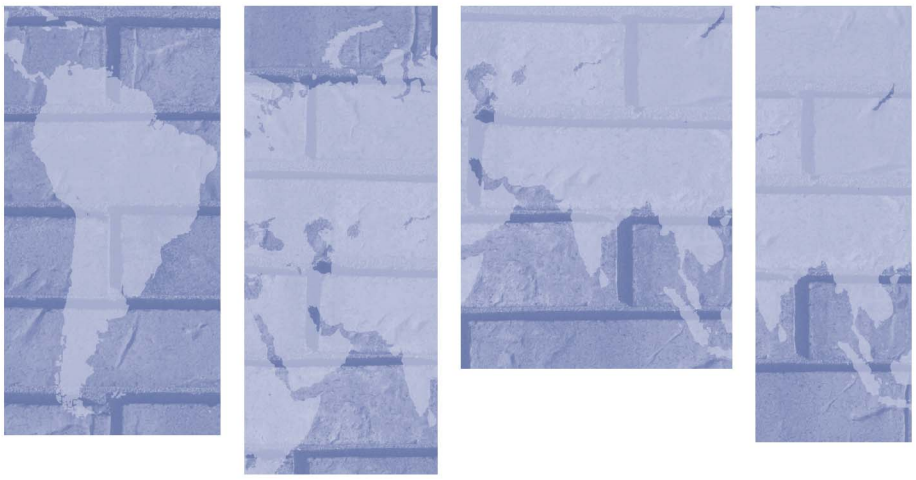
THE WORLD AND THE BRICS DREAM

Goldman Sachs Global Economics Group



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Source for all tables and charts is Goldman Sachs Global Economic Research, unless otherwise stated.

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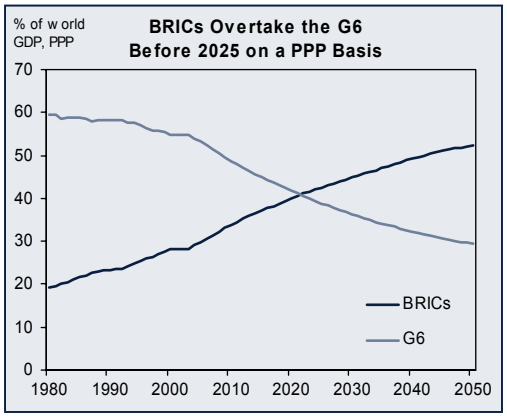
INTRODUCTION: THE WORLD AND THE BRICS DREAM

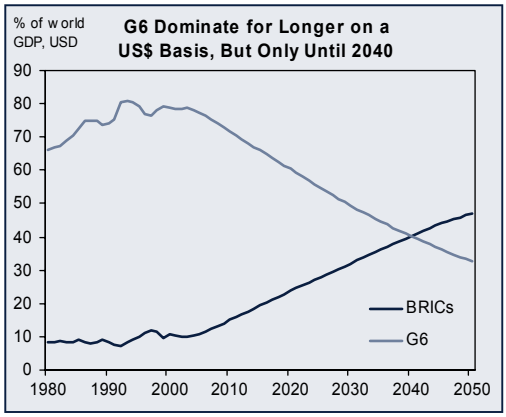
In 2001 we called for the world to 'Build Better Global Economic BRICs'. In doing so, we prompted what has become a global debate about the opportunities presented by Brazil, Russia, India and China. In the intervening five years the BRICs have emerged as central players in the world economy and global policymaking, affecting trade, capital markets, energy policy and investment decisions.

When we first wrote in 2001, we stressed these four countries' importance to the global economy. We calculated that their share of world GDP share was set to increase significantly over the next decade. This growing importance led us to argue that the time had come for a radical reform of international economic policymaking. Post-war economic institutions—most notably the G7 structure—had become outdated and outmoded. Writing in the immediate aftermath of September 11, we argued that the inclusion of the BRICs in formal policymaking was key to greater international economic and political cooperation. Specifically, we called for reform of the G7 into a new G9 that would scale back Europe's role and incorporate Brazil, Russia, India and China.

We followed this paper two years later with *Dreaming With BRICs: The Path to 2050*. This ground-breaking work projected long-term growth rates and suggested that the BRICs as a whole would be bigger—in US Dollar terms—than the G6 (the US, Japan, Germany, the UK, France and Italy combined) by 2041. Our projections were *not* based on hopes of 'miracle growth', but on a sensible model that stressed the importance of good economic policy and stable institutions.

Since then, the case for the BRICs has become ever stronger. The BRICs have in fact grown more rapidly than we had predicted either in 2001 or in 2003, and we now expect that they will continue to exceed our projections for the next several years. The BRICs are of course benefiting from favourable global economic and financial conditions, but they have also been central contributors to this benign environment. In fact, the BRICs' growing impact on the global economy has been felt on a wide range of issues over the past few years:





From Growth and Trade . . .

- Between 2000 and 2005, the BRICs contributed roughly 28% of global growth in US Dollar terms and 55% in Purchasing Power Parity (PPP) terms. More than 30% of total world demand in the past five years originated in the BRICs economies.
- The BRICs' share of global trade continues to climb rapidly. At close to 15%, it is now double its level in 2001.
- Trade among the BRICs has also accelerated, with intra-BRICs trade now nearly 8% of their total trade, compared with 5% in 2000. New trading patterns have emerged, including a growing trade and investment relationship between Brazil and China.

. . . to Capital Flows . . .

- The BRICs now hold more than 30% of world reserves, according to latest estimates. China is the dominant contributor, but Russia, India and Brazil have also accumulated substantial reserves.
- Despite this reserve accumulation, real exchange rates in each country have appreciated over the last two years. Real exchange rate appreciation was and remains an important part of our projected paths out to 2050.
- BRICs' current accounts are in healthy surplus, reflecting the group's key role in the global supply of savings. The BRICs' aggregate current account surplus is now nearly a quarter of a trillion US Dollars, or close to 6% of the BRICs' GDP. The BRICs are increasingly important counterparts to the US current account deficit.
- The BRICs are an increasingly important destination for global FDI. Their 15% share of the global total is up nearly three times from 2000 levels. Even more striking is the fact that BRICs' FDI *outflows* have risen more than sixfold since 2000, to more than 3% of the global total.

. . . Markets . . .

- BRICs stock markets have generally performed very strongly since 2003, with Brazilian, Russian and Indian indices all up by around 150% over that period. China is the one exception, where the idiosyncrasies of the local market have led to lacklustre performance. China provides a warning that the local market may not be the best investment vehicle for the local growth story. BRICs market capitalisation continues to climb, currently at close to 4% of the global total, and Russian and Chinese equity offerings were a key feature of the global equity calendar in 2005.
- The BRICs account for 18% of global oil demand, and their share is moving steadily higher. This dynamic still has a long way to run, with the next decade in particular the likely point of maximum pressure on energy and other natural resources.

. . . and Politics

As the BRICs' economic impact is growing, so is their political clout. Although the G8 is still formally dominated by the US, Europe and Japan, in practice it has begun to widen its scope. China has been invited to G8 summits for several years; the July 2005 summit included the heads of state of India, Brazil, Mexico and many African countries; and the 2003 and 2004 summits included leaders from the Middle East and Africa. Russia holds the G8 chair's position for the first half of 2006. The rapid growth of the BRICs since the start of the decade, in our view, only strengthens the case for a formal reform of the G8. The BRICs have also begun to exercise their political muscle in other fields, including energy security, intellectual property and agricultural policy.

A BRICs Compilation

The rise of the BRICs will remain at the forefront of debate about the global economy and policymaking—and will inform approaches to global investing—for years ahead. With these opportunities in mind, we have collected in one volume a range of our BRICs research published since 2001. The book is divided into three sections:

- **The BRICs Dream.** After setting the stage with our introduction of the BRICs idea, we explain our 50-year growth projections for the BRICs and for today's developed countries. We also discuss the BRICs' impact on global energy, consumer and capital markets; the conditions for economic growth and how well the BRICs are meeting them; and the specific opportunities and challenges facing China and India. We conclude this section with a snapshot of consumer spending and demographics in the BRICs.

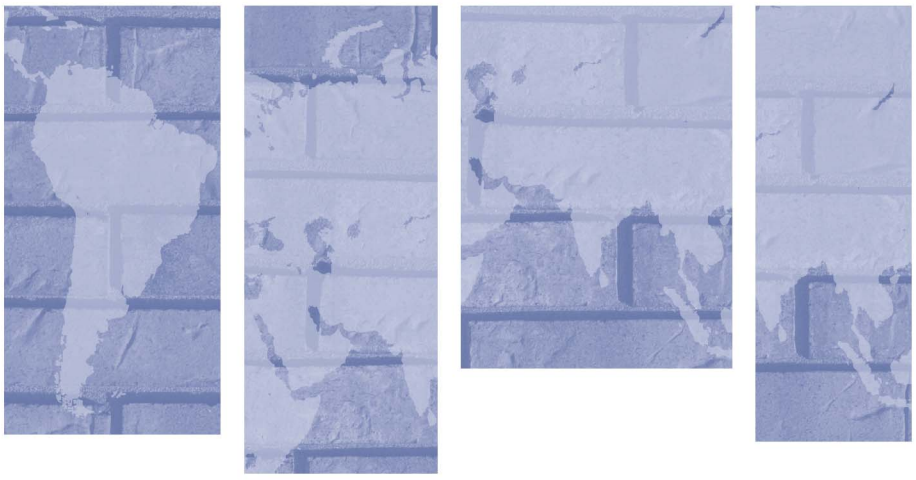
- **The BRICs and the World.** We examine the BRICs' contribution to global growth; whether the G7 can 'afford' to have the BRICs dreams come true; the persistent need to reform the way the world economy is governed; the evolving trade relations between China and Latin America; and the shape of Asia's future monetary system.

- **Beyond the BRICs.** Our final section looks at the region that has thus far benefited the least from globalisation and the rise of the BRICs—Africa. Using an analysis similar to our BRICs research, we examine Africa's growth potential in coming decades. We also assess the impact of last year's G8 debt relief programme, which we see as a small step on the road to a stronger Africa.

Jim O'Neill
February 10, 2006

SECTION ONE

The BRICs Dream



CHAPTER ONE

Building Better Global Economic BRICs

November 2001

BUILDING BETTER GLOBAL ECONOMIC BRICS

The BRICs' share of world GDP is set to rise. On a PPP basis, the aggregate size of the BRICs—Brazil, Russia, India and China—was about 23.3% of world GDP at the end of 2000, somewhat higher than that of both Euroland and Japan. On a current GDP basis, the size of the BRICs is just under 8%; this is also set to rise. Some of the BRICs countries are already bigger than some individual G7 economies: China, at 3.6% of world GDP (using current US Dollar prices), was slightly bigger than Italy at the end of 2000, and notably larger than Canada.

We consider four different growth scenarios for the next decade based on various nominal GDP assumptions for 11 countries (the G7 and the BRICs) and different assumptions about exchange-rate conversion. The nominal GDP assumptions reflect our best guess about the likely trend rates of real GDP growth and inflation.

In all four scenarios, the relative weight of the BRICs rises from 8.0% at present to 14.2% in 2011 (in current US Dollar terms), or from 23.3% to 27.0% (at PPP rates). China is the key driver of this increase, although the other three also grow relative to the G7 countries.

The opportunity to reform the G7 should now be taken. With EU membership set to expand to 25, and EMU membership likely to expand as well, Euroland representation at the G7 should be reduced from three countries to one. In view of the expected continued relative growth of the BRICs, the G7 should incorporate China, probably Brazil and Russia, and possibly India, bringing membership in this key body of global economic policy coordination to eight or nine.

It Is Time for the World to Build Better Global Economic BRICs

The table on the following page shows the size of GDP for the 20 leading economies of the world, based on both Purchasing Power Parity (PPP) and current prices at the end of 2000. The table also shows the actual share of world GDP on both estimates, the difference between them, the size of the population and GDP per capita.

As can be seen, there are some very different estimates about the relative size and share of the world economy depending on whether PPP weights or current GDP weights are used. Perhaps not surprisingly, the actual absolute size does not differ much for most of the G7 countries, with the exception of Japan. Given Japan's expensiveness on a PPP basis, the PPP weighting suggests an economy less than 75% of its current GDP weighting.

The relative picture shifts dramatically when important emerging market economies are taken into account, particularly Brazil, Russia, India and China—which we term the BRICs. The table alongside highlights the difference for the four largest emerging economies in both PPP terms and current prices. In three of the four countries (China, India and Russia), the economies are more than three times bigger when using a PPP weighting rather than current GDP. Indeed, on a PPP basis, China is the second-largest economy in the world and India the fourth. All four BRICs are larger than Canada.

BRICs GDP Weight Comparisons in 2000

	PPP Weight (1)	Current GDP Weight (2)	Ratio (1/2)
China	12.59	3.59	3.51
India	5.06	1.58	3.20
Brazil	2.92	1.96	1.49
Russia	2.70	0.82	3.29
Total	**23.27**	**7.95**	**2.93**

These estimates raise important issues about the transmission of global monetary, fiscal and other economic policies, as well as the need for general international economic and political cooperation (which events since September 11 have highlighted) on a truly global basis. Representation at global economic policy meetings might need to be significantly changed.

A simple comparison between China and Italy serves to illustrate the point. Even on a current GDP basis, the Chinese economy is slightly bigger than Italy, so an expansionary monetary or fiscal policy in China would be likely to have a slightly greater global impact than would a similar policy in Italy. This may be particularly relevant if an economic shock such as the 1997-98 Asian crisis affects the neighbouring region more than the rest of the world. And if PPP weights are more representative than current GDP, China's economy is about four times bigger than Italy's, which magnifies the relative impact of any policy change.

If the G7 were to become a forum where true worldwide economic policy coordination was discussed, the US, Japan, Germany, France and the UK would be joined by China and India rather than Italy and Canada. This assumes that PPP weights are the appropriate guide, as both we and the IMF prefer.

Although we do not really know the 'right' answer to which method (PPP or current GDP weights) is best, it may not matter if you look at relative real GDP and inflation trends for the purposes of future global economic policy implementation. In either case, the relative positions of key countries in the world economy are changing. We think China deserves to be in the G7, and, under some scenarios, so do others—certainly Brazil, Russia and India relative to Canada.

Size of the World in 2000

	GDP (PPP weights[1]) 2000 US$bn	Share of World Total (%) (1)	GDP (current prices) 2000 US$bn	Share of World Total (%) (2)	Difference in Share (1-2)	Population (mn)	GDP Per Capita (current prices) $
United States	9,963	23.98	9,963	33.13	-9.15	281	35,401
China	5,230	12.59	1,080	3.59	9.00	1,267	852
Japan	3,319	7.99	4,760	15.83	-7.84	127	37,515
India	2,104	5.06	474	1.58	3.49	1,002	473
Germany	2,082	5.01	1,878	6.25	-1.23	82	22,898
France	1,458	3.51	1,289	4.29	-0.78	59	21,890
UK	1,425	3.43	1,417	4.71	-1.28	60	23,810
Italy	1,404	3.38	1,077	3.58	-0.20	58	18,719
Brazil	1,214	2.92	588	1.96	0.97	168	3,507
Russia	1,120	2.70	247	0.82	1.88	145	1,696
Canada	903	2.17	699	2.33	-0.15	31	22,747
Mexico	890	2.14	574	1.91	0.23	97	5,901
Spain	797	1.92	560	1.86	0.05	39	14,190
Korea	770	1.85	457	1.52	0.33	47	9,678
Indonesia	696	1.68	154	0.51	1.16	210	730
Australia	523	1.26	382	1.27	-0.01	19	19,933
Taiwan	477	1.15	310	1.03	0.12	22	13,899
Turkey	437	1.05	203	0.67	0.38	67	3,007
Thailand	430	1.04	122	0.41	0.63	62	1,956
Netherlands	416	1.00	370	1.23	-0.23	16	23,334
World	**41,552**	**100**	**30,073**	**100**	**–**	6,073	4,952
of which: G7	20,555	49	21,082	70	-20	693	30,437
Euroland	7,231	17	6,027	20	-3	304	19,820

[1] US used as benchmark for computing GDP in PPP terms

Which Is Right: PPP or Current GDP Weighting?

According to the IMF, the conversion factors used to convert data expressed in national currencies into a common numeraire currency should reflect each currency's purchasing power relative to the numeraire currency. This is the accepted practice adopted at GS. As the IMF notes, if market exchange rates diverge substantially and for extended periods from PPPs, conversion at market exchange rates may yield biased GDP weights and hence biased indicators of aggregate economic activity in groups of countries.

In practice, GDP expressed in national currencies is usually converted at market exchange rates. Such conversions may be acceptable as long as differences between market exchange rates and PPPs are small and stable.

Two examples highlight this dilemma, but neither offers much in the way of an obvious solution. Consider the US and Japan. Because the Yen is 'expensive' on a PPP basis, Japan's economy is reported to be bigger on a relative basis in US Dollar terms when quoted in current Dollars than when it is quoted in PPP terms. Which is right? If it were accepted that the comparison should be made in current Dollars, what about an environment where the Yen weakened by 25% in one year's time? Such a move might actually help to strengthen the Japanese economy, but the size of the economy would appear to be 25% lower in Dollars than today. On a PPP basis, this problem would not occur.

For the second example, take China and Japan. On a current GDP basis, the Japanese economy is about four times bigger than China, but on a PPP basis, the Chinese economy is more than 50% bigger than Japan's. Which is right? Does it matter? For other countries, particularly the more open economies, trying to judge the impact of policy changes elsewhere will obviously depend on the true size. For example, does a 2% of GDP change in Chinese fiscal policy matter more than a 2% of GDP change in Japanese fiscal policy for Korea, Thailand or other Asian countries? This is a difficult question to answer. Most people would probably choose Japan—but this might not be correct.

World Trade Shares

Data showing the share of each of the 11 countries in world trade yield similar results. The broad modern trade-weighted measure of the US Dollar is highly interesting in this regard: China is now the fourth-largest individual weighted country, ahead of Germany. Not only does this mean that competitive issues involving the Chinese Yuan are more important than the (disappearing) Deutschemark, but arguably Chinese fiscal or monetary policy changes might be more important for the US than equivalent German policy changes (although the closeness of France and Italy, and their responsiveness to German policy change would argue differently).

GDP and Inflation Assumptions 2001-2011

% per year	Nominal GDP Growth	Real GDP Growth	CPI
US	5.0	3.0	2.0
Euroland	4.5	2.5	2.0
UK	5.0	2.5	2.5
Canada	4.6	3.0	1.6
Japan	1.0	1.0	0.0
China	9.5	7.0	2.5
India	10.0	5.0	5.0
Brazil	7.5	4.0	3.5
Russia	10.0	4.0	6.0

IMF data on country share of world exports and imports show a similar position. Without including data on re-exports from Hong Kong, China's share of world exports and imports was about 3.9% and 3.4% respectively, comparable to those of Canada and Italy, at the end of 2000. Including re-exports and imports through Hong Kong, China

immediately becomes the third-largest trading nation. Given China's entry into WTO, this relative position can only grow.

Looking Ahead: Projected Average Ten-Year Nominal GDP

The table on the previous page shows our nominal GDP, real GDP and CPI inflation assumptions for a ten-year growth path out from 2000. The assumptions have been derived from our best guess of the likely trend growth and inflation path over the next decade. Based on these assumptions, we can show how the relative size of these countries may change.

Below, we present a series of alternative country rankings and relative economic sizes, based on different ways of estimating the size of GDP in the future.

- Scenario A simply **extrapolates nominal GDP for the next ten years** on the very crude assumption that exchange rates will be the same level as at year-end 2000. The most interesting thing here is the rise in the relative position of China to the fifth-largest economy. The combined weight of the BRICs—Brazil, Russia, India and China—rises to 12.0%.

- Scenario B repeats the basic exercise of the previous scenario but **converts the local GDP into current (2011) US Dollars** using our long-term GSDEER and GSDEEMER values. This scenario raises the relative weighting of the Eurozone countries due to the strong undervaluation of the Euro according to our model, but generally the results are no different from the current situation. The combined weight of the BRICs rises to 9.1%.

- Scenario C **repeats our expected 2001-02 economic outturn for the next decade**. In this, relative nominal GDP growth is higher in the BRICs than the G7 countries. Not surprisingly, the relative ranking of China jumps sharply to joint-third, while Canada drops to tenth. The weight of the BRICs rises to 14.2%.

- Scenario D **considers nominal GDP growth adjusted for PPP developments**, i.e. inflation differentials. Given our assumptions, once more China (not surprisingly) appears very large relative to some other countries, more than twice the size of Japan and larger than the combined size of France, Germany and Italy. This scenario results in a jump in the combined BRICs weight to 27.0%.

Share of World GDP in 2011 Under Four Scenarios

Country	Current GDP (US$ weights)		Current GDP (PPP weights)		Scenarios							
					A: Extrapolating nominal GDP at current exchange rates		B: Extrapolating nominal GDP, converting to current (2011) US$		C: Repeating expected 2001-2002 results for a decade		D: Adjusting nominal GDP growth for PPP developments	
	Ranking	% of total	Ranking	% of total	Ranking	% of total	Ranking	% of total	Ranking	% of total	Ranking	% of total
US	1	33.1	1	24.0	1	34.2	1	32.5	1	31.5	1	26.5
Japan	2	15.8	3	8.0	2	11.0	2	10.5	2	9.7	3	7.3
Germany	3	6.3	5	5.0	3	6.1	3	7.7	3	6.6	4	5.6
UK	4	4.7	7	3.4	5	4.6	5	4.8	5	5.2	8	3.6
France	5	4.3	6	3.5	6	4.2	4	5.3	6	4.5	6	3.9
China	6	3.6	2	12.6	4	5.6	5	4.8	3	6.6	2	16.1
Italy	7	3.6	8	3.4	7	3.5	7	4.4	7	3.8	7	3.8
Canada	8	2.3	11	2.2	10	2.4	9	2.3	10	2.1	10	2.5
Brazil	9	2.0	9	2.9	9	2.5	8	2.5	8	3.0	9	3.2
India	10	1.6	4	5.1	8	2.6	10	1.2	8	3.0	5	5.4
Russia	11	0.8	10	2.7	11	1.3	11	0.6	11	1.6	11	2.3

In each of the four cases, China's relative standing in the world GDP league tables is considerably stronger than today. In all four, the position of Brazil moves closer to that of Italy, while Russia remains eleventh in all except in the scenario in which we convert current GDP into US Dollars at current PPP levels.

With this global economic environment set to emerge, coupled with the dramatic events of September 11, it may be an appropriate time for policymakers to regroup.

What Exactly Is the G7?

The Group of Seven (G7) evolved from the G5, which emerged in April 1973 following a meeting among the finance ministers of the US, Germany and France. This meeting, on the heels of the breakdown of Bretton Woods, focused on the resulting international monetary crisis. This group, with the addition of the UK, began to meet informally, sometimes on the fringes of annual IMF meetings. The Helsinki Conference of July 1975 provided an occasion to pursue the G5 agenda. Later that year, France hosted a summit at which it, Italy, Germany, the UK, the US and Japan discussed a range of economic and political issues. The annual heads of state summit from then on took place on a G7 basis, including Canada.

Typically, the finance ministers of the G5 (excluding Italy and Canada) met separately. G5 meetings took place in a somewhat secretive atmosphere, although their subjects and style were prompted by world economic circumstances. Perhaps their most famous act of influence on the world financial stage was the Plaza Accord of September 1985, in which members agreed to deliberately weaken the value of the US Dollar.

