prices in China has fuelled concerns about a real estate crash similar to that seen in the US or Spain. Pockets of concern in the housing market include a significant inventory overhang in many cities and elevated prices, which could result in a couple of difficult years for developers. This is precisely why in

Figure 30: China's slowdown is inevitable as it develops

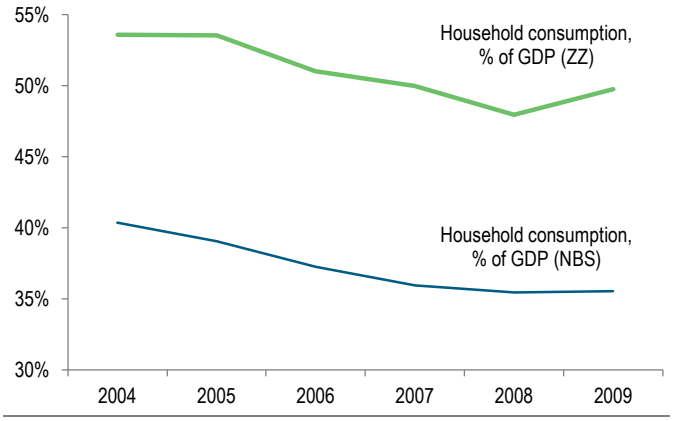
Real GDP , % y/y, 1950-2015



Source: Standard Chartered Research

Figure 31: Consumption is underestimated in China

% of GDP, (ZZ refers to study in text, NBS is official data)



Source: CEIC, Wang Xiaolu, Standard Chartered Research

recent years the government has continually tightened real estate legislation to cool some of the froth in the market and reduce speculation. At the same time, household leverage is still very low in China, with minimum down-payments of 20-30% (in some cases even 50%) being enforced. Also many properties are bought without mortgages. This significantly reduces the possibility of a US-style housing crisis.

India – A few lost years, but this is not 1991

Despite better fundamentals than during the 1991 crisis, India needs to undertake essential structural reforms to equip its growing labour pool

One country that has lost out on account of reform paralysis is India. As part of its 11th Five-Year Plan, the Indian government aimed to hit double-digit growth by FY11 (year ended March 2011). The global financial crisis effectively put paid to this but the growth slowdown that has followed has its roots more in domestic growth bottlenecks rather than any external headwind.

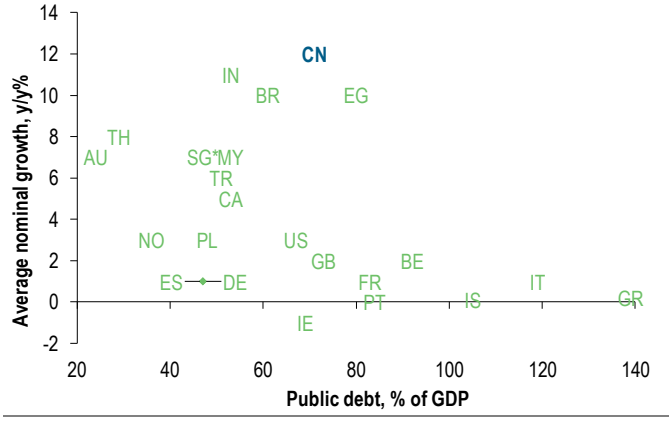
Consequently, compared with our view in 2010, India's growth profile over 2010-30 now looks much weaker. We now expect average growth of 6.7% p.a. versus our 2010 forecast of 8.6% p.a. over the same period. India's share of global GDP at present is only about one-third of China's, at 4%. Therefore this slowdown does not materially alter our global growth forecasts. But longer term, faster growth in India is an important part of the super-cycle story. India will account for nearly one-third of the increase in the world's working-age population by 2030. For the world to see strong economic growth in the 2020s and beyond, India needs this larger workforce to be equipped with the skills and technology needed for rapid development.

We believe that while many of the reforms required of India to boost growth may be difficult to achieve in the context of coalition governments in a pluralistic democracy, they may nevertheless be easier than the changes required of those countries mired in the middle-income trap. This has already been demonstrated in some states in recent years where growth has accelerated dramatically, including Bihar, Madhya Pradesh and Orissa. Gujarat has maintained double-digit growth for over a decade.

The main constraint on the desired growth spurt in India comes from an infrastructure deficit (Figure 34). Strong domestic demand but a lack of supply response has led to an adverse combination of twin deficits and stubbornly high inflation. This has resulted in investor sentiment turning sharply against India – with some worries that India could need IMF assistance similar to the 1991 period.

Figure 32: Public debt is less worrying with growth strong

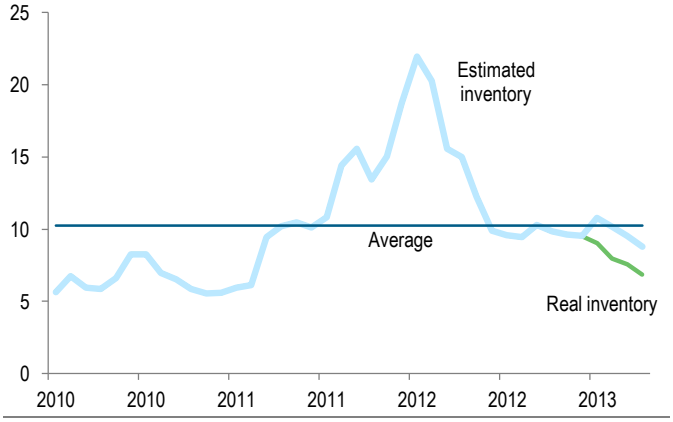
Public debt, % of GDP, 2009 vs. nominal GDP growth 2009-15



Source: CEIC, World Bank, Standard Chartered Research

Figure 33: Inventories are higher than we expected

Months of inventories in China's 31 largest cities



Source: IIF, Standard Chartered Research

However, comparisons with 1991 are unfair in our view. There is no denying that India's economic fundamentals could be improved, but they are much better than in the early 1990s. India's domestic economic structure has evolved with a larger service sector (66% of GDP versus 50% in 1991) providing stability and a liberalised industrial sector, lowering the likelihood of any sharp drop in growth. India's net foreign assets now stand at 16% of GDP compared with only 3.0% in 1991. FX reserves more than cover short-term debt obligations and also provide import cover of 6.5-7.0 months (only one month of cover in 1991). It has a much healthier financial position, with stable inflows including NRI deposits, remittances and FDI inflows now accounting for just under 85% of the trade deficit compared with only 55% in 1991 (see *On the Ground, 28 August 2013, Asia macro – Time for a 'reality check'*)

At the same time, Indian policy makers also appear to be responding to the concerns, with monetary policy now firmly signalling an anti-inflation stance and measures being taken to address the funding of the large current account deficit. We also remain optimistic that the focus on reforms will pick up speed once the election cycle is out of the way (a general election is expected to be held in May 2014).

Other countries: Indonesia, Russia and Brazil

Over the last few years, like some of its other Asian neighbours, Indonesia has witnessed a slowdown in the pace of reforms that has also been reflected in slower growth and a deteriorating BoP position.

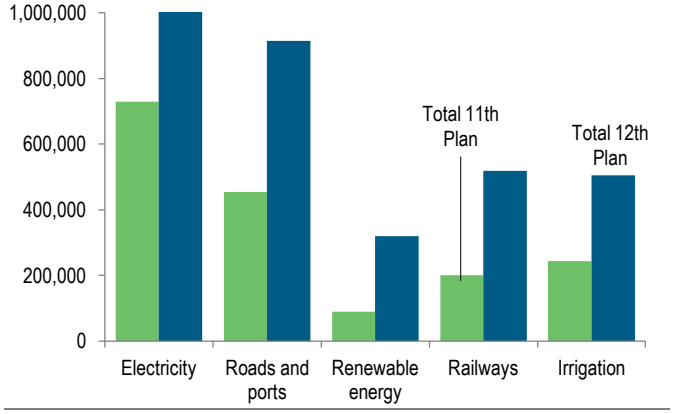
Indonesia and Russia have to rebalance their economies and reduce dependence on commodity revenues

Once again, we believe that the sell-off seen in **Indonesia** over the summer months was overdone compared with its overall fundamental position and that fears of a repeat of the 1997 crisis are unwarranted. Indonesia's net foreign assets position is much stronger overall at 12% of GDP, compared with only 6% before the Asian crisis in 1997. Its short-term external debt is only around 21% of total external debt and even if we add Indonesia's current account deficit to this short-term external debt, its reserves more than cover the two together (FX reserves 159% of short-term external debt + current account deficit). In our view, the risks of a 1997-style crisis remain low.

The recent sell-off, however, might turn out to be the impetus needed by the Indonesian government to accelerate the pace of reforms. To deal with a widening current account deficit (and reduce the fiscal strain) the Indonesian government reduced the fuel subsidy bill by 33% in mid-2013. This should make the current account position more sustainable by lowering import costs in the face of moderating export gains on the back of lower commodity prices.

Figure 34: India – More infrastructure needed

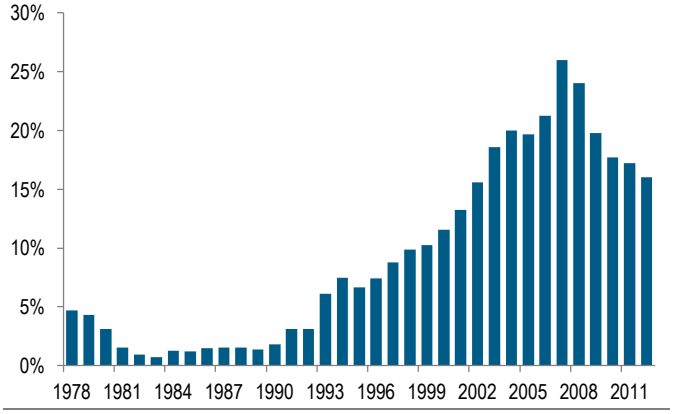
12th FYP planned spending vs. actual in 11th FYP, INR 10mn



Source: India Planning Commission, Standard Chartered Research

Figure 35: India – A healthier financial position

Net foreign assets, % of GDP



Source: IIF, Standard Chartered Research

Like India, part of the problem in Indonesia has been a paucity of infrastructure investment that is crippling an otherwise vibrant domestic economy. Implementation of the land acquisition law at end-2011 was a step forward in dealing with these infrastructure issues but more needs to be done still. We expect the pace of reforms to accelerate following the presidential elections in mid-2014. Our projections suggest that Indonesia could be the 9th largest economy in the world by 2030, up from 16th today.

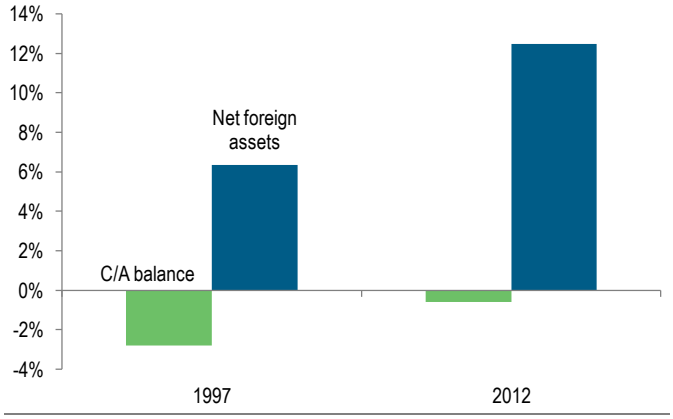
Moderating or stable commodity prices are also dragging **Russian** growth lower, highlighting the need for structural reform away from commodities to other sectors of the economy. Oil-revenue dependence has hampered the growth of the private sector and more measures are needed to support the business climate and boost private-sector investment. Russian authorities are aware of this and are pushing through deregulation measures which they hope will foster private-sector investment. Authorities are also strengthening the macroeconomic policy framework by aiming to move to a flexible exchange rate and inflation-targeting environment by end-2014 and adopting new banking laws aimed at reducing financial-sector risks. The government will have to do more on deregulation and privatisation of state-owned enterprises to materially improve the business conditions of SMEs in Russia. We hope that the G20 presidency as well as the bid to join the OECD will provide additional anchors for speeding up the reform process in Russia.

Two major sports tournaments will support infrastructure spending in Brazil

For **Brazil** in recent years, the main drag on growth has been the loss of export competitiveness. This is the result of delays in infrastructure spending and also tight labour markets that have brought wage increases in excess of labour productivity gains. These factors have shaved 0.2ppt from Brazil's projected growth from 2010-30. This is not too dramatic a loss and with two major sporting events in the next three years (the 2014 FIFA World Cup and the 2016 Olympics), infrastructure spending related to just these two events should be boosted by around 2% of GDP (Figure 37). The more pressing issue is for the government to recognise that Brazil is losing competitiveness due to labour-market rigidities and for it to introduce reforms aimed at improving labour-market flexibility.

Figure 36: Indonesia: Fundamentals are better than 1997

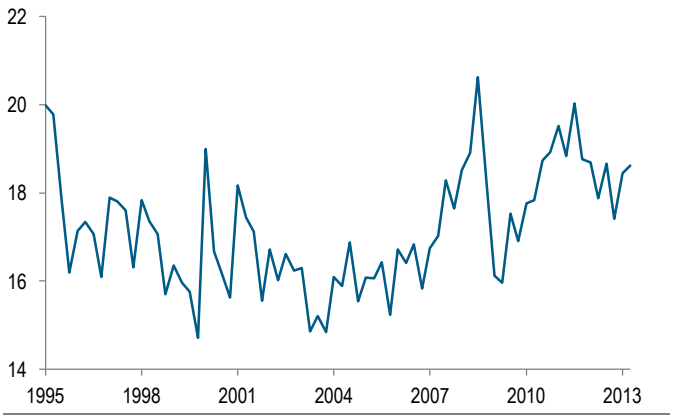
3Y MA, % GDP



Source: Economic Reforms: The unfinished agenda, Standard Chartered Research

Figure 37: Brazil's investment share is picking up

Investment as a % of GDP



Source: Bloomberg, Standard Chartered Research

Conclusion

Emerging markets will dominate the global economy not only in terms of their share of it but also as the main drivers of faster growth

In the last couple of years very few EM countries have attracted investor attention in terms of offering a positive outlook for reform; the Philippines and Mexico are probably the only large countries that have done so. Meanwhile the BRICs as well as Indonesia and South Africa have disappointed. Our view is that the pace of reform will pick up in coming years, inevitably in a patchy, contingent way and that gradually more countries will show a positive outlook. China is far by the most important and here, financial sector reforms are already under way and the government is likely to announce new reforms across a range of areas very soon.

We remain optimistic that EM economies can still drive world growth over the coming years. Concerns about the middle-income trap and over-leverage are overdone in our view. Emerging economies are by and large still poor and can continue to enjoy robust growth rates in the years ahead in a process of catch-up with the more developed world. Armed with a largely favourable demographic profile and encouraging improvements in indictors of sustainable development, emerging economies have the potential to pull the global economy out of its current malaise over the medium term.

Our optimistic view is based on an expectation that these economies will be able to deliver the reforms that are essential for growth. China will have to lead the way and it is encouraging that it is placing so much emphasis on rebalancing its economic structure. India needs to do a lot more to catch up; we hope that it will deliver after the 2014 general election.

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Part 3: Developed markets are set to accelerate

Many developed countries are still struggling to recover from the 2008-09 financial crisis

With developed market (DM) economies still accounting for more than 60% of world GDP, their pace of growth remains a key global growth driver. Yet after a rebound in 2010, advanced-country growth slowed in 2011-13 to average only about 1.5%. Many countries still face enormous challenges after the 2008-09 global financial crisis (GFC): excessive leverage, weak banking systems (especially in Europe) and the need for fiscal retrenchment (notably Japan). Maintaining confidence in the euro (EUR), stabilising Japanese government debt while maintaining economic growth, and exiting from unconventional monetary policy will all be difficult policy balancing acts.

Amid slow growth there are reasons for optimism: Low inflation, spare capacity, better technology

Recent slow growth has been largely due to the acute euro crisis in 2011-12 together with a heavy dose of fiscal tightening (Figure 38). This may be a temporary weak patch rather than a "new normal". Focusing exclusively on the risks can blind us to aspects of the current situation which point to a better long-term outlook, including low inflation, ample spare capacity, and improving technology. In the following pages we assess the various concerns over the developed country outlook.

Concern 1: Balance-sheet adjustment is far from complete

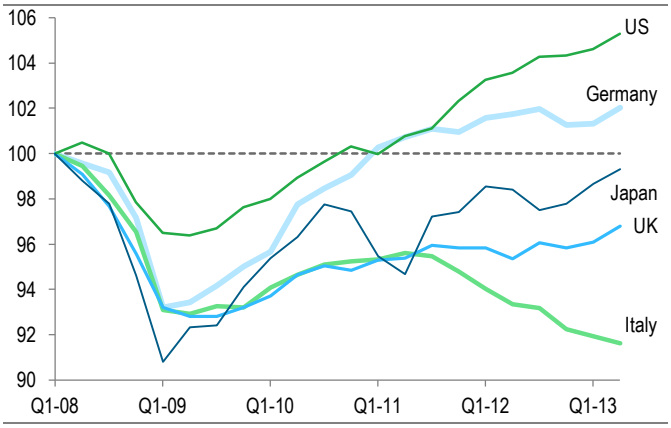
It is taking longer this time than after previous crises for GDP per capita to recover

In their book *This Time Is Different* Reinhart and Rogoff found that it took 4.4 years on average for GDP per capita to return to its pre-crisis highs after post-war financial crises in Scandinavia and East Asia and 10 years during the 1930s crisis. After the Global Financial Crisis (GFC), it took 5.5 years for the US and Japan to return to their pre-crisis highs in Q2-2013, while the Euro area is about 4% below and the UK about 6% below (Figure 39). Spain and Italy, still around 10% adrift, will be lucky to recover inside of 10 years (though we believe Spain has a shot at it) while Greece (not shown in the figure) has seen a more than 20% decline in per capita GDP.

