



Asia 2020

The region nine years hence

Economics-Markets-Strategy

DBS Group Research
15 September 2011

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Nine years hence

In this Quarterly, we break with past issues and split it into two sections: the usual short-term cyclical outlook (presented on the ‘flip side’ of this booklet) and a longer-term ‘structural’ picture of what Asia will look like in the year 2020 presented below. The nine-year study came as a request back in June from our Vickers equities team, who wanted to know, among other things, what valuations might look like in 2020.

The request seemed more than timely. After all, Asia had just emerged from the global financial crisis and, rather than being held back by a soporific US, EU and Japan as most predicted, was instead running ahead at double-digit rates of growth and, in the process, driving whatever growth was taking place in the rest of world as well. Roles had reversed.

For most, this answered once and for all the question of whether Asia had the power – the domestic demand actually – to drive its own growth. It did. Or whether it was relying on the US to drive its growth in a ‘globally imbalanced’ manner. It wasn’t. The world had not ‘decoupled’ to use that unhelpful word – indeed it was more intertwined than ever before. But Asia had driven its own recovery and far more. And with little or no help from the US/G3.

A couple numbers may help to see this. By mid-2011, GDP in the Asia-10 was 10% to 30% higher than in 2Q08 just before the collapse of Lehman Brothers. In the US, output had not yet returned to square one. Since March 2010, Asian central banks have raised interest rates (or tightened currency regimes) 47 times. In the US, the Fed gave us QE2 and is now contemplating a QE3.

So, the Vickers guys and gals wondered, if Asia could do all this in 2011, what might it be doing in 2020? A good question, because it begs many others. What might valuations be then? Which industries should investors be investing in? Which companies?

And if 2020 seems awfully far away, it’s absolutely not. Take a common investment goal, saving for education. Anyone who’s ever raised a son or daughter and packed them off to college at age 18 knows it all goes by in the blink of an eye. Twenty-twenty is nine years away, exactly half that eye-blink.

So we set out to answer these questions. In the economics section, we focus on three questions: how big will Asia be in 2020?; what will per-capita income be? and do we see any countries falling into some sort of ‘trap’, where income levels and GDP growth have come to a standstill? The latter is an important question because it could make or break the answers to the first two: how big and how wealthy is Asia like to be in 2020? Thankfully, we find no evidence of a trap in Asia, just the ‘natural’ slowing of income growth as income levels approach those in the developed countries.

In addition to the regional themes and trends, we take a closer look at each of the economies in the region to assess the key drivers and constraints they face individually. And of course our group wouldn’t be our group if we didn’t assess what the bond, currency and equity markets could look like in 2020 as well.

What do we find? Lots of things but a few stand out. First, output in Asia will surpass the US in 2016, five years from now. By 2020, Asia will be 20% larger and generating three dollars of new demand for every dollar generated by the US. Remember, it’s those new dollars of demand that are the very definition of growth. Put differently, by 2020, Asia will be three times the global growth driver that the US is.

A second finding is that while per-capita income levels in Asia will be much higher by 2020, most Asian countries will remain 20-50 years behind the US. This means fast growth can continue for some time. A third finding is that Asia's population will grow by some 300mn by 2020. What's 300 million you ask? It's a whole US today, that's what it is. In other words, by 2020, Asia "will add an entire US" to its headcount.

That's a big deal, to be sure, but it's even more important to realize that population growth will account for only about 10% of the increase in GDP between now and 2020 – the rest will come from whence it has always come: productivity or per-capita GDP growth. That's why it's important to know whether Asia has fallen into any sort of 'trap' – because an end to productivity growth would spell an end to everything.

Beyond looking at GDP, we also take a stab at sizing up sectors in 2020. How big will consumption be? How much money will be spent on investment? On food and housing? Energy and healthcare? Put it all together and it's a fairly broad picture of what Asian economies may look like in 2020.

But it's just a start. Our analysis couldn't possibly be the final word on Asia 2020 and it is not intended to be. Rather, the hope is that our work serves as a starting point for discussion with clients and as the backdrop for further company and sector analysis from the Vickers team that motivated the study in the first place.

We had initially intended to devote the entire Quarterly to the Asia 2020 topic. In the past six weeks, however, markets have taken a turn for the worse and fears over a double-dip in the global economy have risen just as sharply. A reasonable question arises, who cares about 2020 if the world is going to end in 2012?

There are a couple ways to answer this. One is to suggest that looking out to 2020 may be just what the doctor ordered to get us over the hump! That's less facetious than it seems. Cycles are important but (as discussed below) our study is 'structural' in nature. The ups and downs of the next two years will say less about where Asia stands in 2020 than the trend line that it follows for the next nine.

Second, much of our research over the past five years has dealt with the changing structure of the global economy and how this changes the cycles themselves. Asia recovered from the 2008 financial crisis with little or no help from the US. That would not have happened 10 years ago, to say nothing of 15 - 20 years ago.

The reason is that Asia is no longer too small to matter. Its rise – a long, slow, grinding ascension over many years' time – is the biggest structural change underway in the global economy today. More than anything else, this is what allowed Asia to recover from the 2008 global financial crisis with little or no help from the US/G3 when it would not have been possible 10-15 years ago.

This structural change – described and extended to 2020 in the pages below – is what will allow Asia to endure the uncertainty of the next 2-3 years as well. As we've been saying for several years, it's a new world out there and Asia is at the center of it.

David Carbon, for
DBS Group Research
September 15, 2011

Asia 2020

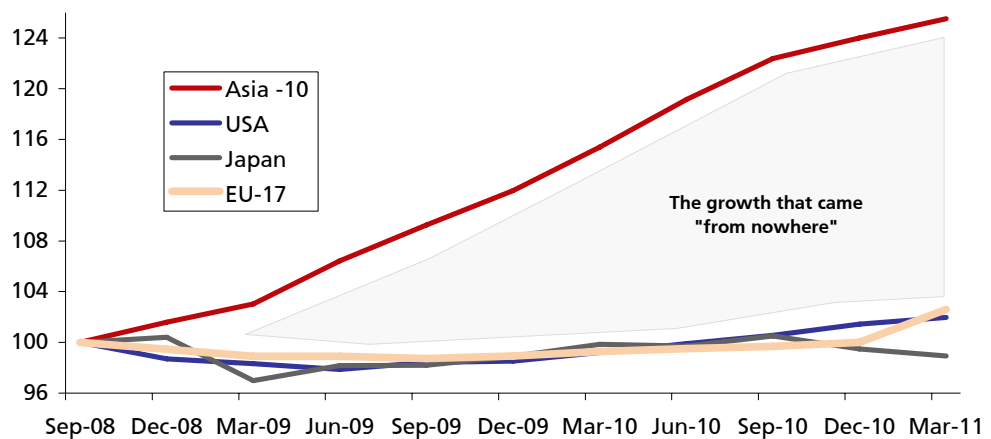
- The shift in economic gravity from West to East continues
- Asia has become a bigger driver of global growth than the US even more rapidly than we envisioned five years ago
- By 2016, the Asia-10 economies will be larger than the US
- But most Asian countries remain 20 to 50 years behind the US
- This means fast growth can continue for a long time to come and, so long as policies remain pro-growth and countries remain open to the global system, it probably will
- By 2020, Asia will be putting three dollars of new demand on the global table each year for every dollar from the US
- More than ever before, Asia will be where the growth is

Back in 2006, we argued that in five years' time – by 2011, that is – Asia would become as big a driver of global growth as the US [1]. Clients and other readers fell into two camps. One was the 'tell me something I don't know' camp. Many in this group had long since built careers and lives around Asia's growth and they didn't need us to tell them the 'obvious'.

The second camp thought the idea ludicrous. To this group, it was 'obvious' that the US drove global growth and would for a long long time. The newspapers were howling about 'global imbalances' almost every day: the US consumer bought everything, the Asian bought nothing. Asians produced and saved and that was it. Growth here depended almost parasitically on the US. If the US ever stopped buying, Asia would go down and might never get up. Asia driving growth? Right, let's catch up sometime...

Real global consumption

3Q08=100, seas adj



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As it turned out, it didn't take 5 years for Asia to become a bigger driver of global growth than the US: it only took four. Last year, in 2010, Asia "crossed over" and generated more new demand than the US did – new dollars of consumption, investment and government spending that are the very measure of global growth.

And, as we now know, the US had nothing to do with it. Americans did indeed do what everyone feared they would in 2008: they stopped buying when Lehman Brothers collapsed. So did the Europeans and so did the Japanese. Since Sep08, real consumption in the G3 has grown by less than one percent.

But Asians didn't stop buying when the Americans did. In sharp contrast to the near-zero growth in the G3, Asians are consuming 25% more today than at the start at the global financial crisis. Not for nothing is GDP up, since 2Q08, by 18% in Singapore and Indonesia, 14% in the Philippines, 10% in HK, Taiwan, Korea and Thailand, 25% in India and 29% in China. US GDP, meanwhile, is still not back to precrisis levels.

It wasn't all smooth sailing of course and the chart below helps to illustrate this and a couple more points. Asian countries fell broadly into two groups: the small, relatively more open and vulnerable countries (like SG, HK, TH, MY, KR and TW), and the larger, more domestically-driven economies like China, India and Indonesia. When Lehman collapsed, Singapore (in grey) fell sharply but then soared back at double-digit rates for a year or more. Indonesia (in red) forged through the mess in almost straight-line fashion.

A second point is that both countries have grown by about the same amount (18%) since 2Q08, just before Lehman collapsed. That's a lot of growth. More generally, the sets of countries that Singapore and Indonesia represent have, whether in straight-line fashion or down-up-down fashion, grown by the amount most would have expected them to grow by, even had the global financial crisis never occurred. Again, all in the face of a US that has yet to climb back to square one.

The bottom line is that most now acknowledge that emerging markets, with Asia at their core, have driven global growth over the past two years, including the modest growth that has been seen in the G3. In short, the shift in economic gravity from West to East – the biggest structural shift under way in the global economy today – continues.

Nomenclature

References to Asia in this report adhere to the following conventions:

- Asia 10: CH, HK, TW, KR, SG, MY, ID, TH, PH, IN
- Asia 9: Asia 10 less IN
- Asia 8: Asia 10 less IN and CH
- Asean 5: SG, MY, TH, ID, PH
- Asean 4: Asean 5 less SG
- EU Big3: GE, FR, UK
- G3: US, EUB3, JP
- G4: US, JP, EUB3, Asia-10

Asia – real GDP levels

2Q08=100, seas adj



2020: in the blink of an eye

If Asia can do all this in 2011, what will it be doing in 2020? The question is important because it begs many others. Do current equity valuations reflect Asia's new punching weight? Do they reflect the weight Asia will be punching at in 2020? More generally, what should investors be thinking about today if they are looking ten years down the road instead of ten months or ten weeks?

And if 2020 seems far away, it's absolutely not. Take a simple and common investment goal: saving for children's education. Anyone who's ever raised a son or daughter and packed them off to college at 18 knows it all goes by in the blink of an eye. Twenty-twenty is 9 years away, exactly half that blink.

We have set out to look at Asia 2020 in four parts. In this, the economics section, our aim is to "dimension the markets", to put a size on things. How big is GDP going to be? What will Asian incomes be? How many people will there be? How many will be working and how many will be depending on others for their sustenance? How much money will be spent on consumption and investment, and food and housing and energy and healthcare? Then we consider what Asia's bond, currency and equity markets will look like nine years hence.

In subsequent / forthcoming research, our equity team will look at the sectors and the companies that are likely to command investor attention. All sections, we hasten to add, are but an introduction to what Asia seems likely to look like in 2020. And all are intended to serve, not as the final word on the subject – how could they be? – but merely and rather as the basis for further research and discussion in the weeks and months ahead.

Sizing the markets

Our main task here is to "size the markets" because that says a lot about what they will be worth and which should be watched. The problem is, while it's easy to say Asia is going to be 'big', throwing out numbers like \$Xbn or \$Ytrn can numb the mind pretty quickly; everything becomes a blur. One way to prevent eyes from glazing over is to compare what Asia will be doing with other countries like the US. Sometimes, these comparisons can be startling.

But we'll also attempt to address some important questions as we go along. Questions like, how long can Asia's rapid growth last? Or how many years is China behind Taiwan or Singapore? Are some countries stuck in the mud? Or is there any such thing as the "Middle Income Trap"? The latter question is important because it could make or break the entire picture of Asia 2020.

Sometimes the most eye-opening way to look at data is through the incremental change in it – "the delta". Take population for example. By 2020, Asia's population will grow by nearly 300 million. What's 300 million, you ask? Well, it's a whole US today, that's what it is. In other words, by 2020, Asia "will add a whole US" to its headcount. That's the delta and lots of our points will be made this way.

Productivity and the 'soft factor' assumptions

Ironically perhaps, and equally eye-opening in any event, is how relatively unimportant population growth will be to Asia's economic growth overall. Asia may "add a whole US" to its population by 2020 but that will account for only 10% of the growth in GDP between now and then. The other 90% will come from whence it has always come: a rise in per-capita GDP, or productivity.

Just where that higher productivity comes from we won't analyze in detail here. For developing countries, it mostly comes from having more capital equipment to work with (most of which is imported), higher education, better infrastructure (roads, ports, electricity and communication grids), better management systems, better incentive and reward systems (especially as regards China), an opening up to the global trade system, better leadership, governance, laws and so on.

Our assumptions here will be two. First, that, for better or for worse, there will be no significant change in the path of the ‘soft’ or less tangible growth factors like governance or education trends or shifts in policies toward (or away from) economic development. In short, no upside surprises (China 1978) or downside surprises (China 1958 or 1967). Second, that productivity growth continues to fall as per-capita income rises. As wages and technology levels rise in a country, the ‘low hanging fruit’ gets harder to find. Bottom line: the richer a country becomes, the slower its rate of growth becomes.

The latter assumption means that while our “dimensioning exercise” is essentially a trend-projection, for most economies, growth rates are not assumed to remain constant. Rather, we assume they fall in most cases. In China, for example, we project growth to drop to 7.5% per year by 2020 from about 10% at present, and, for the sake of simplicity, that in all cases it does so in straight-line fashion.

Structural vs cyclical estimates

The “straight-line” drop assumed above for China’s growth rate underscores two more points that should be mentioned now as well. First, our estimates for 2020 GDP, per-capita income and all other variables are ‘structural’ in nature rather than cyclical. We are not attempting to tell any kind of cyclical story or make any kind of cyclical forecast here. Rather, we are attempting, in the case of GDP for example, to project a ‘structural’ or trend level out over the next 9 years. Of course we know that in 2020, when we look back on the past 9 years, we will see many ups and downs in the actual data. That neither concerns nor distracts us. Our aim is to draw the line *through* those zigs and zags that most reasonable people would draw.

Secondly, our estimates are intended to be as devoid of ‘view’ as possible – to be agnostic, generic. Not to be ‘bullish’ or ‘bearish’ on Asia but to produce a set of numbers that most would agree are reasonable. The hope is that time is spent reflecting upon the outcomes and their implications rather than on the assumptions and cyclical gymnastics that might have gotten us there [2].

Today’s constant dollars

Toward this end, we further note that all past and future variables are expressed in constant 2010 US dollars. Among other things, this means we have not built a 20% fall in the USD (rise in the CNY) into our projections, nor assumed a 10% (or 5%) rate of inflation somewhere in the calculations. The reasons should be self evident. The size of a market 9 years hence can be anything an analyst wishes if inflation and/or currencies are fooled with. Too many permutations are possible, moreover, for scenario analysis. Our estimates are plain vanilla, though investors who believe Asian currencies will rise, say, 25% against the dollar by 2020 may easily inflate our constant 2010 dollar estimates accordingly.

Some will no doubt suggest we could have built a ‘structural’ view of currency appreciation into our GDP and income estimates and that is true. Most accept that currencies appreciate in real terms as per-capita incomes rise and the so-called Harrod-Balassa-Samuels effect is often estimated to show a 2.5% - 3% rise in real currency values for every 10% rise in per-capita income [3]. How that real appreciation gets divided, though, between the currency and price levels is arbitrary. Singapore takes its ‘gains’ through the currency; Indonesia through inflation. What China will do remains unclear. Moreover, the signal-to-noise ratio in estimating structural currency values is notoriously low and estimates vary widely depending on the time period used in estimation. Aiming to keep debate over assumptions to a minimum, we have opted to leave out currency appreciation altogether.

Asia 2020 – the numbers

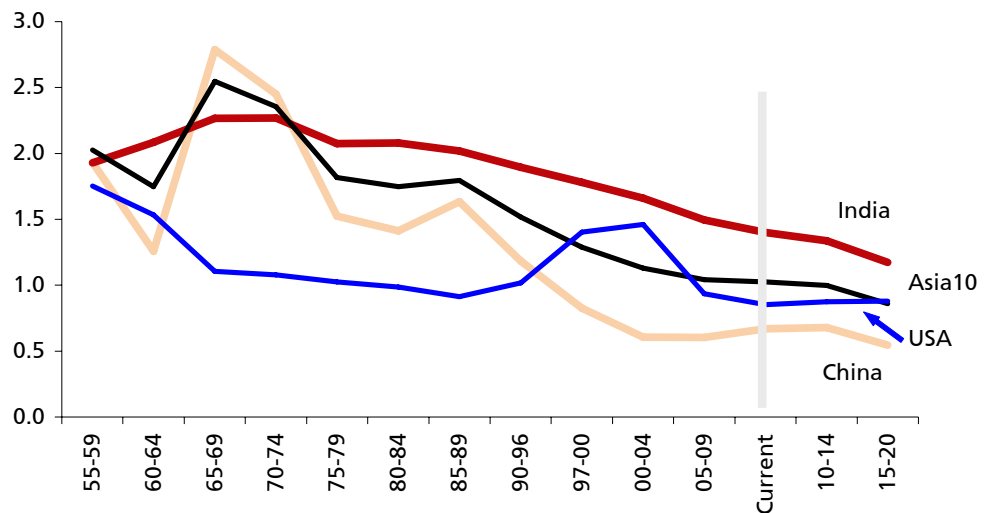
I. Population:

We begin with population partly because it is traditional and partly because several key points about Asia 2020 immediately strike the reader.

- Population growth has been falling in Asia since the late-1960s and this is expected to continue [4]. Current Asia-10 population growth is running at about 1% per year; this will fall to 0.8% by 2020.

Population growth and projections

% per year, period average, projections by US Census Bureau



- Nevertheless, Asia will “add” an entire US by 2020. Asia’s population will grow by 290mn by 2020, nearly equal to the 310mn current population of the US (table below).
- For every new birth or immigrant added to the US headcount over the next 10 years, Asia’s headcount will grow by 10x.
- Most (82%) of the increase in Asia’s population by 2020 will come from India and China. Indonesia will account for another 8% of the increase.

Population
mn persons

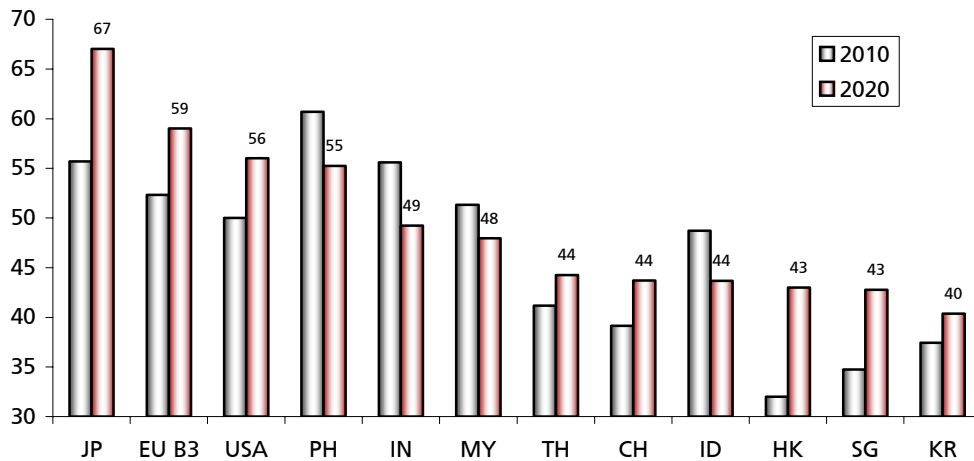
	CH	HK	KR	TW	SG	MY	TH	ID	PH	IN	USA	JP	EU B3	A-10	A-8	CH, IN
2010	1,348	7.1	49	23	4.7	28	66	243	100	1,173	310	127	205	3,042	521	2,521
2020	1,431	7.3	49	23	5.0	33	69	268	119	1,326	338	122	206	3,331	574	2,757
Change	83	0.2	0.7	0.3	0.3	4.4	3.2	25	19	153	28	-5	1	289	53	236
share in A10																
change (%)	29	0	0	0	0	2	1	8	7	53				100	18	82

Source: US census bureau

- Dependency ratios – those over 65 and under 15 as a proportion of working age persons – will fall in India, Indonesia, Malaysia and the Philippines. Less dependency can mean higher savings, investment and growth.

Global – dependency ratios

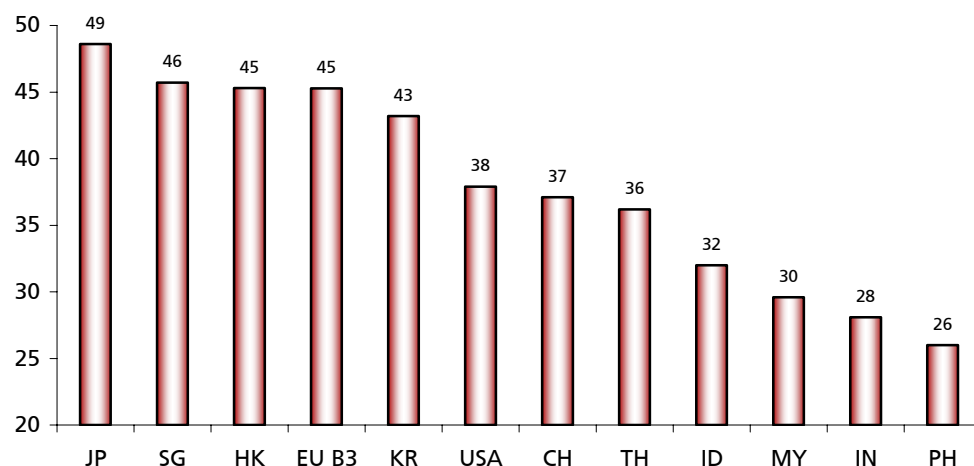
population under age 15 and over 65 as percentage of working age population



- Dependency ratios in Singapore and Hong Kong will rise sharply, but remain low by global standards (chart above).
- Dependency ratios in Asia will remain far below the G3 (chart above).
- In 2020, Singapore will have the second oldest population in the G4, with implications for healthcare and housing. India’s and Indonesia’s populations will remain young (chart below).

Global – median age projections 2020

years of age

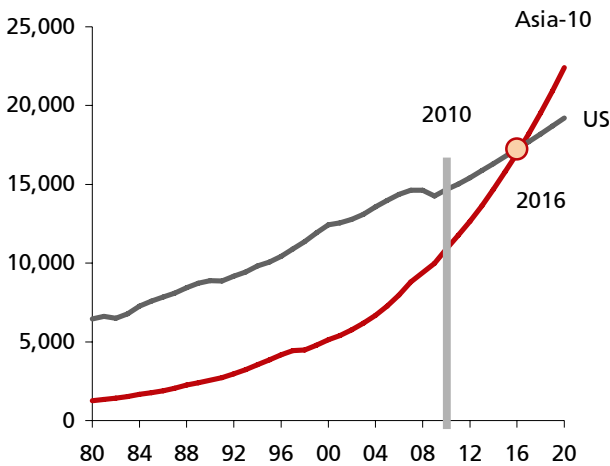


II: Gross Domestic Product 2020

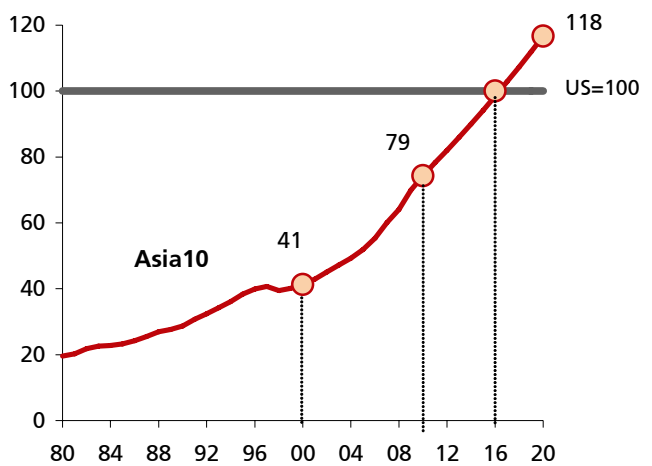
Our growth assumptions for individual countries are shown in the charts in Appendix I. Most will regard them as conservative towards Asia and generous towards the US/G3. They lead to the following outcomes:

- By 2016, Asia-10 GDP will equal the US. GDP in both regions will be about \$17trn in today's dollars. The "crossover" would come sooner were Asian currencies to appreciate (chart below left).
- Asian GDP has converged rapidly on the US, growing from about 40% of the size of the US in 2000 to 80% in 2010 (chart below right). By 2020, the Asia-10 will be 18% bigger than the US.

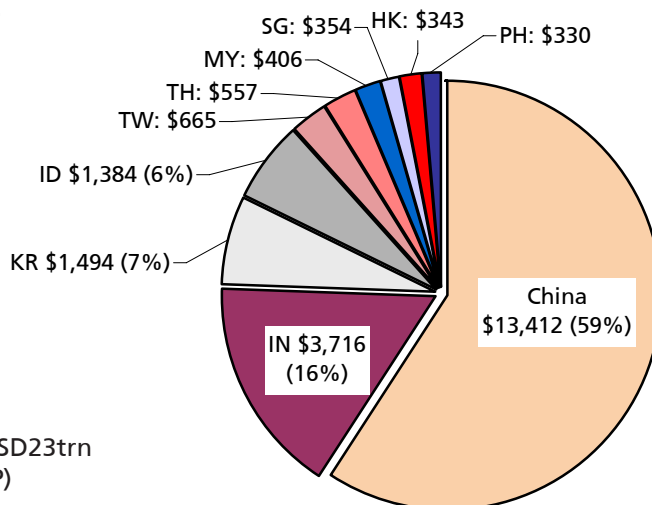
GDP – US and Asia10
constant 2010 US dollars (bn)



GDP – US and Asia10
constant 2010 US dollars, US=100



Asia-10 – GDP in 2020
USDbn, 2010P



Total size: USD23trn
(2010P)

- Three-quarters of Asia-10 GDP will be comprised of China (59%) and India (16%). Korea and Indonesia will each account for another 7%

III: incremental GDP growth

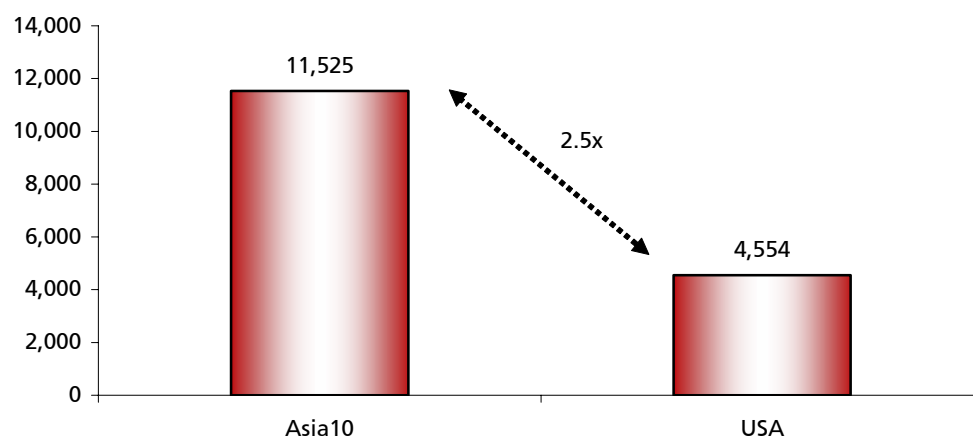
Incremental demand – ‘the delta’ – is the amount by which we measure global growth. If the entire world grows by 10 dollars and your country generated 8 of them, you drove global growth. If your country generated 10 cents of those ten dollars of growth, you were a small player. Size alone won’t make you a driver; you need to grow. Growth alone won’t make you a driver; you need girth. A combination of girth and growth is needed to drive global growth.

In 2010, Asia “crossed over” the US and generated more new dollars of demand than the Americans did. It was the tipping point of a process that has been ongoing for the past fifty years and which will continue for the next 50 years, so long as countries continue to save and invest and to pursue pro-growth policies [5].

- In 2020, Asia-10 GDP will be \$22.4trn, \$11.5trn larger than it is today. The US economy will have grown by \$4.5trn. Asia will have put 2.5 times more new demand on the global table than the US. Put differently, Asia will be 2.5 times the driver that the US is.
- Between now and 2020, the G4 – Asia, Japan, the US and EU B3 – will grow by \$19trn. The Asia-10 will account for 62% of that increase. The US will account for 24% of that increase. Again, a ratio of 2.5x.

Asia10 and US – incremental GDP growth

GDP in 2020 less GDP in 2010, USD bn, 2010 prices and exch rates



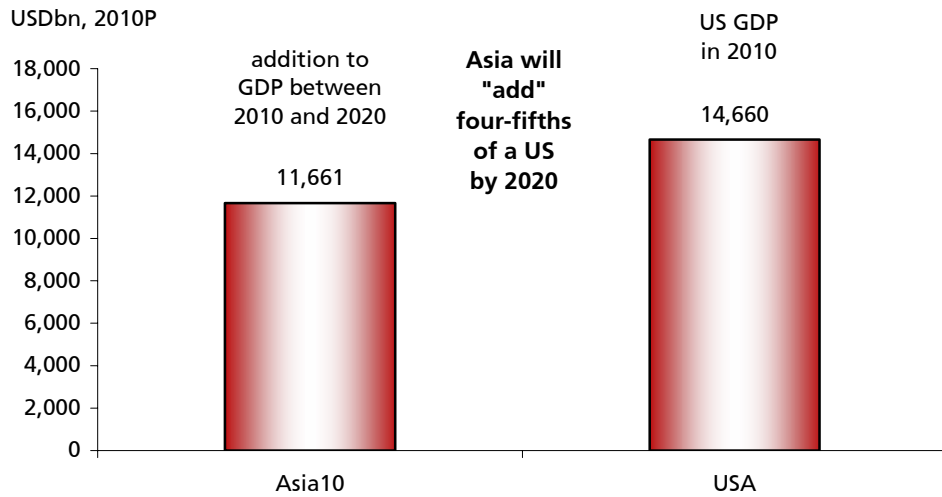
GDP

constant 2010 US dollars (bn)

	CH	HK	KR	TW	SG	MY	TH	ID	PH	IN	USA	JP	EU B3	A-10
2010	5,825	224	1,014	432	223	238	319	707	189	1,721	14,660	5,461	7,939	10,892
2020	13,168	342	1,494	664	354	406	557	1,384	330	3,716	19,214	6,449	9,583	22,417
Change	7,343	117	480	232	131	168	239	677	141	1,995	4,554	988	1,644	11,525
change as % of A10	63.7	1.0	4.2	2.0	1.1	1.5	2.1	5.9	1.2	17.3				100.0

- There are other ways to say the same thing. One is to note that between now and 2020, just the amount that Asia will grow by – the delta – will be equivalent to 80% of current US GDP. That is, Asia will “add” 4/5ths of a United States economy by 2020.

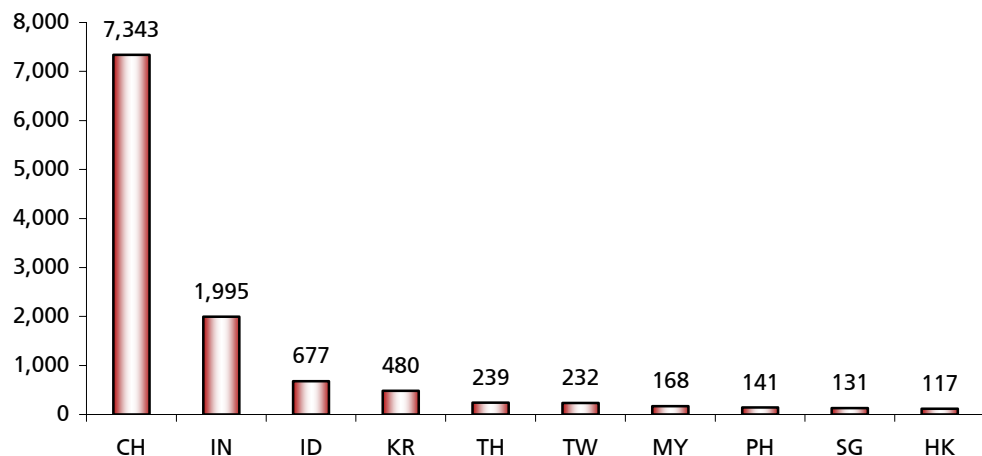
US GDP and Asia10 growth in GDP



- Most (64%) of the new dollars of demand will come from China. Another 17% will come from India; another 6% will come from Indonesia. Together, these 3 countries will account for 87% of the growth in the Asia-10.