The G7 as a forum for finance ministers really emerged in 1986-87 through initiatives by James Baker and Richard Darman of the US Treasury, reflecting their discontent with the secretive nature of the G5 and their desire to have regular meetings of finance ministers parallel to meetings of the heads of state of the seven major economies. Italian discontent with being excluded from the Plaza Accord was seen as a valid excuse to broaden the group and as a way of developing a more formal and publicly recognised regular meeting.

Initially planned as just a forum for the G7 finance ministers, the French (encouraged by the EC) objected to the absence of EC participation. The EC was 'admitted' after much haggling. It did not take long to figure out that to have an effective policy forum, it would be critical to include central bank leaders and their deputies, who would actually implement much of what was desired by the finance ministers, especially if it were to involve FX intervention. The actual membership of the 'club' rose further with the addition of the heads of the IMF and the European Central Bank (following the start of EMU in 1999). The regular meetings have become a feature of the annual economic calendar.

In the heady days of the 1980s, the Louvre Accord was the strongest example of active policy coordination where the G7 attempted to manage exchange rates in a narrow range against each other. While the difficulties involved in active coordination of monetary and fiscal policy meant that the Louvre 'experiment' lasted less than six months, in the late 1980s the G7 finance ministers tried to use their meetings as an attempt to coordinate policies more actively than they have in more modern times.

There have been similar periods since in which the G7 has actively coordinated policies, notably FX management. These include the policy-induced strengthening of the Dollar in 1995 and the intervention to support the Euro in September 2000.

However, for much of the last few years, the G7 has seemed more of an information-gathering point and has generally refrained from any active influence over world events and markets. At least that is the impression among many market participants.

There may be good reason as to why this has been the case. For most of the 1990s, especially since the ERM crisis of 1992-93, the Europeans have focused heavily on the introduction and success of EMU. In addition, various shocks to the world economy have appeared from outside the G7, making a coordinated policy response from inside difficult.

EMU Expansion Bolsters the Case

The outlook for the European Union and European Monetary Union adds to the argument for the reform of the G7. With membership of the EU set to expand to 25 countries in 2004, the economic decision-making process is likely to become unwieldy. This bolsters the case for G7 reform:

- Significant reform will be needed at the ECB, possibly along the lines of the FOMC's rotation scheme, with Governors of some of the central banks taking turns at serving as 'official' decision makers. A parallel global representative change would seem opportune.
- Germany, France and Italy make up about 78% of the Euroland economy. As other countries join, the weight of the big three will decline. Given that they will all share a single currency and a single monetary policy, why should Germany, France and Italy be represented at the G7 at the exclusion of the other 22% (or more) of Euroland?
- A strong case could be made that the existence of so many national representatives at ECB and ECOFIN meetings tends—even now—to result in decision-making that is motivated by self rather than collective interest. As the six permanent ECB board members would no doubt argue, the collective interests are best served by thinking in a 'pan-European' way.

Of course, some critics have argued that the Euroland policymaking forum suffers from both too many participants and a lack of continuity, and so a rotating European representative at the G7 for both the ECB and ECOFIN would not be ideal. Instead, if a single representative from ECOFIN and the ECB President represented Euroland at the G7, this would probably result in a more effective Euroland voice.

Should a G9 Replace the G7?

It seems quite clear that the current G7 needs to be 'upgraded' and room made for the BRICs—creating a new G9—to allow more effective global policymaking.

By reducing European representation to that of the UK and a Euroland representative (only one if the UK joins EMU, reducing the need for another participant), the G7 could be slimmed down to a G5.

Looking at each of Brazil, Russia, India and China, the case for the inclusion of China is overwhelming. The case for the other three is less clear-cut, but in many of our scenarios for the future makeup of the world economy, the case for the inclusion of all three is at least as strong as that for Canada, and in some ways, as strong as that for Italy.

Would the BRICs Want to Be in the G9?

In addition to questioning whether a G9 would be more effective than a G7, observers might wonder whether the BRICs would actually want to be in a G9 'club'. Clearly, the four countries under consideration are very different economically, socially and politically. Incorporating all four of them into a G7-style group might not be straightforward (although the existing G20 meetings are arguably an extended version of this proposal).

- Russia would perhaps be the most likely, not least as it already participates regularly in the annual G8 heads of state summit. Russia's presence might also be valuable due to its role as a major oil producer, in addition to other attractions.

- Brazil might be the next most willing, given its large economic weight in Latin America and its closer social and stylistic ties to Europe and the US.

- China might not be as eager to join a G9. Despite its enormous economic progress, China's social model is still extremely different to the G7 countries. With its less developed capital markets, China might not appreciate regular G7 type 'advice'. However, China's inclusion would probably be the most important given our earlier arguments. China's involvement might require other members to recognise that not all member countries need to be the 'same'.

- India would almost definitely be the least eager to join the G9 club. It might regard any obligations as unwelcome or see its own experiences as limiting its ability to give advice. However, in view of its size, population, geographical location and potential, the possible inclusion of India would be attractive.

What Would the G9 Do?

Just as the G7 finance ministers and central bank governors currently discuss the world economy and policy coordination, the G9 would do the same. What more could that actually achieve?

Most of the world's economic disturbances since the late 1990s and its biggest changes have largely involved countries outside the G7, with the exception of the technology-driven downturn in the US in 2000-01. The involvement of those with stronger locally informed knowledge and their informed consideration of the issues could help to make the fallout from future crises less painful or even help to avoid these crises altogether.

While the 1998 Russian crisis associated with the LTCM collapse might not have been avoided, involvement of China in the 'club' might have resulted in greater awareness of the building economic pressures that led to the Asian crisis. Certainly, a single European voice at the G7 instead of those from different large European countries would allow a 'European voice' to be heard on many occasions.

It is time for better global economic BRICs.

Jim O'Neill
November 2001

CHAPTER TWO

Dreaming With BRICs: The Path to 2050

October 2003

DREAMING WITH BRICS: THE PATH TO 2050

The world economy has changed a lot over the past 50 years. Over the next 50, the changes could be at least as dramatic, as the growth generated by the large developing countries, particularly the BRICs (Brazil, Russia, India and China) could become a much larger force in the world economy than it is now—and much larger than many investors currently expect.

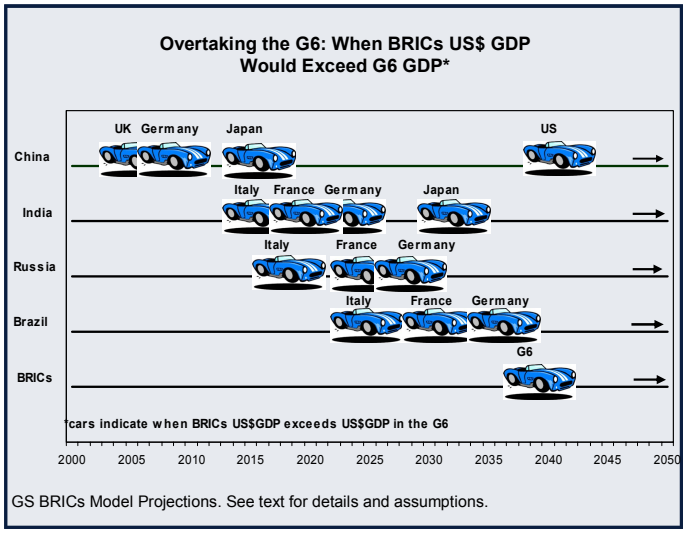
In this piece, we gauge just how large a force the BRICs could become over the next 50 years. We do this not simply by extrapolating from current growth rates, but by setting out clear assumptions about how the process of growth and development works, and applying a formal framework to generate long-term forecasts. We look at our BRICs projections relative to long-term projections for the G6 (US, Japan, Germany, UK, France and Italy).[1]

Using the latest demographic projections and a model of capital accumulation and productivity growth, we map out GDP growth, income per capita and currency movements in the BRICs economies until 2050. This allows us to paint a picture of how the world economy might change over the decades ahead.

The results are startling. If things go right, the BRICs could become a very important source of new global spending in the not too distant future. India's economy, for instance, could be larger than Japan's by 2032, and China's larger than the US by 2041 (and larger than everyone else as early as 2016). The BRICs economies taken together could be larger than the G6 by 2039.

Our projections are optimistic, in the sense that they assume reasonably successful development. But they are economically sensible, internally consistent and provide a clear benchmark against which investors can set their expectations. There is a good chance that the right conditions in one or another economy will not fall into place and the projections will not be realised. If the BRICs pursue sound policies, however, the world we envisage here might turn out to be a reality, not just a dream.

The projections leave us in no doubt that the progress of the BRICs will be critical to how the world economy evolves. If these economies can fulfil their potential for growth, they could become a dominant force in generating spending growth over the next few decades.



GS BRICs Model Projections. See text for details and assumptions.

1. In focusing on the G6 (rather than the G7 or a broader grouping), we decided to limit our focus to those developed economies with GDP currently over US$1 trillion. This means that Canada and some of the other larger developed economies are not included. Adding these economies to the analysis would not materially change the conclusions.

A Dramatically Different World

We start with some key conclusions that describe the way the world might change over the next 50 years. The big assumption underlying all of these projections is that the BRICs maintain growth-supportive policy settings.

Economic Size

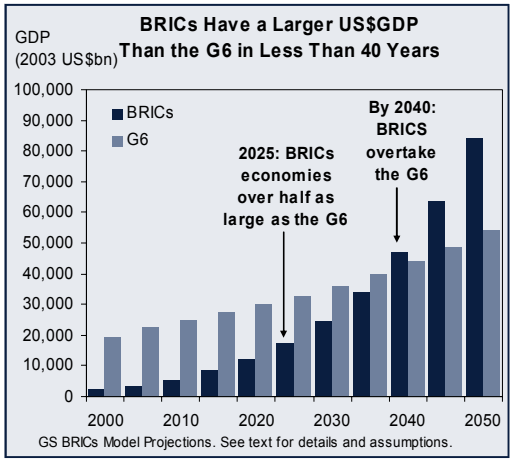
- In less than 40 years, the BRICs economies together could be larger than the G6 in US Dollar terms. By 2025 they could account for over half the size of the G6. Currently they are worth less than 15%.
- In US Dollar terms, China could overtake Germany by 2007, Japan by 2015 and the US by 2039. India's economy could be larger than all but the US and China in 30 years. Russia would overtake Germany, France, Italy and the UK.
- Of the current G6 (US, Japan, Germany, UK, France and Italy), only the US and Japan may be among the six largest economies in US Dollar terms in 2050.

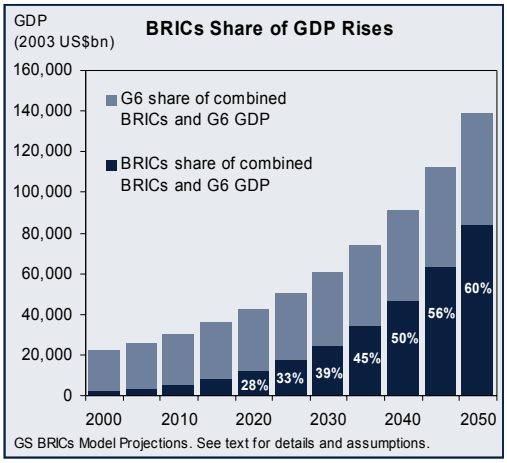
Economic Growth

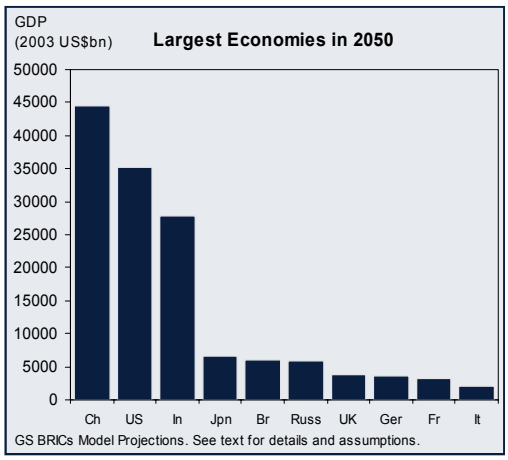
- India has the potential to show the fastest growth over the next 30 and 50 years. Growth could be higher than 5% over the next 30 years and close to 5% as late as 2050 if development proceeds successfully.
- Overall, growth for the BRICs is likely to slow significantly over this 50-year time frame. By 2050, only India would be recording growth rates significantly above 3%.

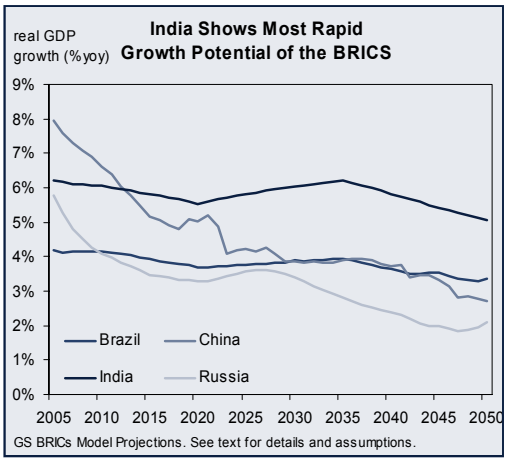
Incomes and Demographics

- Despite much faster growth, individuals in the BRICs are still likely to be poorer on average than individuals in the G6 by 2050. Russia is the exception, essentially catching up with the poorer of the G6 in terms of income per capita by 2050. China's per capita









income could be similar to where the developed economies are now (about US$30,000). By 2030, China's income per capita could be roughly what Korea's is today. In the US, income per capita could reach roughly US$80,000 by 2050.

- Demographics play an important role in the way the world will change. Even within the BRICs, demographic impacts vary greatly. The decline in the working-age population is generally projected to take place later than in the developed economies, but it will be steeper in Russia and China than in India and Brazil.

Global Demand Patterns

- As early as 2009, the annual increase in US Dollar spending from the BRICs could be greater than that of the G6 and more than twice as much in Dollar terms as it is now. By 2025 the annual increase in US Dollar spending from the BRICs could be twice that of the G6, and four times higher by 2050.

Currency Movements

- Rising exchange rates could contribute significantly to the rise in US Dollar GDP in the BRICs. About one-third of the increase in US Dollar GDP from the BRICs over the period may come from rising currencies, with the other two-thirds from faster growth.

- The BRICs' real exchange rates could appreciate by up to 300% over the next 50 years (an average of 2.5% a year). China's currency could double in value in ten years' time if growth continued and the exchange rate were allowed to float freely.

How Countries Get Richer

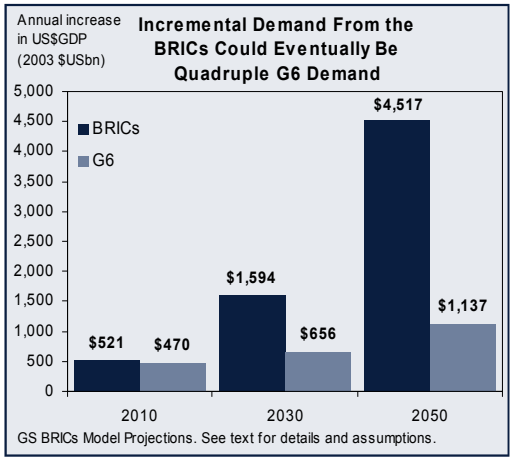
Our predictions may seem dramatic. But over a period of a few decades, the world economy can change a lot. Looking back 30 or 50 years illustrates that point. Fifty years ago, Japan and Germany were struggling to emerge from reconstruction. Thirty years ago, Korea was just beginning to emerge from its position as a low-income nation. Even over the last decade, China's importance to the world economy has increased substantially.

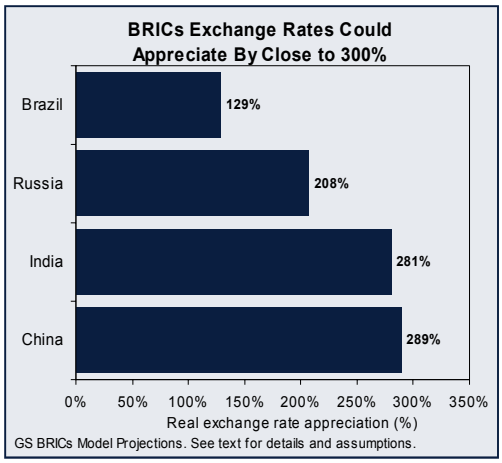
History also illustrates that any kind of long-term projection is subject to a great deal of uncertainty. The further ahead into the future you look, the more uncertain things become. While this makes modeling these kinds of shifts difficult, it is still essential. Over 80% of the value generated by the world's major equity markets will come from earnings delivered more than ten years away. Developing strategies to position for growth may take several years and require significant forward planning. The best option is to provide a sensible framework, based on clear assumptions.

As developing economies grow, they have the potential to post higher growth rates as they catch up with the developed world. This potential comes from two sources. The first is that developing economies have less capital (per worker) than developed economies (in the language of simple growth models, they are further from their 'steady states'). Returns on capital are higher and a given investment rate results in higher growth in the capital stock. The second is that developing countries may be able to use technologies available in more developed countries to 'catch up' with developed country techniques.

As countries develop, these forces fade and growth rates tend to slow towards developed country levels. In Japan and Germany, very rapid growth in the 1960s and 1970s gave way to more moderate growth in the 1980s and 1990s. This is why simple extrapolation gives silly answers over long time frames. As a crude example, assuming that China's GDP growth continued to grow at its current 8% a year over the next three decades would lead to the prediction that China's economy would be three times larger than the US by 2030 in US Dollar terms and 25 times larger by 2050.

Countries also grow richer on the back of appreciating currencies. Currencies tend to rise as higher productivity leads economies to converge on Purchasing Power Parity (PPP) exchange rates. There is a clear tendency for countries with higher income per capita to have exchange rates closer to PPP. The BRICs economies all have exchange rates that are a long way below PPP rates. These large differences between PPP and actual exchange rates come about because productivity levels are much lower in developing economies. As they develop and productivity rises, there will be a tendency for their currencies to rise towards PPP.





Breaking Down Growth

To translate these two processes into actual projections, we need to develop a model. The intuition behind our model is quite simple. Growth accounting divides GDP growth into three components:

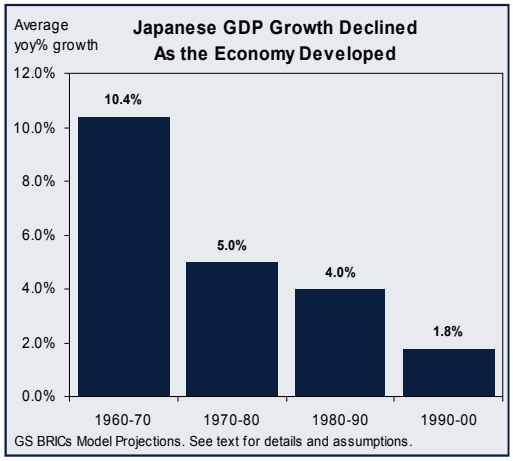
- Growth in employment.
- Growth in the capital stock.
- Technical progress (or total factor productivity (TFP) growth).

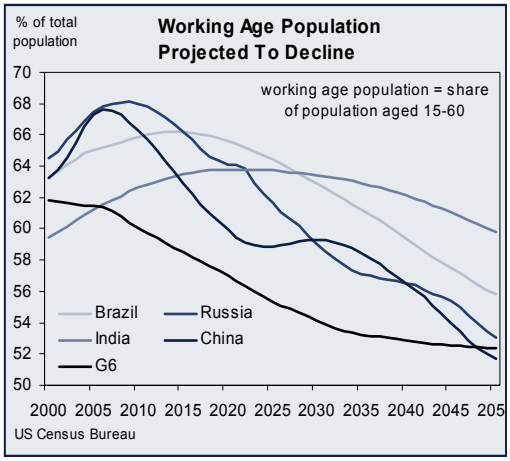
We model each component explicitly. We use the US Census Bureau's demographic projections to forecast employment growth over the long term, assuming that the proportion of the working-age population that works stays roughly stable. We use assumptions about the investment rate to map out the path that the capital stock will take over time. And we model TFP growth as a process of catch-up on the developed economies, by assuming that the larger the income gap between the BRICs and the developed economies, the greater the potential for catch-up and stronger TFP growth. We do not explicitly allow for increases in human capital (education), which are implicitly picked up in the technical progress/TFP term in our model.

We then use the projections of productivity growth from this exercise to map out the path of the real exchange rate. We assume that if an economy experiences higher productivity growth than the US, its equilibrium exchange rate will tend to appreciate.

By varying the assumptions about investment, demographics or the speed of catch-up, we can generate different paths for annual GDP, GDP growth, GDP per capita (in local currency or US Dollars), productivity growth and the real exchange rate.

Because both the growth and currency projections are long-term projections, we ignore the impact of the economic cycle. Effectively, the projections can be interpreted as growth in the trend (or potential growth) of the economy and the currencies' path as an equilibrium path. Where economies peg their exchange rates (as in China), it is even more important to view the





exchange rate projections as an equilibrium real rate. In practice, real exchange rate appreciation might come about through a combination of nominal appreciation and higher inflation, with different mixes having different implications. We abstract from inflation, expressing all of our projections in real terms (either 2003 local currency or 2003 US Dollars).[2]

Generally, the structure of the models is identical across the four economies. We make two minor alterations. We assume that the 'convergence speed' of TFP in Brazil and India is slower than in Russia and China for the first 20 years, largely because of lower education levels and poorer infrastructure (more on these factors below), but gradually rises from 2020 onwards (as these structural problems are addressed), so that all of the BRICs are 'running' at the same convergence speed. We also assume that China's investment rate gradually declines from its current level of around 36% to 30% (close to the Asian average) by 2015. We use GS forecasts until 2004 and begin the simulations in 2005.

A More Detailed Look at the BRICs' Potential

We have already highlighted some of the most striking results, though there are many other intriguing aspects. The tables and charts set out the key features of the projections. In each economy, as development occurs, growth tends to slow and the exchange rate appreciates. Both rising currencies and faster growth raise US Dollar GDP per capita gradually, and the gap between the BRICs and developed economies narrows slowly.

The impact of demographics varies, with labour force growth contributing relatively more to growth in India and Brazil, and detracting from growth in Russia, where the US Census projections show the labour force shrinking quite rapidly. Where labour force and population growth is rapid, income per capita tends to rise more slowly, because higher investment is needed just to keep up with population growth.

To illustrate the shift in economic gravity, we also make comparisons with the G6. To do that, we use a less sophisticated version of the same model to project G6 growth. We assume a common 2% labour productivity growth rate across the G6, so differences in projected GDP growth are purely a function of demographics (and real exchange rates remain roughly stable). A shrinking working-age population appears to be the biggest issue in Japan and Italy, whose growth rates are lower than the others, and the smallest issue in the US, which maintains the fastest growth.

Our G6 projections allow us to compare the paths of GDP and GDP per capita in the BRICs with those of the more advanced economies in a common currency. The shift in GDP relative to the G6 takes place steadily over the period, but is most dramatic in the first 30 years. The BRICs overtake the G6 through higher real growth and through the appreciation of BRICs' currencies. About one-third of the increase in US Dollar GDP from the BRICs over the period may come from rising currencies, with the other two-thirds from faster growth.