Full recovery requires structural adjustments to balance sheets as well as cyclical policy support, as emphasised by Richard Koo in his work on balance-sheet recessions (Koo 2008). Meanwhile weak growth opens up fiscal deficits and leads to rapidly rising government debt. Stabilising this debt requires fiscal austerity at some stage, which restrains recovery. The damage to business confidence can be quite long-lasting; ideally, new reforms and the opening-up of new business opportunities are needed to restore animal spirits.

Figure 38: Weak recovery from the crisis

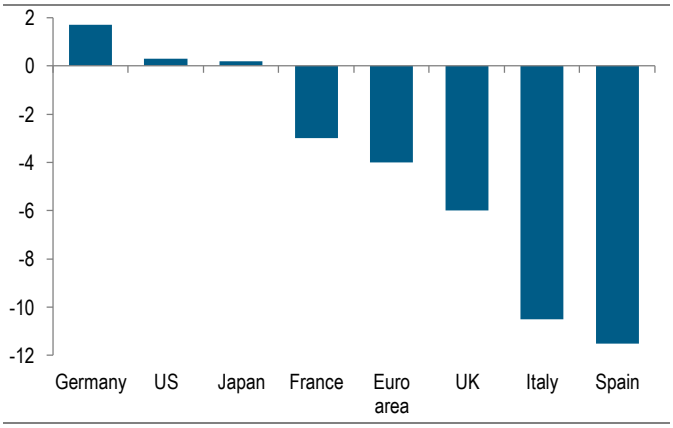
GDP Q2 2013, rebased to Q1-2008, index



Source: Bloomberg, Standard Chartered Research

Figure 39: Incomes still weak 5.5 years after 2008-09 crisis

Change in GDP per capita since Q1-2008 %



Source: Bloomberg, Standard Chartered Research

The US is leading the way

US data has begun to brighten owing to structural reform

Our approach to analysing progress in recovery is based on the checklist in Figure 40 (see report '*Fixing the Developed Countries*'). The US has made by far the most progress in structural reform. House prices were fully deflated by the end of 2011 and have begun to rise again. Household balance sheets have been boosted by rising house and stock prices, as well as higher savings. The ratio of household net worth to income is now well above the average of the last 50 years, though below the levels during the stock and housing bubbles (Figure 41). Asset prices may be artificially inflated by quantitative easing, an issue we return to below; nevertheless, wealth effects have supported private spending so far this year.

Housing quality and investment, along with improved access to credit, support the recovery

Meanwhile, the household debt/income ratio has returned to its long-term trend and appears to be bottoming (Figure 42). Some argue that with the current level still well above the pre-housing bubble level, it has further to fall. We believe there are good reasons why this ratio can be higher than 10-20 years ago. Houses are larger and better equipped than ever before, making them naturally more valuable to mortgage. More people own investment properties or have debt associated with their own small business (which is not always effectively separated from household data). We also suggest that banks are better able to assess credit risk now than in the past, due to improved data and scoring systems, although they did a poor job in 2004-08, when they failed to recognise the housing bubble.

There is some concern that a new house-price bubble is developing. House prices have risen about 16% from their 2012 lows (on the Case-Shiller index) but this still leaves them at only 77% of 2006 levels, or 66% in real terms, so it is much too early for concern. We view a rising trend for home prices as positive, helping to fuel economic growth. A strong rise in the household debt-to-income ratio might be a concern, but a stabilisation of the ratio from here would support economic growth.

Figure 40: Developed markets recovery scorecard

The more asterisks the better

	US	Japan	UK	Spain
Fix balance sheets				
Original asset bubble fully deflated	*****	*****	****	**
Healthy household balance sheets	*****	****	***	*
Healthy corporate balance sheets	*****	*****	*****	***
Healthy banks	*****	****	**	*
Stabilised government debt/low deficit	***	*	**	**
Other reforms/growth stimulus	***	*	*	***
Revived 'animal spirits	***	**	*	*
SUMMARY – STRUCTURAL (out of 35)	29	22	18	13
Supportive fiscal policy (2013)	*	****	**	**
Easy money overall	*****	***	****	*
Low real rates	****	**	***	*
Cheap currency	*****	*****	*****	**
Rising asset prices	*****	***	****	*
Lending up to private sector	****	***	**	*
Healthy money growth	*****	***	****	*
SUMMARY – FISCAL AND MONETARY POLICY (out of 10)	6	7	6	3

Source: Standard Chartered Research

Banks in the US and Japan are relatively strong

US banks were weak in 2008, but they have written off bad debts and raised capital and liquidity ratios. Bank lending fell between 2008 and 2011, but since Q2-2011 has been on a rising trend. Meanwhile, corporate balance sheets, which were never that stretched in the US, were significantly strengthened after the crisis owing to additional cash and the substitution of long-term debt for short-debt. Balance sheets are also strong in Japan (except for the government's), where recovery from the 1980s bubble took a long time, but was essentially complete by the early/mid-2000s.

Balance sheets are weaker in Europe

European banks have both more varied and more serious issues to address

The picture in Europe is weaker, though it varies significantly between countries. Corporate balance sheets are strong in Germany, despite the recent recession, but the IMF has identified a significant overhang of weak corporate debt positions in Italy, Spain and Portugal, which will take time to work through; France also has vulnerabilities in Small and Medium-sized Enterprises (SMEs). These strains will work against restoring economic growth as well as likely bring new losses to banking systems. The household sector is also under stress in a number of countries due to high debt and/or weak house prices, including Spain and the Netherlands.

Of most concern in Europe is the banking system, which the ECB hopes to address with its asset quality review over the course of the next year. Many banks still have work to do to improve capital and leverage ratios, which is tough to do when the recession is bringing a new wave of bad credit, denting profitability, and the risk from sovereign debt is still a nagging worry. In this environment many banks have been reducing balance sheets and tightening lending standards (ECB July 2013). There has been progress on bank repair: in the process, lending activity has fallen, though banks plan to ease credit standards for corporates in Q4-2013, for the first time since 2009. Overall then, the Euro area is likely to lag the US in turning up and the headwinds from private-sector restoration of balance sheets has further to go.

Concern 2: The 'debt super-cycle' has turned down

The West may have reached its limit

On this view, the West has seen a multi-decade debt expansion (going back to the 1950s on some accounts) which has now reached its limit. The concept of a debt super-cycle has been used for many years by the Montreal-based Bank Credit Analyst and was developed by John Mauldin among others (Mauldin 2011). According to his view, the inevitable unwinding of this debt means that growth is doomed to be slow for a very long period.

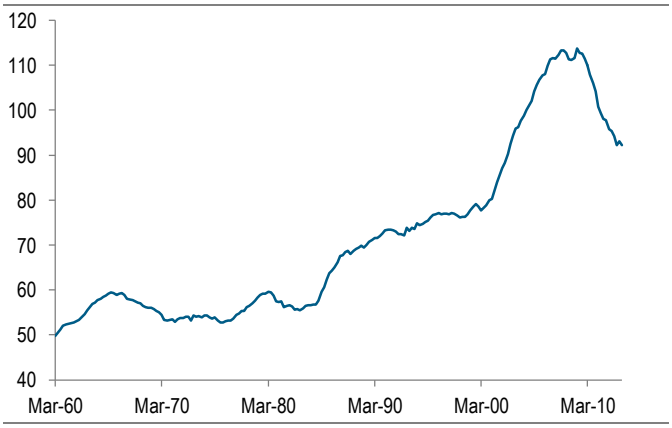
Figure 41: US net worth has rebounded

Net worth/personal disposable income %

Source: Bloomberg, Standard Chartered Research

Figure 42: US household debt back on trend

Debt/GDP ratio %



Source: Bloomberg, Standard Chartered Research

The idea that debt may be too high in some sectors in some countries has received support from researchers at the BIS too, who identified thresholds for debt levels beyond which high debt is a drag on growth (Cecchetti 2011). For government debt the threshold is around 85% of GDP, for corporate debt 90% and for household debt 85%. Across most advanced countries, corporate, household and government debt have been on a rising trend and on average and for some countries, debts are above these thresholds (Figure 43). The BIS researchers found that for every 10ppt government debt is above the 85% threshold, trend growth is reduced by about 17-18bps, while for corporate and household debt the effect is smaller and less clear.

Private-sector confidence tends to lead recovery

The first point to note is that deleveraging in the private sector is normal in a recession and often in the first years of recovery, especially after a major financial crisis. During this period, government leverage tends to increase due to high deficits and sometimes support for banks (McKinsey 2011). But the cycle turns. At some point, when private-sector confidence revives, the economy grows faster, often with a rise in private-sector debt ratios, while government leverage declines. The question is whether there is something more structural going on this time, which will require a much bigger fall in debt.

Good reasons for higher private debt now

Structural and technological changes make borrowing easier and more attractive

The rise in private-sector debt over the last 30 years partly reflects important institutional and market changes; the liberalisation of financial systems removing prior restrictions on borrowing and lending; developments in financial theory and technology making it easier to assess risk and monitor borrowers, and leading to significant financial innovation; and the fall in real interest rates associated with lower inflation. Meanwhile, the favourable tax treatment of borrowing in many cases makes it attractive.

Moreover, as countries develop they have more capital, in the form of plant, machinery and know-how, which means more collateral for credit. This applies to housing too, as already noted, while the value of corporations and of brands has also risen as goods and services become increasingly differentiated. Meanwhile, with increasing pension assets and an ageing population there is an increased demand for financial instruments. And in recent years, partly because of regulatory change and the ageing of populations, this demand has focused on debt instruments rather than equity.

Figure 43: Private-sector debt has been rising in most countries

Debt as % of GDP

	Household debt			Non-financial corporate debt		
	1980	2000	2010	1980	2000	2010
US	52	74	95	53	66	76
Japan	60	87	82	176	178	161
Germany	59	73	64	46	91	100
UK	37	75	106	64	93	126
France	27	47	69	91	123	155
Italy	6	30	53	48	96	128
Canada	56	67	94	109	111	107
Weighted average*	46	69	90	79	99	113

* G7+11 other advanced countries, based on 2005 GDP and PPP FX rates

Source: Ceccheti 2011

How much might high leverage hold back growth?

There is a wide range of opinion regarding the effects of private-sector deleveraging on growth

The thresholds suggested by the BIS should not be regarded as sharp turning points. Some studies fail to find such turning points at all (IMF 2010); other studies find it to be more of a gradual shift. Most of the focus is on public debt. One study (which criticised Reinhart and Rogoff's conclusions on the threshold for public-sector debt) found that public debt ratios between 90% and 120% (where most countries are now) were not nearly as damaging as those above 120%, (Herndon 2013). Meanwhile, a recent study by (other) BIS researchers suggested that private-sector deleveraging is not necessarily harmful for growth. They found that declining bank credit following a financial crisis will not necessarily constrain economic recovery once output has bottomed (BIS July 2013).

Government debt is mainly a problem in Japan

With all these caveats, how strong are the headwinds? Gross government debt in the US and UK is set to peak at around 108% of GDP, while in the euro area it should peak at about 96%. Simplistically, therefore, (since models such as the BIS authors use are only indicative), GDP growth could be held back by about 0.2ppt p.a. Japan, with a much higher debt ratio − 240% and still rising − faces a bigger problem. However, the Japanese government has more financial assets than most governments, which leaves net debt about 100ppt of GDP lower. Still, net debt is likely to head to around 150% of GDP before stabilising which, based on the BIS figures, would hold back growth by around 1ppt of GDP, a very serious headwind. Meanwhile the problem for high debt countries in the euro area is that their debt is essentially foreign, which makes financing more problematic.

Housing cycles are turning up, supporting household debt

Although housing debt levels in Europe vary, the cycle appears to be turning up

Household debt is mostly at or above the threshold level, though well below in Italy, Germany and France. Mortgage debt is the main component of household debt in most countries, so clearly the level of mortgage debt reflects the amount of owner-occupation, the ease of obtaining mortgages and the level of house prices. Housing cycles play a major role in the modern economy via house-building, related consumer spending on fixtures and fittings and wealth effects. Nevertheless, with the exception of Spain and the Netherlands, the house price cycle appears to be turning up now in most developed countries, which points to rising mortgage debt and stronger consumer spending over time.

Corporate debt is modest in the US, but higher in Europe and Japan

Non-financial corporate debt is well under the BIS threshold of 90% in the US, at 76%, but well above it in European countries and Japan. Will this constrain corporate investment? Perhaps, though as balance sheets improve and confidence revives, we doubt if it will prevent it. Companies often need to invest to survive and many will likely seize opportunities once confidence revives. Moreover, quite a bit of the distressed debt in developed countries relates to commercial real estate. As the economy improves, buildings will fill up and rents will rise.

'Debt super-cycle' creates headwinds, not a wall

Overall then, we find the view that the "debt super-cycle" dooms developed countries to slow growth unconvincing. It creates headwinds but not a wall; the headwinds will likely dissipate as the economic upswing gathers strength and confidence improves.

Concern 3: Fiscal restraint will continue to slow growth

The US implemented massive tightening in 2013

Most DMs implemented fiscal stimulus after the GFC

During 2009-10 most developed countries implemented sizeable fiscal stimulus, designed to offset the abrupt cut-back in private spending and avoid depression and deflation. The UK, Spain, Greece and a few others already had begun to consolidate in 2010 and from 2011 onwards most countries joined in, with Japan the main exception (Figure 44). This effort has been successful in roughly halving the cyclically adjusted deficit in the US and UK compared with the peak and reducing the euro area's deficit by two-thirds. Only Japan has seen a rise in its cyclically adjusted deficit, partly reflecting deliberate Keynesian policy and partly due to the clean-up costs of the 2011 tsunami and nuclear accident.

There is further to go, but with debt/GDP ratios now stabilising, most countries are scaling back the amount of tightening for future years (figure 45). Japan is again the exception: Higher consumption taxes next April will bring a significant tightening in 2014, as much as 2.5% of GDP according to the IMF. This will be partially offset by temporary fiscal stimulus measures, but points to some slowing in growth in 2014.

Concern 4: The euro crisis is not over

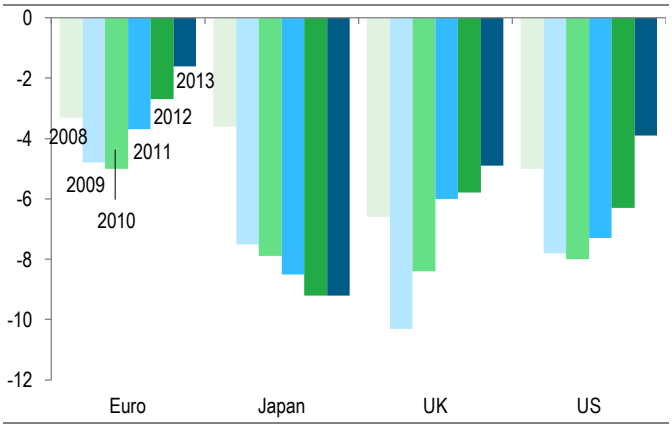
Although global markets have breathed a sigh of relief, they continue to watch the euro

The "acute phase" of the euro crisis – when banks and businesses around the world feared that the euro could blow up, creating a new world economic and financial crisis – appears to have passed. Our forecasts assume it will not return and that European growth will gradually accelerate.

We have always viewed the euro as a political project. The euro area is not an "optimal currency area" that will naturally hold together, though neither is the US or indeed most individual countries. The trick is to maintain market confidence that the central bank will support countries if necessary and that, even though economies may go through very tough periods, populations will vote to remain part of Europe. So far, despite acute economic pain and rising unemployment this has happened. There is still a risk that political events will once more throw the euro into doubt, perhaps due to austerity fatigue or a long-term failure to adjust, but it looks more likely that countries will continue to muddle through. Even if they do not, there is an argument that exits from the euro would only create a short-term impact on economic growth. In the context of a long-term super-cycle this might not matter very much, especially if the countries leaving were able to recover more strongly.

Figure 44: Major fiscal restraint since 2010 except in Japan

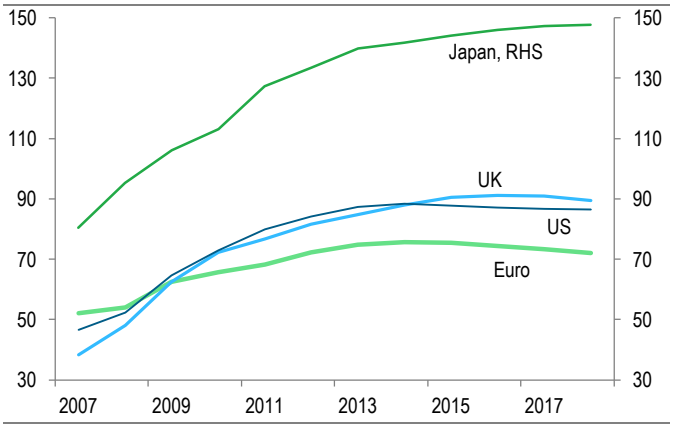
Cyclically adjusted fiscal balance as % of GDP



Source: OECD, Standard Chartered Research

Figure 45: Government debt ratios peaking now

Net government debt as % of GDP



Source: OECD, Standard Chartered Research

Reform may be progressing too slowly in some countries, and will need to accelerate to spur growth

While the acute phase of the crisis is probably over, there could still be a prolonged "chronic phase" as countries struggle to restore growth and stabilise fiscal positions, holding back overall euro-area growth. Even here there are positive signs in some countries, including improved competitiveness in the periphery supporting stronger exports and economic reforms gaining traction.

More broadly, fiscal consolidation will exert much less of a squeeze on the region's growth over the next couple of years than it did in 2011-12; repairing the banking sector will ultimately reduce fragmentation in credit markets; and improved sentiment (even in the periphery) should eventually stimulate a long-overdue recovery in investment. But some countries, including Italy and France, are moving too slowly on reform and the pace will need to step up if growth is going to pick up very much.