Asia10 – incremental GDP growth

GDP in 2020 less GDP in 2010, in constant 2010 USD (bn)



- Businesses want to go where the growth is – where the new dollars of demand are being generated / spent. For most intents and purposes, it’s that simple. The structural rise of Asia is a big reason why we expect investment inflows and cyclical growth to be above average in Asia over the coming 10 years. But that’s another story for another day [6]. Here, we stick to the structure.

IV: Income levels – GDP per-capita 2020

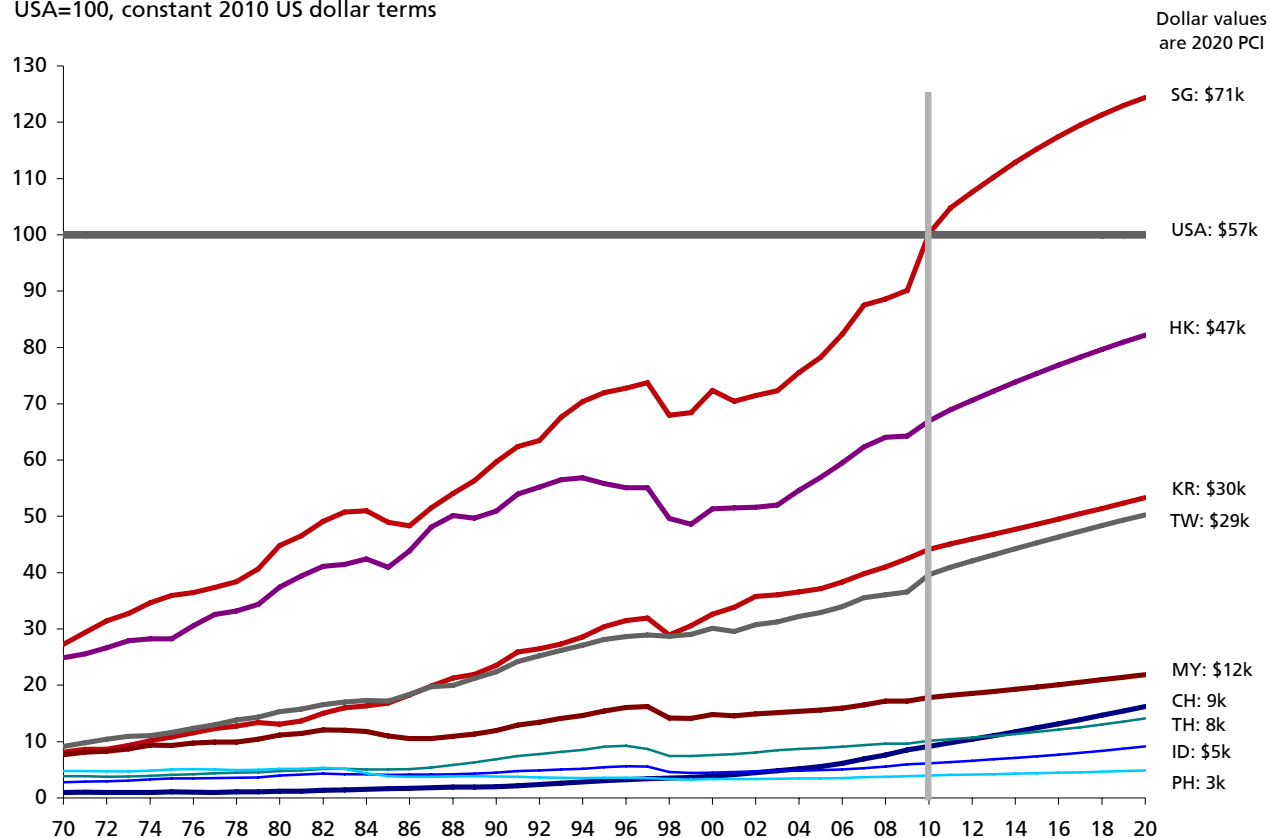
Population growth will be one factor driving Asia-10 GDP between now and 2020. But only about 10% of Asia’s GDP growth will come from a larger population. The other 90% will come from rising per-capita income.

This of course is as it should be. No one cares about GDP per se, what matters is income and, more importantly, the freedom it gives people to pursue what matters to them in life. Readers should find some of the points below about Asia’s rising income familiar. Others should be new.

- Per-capita income (PCI) levels have been converging towards the US for a long time (chart below). In 1970, average income levels in Singapore and Hong Kong were one-quarter US levels. Today, Singapore’s PCI is the same as the US. By 2020, Singapore’s PCI will be 25% higher than the US.
- Many countries have experienced PCI growth of 6%-7% for 25-30 years. At a rate of 7%, income levels double about every ten years [7]. Between the mid-1960s and today, income levels in most Asian countries have grown by factors of 5 to 8.
- Outside of Singapore and Hong Kong, per capita income remains low compared to the US. PCI in Korea and Taiwan is still only about 40% that of the US; in Malaysia it’s about 20%. In China and Thailand, PCI today is about 10% US levels.

Asia – GDP per capita relative to USA

USA=100, constant 2010 US dollar terms



- A frequently asked question is: How long can Asia's fast growth continue? After all, growth rates fall over time as income and technology levels approach those in advanced countries. As convergence proceeds, the "easy" opportunities to import technology and to produce cheaply diminish. Per-capita growth slows, ultimately to the rate of global technological innovation, which most estimate to be between 1.5% and 2.5% per year.

But incomes in most of Asia are still 25-50 years behind Singapore or the US, which means that fast growth in Asia should be able to continue for a long time. That doesn't mean it will of course but consider the chart below. It shows per-capita income in 2010 and how many years one country is behind another, assuming a relatively high PCI growth rate of 6%.

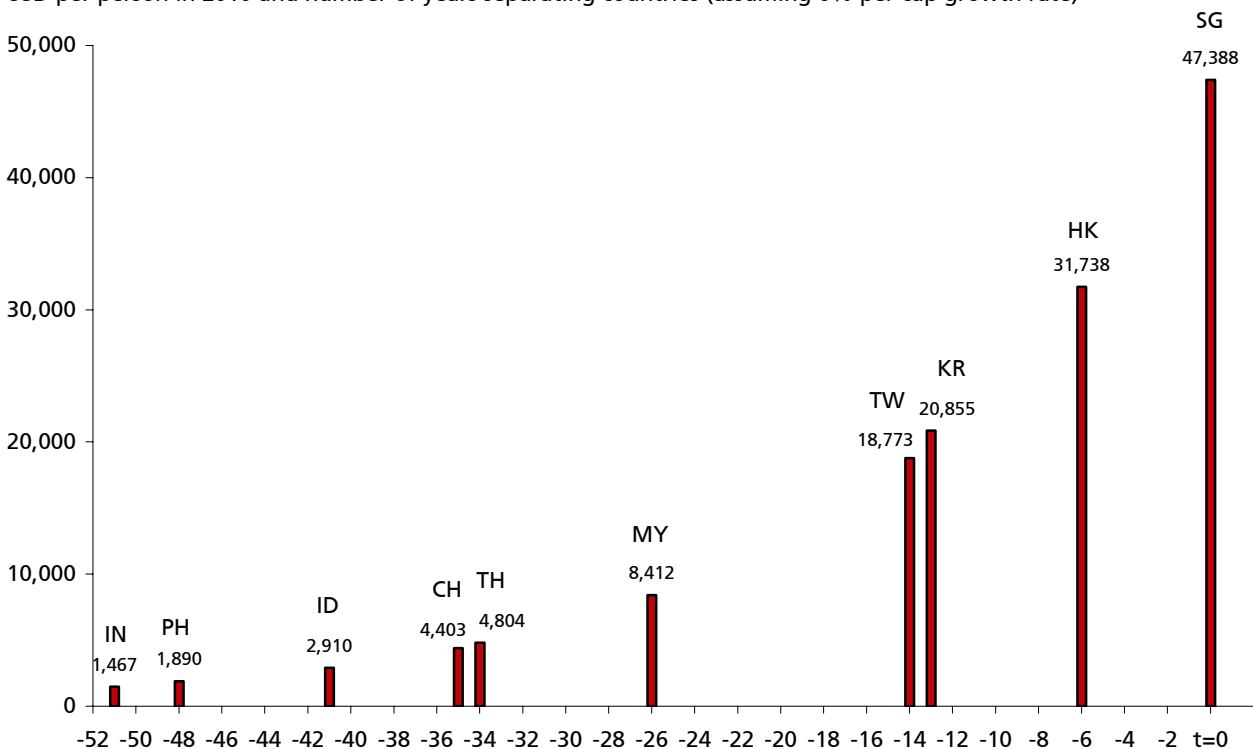
For example, if per-capita income in Hong Kong grows at 6% per year, it would take 6 years to "catch up" to where Singapore is today (Singapore will presumably have moved on too). Taiwan and Korea have run neck and neck for 40 years but Korea looks to be one year ahead of Taiwan at the moment. Both are about 14 years behind Singapore.

China and Thailand are about 20 years behind Taiwan and Korea and 35 years behind Singapore. Indonesia is now six years behind China and 41 years behind Singapore. At a 6% PCI growth rate, India is 15 years behind China and 50 years behind Singapore.

To us, all this means that GDP and incomes can continue to grow rapidly for a long time. There is nothing in the "technology" or in China's rising wages that says China's growth must slow down soon. On the contrary, real incomes could rise by 6% per year and it would still take 35 years to catch up with Singapore.

Asia -- per capita GDP timeline

USD per person in 2010 and number of years separating countries (assuming 6% per cap growth rate)



V: Is there a middle-income trap in Asia?

Can-grow-fast and will-grow-fast are two different things. PCI growth always slows as countries advance but in some cases it stagnates long before it should. One reason is countries face competition from others lower on the technological and income ladder. They lose global market share. If countries whose heels are being nipped at fail to nip on those one rung up the ladder, growth can slow sharply.

But moving up isn't always easy. Countries like where they have gotten to and they may attempt to defend their position rather than fight for a better one. Jobs and industries may be protected by holding currencies low, or with subsidies or by other means. Clinging to past gains, though, is a prescription for slow growth and stagnant incomes – the so-called middle-income trap.

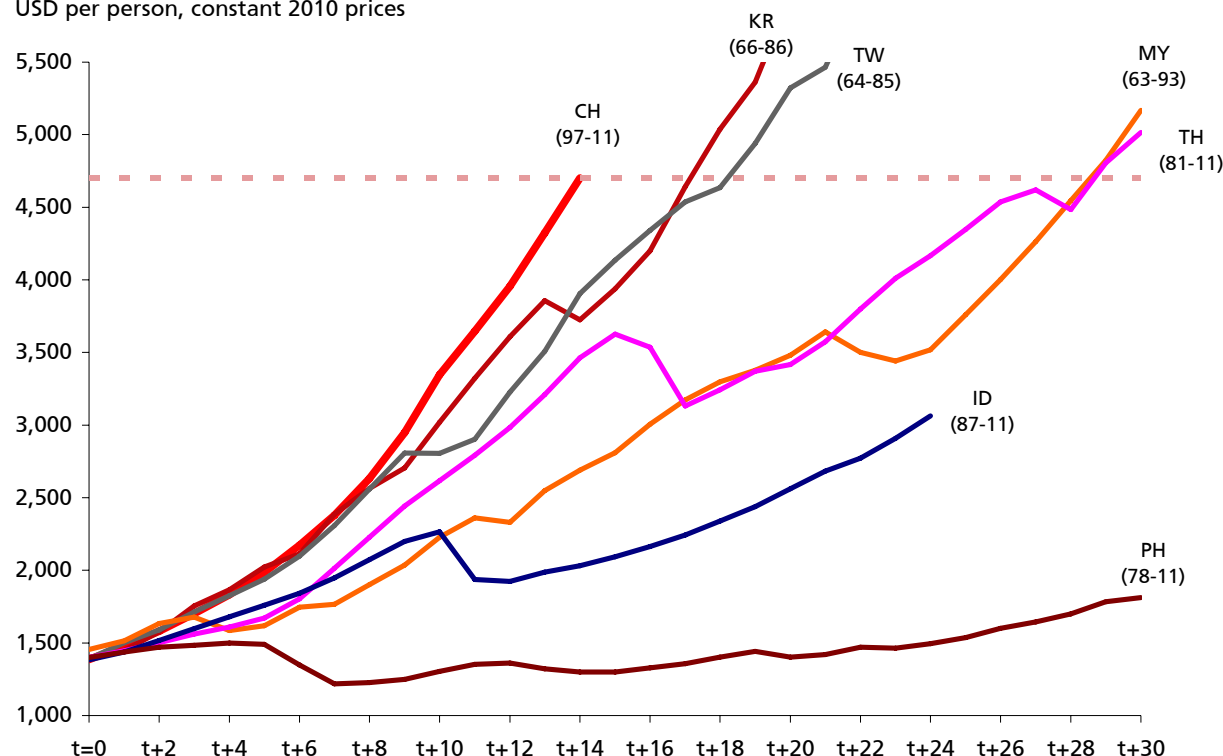
Does Asia show signs of having fallen into such a trap? At first glance, no. The chart below shows PCI levels for 7 countries in the years after they reached a "take-off" income level of \$1400 (about four times higher than a \$1/day poverty line). For Korea, Taiwan and Malaysia, this point was reached back in the mid-1960s. For Thailand and Indonesia, it was 1981 and 1987. For China, \$1400 per person (in today's dollars) was reached in 1997.

Plainly, Asia is home to a wide range of post-takeoff growth rates. China got from \$1400 to where it is today (\$4700) in about 12 years' time. Korea and Taiwan took about 18 years to do what China did in 12. But in all cases the paths are fairly uniform; none appear to have fallen into any 'trap'.

The same is true for Thailand and Malaysia. Both took 29 years to do what China has done since 1997. But except for the noticeable drops following the 1997/98 Asian financial crisis, PCI appears to have grown fairly steadily.

Asia -- per capita income paths after reaching \$1400 p.c. level

USD per person, constant 2010 prices



PCI growth pre- and post-Asian financial crisis

Another way to look at the “middle-income trap” is to compare PCI growth before and after the Asian financial crisis of 1997/98. Here the data are clear: income growth in most Asian countries has fallen sharply since 1997/98.

In Korea and Taiwan, average PCI growth has been 45%-50% lower since the crisis. In Thailand, Indonesia and Malaysia, it has fallen by 55%-60%. The question is, has all of Asia fallen into a middle-income trap? Or none of Asia?

Per-capita GDP growth, pre- and post-Asian financial crisis

Average PCI growth, % per year

	CH	HK	KR	TW	SG	MY	TH	ID	PH	IN
1967-1997	6.9	5.2	7.6	6.6	6.5	4.9	5.4	4.9	1.1	2.5
1997-2010	9.2	2.7	3.7	3.6	3.6	1.9	2.4	1.9	2.1	5.6
Percent reduction/increase	34	-48	-51	-45	-45	-62	-56	-60	95	128

After all, even Singapore’s PCI growth has fallen 45% from precrisis rates and it may well be the last place in the world anyone would accuse of policy complacency. Singapore is home to the policy of “competitive appreciation” not depreciation. Authorities push the currency north, not just to offset imported inflation but to force businesses to raise productivity and keep the country moving up the technological and income ladder too. In this light, the pre- and post-AFC approach to answering the income trap question seems to fall flat too.

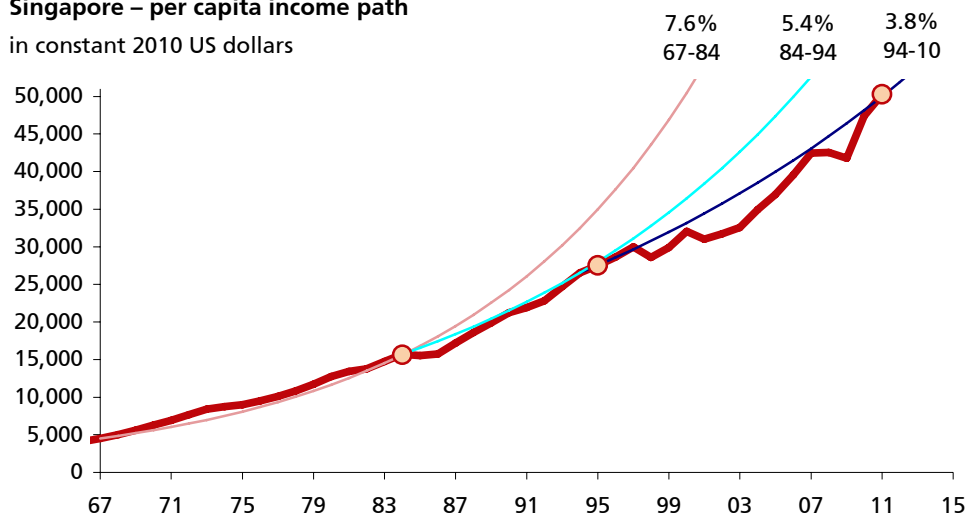
A closer look

A closer look at the PCI paths of individual countries may add some color. Start with Singapore again, where, the chart below shows, PCI grew at a rapid 7.6% rate between 1967 and 1984. It ran at a slower pace of 5.4% between 1984-94 and a slower pace yet of 3.8%, on average, since 1994.

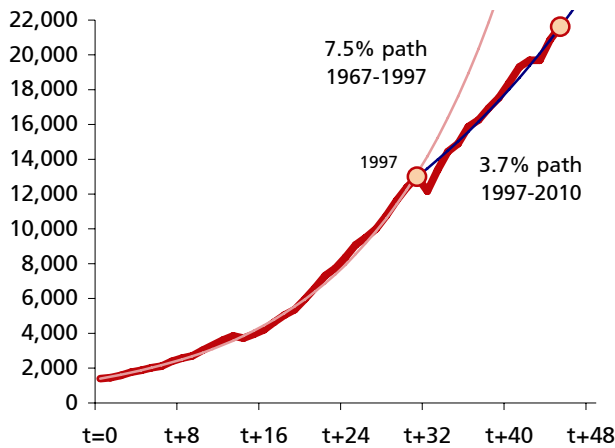
Every time growth has started to slow however, Singapore has attempted to restructure the economy to keep incomes rising. By and large it has succeeded and the country now has a higher per capita income than the US. Bottom line? Singapore’s PCI growth has slowed not because it has fallen into an income trap but because it has avoided traps for fifty years and its high income level simply no longer allows for the rapid growth that it once did.

Singapore – per capita income path

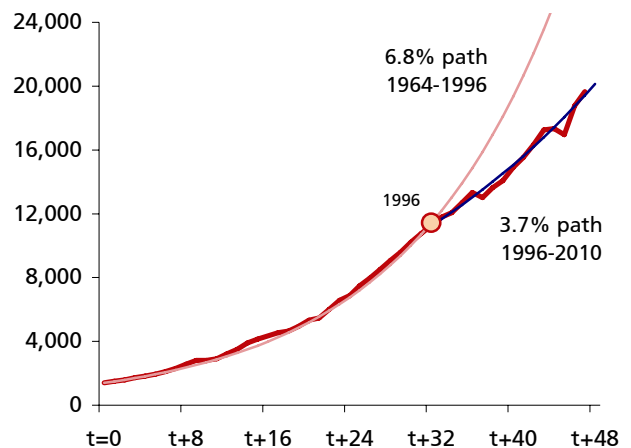
in constant 2010 US dollars



Korea -- PCI paths after reaching \$1400 level
constant 2010 US dollars

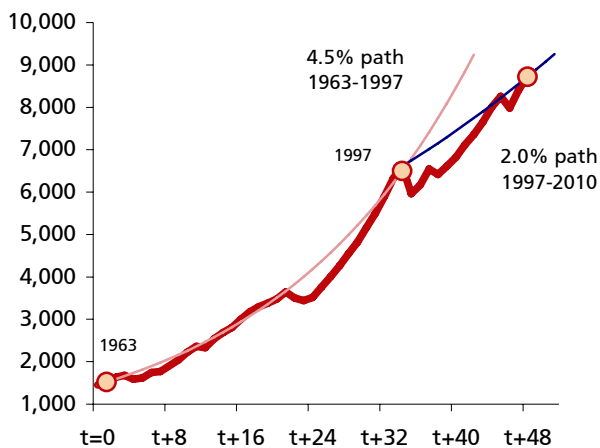


Taiwan -- PCI paths after reaching \$1400 level
constant 2010 US dollars

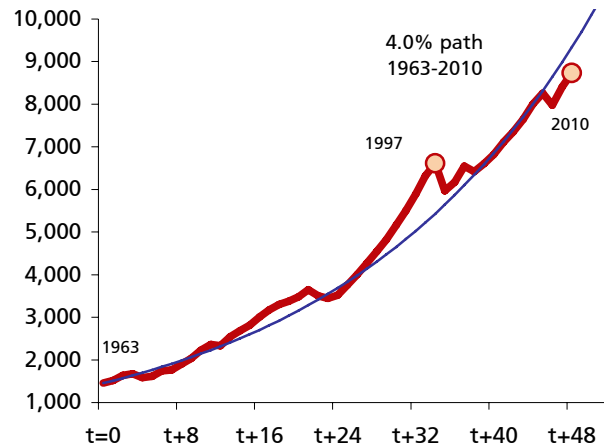


What about Korea and Taiwan? Growth fell sharply in both countries following the Asian financial crisis (AFC). But Korea was involved in the crisis and Taiwan was not. Did both coincidentally fall into a “trap” at the same time? Or is something else responsible for the simultaneous slowdown in both countries?

Malaysia (v1) – PCI paths after reaching \$1400
constant 2010 US dollars



Malaysia (v2) – PCI paths after reaching \$1400
constant 2010 US dollars



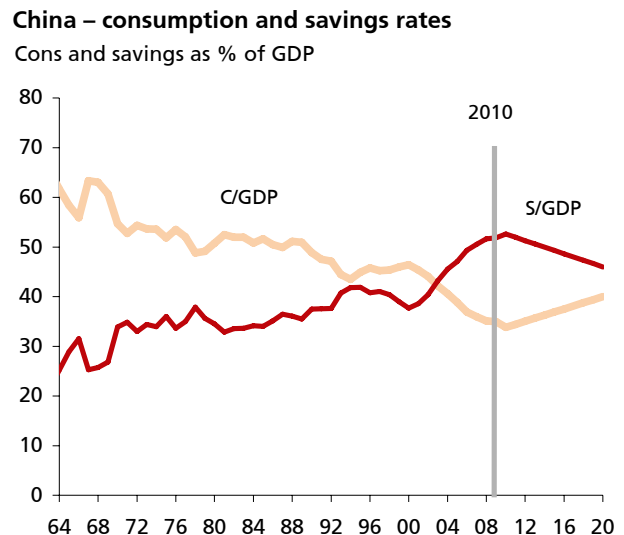
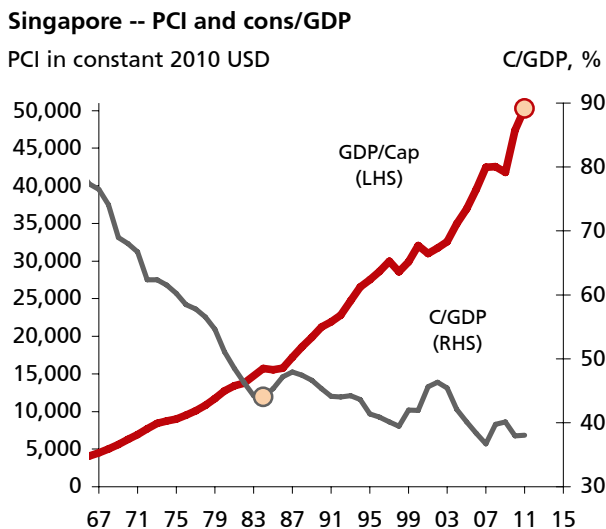
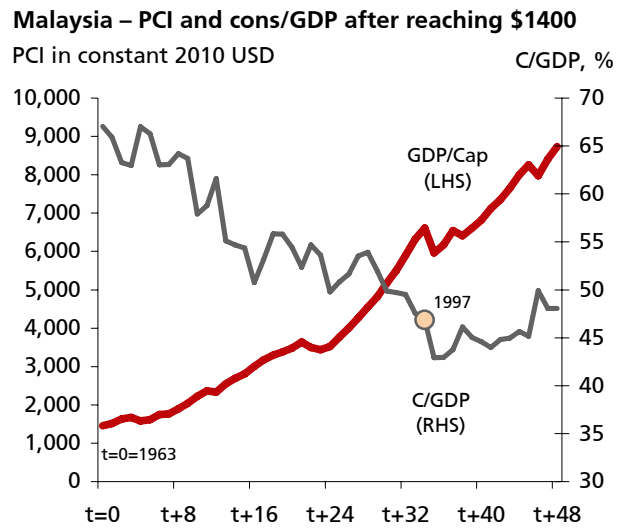
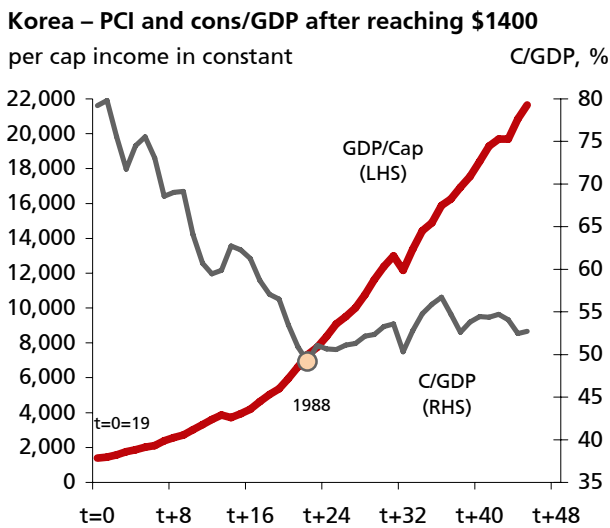
Malaysia is the country most often associated with a “middle-income trap” and the evidence is always presented in pre- and post-AFC period terms. But slower post-AFC growth is the norm in Asia, not the exception. Moreover, in Malaysia’s case, this “breakpoint” (chart above left) may be altogether irrelevant. Malaysia’s ‘true’ PCI path may have always been 4%, as the chart above right suggests. That’s a slightly slower structural rate than in the left side chart, but it means the income trap idea is nothing but a red herring [8]. Either no trap exists in Malaysia, or it’s the same trap that exists everywhere else in Asia.

For Malaysia and Asia overall, we conclude that while post-AFC PCI has been slower than pre-AFC growth, there is no evidence of an “income-trap” per se [9]. This is important because it means that so long as Asia retains its pro-growth policies, incomes should continue to rise for the foreseeable future.

VI: Consumption 2020

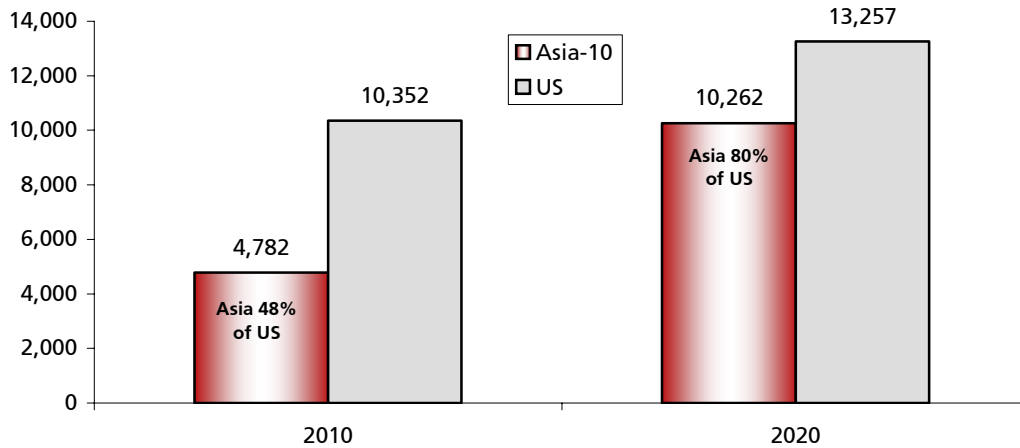
In most countries, consumption as a percentage of GDP declines in the early stages of rapid growth (to make way for investment). Singapore, Korea, Taiwan, Thailand and Malaysia all experienced large, steady drops in C/GDP for 20-30 years. In Korea, Malaysia and Taiwan, C/GDP stabilized when per-capita GDP reached about \$6000. In Singapore, it stabilized when incomes reached about \$12,000 per person.

Save for China, C/GDP has been stable in all countries for the past 10-20 years, which makes projecting consumption in 2020 a straightforward exercise, given GDP. In China, C/GDP has continued to drift lower, partly because it is still in the early stages of rapid growth and partly because investment was accelerated in the aftermath of the global financial crisis to offset external weakness. For China, we project consumption in 2020 by conservatively assuming a slow return to trend C/GDP by 2020 (chart bottom right). Given these assumptions the following points may be made.



Asia10 and US – private consumption

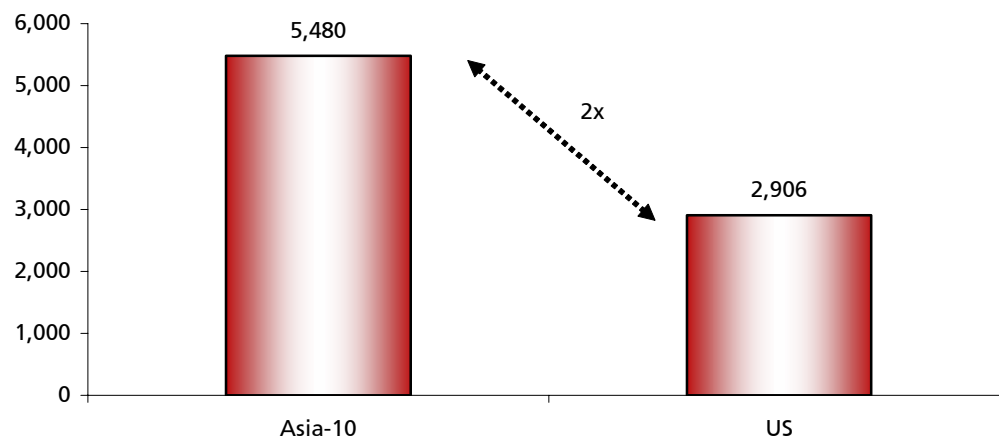
USDbn, 2010 prices and exch rates



- Consumption levels in Asia will grow to 80% that of the US by 2020, up from 48% in 2010.

Asia10 and US – incremental priv consumption growth

Cons in 2020 less cons in 2010, USD bn, 2010P and exch rates



- Asia will put nearly \$5.5 trillion dollars of new consumption demand on the global table by 2020. That's nearly twice as many dollars of new consumption as what the US will generate.

Consumption expenditure

constant 2010 US dollars (bn)

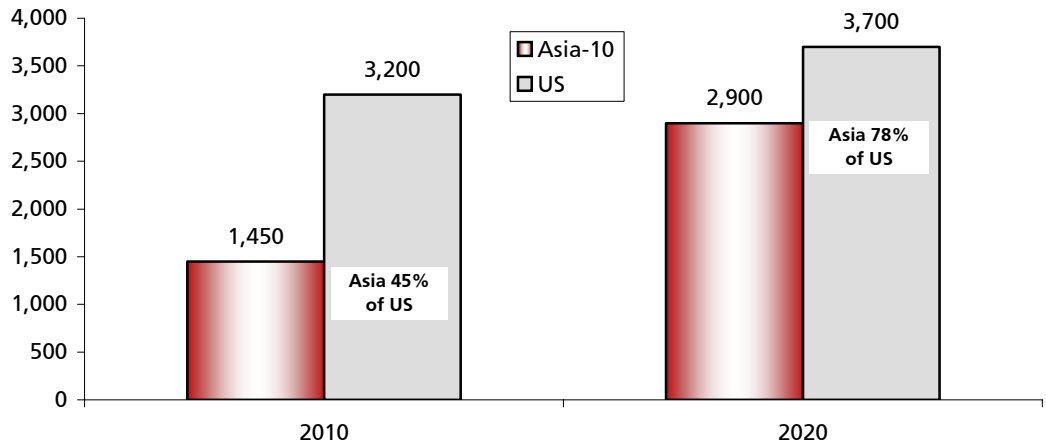
	CH	HK	KR	TW	SG	MY	TH	ID	PH	IN	USA	JP	EU B3	Asia10	CH, IN
2010	1,969	140	532	251	85	114	171	401	137	982	10,352	3,200	4,652	4,782	2,951
2020	5,267	209	822	399	138	195	295	706	225	2,007	13,257	3,740	5,654	10,262	7,274
Change (\$bn)	3,298	69	290	148	54	81	124	305	87	1,025	2,906	541	1,002	5,480	4,323
Change (%)	167	49	54	59	63	71	73	76	63	104	28	17	22	115	146
(pd avg)	10.3	4.1	4.4	4.7	5.0	5.5	5.6	5.8	5.0	7.4	2.5	1.6	2.0	7.9	9.4

VII: Food 2020

Asia10 and US – food consumption

USDbn, 2010 prices and exch rates

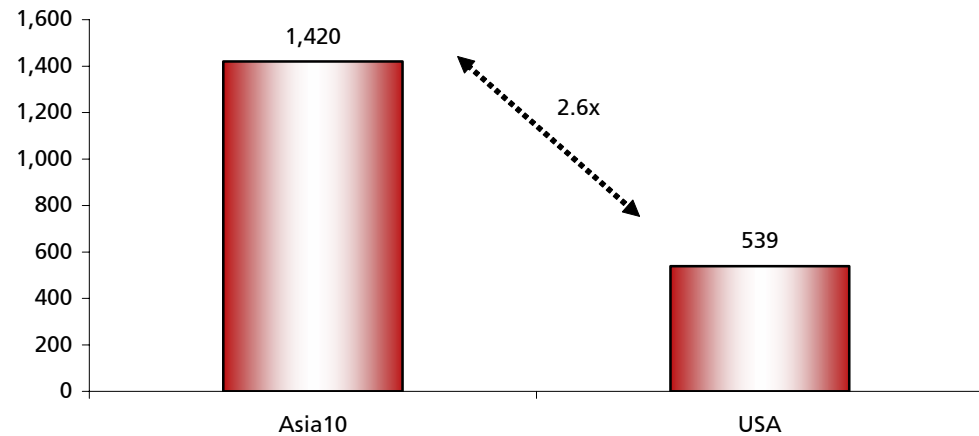
- Food demand will more than double by 2020, to nearly \$3 trillion per year. Asia will consume nearly 80% as much food as the US, up from 45% at present.