We also look explicitly at where new demand growth in the world will come from. While it takes some time for the level of GDP in the BRICs to approach the G6, their share of new demand growth rises much more rapidly. Because it is incremental demand that generally drives returns, this measure may be particularly useful to assess the extent of opportunities in

2. Higher inflation in the BRICs would raise nominal GDP forecasts in local currencies and nominal exchange rates, but would not change the forecasts of real GDP or of US Dollar GDP under the standard assumption that higher inflation would translate into an offsetting depreciation in the currency.

these markets. We measure that new demand growth as the change in US Dollar spending power in the various economies, so again it incorporates both growth and currency effects. On these measures, the BRICs come to dominate the G6 as a source of growth in spending power within ten years.

Taking each of the economies in brief:

- **Brazil**: Over the next 50 years, Brazil's GDP growth rate averages 3.6%. The size of Brazil's economy overtakes Italy by 2025, France by 2031, and the UK and Germany by 2036.

- **China**: China's GDP growth rate falls to 5% in 2020 from its 8.1% growth rate projected for 2003. By the mid-2040s, growth slows to around 3.5%. Even so, high investment rates, a large labour force and steady convergence would mean China becomes the world's largest economy by 2041.

- **India**: While growth in the G6, Brazil, Russia and China is expected to slow significantly over the next 50 years, India's growth rate remains above 5% throughout the period. India's GDP outstrips that of Japan by 2032. With the only population among the BRICs that continues to grow throughout the next 50 years, India has the potential to raise its US Dollar income per capita in 2050 to 35 times current levels. Still, India's income per capita will be significantly lower than any of the other countries we look at.

- **Russia**: Russia's growth projections are hampered by a shrinking population (an assumption that may be too negative). But strong convergence rates work to Russia's benefit and, by 2050, the country's GDP per capita is by far the highest in the group, comparable to that of the G6. Russia's economy overtakes Italy in 2018, France in 2024, the UK in 2027 and Germany in 2028.

Are the Results Plausible?

The projection of a substantial shift in the generation of growth towards the BRICs is dramatic. Is it plausible? We have looked at three main ways to cross-check the forecasts, all of which give us broad comfort with the results.

- First, the forecasts for GDP growth in the next ten years are not out of line with the IMF's assumptions of potential growth in these economies (roughly 5% for Russia, 4% for Brazil, 8% for China and 5%-6% for India). With the exception of Brazil, our projected growth rates are also close to recent performance. Brazil's performance would have to improve quite significantly relative to the past.

- Second, although the implied changes in GDP and currencies may look dramatic on an absolute basis, they are significantly less spectacular than what some economies actually achieved over the last few decades. In Japan between 1955 and 1985, real GDP increased nearly eightfold (from initial levels of income per capita not unlike some of the BRICs) and real industrial production increased tenfold. Between 1970 and 1995, the Yen appreciated by over 300% in nominal terms against the US Dollar. In the more recent past, Korea's GDP increased by nearly nine times between 1970 and 2000. Next to these experiences, our projections look quite tame. Although the projections assume that the

OUR FORECASTS TO 2050: GDP, INCOME PER CAPITA AND GDP GROWTH RATES

Projected US$GDP												
2003 US$bn	BRICs				G6							
	Brazil	China	India	Russia	France	Germany	Italy	Japan	UK	US	BRICs	G6
2000	762	1,078	469	391	1,311	1,875	1,078	4,176	1,437	9,825	2,700	19,702
2005	468	1,724	604	534	1,489	2,011	1,236	4,427	1,688	11,697	3,330	22,548
2010	668	2,998	929	847	1,622	2,212	1,337	4,601	1,876	13,271	5,441	24,919
2015	952	4,754	1,411	1,232	1,767	2,386	1,447	4,858	2,089	14,786	8,349	27,332
2020	1,333	7,070	2,104	1,741	1,930	2,524	1,553	5,221	2,285	16,415	12,248	29,928
2025	1,695	10,213	3,174	2,264	2,095	2,604	1,625	5,567	2,456	18,340	17,345	32,687
2030	2,189	14,312	4,935	2,980	2,267	2,697	1,671	5,810	2,649	20,833	24,415	35,927
2035	2,871	19,605	7,854	3,734	2,445	2,903	1,708	5,882	2,901	23,828	34,064	39,668
2040	3,740	26,439	12,367	4,467	2,668	3,147	1,788	6,039	3,201	27,229	47,013	44,072
2045	4,794	34,799	18,847	5,156	2,898	3,381	1,912	6,297	3,496	30,956	63,596	48,940
2050	6,074	44,453	27,803	5,870	3,148	3,603	2,061	6,673	3,782	35,165	84,201	54,433

GS BRICs Model Projections. See text for details and assumptions.

Projected US$GDP Per Capita										
2003 US$	BRICs				G6					
	Brazil	China	India	Russia	France	Germany	Italy	Japan	UK	US
2000	4,338	854	468	2,675	22,078	22,814	18,677	32,960	24,142	34,797
2005	2,512	1,324	559	3,718	24,547	24,402	21,277	34,744	27,920	39,552
2010	3,417	2,233	804	5,948	26,314	26,877	23,018	36,172	30,611	42,926
2015	4,664	3,428	1,149	8,736	28,338	29,111	25,086	38,626	33,594	45,835
2020	6,302	4,965	1,622	12,527	30,723	31,000	27,239	42,359	36,234	48,849
2025	7,781	7,051	2,331	16,652	33,203	32,299	28,894	46,391	38,479	52,450
2030	9,823	9,809	3,473	22,427	35,876	33,898	30,177	49,944	41,194	57,263
2035	12,682	13,434	5,327	28,749	38,779	37,087	31,402	52,313	44,985	63,017
2040	16,370	18,209	8,124	35,314	42,601	40,966	33,583	55,721	49,658	69,431
2045	20,926	24,192	12,046	42,081	46,795	44,940	36,859	60,454	54,386	76,228
2050	26,592	31,357	17,366	49,646	51,594	48,952	40,901	66,805	59,122	83,710

GS BRICs Model Projections. See text for details and assumptions.

Projected US$ GDP Per Capita Growth: 5-Year Averages										
Average %yoy	BRICs				G6					
	Brazil	China	India	Russia	France	Germany	Italy	Japan	UK	US
2000-2005	-9.8	9.2	3.7	7.0	2.2	1.4	2.7	1.1	3.0	2.6
2005-2010	6.3	11.2	7.5	10.3	1.5	2.0	1.6	0.9	1.9	1.7
2010-2015	6.4	9.2	7.4	8.1	1.5	1.6	1.7	1.2	1.9	1.3
2015-2020	6.2	7.8	7.2	7.5	1.6	1.3	1.7	1.8	1.6	1.3
2020-2025	4.6	7.3	7.4	6.1	1.6	0.9	1.2	1.8	1.2	1.4
2025-2030	4.7	6.9	8.2	6.2	1.6	0.9	0.9	1.5	1.3	1.7
2030-2035	5.2	6.5	8.9	5.2	1.6	1.7	0.8	1.0	1.7	1.9
2035-2040	5.3	6.3	8.9	4.3	1.9	2.0	1.3	1.2	2.0	2.0
2040-2045	5.0	5.9	8.3	3.6	1.9	1.9	1.8	1.6	1.8	1.9
2045-2050	4.9	5.4	7.6	3.4	2.0	1.8	2.1	2.0	1.7	1.9

GS BRICs Model Projections. See text for details and assumptions.

BRICs economies remain on a steady development track, they do not assume 'miracle-economy' growth.

- As a final check, we applied an entirely different approach based on cross-country econometric research. We took a well-known existing econometric model from Levine and Renelt (LR) that explains average GDP growth over the next 30 years as a function of initial income per capita, investment rates, population growth and secondary-school enrolments. Although the technique employed is very different and a year-by-year path cannot be generated, the model has close parallels to our own approach. Projections using the LR equation are not identical to our own, but they are close enough to reassure us that we are making sensible assumptions.

A Look Back in Time: What Would We Have Said in 1960?

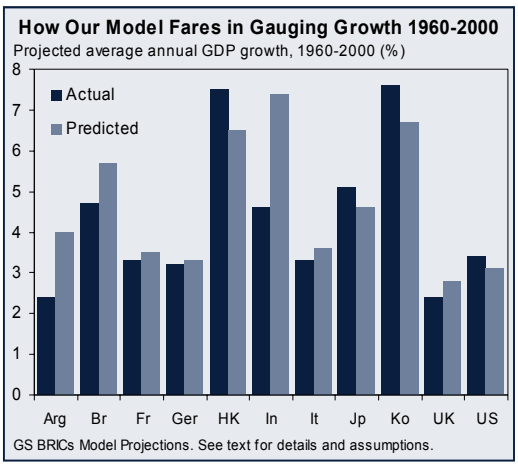
One further check on the plausibility of our projections is to go back in time, apply the same methods that we have used here and look at how our projections of GDP growth then would have compared with subsequent reality.

To do that, we looked at a set of 11 developed and developing countries (US, UK, Germany, France, Italy, Japan, Brazil, Argentina, India, Korea and Hong Kong), starting in 1960 and projecting their GDP growth for the following 40 years. Data availability meant we could not easily do a full 50-year projection.

We applied the same methodology, modeling capital stock growth as a function of the starting level of capital and investment and technical progress as a catch-up process on the US. Because we did not have demographic projections for 1960 (as we do now for the next 50 years), we used actual population data for the period as the basis for our labour force growth assumptions (effectively assuming that this part of the exercise was predicted perfectly).

In general, the projected average growth rates over the period are surprisingly close to the actual outcomes. For the more developed countries, where the growth path has been steadier (France, Germany, UK, US, Italy), the differences between projected and actual growth rates are small.

For the developing countries (and Japan, a developing country in 1960 that was significantly poorer than Argentina), the range of outcomes is wider. In countries where policy settings were not particularly growth-supportive—India, Brazil and Argentina—actual growth fell below what we would have projected. But for the Asian economies that had an unusually favourable experience, our method would have underpredicted actual growth performance—in some cases quite significantly.



Overall, the results highlight that our method of projection seems broadly sensible. For the

BRICs to meet our projections over the next 50 years, they do not need 'miracle' performance—though it is important that they stay on track in maintaining broadly favourable conditions for growth.

Ensuring the Conditions for Growth

This historical exercise highlights a critical point. For our projections to be close to reality, it is important that the BRICs remain on a steady growth track and keep the conditions in place that will allow that to happen. That is harder than it sounds and is the main reason why there is a good chance that the projections might not be realised. Of the BRICs, Brazil has not been growing in line with projections and may have the most immediate obstacles to this kind of growth. It provides a good illustration of the importance of getting the necessary conditions in place.

Research points to a wide range of conditions that are critical to ensuring solid growth performance and increasingly recognises that getting the right institutions as well as the right policies is important. These are the things that the BRICs must get right (or keep getting right) if the kinds of paths we describe are to be close to the truth. The main ingredients are:

- **Sound macroeconomic policies and a stable macroeconomic background**: Low inflation, supportive government policy, sound public finances and a well-managed exchange rate can all help to promote growth. Each of the BRICs has been through periods of macroeconomic instability in the last few decades, and some still face significant macroeconomic challenges. Brazil, for instance, has suffered greatly from the precariousness of public finances and the foreign borrowing that it brought about.

- **Strong and stable political institutions**: Political uncertainty and instability discourages investment and damages growth. Each of the BRICs is likely to face considerable (and different) challenges in political development over the next few decades. For some (Russia most obviously), the task of institution-building has been a major issue in recent growth performance.

- **Openness**: Openness to trade and foreign direct investment has generally been an important part of successful development. The openness of the BRICs varies, but India is still relatively closed on many measures.

- **High levels of education**: Higher levels of education are generally helpful in contributing to more rapid growth and catch-up. The LR growth estimates are based on a strong connection between secondary schooling and growth potential. Of the BRICs, India has the most work to do in expanding education.

How Different Assumptions Would Change Things

In our models, the effect of these conditions for growth can be thought of as operating through our assumptions about the investment rate and the rate of catch-up in TFP with the developed economies. If the BRICs economies fail to deliver the kinds of conditions that are broadly necessary for sustained growth, our assumptions about investment and convergence will prove too optimistic. For Brazil and India, in particular, if they succeed more quickly than we expect, investment rates might actually be higher than our projections, and convergence more rapid.

The Conditions for Growth

A set of core factors—macroeconomic stability, institutional capacity, openness and education—can set the stage for growth. Robert Barro's influential work on the determinants of growth found that growth is enhanced by higher schooling and life expectancy, lower fertility, lower government consumption, better maintenance of the rule of law, lower inflation and improvements in the terms of trade. These core policies are linked: institutional capacity is required to implement stable macroeconomic policies; macro stability is crucial to trade; and without price stability a country rarely has much success in liberalising and expanding trade. We briefly review some of the recent findings on these ingredients here:

Macro stability. An unstable macro environment can hamper growth by distorting prices and incentives. Inflation hinders growth by discouraging saving and investment. Accordingly, a key focus is price stability, achieved through fiscal deficit reduction, tighter monetary policy and exchange-rate realignment. Within the BRICs, macroeconomic indicators reflecting policy divergence show wide swings. Through the 1990s, Brazil averaged an inflation rate of 548% and a government deficit of 21.2% of GDP, against China's average inflation rate of 8% and government deficit of 2.3% of GDP.

Institutions. Institutions affect the 'efficiency' of an economy much in the same way as technology does: more efficient institutions allow an economy to produce the same output with fewer inputs. Bad institutions lower incentives to invest, to work and to save. 'Institutions' in this broad sense include the legal system, functioning markets, health and education systems, financial institutions and the government bureaucracy. Recent research argues that poor political and economic policies are only symptoms of longer-run institutional factors—a line of reasoning that could help explain the disappointing results of developing countries' adoption of macroeconomic policy reforms in the 1990s.

Openness. Openness to trade and FDI can provide access to imported inputs, new technology and larger markets. Empirical studies of trade and growth fall into three buckets. First, country studies document the economic and political consequences of import-substitution policies and export promoting policies. Second, much work uses cross-section or panel data to examine the cross-country relationship between openness and growth. This has produced mixed evidence, but in general it demonstrates a positive relationship between openness and growth. Third, sector, industry and plant-level studies investigate the effects of trade policy on employment, profits, productivity and output at a microeconomic level. There appears to be a greater consensus here than in the cross-country work about the productivity-enhancing effects of trade liberalisation.

Education. As economies grow rapidly, they may face shortages of skilled workers, meaning that more years of schooling are a prerequisite for the next stage of economic development. Enrolment rates have increased dramatically over the past 30 years, on average over 5% a year, particularly in higher education (around 14%). Among the BRICs, India receives low marks for education indicators, particularly at the primary and secondary levels. Many cross-country studies have found positive and statistically significant correlations between schooling and growth rates of per capita GDP—on the order of 0.3% faster annual growth over a 30-year period from an additional one year of schooling.

To illustrate in a simple way the point that the assumptions that we have made—and the underlying conditions that determine them—are important, we show briefly what happens if we change them:

- **Catch-up**: Because the convergence rate captures a broad range of factors that determine the ability to 'catch up', altering it can make a significant difference to projections. For example, if we lower China's convergence rate by a third, our projections of average GDP growth rate over the 50-year period fall to 4.3% from 4.8%, and our projected 2050 US Dollar GDP level drops by 39%. In our baseline model, rates of convergence are generally slower for India and Brazil than for China and Russia. If we raised our convergence rates in India and Brazil to those of China and Russia, India's 2000-2030 average GDP growth rate would rise to 7.4%, against 5.8% originally. Brazil's GDP growth rate would rise as well, to 4.3% from 3.7%.

- **Investment**: The assumed investment rates are less important, but substantial differences from our assumptions would certainly alter the main conclusions. Lowering our assumptions of China's investment rate by five percentage points slightly lowers China's average 2000-2030 GDP growth rate to 5.5% from 5.7%. Cutting five percentage points off of investment rates across the BRICs would reduce their GDP levels on average by around 13% by 2050.

- **Demographics**: The demographic assumptions may also turn out to be incorrect. For instance, Russia's demographics might not turn out to be as negative as the US census projections, and declining fertility and rising mortality may turn out to have been a temporary feature of the transition from communism. Shifting demographic trends might also be partly offset by attempts to raise participation or to extend working ages, neither of which we currently capture.

Sensitivity to these kinds of assumptions clearly means that there is significant uncertainty around our projections. The advantage of the framework we have developed is that we now have the tools to look at these and other questions in much more detail. We also have a clear baseline against which to measure them.

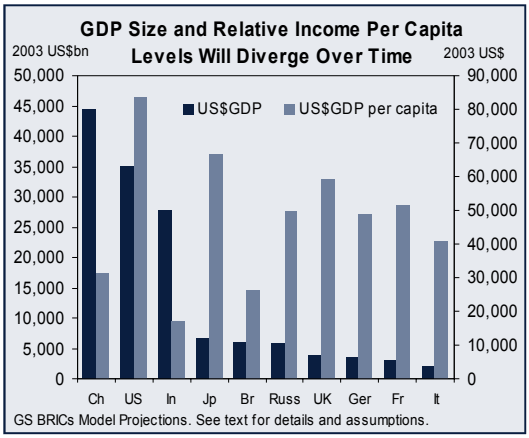
Implications of the BRICs' Ascendancy

Each of the BRICs faces very significant challenges in keeping development on track. This means that there is a good chance that our projections are not met, either through bad policy or bad luck.

Despite the challenges, we think the prospect is worth taking seriously. After all, three of these markets—China, India and Russia—have already been at the top of the growth charts in recent years. They may stay there.

If the BRICs do come anywhere close to meeting the projections set out here, the implications for the pattern of growth and economic activity could be very large indeed. Parts of this story—the opportunities in China, for instance—are well understood. But we suspect that many other parts—the potential for India and the other markets and the interplay of aging in the developed economies with growth in the developing ones—may not be.

We will be using the tools developed here to look in detail at different kinds of scenarios and to flesh out the links between our growth projections and investment opportunities, but we set out some brief conclusions here:



- The relative importance of the BRICs as an engine of new demand growth and spending power may shift more dramatically and quickly than expected. Higher growth in these economies could offset the impact of greying populations and slower growth in today's advanced economies.

- Higher growth may lead to higher returns and increased demand for capital in these markets—and for the means to finance it. The weight of the BRICs in investment portfolios could rise sharply. The pattern of capital flows might move further in their favour, triggering major currency realignments.

- Rising incomes may also see these economies move through the sweet spot of growth for different kinds of products as local spending patterns change. This could be an important determinant of demand and pricing patterns for a range of commodities.

- As the advanced economies become a shrinking part of the world economy, the accompanying shifts in spending could provide significant opportunities for many of today's global companies. Investing in and being involved in the right markets—particularly the right emerging markets—may become an increasingly important strategic choice for many firms.

- The list of the world's ten largest economies may look quite different in 50 years' time. The largest economies in the world (by GDP) may no longer be the richest (by income per capita), making strategic choices for firms more complex.

- Regional neighbours could benefit from the growth opportunities from the BRICs. With three of the four largest economies in 2050 potentially in Asia, we could see important geopolitical shifts towards the Asian region. China's growth is already having a significant impact on the opportunities for the rest of Asia. Sustained strong growth in the other BRICs economies might have similar impacts on their major trading partners.

Dominic Wilson and Roopa Purushothaman
October 2003

CHAPTER THREE

The BRICs and Global Markets: Crude, Cars and Capital

October 2004

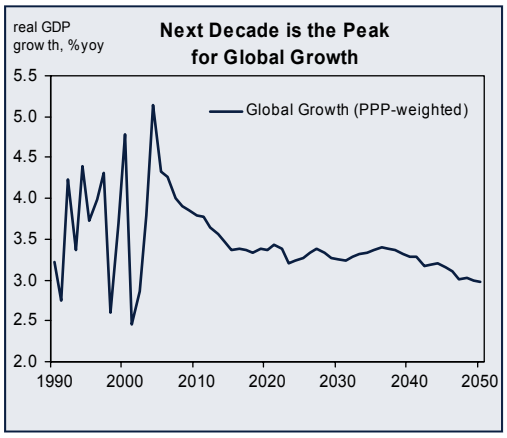
THE BRICS AND GLOBAL MARKETS: CRUDE, CARS AND CAPITAL

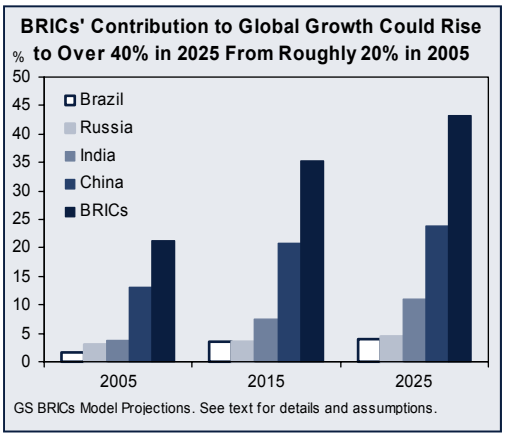
Every few decades, a seismic shift occurs in the world economy that has far-reaching implications across a wide range of markets. The rise of the US economy in the late 19th century, the post-war rebuilding of Japan and Western Europe, and the rise of the East Asian production network have all been events of this kind. We have speculated that the rise of the four largest emerging economies, the BRICs—Brazil, Russia, India and China—could be the same kind of transforming event over the next few decades.

In this report, we look more closely at the impact on the world economy if the BRICs' 'dream' were to become a reality. We show what our BRICs projections would mean for the world growth outlook and what they imply for the emergence of a middle class in the BRICs countries. We then look in detail at what the BRICs growth story would mean for three big areas of market development: energy and oil (as the world's most important commodity); cars (as a major consumer durable), and the level of equity market capitalisation (as a proxy for the size of capital markets). Between them, these three different markets—crude, cars and capital—give a good snapshot of the kinds of opportunities and pressures that could be associated with the BRICs dream.

These new projections again paint a striking picture. Continued growth in the BRICs would push up trend growth for the world in the near term and could see a rapid expansion in the middle class in these four countries. The appetite for energy and commodities, where the BRICs have been most visible so far, is likely to stay strong, with the peak pressures probably felt over the next decade. The BRICs presence could also soon begin to be felt more in areas—consumer durables and capital markets—where they have so far been a smaller force. In fact, in each of the energy, autos and capital markets, the BRICs have the potential to be a major source of growth within ten years and perhaps a dominant one within 20.

Although our earlier report mapped the path of the BRICs out to 2050, our new projections suggest that their importance to global markets could rise much sooner, as they move through the sweet spot of their growth and development path. They also point to the BRICs' rise as a potentially transforming event for the world economy. How policymakers, companies and investors cope with the opportunities and challenges that arise from these shifts is likely to become increasingly important.





Our Main Conclusions

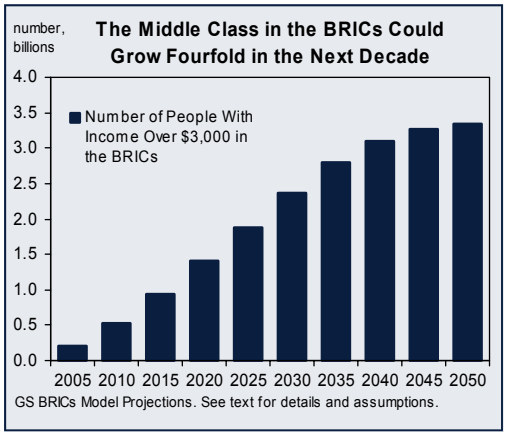
Before offering our main conclusions, we offer three health warnings. The first is that our original BRICs growth projections, on which these results are based, are not pure forecasts, but projections if the conditions for growth in the BRICs are met. We called our original report 'Dreaming With BRICs' because that dream may not become a reality.