Concern 5: Monetary tightening could upset growth

Although QE can be surprisingly effective, it is not a panacea

We have long-argued that quantitative easing (QE) is more potent than many assume (see *Special Report, 19 June 2012, 'QE in a low-yield world'*). This is a view which the Bank of Japan belatedly adopted; market reaction to the Fed's talk of tapering in May/June further bears out the importance of QE. By keeping interest rates very low and engaging in securities purchases, central banks have helped lower long-term borrowing rates, boost asset prices and depress exchange rates. But in the face of fiscal tightening, private-sector balance sheet adjustment and fears over a euro-area blow-up, easy monetary policy cannot work wonders. Moreover, for countries with broken banking systems, as in the US initially and Europe still, the transmission mechanism for monetary policy is weaker.

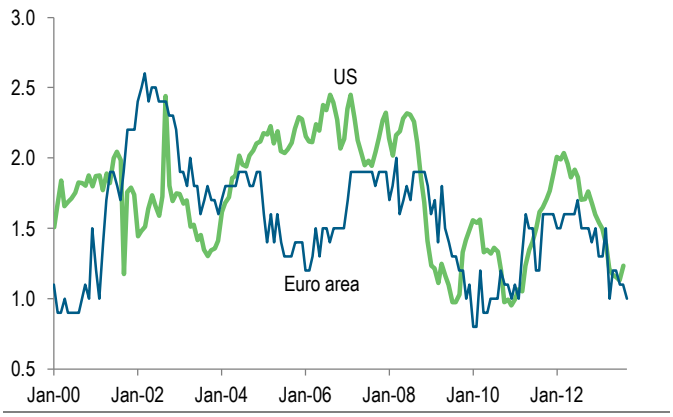
Monetary policy will need tightening as growth accelerates

It will likely be the new Fed Chair who navigates the tightening roadmap

As fiscal austerity recedes and private-sector deleveraging slows, continued loose monetary policy should help economic growth to accelerate. But, as the Fed deliberations this year have shown, the Fed wants to ease up on the accelerator pedal as soon as stronger growth is entrenched, for fear of encouraging asset bubbles and inflation. Achieving a smooth exit will be difficult, and the experience of the last few months is likely to make the Fed more cautious than ever. The new Fed Chairman, Janet Yellen, is likely to adopt a similar or even somewhat more dovish stance than outgoing Chairman Bernanke, so we expect the Fed to move very gradually, both with QE tapering and later with rate increases. The key will be inflation.

Figure 46: Core inflation is well below target

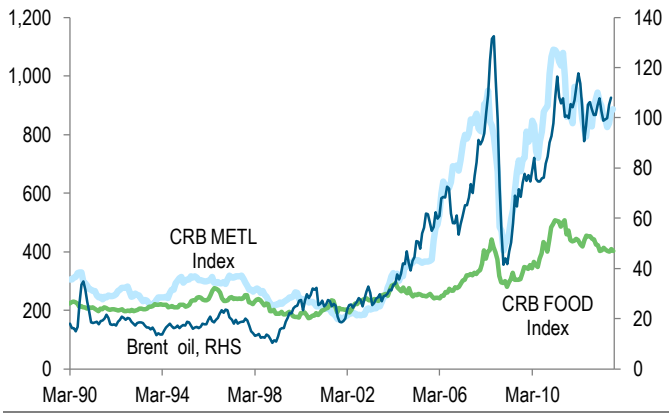
CPI ex food and energy, % y/y



Source: Bloomberg, Standard Chartered Research

Figure 47: Commodity prices up sharply in last decade

Indices from CRB and Brent oil price, USD/barrel



Source: Bloomberg, Standard Chartered Research

Inflation is set to stay low, for a while at least

The US core PCE deflator stands at just 1.2% and the euro-area core index at 0.8% (Figure 46). Japan's core inflation has been picking up, and will temporarily surge next year with the consumption tax increase, but the latest reading was only -0.1% y/y, suggesting that inflation will fall back in 2015. Our view is that low inflation will allow central banks to keep monetary policy easy for a considerable time, and enable economic growth to go above trend during the middle of the current decade.

Unemployment and its intricacies influence perceptions of the output gap

One reason is the large output gaps in most countries and still relatively high unemployment. Europe's unemployment is above 10%. But there is considerable uncertainty as to how much slack there really is in economies. The pessimistic view is that there may be less than appears, as some people are not qualified for the jobs now on offer or have been out of the labour force too long to be successfully reabsorbed. The almost 3ppt fall in US unemployment since 2010 (from 10.0% to 7.2%) despite economic growth averaging only just over 2%, supports this view. The participation rate has fallen faster than most expected. But past experience suggests that some of that fall will be reversed once economic growth speeds up and jobs become easier to find.

Commodity prices likely to be more benign

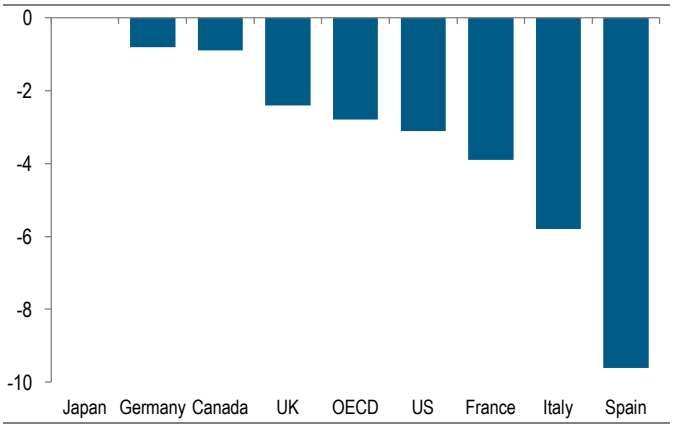
Another reason for expecting inflation to remain moderate is that we forecast commodity prices, especially energy, to be more stable in the next decade than in the last. Since the beginning of the century oil and metal prices have risen more than three-fold and food prices two-fold in USD terms, while US CPI is up only 38%. In fact, core inflation (excluding food and energy) is up only 31%, underlining the difference. We do expect faster economic growth in coming years to boost commodity demand, broadly keeping prices firm and supporting volume increases for producer countries, but the kind of rises we have seen in the last decade are unlikely.

Nevertheless, energy prices are likely to keep inflation low and smooth growth

Energy is the critical area for economic growth. From 1998-2008 US spending on energy rose from 6% of GDP to 9.9% as surging energy prices met initially inelastic demand. Spending has since fallen back to about 8%. We forecast Brent oil prices to remain at just over USD 100/barrel for the next few years as rising supply meets slowly rising demand. More stable oil prices will not only help keep inflation low but also mean that economic growth will be easier.

Figure 48: Large output gaps in developed markets

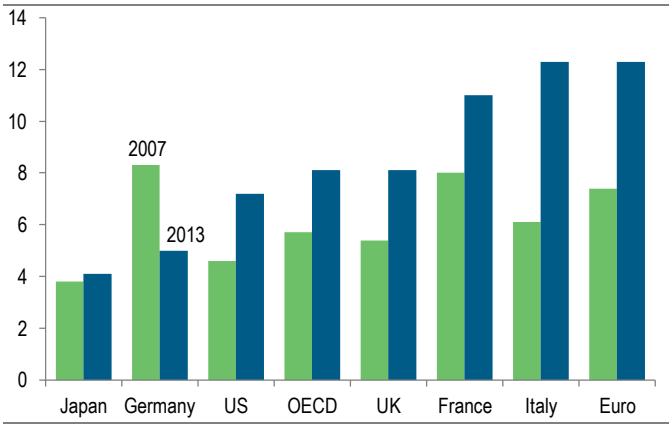
Output gap (spare capacity) as % of GDP



Source: OECD, Standard Chartered Research

Figure 49: Unemployment is high except in Germany

Unemployment %



Source: OECD, Standard Chartered Research

Concern 6: There is less spare capacity than believed

Our forecasts (along with those of the IMF, OECD and others) assume that there is still considerable spare capacity following the recession, which could allow countries to grow relatively rapidly for a few years before hitting against full capacity. The OECD estimates that the OECD area as a whole still has an output gap averaging 2.8%, ranging from 0% in Japan to 9.6% in Spain (and even more in Greece). The US is estimated to be at 3.1% while the euro area average is put at 4.2% (Figure 48).

Similarly unemployment in most countries is well above pre-crisis levels with Germany the main exception (Figure 49), suggesting the potential for substantial employment growth before wage inflation is likely to emerge as a problem.

In practice there is huge uncertainty over estimates of potential GDP and there are fears that labour is in the wrong place or has the wrong skills. In the US estimates of the natural rate of unemployment (or so-called NAIRU) vary from 5-7%, and there is also something of a mystery as to why the participation rate has fallen as much as it has. So there could be either not much spare capacity at all or, much more than the current unemployment rate of 7.2% suggests.

Labour could turn out to be more adaptable than currently perceived

There is not space here to assess these arguments in depth. We only note that it is also possible for output gaps to be under-estimated. Given time, together with more emphasis on improving skills and labour-market reforms (which are beginning to happen particularly in the euro area, where they are needed most), labour could turn out to be more flexible than currently believed. Our forecasts follow closely the OECD view of potential output.

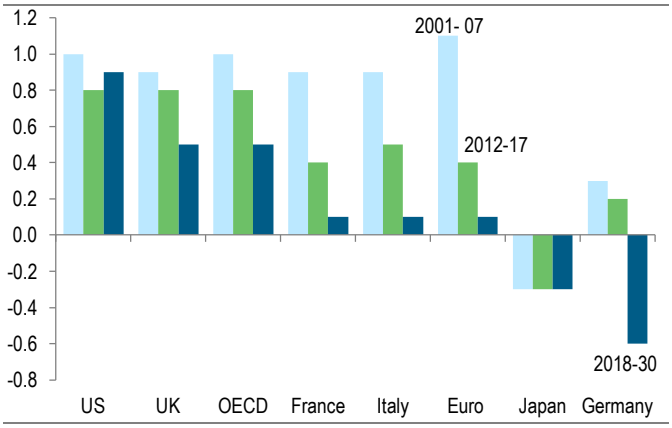
Concern 7: Demographics will probably slow growth

Beyond the next few years, economic growth will be determined by potential growth in employment together with labour-productivity growth. With populations ageing, labour-force growth is set to slow (OECD 2012). From around 1% p.a. growth during 2001-07, potential employment growth will likely decline to 0.5% on average in the OECD area during 2018-30, ranging from 0.9% in the US (hardly changed) to -0.6% for Germany, down from 0.3% (Figure 50).

This seems probable and our forecasts for longer-term growth are slower for the developed countries than was common in the past. From 2018-30 we assume trend

Figure 50: Labour-force growth is set to slow, except in US

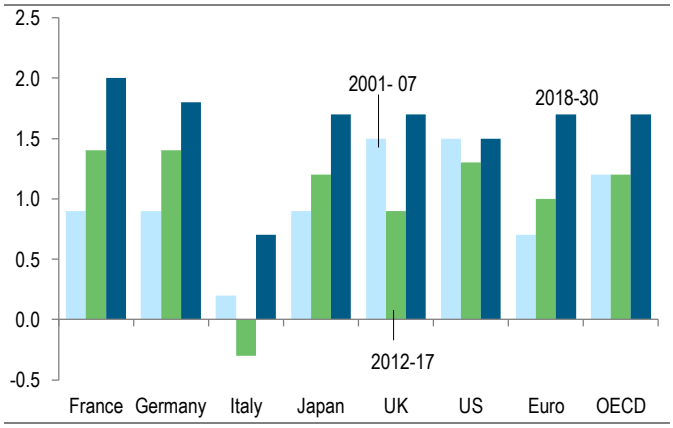
Potential growth in labour force % p.a.



Source: OECD, Standard Chartered Research

Figure 51: OECD forecasts rising labour productivity

OECD forecasts of annual change %



Source: OECD, Standard Chartered Research

More older people in the workforce, along with increased immigration, are factored into slower growth projections

growth at 2.5% in the US, 1.8% in Europe and 1.2% in Japan. The OECD's employment projections already assume that pensionable ages will move up as planned, so that more older people work. Countries could step up immigration, though political opposition to immigration seems to have increased in recent years. While this resistance is doubtless partly due to temporarily higher unemployment caused by the recession, it may also reflect longer-term trends.

The application of existing technologies in emerging countries may become a key growth factor

Slowing population and labour-force growth has certain advantages in relation to potential GDP growth. One is that it points to rising labour costs over time, which should encourage labour-saving innovations. Japan is focusing heavily on mobile robot technology with this in mind.

Another is that the median age of the work force is rising and older people are more productive, at least up to a point. The median age of the US population, for example, has increased to about 37 today from 30 in 1980. This is not the same as the median age of the workforce, but it is indicative of the shift. Finally, while spending on the elderly naturally rises and many countries still need to fully address excessive promises on pensions and find ways to manage growing health-care costs, spending on the young declines.

Concern 8: Technology pessimism

Many people are still very excited about the potential for new technologies to drive economic growth and efficiency. In our original 'Super-cycle Report' we emphasised that, generally, it is not today's newly reported discoveries in the lab that will drive growth in this cycle, but existing technologies being extended to more countries and being developed for new applications.

Thus cars and aircraft and the electric motor were invented during the first super-cycle from 1870-1914, but rapid economic growth in that period was primarily driven by the steam engine in factories and railways and the use of the telegraph. Cars, aircraft and electricity played the leading role half a century later in the 1945-73 super-cycle and remain a key factor for growth in the current super-cycle as they become mainstream in emerging countries too.

Today, while there is enthusiasm across a range of new technologies, it seems to us that the most significant element is the nexus of computers, mobile communications and the internet, now 20-60 years old. This nexus, broadly seen as digitalisation, qualifies as a "network technology", opening up new sectors and new regions of the world economy. It is helping to drive globalisation, for example by opening up trade in services in a way previously thought impossible, and is transforming society in many ways including the nature of work, production and leisure.

In our view it is similar to previous network technologies such as railways, the telegraph, the car and aircraft, in that the full implications will take a long time to play out. It is particularly important in helping to open up the world economy and facilitate the development of EM economies.

If technological progress stopped today, emerging countries could still grow rapidly as they caught up with the developed markets. But growth in developed markets would largely stop. Interestingly, one of the US' key experts on productivity and innovation, Professor Robert Gordon, has argued that innovation is indeed faltering

and that today's new inventions are less transforming than the set initiated in the 1870-1900 period just described (Gordon 2012).

Gordon's arguments make fascinating reading, not least because it is more usual to find technology experts eulogising current transformations and taking past changes for granted. For most people it is hard to imagine the world before railways and easy to under-estimate the scale of change in past eras. However, our reading is that Professor Gordon's goes too far the other way, not appreciating the changes today and, since it is hard to know exactly how things will develop in the next few years, under-estimating the potential. We will leave the reader to consider these issues further with Professor Gordon's book on the subject (forthcoming).

Conclusion: DM countries need reforms too

We see the cycle turning over the next couple of years

Our forecasts are based on the view that all the above challenges can be met over time. We see the cycle turning over the next couple of years and forecast above-trend growth in the middle of this decade as countries finally leave the crisis behind. Europe will lag, but prospects are improving and the buildings blocks are being put in place (both economic and institutional) for a sustainable recovery. We believe the outlook for the US has already brightened considerably, which will help to pull up Europe as well as the rest of the world. US monetary tightening will not occur unless the US is stronger, while low US inflation will help to make the tightening gradual.

Reforms in DMs, some already underway, should help to boost growth

Reforms are needed in developed countries too, to spur growth. There has been considerable progress on liberalising product markets over the last decade, but labour-market reform is urgently needed in some countries (Figure 52). The euro crisis has provided some impetus to this. The planned Trans-pacific Partnership involving the US, Japan and Canada and could be very beneficial. The proposed US-EU pact could also help. Trade in goods is already relatively open between developed countries, but there is plenty of scope to liberalise services. Similarly, we view the further development of the European single market, still not complete, as an important element.

Figure 52: Big improvements in product regulation, fewer in labour flexibility

OECD indices – The lower the better

	Product market		Employment protection	
	1998	2008	1998	2008
Australia	1.58	1.23	1.47	1.43
Canada	1.28	0.96	1.06	1.06
France	2.45	1.39	2.84	2.88
Germany	2.00	1.27	2.57	2.39
Greece	2.91	2.3	3.46	2.81
Italy	2.53	1.32	3.06	2.38
Japan	2.22	1.14	1.60	1.45
Spain	2.47	0.96	2.96	3.01
UK	1.01	0.79	0.98	1.10
US	1.28	0.84	0.65	0.65

Source: OECD (2011) Product Market Regulation Database (www.oecd.org/economy/pmr) and OECD Employment Database

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Part 4: Implications of the super-cycle

Emerging markets are reshaping the world

Emerging markets (EM), with their large populations, are increasingly driving growth in the global economy. The share of emerging economies in world GDP nearly doubled to 38% in 2012 from 20% in 1990. Meanwhile, the EM share of annual world GDP growth has risen to more than two-thirds today from about one-quarter in the early 1990s. Asia's emerging economies account for less than 30% of global GDP but contributed close to 60% of global growth in 2012.

Asia's emerging economies account for less than 30% of global GDP but contributed close to 60% of global growth in 2012

We highlight six factors that show how emerging markets are reshaping the world, and the likely implications of this.

1. We project that China's GDP will exceed that of the US by 2022, although China will remain relatively poor in per-capita income terms. By 2030, we project that China's per-capita income will still be only one-third that of the US. Per-capita incomes in Asia's most populous countries (excluding Japan) are still very low. Despite rising costs, these countries will continue to offer an attractive, cost-effective environment for investment in labour-intensive industries.