Asia10 and US – incremental food consumption growth

Cons in 2020 less cons in 2010, USD bn, 2010P and exch rates

- New food demand from Asia will be three times greater than the growth in demand in the US.



Food consumption

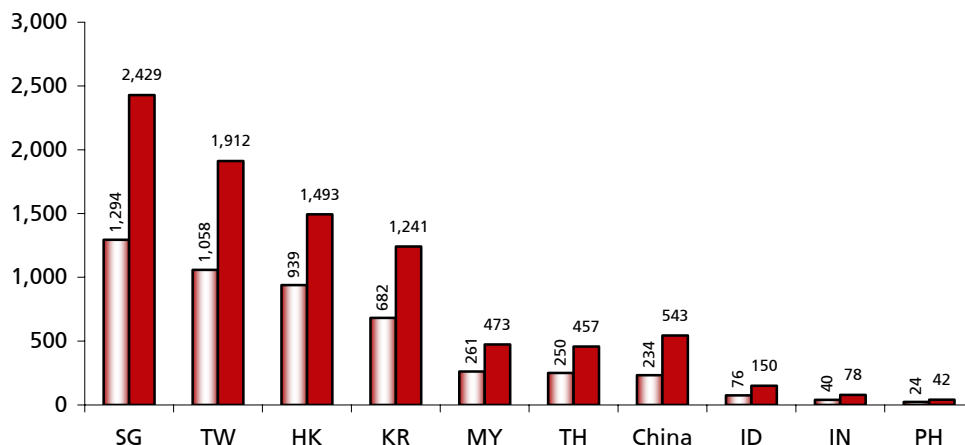
in constant 2010 US dollars (bn)

	CH	HK	KR	TW	SG	MY	TH	ID	PH	IN	USA	JP	EU B3	Asia10	CH, IN
2010	664	21	67	32	6	29	59	191	66	308	3,207	478	682	1,442	972
2020	1,449	27	97	52	13	49	106	339	99	632	3,747	516	843	2,862	2,080
Change	784	7	31	20	7	20	47	148	33	324	539	38	162	1,420	1,108
Change (%)	118	33	46	62	108	71	79	78	50	105	17	8	24	99	114
Avg grth rate	8.1	2.9	3.9	4.9	7.6	5.5	6.0	5.9	4.2	7.4	1.6	0.8	2.2	7.1	7.9
Food cons/pax															
2010 (\$bn)	493	2,904	1,367	1,390	1,304	1,009	894	785	660	263	10,346	3,772	3,327	474	386
2020 (\$bn)	1,013	3,733	1,968	2,226	2,542	1,493	1,524	1,268	830	476	11,072	4,242	4,093	859	755
Food cons/GDP															
2010	11	9	7	7	3	12	19	27	35	18	22	9	9	13	13
2011	11	8	7	8	4	12	19	25	30	17	20	8	9	13	12

VIII: Healthcare expenditure 2020

Healthcare expenditure per capita

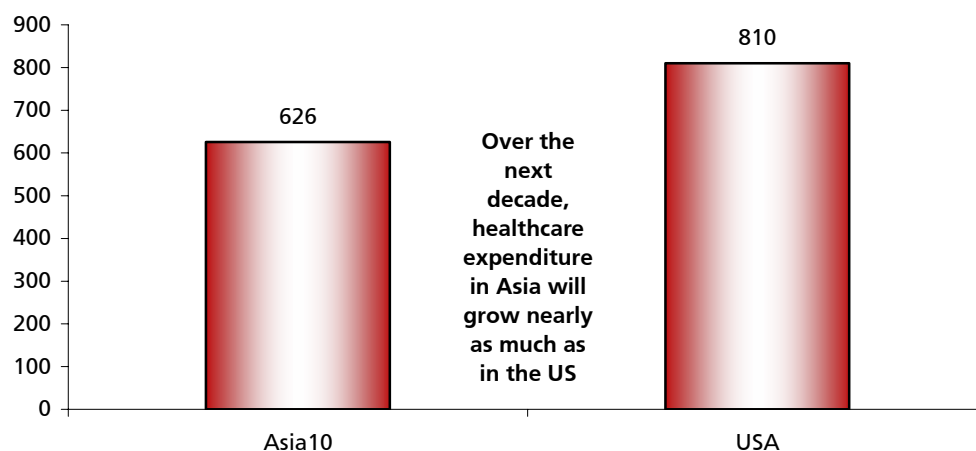
in constant 2010 US dollars



- Healthcare expenditure per person will more than double between now and 2020.

Asia10 – incremental healthcare expenditure

expenditure in 2020 less expenditure in 2010, USD bn, 2010P and exch rates



- People talk about healthcare expenditure in the US growing out of control. But expenditures in Asia will grow by nearly as much between now and 2020.

Most of that (70%) will come from China and Indonesia.

Healthcare expenditures

constant 2010 US dollars (bn)

	CH	HK	KR	TW	SG	MY	TH	ID*	PH	IN	USA	Asia10	CH, IN
2010	315	7	33	24	6	7	17	18	2	46	1,688	477	362
2020	777	11	61	45	12	15	32	40	5	104	2,498	1,102	881
Change	462	4	28	20	6	8	15	22	3	58	810	626	519
Change (%)	147	64	85	83	100	109	92	118	110	124	48	131	144
Avg grth rate	9.4	5.1	6.3	6.2	7.2	7.7	6.7	8.1	7.7	8.4	4.0	8.7	9.3
Exp per capita													
2010	234	939	682	1,058	1,294	261	250	76	24	40	5,444	157	143
2020	543	1,493	1,241	1,912	2,429	473	457	150	42	78	7,382	331	320
Expend/GDP													
2010	5.4	3.0	3.3	5.6	2.7	3.1	5.2	2.6	1.3	2.7	11.5	4.4	4.8
2020	5.9	3.2	4.1	6.7	3.4	3.8	5.7	2.9	1.5	2.8	13.0	4.9	5.2

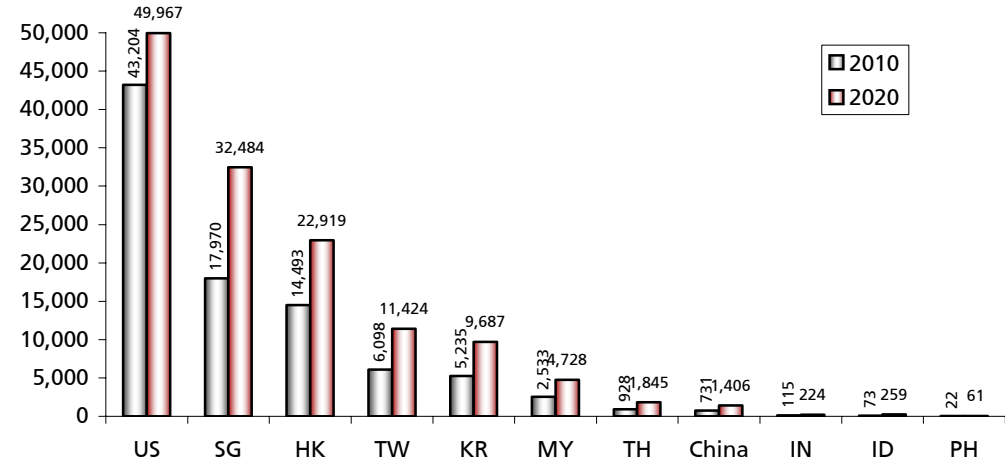
* Due to a lack of data, ID expenditures are assumed to equal 50% of Thailand's, as a % of GDP

IX: Residential housing loans 2020

Housing loans per capita

in constant 2010 USD

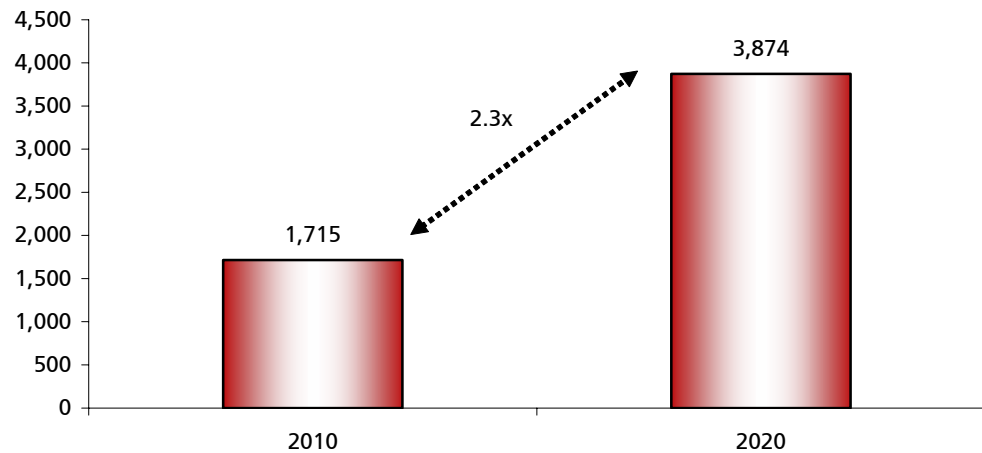
* Housing loan values per capita vary widely across Asia.



Asia10 – housing loans outstanding

in constant 2010 US dollars

• Total housing loans in Asia will grow by 2.3x to \$3.8trn by 2020. While Asia has only one-tenth as many housing loans outstanding today as the US, Asian home loans will grow by some \$2.2trn by 2020.



Real estate (housing loans)

constant 2010 US dollars (bn)

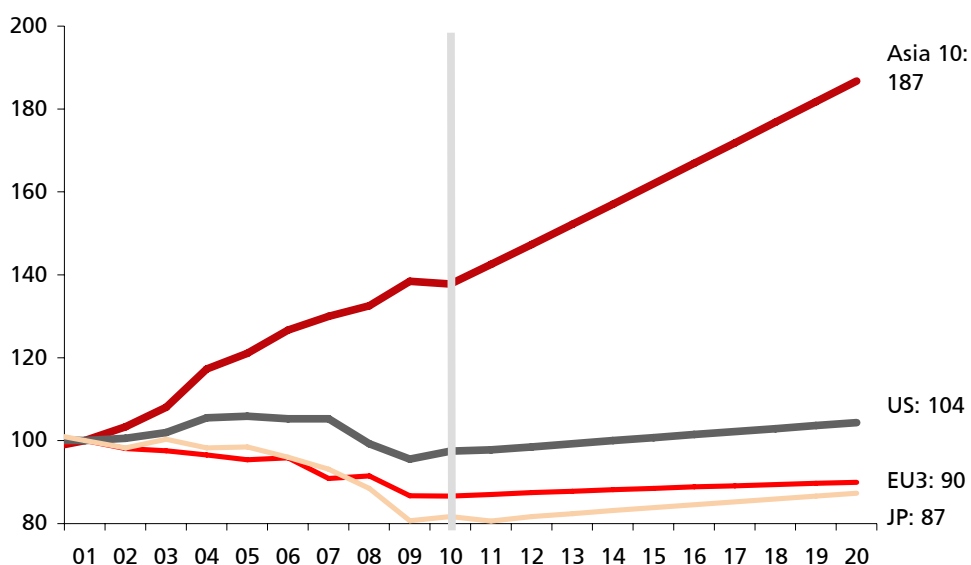
	CH	HK	KR	TW	SG	MY	TH	ID	PH	IN	USA	Asia10	CH, IN
2010	910	97	237	128	77	67	57	14	2	126	13,833	1,715	1,036
2020	2,173	168	448	266	163	154	128	69	7	297	16,908	3,874	2,470
Change	1,263	70	212	138	86	88	71	55	5	171	3,075	2,159	1,434
Change (%)	139	73	89	108	111	132	123	401	284	135	22	126	138
Avg growth rate	9.1	5.6	6.6	7.6	7.8	8.8	8.4	17.5	14.4	8.9	2.0	8.5	9.1
Loans per capita													
2010	675	13,693	4,865	5,549	16,401	2,356	866	57	19	108	44,622	564	411
2020	1,519	22,864	9,081	11,415	32,484	4,728	1,845	259	61	224	49,967	1,163	896
Loans/GDP (%)													
2010	16	43	23	30	35	28	18	2	1	7	94	16	14
2020	17	49	30	40	46	38	23	5	2	8	88	17	15

X: Energy demand 2020

- The world's new demand for oil is not coming from the G3, it is coming from Asia, where per-capita consumption is one-tenth what it is in the US. Since 2001, oil demand from the G3 has fallen; in Asia it has risen by 40%. Even with significant efficiency gains (that should average 5% per year (table below)), Asia's demand for oil will grow by another 40% by 2020. Asia will account for 78% of the G4's new demand for oil over the coming decade [10].

Global petroleum consumption

bbls/ year, 2001=100



Total petroleum consumption

	CH	HK	KR	TW	SG	MY	TH	ID	PH	IN	US	JP	EU B3	Asia10	CH, IN
barrels / yr (mn)															
2010	3,055	131	821	331	162	195	336	399	113	1,173	6,989	1,614	2,119	6,717	4,229
2020	4,358	155	920	357	210	258	470	638	146	1,599	7,484	1,724	2,199	9,111	5,957
change	1,303	24	99	26	48	64	134	239	33	425	495	110	80	2,395	1,728
% of A10 chg	54	1	4	1	2	3	6	10	1	18	16	4	3	100	72
% of G4 chg											16	4	3	78	
constant 2010 US dollars (bn)															
2010	243	10	65	26	13	16	27	32	9	93	556	129	169	535	337
2020	347	12	73	28	17	21	37	51	12	127	596	137	175	725	474
% of GDP															
2010	4	4.6	6.4	6.1	5.8	7	8	4	5	5	4	2	2	5	4
2020	3	3.6	4.9	4.3	4.7	5	7	4	4	3	3	2	2	3	3
per capita consumption (thous bbls / pers / yr)															
2010	2.3	18.4	16.9	14.4	34.5	6.9	5.1	1.6	1.1	1.0	22.5	12.7	10.3	2.2	1.7
2020	3.0	21.1	18.6	15.3	42.0	7.9	6.8	2.4	1.2	1.2	22.1	14.2	10.7	2.7	2.2
US=100															
2010	10	82	75	64	153	31	22	7	5	4	100	56	46	10	7
2020	14	95	84	69	190	36	31	11	6	5	100	64	48	12	10
Efficiency (mn bbls / unit real GDP, 2010=100)															
2010	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2020	63	78	76	70	82	78	80	82	74	63	82	90	86	66	63
Total 10Y gains	37	22	24	30	18	22	20	18	26	37	18	10	14	34	37
Avg gain per yr	5	3	3	4	2	3	2	2	3	5	2	1	2	4	5

XI: One grain of sand at a time

The shift in economic gravity from West to East is not something that happened overnight. It didn't start yesterday. It's not a black box or a magic rabbit pulled from a magic hat. It is a process – a long, slow, grinding process that has been proceeding, bit by bit, for the past fifty years. And so long as policies remain slanted toward growth and development, this process will continue on for another fifty years. Some countries will grow faster and some slower, depending partly on culture and leadership and savings and investment and policy design – and partly on imported capital equipment and how large of a gap remains between Asia and the economies on the developed “edge”.

No doubt too, there will be cyclical ups and downs along the way. And a skinned knee or two. That's what a cycle is. But the ups and downs are less important than the trend when you're looking out over a long period of time. And odds are, in 2020, Asia will look a lot like what we've laid out in the pages above. Incomes will have grown by 90%. Population will have grown by 10%. Output will have doubled.

Asia-10 and US – GDP and population

dollar values in constant 2010 USD

	--- Asia-10 ---			--- USA ---		
	GDP US bn	Pop mn	GDP/cap USD	GDP US bn	Pop mn	GDP/cap USD
2010	10,892	3,042	3,581	14,660	310	47,291
2019	20,934	3,305	6,335	18,700	335	55,748
2020	22,417	3,331	6,731	19,214	338	56,781
Incremental change: 2020-2010	11,525	289	3,150	4,554	28	9,490
Percent change: 2020 vs 2010	106	10	88	31	9	20
Incremental change 2020-2019	1,483			514		

In 2020, Asia will be 20% larger than the US. In 2020, Asia will be putting nearly \$1500bn of new demand on the global table every year, three times what the US will be laying out. Asia will, more than ever before, be where the growth is. Where will you want to be in 2020?

Endnotes

- [1] "Passing the Baton", DBS Economics–Markets–Strategy, 23June06. See also, "Asia driving, not decoupling", DBS EMS, 15Sep06; "The two-fer" rules", DBS EMS, 9Sep07; "Uphill acceleration", DBS EMS, 12Mar08; "On a clear day", DBS EMS, 10Jun08; "Holiday heresies", DBS EMS, 8Dec08; "Asia: new drivers, new risks", DBS EMS, 12Mar09; "2010: Asia's year", DBS EMS, 9Dec10, "The immaculate recovery", DBS EMS, 9Sep10; "The kink in the curve", DBS EMS, 9Sep10.
- [2] We do of course have cyclical views about Asia over the coming decade. We think the next 5-10 years will be a period of rising inflows, currency appreciation, falling external imbalances, and above average GDP growth, investment growth and inflation. In short, the next 10 years will look a lot like the 10 years that led up to the 1997 Asian financial crisis. For more detail, see "Asia-vu: back to the '90s", DBS Economics–Markets–Strategy, 17Sep09.
- [3] See "The Real Exchange Rate and Economic Growth", Dani Rodrik, in *Brookings Papers on Economic Activity*, Mankiw and Summers, eds., 2008; "The Real Exchange Rate and Economic Growth", Barry Eichengreen, Commission on Growth and Development, Working Paper #4, 2008; "The Balassa-Samuelson Effect in Central and Eastern Europe: Myth or Reality?", Egert, Lommatzsch and Rault, University of Michigan William Davidson Working Paper 483, July 2002; The Harrod -Balassa-Samuelson Effect: A Survey of Empirical Evidence, Ticah & Druzic, Working Paper 6-7/686, University of Zagreb, 2006;
- [4] For population statistics and projections in this paper, we utilize US Census Bureau data.
- [5] Ibid [1], also see "Asia driving, not decoupling" DBS Economics–Markets–Strategy, 15Sep06.
- [6] Ibid [2].
- [7] Readers may find the "Rule of 72" a handy rule of thumb. If you want to know the number of years it takes for something (like GDP or income) to double, divide its growth rate into 72. For example, GDP that grows at a 10% rate will double in 7.2 years. Alternatively, if PCI is to double in 5 years, it needs to grow at a 14% rate. Figures are approximate.
- [8] The same interpretation may be made for Thailand and Indonesia (see charts in Appendix II).
- [9] The best explanation for why PCI growth slowed in the post-AFC period is probably "cyclical". (See "Asia-vu: back to the 90s", *ibid*, [2]). The 8-10 years leading up to the crisis in 1997 were a period of rapid capital inflow, current account deficits (foreign borrowing), rising leverage, and above average investment and GDP growth. As most are aware, that came to a head in 1997 and much of Asia spent the next ten years unwinding everything that had come before. Capital flowed out of the region, current accounts swung into surplus – Asia began paying down the debt that had built up earlier and building up large stockpiles of foreign reserves to safeguard against any repeat of the events of 1997. Of course, paying down old debt and building up reserves means there is little money left over to buy new things, like capital equipment. In the post-AFC decade, investment was a but a shadow of its former self. And low investment means low growth, full stop. For this reason, PCI growth has slowed everywhere in Asia that felt the effects of the 97 crisis.
- To the extent that policymakers persist in paying down debt and building up foreign reserves, Asia may be thought to be suffering from a "risk-aversion" trap. The 1997 crisis was one of those watershed events that shaped the mindsets of policymakers for a decade afterward and in many countries continues to do so today.
- [10] For more information on Asia's growing energy demand, see "Oil prices, dog or tail?", DBS Economics–Markets–Strategy, 11Mar11; and "On a clear day", DBS Economics–Markets–Strategy, 12Jun08.

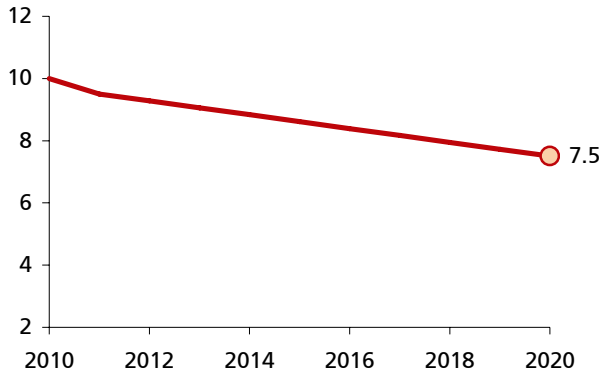
Sources:

Data for all charts and tables come from CEIC and Bloomberg. Population data and projections come from the US Census Bureau. Population dependency ratios come from the UN. Oil/Energy data come from the US EIA. Forecasts and transformations (except for population) are DBS Group Research.

Appendix 1: assumed GDP growth rates

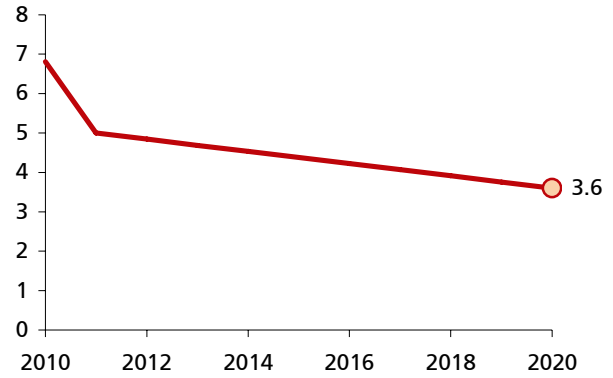
China – GDP growth assumption 2010-2020

% per year



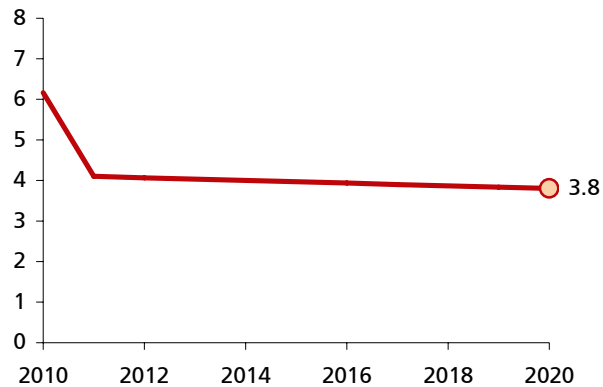
HK – GDP growth assumption 2010-2020

% per year



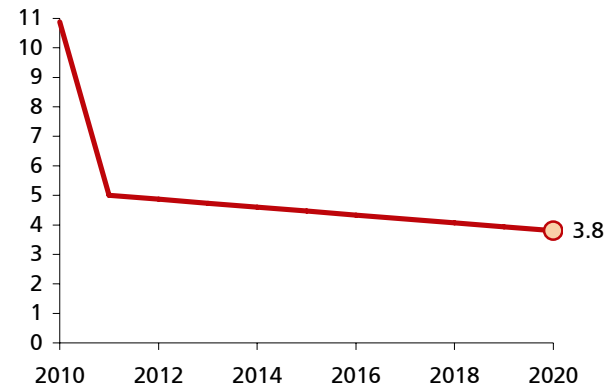
KR – GDP growth assumption 2010-2020

% per year



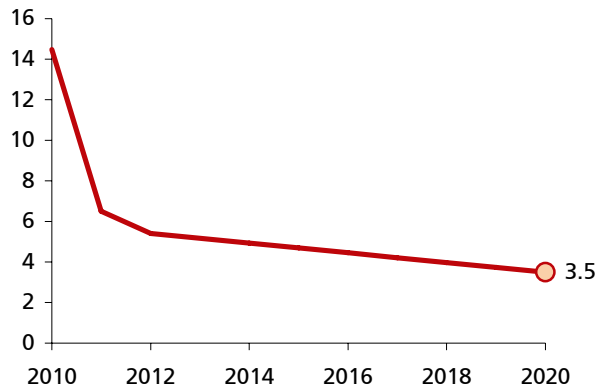
TW – GDP growth assumption 2010-2020

% per year



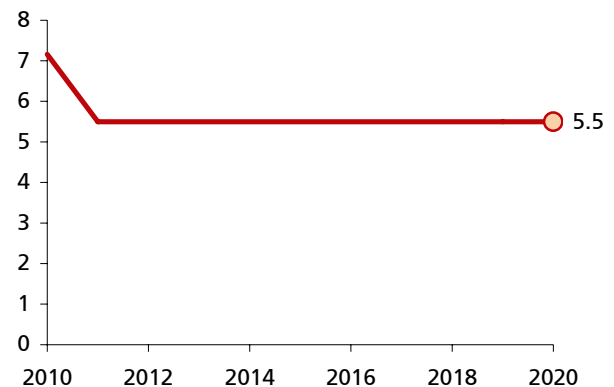
SG – GDP growth assumption 2010-2020

% per year

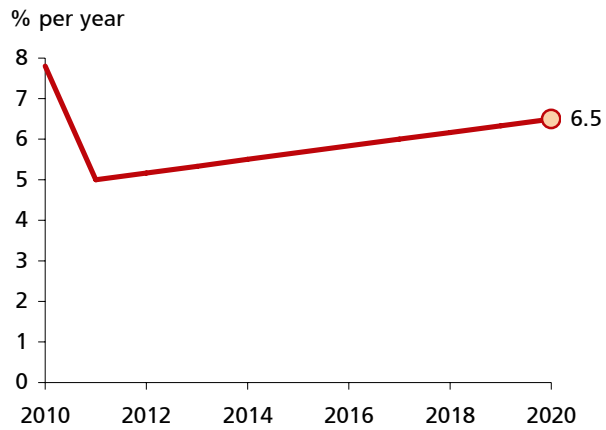


MY – GDP growth assumption 2010-2020

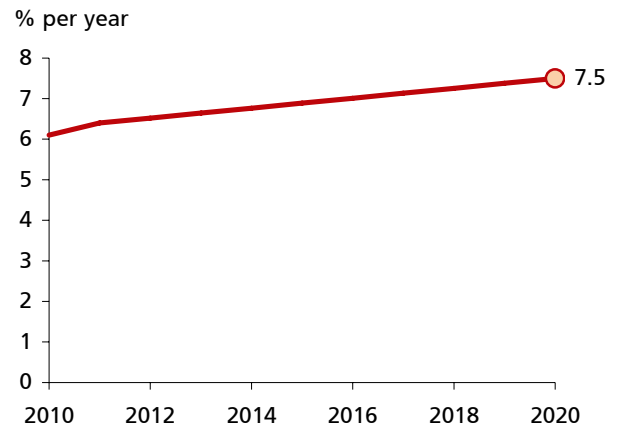
% per year



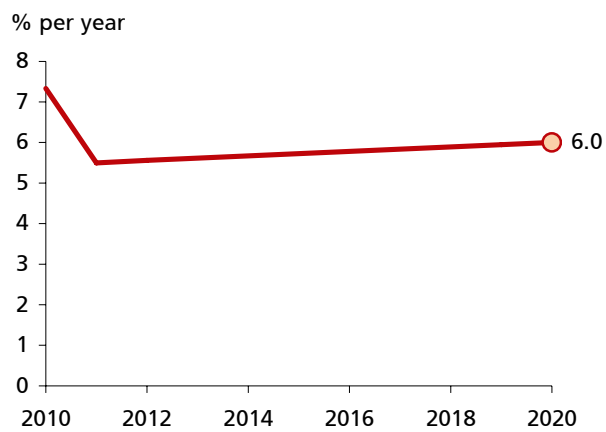
TH – GDP growth assumption 2010-2020



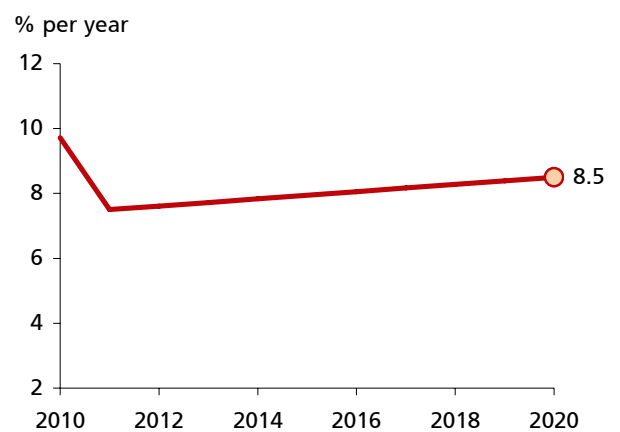
ID – GDP growth assumption 2010-2020



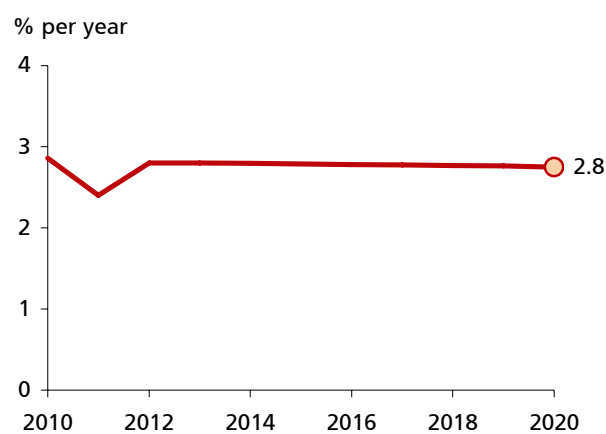
PH – GDP growth assumption 2010-2020



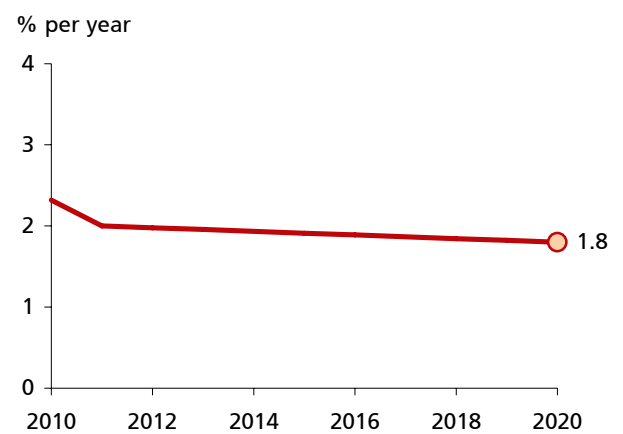
IN – GDP growth assumption 2010-2020



US – GDP growth assumption 2010-2020



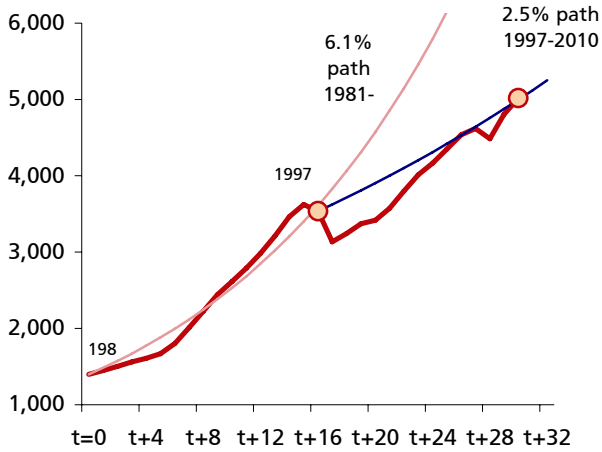
EU B3 – GDP growth assumption 2010-2020



Appendix 2: PCI growth paths in Thailand, Indonesia and Hong Kong

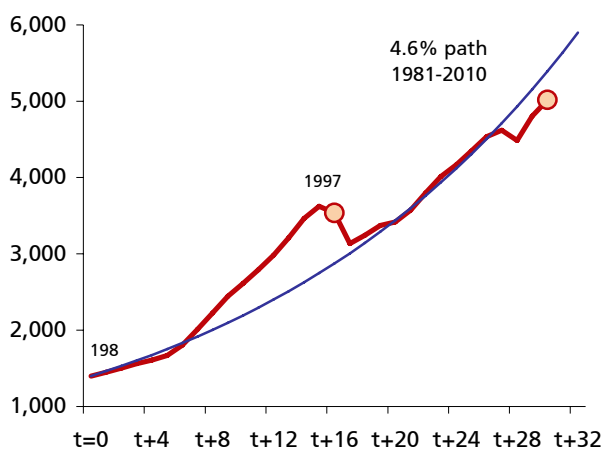
Thailand (v1) – PCI paths after reaching \$1400

constant 2010 US dollars



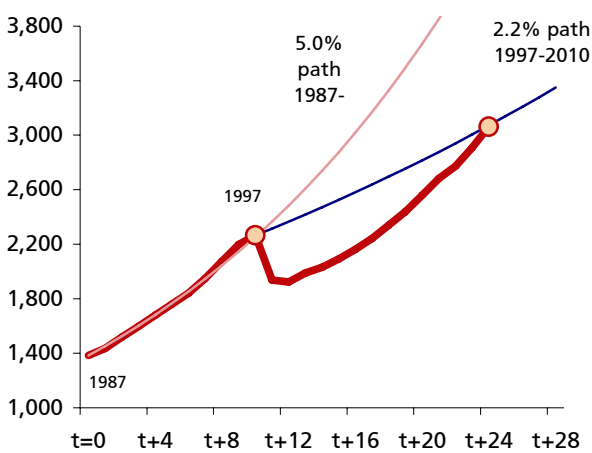
Thailand (v2) – PCI paths after reaching \$1400

constant 2010 US dollars



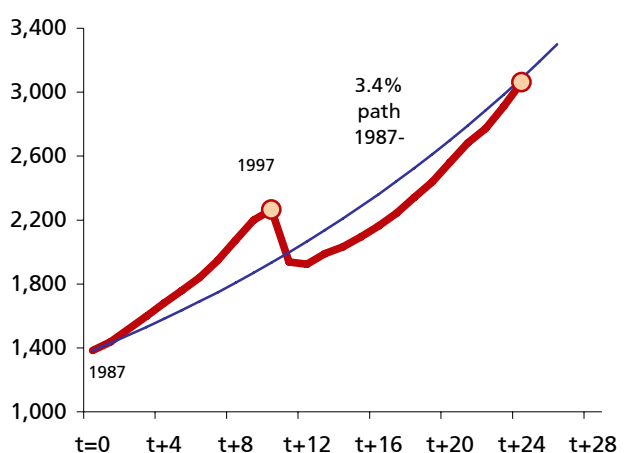
Indonesia (v1) – PCI paths after reaching \$1400

constant 2010 US dollars



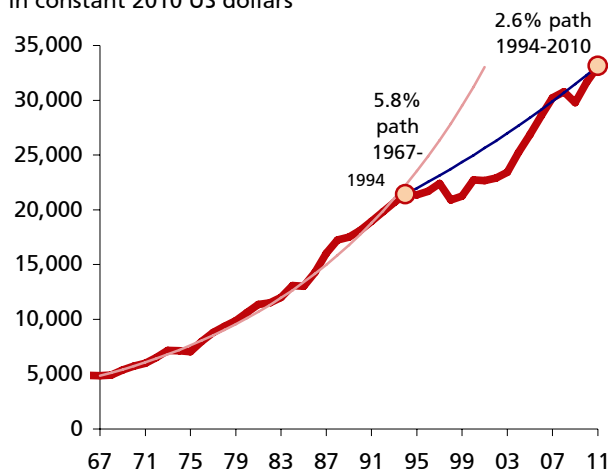
Indonesia (v2) – PCI path after reaching \$1400

constant 2010 US dollars



Hong Kong – PCI paths after reaching \$1400

in constant 2010 US dollars



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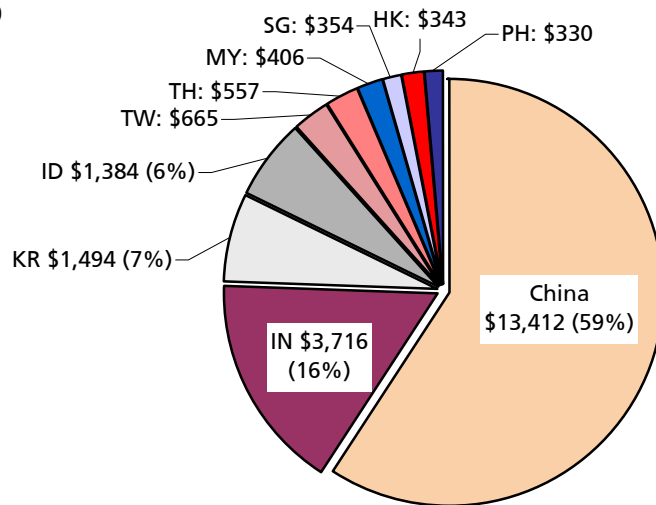
China 2020