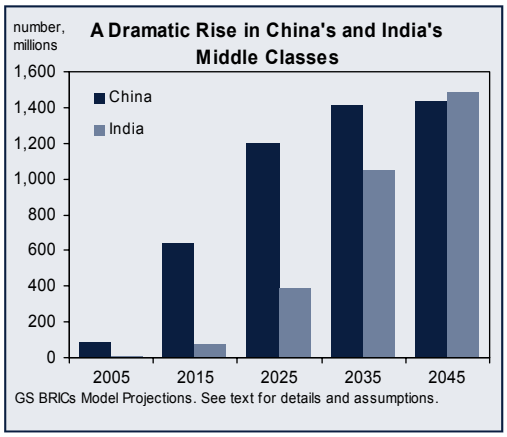
The second is that the task of modeling markets into the future is even more difficult than the task of modeling economies. Over long periods of time, tastes and technologies change, and we spend little time on supply developments.

The third is that a more detailed view of any single area would bring a much wider range of specific knowledge to bear. What our analysis does is set out the broad dimensions of the trends that will shape market development and highlight the kinds of pressures and opportunities that might emerge.

The BRICs and the World

- Over the next few years, BRICs development (and in particular continued industrialisation in China and India) could push the trend world growth rate above 4%. World growth trends could remain above the average of the last 20 years (3.7%) for around a decade, though after that global demographic pressures are likely to lead to a gradual decline.
- If reforms in Europe, Japan or in the BRICs themselves raised overall productivity growth rates, or if demographic pressures led to longer working lives, world growth could move higher than 4% in the short term and stay higher for longer.
- The BRICs' share of world growth could rise from roughly 20% in 2003 to more than 40% in 2025. Their weight in the world economy could rise from less than 10% now to more than 20% in 20 years' time.
- The BRICs impact on global markets is likely to follow a sequence. Commodity markets are already the clearest pressure point for BRICs growth and their impact on those markets is likely to be at its peak in the next decade. The importance of the BRICs as consumer markets is likely to be the next phase and could be a major story in the next ten years. The importance of the BRICs to capital markets is likely to lag a little further behind that and to build gradually over the next 20 years.



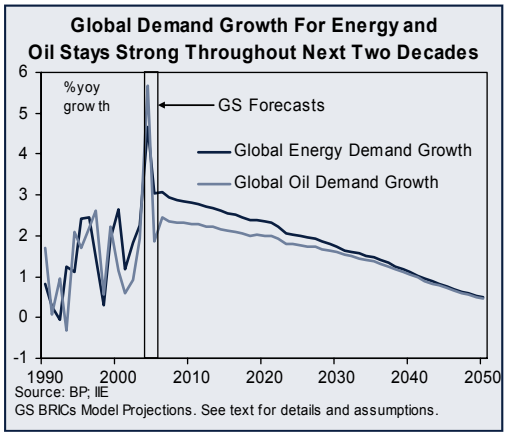


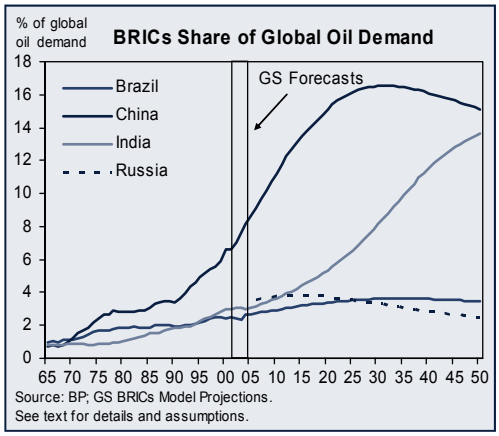
The BRICs and a Growing Middle Class

- The number of people with income over US$3,000 in the BRICs—a level consistent with entry into the 'middle class'—could nearly double in the next three years. In a decade, over 800 million people across the four economies may have crossed that threshold, a number greater than the population of the US, Western Europe and Japan combined.
- In China alone, the number of people with incomes over US$3,000 could increase by close to ten times in the next decade and by nearly 14 times in India, though off a much lower base. In Brazil and Russia, that number could more than double.
- By 2025 there could be more than 200 million new people (more than the population of Japan) in these economies with incomes above US$15,000, up from a tiny fraction today.
- Individuals in the G6 will remain significantly wealthier than those in the BRICs. By 2025, income per capita in the G6 could average roughly US$35,000. At that point, only 24 million people in the BRICs economies are likely to have incomes above that level.

The BRICs and Global Energy Markets

- Underlying global demand growth for energy and oil could remain very strong (well over 2% annually) over the next 15 years or so as China's industrialisation continues and India's follows behind, suggesting pricing pressure could persist for some time. After this period, the trend should decline gradually, as more economies move to a phase of lower demand growth.
- The BRICs could continue to increase their already substantial contribution to global oil demand growth. China's contribution should remain high but is likely to peak in five to ten years' time and should decline steadily thereafter. India's impact will become gradually more important. In less than 15 years, India's contribution to global demand growth could overtake China's.
- China's share of actual oil demand (as opposed to growth) may rise from 8%-9% currently to a peak of around 16.5% in 25 years' time, while India's share could nearly double and will gradually converge on China's.





- Brazil, and even more so Russia, could also be important markets, each coming close to or exceeding Japan's oil consumption by 2025 if they can maintain growth. This implies a doubling of demand from current levels, well above the growth rates likely to be seen in the major advanced economies.

- The US is set to remain the largest consumer of oil for decades to come, unless its oil demand patterns change radically, and its dependence on oil is unlikely to alter. Russia is on a path to remain by far the largest per capita oil consumer of the BRICs.

The BRICs and Global Autos Markets

- China is rapidly approaching the likely sweet spot for growth in autos ownership. Car ownership could increase nearly threefold in the next decade, though growth rates are likely to peak in the next few years.

- India's autos growth will also be rapid, with the potential for a threefold increase in car ownership over the next ten years. But the best decade for India's growth is probably about ten years behind China's, beginning in around 2015.

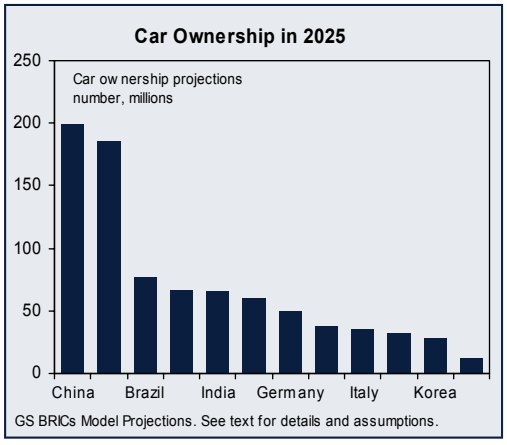
- China and India may emerge as the world's first- and second-largest car markets. Within 20 years, China could have overtaken the US as the world's largest auto market, with India displacing the US perhaps as soon as 15 years later.

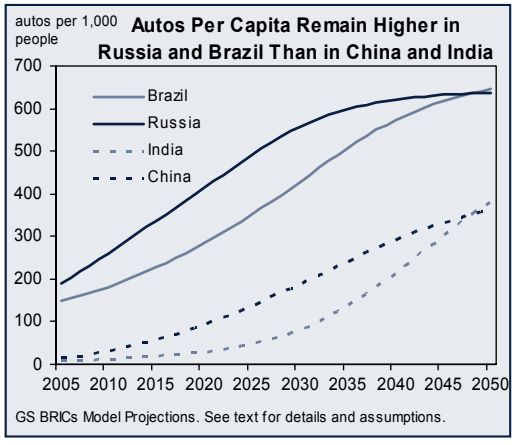
- Russia, where car ownership is much higher already, may be the surprise consumer story. In the next decade, if growth continues, the number of cars on the road in Russia could double and might become comparable to Japan. The potential for strong growth comes as Russia moves through the sweet spot in income levels for consumer products.

- Unlike our oil projections, global autos demand growth may accelerate as the BRICs move through the sweet spot for consumer durable spending, peaking in around 20 years' time. Given that autos growth drives fuel demand, this suggests that there could even be upside to the more macro-based oil projections above.

The BRICS and Global Capital Markets

- The BRICs' importance to global equity markets would rise from a paltry 3.5% currently to around 10% by 2020 depending on the extent of capital market development. If they





choose a more market-based approach to corporate finance, their share could be as large as 16%.

- Market capitalisation in the BRICs economies could increase over the next decade by a factor of four times to US$4trillion, with a large increase in capital market activity. China and India alone could account for 60% of that total.

- Despite this rapid growth, BRICs' capital markets are still likely to be dwarfed by the US market for decades, but could come to rival Europe as a group within 15-20 years and could increase the weight of emerging markets in global equity portfolios.

Three Areas of Focus: Crude, Cars and Capital

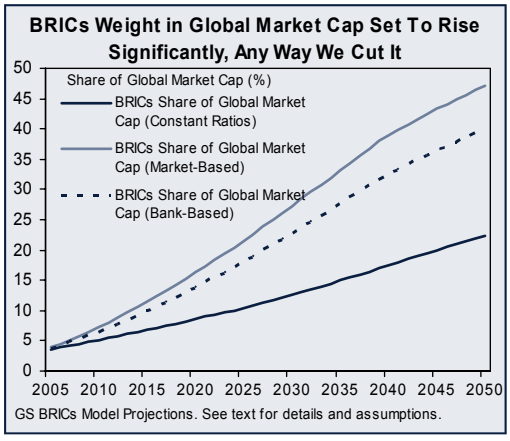
Our projections of the rising economic weight of these four countries have generated many new questions about what that process means for the world. What would the BRICs dream mean for world growth? Will continued growth in these four countries put pressure on global resources? How quickly will a large middle class emerge? When will the BRICs become important markets for different products?

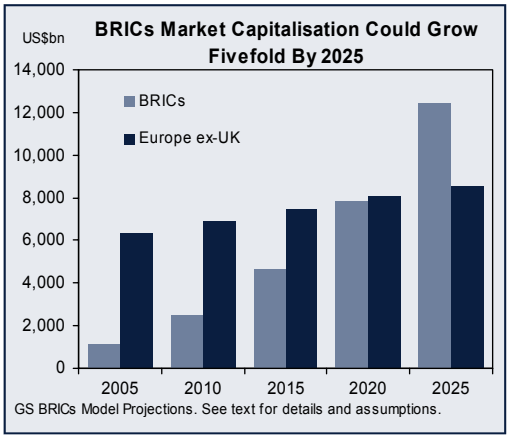
These questions revolve around the implications of our macro projections for the BRICs' influence on global markets. That impact is likely to be wide-ranging; most attention has been focused on three areas:

- The first area is commodities demand. The BRICs impact has been most clearly visible in commodities markets, where they have already played a role in recent demand pressures. Will BRICs' growth keep these pressures in place? And for how long?

- The second area is the demand for consumer goods. If a large middle class emerges in these economies, they could become much more important markets for consumer goods than they are today. How big are these opportunities? Are they close at hand?

- The third area is the growth of capital markets. Growth must be financed, and economic development usually brings financial deepening. The BRICs role in global capital markets is still small. How quickly could that change? Will they become a more important part of the investment universe?





Each of these areas is multi-faceted. Instead of trying to be exhaustive, we have chosen one representative aspect of each area: energy and oil (as an illustration of the impact on commodities demand), cars (as the largest consumer durable) and the level of equity market capitalisation (as one measure of capital market activity). For each, we set out a process for thinking about how our macro projections of BRICs GDP and incomes translate at the micro level into different kinds of markets that capture the main impact on the world if the BRICs dream becomes reality.

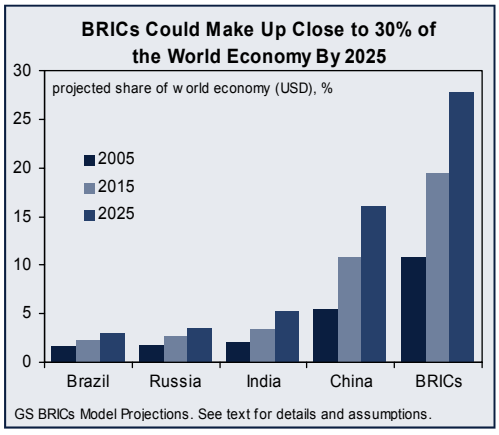
Income Distribution and the Growth of a BRICs Middle Class

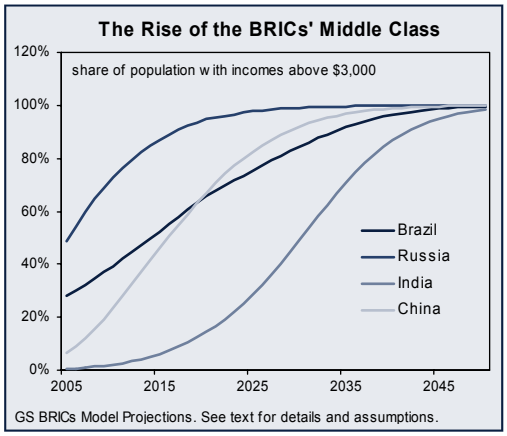
It is not just economic growth that matters for how markets develop. Although our original BRICs projections focused on average incomes, the development of markets is heavily influenced by income distribution and the emergence of a middle class. There can be big differences between overall growth in the economy and the growth in demand for particular products. At different income levels, different products become affordable and available. As the pool of people in that category expands, growth may accelerate rapidly. Poor people don't buy cars, and even the middle class don't buy yachts.

We have used a simple framework that (under sensible assumptions about distribution) allows us to go from a picture of the average income per capita, which we already have, to a much richer picture of how the number of people at different income levels evolves over time. This allows us to map out how a middle class in the BRICs economies might develop.

Think for instance, about the number of people with incomes greater than US$3,000 per capita in China (this is the minimum level that the World Bank uses to define 'higher middle income' economies and which we use as a proxy for the incomes of a true middle class). With the average around US$1,200 currently, the natural spread of incomes ensures that there are still around 5% of people with substantially above-average incomes, largely in the richer cities.

As incomes rise further, that proportion is likely to rise extremely rapidly for a while. For instance, by 2011, with Chinese incomes roughly double their current levels in US Dollar terms (around US$2,500), the proportion of people with incomes above these levels may be six times larger (roughly 28% of the total population). By 2025, with average income levels around six times higher than today, the proportion of people could be over 80%, over 19 times larger. As average incomes increase further, and most people clear the threshold, the impact of





further income gains on the pool of people over that level starts to diminish. The result is that proportions of people with incomes above a certain threshold have an 'S-shape' to them, approaching 100% as incomes rise. The same general pattern can be seen in the other BRICs economies.

Because the BRICs as a group are generally sitting quite close to the cusp of some important thresholds—or will move through them soon—the formation of a growing middle class is likely to be a very important dynamic in boosting markets for particular products. For instance, the number of people with income over US$3,000 per capita in the BRICs could double in the next three years. In a decade, over 800 million people across the four economies may have crossed that threshold. A substantial pool will be much richer. By 2025, over 200m people in the BRICs could have incomes over US$15,000—larger than Japan's and Germany's 2025 population combined.

Putting It All Together: Three Steps to a Market Projection

The key insight that comes from thinking about how groups move above income thresholds is that the typical response of a particular product to growth is also likely to vary at different income levels. For many products, you see an S-shaped pattern: a period of rapid acceleration in product demand that leads to sweet spots in penetration of products.

This is probably most obvious for consumer products, but the same principle applies in other areas. If a family can generally not afford to buy a washing machine until income levels are above US$1,000 per capita, then demand for washing machines may be determined to a significant degree by the number of people who fall into that category. As large numbers of people move into that income bracket, the demand for washing machines may accelerate sharply. Once most people have cleared that income level (and have bought washing machines!), demand growth is likely to slow.

It is the combination of two things—the overall growth in the economy and these shifts in the impact of growth on product demand as income distributions change—that determine how demand in different areas is likely to evolve. By joining those two pieces together, we can translate our BRICs macro projections into projections of the BRICs role in global energy demand, the global autos market and global equity capitalisation.

For our oil and autos projections, we basically proceed in three stages:

1. We come up with projections of how per capita demand growth for a product responds (the income elasticity of demand) to income growth as incomes change.

2. We then combine those estimates with our BRICs and global income per capita projections to come up with projections of per capita demand in those products.

3. We use our population estimates to convert per capita demand projections into projections of total product demand.

The hard work goes into the first step, which predicts how per capita demand varies according to changing income per capita. This automatically integrates the changing sensitivity of demand to rising incomes into our forecasts. We use a similar framework for projecting equity market capitalisation, separating the level of capitalisation (stock market capitalisation as a

percentage of GDP) and then combining our GDP projections with those forecasts. As in the original BRICs projections, we ignore the cycle, so our projections are descriptions of underlying trends.

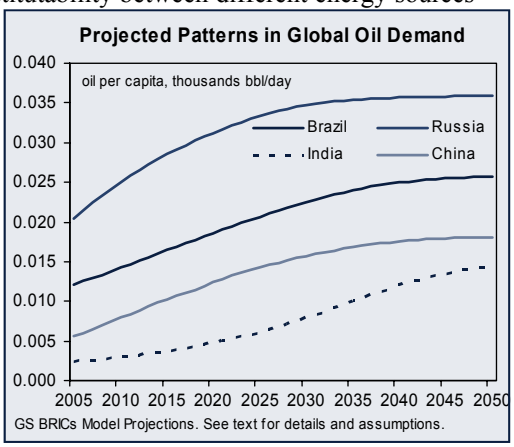
Thinking about markets in this way has one major drawback. We are looking only at the pressures for demand. Modeling supply in an integrated framework for a range of products into the future is simply too big a task. That means that what our projections really describe is the kind of demand pressures that different markets will see. Where supply cannot meet that demand, the result (at least initially) is likely to be pricing pressure. Because of these added uncertainties we would highlight the nearer-term implications and focus more on the immediate future (the next 20 years or so).

The BRICs in Global Energy Markets: Pressures to Continue

The most visible impact of BRICs growth so far—and the one with the broadest global consequences—has been their role in commodity markets in general and metal markets in particular. China's rapid growth in particular has focused attention on the capacity for the BRICs' rapid growth to generate commodity price pressure, but it is their impact on oil demand that has had the widest macroeconomic ramifications. Between them, the BRICs are likely to be responsible for nearly half of the increase in oil demand in 2004 (and roughly 17% of demand itself). While China accounts for the bulk of this, Brazil and India are likely to make significant contributions to demand growth too. Against the backdrop of a tight supply outlook, this demand growth has clearly been a part of the recent story of rising oil prices.

So will the BRICs continue to put pressure on global energy markets? It certainly looks like it. The demand for energy and oil varies greatly over different income levels. During the period of rapid industrialisation, oil demand growth is likely to accelerate more rapidly than the economy itself, while for mature economies it tends to grow more slowly. This generally gives an S-shaped path to per capita oil demand as incomes rise. The peak appears to come at income levels of around US$6,000 in purchasing power terms, not far from where the BRICs now sit.

Combining our estimates of how the elasticities of energy demand evolve with our BRICs projections, we can map out the implied demand for oil for the BRICs and the world. Because in practice there is a quite a high degree of substitutability between different energy sources—at least over the medium term—we focus initially on energy demand and then look at what is implied for oil demand if oil's share of overall energy demand remains stable.



Our projections should not be seen as true 'forecasts', since they take no account of supply developments or the impact of price developments on alternative energy sources. Fundamentally, oil demand and supply must be equal and this will constrain the actual path. Once demand is forecast to exceed supply substantially, it is hard to know how that pressure will resolve itself further down

the track. Despite these uncertainties, the projections are likely to give a good sense of the underlying demand pressures that could emerge. They point to a number of key lessons:

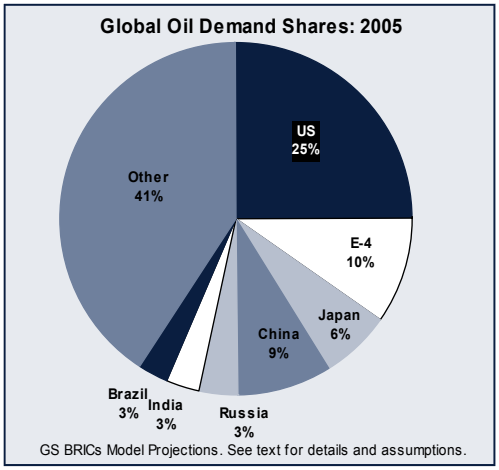
- The issue of strong underlying energy demand is unlikely to go away soon. Our BRICs dream would imply that energy demand would, all else equal, be expected to grow at close to 3% in the near term. Without significant substitution, oil demand could be expected to grow at close to 2.5% over the next few years and above 2% for nearly two decades, well above the 1.4% average over the last two decades.

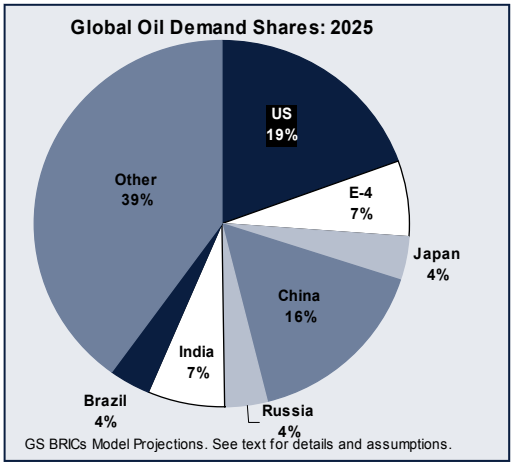
- The peak period of pressure is likely to come over the next decade as a result of the combination of strong global growth, the rising importance of BRICs demand and the phase of high-energy intensive development in India and China. Without reasonably robust growth in supplies, or significant substitution, BRICs pressure on energy markets could remain an issue for some time to come.

- As time goes by, the pressure is likely to fall. Demand growth from the advanced economies is likely to fall further, both because their own growth rates fall further, but also because the responsiveness of oil use to demand heads lower. As China's demand growth also decelerates following the period of maximum energy intensity, that pattern would be reinforced.

- Unsurprisingly, the BRICs' contribution to these shifts is significant and their importance to global oil demand is set to increase further, with the BRICs share rising from 18% now to 30% in 2025. China is currently moving through the strongest point of its global demand impact (its share of global demand growth is projected to peak in 2011). If India's development continues, it too will emerge as a significant contributor to global oil demand growth. It is also striking—given continued focus on US energy dependence—that the BRICs do not displace the US as the world's largest consumer of oil even after several decades.

It is certainly possible that even these projections could be too benign. In particular, they rely on continued declines in oil demand growth in the mature markets, which might not eventuate. As we shall see below, our projections for autos demand point to quite rapid growth, suggesting that a micro-based approach to oil demand forecasting would also point to strong





fuel demand pressure. We have already noted that Russia's oil demand could rise much more than we project, since its current consumption is well below the levels of a decade ago.

The strength of these projections is likely to fuel fears that BRICs growth will see the world run out of natural resources. Those fears, which surfaced throughout the 1960s and 1970s, are overdone. In practice, the pressures that we project are more likely to be resolved in two ways—as they were then—through both increased efficiency of commodity use and the exploitation and discovery of new resources. Temporarily higher prices, however, are usually a key part of the mechanism that delivers that result, so the road ahead may be bumpy.