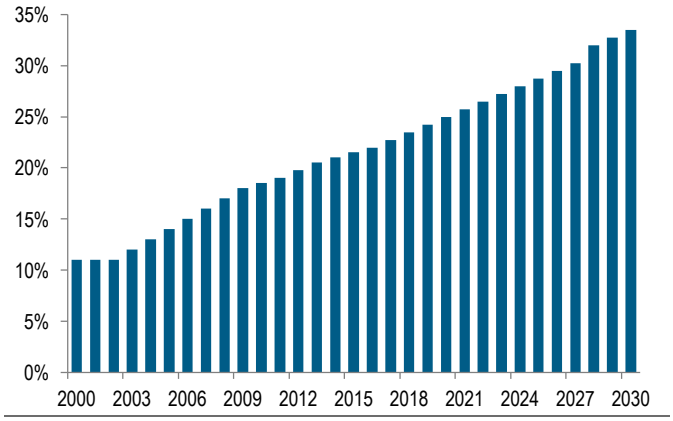
2. South-South trade (Figure 53) has risen to 18% of world trade from 7% in 1990, and is likely to double again in the next 20 years. Some of this growth will reflect the ongoing development of the international production chain, but an increasing amount will be for use within the region as its economies grow and its middle classes expand. We project that Asia's exports will exceed Europe's by the early 2020s (Figure 54). While economic conditions in the West will continue to impact EM countries, the impact on developed countries of conditions in emerging countries, especially China, will grow in importance.

3. In the decades to come, world population growth will be primarily in emerging countries and most countries (with the exception of East Asia) will be in a position to exploit their demographic dividend.

   Most countries will not experience rapid ageing for at least another 25 years. The main beneficiaries of this demographic dividend include India, Indonesia, Malaysia, Brazil, Turkey and much of Sub-Saharan Africa. The biggest exceptions are China and Russia. India clearly has an advantage, while China

Figure 53: South-South trade boom to continue

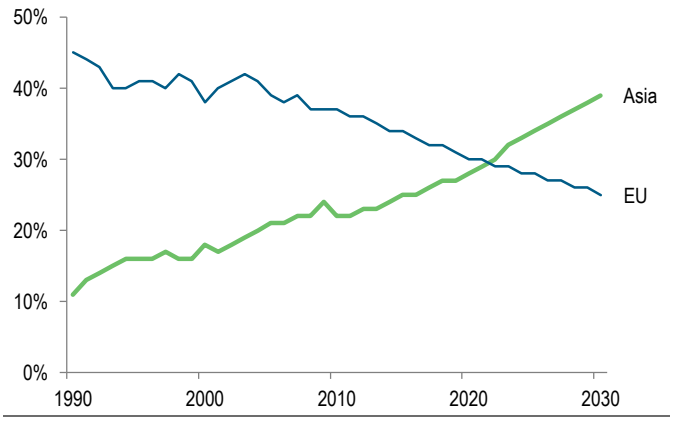
% of world trade



Source: IMF, Standard Chartered Research

Figure 54: Asia to surpass EU in world trade

% of world exports, projections for 2013



Source: IMF, Standard Chartered Research

has a relative disadvantage – India is already adding more than China to the world's working-age population. Although this increment will lessen in the coming decades, India's share of the global workforce will climb towards 30% by 2030, while China's will continue to fall. This points to divergence between relative wages, which is driving China up the value chain and causing low-cost manufacturing to move to western China, South and Southeast Asia, and perhaps eventually to Sub-Saharan Africa.

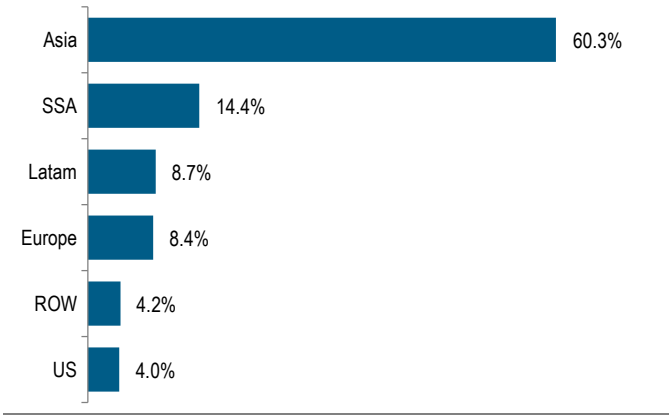
4. Emerging markets present global companies with the prospect of selling to the world's next 1 billion consumers with fast-growing incomes. New middle-class consumers in EM represent new markets for developed-world exports and companies based in developed countries, although they will compete with a growing number of large and increasingly sophisticated domestic companies with expanding brands. EM corporations are another big new market for developed-world exporters: for example, B2B sales to China and India are a key factor in Germany's strong export economy.

According to McKinsey, EM companies will account for more than 45% of the 5,000 largest companies globally by 2025

5. We expect a growing number of major global companies to be headquartered in emerging markets. In 2010 EM countries already accounted for 17% of the Fortune 500 companies, (up from 5% in 1990), together with a rising share of foreign direct investment, and a growing presence in new energy, manufacturing and medical technologies. By 2025, according to McKinsey, emerging companies will likely comprise more than 45% of the world's 500 largest companies (McKinsey Global Institute, 2013).

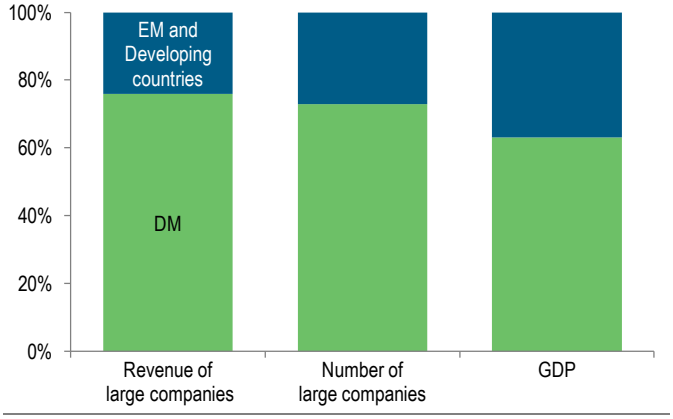
6. The quality of institutions – an often overlooked factor – will be key to sustained economic development in EM, enabling them to manage human and capital inputs. While less developed economies can expand without better-quality institutions, successful middle-income countries tend to be characterised by such institutions. Turkey, Poland, Brazil and Chile are at the cusp of breaking into the ranks of higher-income countries. For these countries, the quality of institutions is an increasingly important factor in avoiding the 'middle-income' trap.

Figure 55: Share of global working-age population, 2030 %



Source: UN, Standard Chartered Research

Figure 56: Dominance of DM companies is set to change 2010 *(%)*



Source: McKinsey Global Institute, Standard Chartered Research

The IMF estimates that a 1ppt increase in China's growth rate translates into a 0.4ppt increase in growth in the rest of the world

In addition to their rising wealth through better trade and financial linkages, growing middle classes and rising incomes, emerging economies are playing a larger role in setting global priorities. Developments in China and India will have an increasing influence on business and consumer sentiment in other countries. While these countries remain relatively poor in per-capita terms, their sheer size means that their policy choices have important regional and global implications. China's influence is particularly significant – the IMF estimates that a 1ppt increase in China's growth translates into a 0.4ppt increase in growth in the rest of the world.

The rise of the middle class

Growth in middle class is an important aspect of the super-cycle. The global middle class will triple to 1.2bn in 2030 from 400mn in 2000, according to World Bank forecasts and by 2030, a significant share of the global middle class will be from EM. Thanks to their large populations and fast economic growth, China and India will be the drivers of middle-class consumerism over the next two decades.

A recent OECD study defined the 'middle class' more broadly as those with daily per-capita income of USD 10-100 in PPP terms (Kharas, 2010). While the lower end of this range is low by Western standards, it is at around this level at which disposable incomes are sufficient to allow purchases of consumer goods such as televisions, motorcycles, cars and other goods that characterise the affluent middle class in the West. A growing middle class will also dramatically increase demand for services including tourism, education and financial services. The number of people in the 'middle-class' range globally will rise to 4.9bn by 2030 from about 1.8bn in 2010, according to the OECD. Growth will come primarily from EM, while the numbers in Europe and the US will remain steady.

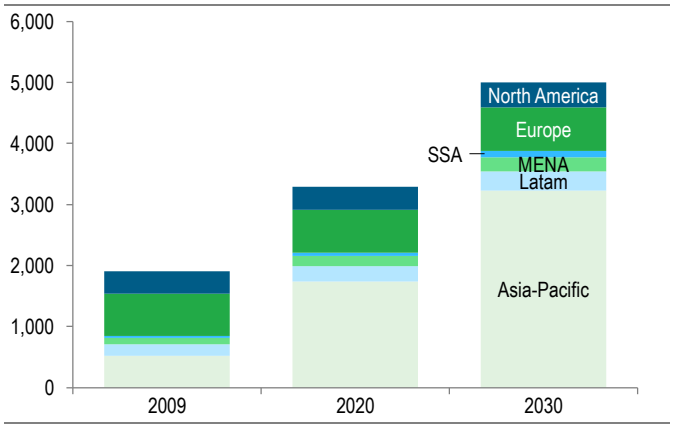
The combined purchasing power of the global middle classes is estimated to more than double by 2030 to USD 56tn

This shift presents tremendous opportunities in new consumer markets as EM consumption expands beyond the basic needs of food and shelter towards consumer durables and services. The OECD estimates the combined purchasing power of the global middle classes to more than double by 2030 to USD 56tn, with more than 80% of this demand coming from Asia (Figures 58 and 59).

We expect a significant proportion of the new Asian middle class to be at the upper end of the income range and to have impressive spending power. The rise of the EM middle class and the weight of middle-income economies are still at an early stage,

Figure 57: The rise of the Asian middle class

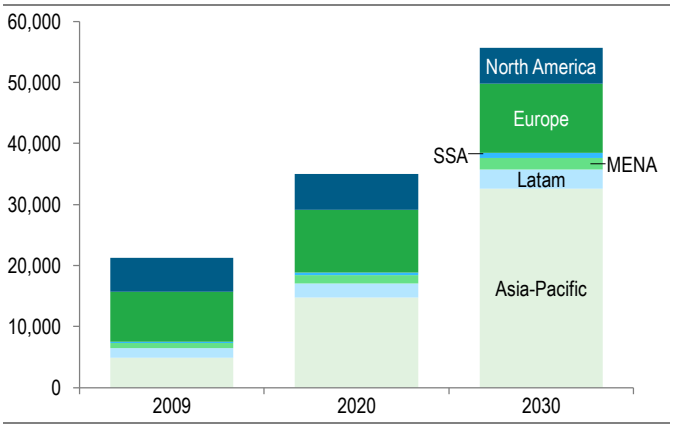
Daily per-capita incomes of USD 10-100 in PPP terms, mn



Source: OECD, Standard Chartered Research

Figure 58: Spending by the middle class

USD bn, PPP dollars



Source: OECD, Standard Chartered Research

but as incomes grow, demand pressures for various types of products will emerge. These shifts in growth and incomes will translate into spending on specific goods and services and will present significant opportunities. EM countries have just passed from an 'age of commodities' to an 'age of consumer durables', while in most developed economies, spending pressures are most intense for services. We expect China to go through the period of consumer durable demand pressure at least a decade before India.

EM market for consumer durables and services is forecast to outstrip the DM market by 2040

The EM market for consumer durables and services is expected to exceed the DM market by 2040, according to a 2013 study by the Institute for Emerging Markets Studies. The emergence of a wealthy middle class will also open up the markets for financial services, education and health care as the emerging world approaches parity with the developed world. Domestic companies will risk losing middle-class consumers to multinational competitors unless they meet demand from the middle class for a higher standard of living and increased brand value.

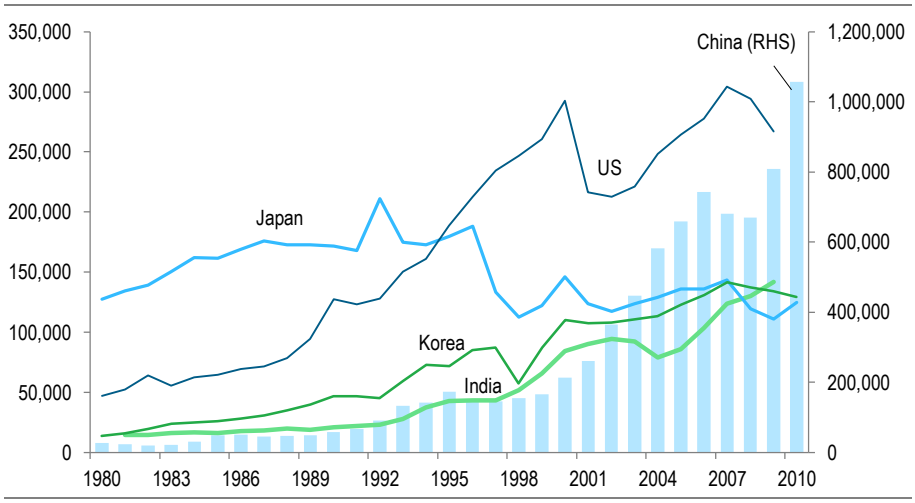
Our forecasts for strong world growth depend on the continued opening up of global trade in goods and services via new free trade agreements, as well as the effects of technology boosting globalisation. Free trade treaties will help foreign companies to compete on a level playing field, but 'localisation' of employees, brands and focus will become increasingly important as traditional Western leadership gradually fades.

A 'new knowledge world order' is emerging

Knowledge and innovation are prerequisites for economic and social progress. There is a clear shift in knowledge production towards Asia, primarily China. Emerging markets like China are steadily increasing their academic output. As a result, a 'new knowledge world order' is emerging. The list of countries investing heavily in researchers was topped by large industrialised countries such as Japan, the US, the UK and Germany. However, heavy investment in China's knowledge economy enabled it to overtake the US in 2007, China today has around 1.6mn researchers and academics, according to a study by the British Council (2012). This trend is not limited to China; the rising number of researchers in EM countries indicates that regional dominance in terms of both production and use of knowledge is increasingly shifting towards Asia.

Figure 59: Patent applications at the top 6 offices

A new world order is emerging



Source: WIPO statistics database Oct 2011

An analysis of UNESCO data on the number of registered students by country shows that in 2010, the US and China had the highest growth in future human capital.

China has significantly increased the proportion of its population participating in tertiary education. In 2012, there were more than 30mn students studying at research and higher education institutions in China. The British Council study concluded that China, India, the US, Brazil and Indonesia will have the world's largest education and research systems by 2020. This is not surprising, as more than half of the world population between the ages of 18 and 22 will be living in these countries by then. These countries look set to benefit from their vast human capital resources.

The West and Japan will continue to have an advantage in knowledge industries for some time, but their share will decline. Educational services will be a major export growth area for developed countries, whether via overseas students studying in developed countries, franchised schools or internet learning.

Urbanisation – A growth driver

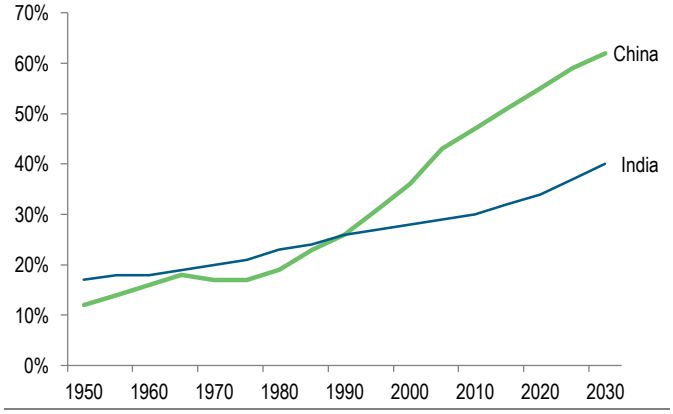
Urbanisation is both a consequence and a driver of growth because it creates commercial and industrial centres, provides a concentrated source of demand for agricultural products and consumer goods, and enables economies of scale to emerge. It is associated with higher income and productivity levels. Generally, the faster the rate of economic growth, the more rapid is the urbanisation trend.

By 2025 there are likely to be 16 cities with a population of 10mn or more, compared with 11 now and one in 1950.

The UN forecasts that 60% of the world's population will live in urban areas by 2030 up from 52% in 2011. Most of the growth will take place in Asia and Africa. In Asia, 53% will be living in urban areas, although the rate of growth is slowing. By 2025, there are likely to be 16 world cities with populations of 10mn or more, compared with 11 now and only one (New York) in 1950.

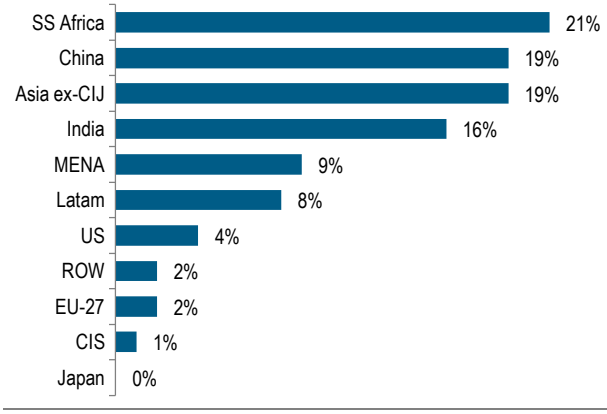
China has become the world's largest urban nation, with more than 600mn urban citizens, and its urbanisation has much further to go. To put China's urbanisation rate into global perspective, China's urban population will be c.700mn by 2015 – at least 2.5 times larger than the projected US urban population and 1.6 times larger than UN projections for India. Metropolitan regions have become the principal engines of China's fast-growing economy.

Figure 60: Urbanisation rates, China vs. India
%



Source: UN, Standard Chartered Research

Figure 61: Share of incremental increase in world urban population, 2010-2030 *(%)*



Source: UN, Standard Chartered Research

Rapid urbanisation will stimulate business but will put significant strains on hard and soft infrastructure. A recent study by Ernst & Young estimates that addressing infrastructure concerns in Asia alone will require USD 7.5tn of investment by 2020, and that meeting this need will require a greater emphasis on public-private partnerships (PPP), new approaches to equity funding and the development of capital markets (Wilson, 2013). The biggest impact of urbanisation is on consumption of commodities – everything from copper and steel for buildings and electricity supply, to increased car use, more consumer durables and higher demand for utilities.

South-South trade expected to double by 2020

China – The leading trade power

Four key phenomena have characterised global trade in the past decade: (1) the world economy is increasingly open, as measured by the ratio of global exports to GDP; (2) emerging markets are increasingly important to world trade; (3) South-South trade has seen explosive growth; and (4) services trade has expanded. Developing economies' steadily growing share of world trade has been largely due to their externally oriented growth strategies, particularly in East Asia.