- China's economy will grow by 8.5% on average between 2011 and 2020
- By 2020, the size of China's economy will represent 59% of Asia's GDP
- Per capita income will reach USD9,205 by 2020, 2.1 times the level of USD4,323 in 2010
- Rising labor productivity will justify rising wages and keep drawing in FDI
- The tertiary industry will represent approximately 60% of the economy by 2020
- Steady private consumption growth will continue to drive higher demand for property, healthcare and services of all types

Even with GDP growth slowing to 7.5% by 2020, average growth of 8.5% will prevail over the coming decade and China will account for 59% of Asia-10 GDP by 2020. Its absolute size will more than double the USD5,825bn that prevailed in 2010. Per capita income is projected should reach USD9,205 by 2020, surpassing Thailand and Indonesia.

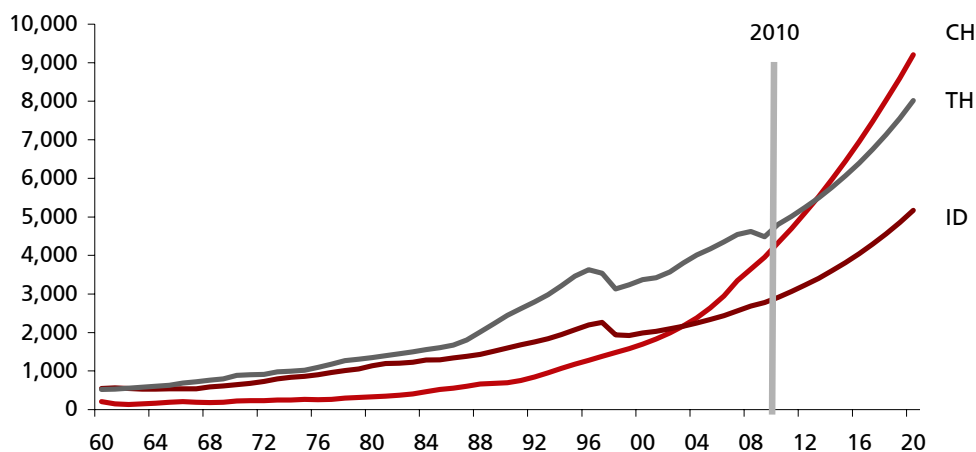
The state's plan to steadily shift the growth bias of the economy from external trade to domestic consumption requires wages to advance at least as fast as labor productivity. Assuming nominal wages will grow 20% per annum on average this decade, there will be tremendous businesses opportunities in the domestic market ranging from healthcare, food and beverage, recreation and entertainment alongside all kind of tertiary services to capture the persistent surge of labor income. The industry structure of the economy in 2020 (2010)

Asia-10 – GDP in 2020
USDbn, 2010P



Asia – GDP per capita

constant 2010 US dollars per person



will most likely be approximately 60% (43%) tertiary, 30% (47%) secondary and 10% (10%) primary.

There presently remains an enormous supply of low cost semi-skilled labor in the central part of China. In particular, the central part of China still has immense unleashed consumption potential. Central China, primarily consisting of the provinces Henan, Shanxi, Hubei, Hunan, Anhui and Jiangxi, has around 357mn people or one-fourth of the total population at the end of 2010. Most of the inland provinces managed to maintain rapid growth from 2008-2011 despite the global credit crisis and the subsequent drag on global growth. This is largely due to their low export dependency and steady domestic demand growth. These provinces should become key drivers of domestic demand over the coming decade.

The eventual completion of the high-speed rail network will link these central provinces with major economic hubs such as the Pearl River Delta, the Yangtze River Delta, Chongqing and the Beijing-Tianjin area. By 2020, foreign investors will have more geographical options to choose from to tap the domestic market potential. Back in the 1990s, the economic prosperity of Southern China was primarily attributed to FDI. Not only did the region become richer, it also gained invaluable management/technology knowhow. Against such a backdrop, per capita incomes in more provinces are set to grow in a similar manner thanks to a better transportation network.

China – GDP, population and energy consumption

dollar values are in constant 2010 USD

	--- GDP ---			--- Demographics ---			--- Energy ---			
	Per cap	Per cap	Per cap	Pop	Med age	Dep ratio	Cons mn	Cons USD	Per cap	Per cap
	USD bn	USD	US=100	Mil pers	Yrs	Ratio	bbl/yr	bn/yr	bbls/pax/yr	US=100
2010	5,825	4,323	9	1,348	34	39	3,055	243	2,267	10
2020	13,168	9,205	16	1,431	37	44	4,358	347	3,047	14
Abs change	7,343	4,882		83	3	5	1,303	104	779	
Growth factor	2.26	2.13		1.06			1.43	1.43	1.34	
Avg grwth rate (%)	8.5	7.9		0.6			3.6	3.6	3.0	

Taiwan 2020

- In 2020, Taiwan will remain the 5th largest economy with the 4th highest income in Asia
- Population aging will bring challenges to growth
- The potential of boosting labor participation, investment and productivity remains strong
- Government policies aim to build the island into a global innovation center and a regional trade hub

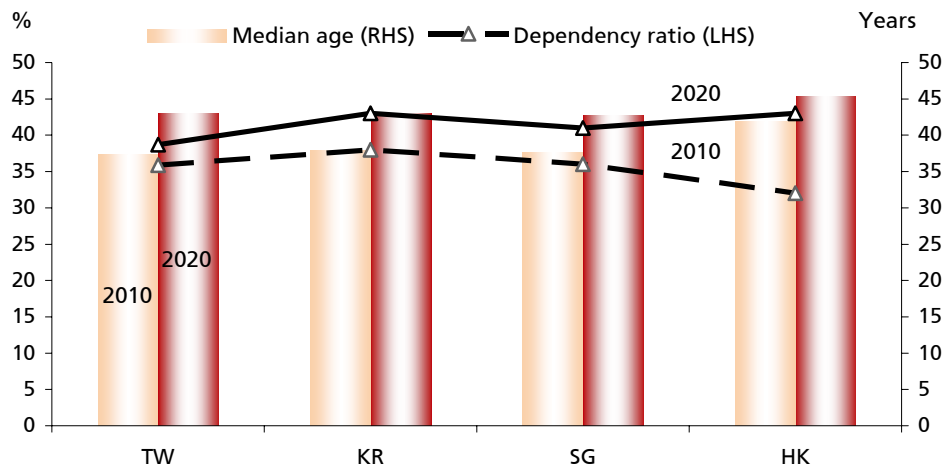
Taiwan's GDP is estimated to reach USD 665bn by 2020 based on the assumption of a slower growth towards 3.8%. Among the Asia 10 economies, Taiwan will remain the fifth largest (after China, India, Korea and Indonesia) with the fourth highest income level (behind Singapore, Hong Kong and Korea).

Population aging will bring about challenges to growth. The working age population will begin to decline from 2016, at a pace of 0.6% per year. To offset this decline, Taiwan can encourage a larger portion of its population to work. The labor participation rate remains relatively low at 58% (vs. more than 60% in Singapore, Hong Kong and Korea), and the female participation rate is only 49.9%.

Despite population aging and the accompanied decline in saving ratios, the saving-investment gap remains wide in the economy and domestic investment growth will continue to be easily funded by domestic savings.

Productivity will be the key to sustaining growth. Despite the success in electronics industries based on the contract manufacturing model, Taiwan still wants higher end technology, self-owned brands, and faster growth in the value-added services sectors. Aiming to build a "global innovation center", the government has designated cloud computing as a priority sector for policy support. Other emerging industries

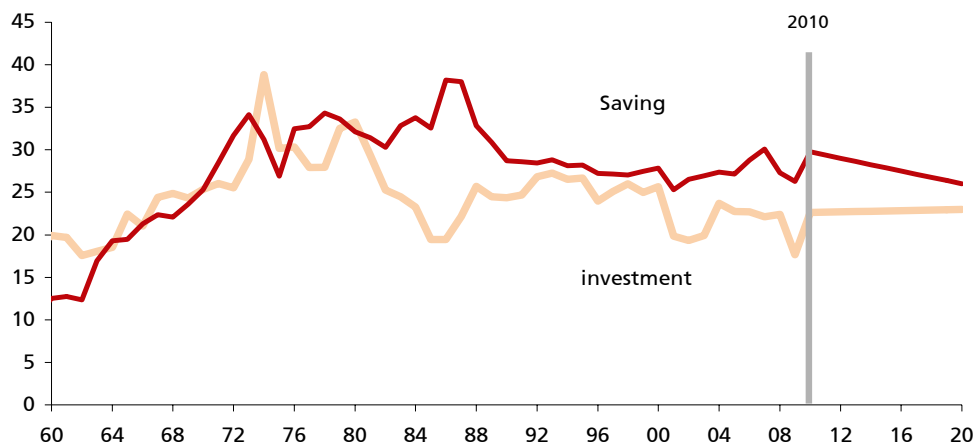
Asia NIEs: Demographic indicators



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Taiwan – investment and savings rates

Priv investment and savings as % of GDP; S=Invst+NetX



the government focuses on include biotechnology, green energy, health care, tourism and culture & creation. Strong R&D capabilities in the private sector, a skilled and well educated workforce and affordable wage costs are Taiwan’s advantages to help achieve its goal of being an innovation center.

Productivity gains will also come from economic openness. The cross-strait free trade agreement has already been launched as of this year and lays ground for Taiwan to negotiate FTAs with other countries. This, together with the government’s promotion of infrastructure projects including the Kaohsiung Port-City Regeneration and Taoyuan International Air City, will allow Taiwan to play a more important role in regional trade and logistics.

As per capita income levels rise, consumer expenditures will be concentrated in discretionary goods and services instead of food and fuels. Demand for health care services should grow strongly with the aging population. Medical subsidies by the government are large at present. As subsidies raise the fiscal burden, there will be more opportunities for the private sector to participate in the health care sector.

Housing demand should continue to be supported by the lifestyle changes and the trend toward family downsizing. Don’t expect a surge in Chinese property buyers, as controls on permanent residency for mainland citizens will likely remain strict.

Taiwan – GDP, population and energy consumption

dollar values are in constant 2010 USD

	--- GDP ---			--- Demographics ---			--- Energy ---			
	USD bn	Per cap USD	Per cap US=100	Pop Mil pers	Med age Yrs	Dep ratio Ratio	Cons mn bbl/yr	Cons USD bn/yr	Per cap bbls/pax/yr	Per cap US=100
2010	432	18,758	40	23	#N/A	#N/A	331	26	14,394	64
2020	664	28,537	50	23	#N/A	#N/A	357	28	15,335	69
Abs change	232	9,779		0	#N/A	#N/A	26	2	941	
Growth factor	1.54	1.52		1.01			1.08	1.08	1.07	
Avg growth rate	4.4	4.3		0.1			0.7	0.7	0.6	

Korea 2020

- Korea will remain the 4th most important growth driver in the Asia 10
- The demographic profile will worsen after 2015 and negatively affect potential growth
- The government is working in the right direction to boost productivity and sustain long-term growth via cultivating higher value-added industries and building global FTA networks

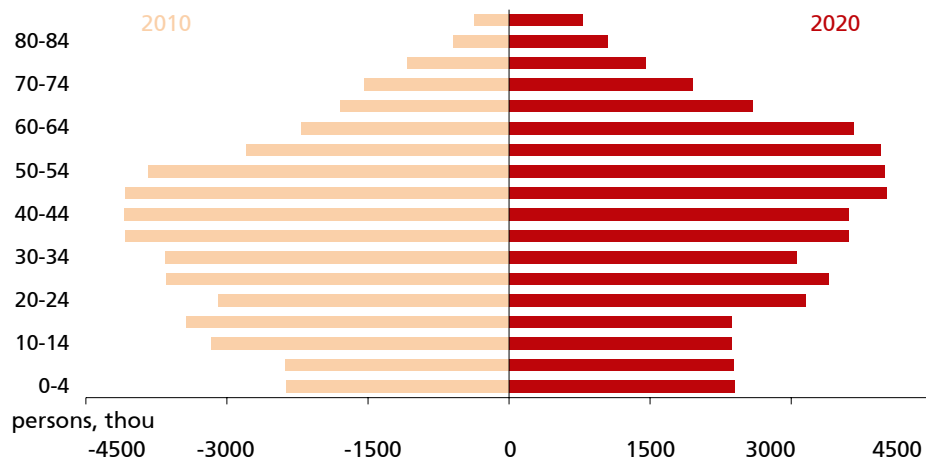
GDP growth is expected to slow to 3.5%-4% by 2020 from 4%-4.5% over the past decade, and GDP should expand to USD 1494bn by 2020. Korea will remain as the third largest economy in Asia-10, only surpassed by China and India. In terms of incremental GDP growth, Korea will be the fourth most important growth contributor in the Asia region, after China, India and Indonesia.

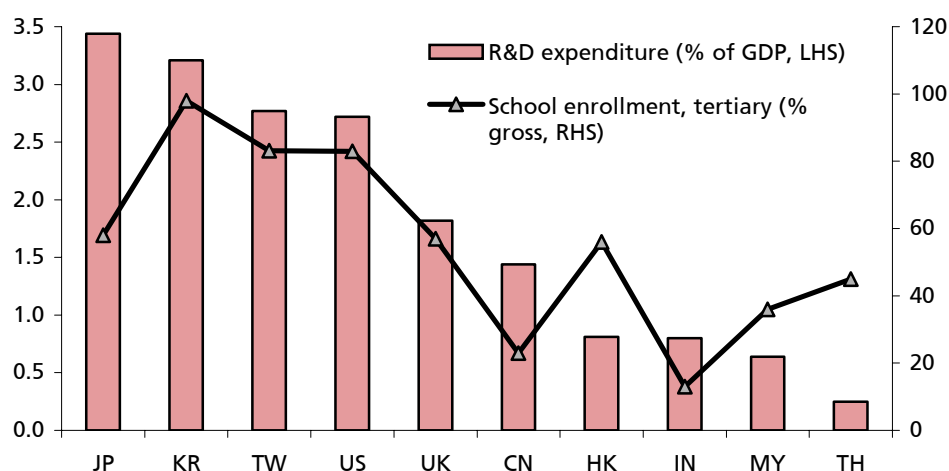
The demographic profile will worsen and impact Korea’s potential growth. The working age population will shrink by 0.4% per year from 2015, which constrains the supply of labor to output/GDP growth. The dependency ratio will rise significantly from 2015 to 2020, implying a decline in savings and perhaps investment too absent, the external financing.

That said, a relatively low female labor participation rate of 51% (vs. 56% in Singapore or 53% in Hong Kong) can be boosted to sustain a positive labor growth. Meanwhile, Korea still has room to enhance the investment climate, particularly in terms of institutional efficiency and labor regulations so as to better utilize FDI. The ease of doing business still ranks No. 3 in Asia, behind Singapore and Hong Kong.

The key to sustaining long-term growth is to boost productivity. The government is working in the right direction, providing assistance and incentives to cultivate

Korea's demographic profile by age group



Korea maintains a lead in technology and education


the “new growth engine” in three areas including green technology, high-tech convergence, and high-value added services such as health care, education and finance. Strong R&D capacity and high quality labor resources should help Korea maintain its leading role in high-tech and boost the potential of services sectors. Economic openness will also help raise productivity. The government is focusing on building global free trade networks. Korea has already signed or implemented FTAs with ASEAN, the EU and US, while FTAs with China and Japan are under consideration.

With per capita income rising and living standards improving, Korean consumers will continue to move away from food to discretionary goods and services. Demand for health care services will grow rapidly in particular because of population aging – the median population age will rise to 43 by 2020 from today’s 37.9.

Housing demand will be underpinned thanks to the continued social trend of nuclear family formation (average household size: 3.3 in 2010, vs. 3.5 in 2003), which helps offset the decline in population growth and the slowdown in urbanization process. The home ownership ratio remains low at mid-60%.

Energy efficiency has been improving and will continue doing so in the coming years, on account of the expected slowdown in heavy manufacturing, upgrade of industrial structure and more stringent efficiency standards to be implemented by the government. Policies will focus on nurturing renewable energy.

Korea – GDP, population and energy consumption

dollar values are in constant 2010 USD

	--- GDP ---			--- Demographics ---			--- Energy ---			
	Per cap	Per cap	Per cap	Pop	Med age	Dep ratio	Cons mn	Cons USD	Per cap	Per cap
	USD bn	USD	US=100	Mil pers	Yrs	Ratio	bbl/yr	bn/yr	bbls/pax/yr	US=100
2010	1,014	20,855	44	49	38	37	821	65	16,875	75
2020	1,494	30,271	53	49	43	40	920	73	18,629	84
Abs change	480	9,416		1	5	3	99	8	1,754	
Growth factor	1.47	1.45		1.01			1.12	1.12	1.10	
Avg growth rate	3.9	3.8		0.1			1.1	1.1	1.0	

Hong Kong 2020

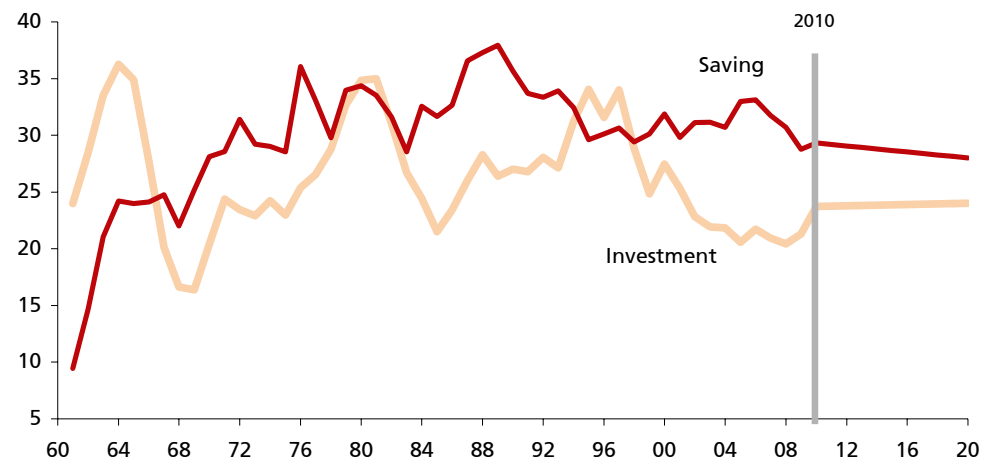
- Hong Kong will grow by 4.3% on average between 2011 and 2020
- Capitalizing on the growing strength of China's domestic economy, per capita income will reach USD 47k by the end of the decade, compared to USD 33k in 2010
- Economic integration with China, especially with respect to the Pearl River Delta, will bring higher cross-border labor, goods and capital mobility
- By 2020, CNY could account for 40% of the total deposit base

Hong Kong's integration with the mainland has mainly taken place through the Pearl River Delta (PRD). Hong Kong's FDI to Guangdong accounted for 40.1% of Hong Kong's FDI to the mainland in 2009. Even closer integration is expected upon completion of the Hong Kong-Zhuhai-Macau Bridge in 2015-2016. This bridge will greatly improve accessibility, and passenger/freight traffic flow will increase significantly. As more and more manufacturers relocate from Eastern PRD (e.g. Shenzhen) to Western PRD (e.g. Zhuhai) to take advantage of lower costs, the economic prospects of Western PRD will be more promising over time. As income increases, the spending strength of Chinese tourists from this region will strengthen. Chinese tourists has been of paramount to the Hong Kong retail sector for some time, accounting for as much as 70% of tourist spending. The sustained appreciation of the CNY against HKD will help maintain this trend.

As a result of ever stronger economic integration, capital flows between Hong Kong and the mainland will increase. Since the expansion of the CNY cross-border trade scheme to 20 provinces in July 2010, CNY-settled trade has grown more than 10 times to reach RMB 597 billion in 2Q11. This accounts for 10.2% of China's total trade compared to just 1.0% in the 2Q10. With the scheme's nationwide

Hong Kong – investment and savings rates

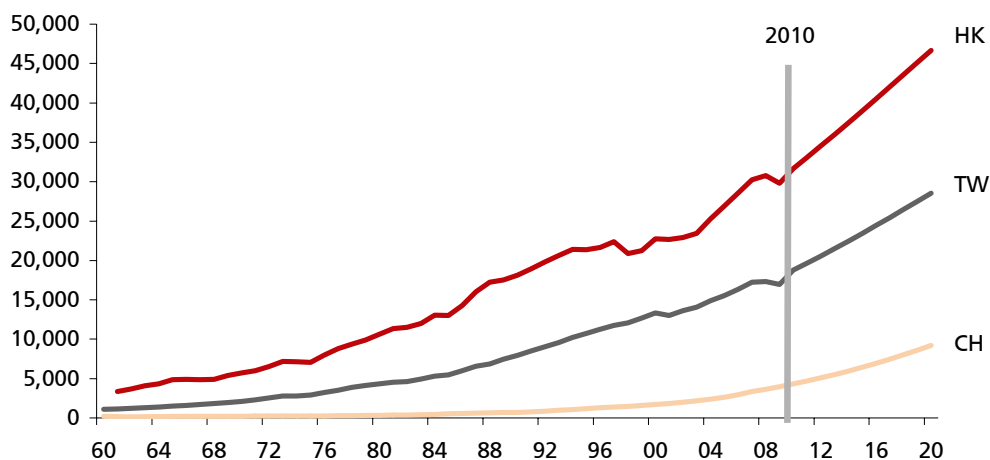
Priv investment and savings as % of GDP; S=Invst+NetX



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Asia – GDP per capita

constant 2010 US dollars per person



expansion in August 2011, this figure could reach 50% by 2020. Depending on the pace of China's capital account liberalization, CNY will likely be accepted partially for transactions in the capital account, e.g., for property investment. In fact, the Ministry of Commerce has already drafted regulations to allow a limited amount of CNY FDI from Hong Kong. By 2020, there will be a wide range of financial products denominated in CNY. To reflect its widened acceptance, CNY will likely account for at least 40% of total deposits in Hong Kong by 2020, surpassing the share of USD (30.6% at the end of 2010). The acceptance of CNY as a transaction currency in Hong Kong will probably be universal by then.

At the macroeconomic level, Hong Kong's net exports as a share of the economy will likely retreat in tandem with China's economic rebalancing, which shifts to a greater reliance on domestic consumption to drive growth. As a result, the share of consumption will increase steadily from 62% in 2010 to potentially 70% by 2020, with the most noticeable shift falling in the latter part of this decade. On the inflation front, demand-pull forces on the mainland will likely exert upward pressure on prices. As such, inflation measured by the composite CPI will likely average 4-5% in the coming decade, versus 2.0% from 2005-2009. Mainlanders' support will likely to create a floor on property prices as well.

With the backing of a fast growing Chinese economy, Hong Kong will be in a better position to weather potential exogenous shocks. It is clear that Hong Kong's deepening integration with China on all fronts will be the pivotal force driving the growth of its economy in this decade.

Hong Kong – GDP, population and energy consumption

dollar values are in constant 2010 USD

	--- GDP ---			--- Demographics ---			--- Energy ---			
	Per cap		Per cap	Pop	Med age	Dep ratio	Cons mn	Cons USD	Per cap	Per cap
	USD bn	USD	US=100	Mil pers	Yrs	Ratio	bbl/yr	bn/yr	bbls/pax/yr	US=100
2010	224	31,661	67	7.1	42	32	131	10	18,431	82
2020	342	46,661	82	7.3	45	43	155	12	21,087	95
Abs change	117	14,999		0	4	11	24	2	2,656	
Growth factor	1.52	1.47		1.03			1.18	1.18	1.14	
Avg growth rate	4.3	4.0		0.3			1.7	1.7	1.4	

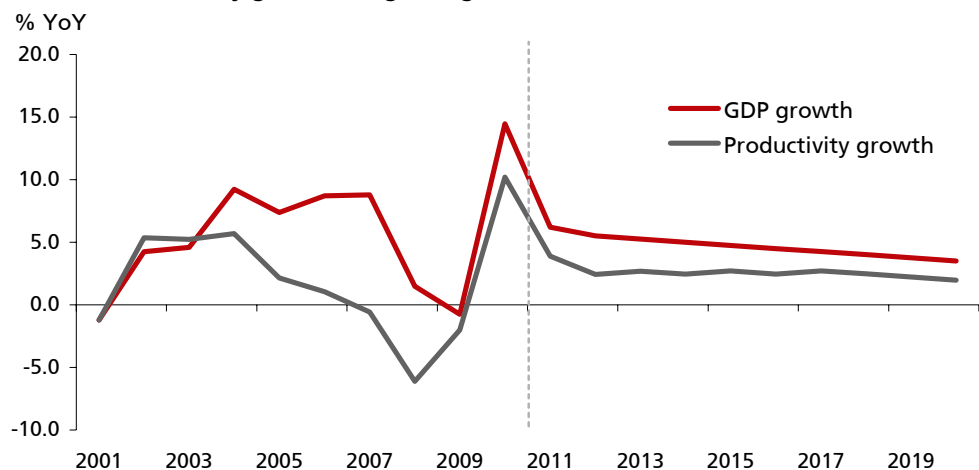
Singapore 2020

- GDP growth to moderate gradually to 3.5% but average about 4.8% over this ten year period
- Productivity growth will be the key driver
- Tightening in foreign labour policy will drive companies to invest more heavily on technology and training
- Per capita GDP will be one of the highest in the world, outstripping all Asia economies and about 25% above the US
- Aging population and rising income level implies stronger demand for healthcare

Twenty-twenty will be a special year for Singapore as it will mark the tenth anniversary of the productivity drive recommended by the Economic Strategy Committee (ESC) in 2010. We expect the measures introduced to bear fruit in the form of raising productivity growth to about 2.6% per annum, up from just 1.6% over the last ten years (Chart 1). While the new growth strategy is expected to bring about more inclusive and sustained growth, the pace of growth will likely have slowed. Headline growth will likely moderate to 3.5% in 2020 but average 4.8% over the next ten years. This is slower compared to 5.7% in 2001-2010 and 7.2% between 1991-2000.

Specifically, though incentives and measures introduced to help companies upgrade their technology and production capability would have helped to boost productivity, the tightening in the foreign labour policies is expected to take a toll on headline growth. The reduced inflow of foreign workers, particularly in the low and mid-skilled categories will create a supply side bottlenecks, which may lead to higher labour costs and erode overall cost competitiveness. With rapidly rising

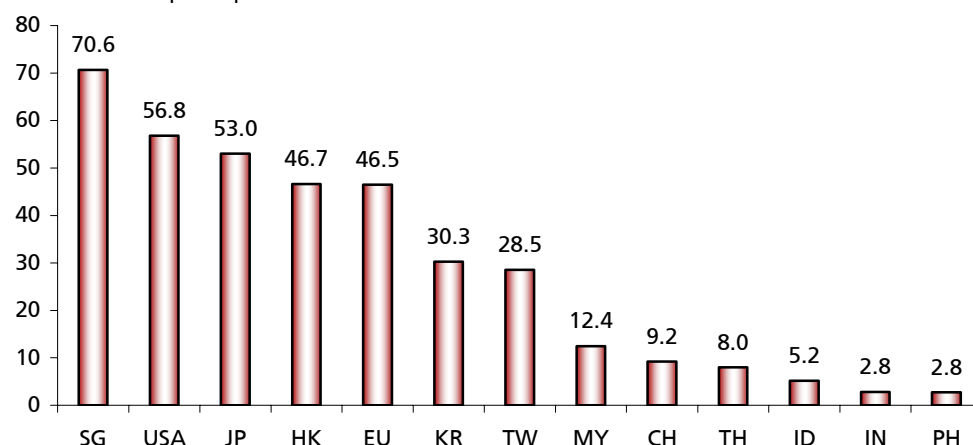
Chart 1: Productivity gains driving GDP growth



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Chart 2: GDP per capita, 2020

Thousand USD per capita



competition from key regional players such as China and India, companies will be compelled to either relocate overseas or move up the value chain and invest more on technology, productivity and training of workers. Demand in these aspects will surely rise, especially given the strong backing from the government.

Given the low birth rate and a possibly tighter immigration policy, overall population is expected to grow by just 6.5% to 5.3mn by 2020. A steady GDP growth pace juxtaposed with a relatively modest population growth implies that Singapore's per capita GDP will continue to rise and outstrip all the regional peers (Chart 2). In fact, Singapore's per capita income would have been one of the highest in the world and about 25% higher than the US, and 50% above the next highest emerging Asia economies, Hong Kong. Although still an externally driven economy, this rise in income will have a positive impact on domestic consumption, particularly on lifestyle and financial services as well as discretionary and luxury items.

Though Singapore incomes continue to rise, the population is aging. The median age will have risen to 46 by 2020 from 41 at present (see Table). In fact, Singapore will have the oldest population in Asia ex-Japan by 2020. The dependency ratio will also rise to 43% against 35% presently. Higher income and an older population implies stronger demand for better quality healthcare products and services. Against this backdrop, the government is setting aside more of its fiscal expenditure to cater to an aging population. More healthcare subsidies can be expected and investment into healthcare infrastructure (i.e. hospitals and centres for the aged) and equipment will likewise increase.