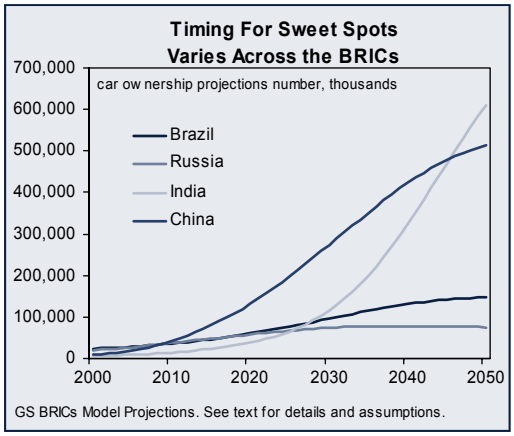
The BRICs in Global Autos Markets: An Emerging Story

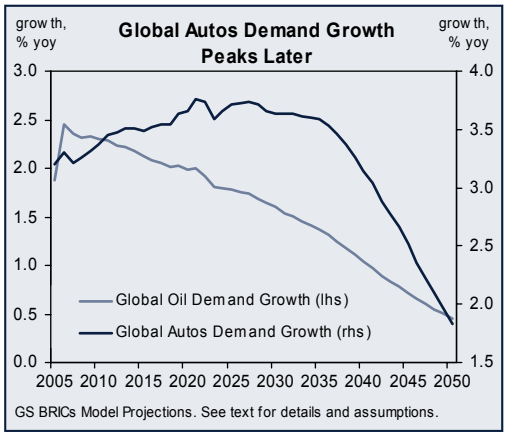
The impact of the BRICs on commodity markets is already being felt. In consumer durable markets, the BRICs economies are at an earlier stage. Their share of global autos markets, for instance, is much smaller (only around 10% of cars on the road globally are in the BRICs) than their share of oil demand. Dramatic growth in China's car market over the past few years (and more recently in India) has already been the subject of attention, though both are coming from a low base.

Our projections suggest that over the next decade or two, the BRICs presence in this area could become a lot more visible. Once again, we analyse how the number of cars per capita has tended to vary at different points in time. The general pattern is similar to the pictures we saw of people moving through different income levels: a period of relatively rapid increase as incomes rise enough for significant numbers of households to afford cars, followed by saturation at around 500-600 cars per capita. The sweet spot for growth comes at around US$8,000 per capita in PPP terms (a level that corresponds to roughly US$3,000-$4,000 per capita at current exchange rates for most of these economies).

- The BRICs themselves could become extremely important parts of the global market, with the annual increase in the number of cars on the road larger than or comparable to the US in each of the BRICs within a little more than a decade, particularly in China and India.

- There are important differences in timing across markets, with India now roughly 10-15 years behind China and each of the BRICs potentially becoming much more important markets over the next decade or two. The growth rate in China's car ownership could peak





soon (though double-digit growth is set to continue for a while), but should accelerate further in India.

- Saturation in the aging major markets makes the potential growth in the BRICs potentially more important as a driver of global demand. Unlike our global energy projections, which showed growth rates slowing gently from peak rates currently, global growth in autos spending would accelerate further if the BRICs dream continues.

- Both in terms of the peak in overall global growth and the peak contribution from the BRICs themselves, the autos story lags behind the impact on energy markets.

Different consumer products will have different profiles, but we think the general path of autos spending is likely to be broadly representative of consumer durables. While the exact take-off points will vary, it suggests that China may be approaching its sweet spot in terms of growth rates, Russia could already be in that zone and India is probably a decade behind China.

The BRICs in Global Capital Markets: A Slow-Building Force

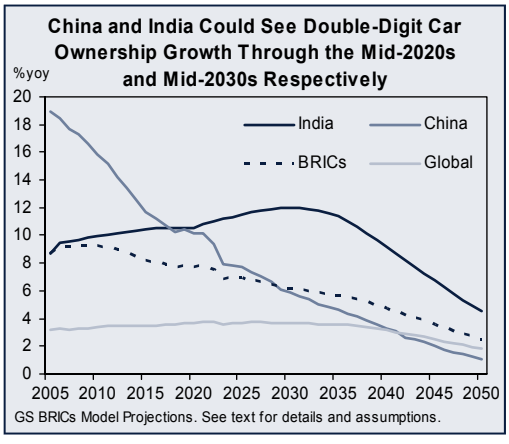
If the BRICs' impact on consumer markets is only gradually appearing, their weight in global capital markets is currently even smaller. There are many dimensions to financial deepening. We focus on equity market capitalisation as a proxy for the importance of capital-market-related activity in each of these economies. The evolution of market capitalisation also shows how the significance of these markets to investor portfolios is likely to shift.

The BRICs have already seen increases in their market size over time. As the BRICs economies develop, it is likely that capital market development will see their equity assets grow more rapidly than the economy as a whole. Although some of this rise may come from multiple expansion as risk premia fall, the main dynamic will be the equitisation of corporate assets, the deepening of capital markets and the disintermediation that takes place as financial development proceeds. New issuance and privatisations are likely to be an important part of that process.

To gauge what market deepening could mean for the BRICs, we have looked at three different assumptions about the process of equitisation and convergence on the developed world:

- The first (and most conservative) assumes that BRICs equity market ratios remain at current levels. In this case, it is purely their growing weight in the global economy that affects their weight in global equity markets.

- The second (and least conservative) is that the BRICs move towards the model of the 'market-based' economies and gradually move to much higher levels of equity market capitalisation as they develop. The IMF characterises 'market-based' economies as those where capital markets rather than banks play a primary



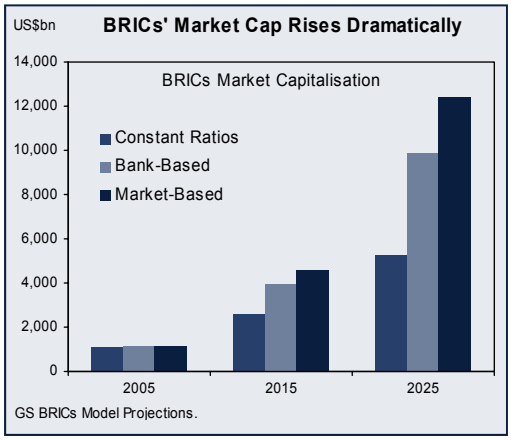
role in corporate finance. Across these economies, the equity market is on average around 90% of GDP.

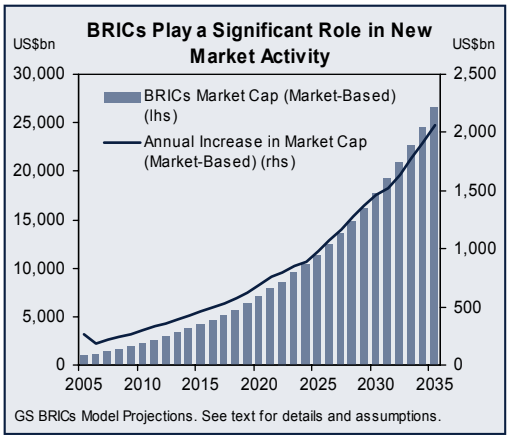
- The third is that the BRICs gravitate towards a more 'bank-based' model, in which equity markets rise in importance but stabilise at more moderate levels as a proportion of the economy. In 'bank-based economies', capital markets are an important, but smaller, part of overall corporate fund-raising. Equity markets in these economies average around 65% of GDP.

Regardless of the assumptions (and we think the most conservative is the least likely if economic growth continues), the BRICs are likely to become much more important as capital markets. We stress that these projections are not meant to capture the actual movements of equity market indices or share prices. We are focused solely on the degree to which the economy becomes 'equitised' or capital-market-oriented. In particular:

- Within a decade, the BRICs market capitalisation could be four or times bigger than today, with both China and India playing significantly greater roles.
- The BRICs' role in new capital market activity could also become very significant, with the BRICs' role in capital market growth rising even more sharply, as with our energy and autos projections.
- Alongside the increase in capital-market-related activity, the BRICs' share in a benchmarked global portfolio would also rise as a result, perhaps to as much as 17% by 2020.
- The BRICs markets would still likely be dwarfed by the US market for decades, but they could come to rival Europe as a group within 15-20 years.

We noted in our first report that one feature of the world that could change if the BRICs develop is that the world's largest economies would no longer be among the richest, as they generally are today. The corollary for portfolios is that emerging market assets may become a more important part of global equity markets if economies such as the BRICs continue to develop, increasing their weight before they reach developed country income levels.





Why Should We Believe the Results?

How plausible are these projections? We have already listed several caveats, the most important being that they rely on continued growth in the BRICs economies and that the impact of supply developments must be properly accounted for.

We have also looked at a few different ways to check our comfort levels with the overall thrust of the projections.

For some areas, we are able to compare our results directly with other official bodies. For instance, the EIA—in the US Department of Energy—reports long-term projections of oil demand, using a model that is more complex in some respects than our own (though they also rely on their own economic forecasts of the BRICs and major economies). Comparing our results to theirs, we find that our demand forecasts generally show stronger pressure than their central projections and have more in common with their 'upside case'. Where our results differ most is that we expect a significantly larger contribution to demand growth from China and India. This stems less from our being more optimistic on growth than they are, but from a view that growth will translate into stronger oil demand growth than they expect. It is interesting that the EIA appears to have underestimated China's energy response for several years and by a fairly wide margin.

A second way of gauging the plausibility of our results is to look at the experience of other economies that have moved through the income ranges that the BRICs are likely to cross in the next few decades. Our Japanese economists have done some very interesting work comparing China's development currently to Japan's position in the 1950s. Japan's high-growth phase was characterised by a rapid rise in the penetration rate of products such as refrigerators, washing machines and colour televisions. By the mid-1970s, penetration rates for these three products rose to 100% or more, from a base ranging from 3%-24% in the late 1950s. Our Japanese group has argued that China is at a level where in Japan's history, urbanisation and rising incomes saw a rapid increase in consumer durables products, consistent with the projection path we have mapped out above.

Similar evidence can be found from Korea's development experience. During the phase of rapid industrialisation, Korea's oil demand increased 2.5 times in a decade, more than the twofold increase we are projecting for China. The experience of the Korean autos boom also resonates with our projections. At the point when Korea was around the income levels that

Consumer Durables Penetration Rates

(%)		Refrigerators		Washing machines		TV sets	
		Urban	Rural	Urban	Rural	Urban	Rural
Japan	1959	11	3	44	24	(43)	(24)
	1964	78	58	86	77	(111)	(101)
	1969	98	91	100	97	27	23
	1974	**107**	**108**	**102**	**103**	**107**	**106**
China	1985	7	0	48	2	17	1
	1990	42	1	78	9	59	5
	1995	66	5	89	17	90	17
	2001	**83**	**14**	**93**	**30**	**121**	**54**

Note: Figures in parenthesis for TV sets denote black-and-white. 1964 was the year of the Tokyo Olympics.
Source: MPHPT, China Statistical Yearbook.

China has now, the following decade saw car ownership increase from eight cars per thousand people to 80! If China, and subsequently India, follow a similar path, our projections would turn out to be conservative.

In terms of equity market capitalisation, there is also plenty of evidence for the notion of capital market deepening. Not only have the developed markets themselves seen pretty dramatic rises in capitalisation, but the wide range of capitalisations in the developing economies shows that it is easy to conceive of increases in the BRICs economies as development occurs.

A third cross-check is to look at what we are suggesting the BRICs will look like when they reach the income levels of some of today's middle-income and developed countries (we look at the US, Germany, Japan and Korea). Our projections imply relatively high autos penetration in Brazil and Russia (effectively, they are already more car-friendly than the developed markets were at their income levels), but are quite conservative for India and particularly China. The energy projections imply much lower oil per capita use across the BRICs than in the more developed economies. On balance, both sets of forecasts look quite reasonable on this kind of simple comparison.

The BRICs Impact on Global Markets: A Transforming Event

Our projections leave us in little doubt that continued growth in the BRICs economies could be a major influence in shaping global markets in the next decade or two.

The key question remains: can they do it? On that front, the short-term risks in each of the BRICs remain as visible as ever, but we remain convinced of the value of exploring the 'dream' and delving into the consequences of what could be a major transforming event for the world. In the end, our purpose is less to give definitive forecasts—something we think is impossible given the uncertainties—and more to think systematically about the BRICs growth process. As with our original study, we hope to offer a benchmark for investors and a framework for thinking about turning macro projections into market developments.

Although we have kept our focus deliberately narrow, the three areas we have examined provide some important insights into how our BRICs projections might affect a wider range of markets than the ones we have considered here. We would highlight a few key conclusions:

- **A sequence of pressures: crude, then cars, then capital.** The broad sequence that our results describe show the BRICs having their largest impact on commodity markets first, then on consumer durables markets and finally on global capital markets. While that division is too neat, since the BRICs could be important in all areas within a decade or two, it gives a sense of where the maximum pressures and opportunities could come.

- **The growth of a BRICs middle class could be a key market dynamic.** Although the timing of this story differs across markets, it could be an important driver in each within a decade. We have seen in the case of autos that this rapid growth could underpin very strong demand for consumer products, even over the next decade.

- **The timing of impacts varies across the BRICs.** We would highlight Russia as a 'sleeper' story for consumer spending, and its potential as a major European market. In commodities, China is the dominant force now, but India could move into a similar role a decade or so from now if its growth continues.

- **The next decade is likely to be the peak period for resource pressure.** The commodities demand story may be in its peak period now, as the BRICs move through a commodity-intensive phase of growth, but could remain strong through the next two decades. With supplies still very tight, even modest demand growth may be a source of pressure.

- **Fears of commodity exhaustion are overdone, but the path to substitution can be rocky.** Our projections imply that underlying demand for energy at current prices could remain very strong. Despite fears that BRICs growth will starve the world of natural resources, in practice, the more likely outcome is substitution. That can be a rocky road, since price spikes are often a key part of the adjustment process. The experience of the 1970s is both encouraging and discouraging: discouraging, because of the impact on the world economy; encouraging, because North Asia's long-term development was barely interrupted, suggesting that limited natural resources need not be a binding constraint on BRICs growth.

- **High growth and high returns do not always go hand in hand.** Our projections (both macro and micro) are fundamentally about demand growth. High growth need not always mean high returns, however. Supply dynamics and the competitive landscape are critical to whether strong market growth can translate into strong returns for firms and their investors.

As with our earlier work, we are left with as many questions as answers. What is the outlook for other products and commodities? Can we integrate a supply picture more fully into our analysis? What would a consumer boom in the BRICs economies mean for resource pressures and where would they emerge first? We look forward to entering the next stage of the debate.

Dominic Wilson, Roopa Purushothaman and Themistoklis Fiotakis
October 2004

CRUDE, CARS AND CAPITAL: OUR PROJECTIONS TO 2050

Oil, Thousands of Barrels per day									
	Brazil	Russia	India	China	US	Japan	Germany	Korea	World
2000	2,166	2,578	2,127	4,796	19,701	5,479	2,772	2,135	76,312
2005	2,255	2,935	2,576	7,242	20,916	5,375	2,663	2,249	84,086
2010	2,781	3,563	3,442	10,632	21,928	5,386	2,702	2,481	94,435
2015	3,359	4,023	4,637	14,180	22,906	5,344	2,714	2,634	105,332
2020	3,937	4,340	6,231	17,595	23,882	5,255	2,711	2,717	116,484
2025	4,501	4,534	8,396	20,628	24,860	5,128	2,694	2,764	127,727
2030	5,018	4,613	11,293	22,948	25,872	4,977	2,665	2,779	138,828
2035	5,432	4,597	14,795	24,548	26,903	4,814	2,631	2,765	149,226
2040	5,699	4,515	18,281	25,477	27,915	4,643	2,587	2,726	158,219
2045	5,834	4,390	21,118	25,777	28,914	4,465	2,538	2,667	164,967
2050	5,872	4,243	23,091	25,638	29,915	4,284	2,484	2,596	169,576

GS BRICs Model Projections. See text for details and assumptions.

Autos, Cars Owned per 1,000 People								
	Brazil	Russia	India	China	US	Japan	Germany	Korea
2000	137	140	5	7	480	413	521	171
2005	150	189	8	15	503	446	555	273
2010	182	261	12	32	513	457	581	367
2015	228	337	19	58	521	473	598	445
2020	284	414	30	92	527	493	609	499
2025	351	492	48	137	532	508	614	540
2030	429	558	81	188	538	518	620	566
2035	508	598	136	241	543	524	629	582
2040	573	620	213	292	547	530	635	596
2045	618	632	300	333	551	537	638	607
2050	645	638	382	363	555	544	640	616

GS BRICs Model Projections. See text for details and assumptions.

Stock Market Cap (Market-Based) US$bn									
	Brazil	Russia	India	China	US	Japan	Germany	Korea	World
2000	216	62	130	92	15,093	4,011	1,107	180	31,147
2005	259	242	238	414	12,937	3,230	986	325	29,496
2010	414	485	429	1,170	14,679	3,356	1,084	440	34,514
2015	653	823	744	2,408	16,354	3,544	1,169	578	40,512
2020	1,003	1,310	1,239	4,265	18,156	3,809	1,237	730	48,039
2025	1,394	1,899	2,063	7,054	20,285	4,061	1,276	908	57,598
2030	1,967	2,703	3,514	11,013	23,042	4,239	1,322	1,086	70,362
2035	2,818	3,357	6,078	16,564	26,355	4,291	1,423	1,229	86,856
2040	3,933	3,979	10,288	23,915	30,117	4,405	1,542	1,400	108,239
2045	5,093	4,552	16,672	31,190	34,238	4,594	1,657	1,586	132,846
2050	6,514	5,136	25,927	39,490	38,894	4,868	1,766	1,811	163,259

GS BRICs Model Projections. See text for details and assumptions.

CHAPTER FOUR

How Solid Are the BRICs?

December 2005

HOW SOLID ARE THE BRICS?

This latest paper in the BRICs series discusses how the BRICs countries have progressed since we introduced our BRICs 2050 scenarios. We also look at how 'BRIC-like' other large countries are, and present a measure to show how these, the BRICs and all the world's economies score in terms of sustaining a healthy environment for growth. The BRICs economies do seem to be ahead of many other developing economies, both large and small.

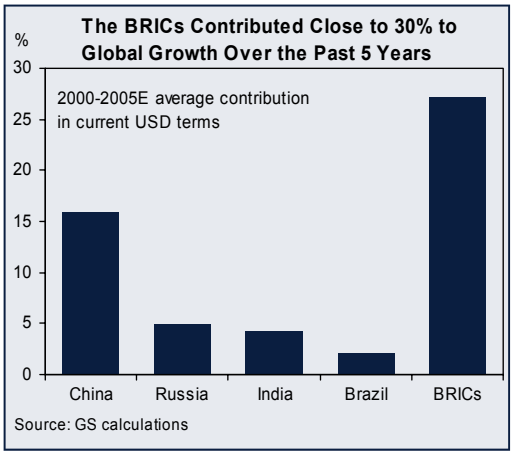
We also present a detailed study of the prospects for another set of developing countries, a group we call the N-11—the Next Eleven. Of them, only Mexico and perhaps Korea have the capacity to become as important globally as the BRICs, although many of them have compelling potential for growth.

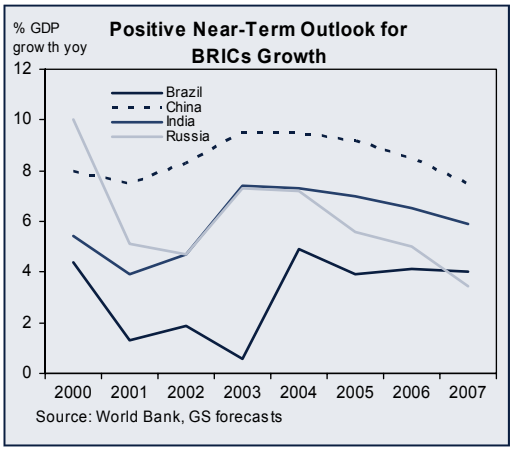
For all countries, BRIC-like or otherwise, the key to converting potential into reality continues to be progress in strengthening key long-term conditions for growth (macroeconomic stability, political institutional development, trade and investment openness, and education). We introduce a Growth Environment Score (GES), which aims to summarise the overall structural conditions and policy settings for countries globally. Encouragingly, the BRICs themselves are all in the top half of the rankings for developing countries. While the BRICs are generally progressing, our GES implies there is a need for considerable further policy improvement in each country.

Dreams and Reality

Two themes have come up repeatedly since we introduced our BRICs 2050 scenarios: Will the BRICs make it? And who else might join them?

There is a major distinction between the BRICs' *potential* and the *reality*. The key to turning one into the other—as we pointed out in our 2003 paper—relies largely on the BRICs finding and keeping in place the *conditions* for growth. Without these improvements, the BRICs' potential will not be fulfilled. Demographic advantage is not sufficient. As we showed, 'miracle conditions' are not necessary, but a basic set of powerful conditions is crucial. We try to capture the progress and current state of growth conditions in our Growth Environment Score index.



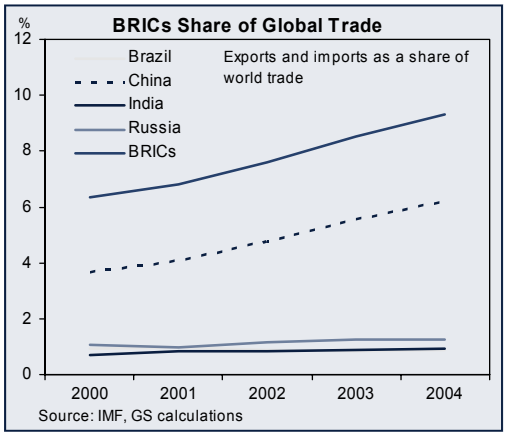


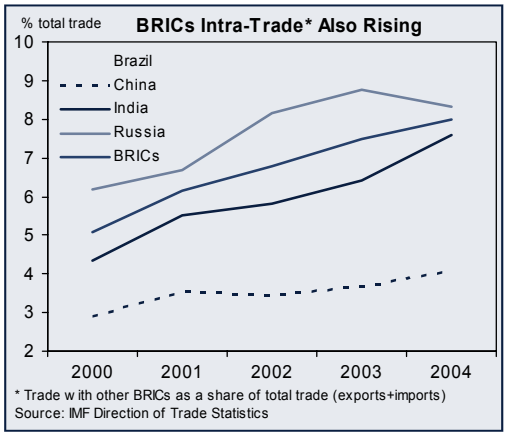
A common question we hear is: why just Brazil, Russia, India and China? The simple reason is that we think they represent the group of countries that have both the potential to become important (largely because of their size) and a reasonable chance of meeting the criteria. The case for China and India is especially straightforward, simply on the basis of their massive populations. We did not include Brazil and Russia purely because the acronym would fail to be made if we left them out, as we have repeatedly and amusingly heard. We genuinely believed, and still do, that these two economies, along with China and India, have the potential to be among the most interesting global economic stories and investment themes for many years to come. In addition, we now believe even more strongly that optimal global economic policymaking cannot be undertaken without including *all* of the BRICs at the highest level.

In our initial report, we did exclude several other large developing countries that have the potential to be much bigger economies in coming decades. We did not ignore South Africa—in fact, we specifically showed how unlikely it would be that South Africa could reach the size of any of the BRICs despite its own potential. We excluded other candidates in our earlier studies either because they lacked the potential to become large and important players (in many cases because they are just too small) or because we thought that fulfilling the conditions was an unrealistic assumption.