Rising South-South trade – trade between emerging markets – is a key feature of the current trade super-cycle. Since 1990, South-South trade (including Asia's newly industrialised economies) has risen to 18% of world trade from 7%, while North-North trade has fallen to 50% from 65% (IMF DOTS). The IMF expects South-South trade to double again by 2020. Some of this growth will reflect the development of the international production chain, but a growing amount of this trade will be for use within emerging markets as their economies grow and their middle classes expand.

We forecast that world exports will reach USD 74.5tn by 2030, representing 34% of nominal global GDP

We forecast that global exports will reach USD 74.5tn by 2030, representing 34% of nominal world GDP, up from USD 17.8tn in 2012 (Figure 62). China is already the world's largest exporter and its share of world trade will continue to expand. China is undergoing the same export-led industrialisation as other countries in East Asia, but on a much larger scale. We expect the government's interest in promoting world free trade to increase, just as the UK championed free trade in the first super-cycle and the US did in the second.

Figure 62: Exports by region

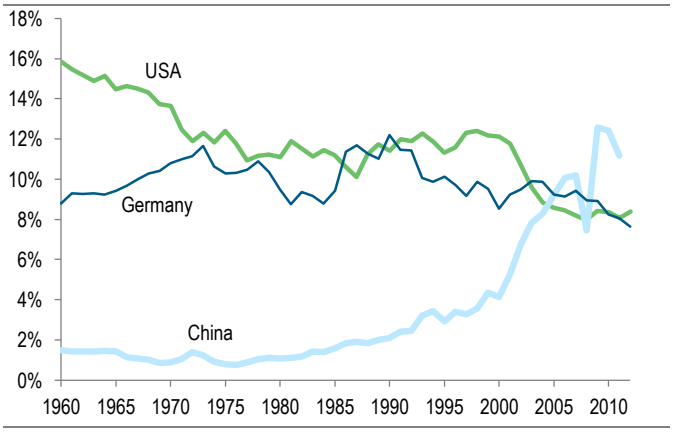
USD bn

Total exports	2000	2012	2030
China	249	2,050	17,067
India	42	297	2,692
Asia ex-CIJ	830	895	949
Africa	125	489	824
MENA	30	1,349	5,609
Latam	365	1,098	4,446
US	772	1,546	4,619
EU-27	2,424	5,573	12,097
Japan	478	799	2,427
ROW	1,064	3,759	23,853
World	6,379	17,855	74,583

Source: IMF DOTS, Standard Chartered Research

Figure 63: China, the leading trade powerhouse

% of world exports



Source: IMF DOTS, Standard Chartered Research

As EM countries continue to grow faster than the West, they are likely to dominate world trade by 2030. China is likely to lead the way, becoming the trade powerhouse of the 21st century (Figure 63). By 2030, we estimate South-South trade could increase to roughly 40% of world trade, up from the current level of 18% (and 7% in 1990). China will be at the centre of many significant trade corridors. China's trade with the rest of Asia is set to grow strongly, while a similar trend is likely to develop for China's trade with the Middle East and Latin America. China-Africa is likely to become a more important trade corridor than EU-Africa by 2030. Middle East-India is set to become a major trade corridor.

Strong demand for resources

The food-energy-water nexus

Rapid growth during the current super-cycle will put increasing pressure on the environment to provide sufficient resources of adequate quality. Balancing the use of food, energy and water resources in the context of climate variability and rapid economic growth will be a challenging task, but also presents a significant opportunity. New technologies will be a key driver of increased supply, while more sophisticated pricing structures will be important in managing demand.

Food – Asia to dominate food production

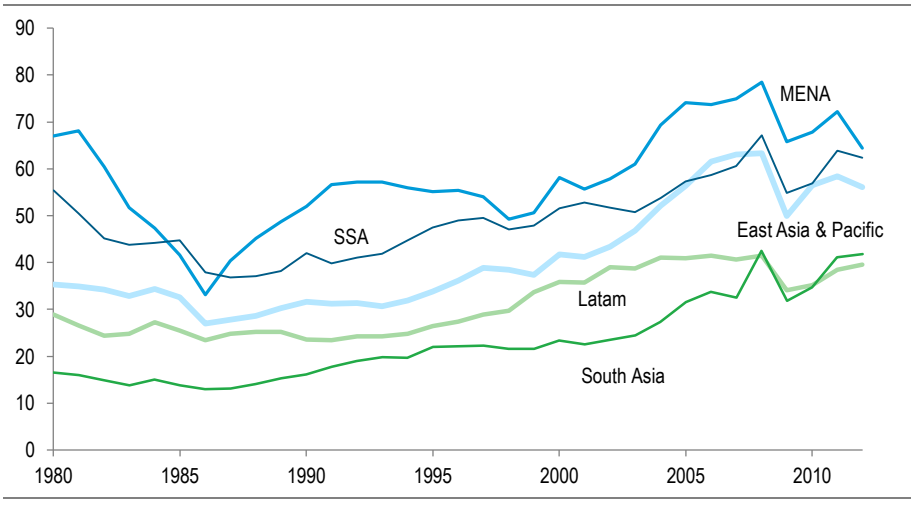
The UN projects that if the world population reaches 9.1bn by 2050, this will require a 70% increase in food production from 2005-07 levels

Asia is increasingly taking a lead in driving global balances of resources, including food. Rising incomes and urbanisation are changing the composition of demand. The UN projects that if the world population reaches 9.1bn by 2050, this will require a 70% increase in food production from 2005-07 levels. Water scarcity and climate change may affect existing production and expansion plans.

Energy – Adapting to a changing world

The challenge for the energy sector is to meet the energy needs of economic growth while de-carbonising the energy mix to limit the climate impact. On the supply side, there are hopes that the US shale revolution can be replicated elsewhere around the world. Other new energy supplies are coming from increasingly diverse sources as the world's energy market continues to innovate and evolve. For many EM countries in Africa and elsewhere, new discoveries of oil and gas will continue to drive economic growth. Our energy price forecasts suggest that the incentive for development will remain strong, though prices will not rise as fast as in the past, at least in the next few years.

Figure 64: The trend towards more open economies is set to continue
Merchandise trade-to-GDP ratio, %



Source: World Bank (WDI)

The Asia-Pacific region accounted for a record 40% of global energy consumption and 69.9% of global coal consumption in 2012

The Asia-Pacific region accounted for a record 40% of global energy consumption and 69.9% of global coal consumption in 2012; the region also leads in oil and hydroelectric generation, while Europe and the CIS are the leading regions for consumption of natural gas, nuclear power and renewables (Figure 65).

Coal is the dominant fuel in the Asia-Pacific region, the only region dependent on a single fuel for more than 50% of total primary energy consumption. Demand for energy will continue to rise rapidly, though energy intensity will gradually fall as countries develop. More stable energy prices should allow emerging countries to scale back widespread fuel subsidies over time.

The evolution of China's energy mix is the key to the outlook. Coal remains the fastest-growing fossil fuel, with China consuming half of the world's coal for the first time in 2012. Renewables are likely to make an increasing contribution, but fossil fuels will continue to meet the bulk of demand, with important implications for climate change projections.

Carbon emissions – China holds the key

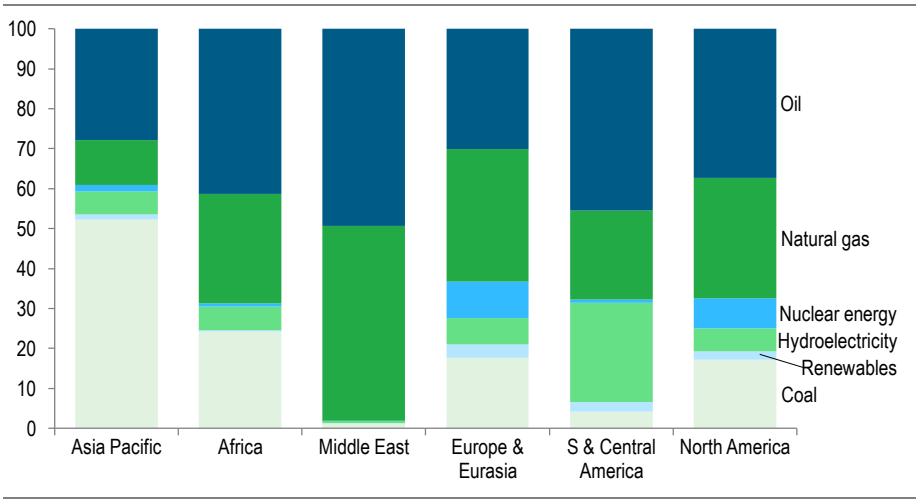
Fast economic growth implies rapid growth in carbon emissions unless there are major efforts to find alternatives, reduce energy intensity or store carbon. While the developed world has done a reasonably good job of limiting and even reducing emissions growth in recent years (albeit at high levels), this modest progress has been more than offset by the dramatic growth in emissions (about 60%) from China and, to a lesser extent, India and other developing economies (Figure 66). China now accounts for c.25% of global emissions, well above the US level of 16% (IEA, 2013). Little progress has been made on CO_2 emissions, which are increasing faster than ever.

China's CO^2 emissions have surged in recent years and are expected to be twice as large as US emissions by 2015

A study by China's Energy Research Institute (affiliated with the National Development and Reform Commission, the influential government ministry that oversees China's energy strategy) argues that to avoid the two-degree warming limit agreed by world leaders in 2009, China needs to cut emissions 70% by 2050 compared to 2020 levels (Jiang Kejun, 2013).

Figure 65: Regional fuel consumption patterns, 2012

%



Source: BP Statistical Review of World Energy 2013, Standard Chartered Research

Water – A threat to economic growth?

Nearly half the global population could face water scarcity by 2030, according to the UN; demand could exceed supply by 40%

Nearly half the global population is likely to face water scarcity by 2030, according to the UN. Demand may exceed supply by 40%. About 12% of the world's population living in the poorest or most undeveloped areas suffers from economic water scarcity (Figure 67).

GDP growth in Africa and the Indian sub-continent lags that of China, although most of these countries have made faster progress on environmental and human health; South Africa is the important exception. A lack of funding and, more often, poor policy planning and implementation have hindered the development of the infrastructure needed to allow access to clean water. Sub-Saharan Africa has the largest number of water-stressed countries of any region.

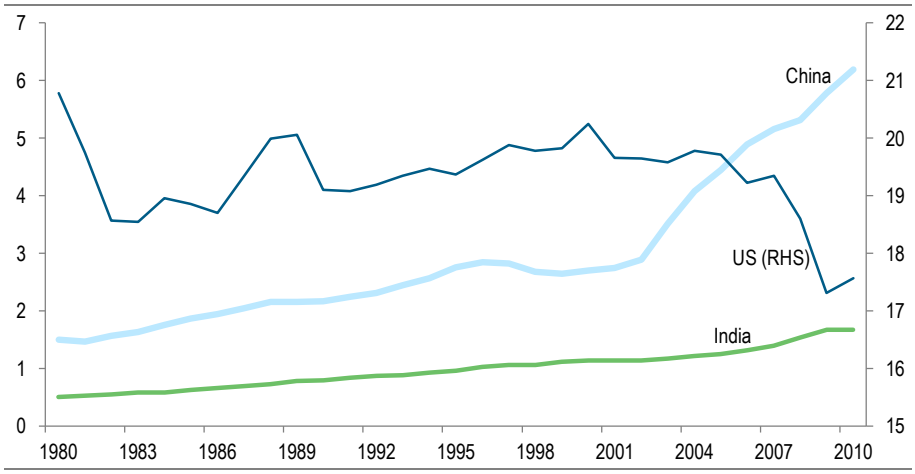
As discussed in our *Special Report, 18 September 2013, 'Measuring sustainable development'*, most countries still score negatively on the ecosystem vitality measure, reflecting air pollution and pressures on water use. A combination of demand drivers will drive pressure on water resources in the next two decades. Growing demand from changing consumption patterns due to urbanisation and population growth will be most rapid in the least developed countries, where economic and physical resources are already under stress.

Our report on sustainable development highlights three fast-growing countries that are performing fairly poorly on ecosystem vitality: China, Vietnam and India. This likely reflects rapid growth with inadequate environmental mitigation. Water use is a big issue for all three. Population growth and increased per-capita income use resulting from business expansion and increasing affluence will increase water requirements. Climate change is likely to exacerbate the problem.

The solutions to water scarcity include improving efficiency through investment and technological development; increased water treatment and agricultural trade (trade in virtual water whereby water in the exporting country is used to produce food for the importing country); and better pricing involving a mix of policy and political changes. Governments will need to tackle issues of water allocation, food security and international co-operation to ensure that water scarcity does not hinder global growth.

Figure 66: China's CO^2 emissions have surged in recent years

Tonnes per capita



Source: WDI, Standard Chartered Research

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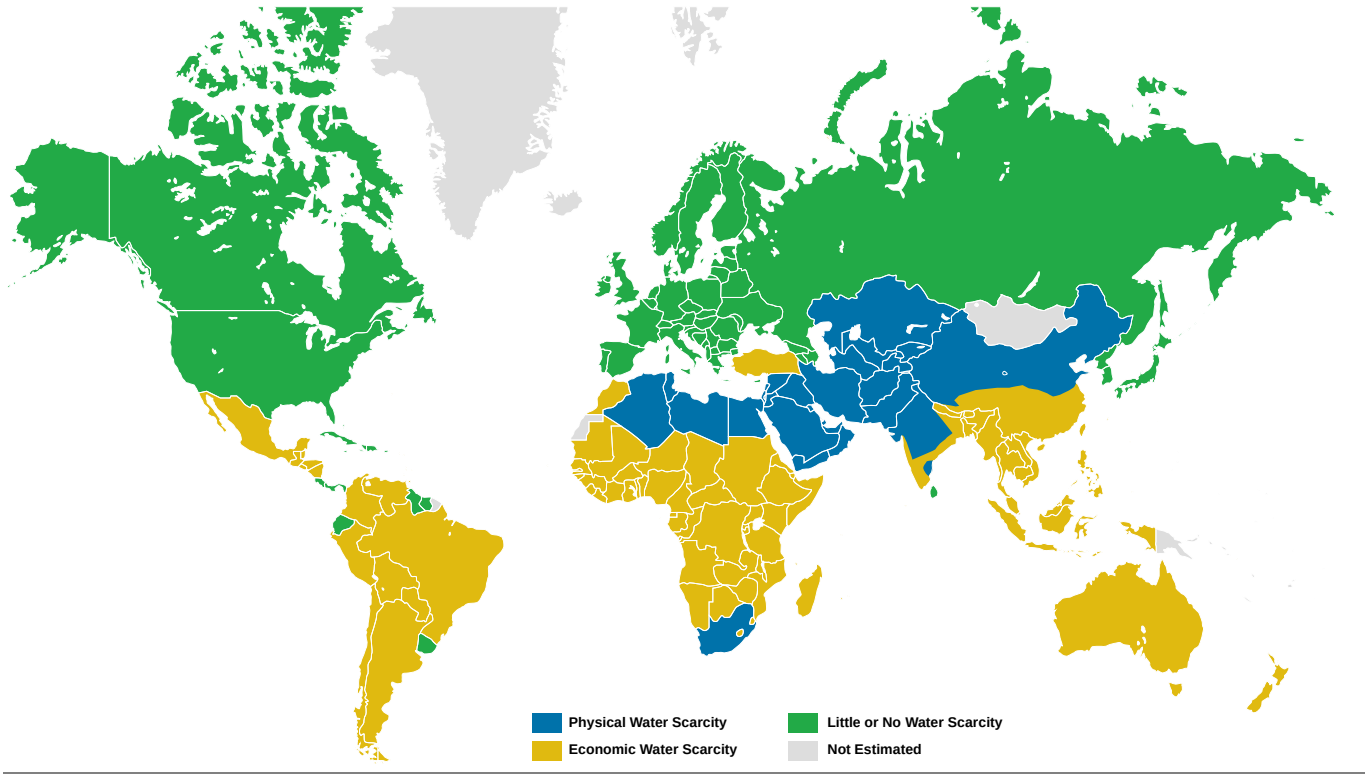
Figure 67: Water scarcity



Source: IWMI

Part 5: Sizing financial markets in 2030

Equity markets

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We see market capitalisation as the best measure to express the development of the equity markets. Figure 68 below shows current levels and change over the past decade of equity market capitalisation, in absolute as well as relative-to-GDP terms, for the world and for selected economies.

The 6% average annual growth in global equity-market capitalization over the last decade masks two interesting sub-trends that we believe are relevant for thinking about the next two decades. First, growth has been very uneven over time, the past decade divided between a boom phase of 2003-07, when global market capitalisation rose by 18% annually, followed by decline since 2007. Over the decade, market capitalisation declined relative to GDP – a performance that we do not expect to repeat over the next two decades.

Secondly, growth of market capitalisation has been driven overwhelmingly by developing markets, which grew at slightly above 15% per year throughout a tough decade in contrast to developed markets' 3% average annual increase. The difficult financial market environment drove a steep decline in market capitalisation relative to GDP over the past five years across all regions.

Nevertheless, selected Asian markets' capitalisation relative to GDP rose by six percentage points between 2003 and 2012. This is, in our view, an impressively resilient performance in the face of extremely difficult global market conditions. It speaks to the strong structural foundation for financial market development across emerging markets, particularly in Asia. We expect these structural forces to persist and to drive continued growth of equity markets across emerging economies, both in absolute terms and relative to underlying GDP.