Singapore – GDP, population and energy consumption

dollar values are in constant 2010 USD

	--- GDP ---			--- Demographics ---			--- Energy ---			
	Per cap	Per cap	Per cap	Pop	Med age	Dep ratio	Cons mn	Cons USD	Per cap	Per cap
	USD bn	USD	US=100	Mil pers	Yrs	Ratio	bbl/yr	bn/yr	bbls/pax/yr	US=100
2010	223	47,388	100	4.7	41	35	162	13	34,460	153
2020	354	70,617	124	5.0	46	43	210	17	41,958	190
Abs change	131	23,229		0	5	8	48	4	7,498	
Growth factor	1.59	1.49		1.07			1.30	1.30	1.22	
Avg growth rate	4.7	4.1		0.6			2.7	2.7	2.0	

Malaysia 2020

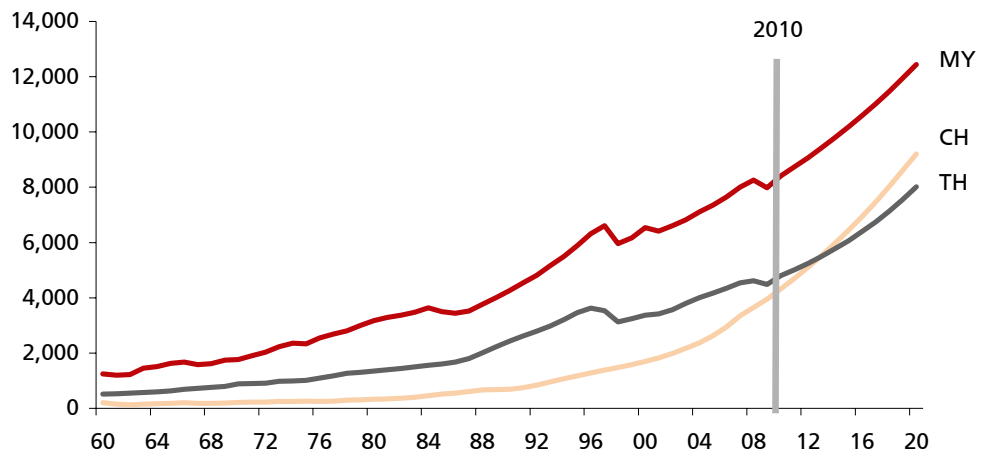
- GDP growth to register 5.5% and per capita GDP to record USD 12,500 per annum, slightly short of the targets set for Vision 2020
- Private investment growth will be significantly stronger, helped by rising domestic demand, low funding cost and FDI inflows
- Strong domestic demand will be an important engine of growth as the economy continues to struggle with external competition
- A healthy domestic sector will facilitate fiscal consolidation despite risks of political impediments and social backlash
- Fiscal deficit is expected to fall to 2.5% of GDP, from 5.6% currently

The state of the economy in 2020 rests upon the success of the government in achieving its Vision 2020 objectives. The government hopes to double Gross National Income (GNI) per capita to USD 15,000 and sustain an average growth pace of 6% over the next 10 years. This will involve effective implementation of broad economic blueprints such as the New Economic Model (NEM), the Economic Transformation Programme (ETP) and two Malaysia Plans. But hampered by implementation glitches, political impediments and intense external competition, it is likely that the final outcome will fall slightly short of expectations. We reckon GDP growth will average 5.5% in the next ten years while per capita GDP will likely come to about USD 12,500 per annum (Chart 1).

Despite the slight disappointment on the key objectives, economic fundamentals remain robust. Investment as a percentage of GDP, which has been falling over the last ten years since the Asian financial crisis is expected to recover. Broad-based liberalisation in the services sector, completion of key economic corridors (i.e. Iskandar Malaysia), private-public collaboration as well as the focus on upgrading infrastructure should reinvigorate private investment. Moreover, given the huge

Asia – GDP per capita

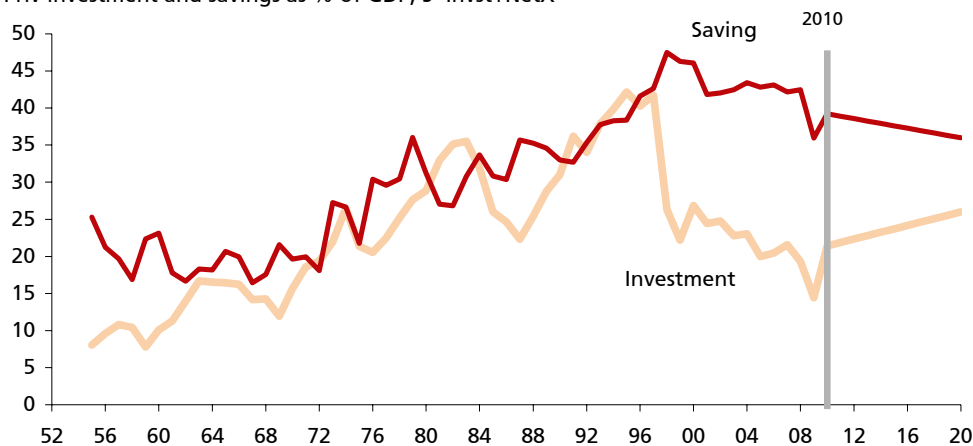
constant 2010 US dollars per person



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Malaysia – investment and savings rates

Priv investment and savings as % of GDP; S=Invst+NetX



gap between saving and investment, funding cost will be relatively low (Chart 2). As a result, investment growth is expected to register a fairly healthy pace of 7.6%, which should lift investment/GDP to 26%, up from 21% in 2010. Furthermore, FDI is seen flowing back to Malaysia given the liberalisation and reform effort. A strong outward direct investment flow due to local companies venturing overseas is likely to be offset by even stronger inflows from higher cost economies such as Singapore.

With rising income and healthy investment growth, domestic demand will become an even more important engine of growth. While Malaysia continues to be sandwiched between lower cost economies such as Thailand, China and Vietnam, and high end manufacturers like Singapore, the vitality of its domestic sector will be crucial in supporting overall economic growth.

One challenge is that Malaysia’s oil reserves are declining. This raises questions about fiscal sustainability. The government will be compelled to cut fuel subsidies to introduce an unpopular GST to broaden its revenue base. Despite the risk of political and social backlash, the increase in disposable income and marked improvement in the domestic sector should enable the government to push through reform in its tax regime. On that basis, we expect Malaysia’s fiscal deficit to gradually fall to about 2.5% by 2020, from 5.6% in 2010.

Malaysia – GDP, population and energy consumption

dollar values are in constant 2010 USD

	--- GDP ---			--- Demographics ---			--- Energy ---			
	Per cap		Per cap	Pop	Med age	Dep ratio	Cons mn	Cons USD	Per cap	Per cap
	USD bn	USD	US=100	Mil pers	Yrs	Ratio	bbl/yr	bn/yr	bbls/pax/yr	US=100
2010	238	8,412	18	28	26	35	195	16	6,893	31
2020	406	12,442	22	33	30	48	258	21	7,916	36
Abs change	168	4,030		4	3	13	64	5	1,022	
Growth factor	1.71	1.48		1.15			1.33	1.33	1.15	
Avg growth rate	5.5	4.0		1.4			2.9	2.9	1.4	

Indonesia 2020

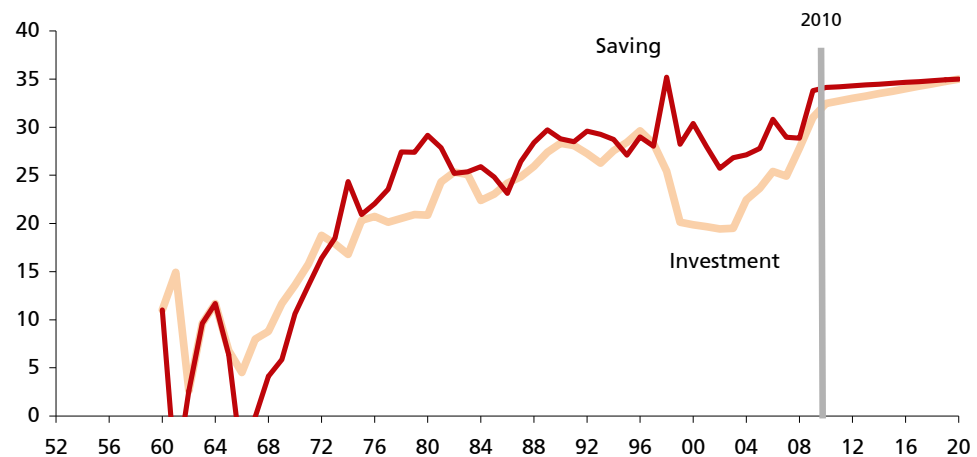
- GDP growth to accelerate towards 7.5%
- Investment to lead growth, leading to higher productivity and wages
- Incremental demand between now and 2020 will equal Thailand's, Malaysia's, Singapore's and the Philippines' combined
- The workforce will grow by 1.7mn per year
- Urbanisation and rising wealth provides opportunities for infrastructure and consumer sectors
- Natural resource endowment will provide an additional tailwind

GDP growth is set to accelerate towards 7.5% by 2020, driven by a rampup in gross fixed capital formation (GFCF), in contrast to the generally declining trend across Asia. Indonesia will be the largest growth driver within the Southeast Asian region and will start to pull its own weight and more in the coming decade. To put things into perspective, Indonesia's incremental growth in constant 2010 USD terms will roughly equal that of Thailand's, Malaysia's, Singapore and the Philippines' combined.

The investment story will dominate and GFCF will take up a larger proportion of GDP going forward. Indonesia was one of the worst hit during the Asian financial crisis of 1997/98 and it was not surprising that the country did not recover (as reflected in the weak GFCF numbers) until almost 10 years later. The situation has now completely flipped with the country fast becoming the preferred investment destination within the region. With the government embarking on reforms (albeit at a slow pace), it has become significantly easier for foreign investors to channel funds into the country. Under our core scenario, the modest

Indonesia – investment and savings rates

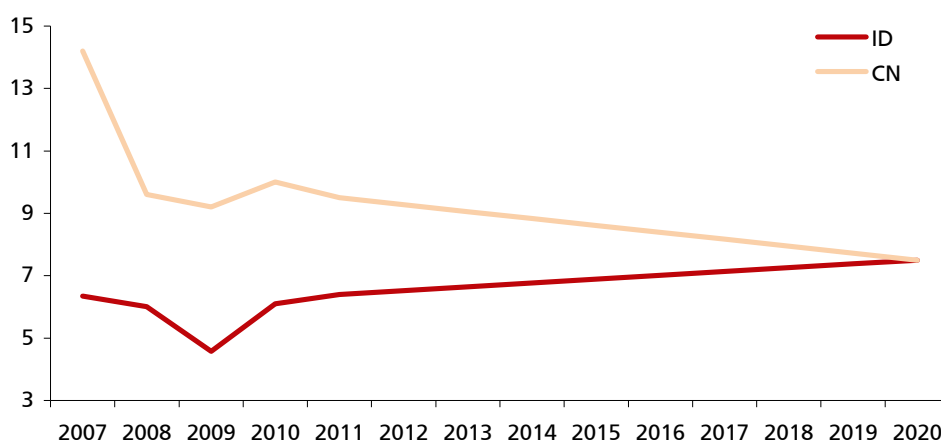
Priv investment and savings as % of GDP; S=Invst+NetX



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Indonesia and China – GDP Growth

% per year



pace of reforms will persist and we see scope for improvement in land acquisition and labor laws, facilitating a continued uptick in investment growth.

Demographics are firmly in Indonesia’s favor. The coming decade will see Indonesia enjoy a rising proportion of working age population and a declining dependency ratio. On average, Indonesia will add 1.7 mn people into the workforce per year between now and 2020. The expected rise in investment, coupled with this demographic dividend implies that productivity and income levels will increase hand in hand. Indonesia will experience a large increase in the number of middleclass as per capita GDP increases from USD 2910 in 2010 to USD 5174 in 2020. The accompanying jump in spending power will herald a new era of consumerism as private consumption becomes even more important as a driver of growth.

Plainly, there is much scope for expansion across a multitude of sectors including infrastructure, consumer goods, real estate and utilities as urbanization continues and incomes rise. In addition, Indonesia is well-endowed with natural resources including coal, tin and palm oil. With demand for resources likely to remain strong alongside the rise of China and India, resources will be an added tailwind to the longer-term outlook.

Indonesia – GDP, population and energy consumption

dollar values are in constant 2010 USD

	--- GDP ---			--- Demographics ---			--- Energy ---			
	Per cap		Per cap	Pop	Med age	Dep ratio	Cons mn	Cons USD	Per cap	Per cap
	USD bn	USD	US=100	Mil pers	Yrs	Ratio	bbl/yr	bn/yr	bbls/pax/yr	US=100
2010	707	2,910	6	243	28	49	399	32	1,642	7
2020	1,384	5,174	9	268	32	44	638	51	2,386	11
Abs change	677	2,264		25	4	-5	239	19	744	
Growth factor	1.96	1.78		1.10			1.60	1.60	1.45	
Avg growth rate	6.9	5.9		1.0			4.8	4.8	3.8	

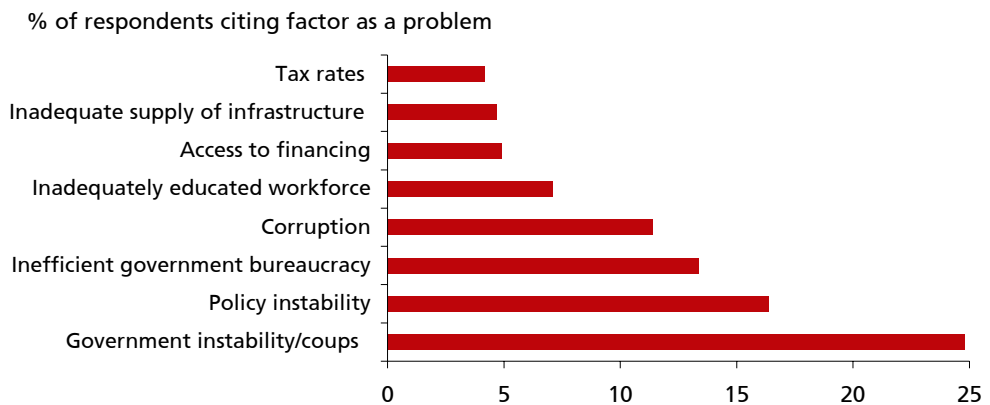
Thailand 2020

- Growth could easily rebound to 6.5% by 2020 or even earlier considering the still low per-capita income level, with the wild card still political stability
- The fast growth in exports in recent years reveals much about the competitiveness of the economy and suggests a mere return to political stability will lift investment and growth
- Infrastructure, consumer durables sector and agro-industries could grow in importance over the next ten years

Since 2006, political instability has restricted annual consumption growth to half its norm (2.5% vs 5%) and sharply choked investment. The economy grew by just 4% per year since 2006, driven by exports. As such, the instability probably reduced Thai growth by as much as two percentage of GDP each year. Growth could pick up to 6.5% by 2020 (or even earlier) considering the still low per-capita income level and the scope for investment and consumption to catch-up should a semblance of political stability return. The economy could roughly double in size over the next 10 years to US 560bn, even without accounting for inflation or currency appreciation.

Annual nominal and real exports grew by an average of 13% and 5% in 2006-2010 despite the political crisis and eruption of the global financial crisis, driven by growth in sectors such as hard disk drives, automobiles, chemicals, manufactured food. The fast growth in exports in recent years reveals much about the competitiveness of the economy (and its growth potential). In the latest World Bank "Doing Business" survey, Thailand ranks a high 19 out of 183 economies (with Malaysia at 21 and Singapore #1). In the annual survey of businesses conducted by World

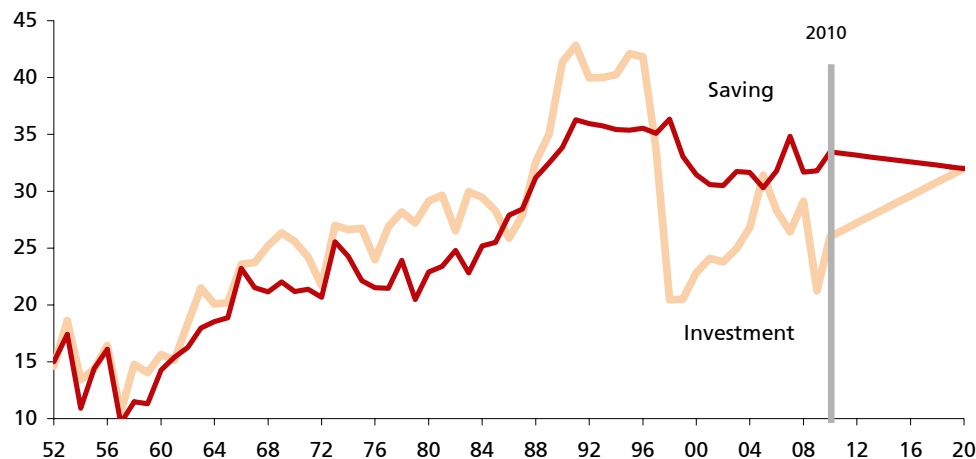
TH: Most problematic factors for doing business



Source: Global Competitiveness Report, 2010, World Economic Forum

Thailand – investment and savings rates

Priv investment and savings as % of GDP; S=Invst+NetX



Economic Forum, businesses ranked political instability and government bureaucracy as the two areas most in need of improvement. Thus, a return to political stability could lift investment and consumption considerably. A still-high national savings rate will help fund investment even as the dependency ratio rises over the next ten years. From a sectoral perspective, given the still low income level and the under-investment of the past decade, infrastructure, consumer durables and agro-industries could grow in importance over the coming decade.

With the general election having thrown up a relatively strong government, we may not have to wait too long to see a pick up in growth. The new government knows stability is crucial and has set national reconciliation as its main goal. It is also aware that inflation could hurt the social fabric and is addressing this issue as well. The government has wasted no time in addressing GDP growth. It has set a target of pushing Thailand to the top ten ranks in the Ease of Doing Business Survey, which probably means bureaucracy and red-tape could be reduced further. While many of the electoral promises involve an expansion of government consumption spending (such as wage hikes or subsidies) and risk inflation, those are short-term challenges of a macro-policy nature. From a longer-term growth perspective, political stability remains key to the outlook.

Thailand – GDP, population and energy consumption

dollar values are in constant 2010 USD

	--- GDP ---			--- Demographics ---			--- Energy ---			
	Per cap	Per cap	Per cap	Pop	Med age	Dep ratio	Cons mn	Cons USD	Per cap	Per cap
	USD bn	USD	US=100	Mil pers	Yrs	Ratio	bbl/yr	bn/yr	bbls/pax/yr	US=100
2010	319	4,804	10	66	33	41	336	27	5,065	22
2020	557	8,020	14	69	36	44	470	37	6,768	31
Abs change	239	3,215		3	3	3	134	11	1,703	
Growth factor	1.75	1.67		1.05			1.40	1.40	1.34	
Avg growth rate	5.7	5.3		0.5			3.4	3.4	2.9	

Philippines 2020

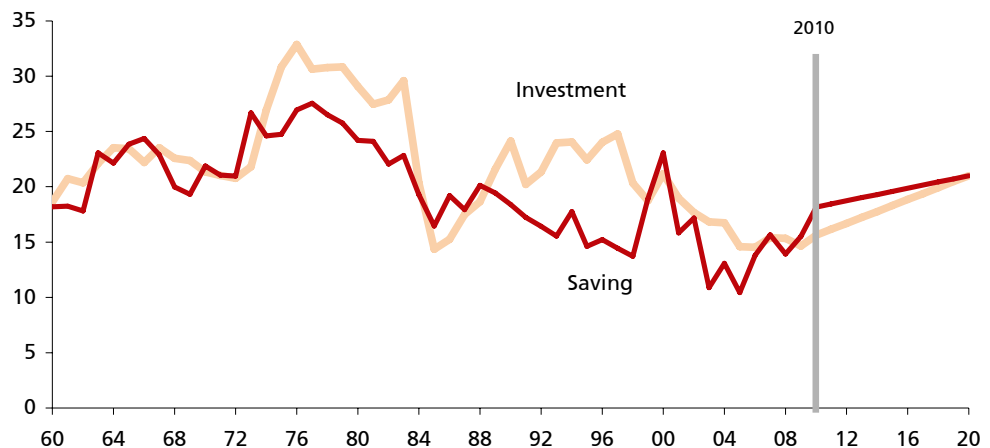
- GDP growth to trend higher towards 6%
- Economy will be 80% larger by 2020
- Investment growth to drift upwards as impediments get removed
- A youthful population is a strong plus, however, rapid population growth is also a challenge
- Cautiously optimistic for the longer-term; but a lot depends on the government's policies and how the large labor pool and resource endowment can be tapped

On the back of savings and investment that continues to rise back toward longer-term averages, GDP growth should trend towards 6% by 2020. The current government has thus far done a credible job in introducing reforms centered on government finances and private-public investment partnerships (PPP) and has now focussed its attention on population management and reforms aimed at lowering corruption. The savings rate has grown to 18% from 11% in 2004 and investment is beginning to follow the same path. GDP should follow from there.

Reform is key and progress is being made. Firstly, fiscal reforms are starting to bear fruit. Since a more stringent standard for transparency and accountability was put in place in 2011, the country's budget deficit has narrowed sharply in the first half of the year. This complements the budget consolidation trend since the early 2000s and fiscal stress is increasingly less of a concern. Secondly, efforts to increase investment are noteworthy. A new structure for project approvals

Philippines – investment and savings rates

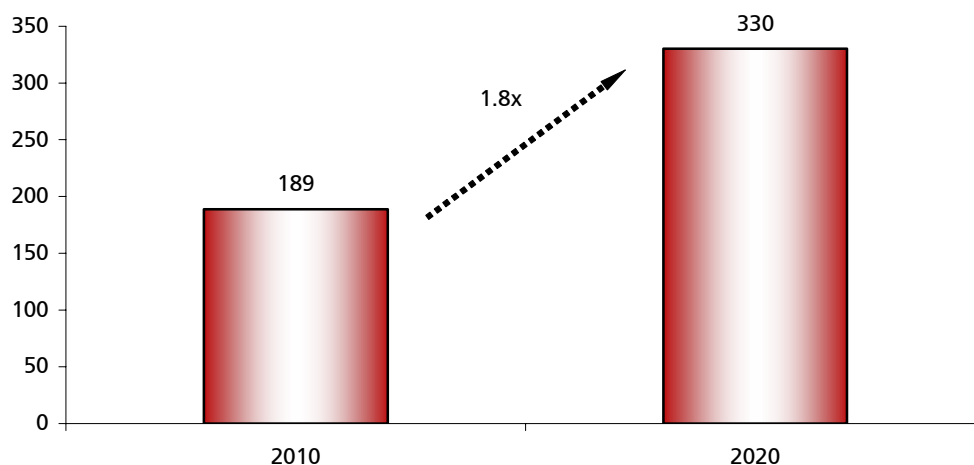
Priv investment and savings as % of GDP; S=Invst+NetX



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Philippines – GDP

constant 2010 US dollars



and implementation is being established, which should complement the launch of PPP projects. Measures to counter corruption should raise investor confidence. In short, the reform momentum is building, and this should translate into greater FDI inflows and complement the rising domestic savings rate already apparent in the data.

Demographics is favorable for the Philippines but the still-high birth rate remains a challenge. The country has a youthful population and its population is projected to increase by 19 mn by 2020. To some extent, resources have been spent accomodating a rise in population at the expense of other investment and this may have impeded GDP growth in the past. The government has taken a pro-contraceptive stance and if it is successful, the demographic outcome could mean an upside surprise to the growth outlook.

Over the coming decade, economic growth will be respectable with much depending on policy and whether the large labor pool and resource endowment – which include gold, nickel and copper – can be effectively tapped upon. We hold a cautiously optimistic view of the economy and expect reform to proceed at a moderate rate. By 2020, GDP (in today’s dollars) will likely be 80% larger, and income levels 45% higher than at present.

Philippines – GDP, population and energy consumption

dollar values are in constant 2010 USD

	--- GDP ---			--- Demographics ---			--- Energy ---			
	USD bn	Per cap USD	Per cap US=100	Pop Mil pers	Med age Yrs	Dep ratio	Cons mn bbl/yr	Cons USD bn/yr	Per cap bbls/pax/yr	Per cap US=100
2010	189	1,890	4	100	23	61	113	9	1,133	5
2020	330	2,767	5	119	26	55	146	12	1,223	6
Abs change	141	877		19	3	-5	33	3	90	
Growth factor	1.75	1.46		1.19			1.29	1.29	1.08	
Avg growth rate	5.7	3.9		1.8			2.6	2.6	0.8	

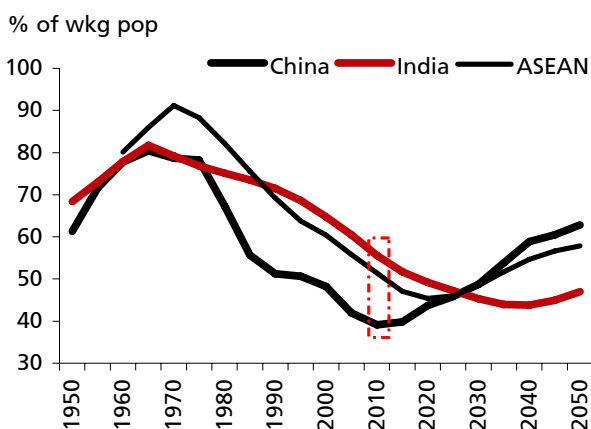
India 2020

- GDP growth could rise to 8.5% by 2020 making India the fastest growing economy in Asia by 2020
- Favourable demographics and a low base will support growth
- A number of policy reforms are under consideration by the government with progress likely over the next few years
- Consumer durables, infrastructure and education will be fast growing sectors

GDP growth could rise to 8.5% by 2020 even as China's growth slows to 7.5%, making India the fastest growing economy in Asia nine years hence. At 8.5%, growth would be twice as high as in the Asia-8 (ex-China & India) on average.

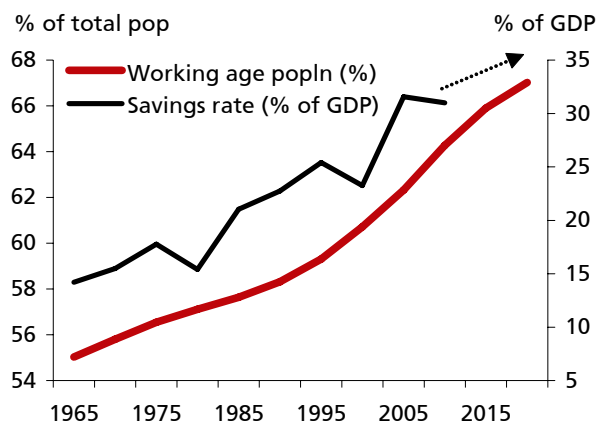
Favourable demographics and a low base for per-capita GDP leave lots of room for economic growth. In 2020, India's population will still be very young with more than half the population below the age of 28, the second youngest in Asia, after the Philippines. The working age population growth is likely to continue to exceed overall population growth for another 25 years, leading to a fall in the dependency ratio (one amongst only four Asian economies that will experience this). The rising share of working-age population points to larger disposable incomes, greater availability of resources for education (per child) and higher discretionary consumption expenditure. At the same time, a rising share of working-age population will mean a continued rise in the pool of national savings to meet the economy's growing investment needs (and keep the current account deficit capped).

Dependency ratios: a comparison (Asia)



Source: World Population Prospects, UN

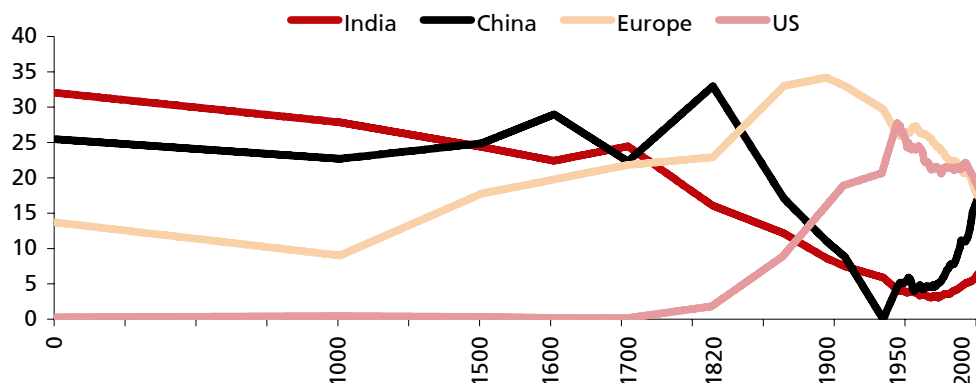
IN: Savings rate vs working age population



Source: UN, CEIC, DBS estimates

Share of global GDP (%) - the rise of China and India

%, 1990 international dollar



Source: Angus Maddison, *Historical Statistics of the World Economy*, DBS

With per capita income level the lowest in Asia, the importance of a low base cannot be exaggerated. For starters, it means high growth could last for much longer in India than anywhere else in Asia. Low per-capita income means low penetration rates of durable goods such as passenger cars and mobile phones. India is one of the fastest growing markets for both goods and this is in no small part due to the low base and improving demographics. The other consequence of the low base is the low stock of capital per head. At a third of China's, India's stock of capital per head is low enough that investors needn't worry about investment returns being dampened by excess capacity. Given the infrastructure bottlenecks the economy is currently experiencing, the sector is poised for significantly faster growth over the coming decade.

The economy has been progressively opened and liberalized over the past two decades, but bureaucracy, weak governance and poor delivery of public services (infrastructure, education, health, etc.) have held back growth. Liberalizing retail FDI (one of the few sectors where FDI is not permitted), reform of land acquisition and rehabilitation laws, the indirect tax system (GST), governance and public services, are all areas where efforts are underway and progress is expected over the next few years. Despite much foot-dragging on reform of late, we are optimistic that structural reforms will re-accelerate growth over the next few years.

India – GDP, population and energy consumption

dollar values are in constant 2010 USD

	--- GDP ---			--- Demographics ---			--- Energy ---			
	Per cap	Per cap	Per cap	Pop	Med age	Dep ratio	Cons mn	Cons USD	Per cap	Per cap
	USD bn	USD	US=100	Mil pers	Yrs	Ratio	bbl/yr	bn/yr	bbls/pax/yr	US=100
2010	1,721	1,467	3	1,173	25	56	1,173	93	1,000	4
2020	3,716	2,802	5	1,326	28	49	1,599	127	1,205	5
Abs change	1,995	1,335		153	3	-6	425	34	205	
Growth factor	2.16	1.91		1.13			1.36	1.36	1.21	
Avg growth rate	8.0	6.7		1.2			3.1	3.1	1.9	

Bonds 2020

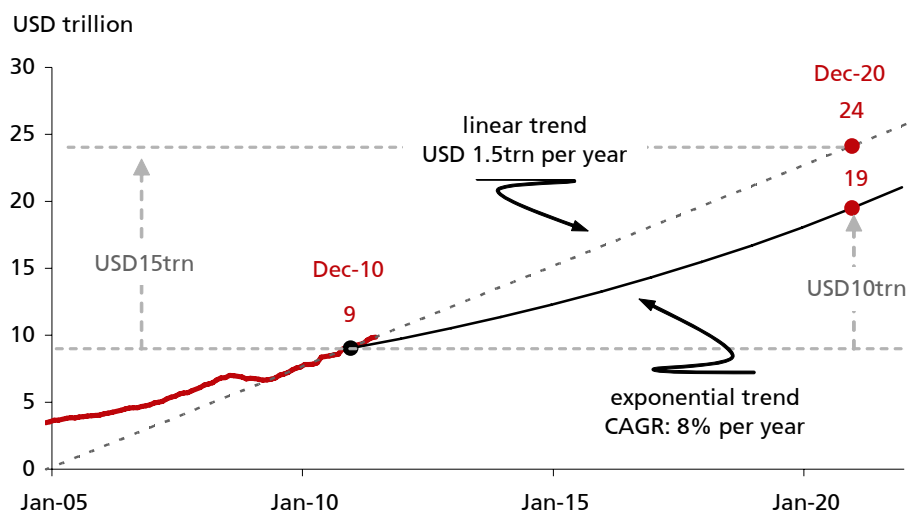
- The shift of growth and wealth dynamics from the G3 to emerging markets will give rise to large sustained capital flows to emerging markets for as long as the US faces structural headwinds
- Capital flows will likely be volatile, but Asian central banks should continue to build reserves
- Amid this, the Asian debt market seems likely to double in size over the next ten years. Debt issuance to sterilize domestic excess liquidity associated with reserve accumulation will be the key driver of government debt market growth in Asia

Capital flows will drive Asian local-currency debt market growth

Globalization has seen large increases in global net private capital flows to emerging markets. The global financial crisis of 2008/2009 temporarily disrupted these flows but the trend is very much in place again. With the US economy facing structural headwinds, substantial amounts of capital are likely to flow to emerging markets where expected returns are higher. The need for many emerging market economies to move away from a risky overdependence on export-based economic models to more domestic demand driven ones is expected to guarantee the availability of ample opportunities for growth and wealth creation.