In this paper, we discuss the candidacy of other countries to be BRIC-like. We have estimated projections up to 2050 to include another broad group of possible candidates, a group we call the N-11—the Next Eleven. By and large, our new work confirms our initial belief. We still find that the BRICs stand out relative to the bulk of these other candidates, in terms of the potential to be a major economic force. Of the other countries we look at, only Mexico and perhaps Korea have the potential to rival the BRICs—economies that we excluded initially because we view them as already more developed. Mexico's favourable demographics and scope to catch up place it among the BRICs in terms of economic size by 2050. Korea, albeit somewhat smaller, is better placed than most others to realise its potential due to its growth-supportive fundamentals. Nigeria and Indonesia emerge as interesting prospects, but they face serious fundamental weaknesses in the conditions that we identify as necessary.

Each of the countries in the N-11, Korea and Mexico excluded, faces its own specific dilemmas, and perhaps unlike the four BRICs, they are not close to the heart of current and likely future globalisation developments. That does not mean that these other countries cannot achieve their own BRICs-like aspirations—indeed several probably will—but the probability is lower and their ultimate potential size is smaller.





Bigger BRICs, Bigger Impact

Since we first published our BRICs 2050 scenarios, the BRICs have grown significantly faster than we assumed. Each of the BRICs exceeded its growth path in 2004 by at least a percentage point, and all but Brazil are expected to do so in 2005. Our regional economists' forecasts show that the BRICs should continue to exceed our projections in the next couple of years, suggesting that in the near term our approach is proving conservative. Of course, global economic and financial conditions have been favourable, although the BRICs economies themselves have been central to these developments.

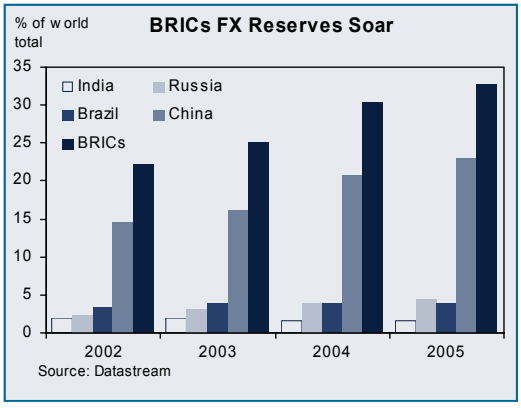
The BRICs' impact on the global economy has continued to grow over the last few years, through a wide range of different dimensions:

Growth and Trade

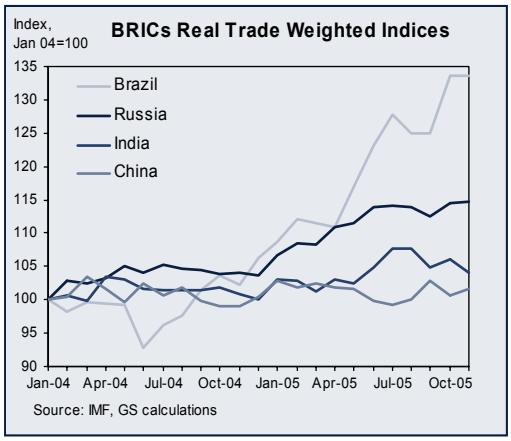
- Between 2000 and 2005, the BRICs contributed roughly 28% of global growth in US Dollar terms, and 55% in Purchasing Power Parity (PPP) terms.
- Their share of global trade continues to climb at a rapid rate. At close to 15% currently, it is now *double* its level in 2001.
- Trade *among* the BRICs has also accelerated, with intra-BRICs trade now nearly 8% of their total trade compared with 5% in 2000. There have been numerous signs of developing trade relationships among the BRICs, including the sharp increase in Brazilian trade with China and Chinese investment commitments in Brazil.
- India (in intellectual property) and Brazil (in agriculture) have also illustrated their policymaking leadership among developing countries through the WTO negotiation process.

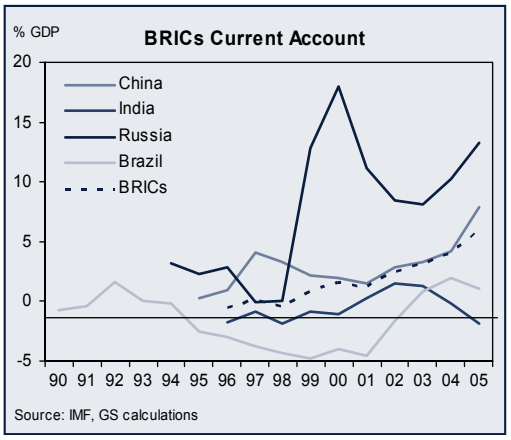
Capital Flows

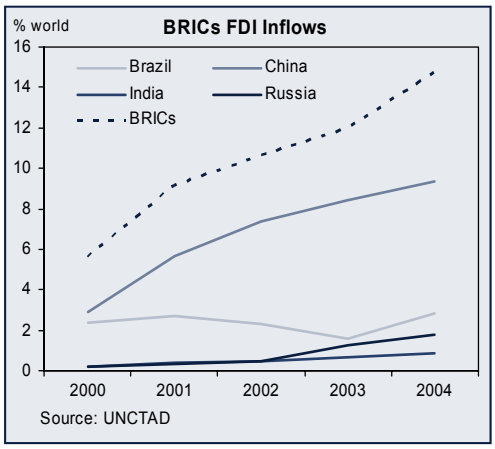
- The BRICs have played an important part in global financial developments. Latest estimates suggest that the BRICs now hold more than 30% of world reserves. China is the dominant contributor, but Russia, India and Brazil have all accumulated substantial reserves also.
- Despite this reserve accumulation, real exchange rates in each country have appreciated over the last two years. Real exchange rate appreciation was and remains an important part of our projected paths out to 2050.
- BRICs' current accounts remain in healthy surplus, reflecting the group's key role in the global savings supply. With China's surplus increasing sharply, the BRICs' current account is likely to come in at around US$240bn in 2005, or close to 6% of BRICs' GDP. The BRICs are increasingly important counterparts to the US current account deficit.

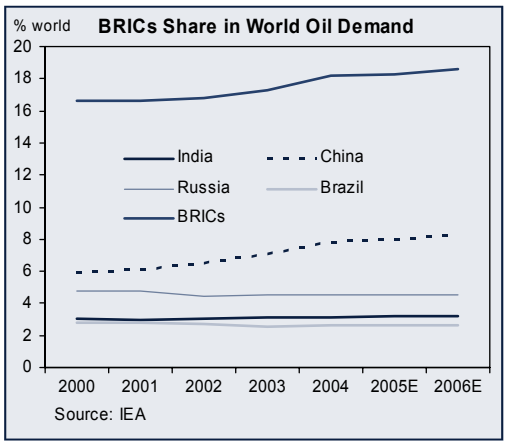


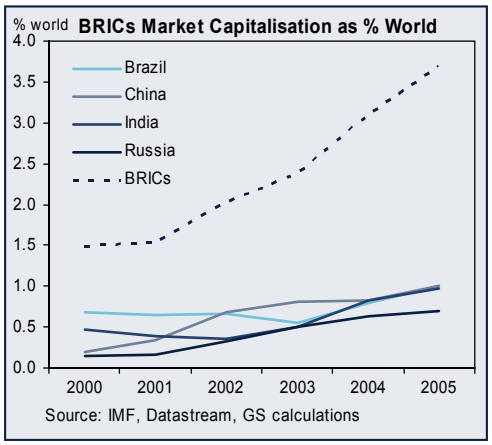
BRICs Play a Growing Role in Global Trade and Markets

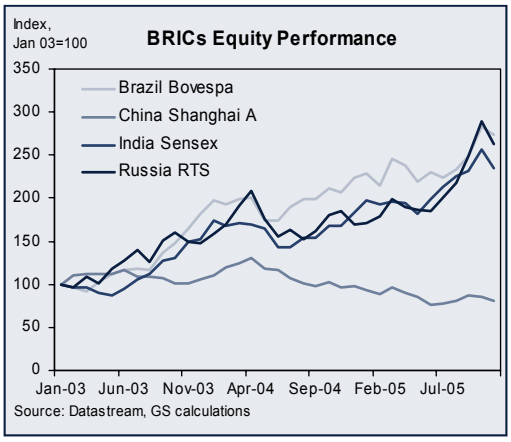












- BRICs' share as a destination for global FDI also continues to rise (now 15% of the global total, nearly three times higher than in 2000). What is even more striking is that BRICs' FDI *outflows* have also picked up (to more than 3% of the global total, a sixfold increase since 2000) as BRICs companies expand their own global presence. M&A transactions have also picked up.

Markets

- BRICs' share of oil demand is moving steadily higher, with an estimated 18% share, projected to rise further this year and next. This dynamic still has a long way to run, with the next decade in particular the likely point of maximum pressure on energy and other natural resources.

- BRICs stock markets have generally performed very strongly since 2003, with Brazilian, Russian and Indian indices all up by around 150% over that period. China is the one exception, where the idiosyncrasies of the local market have meant persistent lacklustre performance. China provides a warning that the local market may not be the best investment vehicle for the local growth story. BRICs market capitalisation continues to climb, currently at close to 4% of the global total.

Current success is obviously no guarantee of future performance, but it is encouraging that the BRICs have so far grown faster than we envisaged.

We have now updated our projections to take into account the recent economic data and the latest demographic projections, rebasing our figures to 2005. Key elements of the initial projections remain in place, with minor variations. China would now overtake the US by 2040 (slightly ahead of our 2003 projections), while India would overtake Japan by 2033 (slightly later than earlier projections, due to the recent improvements in Japan's economic performance).

We have also added Canada to our analysis, given some suggestions that we specifically excluded Canada from our G6 developed country group (in reality, we initially analysed the G3—the US, Japan and the four large European economies, labeling it the G6). Canada would still be the smallest economy in the current G7 grouping by 2050.

Are There More 'BRICs'? A Look at the N-11

The BRICs story is not simply about developing country growth successes. What makes the BRICs special is that they have the scale and the trajectory to challenge the major economies in terms of influence on the world economy. Looking across the developing world today, the BRICs nations clearly stand out on both their economic and demographic size. Thinking back to the original purpose of the BRICs analysis—an attempt to highlight those economies that could provide a challenge to the major developed economies in terms of their weight—these two criteria provide the basic foundations for the potential we map out.

Of course, this is not to say that we will not see other important growth success stories outside of the BRICs—we expect to, but not with the scale to match the BRICs. Our 2003 paper included a similar long-term growth exercise for South Africa, in which we found real GDP growth to average roughly 3.5% over the projection period. Measures such as income per

The N-11 Snapshot				
	Population (2005, mn)	2005 GDP (US$bn)	5y Average GDP Growth Rate (2000-2005)	2005 GDP per Capita (US$)
Bangladesh	144	61	5.4%	422
Egypt	78	91	4.0%	1,170
Indonesia	242	272	4.6%	1,122
Iran	68	203	5.7%	2,989
Korea	49	814	5.2%	16,741
Mexico	106	753	2.6%	7,092
Nigeria	129	94	5.1%	733
Pakistan	162	120	4.1%	737
Philippines	88	98	4.7%	1,115
Turkey	70	349	4.3%	5,013
Vietnam	84	47	7.2%	566

capita move rapidly towards G6 levels; however, we found that by 2050 South Africa's GDP would be much smaller than the smallest BRIC, making it difficult for the country to become a global economic heavyweight.

In thinking about other countries that might have BRICs-like potential, we focused on demographic profiles, which drive much of the analysis. Without a substantial population, even a successful growth story is unlikely to have a global impact. Hong Kong and Luxembourg will never be global powers, despite the very high levels of income and living standards that they have achieved.

We call this larger developing-country set the Next Eleven (N-11), though whether they will 'emerge' is still an open question for many. This group shows broad representation by region and comprises Bangladesh, Egypt, Indonesia, Iran, Korea, Mexico, Nigeria, Pakistan, Philippines, Turkey and Vietnam.[1]

We have chosen to include Korea and Mexico here, which as OECD members we excluded from our initial study. Korea and Mexico have the highest income levels of the N-11 group by some margin (roughly US$17,000 in Korea and US$7,000 in Mexico). Korea, in particular, is unique in this group. Income per capita is already at high-income levels, and across the components in our Growth Environment Score, Korea resembles more of a developed country than a developing one. However, both Korea and Mexico are important to include in any complete projection of the largest economies over the next 50 years. The fact that income per capita is already high somewhat limits their growth potential in our model of productivity convergence, which is driven by the income gap with the US. Korea's working-age demographics, which show a sharp fall-off after 2010, also pose a significant challenge to future growth.

Even With the N-11, Still Largely a BRICs Story

We ran projections of US Dollar GDP, real GDP growth, income per capita, incremental demand and exchange rate paths for each of these economies. Similar to our original analysis,

1. Some of the smaller Central European economies come up frequently in discussions. With much higher income levels than the BRICs—but smaller populations—they have the capacity to be dynamic growth stories, but not to have the same kind of global impact. We also looked at Ethiopia and Thailand, which are on the verge of the same population bracket as the N-11, but both remain smaller than this group under most assumptions. For this reason, we chose to exclude them from the final N-11.

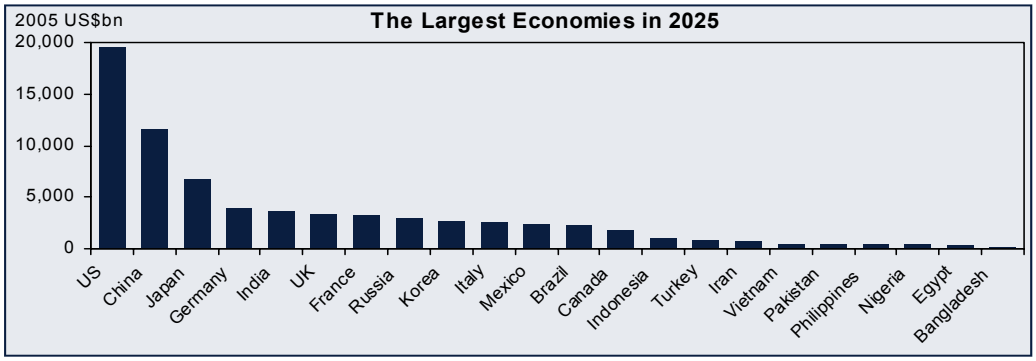
about two-thirds of the increase in US Dollar GDP comes from the higher real GDP growth we project, with the balance coming from real currency appreciation.

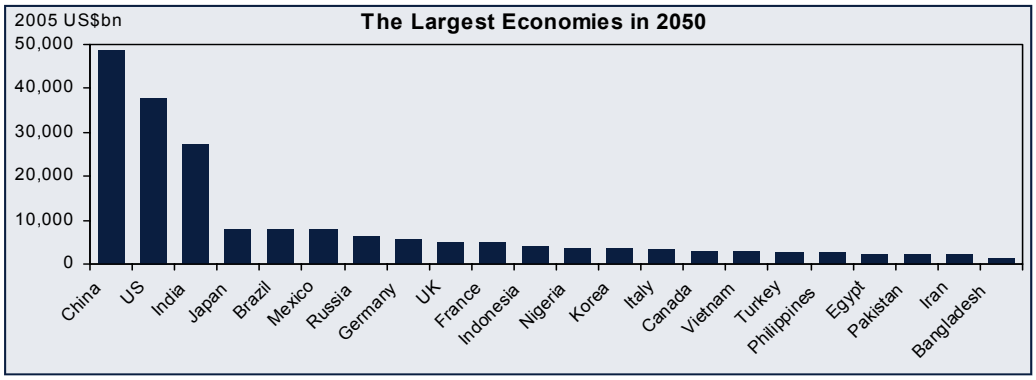
The composite projections reinforce the notion that, by 2050, the largest economies in US Dollar terms will look very different from today. China would still become the largest economy, followed by the US, India, Japan and Brazil. Mexico, however, now becomes the sixth-largest economy, slightly ahead of Russia, though Russia still emerges as the wealthiest BRIC nation in terms of GDP per capita. Indonesia, Nigeria and Korea could overtake Italy and Canada by 2050, but the other N-11 members do not 'catch up' with the current G7 group. Other than Mexico, and perhaps Korea, the rise of the rest of the N-11—while potentially significant in absolute terms—would contribute quite modestly on a global basis. Although Korea does not overtake the BRICs economies by 2050, it is more likely to achieve its potential based on its solid growth environment. Korea overtakes Italy by 2020, while Indonesia overtakes Italy only in 2044 and Nigeria outpaces Italy by 2048.

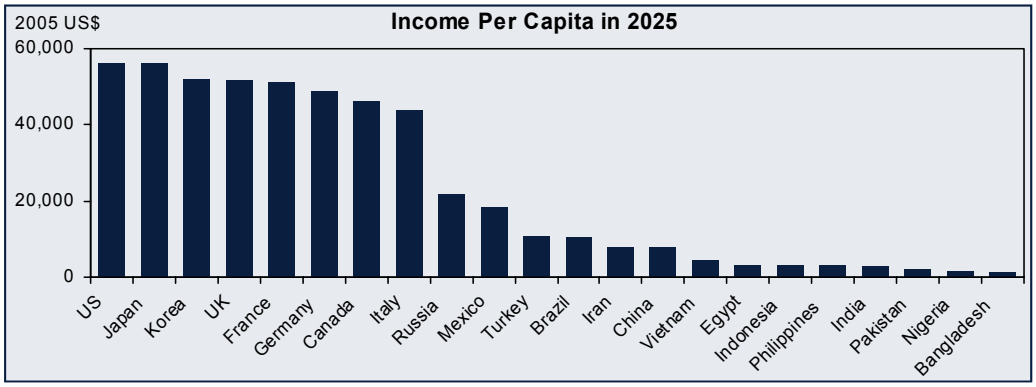
In terms of income per capita, the picture is slightly different. By 2050, Korea's income per capita is higher than each of the G7, except for the US. Russia and Mexico also converge to developed country income levels at roughly US$55,000. Brazil, China and Turkey have incomes per capita similar to that of the US today. India's income per capita in 2050 looks more like Korea's today. By 2025, most of the BRICs and N-11 would be entering (or have crossed) the US$3,000 threshold, a crucial sweet spot for consumption. By 2050, all of the BRICs and seven of the N-11 (Egypt, Iran, Korea, Mexico, Philippines, Turkey and Vietnam) cross the high-income US$15,000 threshold. At the end of the period, Bangladesh's income remains by far the lowest of the entire group at US$4,500.

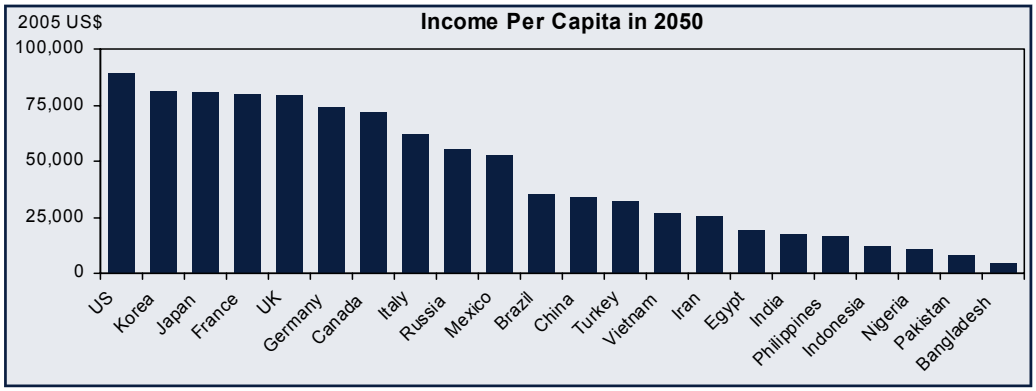
These expanded projections reinforce our initial 2003 conclusion, Korea and Mexico aside, that the BRICs really are different. For the N-11 ex-Korea and -Mexico, the productivity catch-up potential is even more important, as their demographics alone will not allow growth of BRICs-type proportions. The next section underlines how cautious we are about the current likelihood of many of these countries being in a position to reach their potential, as well as underscoring the significant tasks ahead for each of the BRICs nations.

OUR PROJECTIONS: GDP AND INCOME PER CAPITA IN 2025 AND 2050









Getting Conditions Right: The Growth Environment Score (GES)

Deciding how plausible the N-11 might be as candidates for a BRICs-type story once again highlights the centrality of getting growth conditions right in understanding the scenarios we have mapped out, both for the BRICs and the broader grouping. There is no doubt that the BRICs are currently performing well, and the near-term outlook looks quite favourable. The big question is whether they can keep growing over the longer horizon of our projections.

In our original projections, we argued that getting the *conditions* for growth in place—and keeping them there—was critical to whether the scenario we described would in fact occur. We showed that running the same model from 1960 would have accurately predicted growth for the developed economies, and some key emerging Asian economies (except India), but not others.

It helps to think of a country's growth performance as a combination of its potential and its conditions. In general, developed countries have lower potential (because they are already developed), but the chances of meeting that modest potential are good. Developing countries have much higher potential for rapid growth, but the difficulty is to achieve and sustain the conditions that allow that potential to be realised.[2]

We are often asked to rank the BRICs and assess their prospects of staying on the projected path. In our previous research we resorted to a number of ways to tackle this challenging question, but largely stuck with a qualitative assessment of the growth environment, identifying the most probable risks the BRICs might face in the future. We try to answer this question now in a more fundamental way.

In order to rank countries' abilities to meet their growth potential more formally and to monitor growth conditions over time, we have developed a Growth Environment Score (GES) that aims to summarise the overall environment in an economy, emphasising the dimensions that are important to economic growth.

Relying on the large body of research on the determinants of economic growth, we have constructed our GES using 13 sub-indices, which can be divided into five basic areas:

- **Macroeconomic stability:** inflation; government deficit; external debt
- **Macroeconomic conditions:** investment rates; openness of the economy
- **Technological capabilities:** penetration of PCs; phones; internet
- **Human capital:** education; life expectancy
- **Political conditions:** political stability; rule of law; corruption

The appendix describes the methodology in greater detail, but the basic notion is that strong growth is best achieved with a stable and open economy, healthy investment, high rates of technology adoption, a healthy and well-educated workforce, and a secure and rule-based political environment. We rank a country's performance on each measure on a 0-10 scale and create an overall score, the GES, which also ranges from a possible minimum of 0 (poor

2. This corresponds to the notion of 'conditional convergence' in growth research that underpins our BRICs projections (that research essentially shows that with the right conditions in place, lower-income countries tend to catch up with richer ones).

conditions) to a possible maximum of 10 (perfect conditions).

The GES is consistent across countries and over time, can be easily updated and tracked on an ongoing basis, and is based on hard evidence.

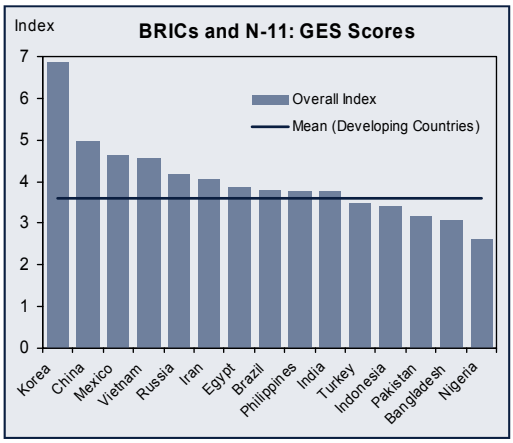
How the BRICs and N-11 Score on Growth Environments

The GES shows how the BRICs and N-11 fit into the broader picture. The table on page 12 sets out the full list and rankings across 170 countries. In general, not surprisingly, the most developed economies are better at maintaining the conditions for growth and score more highly. This means that they are more likely to deliver stable growth and meet their potential, though, as our BRICs projections have shown, that potential is itself much lower than for the BRICs economies. For this reason, we also divided economies relative to their peer group and split the GES into a developing and developed country sample to allow like-for-like comparisons.