Figure 68: Equity-market capitalisation 2003-12

	Market Capitalisation, USD bn			CAGR[1]	Market Capitalisation as % GDP			Δ, ppt[2]
Market	**2003**	**2007**	**2012**	**2003-12**	**2003**	**2007**	**2012**	**2003-12**
World	30,498	59,764	52,452	6%	87%	116%	78%	-10
United States	13,508	17,663	16,856	2%	117%	122%	104%	-14
United Kingdom	2,375	4,047	3,416	4%	127%	142%	138%	11
Japan	3,158	4,546	3,639	2%	73%	104%	61%	-12
Key Developed Markets	19,042	26,256	23,910	3%	108%	121%	97%	-11
China	443	3,851	2,996	24%	27%	110%	36%	9
India	280	1,815	1,260	18%	46%	151%	53%	7
Indonesia	55	205	427	26%	23%	47%	49%	25
South Korea	324	1,103	1,160	15%	50%	105%	103%	52
Taiwan	413	701	813	8%	133%	178%	172%	39
Hong Kong	956	3,551	3,370	15%	593%	1678%	1280%	688
Singapore	169	498	600	15%	177%	280%	217%	41
Selected Asian Markets	2,640	11,724	10,626	17%	71%	168%	78%	6
Brazil	216	1,399	1,196	21%	39%	102%	53%	14
Russia	255	1,514	793	13%	59%	116%	39%	-20
South Africa	168	456	517	13%	100%	160%	135%	35
Selected non-Asian EM	639	3,368	2,506	16%	56%	114%	54%	-2

1 Compound annual growth rate, 2 Difference in percentage points; Source: Bloomberg, IMF, Standard Chartered Research

Structural growth drivers of equity-market capitalisation

From a supply-side perspective, we think that continuing growth in market capitalisation will be driven by several powerful structural forces. The first and broadest is simply a general need of corporates in developing economies for capital to fund growth. As economies develop, companies become larger, more capital-intensive, and more global. They therefore evolve toward a bias for public market ownership. Leverage also rises, generating a need for bank capital that is often met with public equity. Another classic by-product and driver of development is the privatisation of state-owned enterprises, often by initial public offerings (IPOs) in the financial services, energy, telecommunications, infrastructure and other sectors dominated by large enterprises. While this process is already underway across much of the developing world, state-owned enterprises in many countries remain government-controlled entities with small public floats. The process of true privatisation will require many more years of secondary offerings.

Increasing capital requirements and a structural shift to savings will drive growth in EM equity markets

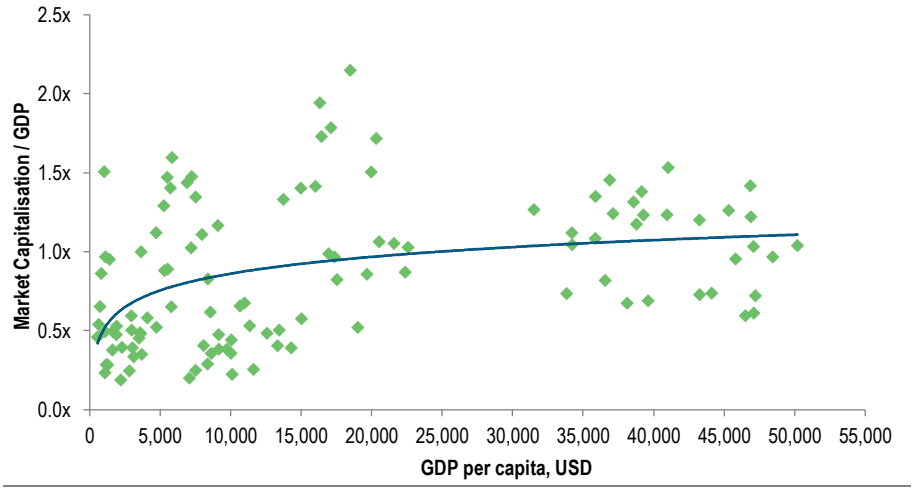
The investor base, too, will continue to accommodate this hunger for equity capital. As economies develop, investors tend to become more sophisticated and yield-oriented. As they do, they tend to shift household financial assets from bank deposits into a broader variety of longer-dated and higher-yielding instruments – initially direct investments in real estate, equities and insurance, and over time, into a broader range of mutual funds, structured financial products, pension plans and other professionally managed financial assets. As they get wealthier, an increasing proportion of household wealth is allocated to direct and indirect ownership of public market equities.

All of these dynamics are underway, but none is complete; and their continuation should drive equity market capitalisation to rise faster than underlying nominal GDP over the next few decades.

Estimating future equity-market size

To model the relationship between economic development and the value of public equity capital, we correlate market capitalisation as a percentage of GDP against per-capita GDP across several economies for each of the years from 2003 (the earliest year for which Bloomberg provides country aggregate market capitalisation)

Figure 69: Selected countries – Equity-market capitalisation as a % of GDP, and per-capita GDP in USD



Source: Bloomberg, IMF, Standard Chartered Research

to 2012 (Figure 69). We include the US, the UK, Japan and several of the most significant developing economies shown in the Figure 68 above.

We exclude Hong Kong, Singapore, and Taiwan, where equity market capitalisations are not true representation of the economic activity. Hong Kong is a venue for large-cap listings for Chinese companies unrelated to Hong Kong's GDP. Likewise, many of the largest Taiwan-listed companies run operations that are based in China, sell into global supply chains, and are therefore largely de-linked from the Taiwan economy.

The relationship between market capitalisation and GDP is shown in Figure 70 below. We have assumed a natural log rather than a linear relationship between economic development and equity-market deepening. That is, at some point, incremental economic development starts to generate a diminishing impact for incremental deepening of equity markets relative to GDP.

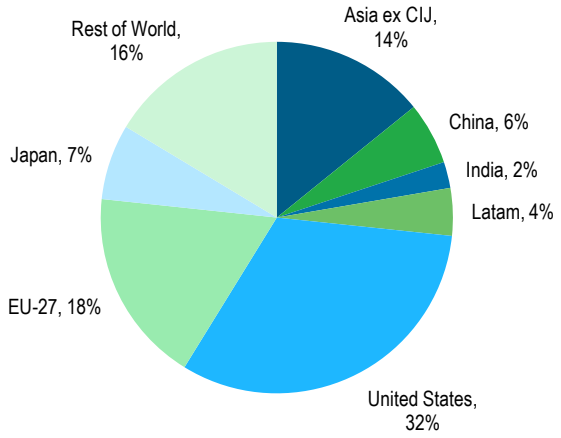
Figure 70: Equity-market capitalisation 2030

	GDP (USD Bn)		GDP per capita (USD)		Mkt. Cap. % GDP		Equity Mkt. Cap. (USD bn)		CAGR
	2012	2030	2012	2030	2012	2030	2012	2030	2012 - 30
Asia ex-Japan	14,494	87,274	3,840	20,043	81%	97%	11,697	84,391	12%
Asia ex-CIJ	3,805	18,983	3,287	13,488	196%	149%	7,441	28,327	8%
China	8,303	53,333	6,057	36,468	36%	81%	2,996	43,174	16%
India	2,386	14,958	1,914	10,075	53%	86%	1,260	12,890	14%
Latin America	5,629	20,208	9,373	29,293	41%	103%	2,289	20,713	13%
United States	16,245	38,494	50,212	104,044	104%	122%	16,856	46,922	6%
EU-27	12,199	23,264	24,071	45,329	77%	109%	9,379	25,400	6%
Japan	5,960	9,333	47,112	79,480	61%	118%	3,639	10,992	6%
Rest of World	12,857	40,790			67%	81%	8,594	32,945	8%
World	**67,384**	**219,363**	**9,536**	**26,401**	**78%**	**101%**	**52,452**	**221,363**	**8%**

Source: Standard Chartered Research

Figure 71: Global equity-market capitalisation, 2012

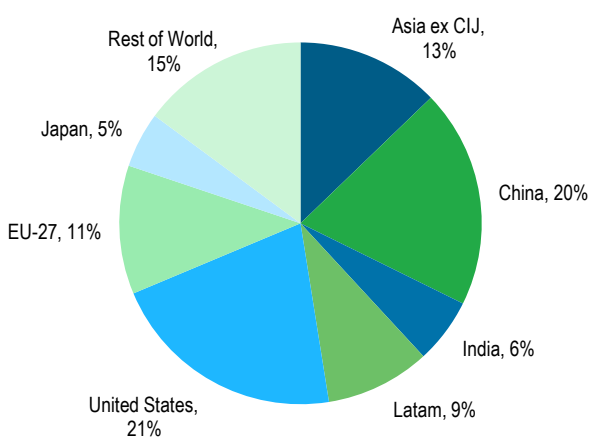
USD tn, % of USD 52.4tn total



Source: Standard Chartered Research

Figure 72: Global equity-market capitalisation, 2030

USD tn, % of USD 221.4tn total



Source: Standard Chartered Research

This general approach, combined with Standard Chartered Bank's forecasts for macroeconomic aggregates over the 2013-30 period, suggests the equity-market growth trajectories showcased in Figure 72.

We predict that China and India will continue to lead the growth in market capitalisation and sharply increase their share of the global equity markets. Growth in these countries, and in other developing markets, would be driven by both GDP growth as well as a marked increase in the ratio of equity market capitalisation to GDP.

This asymmetric growth would lead to significant shifts in the shares of different regional markets in the global equity-market, as shown in Figure 71 and Figure 72, with China increasing its market share by more than three times to become as big as the US in terms of equity-market capitalisation.

Global FX markets

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In our original Super-cycle report, we suggested that liberalisation, increasing trade and deepening capital markets would drive rapid growth in EM FX markets. The preliminary findings of the Bank of International Settlements (BIS) 2013 Triennial Central Bank Survey on the FX market suggest that these expected drivers were right on the mark for the Chinese yuan (CNY), less so for the other EM currencies.

The BIS 2013 preliminary report confirmed explosive growth in CNY daily average turnover, as well as more generally in investor FX transactions

At this stage, it is worth revisiting those preliminary BIS findings. As of April 2013, global FX turnover rose 34.60% on the 2010 survey to a daily average of USD 5.345tn a day, up from 19.46% growth in 2010, but down sharply from 71.87% growth in 2007. In 2013, FX trading with 'non-financial customers' (i.e., corporates) fell to 8.7% of total FX turnover, from 13.4% in 2010 and 17.8% in 2007. By contrast, FX trading with 'other financial institutions' (i.e., smaller banks and private- and public-sector investors) rose to 52.6% of total from 47.7% in 2010 and 40.3% in 2007. These days investors are the main participants in the FX market, followed by reporting dealers and then corporates.

CNY daily turnover increased by more than 250% from 2010 to 2013 and is up more than 35,000% since 2001

There remains an important link between economic output and FX turnover. However, the real delta is in the opening up of the capital account rather than the current account – and as we shall see this is exactly why CNY turnover has grown so explosively while that of some other EM currencies appears to have faltered. As we see in Figure 73, G10 currencies still make up the lion's share of trading volumes and dominate in terms of FX turnover to trade and GDP – precisely because of their open capital accounts.

The good news is that within the top 20 most actively traded currencies, EM currencies now account for some 14.8ppt of market share versus 11.6ppt in 2010 and 10.1ppt in 2007. The share of G10 or, more accurately, the developed market currencies was 178.8ppt (because two currencies are involved in each transaction, the sum of the percentage shares of individual currencies totals 200%) in 2013 compared with 180.2ppt in 2010 and 179.9ppt in 2007. The substantial difference in DM versus EM FX share of FX turnover represents both a challenge and an extraordinary opportunity.

Figure 73: Currency distribution of global FX turnover

Net-net basis (1), percentage share of average daily turnover in April (2)

EM currencies are bolded	2004	2007	2010	2013
1	USD (88.0% share)	USD (85.6%)	USD (84.9%)	USD (87.0%)
2	EUR (37.4%)	EUR (37.0%)	EUR (39.1%)	EUR (33.4%)
3	JPY (20.8%)	JPY (17.2%)	JPY (19.0%)	JPY (23.0%)
4	GBP (16.5%)	GBP (14.9%)	GBP (12.9%)	GBP (11.8%)
5	CHF (6.0%)	CHF (6.8%)	AUD (7.6%)	AUD (8.6%)
6	AUD (6.0%)	AUD (6.6%)	CHF (6.3%)	CHF (5.2%)
7	CAD (4.2%)	CAD (4.3%)	CAD (5.3%)	CAD (4.6%)
8	SEK (2.2%)	**HKD (2.7%)**	**HKD (2.4%)**	**MXN (2.5%)**
9	**HKD (1.8%)**	SEK (2.7%)	SEK (2.2%)	**CNY (2.2%)**
10	NOK (1.4%)	NOK (2.1%)	NZD (1.6%)	NZD (2.0%)
11	**KRW (1.1%)**	NZD (1.9%)	**KRW (1.5%)**	SEK (1.8%)
12	**MXN (1.1%)**	**MXN (1.3%)**	**SGD (1.4%)**	**RUB (1.6%)**
13	NZD (1.1%)	**SGD (1.3%)**	NOK (1.3%)	**HKD (1.4%)**
14	**SGD (0.9%)**	**KRW (1.2%)**	**MXN (1.3%)**	NOK (1.4%)
15	DKK (0.9%)	**ZAR (0.9%)**	**INR (1.0%)**	**SGD (1.4%)**
16	**ZAR (0.7%)**	DKK (0.8%)	**RUB (0.9%)**	**TRY (1.3%)**
17	**RUB (0.6%)**	**PLN (0.8%)**	**CNY (0.9%)**	**KRW (1.2%)**
18	**TWD (0.4%)**	**RUB (0.7%)**	**PLN (0.8%)**	**ZAR (1.1%)**
19	**PLN (0.4%)**	**INR (0.7%)**	**TRY (0.7%)**	**BRL (1.1%)**
20	**INR (0.3%)**	**CNY (0.5%)**	**ZAR (0.7%)**	**INR (1.0%)**
21	**BRL (0.3%)**	**BRL (0.4%)**	**BRL (0.7%)**	DKK (0.8%)
22	**THB (0.2%)**	**TWD (0.4%)**	DKK (0.6%)	**PLN (0.7%)**
23	**HUF (0.2%)**	**HUF (0.3%)**	**TWD (0.5%)**	**TWD (0.5%)**
24	**CZK (0.2%)**	**CZK (0.2%)**	**HUF (0.4%)**	**HUF (0.4%)**
25	**CLP (0.1%)**	**THB (0.2%)**	**MYR (0.3%)**	**MYR (0.4%)**
26	**ILS (0.1%)**	**TRY (0.2%)**	**THB (0.2%)**	**CZK (0.4%)**
27	**IDR (0.1%)**	**ILS (0.2%)**	**CZK (0.2%)**	**THB (0.3%)**
28	**TRY (0.1%)**	**MYR (0.1%)**	**PHP (0.2%)**	**CLP (0.3%)**
29	**CNY (0.1%)**	**IDR (0.1%)**	**CLP (0.2%)**	**ILS (0.2%)**
30	**MYR (0.1%)**	**CLP (0.1%)**	**IDR (0.2%)**	**IDR (0.2%)**
31	**PHP (0.0%)**	**PHP (0.1%)**	**ILS (0.1%)**	**PHP (0.1%)**
32	**SAR (0.0%)**	**SAR (0.1%)**	**COP (0.1%)**	**RON (0.1%)**
33	**COP (0.0%)**	**COP (0.1%)**	**RON (0.1%)**	**COP (0.1%)**
34	–	**RON (0.0%)**	**SAR (0.1%)**	**SAR (0.1%)**
35	**PEN (0.0%)**	–	–	**PEN (0.1%)**

Source: BIS

1 = Adjusted for local and cross-border inter-dealer double-counting (i.e. net-net basis')

2 = Because two currencies are involved in each transaction, the sum of the percentage shares of individual currencies totals 200%

The rise and rise of the CNY

In terms of individual EM currencies, the rise of the CNY has been meteoric. In the 2004 and 2007 BIS FX surveys, the CNY accounted for only 0.1% and 0.5% of average daily global FX turnover. In 2010, that rose to 0.9% and in 2013 to 2.2%. In absolute terms, CNY daily average turnover has increased from USD 15bn in 2007 and USD 34bn in 2010 to USD 120bn in 2013. As such, CNY daily average turnover increased by 126.66% from 2007 to 2010 and by 252.94% from 2010 to 2013. From 2001-10, CNY daily average turnover increased 35,689.5%.

In our original 'Super-cycle' report, we estimated that CNY daily average turnover against all currencies in 2010 would be around USD 50.4bn and 2001-10 growth would be 52,947%. In the event, our forecasts exceeded the actual results, most likely because the pace of policy liberalisation was slightly slower than anticipated. Nevertheless, as shown above, the pace of growth in CNY daily turnover is accelerating. Indeed from 2001-13, CNY turnover has increased by 126,215.78%.

Modest convergence towards international norms could see CNY daily turnover reach USD 1tn by 2020

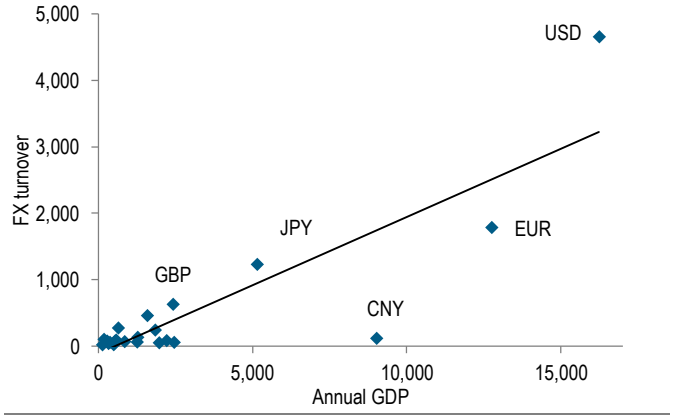
Through 2020, we see powerful drivers of growth in the CNY's daily turnover. China's nominal GDP in US dollar (USD) terms rose 2.6 times in the seven years from 2007 to 2013; based on relatively conservative growth, inflation and USD-CNY projections, it could rise by another 2.4 times in USD terms by 2020. China's overall trade flows are likely to double by 2020 from today's levels, while CNY flows in China's trade settlement may rise 3.25 times (allowing more CNY to spill out into the global financial system). These dynamics, alongside the gradual convergence of CNY FX trading volumes with international norms, suggest substantial scope for growth in the size of the CNY FX market.