The disparity in growth potential will keep capital flowing from the developed economies to emerging markets, which should help raise domestic wealth and contribute to balance of payments surpluses of many developing countries. If

World international reserve assets excluding gold

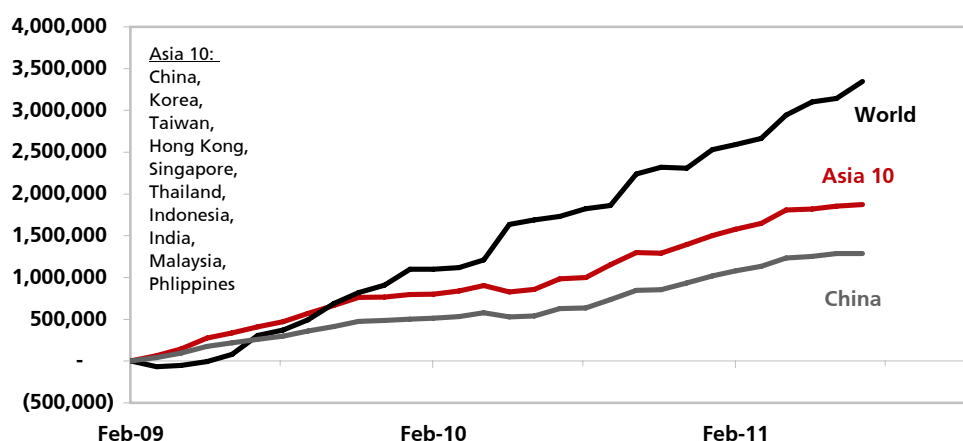


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world international reserve assets grow in line with the current post-crisis trend, they will be near USD 24 trillion by end 2020. That would be 1.5 times the Dec-10 level of USD 9 trillion. Even more moderate growth of 8% a year would see reserves rise to USD 19 trillion, a USD 10 trillion increase.

Geographically, at least half of the increase in international reserve assets would likely come from Asia ex-Japan. Asia 10 (see side table) currently already holds 53% of the world's total reserves and this share is more likely to rise than fall in the coming years, given the positive secular growth outlook for Asia. The chart below shows the change in foreign reserves since February 2009 for Asia 10, China and the world as a whole.

Change in Foreign Reserves - Asia 10
in USD millions, cumulative since Feb-2009



Source: Bloomberg

Intl. Reserves
in USD billions
as of July 2011

World	10063
China	3197
Korea	311
Hong Kong	279
Taiwan	401
Singapore	249
Thailand	179
India	286
Indonesia	123
Philippines	72
Malaysia	135
Asia 10	5231

Source: Bloomberg

Extrapolating trends is always risky, though. The shift of growth and wealth dynamics from the G3 to emerging markets should persist for as long as the US economy faces structural headwinds, but capital flows will be volatile at times. Moreover, weakness in the US economy combined with domestic demand growth and inflation in Asia suggest lower BOP surpluses, not higher. Therefore, the most likely scenario is one where international reserves grow substantially, but less rapidly than what has been seen in recent years.

Even 8% annual growth would be fast, as growth in supply of traditional reserve assets in the USD and EUR space will be constrained by slow GDP growth and the need for fiscal consolidation. Given already high debt levels, G3 governments will make efforts not to grow debt much faster than their nominal economies. From a practical point of view, it is for that reason that global imbalances and excessive reserve accumulation have to be addressed in the coming ten year. It is no surprise – and not the first time – that US Secretary of State Clinton in July told developing nations that the US is “making economics a priority of our foreign policy. Increasingly, economic progress depends on strong diplomatic ties, and diplomatic progress depends on strong economic ties. All who benefit from open, free, transparent and fair competition have an interest and a responsibility to follow its rules. Enough of the world's commerce takes place with developing nations that leaving them out of the rules-based system would render that system unworkable.” [1]

EM central banks will have no choice, but to build reserves

Emerging markets will generally welcome inflows of foreign capital, but this process, of course, is not without risks. Inflows of foreign capital will not only give rise to currency appreciation pressures and risks stemming from domestic excess liquidity, but also create the potential for rapid outflows in later years.

Asian markets are still small, not only relative to those of the reserve issuers, but also relative to the capital flows they can attract. That means that, to the extent that there are reversible inflows of foreign capital, central banks in Asia will see a need to slow currency appreciation and build reserves to counter the risk of potential rapid outflows. This inevitably will keep money supply under upward pressure and boost domestic liquidity. The table below shows how money supply in Asia has expanded since 1Q09, the most acute phase of the global financial crisis.

Money Supply Growth

			30-Sep-08		Latest	% chg
US	M2	USD bn	7,897	Jun-11	9,112	15%
CH	M2	CNY bn	45,290	Jun-11	78,080	72%
IN	M3	INR bn	42,835	Jul-11	67,498	58%
KR	M3	KRW bn	1,395,719	May-11	1,690,543	21%
TW	M2	TWD bn	26,845	Jun-11	31,639	18%
TH	M2	THB bn	9,410	Jun-11	12,611	34%
ID	M2	IDR bn	1,778,139	May-11	2,475,286	39%
MY	M3	MYR bn	913	Jun-11	1,159	27%
SG	M3	SGD bn	334	Jun-11	431	29%
PH	M3	PHP bn	3,287	May-11	4,262	30%

Source: Bloomberg

To lessen some of this pressure on bond markets and limit banks' free liquidity, central banks have sterilized a great deal of the domestic liquidity injections associated with FX intervention and they will have no choice but to do more of the same, if inflows remain strong. Therefore, bill and bond issuance to sterilize intervention in FX markets is likely to remain the key driver of LC debt market growth in many Asian bond markets over the next 5-10 years. The supply of government bonds will be limited due to a generally positive ten-year outlook for governments' fiscal positions.

The charts on the following page shows how central bank issuance compared to government issuance over the past four years and how outstanding amounts of central bank securities compare to outstanding amounts of central government paper. For the latter, note that total figures per market here refer to bills and bonds issued by the central government and the central bank, debt issued by policy banks and state-owned enterprises is excluded.

While government issuance has been essentially stable between USD 100-200 billion per quarter, central bank issuance has increased considerably after 2008. The latter, in fact, reached an all-time high of slightly under USD 800 billion in 1Q10. Total central bank issuance in 2010 totalled almost USD 2.5 trillion, more than double the amount in 2006.

Government Securities Outstanding (4Q10)

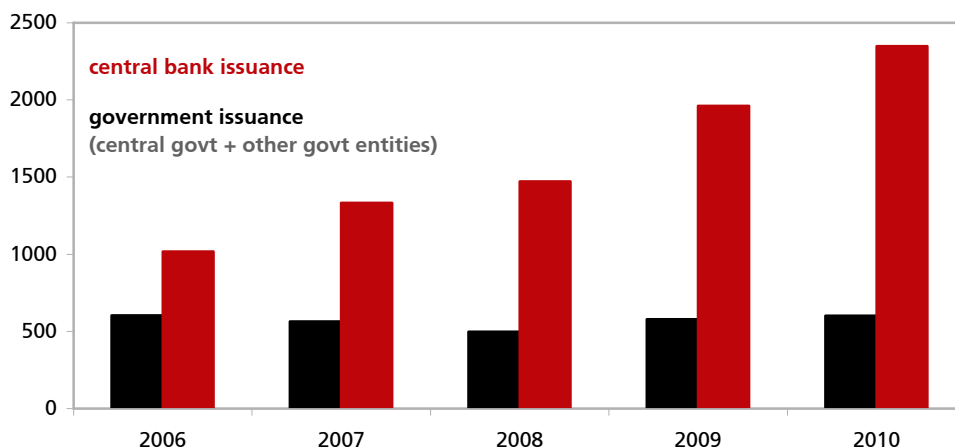
	Total USD billion	Central Govt & Central Bank Only USD billion	% share
CH	2408	1,521	63
HK	87	87	100
ID	94	94	100
KR	492	422	86
MY	145	145	100
PH	64	61	95
SG	103	103	100
TH	183	167	91
VN	14	6	44
Total	3,590	2,606	

Source: Asian Bonds Online

Bill and bond issuance to sterilize inflows is likely to be the key driver of the LC debt market growth in Asia

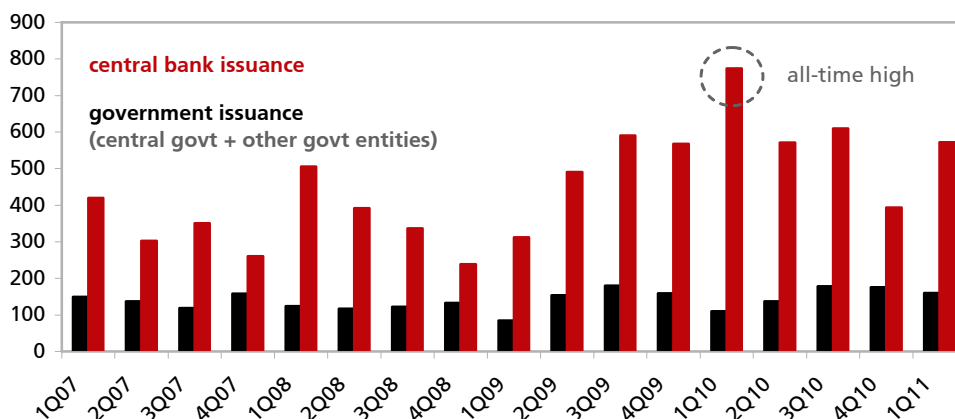
Government Issuance breakdown (Emerging East Asian Local Currency Bond Markets)

USD bn



Government Issuance breakdown (Emerging East Asian Local Currency Bond Markets)

USD bn

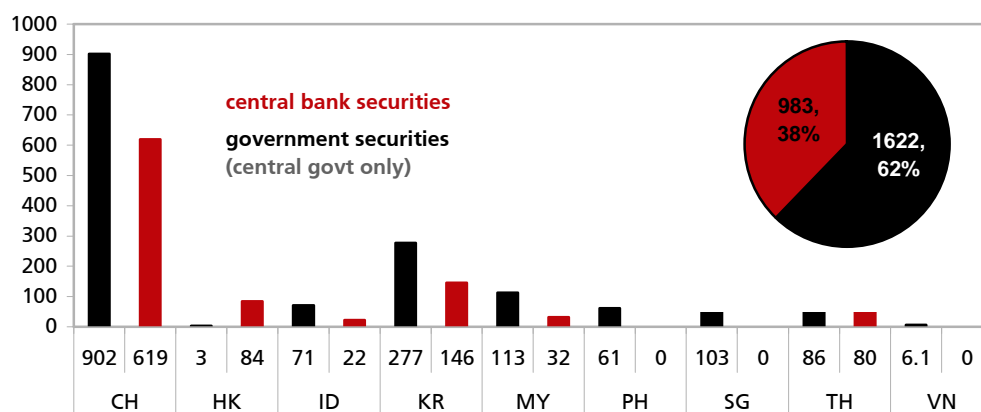


Total figures refer to bills and bonds issued by the central government, other government entities and the central bank.

Source: Asian Bonds Online

Government Securities Outstanding

USD bn, end 4Q10



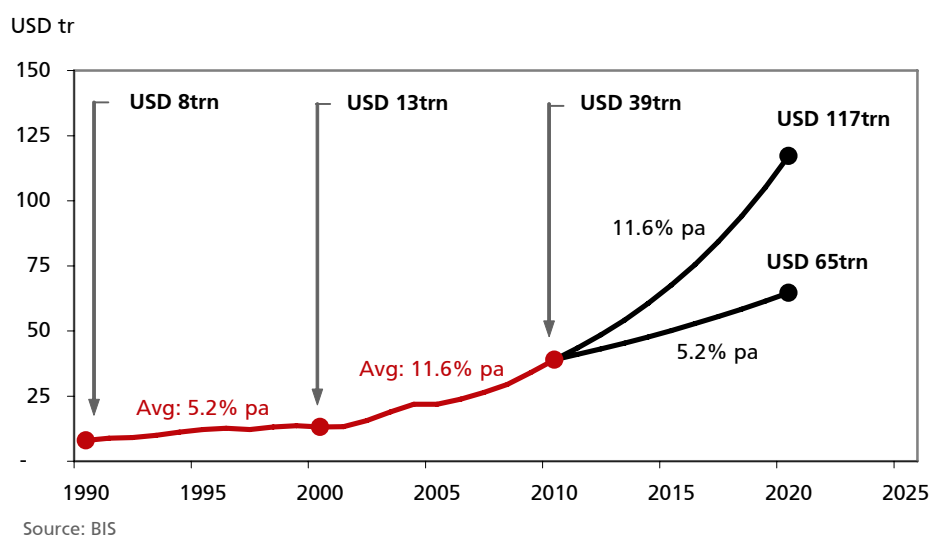
Total figures per market refer to bills and bonds issued by the central government and the central bank. Bonds issued by policy banks and state-owned enterprises are excluded.

Source: Asian Bonds Online

Trends in the global debt market

Total government debt outstanding globally (comprising central bank debt, central government debt, and other government debt) has tripled over the past ten years to USD 39 trillion and if history is any guide, the market is likely to grow at an average annual rate of somewhere between 5% and 12% in the coming 10 years. A 12% annual growth rate would be consistent with that seen on average between 2000 and 2010, while a 5% rate would be consistent with that seen on average between 1990 and 2000. Under the slow-growth scenario, 5% annual growth in debt would add USD 25 trillion to the current level of USD 39 trillion, boosting the outstanding total to USD 65 trillion. Under the fast-growth scenario, 12% annual growth would add USD 77 trillion to the current level of USD 39 trillion, boosting the outstanding total to USD 117 trillion.

World total of outstanding government bonds



Level & 10Y change in debt outstanding

Domestic debt securities

Govt bonds only, 12 largest markets

outstanding amounts in billions of US dollars

	2000 level	2010 level	chg
World	13,175	38,960	25,785
Japan	3,618	11,632	8,014
United States	4,106	11,152	7,046
China	111	1,623	1,512
Germany	596	1,724	1,129
France	595	1,700	1,106
Italy	970	1,934	963
United Kingdom	427	1,324	898
Canada	433	1,021	588
Brazil	262	829	567
India	112	608	497
Spain	268	629	362
South Korea	114	475	361
All of the above	11,610	34,653	23,043

Source: BIS Quarterly Review: 'June 2011

Level & 10Y change in debt outstanding

Domestic debt securities

Govt bonds only, Asia

outstanding amounts in billions of US dollars

	2000 level	2010 level	chg
Japan	3,618	11,632	8,014
China	111	1,623	1,512
India	112	608	497
South Korea	114	475	361
Chinese Taipei	46	157	111
Malaysia	28	128	100
Thailand	17	166	149
Singapore	25	103	78
Indonesia	51	82	31
Hong Kong SAR	15	31	15
Philippines	21	62	41
All of Asia	4,158	15,066	10,909
Asia ex Japan	540	3,434	2,895
Asia ex Japan & China	429	1,811	1,382

Source: BIS Quarterly Review: 'June 2011

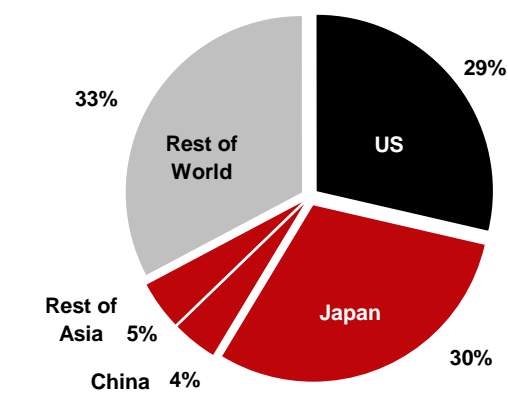
As shown in the left table at the bottom of the previous page, the bulk of the increase in debt over the past ten years is attributable to the rapid growth in the government debt markets of Japan, the US and Europe. The table on the right makes clear that the contribution from emerging Asia was small. Asian ex-Japan debt increased only by USD 2.924 trillion, of which USD 1.512 trillion was due to the increase in the Chinese debt market.

Essentially, Asia ex-Japan local currency government bond markets are still small, accounting for only 9% of the global total. Hence, even given the prospect for fairly high central bank issuance and stable government issuance, large increases in dollar terms relative to those in the G3 are unlikely over the next ten years.

Given that central bank issuance is likely to be the key growth driver, the expansion of Asia's domestic government bond market is unlikely to be much faster than reserve growth. In fact, it could grow more slowly, as central banks will absorb liquidity not just through debt instruments but also other liquidity management tools, like cash reserve ratios, etc. Nonetheless, growth of 8% a year would mean that the Asia ex- Japan market grows from USD 3.434 trillion in 2010 (BIS data) to USD 7.4 trillion in 2020 – a 116% increase, adding USD 4 trillion.

Asia's govt bond markets

outstanding amounts in billions of US dollars
Dec-2010

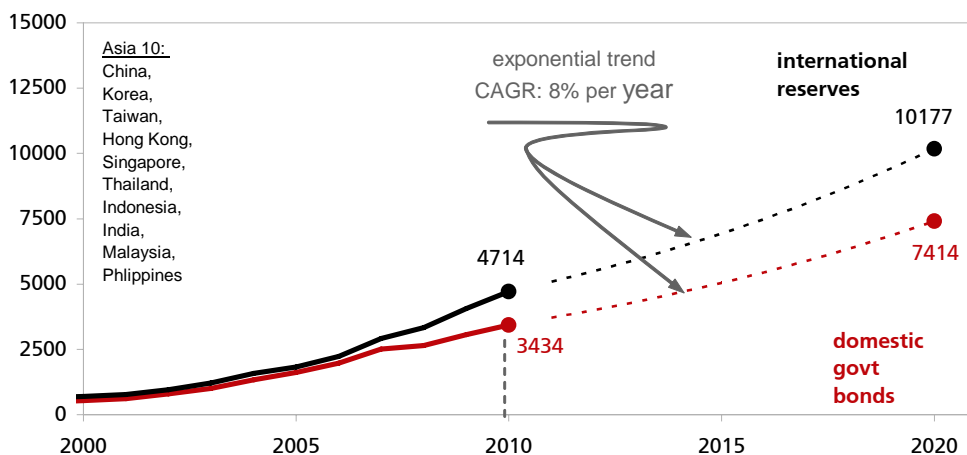


Source: BIS

That means that under a scenario of further substantial global net private capital flows to emerging markets over the next ten years, Asia's share of the global debt would likely increase. It is hard to imagine that a 116% increase in Asian debt would be matched by an equally large 116% increase in the debt of the rest of the world when there is a need to slow debt increases in the G3.

Asia ex-Japan domestic govt debt securities outstanding and reserves

in billions of US dollars



Source: BIS, Bloomberg

Conclusion

The Asia ex-Japan government debt market will likely double in size over the next ten years. Not because governments will run large deficits, but because balance of payments surpluses are likely to grow bigger before they start to fall. The region is likely to benefit from capital inflows which will more than offset expected declines in current account surpluses. As such, central bank issuance is likely to be the key growth driver for the Asian government debt market. To be clear, growth and wealth dynamics in emerging markets should diminish their trade surpluses and reserve growth will likely be slower than in recent years. Nevertheless, the incremental dollar growth between now and 2020 should be very substantial.

Is a doubling in debt bad news? Not really. Further substantial growth in Asian debt markets, if driven by central bank issuance would merely reflect BoP surpluses vis-a-vis the rest of the world and increases in international reserves. Of course, managing the inflows will be a challenge. There are costs associated with sterilization, and there are risks of asset bubbles, to name but two. But at the end of the day, capital inflow is one of the more pleasant problems to have.

Endnotes

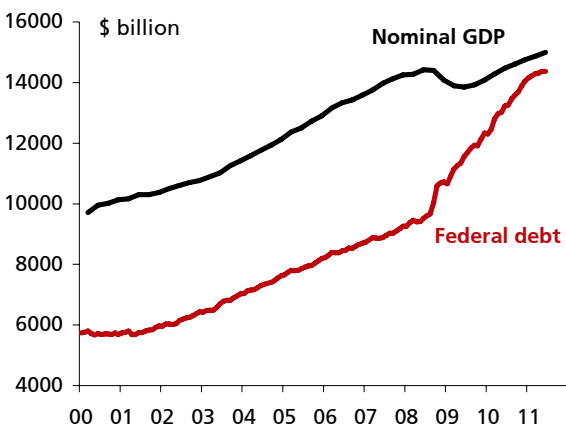
1 Bloomberg News, "Clinton Assures China That U.S. Will Reach Debt Solution", By Nicole Gaouette - Jul 25, 2011

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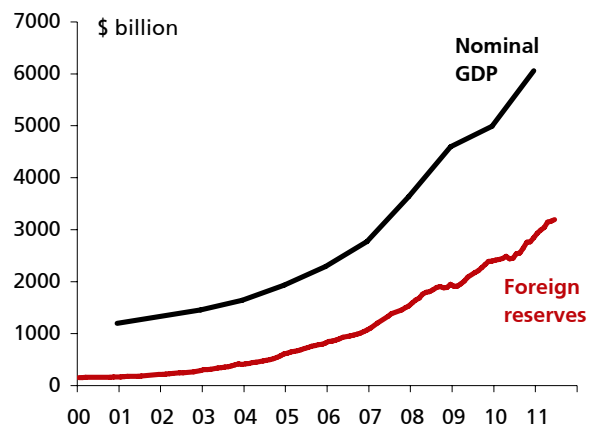
Currencies 2020

- The post-crisis global currency system faces three key challenges over the next decade
 - USD cannot maintain its dominance without a loss of credibility
 - CNY cannot be international without a more open capital account and a more market-determined exchange rate
 - EUR cannot unshackle itself from the sovereign debt crisis without fiscal integration
- Global imbalances and reforming the global currency system are different aspects of the same problem
 - The world economy needs cooperation on a G20 level to prevent a currency and trade wars
 - China and surplus emerging economies will be urged to allow more currency appreciation and to spend more
 - US and other deficit/debt ridden advanced economies need to save more and deliver credible fiscal consolidation plans
- CNY internationalization will be carried out in two stages
 - CNY to become the fifth SDR currency by 2015
 - CNY to account for 5% of world’s foreign reserves by 2020
- After Hong Kong, the next offshore CNY center should seek synergy with Southeast Asia
 - China-Asean FTA was launched in 2010
 - Asean Economic Community will be launched in 2015
- CNY and Asian currencies to become more prominent

US – slower economy, higher debt



China – fast FX reserves, faster economy



The difficult post-crisis global exchange rate landscape

There are no quick and easy answers to the structural problems and challenges confronting global currency markets after the 2008/09 global financial crisis.

Forty years after the end of Bretton Woods system in 1971, record high gold prices and the loss of one of US's AAA debt rating are questioning if today's market-determined exchange rate system, centered around the USD, is sustainable. The weakness associated with the dominance of the USD was best demonstrated during the global crisis, when the near collapse of the US banking system led to a meltdown in world economic, financial and trade activities.

The other uncomfortable truth is that all four currencies in the IMF Special Drawing Right (SDR) – USD, EUR, GBP and JPY – are suffering similar fiscal deficit and sovereign debt problems, as well as downgrades in their long-term foreign currency debt ratings/outlooks. Of these four key world reserve currencies, the two most liquid reserve currencies – USD and EUR – face the most serious credibility issues.

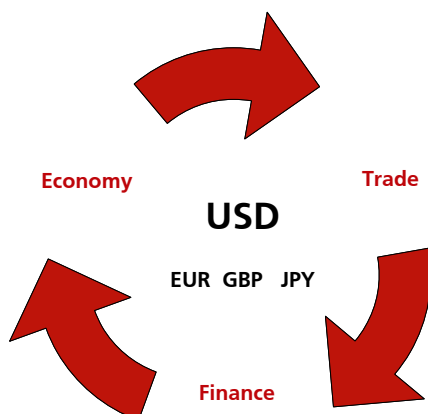
The present-day fiat paper currency system is built around the credibility of the USD, which has steadily eroded over the past decade. Following the US corporate accounting scandals in 2001/02, the US financial crisis in 2008/09, and Standard & Poor's removing US's AAA debt rating in August 2011, global investors no longer blindly believe that America has the best practices in the corporate, banking and fiscal sectors in the world.

The sovereign debt crisis that started in the EU peripheral nations is a symptom of an inherent structural problem in the EUR. The single market has a single (ECB) interest rate and a single (EUR) currency, but no unified fiscal policy. Member countries that joined the monetary union had to give up their currencies for the EUR, at an agreed fixed rate to the single currency, which they have pledged to uphold via the Maastricht Criteria. Ergo, the fiscal austerity measures that have been exacted on weaker members to defend the EUR. A fiscal union would allow greater latitude for rebalancing via stronger countries helping the weak.

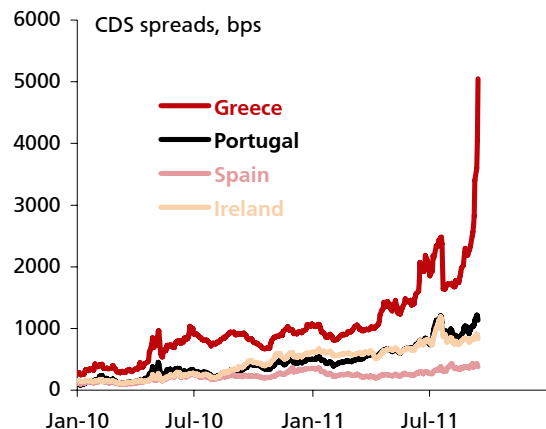
With the indebted advanced economies constrained by fiscal deficits, surplus-led emerging economies have been urged to play a more active role to support the world economy. Put simply, advanced economies need emerging economies to leverage while they deleverage. There exists, however, one problem. Major economies are open on the capital market, set interest rates and favor markets to set exchange rates. On the other hand, most emerging countries still prefer managed float exchange rate regimes.

To ensure a sustainable path for the world economy, both sides need to find common ground here to avoid turning a currency war into a trade war.

A more vulnerable world after the 2008 global crisis



EU sovereign debt crisis



Persistent global imbalances

US's bilateral trade balances, \$ bn

	2000	2010
Overall	-377	-500

Top deficits

Region	2000	2010
China	-84	-273
OPEC	-48	-96
EU	-59	-80
Japan	-82	-60

BRIC economies

Region	2000	2010
China	-84	-273
Russia	-5.6	-20
India	-7.0	-10
Brazil	+1.5	+12

DXY currencies

Region	2000	2010
EUR*	-59	-80
JPY*	-82	-60
CAD	-51.9	-29
SEK	-5.0	-5.8
GBP*	-1.8	-1.4
CHF	-0.2	+1.6

* also SDR currencies

Today's US-China imbalances is not a new development. Addressing imbalances via market-determined exchange rate adjustments has been the norm since the end of the Bretton Woods system in 1971.

The dominance of the USD in the global financial system has an inherent tendency to link the well-being of the world economy to US spending. Ergo the saying, "When America sneezes, the rest of the world catches a cold." More often than not, the world economy tends to retreat after US real interest rates increased sufficiently to restrain domestic demand in the US private sector.

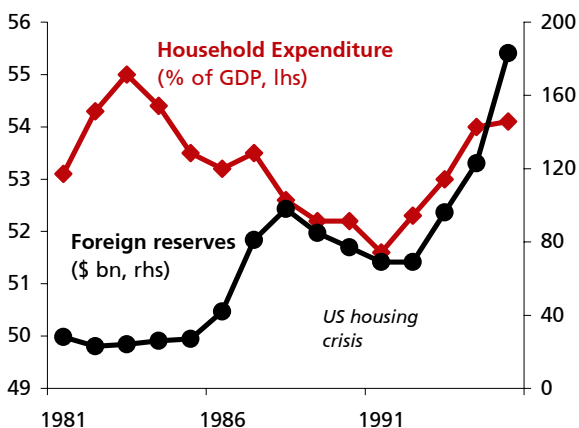
Not surprisingly, recoveries from world recessions often required the US to lead with an fiscal stimulus and interest rate cuts. Once the US-led global recovery was underway, the US trade deficit would start to widen again alongside the revival in private sector activities. Left unchecked, the persistent deterioration in the twin deficits would undermine the long-term credibility of the USD. At this stage, America would start to think about fiscal consolidation. To ensure that this (contractionary) process did not undermine world growth, large and strong surplus economies were urged to allow more currency appreciation as well as to steer their economies towards domestic demand for growth.

While the US has remained the principal deficit country, the surplus countries facilitating the above adjustment process have changed over time, from Japan during 1985-95 to China from 2003. One thing, however, did not change. America sought a weaker USD against the JPY then, and a stronger CNY today. Between the two, there was more success with Japan than China.

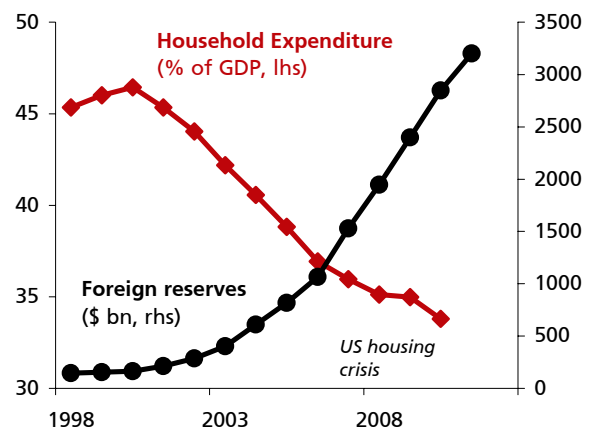
As a G7 member, Japan supported the US-led effort to weaken the greenback globally via the Plaza Accord in September 1985. Japan also shared the same impossible trinity as its SDR peers – full capital account convertibility, set policy interest rates and, except in extraordinary circumstances, respected markets in determining the yen exchange rate. Conversely, China was not a G7 member and favored actively managing both its exchange rate and interest rates via a closed capital account. To engage China, the G20 replaced the G7 as the chief international economic/financial forum in 2009. To address the second challenge, China has set in motion a process to internationalize the CNY over the next decade.

One thing Japan and China had in common was that household expenditure (HHE) fell as a proportion of GDP during the first episode of currency appreciation. Japan's HHE/GDP ratio only turned up after the US housing crisis in the early 1990s, with emerging Asia leading world growth. Similarly, China's 12th Five Year Plan also aims to boost HHE/GDP in 2011-2015 which is likely to be, once more, accompanied by fast growth in emerging Asia.

US-Japan imbalances (1980s to 1990s)



US-China imbalances (2000s to 2010s)



Internationalizing the CNY

Unlike the first CNY appreciation episode (2005-2010), the present episode is likely to last longer, with the internationalization of the CNY dominating as the major global currency theme in the next ten years into 2020.

- The first five years will seek to establish the CNY as the fifth currency in the IMF Special Drawing Right (SDR) in 2015.

To achieve this, China has started to make the CNY a more market-determined exchange rate as well as more convertible on the capital account. The former will need to be reflected by more appreciation in the CNY which the IMF considered undervalued based on China's large surpluses and strong fundamentals. The latter will be reflected by China's incremental willingness for foreign investors to access the onshore CNY.

To promote the use of the CNY as a medium of exchange and a store of value offshore, China has been actively promoting more trade settlement using the CNY as well as encouraging the development of the CNY bond market.

- In the latter five years, the CNY has potential to account for 3-5% of the world's foreign reserves by 2020.

With the CNY in SDR, China will have become sufficiently open on the capital account for some emerging countries to include the CNY into their reserves. Some of the countries that have expressed interest here included South Korea, Russia, Malaysia, Indonesia, the Philippines, Nigeria and Chile.

The achievement in the first episode of CNY appreciation in 2005-2010 was more about establishing China's economic pivotal role in the world economy. The G20 established the importance of not only China, but also the emerging markets to the post-crisis economy. China's economic eminence was highlighted by two key events in 2010. First, the Chinese economy overtook Japan in size. Second, China's voice in the IMF was significantly increased; its votes was the third largest and marginally below that of Japan.

The current episode over the next decade (2010-2020) is more about increasing the CNY's role in the global currency system. The 12th Five Year Plan will be about shifting China's economy more towards domestic demand. After the 2008 crisis, China already overtook the US in several markets. It was reported in July 2010, January 2011 and August 2011 that China became the world's biggest energy consumer, the largest auto market, and the top personal computer market respectively. The internationalization of the CNY should also be viewed as part of China's effort to address the inconsistency between an increasingly multipolar world economy and a global currency system dominated by the USD.

CNY – the first episode (2005-2010)		CNY – the next episode (2010-2020)	
Jul-05	CNY de-peg	Jun-10	CNY de-peg
2006-10	11th Five Year Plan	2011-2015	12th Five Year Plan
Achievements	Global imbalances	Goals	Reforming global financial sector
Sep-09	G20 replaced G7 as the world's chief global economic/financial forum	2015	China to become fifth SDR currency
2010	China overtook Japan as world's second largest economy		A more international CNY
	China has third largest vote in IMF		Capital account convertibility
		2020	CNY accounts for 5% of world's foreign reserves

Asianizing the CNY via offshore CNY centers

The most discernible difference between 2005-08 and today's CNY appreciation is the launch of the offshore yuan center in Hong Kong in July/August 2010.