How do the BRICs fare? Encouragingly, the BRICs themselves are all in the top half of the rankings for developing countries and above the developing country mean. Among the developing countries, China ranks most highly (16th), followed by Russia (44th), while Brazil and India are further behind (58th and 60th, respectively, out of a total of 133 developing countries). This validates our decision in our BRICs projections to use a lower convergence speed in the initial period projections for Brazil and India. Importantly, China clearly tops the list of the big-population developing economies (BRICs plus N-11), and by a sizeable margin.

The GES sub-components highlight the strengths and weaknesses of each of the BRICs, and where there is room for improvement:

- **Brazil** scores relatively well on measures of political stability, life expectancy and technology adoption, but quite poorly on investment, education levels, openness to trade and government deficit.
- **Russia** also scores well in terms of education, fiscal position, external debt position, openness to trade, technology adoption and life expectancy, but it does less well in terms of political stability, corruption, investment rates and inflation.
- **India** scores relatively well in terms of rule of law, external debt and inflation, but quite poorly in terms of levels of secondary education, technology adoption, fiscal position and openness.
- **China** ranks well above the mean on macro stability, investment, openness to trade and human capital. Its rankings on technology adoption are more mixed (PC usage is still quite low) and corruption measures are also a little worse than the mean.

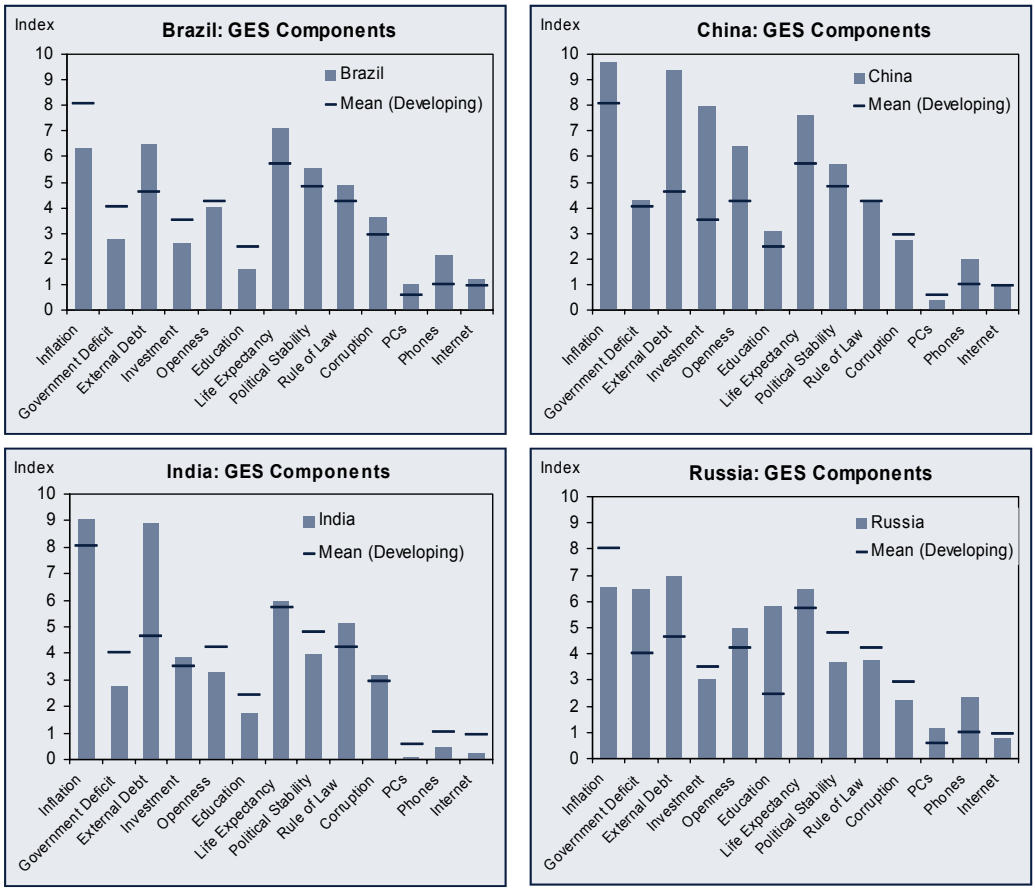


THE GES ACROSS ALL COUNTRIES

Country	Index	Ranking	Country	Index	Ranking	Country	Index	Ranking
Luxembourg	8.0	1	Mauritius	4.7	58	Sao Tome and Principe	3.4	115
Switzerland	7.9	2	**Mexico**	**4.6**	**59**	Guyana	3.4	116
Sweden	7.7	3	Panama	4.6	60	Guatemala	3.3	117
Hong Kong	7.7	4	Azerbaijan	4.6	61	Nicaragua	3.3	118
Norway	7.6	5	Romania	4.6	62	Senegal	3.3	119
Iceland	7.6	6	**Vietnam**	**4.6**	**63**	Mauritania	3.3	120
Singapore	7.6	7	Fiji	4.6	64	Honduras	3.3	121
Canada	7.6	8	Jordan	4.5	65	Serbia and Montenegro	3.3	122
Australia	7.6	9	Saudi Arabia	4.5	66	Bolivia	3.2	123
United States	7.4	10	Vanuatu	4.4	67	Yemen	3.2	124
Denmark	7.4	11	Belize	4.4	68	Tajikistan	3.2	125
New Zealand	7.4	12	Tunisia	4.4	69	**Pakistan**	**3.2**	**126**
Finland	7.3	13	Jamaica	4.3	70	Gabon	3.2	127
Netherlands	7.2	14	Ukraine	4.3	71	Burkina Faso	3.2	128
Austria	7.1	15	Morocco	4.3	72	Benin	3.1	129
Germany	7.0	16	Belarus	4.3	73	Lebanon	3.1	130
Korea	6.9	17	Cape Verde	4.2	74	Paraguay	3.1	131
Ireland	6.7	18	Mongolia	4.2	75	Kyrgyz Republic	3.1	132
Belgium	6.5	19	Botswana	4.2	76	Uzbekistan	3.1	133
Cyprus	6.4	20	Dominica	4.2	77	**Bangladesh**	**3.1**	**134**
United Kingdom	6.4	21	Tonga	4.2	78	Mali	3.1	135
Malta	6.3	22	Uruguay	4.2	79	Venezuela	3.0	136
Estonia	6.2	23	South Africa	4.2	80	Papua New Guinea	3.0	137
Japan	6.2	24	**Russia**	**4.2**	**81**	Tanzania	3.0	138
France	6.2	25	Armenia	4.1	82	Ghana	2.9	139
Slovenia	6.1	26	Macedonia	4.1	83	Gambia	2.8	140
Czech Republic	5.9	27	Suriname	4.1	84	Nepal	2.8	141
Barbados	5.9	28	Bosnia and Herzegovin	4.1	85	Togo	2.8	142
Spain	5.8	29	**Iran**	**4.1**	**86**	Congo	2.7	143
Macao	5.8	30	Lesotho	4.0	87	Guinea-Bissau	2.7	144
Qatar	5.8	31	Albania	4.0	88	Eritrea	2.7	145
Portugal	5.7	32	Sri Lanka	4.0	89	Cameroon	2.7	146
United Arab Emirate	5.6	33	Kazakhstan	3.9	90	**Nigeria**	**2.6**	**147**
Malaysia	5.6	34	**Egypt**	**3.9**	**91**	Kenya	2.6	148
Oman	5.6	35	Syrian Arab Republic	3.8	92	Niger	2.6	149
Chile	5.5	36	Algeria	3.8	93	Lao PDR	2.5	150
Italy	5.4	37	Chad	3.8	94	Mozambique	2.4	151
Lithuania	5.3	38	**Brazil**	**3.8**	**95**	Uganda	2.4	152
Slovak Republic	5.3	39	**Philippines**	**3.8**	**96**	Haiti	2.4	153
Latvia	5.3	40	**India**	**3.7**	**97**	Rwanda	2.3	154
Israel	5.3	41	El Salvador	3.7	98	Cote d'Ivoire	2.2	155
Hungary	5.3	42	Libya	3.7	99	Ethiopia	2.1	156
Costa Rica	5.3	43	Georgia	3.7	100	Zambia	2.1	157
Grenada	5.2	44	Peru	3.7	101	Angola	2.1	158
Kuwait	5.2	45	Namibia	3.7	102	Sierra Leone	2.1	159
Greece	5.2	46	Colombia	3.6	103	Malawi	2.1	160
Bahrain	5.1	47	Ecuador	3.6	104	Iraq	2.0	161
Croatia	5.1	48	Swaziland	3.6	105	Central African Republic	1.8	162
Bulgaria	5.0	49	Dominican Republic	3.6	106	Sudan	1.6	163
French Polynesia	5.0	50	Cuba	3.6	107	Guinea	1.6	164
Bhutan	5.0	51	Turkmenistan	3.6	108	Congo	1.6	165
Poland	5.0	52	Moldova	3.5	109	Comoros	1.6	166
China	**5.0**	**53**	Madagascar	3.5	110	Afghanistan	1.5	167
Trinidad and Tobago	4.9	54	Cambodia	3.5	111	Liberia	1.4	168
Seychelles	4.8	55	**Turkey**	**3.5**	**112**	Burundi	1.2	169
Maldives	4.7	56	Argentina	3.4	113	Zimbabwe	1.1	170
Thailand	**4.7**	**57**	**Indonesia**	**3.4**	**114**			

Note: The BRICs and N-11 countries are in bold.

How the BRICs Fare on GES Components



The GES also shows that some of the N-11 are quite well-placed. Korea is the standout, highlighting how different it is to the rest of the group. But Mexico and Vietnam (and to a lesser extent Iran, Egypt and Philippines) also score relatively well currently in terms of growth conditions. At the other end of the spectrum, Nigeria, Bangladesh and Pakistan all score poorly. Nigeria's standing, in particular, highlights the large amount of work that will be needed if it is to have a serious claim in achieving the potential growth outlined in the new 2050 projections. Turkey and Indonesia lie somewhere in between. Turkey's low score is somewhat surprising. If macroeconomic stability (its biggest weakness in the GES) continues to improve, however, its score could rise substantially. Even given an optimistic view of the path for some of the better-placed members of the N-11, the overall picture suggests that Korea and Mexico are the only serious candidates that are both large enough and plausible enough to lay claim to a BRICs-like impact.

Highlights From the Rest of the World

While the BRICs and N-11 have been our main focus, a few other highlights from the broader scores are also interesting:

- Within the developed countries, Luxembourg ranks first. Canada (in 8th place) is the highest of the current G7, with the US close behind (in 10th place).
- Of the G7, Italy is currently the lowest ranked (in 37th place), while Poland is the lowest ranked of the 'developed' group (though still very favourably ranked compared with developing economies). In 17th place, Korea ranks more highly than the UK, Japan, France and Italy.
- Africa is unsurprisingly heavily represented in the worst-ranked economies, while Asia's developing economies fare relatively well. Zimbabwe is currently the lowest-ranked economy in the group, while Iraq and Afghanistan are the only countries outside of Africa in the bottom 15.
- Among the developing economies, Asian economies (Malaysia, Thailand) score well, as do several Latin American and Central European economies (Chile, Costa Rica, Bulgaria, Romania). The richer oil-producers are also at the very top of the 'developing country' list.

The GES suggests that the BRICs as a whole are doing a reasonable job in keeping favourable growth conditions in place, but that more work needs to be done. For India and Brazil, in particular, more progress is needed if they are to continue to deliver the best possible outcomes over a longer period of time.

The BRICs: A Lasting Global Theme

Three key points emerge from our research:

- Since our initial reports, the BRICs' impact on the world has grown substantially across a broad range of areas. Given their importance to a wide range of global economic issues, the case for including them more actively in policy-making is overwhelming.
- Other economies may be able to share in a 'BRICs-like' story, but (Mexico aside, perhaps) the probability of their having a similar impact is small, at least as individual markets. Strong regional growth themes may emerge—Brazil and Mexico in Latin America for instance; China, India, Korea and Vietnam in Asia; or possibly India, Pakistan and Bangladesh in South Asia. But the BRICs are likely to remain the only ones at the core of truly global growth themes.
- There is quite wide variation in setting the conditions that should allow countries to stay on course for the 'dream' projections we set out. The BRICs are generally doing a reasonable job now, but there are clear weaknesses in each case. Dealing with them remains critical.

The BRICs theme continues to have major implications for investments in local markets. It does not (and never did) necessarily follow that due to the BRICs' potential, investing in the BRICs stock markets is the best investment theme. However, BRICs equity markets have

performed extremely well, except for China. Even after strong recent performances, on current P/E ratios, the BRICs markets do seem cheap relative to their more developed competitors. If BRICs' potential is fulfilled, then local stock markets *will* probably continue to be good investments over the long haul.

So will their currencies, probably. Our 2050 projections, and the specific dramatic forecast that the BRICs' GDP will exceed the G6 by 2041, depend on an assumption of real FX appreciation for one-third of the potential. While there are some fast-growing economies of the past 40 years that did not see real currency appreciation, the fastest-rising of them all, Japan, did. We think the case for further appreciation in BRICs currencies is very good, if their strong growth continues.

Local market opportunities are only a small part of the story. In fact, what distinguishes the BRICs theme from an 'emerging markets' story is that they appear to be a crucial driver of markets and investment opportunities *outside* those countries also. The ongoing bull run in commodities is the most striking example of global trends being driven in part by BRICs' growth.

The interplay between the four BRICs economies, especially in terms of commodities, has been, and is increasingly likely to be during the next decade, the critical aspect of developments in the energy and commodity markets. Related to this, and as we suggested in 2003, the commodity investment theme is likely to remain a strong one for much of the next decade.

Just as commodity investments have been an excellent BRICs-related theme, investing in other non-BRICs-located companies might become a more rewarding experience in the near future, such as the luxury goods market leaders of today or the big consumer products areas. Our earlier work showed that the natural sequence of opportunities is likely to move from basic materials to consumer products to services, but there will be plenty of variation around that broad trend.

There are a multitude of risks to all of these projections, as we continually point out. But with the BRICs continuing to grow in importance and their inter-relationship with each other and the world still rising, we think they will remain a critical factor in the global investment themes of today and for many years to come.

Jim O'Neill, Dominic Wilson, Roopa Purushothaman and Anna Stupnytska
December 2005

APPENDIX: MEASURING CONDITIONS: HOW THE GES IS COMPILED

The GES aims to capture the principal factors that are known to affect an economy's ability to grow. We based our choice of the components on the extensive literature on the determinants of growth.[3] Each of the variables we include has been found to have a significant and relatively robust effect on growth in various cross-country growth regressions. We also favoured the variables that are available for a large number of countries and updated on a regular basis. Our main source is the World Bank's World Development Indicators database, though some data (such as schooling, political environment indices and, partially, government consumption) come from other sources.[4]

The 13 variables are:

Inflation—high inflation discourages investment and erodes growth performance.

Government deficit (as % of GDP)—high budget deficits can hurt economic stability and push up borrowing costs.

External debt (as % of GDP)—large foreign borrowing raises the risk of external crises and tends to push up real interest rates.

Investment rates—high investment rates encourage capital accumulation and growth, though investment should be productive.

Openness of the economy—proxied by the share of trade as a proportion of GDP (adjusted for population and geographical area[5]). A wide range of studies find that more open economies have tended to show greater tendency for 'convergence'.

Penetration of phones—proxied by mainlines per 1,000 people. Telephone penetration is a basic proxy for technology adoption. Communications technology may help the transfer of broader technology and techniques that aid growth.

Penetration of PCs—estimates of personal computers per 1,000 people are another dimension of communications technology.

Penetration of internet—estimates of internet usage per 1,000 people, like PC usage, provide another important measure of technology adoption and interconnectedness.

Average years of secondary education—higher levels of education aid the growth process, with secondary education most consistently identified.

3. Our main reference is Robert Barro's influential research, in particular Robert J. Barro and Xavier Sala-i-Martin (2004) 'Economic Growth', second edition, MIT.
4. Schooling data comes from Robert J. Barro and Jong-Wha Lee, 'International Data on Educational Attainment: Updates and Implications', Centre for Institutional Development Working Paper No.42, April 2000; political stability, rule of law and corruption indices come from Kaufmann D., A. Kraay, and M. Mastruzzi 2005: 'Governance Matters IV: Governance Indicators for 1996-2004'; government deficit numbers (not provided in the WDI database) are taken from country-specific IMF public information notices and national sources.
5. As large countries tend to be less open because their large internal markets serve as substitutes for international markets, openness and country size are related. We filter out this relationship by regressing openness on population and geographical area variables; the residual of this regression is the adjusted openness variable reflecting the policy-specific effects (tariffs, trade restrictions) on international trade, and therefore growth.

Life expectancy—as a basic measure of health conditions, higher life expectancy has been shown to have been powerfully associated with growth performance.

Political stability—stable political regimes promote confidence and therefore entail higher investment and growth.

Rule of law—well-defined property rights and generally well-functioning institutions are believed to be conducive to higher investment and growth.

Corruption—increased corruption is likely to have an adverse effect on growth via distorting incentives.

The latest available data points (mostly for 2002 and 2003) are converted to a 0-10 scale (from 0=bad for growth to 10=good for growth) in the following way:

Sub-index = 10 * (actual observation – sample minimum) / (sample maximum – sample minimum)

Those variables where higher values are *bad* for growth (external debt, inflation) are also inverted so that the scales work in the opposite direction (high observations give lower scores). In addition, to prevent extreme outliers from skewing the distribution of some variables, we chose cut-off points to replace the sample maxima and/or minima, as necessary (for instance, we used a maximum of 120% for external debt as a percentage of GDP; a 0 to 40% range for inflation; and a 100% of GDP cut-off for openness).

The total score is then calculated by finding a simple average of all 13 sub-indices of the components. We tried alternative weighting schemes, such as aggregating the technological capability variables into one component, or assigning weights implied from the estimated coefficients in Barro's cross-country regressions. Those alternatives do not alter the overall picture much and the strategy of equal-weighting reduces the risks associated with overplaying any one particular factor.

We also considered including other variables, such as railway passengers carried, container port traffic and mobile phone penetration as part of the technological capabilities group, and customs and other import duties as one of the macroeconomic conditions variables. However, due to limited availability we could not use these data in the score. Admittedly, mobile phone penetration would be a better substitute for the telephone mainlines component (which we ended up using), as for most low income countries in Africa, mobile phones are having an increasingly important effect on growth. As more data becomes available over time, we might replace the mainlines series with this one.

We also considered using government consumption as one of the macroeconomic stability indicators but decided against it. In growth literature, government consumption is considered to be non-productive and leading to distortions of private decisions, directly (crowding out) and indirectly through negative impacts on public finances. It is thus assumed that a higher ratio of government consumption reduces the growth rate, all other things being equal. In our view, however, this inverse relationship is not clear-cut and likely to be non-linear, in the sense that in a low-income country low government consumption does not necessarily mean higher private productivity-augmenting expenditures, but rather a sign of unhealthy public finances.

The GES has some commonality with the World Economic Forum's Growth Competitiveness Index (and the correlation between the two indices is quite high—around 87%). The underlying variables are not identical, however, and in some cases the scores are quite different. The use of life expectancy in our index, for instance, which is critical to growth performance, has the effect of downgrading several economies, particularly in Africa.

The GES is designed as a simple representation of the conditions necessary for convergence (i.e. catch-up growth) to occur. For an equivalent GES, less developed countries should grow faster. Some simple regressions of growth on income per capita and the index show and suggest that one point on the index adds about 0.6% to a country's growth rate and there is also evidence that it increases the convergence speed significantly.

The fact that developed countries score well highlights the notion that good conditions tend to reinforce each other. In general, countries that score very well in some areas do so in most areas.

We stress that any attempt to quantify these types of conditions has the advantage of providing a consistent framework across countries. However, it is important to keep in mind that this type of measure may also be overly rigid at times in capturing and quantifying macro and policy variables.

CHAPTER FIVE

China's Ascent: Can the Middle Kingdom Meet Its Dreams?

November 2005

CHINA'S ASCENT: CAN THE MIDDLE KINGDOM MEET ITS DREAMS?

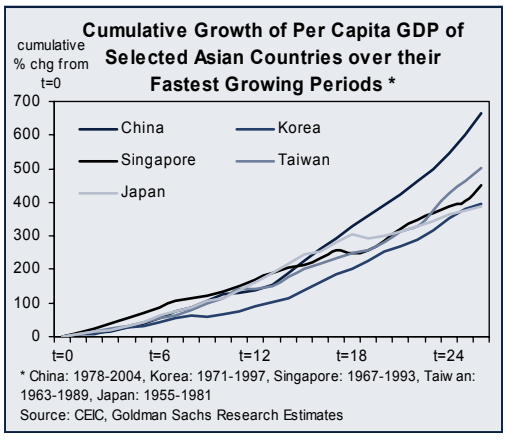
Over the past 27 years, China's economic performance has been unprecedented in world history. Its real GDP growth has averaged more than 9.4% per annum[1], real GDP per capita has risen more than sixfold, and the number of people living in absolute poverty has been reduced substantially. Two historic transformations have underpinned this extraordinary growth performance: from an agrarian to an industrial society, and from a central-planned to a market-based economy. The unique path China chose for the second transformation has distinguished its story from any other growth experiences.

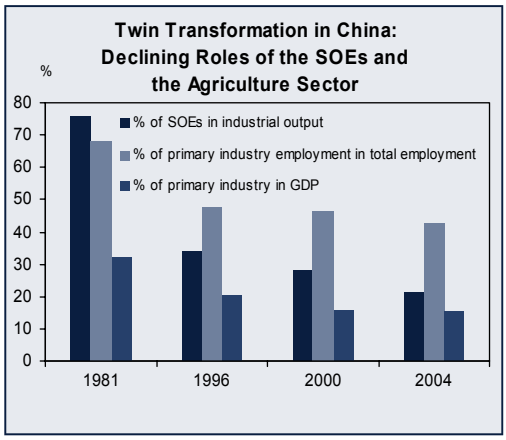
We have projected that China may become the world's largest economy by 2041, if the right policies are pursued. Some observers argue that China can get there even faster, while others show a profound scepticism about the country's ability to overcome its structural obstacles and avoid severe cyclical downturns. The apparent paradox between sustained economic strength and continued concerns over the longer-term perspective is in part attributable to the disappointing performance of the Asian tigers, including Japan, in the last decade. Rather than being the Asian decade, the 1990s saw many of its most economically dynamic and vibrant members succumb to financial turmoil or long-lasting recessions. The Asian development model has been identified as a source of vulnerability for its heavy reliance on external demand and government-directed investment. How can China avoid the same fate with an even more inefficient state industry and banking system?

China's Unprecedented Transformation

China's growth model is different in several important aspects. Growth has been driven by productivity gains as much as, if not more than, factor accumulation. China has clearly got some big issues right. Sustained and substantial gains in per capita income have improved the lives of millions, and cannot be lightly described as a 'mirage' or 'bubble'.

We argue that the observed sharp, sustained increase in productivity in China constitutes a unique form of 'reform dividend', originating from policy efforts since 1978 to transform a centrally-planned regime to a more market-driven system. This transformation has at the same





1. The closest match to China's growth performance so far is Taiwan (9.41%, during 1962-1989), followed by Singapore (8.97%, during 1966-1993). Most other Asian tigers achieved average growth rates of 7%-8% during their periods of fastest growth.

time initiated and propelled the other observed transformation from an agrarian to an industrial society.