As a base case, USD 500bn daily average turnover in CNY looks reasonable for 2020

The pace of liberalisation of China's capital account will be a critical influence on CNY growth. Based on the 2010 BIS Triennial Survey (the last survey for which we have full details) and respective national GDPs, daily FX turnover averaged 27.9% of 2010 annual GDP for fully deliverable currencies, but just 4.8% of GDP for non-deliverable or partially deliverable ones.

Figure 74: CNY FX trading well below international norms

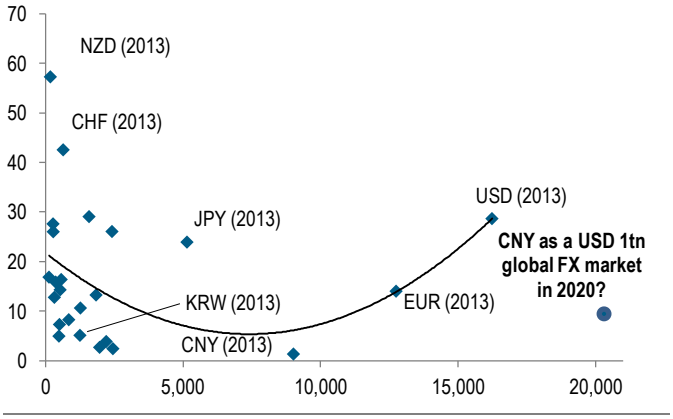
Average daily volumes vs. GDP (USD bn, 2013)



Source: BIS, World Bank, Standard Chartered Research

Figure 75: High FX turnover/GDP ratios in deliverable FX

Average daily volumes as % of GDP vs. GDP



Source: BIS, World Bank, Standard Chartered Research

As trade settlement in CNH increases and China's capital account opens up, CNY turnover growth should accelerate sharply

We expect major steps towards capital-account convertibility by 2020; clearing banks outside mainland China already give the offshore CNY (CNH) many of the characteristics of a fully deliverable currency. On a conservative estimate that China's GDP will reach USD 21.8tn by 2020, CNY FX turnover could easily reach USD 1tn per day by then (4.6% of annual GDP).

However, there are reasons to adopt a more cautious baseline projection. Low CNY FX turnover so far may reflect structural characteristics of China's economy (and financial system) that may weigh on FX market turnover growth even in the medium term. Global CNY FX turnover will be heavily influenced by the size of the pool of CNY assets outside China. While this pool is likely to grow very quickly until 2020, it will be from a low base (perhaps around USD 135bn at end-2013). As a baseline estimate, it is reasonable to expect global gross FX market turnover in CNY to reach an average daily volume of USD 500bn by 2020 compared with USD 120bn in 2013, a 4.2-fold increase.

Renminbi internationalisation has made good progress, but it has much further to go

Renminbi internationalisation has made considerable progress since the reforms of mid-2010, but it has much further to go. Increasing currency usage outside a country's borders is tangible evidence of progress in currency internationalisation. The top seven currencies used for global payments are also the seven major official reserve currencies identified in the IMF Composition of Foreign Exchange Reserves (COFER) report. The CNY rose to 11th place among world payment currencies as of June 2013 from 12th in January 2012, signalling room for further growth.

Roughly three-quarters of trading in the major currencies is offshore

The new BIS Survey puts FX trading volumes in mainland China at USD 44bn per day; this suggests that the offshore market may account for around two-thirds of global CNY trading. This is not far from the typical pattern for the major payment currencies (see Figure 76), where offshore trading averages 75% of global trading of each currency. By comparison, our own estimate of spot trading suggests onshore USD-CNY trading still accounts for the majority of global CNY trading. We estimate that 70% of CNY trading volumes are onshore, with Hong Kong accounting for around 20%.

An even split between onshore and offshore trading in 2020 would require annual growth rates of around 25% and 50%, respectively

The share of offshore CNY trading within the overall CNY FX market will be subject to competing influences. The launch of the Shanghai Free Trade Zone (CSFTEZ) and new onshore interbank FX reforms scheduled for 2014 will boost the role of the onshore FX market. However, the currency's growing international role will also steadily lift offshore CNY trading, particularly in 'distant' offshore centres such as London and continental Europe.

Assuming that CNY trading is evenly split between the onshore and the offshore FX markets in 2020, this would put daily offshore and onshore trading at USD 250bn each, according to our base case. This would reflect much faster offshore than onshore turnover growth. Onshore FX trading volumes would need to grow by 25-30% a year on average to reach USD 250bn, while offshore volumes would need to rise by around 20% per year.

Shanghai, Hong Kong and London may account for the bulk of Renminbi trading in 2020

A range of factors, such as economies of scale and the value of a single settlement and regulatory regime, favour concentration of FX transactions in a small number of financial centres. Taking the Japanese yen (JPY) as an example, 38.2% of global trading in the JPY was in the UK as of 2010, 27.8% was in Japan, and 8.1% was in

Hong Kong and Singapore combined, according to the BIS Survey. Only 7.1% of JPY FX trading took place outside the six locations listed in Figure 73.

By 2020, Shanghai, Hong Kong and London (alongside perhaps Frankfurt and Paris) are likely to account for the bulk of global CNY FX turnover – and 'set' CNY pricing in the global FX market. If we attribute a conservative 25% of offshore trade to London, then CNY turnover in that market alone could reach USD 62.5bn by 2020 (based on our baseline scenario).

Slower growth in other EM currencies

The pace of capital account liberalisation is not only a major driver of CNY turnover growth, but also a differentiator with the rest of EM where, in some cases, turnover growth stalled in 2013. To repeat, CNY daily average turnover increased by 126.66% from 2007 to 2010 and 252.94% from to 2013, due in large part to the internationalisation of the CNY.

From 2007 to April 2010, daily turnover growth in the Turkish lira (TRY) and Brazilian real (BRL) exceeded that in the CNY. However, from 2010 to 2013, the CNY has led the way. Thereafter, with the exception of the BRL, where the offshore market remains on an NDF basis, the fastest FX turnover growth was generally in the deliverable currencies such as the Mexican peso (MXN), TRY and South African rand (ZAR). Indeed, the MXN is now the eighth most traded currency in the world, ahead of the CNY. By contrast, turnover growth slowed in the Indian rupee (INR) and fell outright in the Hong Kong dollar (HKD, replaced by the CNH).

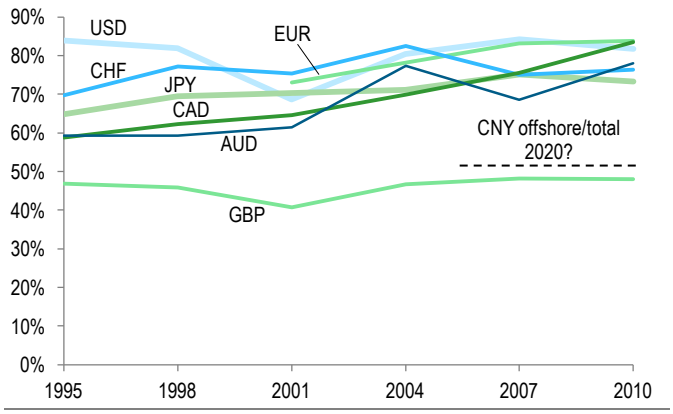
Estimates of EM FX volumes in 2020 and 2030

In this section, we provide estimates for the expansion of EM volumes over the period through 2030. We make the following assumptions:

- The CNY will remain the fastest-growing currency in average daily turnover terms, mirroring the early and middle phases of G10 currency development. This assumption is based on the following factors: (1) China is the world's largest trading nation, and we estimate that the Chinese economy will be nearly 40% larger than the size of the US economy by 2030; and (2) the CNY will be a major reserve currency by 2030, alongside the euro (EUR) and USD.

Figure 76: Percentage of currency traded outside borders

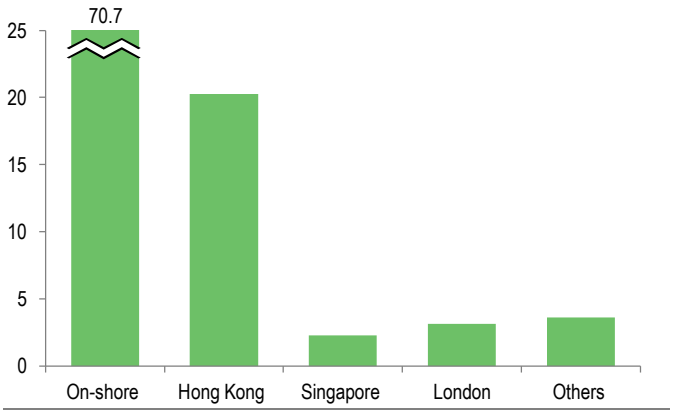
Offshore as a percentage of total FX volumes, 2010



Source: BIS, Standard Chartered Research

Figure 77: Onshore CNY may still dominate spot trading

% of global spot trading in CNY



Source: Standard Chartered Research

- The dramatic rise of the CNY on the back of CNH internationalisation and capital-account liberalisation poses a major challenge for the rest of the EM world. Greater CNY liquidity, reflecting access to CNY assets and the ability to invoice trade in CNY, results in real cost savings to investors and corporates alike. This, in turn, influences relative competitiveness.

- For the rest of AXJ in particular, this poses a dilemma: open up the capital account further and risk greater local market volatility or potentially lose further competitiveness to China. In our view, the gradual opening up of China's capital account, and more specifically the emergence of the CNH, will lead to a parallel opening up of AXJ capital accounts to maintain competitiveness, acceleration in local currency turnover – and the eventual elimination of Asian NDF markets, including the CNY NDF market.

Figure 78: FX turnover growth by currency (EM currencies)

Estimated growth rates in specified currency against all other currencies

	BRL	CNY	INR	IDR	MXN	PHP	RUB	ZAR	THB	TRY
% 2007-2010	144.99	126.66	78.59	83.17	27.37	94.34	44.57	0.90	19.97	524.28
% 2010-2013*	116.72	252.94	40.44	–	170.24	–	136.96	108.47	–	139.03

*Preliminary estimates. Source: Standard Chartered Research

Figure 79: FX turnover by currency (EM currencies)

Specified currency against all other currencies, daily average, USD mn

Currency	2001	2004	2007	2010	2013*
BRL	5,239	4,344	11,112	27,224	59,000
CNY	95	1,742	14,631	34,261	120,000
CZK	2,234	2,813	6,851	7,034	–
HKD	27,381	33,180	85,632	94,015	77,000
HUF	197	3,625	8,665	17,184	22,000
INR	2,840	6,066	21,130	37,738	53,000
IDR	552	2,051	3,286	6,019	–
KRW	9,757	21,151	34,047	60,265	64,000
MXN	10,086	20,151	39,218	49,954	135,000
PHP	502	765	3,451	6,707	–
PLN	6,325	7,031	24,231	32,089	37,000
RUB	4,282	12,208	24,811	35,870	85,000
ZAR	11,327	13,656	28,523	28,780	60,000
SGD	12,886	17,010	37,663	56,371	75,000
TWD	3,167	7,261	11,648	19,021	24,000
THB	1,859	3,492	6,378	7,652	–
TRY	433	1,991	4,691	29,285	70,000

*Preliminary results for April 2013. Source: BIS Triennial Central Bank Survey, Standard Chartered Research

In Figure 81, we compare our estimates of the average turnover of key EM to the average turnover of the USD, JPY and EUR in the 2000s as a percentage of GDP. From this perspective, we note that our estimates for EM currencies with low GDP per capita – such as the CNY, INR and Indonesian rupiah (IDR) – appear conservative compared with the current size of the USD, JPY and EUR. However, we estimate that EM currencies with higher per-capita GDP – such as the BRL and Russian rouble (RUB) – will achieve much higher average daily turnover as a percentage of GDP by 2030.

Figure 80: Estimates of FX turnover by currency (EM currencies)

Specified currency against all other currencies, daily average, USD mn

Currency	2020	2030
BRL	245,440	746,138
CNY	500,000	1,520,000
CZK	28,500	86,640
HKD	199,430	516,524
HUF	66,880	203,315
INR	220,480	670,259
IDR	25,039	104,162
KRW	194,560	503,910
MXN	410,400	1,062,936
PHP	27,901	116,069
PLN	112,480	341,939
RUB	258,400	785,536
ZAR	182,400	554,496
SGD	194,250	503,108
TWD	72,960	188,966
THB	31,832	96,770
TRY	212,800	646,912

Source: Standard Chartered Research

Figure 81: Estimates of daily FX turnover by currency (% of GDP)

Specified currency against all other currencies, daily average

	2001	2010	2020^	2030^
USD	9.7	22.9	–	–
JPY	15.4	13.3	–	–
EUR*	5.2	9.2	–	–
CNY	0.0	0.9	2.3	2.8
INR	0.6	2.9	4.8	4.3
KRW	1.9	7.6	7.9	11.6
IDR	0.3	0.8**	1.11	1.6
BRL	0.9	2.8	6.9	11.0
RUB	1.4	1.9**	7.1	10.9

^ Our estimates, * GDP is for EU-27, ** Based on 2007 data, Source: Standard Chartered Research

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In this report, we argue that the super-cycle will continue, although we have lowered our GDP growth forecasts out to 2030 for some countries. In our *'Local Markets Compendia'*, we have argued that as GDP per capita rises, the importance of local investors increases. Based on this relationship, we use our forecasts of nominal GDP per capita for 19 emerging markets and footprint economies to project the size of the local investor base in 2030 in those countries. We will highlight where local factors suggest that the local investor base will not develop in line with what is prescribed by our nominal GDP per capita projections.

NBFIs are defined as the sum of mutual funds, life-insurance companies and pension funds

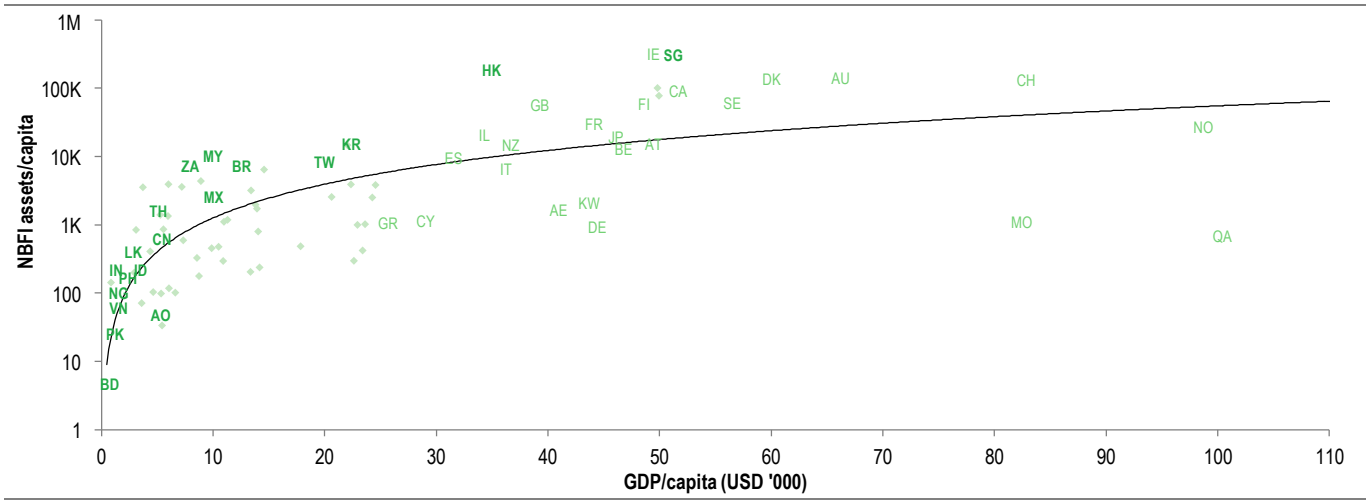
We define non-bank financial institutions (NBFIs) as the sum of mutual funds (or in some markets, unit trusts), life-insurance companies and pension funds. As GDP per capita rises, NBFI assets per capita increase (Figure 82). The result is as expected: in simple terms, a household faced with a choice of food on the table versus, for example, a life-insurance policy will choose the food. As income rises above subsistence levels, the banking sector will initially grow, but liquidity preferences will still dominate. Only as income moves beyond subsistence and liquidity needs will the marginal allocation to savings increase more rapidly. This relationship holds not just across countries at a single point in time but also through time. For example, we saw a positive linear relationship between the percentage change in NBFI assets and the percentage change in income during end-2008 and end-2012 (see *Local Markets Compendium 2014*).

We forecast large increases in nominal GDP per capita through 2013-30, particularly in countries with relatively low current nominal GDP per capita, such as India, Indonesia, the Philippines, Vietnam, Sri Lanka and Bangladesh. We also expect nominal GDP per capita to rise sharply in China, despite China having already reached middle-income status. In contrast, high-income countries like Singapore and Hong Kong will naturally experience much slower growth in nominal GDP per capita.

We expect NBFI assets to continue to rise faster than income levels, consistent with the pattern seen globally

Figure 83 shows projected NBFI assets per capita in 2030 for those countries where we have estimated nominal GDP per capita in 2030, assuming that the NBFI sector in each country progresses in line with current cross-country relationships between GDP per capita and NBFI assets per capita in our broader dataset in the *Local*

Figure 82: Domestic institutional investor size increases with income growth, 2012
NBFI assets per capita (log scale) vs. nominal GDP per capita (USD)



Source: Standard Chartered Research

Markets Compendia. Hence, this ignores country-specific factors. Based on cross-country relationships, the countries that could see the fastest growth in the NBFI segment are those with low current nominal GDP per capita and a currently low NBFI asset base, i.e., Bangladesh, Vietnam, India and Sri Lanka

Figure 83 shows estimated NBFI assets per capita in 2030 for the 19 countries that we have nominal GDP per capita forecasts, assuming that the NBFI segment in each country will rise in line with the current average cross-country relationship. If nominal GDP per capita were the only determining factor for the NBFI segment, NBFI assets per capita would rise by around 400% through 2012-30.