This is a significant development when viewed against the structural constraints on the US economy after the 2008 global crisis. First, deleveraging has yet to run its course in the US banking/property sectors. Second, the US government is facing growing political pressure to rein in both the fiscal deficit and the federal debt.

Effectively, these two developments hamper America's ability to keep spending and supplying US dollars to support world economic, trade and financial activities without jeopardizing itself. The loss of one of US's triple-A government debt rating in August 2011 was a case in point.

More than ever, America needs surplus economies, namely China, to step up domestic spending to relieve the USD's role in supporting the world economy. For China, the message from the US is increasingly clear that a stronger CNY is necessary to keep trade and investment open in the US. For China, a deleveraging US economy has two implications. Apart from the urgency to seek and bolster new markets, there is also the need to safeguard against possible shortfalls in trade finance from slower US spending.

To address these new post-crisis realities, it was no coincidence that China launched the CNY trade settlement scheme in July 2009, freed the CNY peg in June 2010, and launched the offshore yuan center in Hong Kong in July/August 2010.

Apart from Hong Kong, other second-tier offshore CNY sub-clearing centers are also likely to emerge, mostly in Asia. The region not only has the capacity to grow because of surpluses, but has also the large pool of foreign reserves to diversify into the CNY after 2015 into 2020.

Between December 2008 and June 2011, East Asia accounted for about 85% of the bilateral currency swap agreements set up by China. As for the new growth markets, China is probably eyeing Asia, namely ASEAN. After all, the China-ASEAN Free Trade Area (CAFTA) launched in January 2010 is the largest free trade area in the world. The ASEAN Economic Community is also scheduled to be established in 2015, the same year the CNY is expected to become a SDR currency.

Of the Asian economies, Singapore has indicated interest to become the second offshore CNY center. Like Hong Kong, Singapore is considered an international financial center. While Hong Kong benefits from its geographical proximity to China, Singapore is centrally located in ASEAN. Singapore also shares the same policy bias with China to promote continuity and renewal, as well as experience in managing a mostly appreciation exchange rate policy.

China's bilateral currency swap agreements

Trading partner	CNY bn	Date	Period
Hong Kong	200	20-Jan-09	3 yrs
South Korea	180	12-Dec-08	3 yrs
Singapore	150	23-Jul-10	3 yrs
Indonesia	100	23-Mar-09	3 yrs
Malaysia	80	08-Feb-09	3 yrs
Argentina	70	02-Feb-09	3 yrs
New Zealand	25	18-Apr-11	3 yrs
Belarus	20	11-Mar-09	3 yrs
Mongolia	5.0	06-May-11	3 yrs
Iceland	3.5	09-Jun-10	3 yrs
Kazakhstan	1.0	13-Jun-11	3 yrs
Uzbekistan	0.7	19-Apr-11	3 yrs
Total	835		

Sources: DBS Research, Reuters (as at Aug 31, 2011)

China is more proactive in promoting CNY in HK

	CNY deposits in HK		CNY bonds*	QFII	
	CNY bn	# banks**		Units	USD bn
2004	12	38	–	26	3.5
2005	23	38	–	33	5.7
2006	23	38	–	51	9.1
2007	33	37	10	51	10.0
2008	56	39	12	74	13.4
2009	63	60	16	93	16.7
2010	315	111	36	106	19.7
2011	554	128	–	113	20.7
Latest	Jun	Jun	–	Jun	Apr

* New CNY bonds issued in HK; ** licensed banks

Reforming the global currency system

In our opinion, China is not seeking to replace the USD with the CNY as the next dominant reserve currency in the world.

In targeting the CNY as a SDR currency in 2015 and for CNY to account for 5% of world's foreign reserves by 2020, China is leading the way to better represent the global currency system in an increasingly multipolar world economy. Why?

In the last decade, between 2000 and 2010, Asia10 economies expanded 2.4 times, quadruple the 0.6 times increase in the G3 economies. By 2010, Asia10 economies totaled more than \$10 trillion, and were collectively, more than double Japan and almost as large as Eurozone itself. This was an amazing feat considering that back in 2000, Asia10 was not only smaller than Japan, but also only half of Eurozone.

Given China's success in growing its economy, by almost five times to become the world's second largest economy over the 2000-10 decade, it was only appropriate that the CNY represents emerging economies as the first truly international currency. Until this happens, central banks have little choice but to continue diversifying foreign reserves away from the USD. Unfortunately, this is easier said than done. Alternative reserve or SDR currencies – EUR, GBP and JPY – were also hard hit by the 2008 global crisis. Like the USD, none of them fully satisfies the four criteria – liquidity, safety, stability and returns – used to allocate reserves.

Not surprisingly, some central banks have ventured beyond these traditional reserve currencies, and started to allocate more reserves into other non-traditional currencies. Many believe that the AUD has emerged as such a reserve currency for several reasons. First, Australia is a major beneficiary of China's demand for commodities. Second, a persistently ultra-loose US monetary policy increases the allure of the AUD as a high yielding currency. Third, Australia has a AAA long-term foreign currency debt rating that compares favorably to the fiscal deficit/public debt worries in the SDR currencies. Finally, the AUD is a market-determined exchange rate.

Then again, reforming the global currency system is not simply about reducing its dependence on the USD. The objective of a currency system is also to ensure a sustainable world economy by addressing global imbalances. It is as much about surplus economies spending more, as it is about deficit countries saving more. While emerging economies are looking for currencies to diversify into, major economies are wondering why they are building reserves. Nonetheless, this is hard to achieve when exchange rate regimes in surplus-led emerging economies are less flexible compared to those in the advanced economies weighed down by debt. In this regard, China's plan to internationalize the CNY is a step in the right direction. The US must also complement China by working towards a credible fiscal consolidation plan for the medium-term.

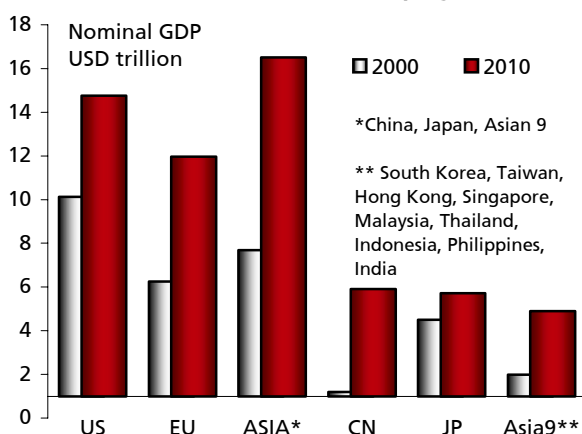
- G3 economies**
- US United States
 - EU Eurozone
 - JP Japan

- Asia10**
- Northeast Asia +
 - Southeast Asia + India

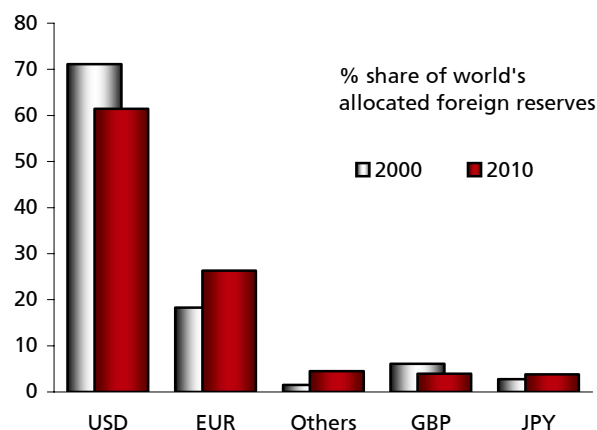
- Northeast Asia**
- CH China
 - HK Hong Kong
 - TW Taiwan
 - KR South Korea

- Southeast Asia**
- SG Singapore
 - MY Malaysia
 - TH Thailand
 - ID Indonesia
 - PH Philippines

2000-2010: Asian economies on top again



2000-2010: USD still dominates global fin system



2010-2020 – East and West trading places

Nominal GDP, \$ bn

Region	2000	2010
China	1199	5900
Japan	4497	5712
SE Asia	545	1698
NE Asia	1021	1666
India	418	1534
All Asia	7680	16510
US	10130	14755
EU	6251	11963

Private consumption expenditure, \$ bn

Region	2000	2010
China	554	2004
Japan	2520	3368
SE Asia	285	938
NE Asia	552	941
India	376	967
All Asia	4287	8219
US	6981	10417
EU	3519	6990

Notes

SE Asia: Singapore, Malaysia, Thailand, Indonesia, Philippines
 NE Asia: Hong Kong, Taiwan, South Korea
 All Asia: China, Japan, SE Asia, NE Asia, India

For the US and Eurozone, the landscape after the 2008/09 global financial crisis looks very much like the one Asia faced after the 1997/98 Asian crisis.

- After the 1997/98 Asian crisis, the US, with its strong USD policy, became the growth pole of the world. This helped Asian countries to deleverage and mend their balance sheets, and return them to a path of growth.
- After the 2008/09 global crisis, China, with an appreciating CNY policy, is urged to boost domestic demand. This will help lead emerging markets to underpin world growth, which in turn, will allow America and Eurozone greater latitude to deleverage and restore fiscal responsibility.

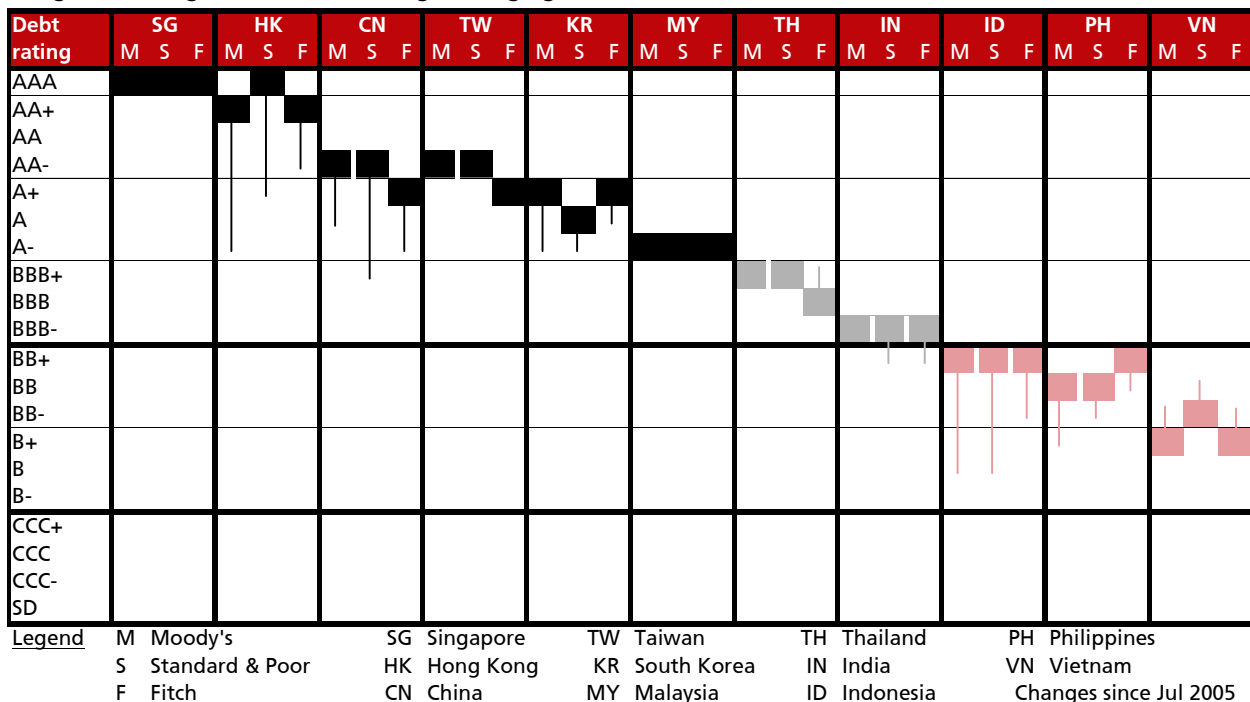
The reversal in the fortunes of the advanced economies and emerging Asia was probably best reflected by their sovereign debt ratings (by Moody's, Standard & Poor's and Fitch) heading in opposite directions.

- Indonesia, the worst hit country during the Asian crisis, is one step away from investment grade after multiple upgrades. Greece, the worst hit EU economy, not only lost its single-A status, but is now considered a high default risk.
- In the triple-A space, Hong Kong joined Singapore as the only Asian countries with at least one AAA sovereign debt rating. Interestingly, both countries are key financial centers in Asia, and seek greater participation in China's offshore CNY business.

In the advanced economies after the global crisis, Japan lost its only AAA rating, while the US lost one of its AAA rating. European countries that lost all three AAA ratings were Spain and Ireland. Moody's not only stripped Ireland and Portugal of their AAA and AA debt ratings respectively, but also relegated them to junk bond status.

The performances of the above ratings send one important message. Advanced economies are fiscally constrained to support world growth. Those who attempt to do so risks further downgrades in their debt ratings. Emerging economies, with their improving debt ratings, have greater flexibility to boost domestic demand.

Long-term foreign current debt rating - Emerging Asia



Asian countries that succeed in achieving a higher growth path with stable inflation and sound fiscal finances are likely to be rewarded with higher sovereign debt ratings.

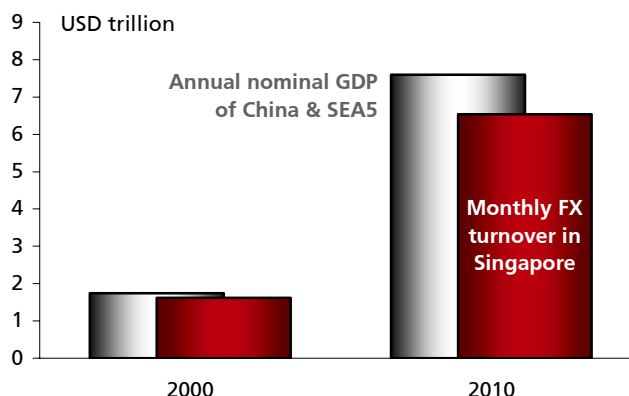
In Asia, we believe that Southeast Asia is better positioned with a better track record than Northeast Asia in supporting China to become Asia’s fastest growing consumer market.

Between 2000 and 2010, private consumption expenditure in Southeast Asia expanded 3.3 times, which was not only close to the 3.6 times seen in China, but better than Northeast Asia’s increase of 1.7 times. Against these numbers, it is important to recognize that the China-ASEAN Free Trade Area (CAFTA) launched in January 2010 is the world’s largest FTA in terms of population. In nominal GDP terms, CAFTA is the third largest FTA after the North American Free Trade Area (NAFTA) and European Economic Area (EEA). In seeking to establish the ASEAN Economic Community in 2015, Southeast Asia is also actively pursuing regional economic integration, and to transform itself into a region with free movement of goods, services, investment, skilled labour and freer flow of capital.

Apart from China’s economy overtaking Japan, there were also other notable shifts in East Asian economies in 2010. Nominal GDP in Southeast Asia surpassed Northeast Asia too. Between the two financial centres in the SEA5 and NEA3, Singapore’s economy also overtook Hong Kong. Countries and regions that expanded faster here generally experienced more currency appreciation too.

Over the previous decade, Singapore has consistently grown with the region (China and SEA5) to become a key foreign exchange centre in the world and in Asia. Hence, Singapore is well-positioned to play a key contributory role to internationalizing the yuan as an offshore CNY centre in Southeast Asia.

Singapore's rise as an international forex center is linked to growth in China and Southeast Asia



Long-term foreign current debt rating - Advanced economies

Debt rating	US			JP			UK			SZ			GE			FR			IT			SP			IE			PT			GR					
	M	S	F	M	S	F	M	S	F	M	S	F	M	S	F	M	S	F	M	S	F	M	S	F	M	S	F	M	S	F	M	S	F			
AAA																																				
AA+																																				
AA																																				
AA-																																				
A+																																				
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Legend M Moody's US United States SZ Switzerland IT Italy PT Portugal
 S Standard & Poor JP Japan GE Germany SP Spain GR Greece
 F Fitch UK Utd Kingdom FR France IE Ireland Changes since 2008

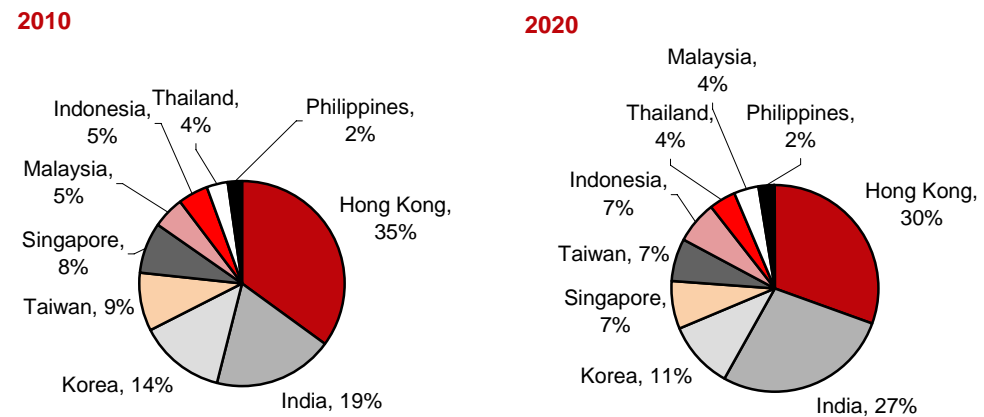
Asia equity 2020

- Asian market capitalisation to expand 4-fold in the next 10 years
- 12% average return per year is realistic, brought about by opportunities in Asia's structural growth story of urbanisation, young population growth and rising middle income class
- Focus on the largest market which is China, and the fastest growing which is ASEAN
- Consumer agribusiness, food retail, automobiles, housing, and energy are key sectors to benefit from "people power" in Asia

Sizing the market

We expect Asian market capitalisation to expand by 4 times in the next 10 years, achieved by higher share prices supported by earnings growth and an increase in new and secondary offerings. Fastest growth will be seen in Indonesia's and India's market capitalisation.

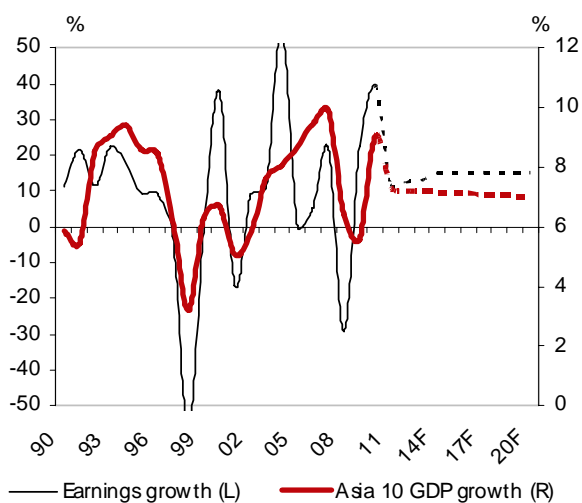
Fig. 1: Asian market cap as of 2010 and 2020 projection



Earnings growth is a function of real GDP growth

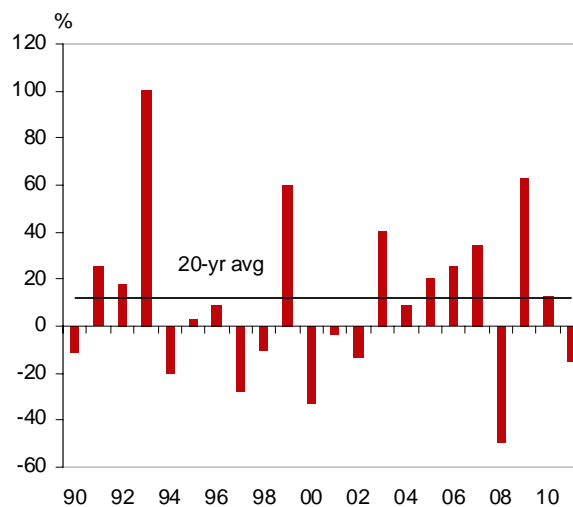
Asian equities have achieved an average return of 12% in the past 20 years (1990-2010), albeit with volatility. In our view, it is certainly not ambitious to expect the same level of return to be achieved in the next 10 years as real GDP is expected to grow at 7% per annum. Asian corporates are diversified across many sectors with demand derived both domestically and externally. Barring any cyclicity in earnings, structural factors like population growth, urbanisation, rising numbers of working class adults etc should all help to underscore consistent earnings growth going forward.

Fig. 2: Asia GDP and earnings growth



Source: IBES, Datastream, DBS

Fig. 3: MSCI Asia ex-Japan annual returns in local currency



Source: Datastream, DBS

Asian companies breakdown by sector

We expect market cap for companies in the domestic sectors such as consumer discretionary, materials, financials and consumer staples to grow faster than the other sectors. As more Asians enter the work force, rising disposable incomes will create incremental demand for staple and discretionary items, dreams of owning that first car, and home purchase will be within reach for millions across Asia. The increased demand for infrastructure also bodes well for the expansion of the materials sector, which includes cement, copper, steel, chemicals and refineries.

New offerings

Out of the 3x increase in market cap size expected over the next 10 years, we expect one third to be derived from new company listings. Market cap as a % of GDP is currently low (Note 1), indicating there is room for further capital market development. New listings will be created out of sectors where there is strong end demand.

We believe there are opportunities for investors to participate in Asia's structural growth story. Consistent domestic growth should help offset the cyclicity brought about by maturing industrialised economies like Singapore, Taiwan and Korea. Abundant liquidity from high savings rate in Asia should find itself reinvesting into Asia's growth to provide for pension and retirement benefits, which could surface as a problem in the next decade.

Note:

(1) We do not agree with using market cap / GDP as a valuation matrix to gauge if the overall market is expensive. Foreign funds park their monies in Asia as growth is scarce elsewhere in the developed markets. More foreign companies are also listing in Asia to tap on the abundant liquidity. As a case in point, Chinese entities listed in Hong Kong have pushed up market cap / GDP, not to mention the listing of global stocks like Prada, MGM, Sands, Glencore etc in Hong Kong. Liquidity in Asia is 2.8 times of the US when measured using M2 / GDP ratio.

Demographics terminology (Note 2)

Asia is home to 60% of the world's population. As a result of rising economic growth in Asia, middle income class is rising that will give rise to significant potential within the region.

Urbanisation - the buzz word

The intended purpose of achieving higher income levels for a country is ultimately a higher living standard for its inhabitants. The level of urbanisation is thus related to income levels. Hence, urbanisation needs should be more targeted to move a country to a higher income level. The benefits of urbanisation includes better education, healthcare, clean water and safe sanitation, retail services which can be achieved through efficiency from clustering of firms to enjoy economies of scale, thus attracting more people to urban areas.

Fig. 4: The world's middle class population

	2009		2020	
North America	5602	26%	5863	17%
Europe	8138	38%	10301	29%
Latin America	1534	7%	2315	7%
Asia Pacific	4952	23%	14798	42%
Sub-Saharan Africa	256	1%	448	1%
MENA	796	4%	1321	4%
World	21278	100%	35045	100%

Source: World Population Prospects, The 2010 Revisions. UN

Fig. 5: Dependency Ratios from 2005 -2040

	2005	2010	2015	2020	2025	2030	2035	2040
CH	42	38	38	40	42	45	52	59
TH	44	42	41	42	45	49	54	58
VN	50	42	41	42	42	43	45	49
ID	51	48	46	44	43	44	46	49
IN	59	55	52	50	49	47	47	46
MY	58	54	51	50	51	52	53	53
SG	39	36	36	41	51	61	71	76
PH	68	64	60	57	56	55	54	52

Source: OECD Working Paper No. 285

Dependency ratio

Media reports periodically warn of low birth rates and high dependency ratios in fast developing Asian countries. However many of these countries still enjoy the so-called demographic dividend as these countries go through the population cycle of different fertility and mortality rates. The dependency ratio table below shows the ratio is still coming off for all countries - China, Singapore and Thailand till 2015, Malaysia till 2020, Vietnam and Indonesia till 2025 - before the ratio starts picking up. Implications on economic development are that : 1) there is still a young working population that would inspire growth; and 2) a rapid reduction in poverty as the dependency ratio shrinks gives families the means to save, accumulate and invest in their own well-being; and 3) the burden for old age provisions such as pension and healthcare which the western countries are faced with now would not be an immediate concern.

The demographic structure has implications on whether Asia will face the same fate. The burden to continuously provide employment for a growing young population for populous countries like China, India and Indonesia is high as social disorder like what happened in the Middle East may occur if youth unemployment rates are high. Sufficient pension and retirement benefit planning are needed so as not to ruin government finances in time to come as what is happening in the western countries now.

Note:

(2) This section is a summary from "People Power" by Asia 360, which will be published separately in the DBS Vickers Asia 2020 Report.

The rise of the Asian middle class

There is no standard definition or measurement for the middle class in Asia. We adopt the ADB and World Bank approach from looking at daily spending per person. Even by the more stringent measure of more than USD10, Asia Pacific today has a middle class of 525 million people representing 28% of the global middle class. Notably, this middle-class is projected to expand by more than three times its current size over the next decade to 1.74 billion people, making up 54% of the world's middle class population by 2020.

Middle class Asians do not constitute the majority of the population. The table below shows the growth in each of the spending group for the six target countries between 2010 and 2020. The more impressive augmentation occurs at the lower range of US\$4-US\$10 expenditure per day, especially for the emerging economies of Indonesia, Vietnam, India and China. At the same time, Malaysia and Thailand will see a more significant increase in the >US\$10 expenditure per day range. The growth of the upper middle class in China will also be impressive in terms of sheer size with an increase from 80 million in 2010 to 208 million people in 2020.

Asia's middle class is similar to the rest of the world's: it is disproportionately urban, better educated and has smaller families. Smaller households will shape the nature of housing demand. Fewer children give middle class parents a greater ability to afford quality education for their children. More women would also be freed up to rejoin the workforce and families would have more opportunities for savings, personal consumption and investment in health, nutrition and schooling.

Asia's new middle class may not be as wealthy as the western middle class, but the critical mass would put incremental demand growth at a size which is 3 times higher than the west. The urban lifestyles of the rising middle class in Asia will invariably deepen demand across a wide range of goods and services and at the same time give rise to new markets, new consumers and innovations.

Discretionary consumption requires per capita GDP levels to go past tipping points. Historically, consumption of automobiles, travel and education rises when GDP per capita reaches US\$3,000. At US\$4,000, the middle class begins to dominate overall consumption and drives growth in "quality-of-life" consumption. While these vary by country, the important point to note is that faster economic growth is pushing many countries going past such tipping points, leading to an acceleration in consumption patterns. By 2020, only Philippines is likely to have a per capita below US\$4000.

Fig. 6: Middle Class Projections by Percentage, Six Target Countries

Economy		India		China		Indonesia		Malaysia		Philippines		Thailand	
Year	Spending group	2010	2020	2010	2020	2010	2020	2010	2020	2010	2020	2010	2020
Percentage of Population (%)	\$4-10	34	54	26	37	22	32	40	44	35	41	44	49
	\$10-20	1	2	4	10	1	1	5	10	6	10	8	12
	>\$20	-	1	2	5	-	1	4	8	2	4	4	6

Source: Asia360 estimates based on ADB, Key Indicators for Asia and the Pacific 2010. ADB: Manila. 2010

Asian equities markets in 2020

Singapore stock market's long term return is restricted by its demographics

Singapore's average stock market performance in the past 40 years was the second lowest in the region. It is not without coincidence that it has the smallest population among the Asian countries. Singapore also has the highest GDP per capita among Asian countries and is the only one that is higher than the US. Urbanisation rate in Singapore is almost 100%.

Singapore's high income also doesn't allow for rapid growth in the next 10 years. DBS' economists are forecasting that GDP growth will trend lower towards 3.5% from the 4.5% average in the past 10 years. Indeed Singapore has to keep re-inventing itself to keep up with the high growth rates. Policies like diversifying Singapore's industry base, rejuvenation of Singapore as a major tourist destination, establishing Singapore as a global wealth management centre have managed to sustain growth. Repeat innovation, improving productivity, and tapping regional opportunities are ways for Singapore to move forward.

Growth in Singapore has to be externally driven, which exposes the Singapore economy to external cyclical. Likewise for the stock market as more than half of Singapore's stock market capitalisation is made up of cyclical industrial stocks. Big cap domestic property and banking stocks have to look outside Singapore for regional expansion due to the small Singapore market.

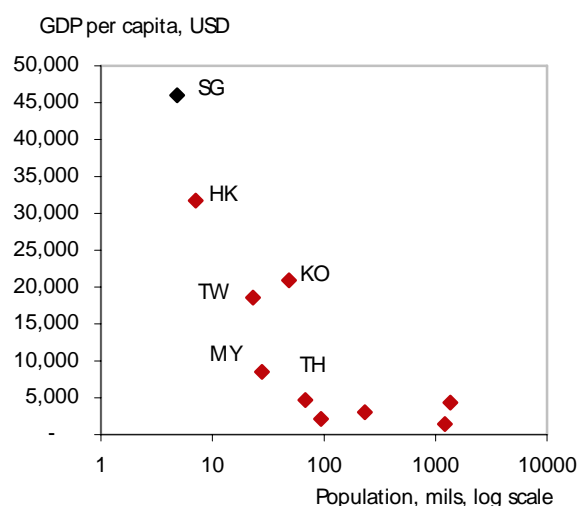
Singapore's stock market return has derated over the last 3 decades. We see the de-rating trend to continue if the long term GDP growth is to trend down. We envision winners in the next decade to be companies that can buck this trend.

In the midst of the last global financial crisis in 2008-09, Singapore's Prime Minister established an Economic Strategies Committee (ESC) in May 2009 to develop strategies for Singapore to maximize opportunities in a new world environment.

Among the ESC's key recommendations, it articulated the need to "deepen capabilities among Singapore companies to seize opportunities in Asia". The committee highlighted there are considerable opportunities in the next 5 to 10 years for local companies to grow into industry leaders in Asia.

We see immense opportunities for Singapore consumer-focused companies that can tap successfully into rising consumption trends in both the China and ASEAN markets. In our view Singapore companies are in a good position to leverage off both markets, benefiting from neighbourhood advantages with the largest and the fastest growing markets in the world closer to home.

Fig. 7: Asian market capSingapore - Smaller population, higher GDP per capita, but lower growth



Thailand's favourable demographics should override political risks

Thailand equity market has consistently delivered 20-30% returns in each of the decades save for the 1990s. It is the only country in ASEAN which has yet to re-touch its historical high. Despite political tensions over the years, the stock market has bounced back sharply each time from a crisis. The market consistently trades at a discount to the region and touched parity only recently.

We believe the Thai market should continue to trade at a discount to the region due to the history of political volatility in Thailand. Market cap expansion is driven by strong earnings growth and not P/E multiple expansion. DBS projects a higher GDP growth towards 6.5% by the end of 2020, mostly from domestic demand growth, driven by both investments and consumption.

Thailand is the next populous market in Asia ex-J after China, Indonesia and India. However, unlike these three countries, the exports sector had been the main growth contributor, thanks to its strong foothold in autos, electronics and agricultural sectors and the presence of Japanese investors in Thailand established during the early 1970-80s. The market is thus more cyclical than the other three.

Politics had been an impediment to strong domestic demand growth in the past. But Thailand has all the demographic dynamics for a demand pick up. Population is the fourth largest. Dependency ratio is one of the lowest in the region due to steeper declines in its birth rates, which is not expected to rise before 2015. This implies a larger proportion of economically active population over the next five years.

According to ADB estimates, Thailand has the highest proportion of middle income population in Asia and will see a more significant increase towards the highest income population by 2020. New consumers with money to spend on wide range of consumer goods are expected to surge.

Thailand's infrastructure spend has not been able to support the rising demand of the middle class. One of the most visible infrastructure bottlenecks is urban transport; Bangkok being notorious for its traffic congestion. Investment growth has to return to sustain its growth. Given its high ranking in ease of doing business (and thus a favourite for FDI flows) and good debt and fiscal position, the potential for Thailand is high if political stability returns as well.

We like Thailand's consumption plays as main beneficiaries of demand growth from the underlying favourable demographics trend.

Fig. 8: Infrastructure Expenditure Needs (2006-10)

Country	Total	Urban Sector (basic infrastructure) (\$ million)	Urban Sector (basic + other) (\$ million)
Indonesia	19,354	1,999	4,773
Malaysia	2,430	279	670
Philippines	7,299	1,044	2,505
Thailand	5,756	267	640
Vietnam	3,883	455	1,093
China	116,307	10,458	25,099
India	51,264	6,629	15,909

Source: ADB (2008), Managing Asian Cities, ADB, Manila.

Najib's vision for Malaysia 2020

Malaysia's PM has an economic transformation plan (ETP) with a vision to raise per capita income level from the current US\$8500 to US\$13,000 by end 2015. Accelerating land sales, infrastructure projects like construction of highways and MRT, oil and gas projects, establishment of the Iskandar region to attract foreign investments, and privatisations are part of the economic plan.

Malaysia was indeed the worst performing market during each of the past decades, linked to structural issues like Bumi laws and the confidence in the ruling government. FDI as a proportion of incoming FDI to the region (ex China) has been falling. The success of the ETP to be implemented in the next decade is crucial to restore investor confidence in the country.