Large catch-up potential in insurance penetration in PH, ID and MX

Perhaps the clearest relationship to income is the one between per capita life-insurance premium (or premium density) and nominal per capita GDP. Life insurance generally comes after essential expenditure and, in that sense, is similar to a luxury good. When we plot this relationship, we find that as nominal GDP per capita rises, the log of the insurance density will rise. This suggests that as per capita income increases, countries will experience accelerated growth in the life-insurance segment. Given the long duration of liabilities, this should also be an important contributor to bond-market development.

Figure 83: The fastest-growing NBFI segments are in the fastest-growing economies

Ratio of NBFI assets per capita in 2030 to NBFI assets per capita in 2012 based on the change in nominal GDP per capita

	Nominal GDP per capita (USD bn)			NBFI assets per capita (USD bn)		
	2012	2030	Ratio	2012	2030	Ratio
Bangladesh	804	5,505	6.8	31	732	23.5
Vietnam	1,730	11,323	6.5	109	2,419	22.2
Sri Lanka	2,839	17,896	6.3	246	5,185	21.1
China	6,057	36,468	6.0	857	17,083	19.9
Indonesia	3,785	20,838	5.5	394	6,686	17.0
Philippines	2,614	14,363	5.5	214	3,593	16.8
India	1,914	10,075	5.3	129	1,992	15.5
Nigeria	1,646	6,573	4.0	100	981	9.8
Thailand	5,678	19,191	3.4	770	5,827	7.6
Pakistan	1,281	4,379	3.4	67	501	7.5
Malaysia	10,304	32,918	3.2	2,068	14,383	7.0
Mexico	10,059	26,369	2.6	1,987	9,915	5.0
Brazil	11,359	27,337	2.4	2,431	10,532	4.3
South Korea	21,256	46,943	2.2	6,912	26,124	3.8
Taiwan	20,328	44,894	2.2	6,415	24,233	3.8
Singapore	51,160	103,640	2.0	30,199	99,663	3.3
Hong Kong	36,668	74,283	2.0	17,241	56,686	3.3
South Africa	7,412	15,013	2.0	1,197	3,868	3.2
Angola	5,714	6,885	1.2	778	1,059	1.4
Total	202,608	524,893	2.6	72,145	291,462	4.0

Source: Standard Chartered Research

Figure 84: Mutual-fund asset growth will outpace pension-fund asset growth

Forecasts of NBFI asset size per capita, 2030 vs. 2012

	2012	2030
NBFI assets per capita (USD)	72,145	291,462
Insurance assets per capita as a % of NBFI assets per capita	43	43
Pension assets per capita as a % of NBFI assets per capita	34	31
Mutual fund assets per capita as a % of NBFI assets per capita	23	26

Note: Includes China, India, Hong Kong, Taiwan, Malaysia, Indonesia, the Philippines, Singapore, Korea, Thailand, Vietnam, Sri Lanka, Bangladesh, Pakistan, Brazil, Mexico, South Africa, Nigeria, Angola; Source: Standard Chartered Research

Figure 86 shows insurance density relative to nominal GDP per capita in 2012 for the 19 countries in our study and where they would be in 2030, assuming that each country's insurance density will rise according to the current cross-country relationship. Figure 5 shows the deviation from the best-fit line based on 2012 data.

Insurance penetration in Taiwan, Korea and South Africa is already at a relatively advanced stage

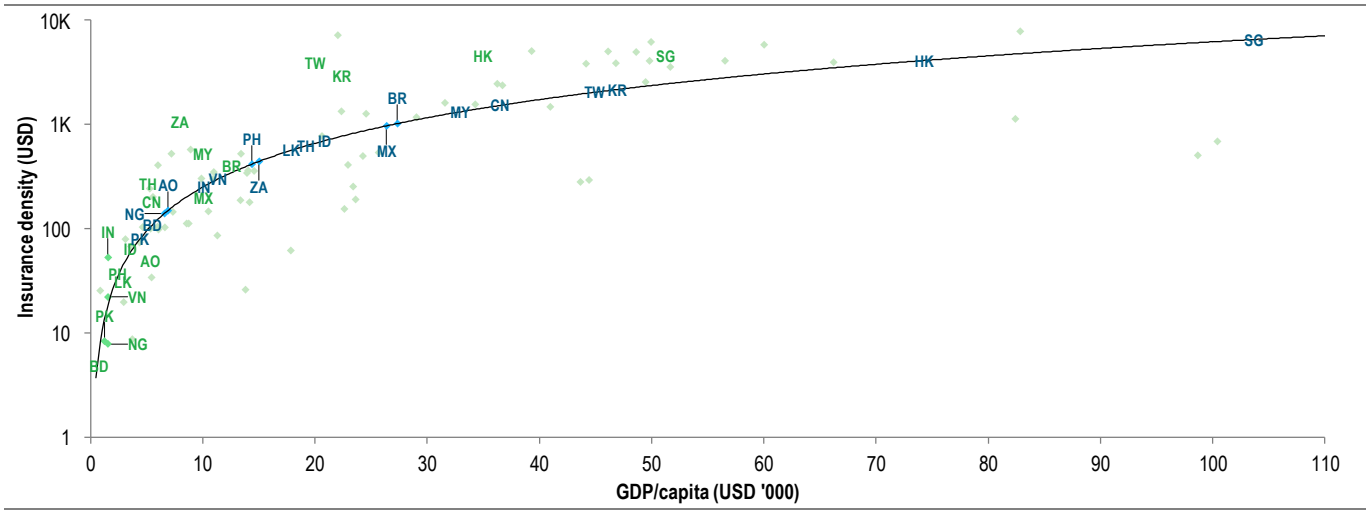
Taiwan, Korea and South Africa have larger insurance segments than their income levels alone would suggest (Figures 85 and 86). In Taiwan's case, this is because of the significant contribution from investment-linked products, many of which were sold with minimum return features. Mainland China-based insurance companies have also grown rapidly through the emergence of investment-linked products, although regulations have tightened and this should slow the impressive pace of growth so far.

Figure 85: NBFI segments in many Asian and Latam countries are more developed than the global average
Deviation from the best-fit line (actual - best fit), 2012, USD

	Insurance density	Pension assets per capita	Mutual-fund assets per capita
Bangladesh	-2.7	-15.6	NA
Vietnam	0.3	-12.2	-12.0
India	27.8	0.6	75.3
Sri Lanka	-10.8	257.3	NA
Philippines	-1.5	1.6	7.4
Nigeria	-12.4	45.5	NA
Pakistan	-6.0	-31.8	9.8
Indonesia	-1.0	-100.7	31.8
China	56.6	-220.5	176.7
Thailand	156.6	-43.0	927.0
Malaysia	258.7	5,643.1	2,958.4
Mexico	-43.5	616.2	596.7
Brazil	96.9	630.1	4,930.4
South Africa	880.2	3,046.4	2,649.8
Taiwan	3,167.8	-97.7	1,162.6
South Korea	2,191.3	4,918.9	3,853.5
Hong Kong	3,020.5	5,449.9	167,725.1
Singapore	2,082.0	28,658.1	257,924.0
Angola	-65.6	-319.7	NA

Source: Standard Chartered Research

Figure 86: Low-income countries may see a rapid increase in insurance penetration
Forecasts of insurance density (log scale) relative to nominal GDP per capita, 2012 (green) vs. 2030 (blue)



Source: SwissRe, OECD, National Sources, Standard Chartered Research

The relatively developed insurance markets in Taiwan, Korea and South Africa suggest that insurance density will fall through 2012-30 if the insurance markets in those countries developed purely in line with average cross-country relationships (Figure 86). Clearly, nominal GDP per capita is not the only factor behind the development of the insurance segment; we therefore caution against coming to such conclusions. However, our analysis suggests that in the coming decades, insurance penetration in, for example, Mexico may catch up with that in South Africa, whereas the insurance segment appears to be very mature in Singapore and Hong Kong.

The GCC region has low levels of life-insurance penetration, especially in the Shariah-compliant Takaful industry

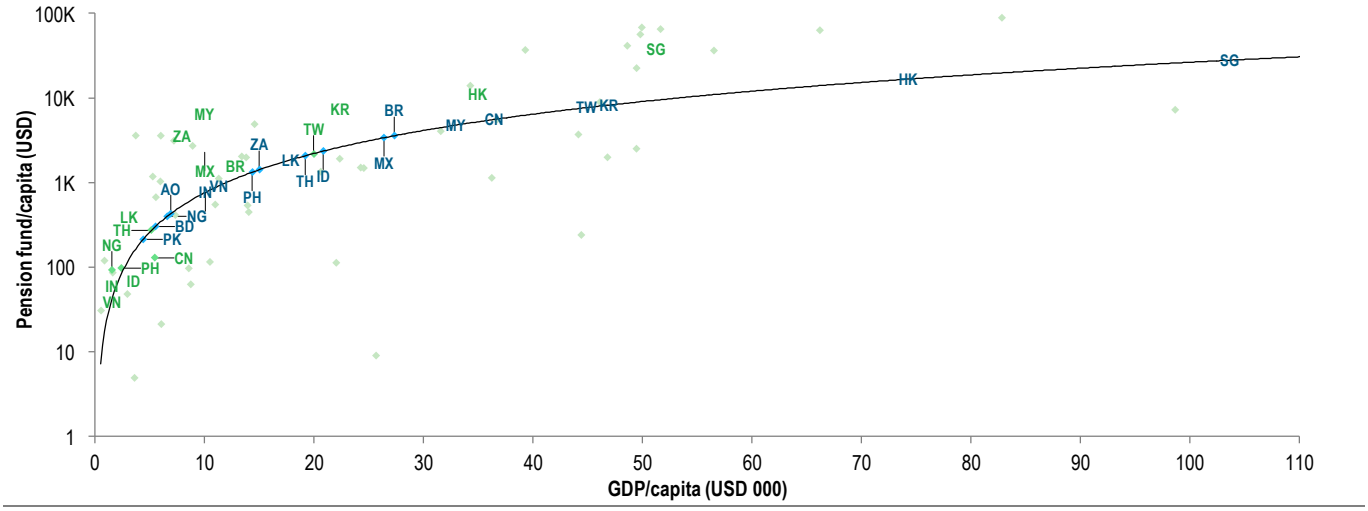
At the other end of the spectrum, the Gulf Cooperation Council (GCC) market has much lower premium density than implied by income levels. This is partly explained by income distribution in the region, with much of the wealth held by state-owned entities and a dominant share of investment assets held by sovereign wealth funds. However, the investment component of insurance is also likely to be affected by Shariah restrictions on investable assets. The Takaful, or Shariah-compliant, insurance market has begun to grow but is still very small compared with the conventional insurance market. We believe that the Takaful segment could become an important contributor to domestic market development. However, it is far less developed than the conventional insurance segment, and hence the penetration of the insurance segment in GCC may lag that of Asia's and Latin America's (Latam's) in the coming years.

Pension penetration in China may rise sharply in the coming decades

We find a similar relationship between per capita pension-fund assets and income: pension growth accelerates as GDP per capita rises. While life-insurance companies differ in size and behaviour depending on investment-linked product development, these differences are often even greater for pension funds. Two factors affect the difference. First, the size of the fund depends on whether there is an explicit, separately managed pension system (the first-pillar pension system); if pensions are provided by the government but not explicitly managed, pension assets will be much smaller. Second, the liability profiles of pension funds will be significantly different depending on whether they are defined-benefit (DB) or defined-contribution (DC) systems. (We discuss this in detail in '*Local Markets Compendium 2011'.*)

Figure 87: Pension penetration may rise rapidly in China; less so in Singapore

Forecasts of pension asset size per capita (log scale) relative to nominal GDP per capita, 2012 (green) vs. 2030 (blue)



Source: OECD, national sources, Standard Chartered Research

We estimate that EM pension-fund assets were USD 2.3tn in 2012, up from USD 1.5tn in 2007

Emerging-market (EM) pension funds have grown rapidly. We estimate that total assets in such funds were around USD 2.3tn as of end-2012, up from just USD 1.5tn in 2007. However, this represents just under 10% of global pension-fund assets. As with insurance funds, growth in EM pension funds has been impressive, but a sustained increase in nominal GDP per capita and its small size relative to global pension-fund assets suggest that significant upside remains for this segment.

Pension penetration in Singapore appears to be very mature; China has significant catch-up potential

Markets like Malaysia and South Africa already have relatively well-developed pension segments. Malaysia's Employment Provident Fund (EPF), its public pension fund, is its largest, with a size of MYR 527bn at end-2012. In contrast, compared with the rapid rise in GDP per capita in China in recent decades, pension penetration in China is still relatively low. This, combined with China's ageing population and the likely reform of China's pension systems (including pension coverage) in the coming years, is likely to lead to pension penetration in China rising rapidly in the coming decades.

Mutual funds are not exclusive to developed markets

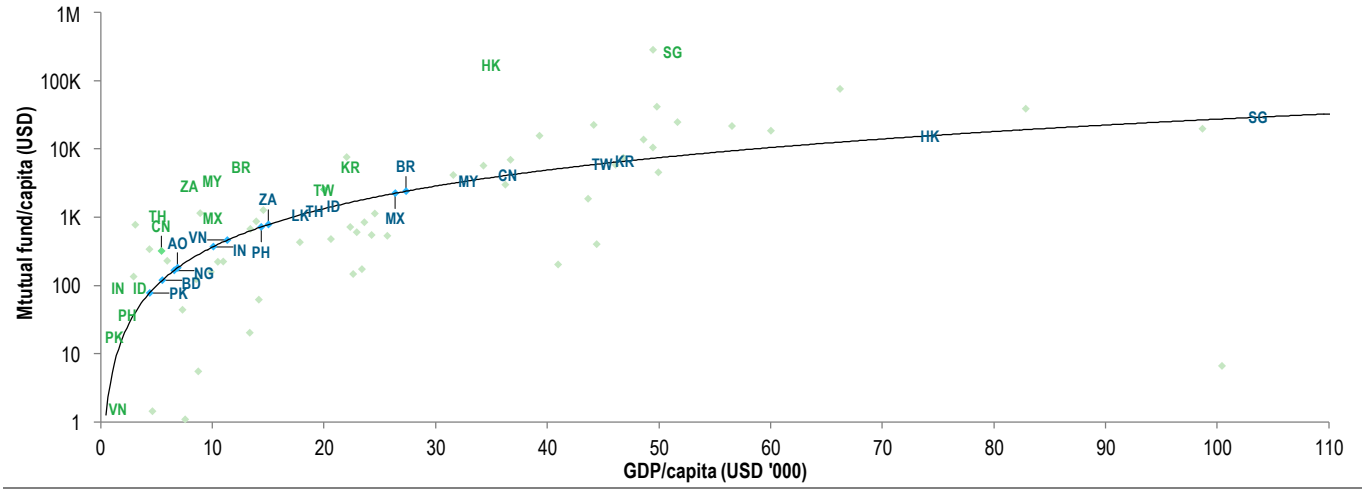
As income levels rise, the proportion of mutual funds investing in fixed income and money markets tends to decline

As with pension assets and insurance density, there is a positive relationship between the size of per capita mutual-fund assets and GDP. However, although acceleration in asset growth moderates at higher income levels for pension and insurance companies, it does not do so for mutual funds. (This is represented by a steeper slope for GDP per capita above USD 30,000 in Figure 88 than in Figures 86 and 87). This indicates that at high income levels, households tend to shift from pure savings vehicles to a mix of investment strategies. While rising income levels are likely to contribute to growth in mutual-fund assets, this will probably be accompanied by increased allocations to equities rather than fixed income. This is to be expected, on the basis that higher disposable income levels are likely to see mutual funds evolve from being long-term savings vehicles to being increasingly used as tradable products.

With the exception of Vietnam, all the countries we have data for in Asia and Latam have higher mutual-fund penetration than the cross-country average. Like in the case of insurance penetration, this can be explained by low mutual-fund penetration in the GCC markets. Singapore and Hong Kong stand out as having very developed mutual-fund segments. Clearly, this is due to the two countries' roles as centres for financial services and wealth management. They are likely to remain as such in the coming

Figure 88: We expect strong growth from a low base, except in Singapore and Hong Kong

Forecasts of mutual asset size per capita (log scale) vs. nominal GDP per capita, 2012 (green) vs. 2030 (blue)



Source: ICI, Lipper, OECD, Standard Chartered Research

decades as well, but may face increasingly fierce competition from China as its capital account opens. This suggests that growth of the mutual-fund industry in Singapore and Hong Kong may slow at the expense of, for example, China. Again, Malaysia and South Africa stand out as having already relatively developed mutual-fund segments and may lag China in terms of mutual-fund penetration in the coming decades.

Onshore NBFIs – The future of domestic bonds

As foreign-investor participation grows and NBFI assets rise, we expect banks to play a smaller role in EM government bond holdings

Since the global financial crisis, the number of foreign investors in local-currency (LCY) EM bond markets has risen substantially. We believe that foreign participation has further to rise. At the same time, we expect the role of NBFIs to increase significantly, as NBFI assets per capita may rise by 400% through 2012-30. However, if both foreign participation and NBFI ownership are rising, we would have to reconcile how they balance out. We believe the answer is relatively straightforward: a diminishing contribution from banks. As GDP per capita increases, the percentage of household financial assets (HFA) held in bank accounts and money-market funds declines. This is again consistent with the shift from precautionary and liquidity holdings to longer-term savings.

The impact of short-term rates will lessen in EM local markets; instead, interest rates will be influenced by multiple dynamics across market participants

From a market-behaviour perspective, two important dynamics emerge. First, the investor base becomes more diversified. This diversification creates greater liquidity and lower transaction costs as the likelihood of herd behaviour diminishes. Second, the term structure of interest rates in emerging markets will, over time, become more dynamic. Currently, short-term interests have a large impact on most EM curves through the banking system. In addition, interest-rate levels explain most of the curve dynamics. As the role of NBFIs and foreign investors increases while the role of domestic banks diminishes, the impact of short-term interest rates will lessen. Instead, interest rates will be influenced by multiple dynamics across market participants – from the general carry and roll-down bias of mutual funds to the long-dated liability hedging of life-insurance companies. This transformation of market dynamics is particularly likely to happen in countries such as China and India, where banks currently play a dominant role.

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