We expect investments in Malaysia to drive growth in the next 10 years, supported by government project tenders from the ETP. Investment as a percentage of GDP, which has been falling over the last ten years since the Asia financial crisis is expected to recover.

Broad-based liberalisation in the services sector, completion of key economic corridors (i.e. Iskandar Malaysia), and private-public collaboration will essentially reinvigorate private investment.

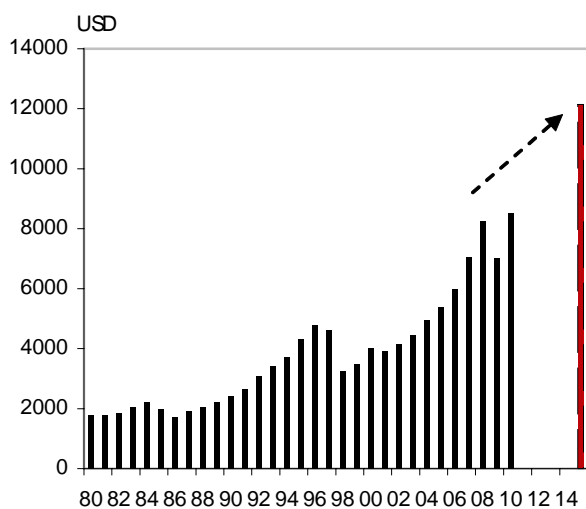
We believe the MRT project will have a lasting impact on improving standards of living in Malaysia and speed up the urbanisation process. By 2020 the first phase of the MRT line will be up and running. We like home builders with a large landbank along the MRT line, which should benefit from underlying demand for better standard of living in Malaysia.

Malaysia is also the largest palm oil producer in the world, which is an added advantage. We believe the palm oil sector is a long term structural story for food consumption in China. Singapore-listed Wilmar should be a key holding.

Industry representation in the stock market includes Banks, Plantations, Gaming, Construction and Property. Malaysia failed to establish strong foothold in the key resource sector except for plantations although it produces the most rubber in the world.

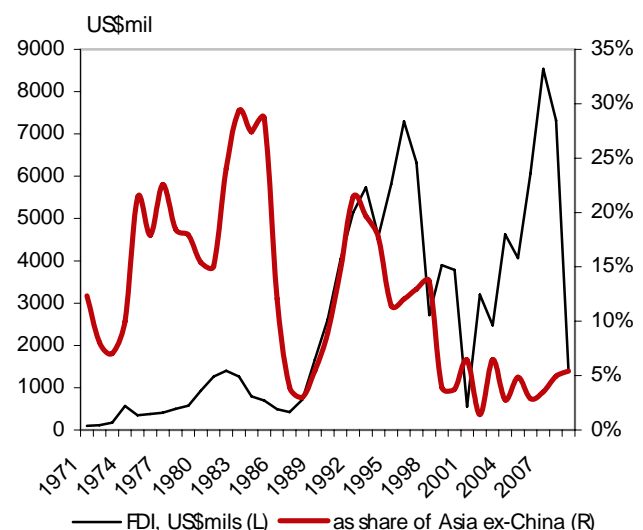
In fact Malaysia, like Thailand, has favourable demographic dynamics for private consumption growth. The rise in per capita will depend on the success of Najib's ETP.

Fig. 9: Malaysia GDP per capita



Source: Datastream, DBS

Fig. 10: Falling FDI to Malaysia (data till 2009)



Source: UNCTAD, World Investment Report 2010

Indonesia - making the most of strong regional commodity demand

Indonesia has the right formula for sustaining growth ahead. We are forecasting GDP growth towards 7.5% by 2020. Indonesia is the third populous market after China and India. Domestic demand is 90% of GDP which makes the economy less volatile than the other export markets. The economy is also blessed with rich resources such as coal, mining, natural gas and agricultural produce. The recent commodity boom on rising China consumption trend has led to rising income levels in Indonesia. Higher direct domestic demand in Indonesia has yet to be seen as GDP per capita remains 41 years to catch up with Singapore's.

Indonesia has the population as well as high growth rates to benefit from rising income levels. Indonesia exhibits characteristics in line with general observations on emerging markets that are presently reaping their demographic dividend. Dependency ratio is not expected to peak until 2025. By 2015, GDP per capita will cross US\$4000 where consumer discretionary spending will rise exponentially.

Our vision for Indonesia 2020 is a population with rising purchasing power. The stock market is well represented to ride on the theme with the consumer sector accounting for 28% of total market cap. These include supermarket chains, staple food manufacturers, auto stocks which can satisfy consumers over a large demand spectrum. Banks as a proxy to domestic demand also accounts for 32% of total market cap.

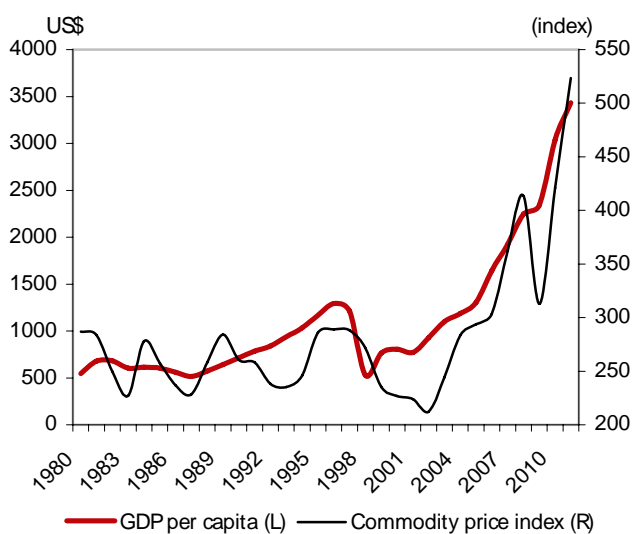
We also see Indonesia as a source of commodity supply for Asia's growing demand, primarily coal and palm oil. Both palm oil and coal industries are highly profitable. Through higher prices over the last five years, these have improved the livelihood of many farmers and miners, which make up a majority of Indonesia's population.

Indonesia currently accounts for 16% of world coal exports. Given the promising sector outlook on coal with resilient demand, and supply shortages due to sector consolidation and transportation bottlenecks, we expect coal miners to continue to enjoy strong pricing power and attractive earnings growth as a result of price and volume increases. Indonesian miners focus mainly on exports, which account for more than 80% of their production.

Indonesia accounts for 50% of world's palm oil production. This has benefited Asia's food manufacturers, as the proximity of access to this important food ingredient has led them to become key participants in the global food supply chain.

The majority of people in Indonesia currently live in rural areas. Given the low urbanisation rate, infrastructure spending will be enormous to meet the demand of the rapidly rising middle class population. The political will to make this happen is the key to bring this country to a higher income level at a faster rate. GDP per capita in Indonesia is the lowest in Asia after India.

Fig. 11: Indonesia GDP per capita vs commodity prices



China

China's domestic demand story has been well played out but this theme still has legs just from the sheer size of China's domestic demand. The two main drivers are government policy to boost domestic demand share of GDP by raising income levels, as well as the rapid growth in infrastructure and logistics which give rise to opportunities in newer cities. Focus should be on consumer demand deriving from higher income threshold of US\$4000, as well as the unleashed market potential in inner cities.

According to McKinsey Global Institute, in China, there will be 131 cities with more than a million people by 2025, of which 7 are megacities of more than 8 million people. Half of China's population will also be urbanised by 2015. These cities will be slated to become noteworthy economic centres in terms of wealth. Shanghai, Beijing and Guangzhou will be included in Asia's top 30 richest cities in 2025.

Demand for consumer discretionary, such as cars, property, luxury goods will be on an upward trend. It is estimated that total annual expenditure for middle income Chinese will increase by xxx between 2010 and 2020.

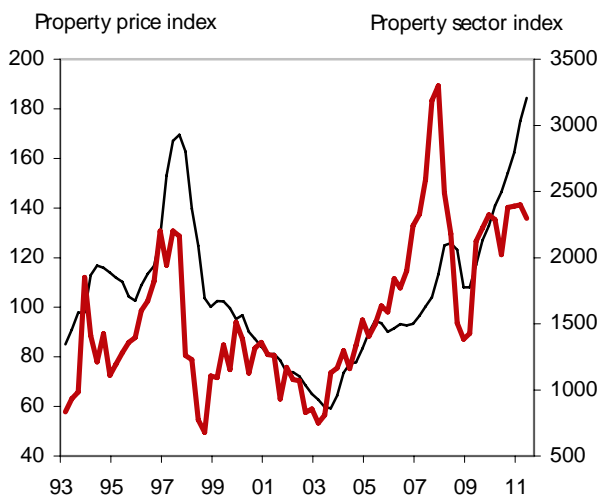
Competition in China, the world's biggest demand market, is intense and global players are eager to penetrate this market. Only companies with good management, large operating scale, efficient technology and logistics, financial muscle, and needless to say, strong know-how can succeed in gaining market share in this country.

Hong Kong

Hong Kong has the second smallest population in Asia. But the support from China is strong in many areas such as trade and finance, domestic consumption and liquidity flows, especially the latter.

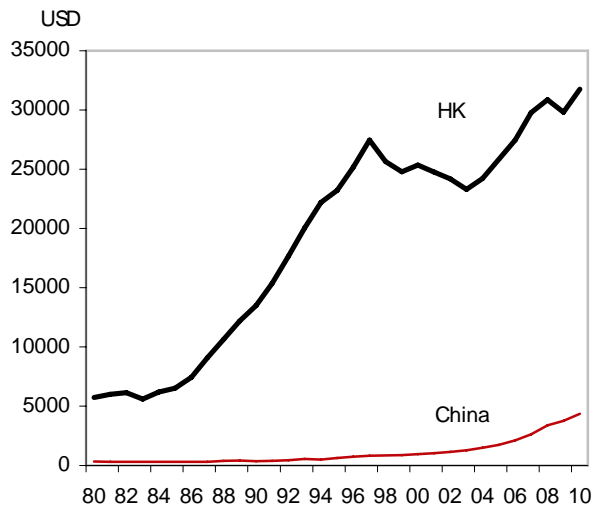
Chinese liquidity flows to Hong Kong remain an extraordinary phenomenon. Chinese migrants have aspirations for higher standards of living in Hong Kong as reflected in its higher GDP per capita level. Limited land supply will continue to sustain high Hong Kong property prices. Property in Hong Kong is a long term structural play for additional demand created by the existing wide income gap between Hong Kong and China.

Fig. 12: Hong Kong property price



Source: Datastream, DBS

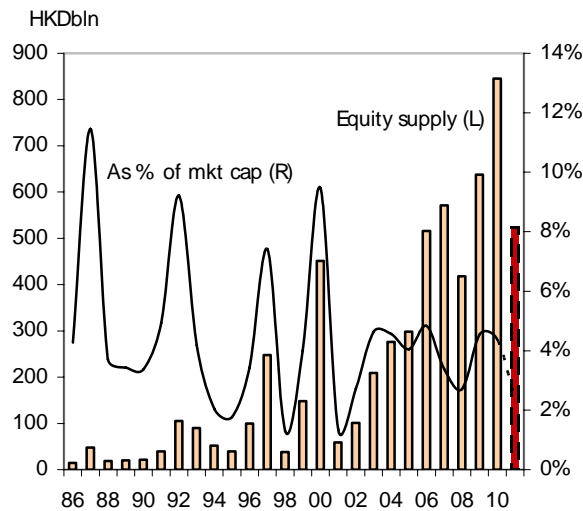
Fig. 13: Hong Kong vs China per capita GDP



Source: UNCTAD, World Investment Report 2010

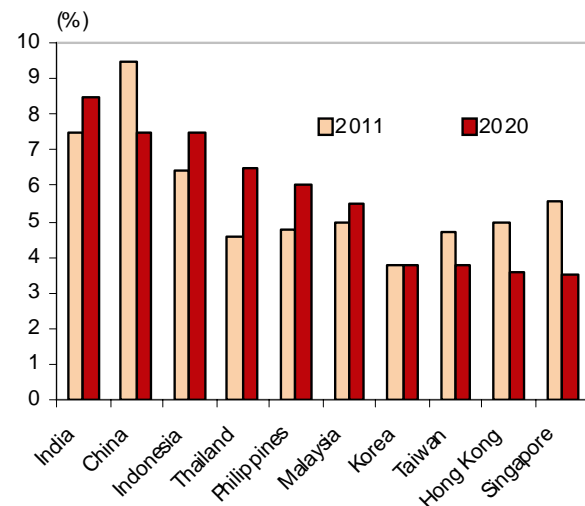
Hong Kong has also established itself as a hub for fund raising due to its strategic geographical location and well regulated banking sector. Since 1994 it has been the source of funding for Chinese companies and almost all economic sectors in China are represented in Hong Kong stock exchange. This year we see high profile listing of global players like Prada, Glencore, Sands, Prada which could set the trend for listing of global companies in Hong Kong.

Fig. 14: Hong Kong IPOs and placements



Source: HKEX, DBS

Fig. 15: GDP growth forecasts (2011 vs 2020) - India highest and the most improved



Source: DBS

India

The potential for India is in its favourable demographics and low base, which makes growth a given. However the rapid growth is also placing an enormous stress on existing urban infrastructure and services where investment needs will run into billions of dollars. India runs a high budget deficit which does not allow for a big infrastructure bill. Reform is very much needed to bring the society to a higher income level.

Despite a higher growth rate, India's per capita GDP will still be the lowest in the region in 10 years time. Only 3% of population will be in the higher middle class group vs 15% for China by 2020.

The big population simply means that there is a lot of untapped market potential in India. Strongest growth will be in the lower middle class group of US\$4 - 10 spending a day. Opportunity for India therefore lies in the consumer sector with a focus on consumer staples and lower priced discretionary items.

Reforms are badly needed in India to improve governance as well as to bring down inflation and narrow the fiscal deficit. India needs to maintain a high level of growth for sustainability given its increasingly high young adult population ratio. In the latest economic survey of India, OECD has recommended reforms in the following areas: 1) reduce administrative red tape; 2) transparency and accountability in public-sector governance; 3) strengthening anti-corruption efforts; 4) reductions in trade and FDI barriers; 5) strengthen fiscal discipline in the areas of subsidies, tax collections and a medium term rolling frame work; 6) more inclusive growth; 7) financial sector reform; 8) improving education access and quality; and 9) further promote international integration. While it seems like a tall order it is not implausible that India can work towards these reforms given its impressive past history of high growth.

Investment themes (By DBSVickers Research Team)

We identify consumer agribusiness, food retail, automobiles, housing, and energy as the key sectors to benefit from "people power" in Asia, focusing on the largest market which is China, and the fastest growth which is ASEAN.

Consumer agribusiness - palm oil and natural rubber sectors

Asia's agribusiness industry is huge. Spanning agriculture, aquaculture, poultry, feed mills, seed producers, to industrial forestry, the sector has expanded rapidly over the last decade and is expected to play a key role as one of the world's largest suppliers by 2020.

At DBSV, our key focus is on the palm oil and natural rubber sectors, for which we believe Asia is key - both as a producer and consumer. China, India, and Indonesia will contribute much of the demand growth, accounting for around c.40% of the world's population. Asia's competitive advantage stems from its large economies of scale and innovations in both productivity and product development.

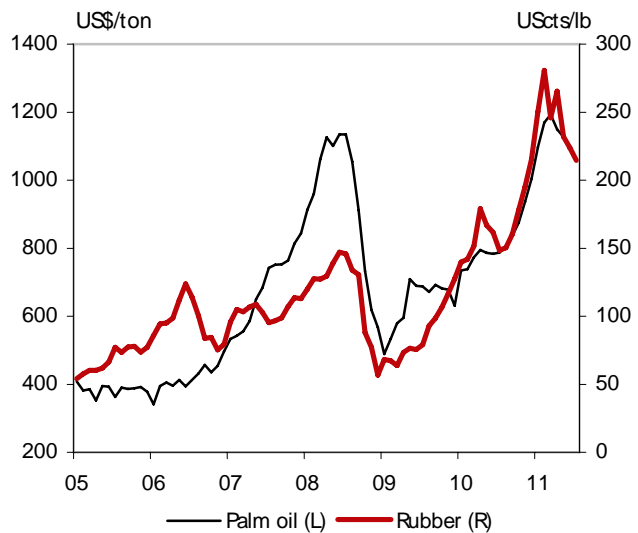
Globally, both palm oil and natural rubber are vital commodities with current annual sales of US\$41bn and US\$33bn

per annum, respectively and are expected to double by 2020. Asia will supply 86.3% of global palm oil supplies and 95% of global natural rubber supplies, primarily from Indonesia and Malaysia.

Global demand for both of the above commodities is expected to match or exceed supply, premised on demographic shifts and rising affluence of emerging economies. Palm oil and rubber prices have risen over the last five years. We see higher prices continuing well into the future on positive demographics and cost push factors while erratic weather conditions may increasingly restrict supplies.

Unlike the manufacturing industry, palm oil and rubber producers are primarily 'price-takers', given little product differentiation. Volume growth was the key driver in the past whereas players now opt for (1) expansion in both upstream and downstream; (2) expansion into other countries; (3) cost efficiency and higher yields; or (4) diversification into other crops to gain a competitive advantage over peers. We believe dominant players will take smaller competitors' market share simply through efficiency and better economies of scale. Our best pick is Wilmar International.

Fig. 16: Price of palm oil and rubber



Source: IFS, Datastream

Consumer: Food retail

We see food as a key proxy for Asian consumption, especially in the emerging markets, while retail spending will continue to rise on the back of rising affluence and urbanization. Private consumption in Asia amounts to US\$4trn, and is projected to more than double to US\$8.6trn by 2020, at an average rate of 8.1% per year, significantly faster than in the US (2.5%).

In the food consumption sector, we see food retail, particularly grocery retailing to continue its growth trajectory on the back of rising disposable income and urbanization.

The Asean market is fragmented with numerous food retailers. The few notable players with reasonable market shares are Dairy Farm Industries, CP All and Big C Supermarket. In China, the market remains fragmented, as chain store development is premature when compared to developed countries. Top players are dominated by listed companies in both Hong Kong and China, including Lianhua Supermarket (980 HK), China Resources Enterprise (291 HK), Sun Art (6808), Wumart (1025 HK) as well as leading foreign retail chains including Walmart and Carrefour.

The key to gaining market share in the region includes expansion of network and having right location for stores, staying relevant with consumers on product offerings, outlet segmentation, and potential mergers & acquisitions especially for developing markets like China that provide ample expansion potential. Improvements in direct sourcing capabilities and operating scale could also lift competitiveness to better compete with the traditional wet markets.

We believe size matters very much in this volume driven food retail industry. Apart from better economies of scale and brand awareness to enhance sourcing power and customer loyalty, a large operating scale coupled with efficient technology and logistics infrastructure could also help to fine tuning product mix, strengthen local know-how and enhance overall operating efficiency. This is particularly important for the Chinese market as regional tastes and demand still vary significantly across China. Our top pick is Sun Art.

Thailand and Indonesia are the two countries where we project food consumption growth will exceed private consumption growth by 2020. In Thailand, we like the retail strategy of CPALL. It reformed its store concept to become more than a regular convenience store but a "convenience food store" and is continuously adding in more Ready To Eat/Ready to Drink products. The transformation has proven successful with improving margins and sale. CPALL plans to add 500 stores a year and the market can well absorb the supply especially in upcountry where income levels are rising (65% of its new stores will be in upcountry). Competitive threat for CPALL is also low given its leading market share of more than 85% of the convenience store channel in Thailand.

Fig. 17: Size of Market – Private/ Food consumption in Asia

	2010	2020E	CAGR %
Private consumption			
Asia9	3,964	8,622	8.1
Asean5	908	1,559	5.8
Food consumption			
Asia9	1,146	2,257	7
Asean5	351	606	5.6
China	676	1,475	8.1
Indonesia	191	339	5.9
Philippines	66	99	4.1
Thailand	59	106	6
Malaysia	29	49	5.4
Singapore	6	13	8

Source: DBS Group Research, BMI. Assume Constant USD

Consumer: Automobiles

The focus of our analysis centres on the largest and fastest growing automobile manufacturing centres in Asia, which are China and South East Asia.

China's automobile industry has become the largest in the world (in terms of sales volume), overtaking the United States for two consecutive years in 2009 and 2010. In 2010, a total of 18m vehicles were sold, and total vehicle size has reached almost 80m vehicles. Rising disposal income, increasing urbanisation and aggressive new model roll-out strategies by automakers will continue to drive automobile consumption in China. By 2020, vehicle sales are expected to reach c.30m units, translating into CAGR of 5.3% from 2010.

The combined size of the automotive markets in Indonesia, Malaysia and Thailand ('IMT') is estimated to reach 2.4 m vehicles in 2011, implying 8.6% y-o-y growth. We believe IMT has exceptional long term growth prospects, with auto demand projected to expand at 10.5% CAGR over FY10-20F. At the same time, low car ownership (9%) and rising household disposable income in the region will remain solid growth drivers. In addition, given the region's political commitment to stimulate foreign investment flows, infrastructure development and job creation, the automotive industry should remain a proxy to IMT's long term economic potential.

The Chinese auto manufacturing sector is dominated by the SOEs that have teamed up with international auto brands. The top five SOE auto groups - Shanghai Automotive Industry Corp, Dongfeng Motor Corp, First Automobile Works, Changan Automotive Group and Beijing Automotive Industry Corp - accounted for 70% of total vehicles sold in 2010. The South East Asian automotive sector is dominated by Japanese JVs. In terms of 2010 unit sales in the region, the top three listed auto names are Astra International in Indonesia and Malaysia's Proton and UMW.

The main challenge for the auto industry in the long term lies in higher oil prices and the negative economic consequences of urbanisation such as pollution and traffic congestion. Asian economies are subsidising oil prices to a certain extent. This has been the critique of western countries on Asia for increased oil consumption and higher oil price. The liberalisation of oil prices is the way to go for Asian economies to control car population growth in our view. Government policies to promote energy efficient cars and better road infrastructure will ensure the long term sustainability of this sector. HK-listed Dongfeng Motor and Indonesia's Astra are our top picks for this sector.

Housing

The scope of our analysis is on the residential sectors in China, Hong Kong, Indonesia, Malaysia, Singapore and Thailand. These 6 countries are home to 24.2% of the world population with home ownership ranging from as low as 50% in HK to as high as 88% in Singapore. Over the past decade, economic growth, urbanization and rising incomes have led to an intense demand for housing. The size of the housing market, defined as primary transactions by private and government sectors, in 2010 was 9.8m units, of which 95% came from China and Indonesia. Thailand, Malaysia, HK and Singapore made up the balance 5%.

The market is projected to grow at 5.3% CAGR till 2020 to 16.5m units valued at USD1.1trn. Generally, drivers for housing between now and 2020 across the countries would be population and household formation growth, urbanization and infrastructure development. Meanwhile, rising affluence would lead buyers to seek out higher quality housing. This would enable housing suppliers to broaden their product offerings.

Growth dynamics vary according to the stage of market development and demographics in each country. We believe volume growth will be the major driver in Indonesia and Malaysia, in view of the young population, where 46% of the population is <25 years old. In China, low ownership levels and a young population with a median age of 34 years would mean that consumption and demand for housing should remain robust. In Thailand, demand for housing is driven by a young population (where buyers aged <25 years old account for a third of the market) and a fairly low urbanization rate. Singapore is the only market where the government (via the HDB) plays a dominant role as a housing provider, and accounts for 80-85% of the market. Home ownership is also high. Hence, volume growth is likely to remain modest with demand drivers coming from new household formation and movement up the value chain.

In Hong Kong, the "Thorties" (26-44 years) cohort account for 33% of the market, vs 26% for the <25 years group. Notably, home ownership is still at a low 50+% in the SAR. We believe a two tier market could develop where private developers would focus on building luxury homes with higher values, while the government introduces HOS (public) housing over the next few years to cater to lower income buyers. This would expand the projected market size, which we have NOT factored into our current estimates.

Home ownership has traditionally been a means of wealth creation within a society especially in Asia. Governments condone home ownership through the approved use of pension funds for home ownership as in the case of Singapore and Malaysia. Foreign ownership is also allowed in most countries albeit at differing degrees of restriction. The sector is thus subject to speculation in a tight supply vs demand situation. The biggest risk in the sector remains policy risks but this should not dampen Asia's quest for home ownership.

Over the next few years, we believe key success factors for the listed players to gain market share include ability to secure land sites, strong execution track record, good products and brand name, strong corporate governance and a solid balance sheet with ready access to capital.

Banks - credit demand, wealth management and disintermediation

We believe Asian banks are well placed to ride on positive housing, consumerism and wealth management trends in Asia. Given the low penetration rate in the developing economies, credit demand is set to explode with favourable demographics and economic growth. Likewise infrastructure spend to support accelerating urbanisation rates will fuel capital market activities and commercial lending to fund the rapid expansion. The rise of middle income in Asia's richer economies is also opening up opportunities for wealth management services. High savings rate coupled with rising awareness for insurance and retirement planning have broadened the scope for business opportunities for the new "haves" in Asia.

The structural strong demand for credit will only be hindered by government controls on credit to prevent overheating on the interest rate and the economic cycle. Asian banks have strong balance sheets to ride through the cycle in the next 10 years, in our view. Together with prudent government policies and the financial reform which was undertaken during the Asian financial crisis, asset quality of Asian banks are a lot stronger than their western counterparts.

Construction materials - cement sector

The direct beneficiary from a robust housing market is the cement sector. We are positive on the outlook for cement prices supported by stable demand riding on solid growth in property, quickening pace of affordable housing construction and accelerating growth in urbanization infrastructure.

According to an analysis from the China Cement Association, cement consumption in 2015 (the final year of the 12th five-year plan) is expected to reach 2,400mt representing a CAGR of 5.5% in 2010-15, assuming 7% p.a. GDP growth in 2011-15. Although growth in investment in traditional infrastructure (including railways and highways) is expected to decelerate due to high base effect, we expect solid growth in property and accelerating pace of construction of affordable housing together with rising urbanization infrastructure will bolster cement demand going ahead.

Beijing has pledged to build 36 million homes over the next five years to help cities in China cope with rising population and to aid policymakers tackle the country's stubbornly high inflation fuelled in part by housing prices. The nationwide affordable housing building programme is estimated to cost Rmb4trillion over the next 5 five years. The construction is expected to trigger 450mt incremental cement consumption or 5%p.a. growth rates in the next five years.

For urban metro-line construction, China Communications and Transportation Association estimates total investment will reach Rmb1trn in the 12th five-year plan (2011-15), representing an increase of 67% over the 11th five-year plan (2006-2010). We estimate the investment of Rmb1trn will boost cement consumption by 100-150mt, equivalent to c.5-8% of country's FY10 cement consumption over a five year horizon.

Upside risks to our cement consumption forecasts can come from higher construction activities from urban metro-railways and rural water conservancy facilities. Cities in China continue to invest heavily in metro lines to ease traffic congestion and meet fast-growing demand from rapid urbanization. China's Ministry of Finance stated it would work out more detailed policies to ensure 10% of revenues from government land sales will be spent on improving rural water conservancy facilities as the nation faces rising threat from drought.

Energy - coal

The focus of our analysis is on the regional coal sector, which we view as a proxy to power generation demand in Asia.

Asia accounts for 65% of world coal demand, with China and India accounting for 44% and 13% of consumption respectively. Asian coal consumption came in at 5.2bn tonnes in 2010, driven mainly by coal fired power plants.

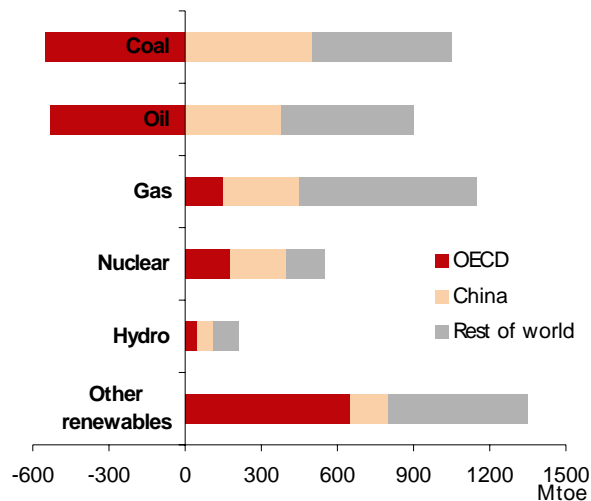
Growth in demand for coal power plants has a positive correlation with GDP growth of 1.0x, implying average growth of 9% p.a. over 2008-2010. Hence, coal consumption translates to a huge US\$515.3bn p.a. based on the average coal price of US\$99/tonne in 2010.

Renewable energy investments are growing but these will still be insignificant in year 2020. Growing investments in renewable energy for environmental concerns may hamper coal demand over the next 20-30 years, but is unlikely to have a meaningful impact in 2020. This is because coal power plants are estimated to still account for >70% of power generation mix in 2020, and coal is still the cheaper and most easily available fuel source in Asia due to strong production growth from Asian countries.

India's demand for coal is rising at the fastest pace. In Asia, we expect India to show the fastest growing demand for coal, due to the country's low electrification ratio (at 56% in 2009, against 99% in China) and an expected increase in installed capacity of up to 113 GW by 2017. By 2020, we expect India to account for 10% of global coal consumption, behind China at 47% and USA at 13%. Indonesia is another fast growing country with plans to add 10 GW of power capacity by 2020 as a result of its low electrification ratio of 54%.

Coal demand to track strong GDP growth in Asia. Looking ahead, we expect Asian coal demand to continue to grow at an average rate of 8% p.a. till 2020, reflecting the strong GDP growth of China, India as well as other South East Asian countries such as Indonesia, Malaysia and Vietnam. We estimate total coal consumption of 11.2bn tonnes in year 2020, or coal trade to grow by >2.5x to US\$1,812bn based on coal price of US\$161/tonne with assumed coal price increases of 5% p.a. to reflect the average GDP growth for major coal consuming countries within Asia.

Fig. 18: Emerging countries dominate demand growth for all fuels



Source: IEA, DBS Vickers

China is the largest coal producer and consumer. China contributes 42% of coal output, but has become a net coal importer since 2009 due to strong growth in coal demand of c.10% p.a. The other major coal producing countries are Australia and Indonesia, which account for 37% and 16% of world coal exports. The coal sector in China is very fragmented with the top four players accounting for only 20% of the country's production. The remaining players are largely privately owned firms, with some related to the respective provincial governments. The top five coal producers in Indonesia accounted for 62% of coal output of 275mt in 2010.

The key competitive driver for coal miners over the longer term lies in its cost competitiveness and acquisition strategy in order to sustain longer term production growth. As such, we believe that coal miners with stronger balance sheets for M&As and infrastructure improvement, will stand out as the clear sector winners in 2020. Integrated operations can also help towards cost competitiveness for these miners, leading to superior margins and earnings resilience against peers.

The key risk to the coal sector will be rising mining costs due to higher equipment costs, rising transportation charges and increasing fuel costs to run the machinery. Nevertheless, we believe that coal miners will gradually pass on the cost increases, which will be reflected in higher coal prices.

Potential regulatory changes such as capping of coal prices as power plants are unable to raise tariff rates due to the high inflationary pressure, may affect the profitability of miners in the short term. The regulatory changes will impact Chinese miners more than the Indonesian miners, as Indonesian miners focus mainly on exports, which account for more than 80% of their production.

Total market cap for coal stocks under our coverage in HK/China, Indonesia, Singapore and Thailand, is equivalent to US\$168.5bn. Given the promising sector outlook with resilient demand, and supply shortages due to sector consolidation and transportation bottlenecks, we expect coal miners to continue to enjoy strong pricing power and attractive earnings growth as a result of price and volume increases. We expect the coal mining stocks under our coverage to achieve total market capitalization of US\$784.1bn in year 2020, translating to strong growth of 3.6x over 2010-2020. Our top pick for a 2020 winner is Shenhua Energy.

Energy - oil & gas

Between now and 2020, demand for all types of energy is expected to increase in non-OECD countries, while demand for coal and oil should decline in OECD countries. Oil remains the dominant fuel source. But demand growth for natural gas will surpass that for other fuels due to a more favourable environment. The share of nuclear power will also increase (from 6% in 2008 to 8% in 2035).

Non-OECD countries will account for 93% of the projected increase in world energy demand. By 2035, China will contribute 36% of the growth and account for 22% of global demand, up from 17% today. India is the second largest contributor, accounting for 18% of the increase.

Gas is set to play a key role in meeting the world's energy needs. IEA forecasts that gas demand should increase by 44% in 2035 led by China and the Middle East. Unconventional gas sources will account for 35% of the increase in global supply. The main driver will come from lower prices, which will lead to stronger demand for gas.

Investment conclusion - Asia 2020 winners

We see the winners to be markets with a high consumer base driven by favourable demographics such as a large population, high income per capita GDP growth and young population.

Indonesia is our top market on rising GDP per capita. China is a pick on rising discretionary spending. Malaysia's urbanisation via better quality transportation network and homes should benefit developers along the MRT line. Thailand's suppressed pent up demand should see an explosion of consumer spending for the "haves". Feeding on Chinese consumption includes retail supermarkets in China, Malaysia and Indonesia palm oil players and Indonesian coal. Cement is a long term infrastructure play. With a small population in Singapore and Hong Kong, we like Singapore companies which will benefit from ASEAN / China demand, while in Hong Kong, we like companies that will benefit from its strategic proximity to China.

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