The real epic China story is not about how an inefficient economy has been able to grow so fast, but rather how it has managed, gradually but consistently, to reduce the inefficiencies in the system. It is therefore an oversimplification to use other Asian tigers' experiences to extrapolate what China will likely achieve over the long term. The dynamics of China's transition are much richer, the potential greater, and the challenges more multi-dimensional. Hence, in our view, both past progress and future challenges for China should be evaluated in the context of the transition experience of former socialist countries. On this count, China's economic growth exceeded that of other former socialist countries by a wide margin in 1992-2004: average real growth ranged from 4.3% in Poland to -0.5% in Russia.

However, the complexity of transition has posed, and will continue to pose, monumental challenges. In this paper, we present a case for continued cautious optimism about China's economic prospects. We foresee further sizeable gains in 'reform dividends' over the next several years. As China fulfils its WTO commitments to deregulate key state industries, revamp its financial system, and forge closer ties with the global economy, we expect to see significant improvement in the efficiency of resource allocation, and therefore substantial gains in productivity over the medium term.

However, there are fewer certainties beyond the medium term, when China's per capita annual income will likely cross the US$3,000 mark. Challenges will likely emerge not so much from growth potentially trending down (either because of diminishing returns from the catching-up process or less favourable demographics), but rather as some of the 'postponed' political and economic reforms potentially become too difficult to tackle over time.

Is China Becoming More or Less Efficient?

China's 9% plus average annual real growth in the last 27 years has often been attributed to fast, even excessive, capital investment growth. At the same time, low investment efficiency is also frequently criticised, and sometimes highlighted as the potential Achilles heel for growth in the not-too-distant future. Much of the criticism on investment inefficiencies, linked to inefficiencies in the financial system, is justified. However, we see the need for a more comprehensive approach to evaluate China's efficiency score.

Total Factor Productivity (TFP) is the measurement used most often by economists to try to capture the efficiency score for the overall economy. TFP is also known as the Solow Residual or Multi-Factor Productivity, defined as the increase in output growth not accounted for by increases in factor inputs. It is a much broader concept than simply the efficiency gains from technological progress. TFP should also reflect a more efficient allocation and management of resources, higher intensity use of labour, a friendlier political, legal and institutional environment, and so on.

Using the TFP matrix, many academic studies have found a significant contribution from productivity gains to China's economic growth since 1978. China's sustained productivity performance often compares favourably with those of other Asian tigers, on similar growth accounting estimation methods.

Having examined the sources of China's growth for the period 1978-2004, we find that a sharp and sustained increase in productivity was the driving force behind China's astonishing

Sources of China's Economic Growth 1979-2004

	Average Growth 1979-2004 (%yoy)	Contribution (ppt)	Contribution (%)
GDP (% yoy)	9.4		
Capital Stock (α=0.4)	8.3	3.4	35.7
Labour	2.0	1.2	13.0
Educational Attainment	2.3	1.4	15.1
TFP	3.3	3.4	36.2

growth, although factor accumulation—the growth of physical capital stock and human capital—was also important. During this period, TFP gains averaged 3.3% per annum and accounted for 36% of China's growth, similar to the contribution by capital accumulation.

We have checked the robustness of our results by using different assumptions of initial capital stock estimates and capital share in the production function. Our qualitative conclusions stand. Therefore, the measurement problem, while real, probably does not alter the basic conclusions on sources of growth, especially given the long period of data we can now work with.

The analytical findings of this study were also compared with those of other economists using somewhat different data sets or assumptions. Most available evidence, including an 2005 OECD study, supports the basic conclusion that productivity growth has been a significant source of growth since 1978. The estimated productivity growth rates vary from about 2% to nearly 4% for the post-1978 period.

Why Is Productivity Growing So Rapidly?

In our view, China's remarkable productivity performance is a reflection of (1) an extremely low starting point—China's economy before 1978 was not much different from the North Korean economy today; and (2) a profound evolution of government policies that have gradually but consistently reduced the inefficiencies in the system.

An interesting way to visualise the story is to plot the time series of cumulative TFP growth versus the decline of SOEs' share in total industrial outputs (to around 20% at present from above 80% in 1978). Clearly, some inverse relationship can be observed.

According to the OECD analysis (2005) based on the National Bureau of Statistics (NBS) micro industrial data, TFP growth of private industrial enterprises was more than twice as fast as that of the direct state-controlled enterprises, and at least 60% faster than that of the indirect state-controlled enterprises. In the meantime, industrial enterprises' return on equity (ROE) also improved substantially as government stakes declined.

Of course, the reform path is not a straight line, and there have been zigzags along the way. Consequently, we observed surges and ebbs in productivity growth. There were roughly three periods of accelerating productivity growth, coincident with three important reform episodes.

- In the first half of the 1980s, following the breakthrough in agricultural reforms that de-collectivised farming land and significantly liberalised agricultural product prices.
- During the mid-1990s, riding on the market liberalisation waves following Deng Xiaoping's trip to the south.

- When China joined the WTO in the early part of this decade. WTO membership not only offered China greater access to the global market, but—more importantly—provided the government with mandates to deregulate and open up the remaining strongholds of state industries, in particular in the service areas, where inefficiencies are most prevalent.

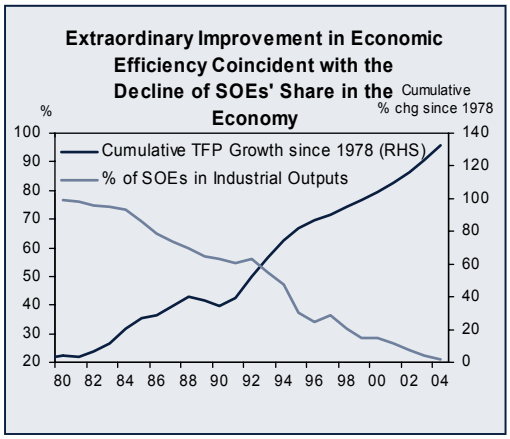
It is worth noting that the estimated TFP growth rates tend to be pro-cyclical for most economies. The cyclicality of China's TFP growth was also exaggerated by the boom and bust of the underlying economy. However, the 'cyclical neutral' TFP growth rate appears to centre at slightly above the 3% level. Moreover, the volatilities around this mean seem to have come down substantially since the mid-1990s, largely reflecting better macro management.

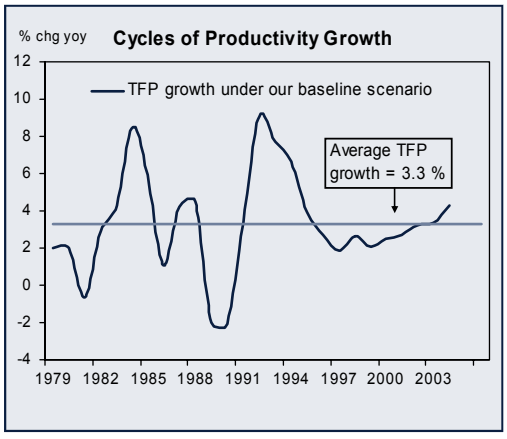
Sectoral reallocations of resources from agriculture to industry, as well as from state-owned to non-state-owned sectors, were important mechanisms through which efficiency gains were achieved. However, we believe reforms and opening-up have been the driving forces that enabled this more efficient sectoral reallocation to take place with the observed scale and speed. Although it is hard to separate specific reform gains from the overall TFP growth, China's 3% plus TFP growth per annum compared favourably with those of other Asian tigers, estimated at around 2% or below. Therefore, policy shifts since 1978 may have given China an additional TFP growth 'bonus' of around 1 percentage point.

While the Chinese economy as a whole has become much more efficient, the degree of productivity improvement varies across sectors. Both the World Bank (1997) and OECD (2005) studies highlight the contribution of sectoral changes to output growth. According to these studies, moving labour out of the agricultural sector alone adds 1pp per year to the overall growth. In addition, the World Bank attributed another 0.5pp of growth to the reallocation of labour out of the state-owned sector. OECD finds non-agricultural labour productivity is more than four times the agricultural productivity. Although progress in the past 27 years is impressive, inefficiencies can be reduced further, as the visible hand of the government remains excessively involved in many resource allocation decisions.

What Has China Done Right?

In our view, profound reforms in resource allocation are at the heart of China's success. Of equal importance is the leadership's pragmatism in executing these changes. Reforms tend to be undertaken first on a pilot or experimental basis, and intermediate mechanisms frequently





arranged to smooth the transition process. As a result, the successes of earlier, smaller reform steps tend to reinforce social and political support for further, bolder reform experiments.

We believe changes in five areas have been crucial to China's success; some of these are relatively well-known, while others are less well appreciated.

Market-oriented reforms. Since 1978, policy changes have progressively given greater rein to market forces, starting in the agricultural sector and extending gradually to industry and large parts of the service sector. Price controls were dismantled step by step, non-public-owned enterprises were allowed to emerge, and SOEs were forced to compete with non-state companies (domestic and foreign), and sometimes with one another. Market discipline was further sharpened by steps taken to open up to world trade and foreign direct investment.

The 'great leap outward'. The 'open door' policy adopted after 1978 ended three decades of isolation. Since then, FDI has been encouraged, tariffs reduced, the state-export trading monopoly abolished and multiple exchange rates eliminated. China has joined the league of top FDI destinations, and is now the third-largest economy by total trade in the world. China's policy of welcoming FDI at such an early stage in its development compares favourably with other Asian tigers, such as Japan and Korea.

Better-defined private property rights. Chinese privatisation has more to do with transfer of effective control of resources than with outright transfer of legal ownership. For example, for urban housing privatisation, the government retains ownership of the land, but grants the private sector property rights, including use rights, income rights and the rights to transfer, for up to 70 years. Privatisation originated with the transfer of use rights and rights to income through contracts with private individuals, most notably under the family-responsibility system for farm land. This was followed by SOE performance contracts. In the late 1990s, a policy of 'seize the big, and free the small' led to a massive reduction in the number of small and medium-sized SOEs, and in many cases the troubled SOEs were sold to the private sector.

China's pragmatic approach to property rights 'privatisation' has allowed a revival of private ownership, helped form a broad foundation for the market economy, and fostered an entrepreneurial spirit. Its scorecard in terms of generating economic growth is impressive. However, there is still work to be done to strengthen farmers' land rights and to advance privatisation in the 'core industries'. In addition, the process has been widely perceived as non-transparent and responsible for rising social inequality.

Decentralisation and competition. In addition to market forces, competition among local governments adds another layer of checks and balances in the system. Local experiments have been an important source of pragmatic solutions to many transition issues.

Prudent macro management. Before the mid-1990s, rapid economic growth was also associated with some notable boom-bust cycles. Nevertheless, the volatility of Chinese growth and inflation has been well below that of many other emerging economies or former socialist countries. Volatility of growth and inflation seems to have been reduced further in recent years, as the economy became more market-driven and the government's skills, as well as instruments to manage the cycle, improved. The government has managed to avoid some dire policy mistakes frequently seen in emerging economies, such as monetising excessive budgetary deficits or maintaining an overvalued exchange rate.

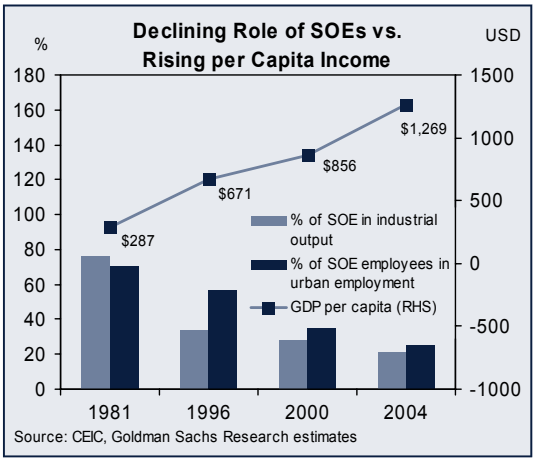
But Can China Continue to Deliver?

Notwithstanding the remarkable progress to date, the transition to a market-based economy remains incomplete: the role of the government in economic affairs needs to be redefined; SOE reform and banking-sector restructuring need to be advanced; protection of private property rights need to be enhanced; and the rule of law needs to be established. These are daunting challenges, and good reasons to maintain a healthy degree of caution when assessing the economic outlook over the long term. In our view, the make or break will hinge on whether pragmatic reforms can progressively give more rein to market forces, and eventually give more rein to its people in areas other than economics.

Next Five Years: Sweet Spot of Growth and Reform Dividends

Tailwinds from two fronts should continue to support China's growth at 8%-9% a year over the next five years:

Accelerating domestic reforms. In the next two to three years, we expect to see an acceleration of domestic restructuring, as China fulfils its WTO commitments to deregulate and open up key state industries and service sectors. We have already observed stepped-up efforts to restructure the ailing banking system and overhaul the dysfunctional capital markets. In addition, WTO membership will involve standardisation of a large number of commercial laws and regulations, which will help make the regulatory systems more stable and transparent.



Deepening industrialisation and integration with the world. As Chinese producers move up the product ladder and global outsourcing continues to integrate China into the global production chain,

hefty gains can be made by further expanding the technical frontier. This would generate sustained productivity advances.

Although undertaking the WTO-necessitated reforms is challenging, the government is committed to delivering them, and there appears to be broad political and social support for these reforms. We do not believe this reform process threatens social and political stability, and we therefore attach a high probability to China delivering most of its promises, including opening up its financial services for private investors. Under this scenario, we expect further significant gains in productivity and an acceleration in per capita income over the next few years. Moreover, the success of these reforms is likely to support and propel further reform momentum.

If China were to falter in delivering these reforms, its long-term economic prospects would be bleaker. There are still several significant risks associated with cyclical management 'mistakes', such as the price mechanism, as the interest rate and the exchange rate have so far been allowed to play only a very limited role in adjusting short-term macro imbalances. In particular, we believe the still inflexible and significantly undervalued currency has not only generated excessive external demand at the expense of suppressing domestic demand, but it has also exposed the economy to more risks than needed of an eventual slowdown in external demand, led by either a weakening US economy or rising trade protectionist measures.

We remain confident that China will be able to deliver the 'right policies' over the next several years, but we acknowledge there is more uncertainty in the long term.

Long-Term Risks: Ideas vs. Money

We believe the key to China's transition centres on how successfully the government can redefine its role in the economy. Despite the significant progress made, one area of particular concern is how government power has been intertwined with business interests during the transition. The concern is threefold:

- Unlike the loss-making SOEs of the past, many remaining SOEs in the core industries, such as steel, energy and telecom industries, now appear to be quite 'profitable'. But their profits often come from monopoly rents and government protection. These profits are costs for the downstream industries and obstacles for further advancement in economic productivity.
- Private-sector firms tend to have very close ties with government officials, and cultivating favours from the government often offers tempting routes to easy profits.
- Family members of many officials or former officials are extensively involved in business, often in government-protected monopoly industries.

If government power is so closely linked to business interests, it may: (1) delay the needed deregulation and opening up of core industries because of vested interests; (2) make it hard to have a level playing field for private enterprises; (3) lead to social discontent and public perceptions that being rich equals being corrupt; and (4) make it more difficult to have a peaceful political transformation to a more democratic society.

In the late 1970s, most opponents of reform were old cadres who had fought in the revolution and believed in communism. More and more, opponents of reform will likely have few noble ideas to defend, but a great deal of interests—often family business interests—to protect.

Income Distribution a Guide to Success

Reforms in the last 27 years have substantially reduced the number of people living in absolute poverty. However, they have also significantly widened the income gap between rich and poor, between rural farmers and urban residents, and between coastal areas and inland provinces. According to the Ministry of Finance, the income gap has been widening, as evidenced by the rise of the Gini coefficient from 0.28 in 1991 to 0.46 in 2000[2].

Development economics suggests that as income rises, the trickle-down effect tends to narrow the income distribution gap over time. For China, the issue is whether this trickle-down process will be fast enough to be socially acceptable, and whether there are any institutional obstacles to slow or block the gains from fast growth being transmitted to lower-income groups. Institutional obstacles may include such restrictions as limiting job opportunities for migrant workers, preventing their children from attending city schools, setting up entry barriers for private firms in competitive industries and protecting inefficient state monopolies.

From an investment point of view, the flip side of income distribution is the true size of China's market. With a domestic market of 1.3 billion people, there should be little concern of either overcapacity or overinvestment in many consumer-related industries. Better income distribution, therefore, will imply a larger domestic market with more people having real purchasing power. As a large continental economy, China should not and probably cannot rely on an export-driven growth model. Therefore, nurturing a strong domestic demand, underpinned by a well-balanced income distribution, will be of crucial importance for long-term sustainable growth.

From a political-economy perspective, improvements in income distribution will help maintain social and political stability, expand the size of the middle class, and thereby lay the foundation for an eventual peaceful political transformation to a more democratic society.

However, better income distribution should not be achieved through redistribution policies from rich to poor. Such egalitarian doctrines were exactly what kept China in stagnation before 1978. Instead, we believe efforts should be aimed at removing those restrictions that have blocked the benefits of growth from being shared more broadly. Furthermore, more transparent privatisation of the SOEs and granting fuller property rights to farmers would take China a long way towards narrowing the income gap and easing social discontent. Taiwan's experience of land reform and the resulting more-balanced income distribution should offer China's leadership much food for thought as it struggles to jump-start the pent-up demand in rural areas.

In sum, income distribution is an important matrix both for evaluating the true size of the market and for monitoring the risks associated with social discontent. If China ultimately fails on this score, Indonesia's experience during the Asian crisis serves as a good reminder that, despite decades of fast growth, a regime remains vulnerable if its political and economic institutions remain on shaky ground. On the other hand, Taiwan's peaceful political transition

2. A Gini coefficient of 0 represents perfect equality in the distribution of wealth and an index of 1 represents extreme inequality. By this measure, China's income equality is worse than that of the US, which is around 0.41, but roughly equivalent to Russia (0.46) and better than the Philippines (0.47). (United Nations, 2004).

in the late 1980s offers hope that an authoritarian regime can successfully undertake democratic reforms without political or economic disruptions.

Some Concluding Thoughts

China's track record over the past 27 years is important in two respects:

First, it has demonstrated the government's commitment to reform and its execution capabilities. China was the first country among former centrally-planned economies to embark on market-oriented economic reforms. The reform programme has been consistently pursued through the country's political transition, and survived the severe testing periods of the 1989 Tiananmen Square incident and the 1997-1998 Asian economic crisis. The Chinese leadership has also demonstrated pragmatism and impressive effectiveness (by most developing countries' standards) in executing policy changes, as well as in fine-tuning polices if needed.

Second, 27 years of reforms have already brought fundamental changes to the society, which will be very hard to reverse. We believe China's future leaders, like the current ones, will be under increasing pressure to deliver prosperity to their people, and there is no alternative for maintaining fast economic growth other than to continue freeing markets and nurturing the private sector. The private sector has already become the dominant force for growth, and the country has become one of the most open economies in the world, measured by either its trade or FDI to GDP ratios. Deep integration with the global economy has also increasingly intertwined China's own interests with those of its trading partners.

Furthermore, China can and surely has benefited from some late-mover advantages. These advantages not only include the ability to leap forward on the technology frontier. But more importantly, lessons and pitfalls of other countries' experiences may help China avoid repeating some costly mistakes. In another words, China can still get it right where other countries got it wrong. A good case in point is how China shied away from Korea's chaebol model after the Asian crisis, despite being very attracted to it earlier. And if China can learn from Japan's mistake of keeping an undervalued currency for too long, it may be able to reduce its excessive reliance on export growth earlier and thus avoid some potentially painful adjustments down the road.

A lot is at stake in China's experiment of a gradual and peaceful transformation. If China successfully pursues the right policies, we believe it will become a major economic power, and its population—one fifth of humanity—would be able to enjoy upper-middle-income living standards in the next few decades. By 2041, our BRICs research projects that China will be able to reclaim its status as the world's largest economy, a position it has lost since the early 19th century.

In fact, if policy reforms accelerate, China could grow even faster than our seemingly optimistic projection. Indeed, China has started the first five years of the 21st century with another impressive scorecard: its growth performance is set to surpass our BRICs projection of 8% per annum for the 2000-2005 period.

Hong Liang and Eva Yi
November 2005

CHAPTER SIX

India: Realising BRICs Potential

April 2004

INDIA: REALISING BRICS POTENTIAL

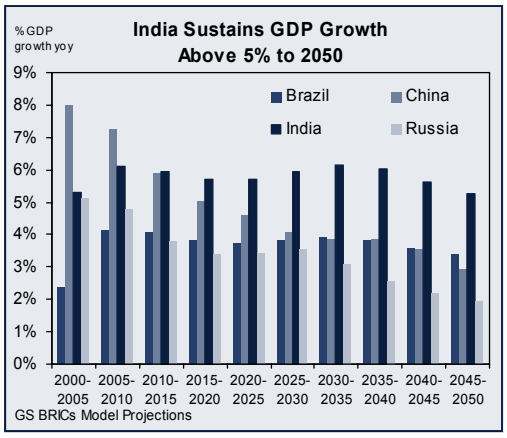
One highlight of our early BRICs research was the remarkable—and largely underappreciated—growth potential for India. Investors and corporations have focused intensively on China, but India could be a bigger growth story over the long run. Under our projections:

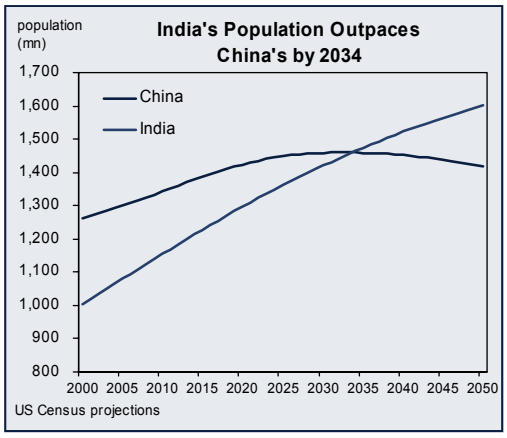
- India becomes one of the world's three largest economies in less than 30 years.
- It is the only BRICs economy to sustain growth above 5% throughout the next 45 years.
- India has the only population in the BRICs that continues to grow throughout the period. Its population will overtake China's in 2034.
- Income per capita in 2050 increases by 35 times current levels.
- Yet India's income per capita will be significantly lower than that of the other BRICs, as well as today's G6.

Two main factors underpin India's sustained growth potential: the scope for it to 'catch up' with developed economies and its very favourable demographics. These factors are not new, and India bulls have been disappointed in the past. Our own back test of the BRICs projections showed that India undershot its potential between 1960 and 2000, largely on the back of disappointing productivity growth. What has changed to account for our optimism now?

We think fundamental changes in the economy and its governance, as well as in the world economy, support India's ability to meet our BRICs projections. India's service-led growth strategy is benefiting from both domestic and global demand. Globally competitive firms are emerging from the country's historically protected private sector, and broad-based reform is fostering infrastructure development and greater openness.

India is often characterised as a country of contradictions, exemplified by the popular assertion that India accounts for close to a third of the world's software engineers and a quarter of the world's undernourished. Below we discuss India's progress on key macro and structural fundamentals, highlighting this duality: for every positive development, a host of significant challenges within the same areas still need to be addressed.





Following this, we take a closer look at industry dynamics, focusing on the benefits of and challenges to India's services-led growth model, which is a sharp change from the manufacturing-led growth seen historically across much of Asia. For India to continue on this path, it must make further steps towards improving education and infrastructure. After considering these key features of the Indian economy, we close with a look forward. Can India become 'the next China'? India is about 10-15 years behind China in the reform process, suggesting that better growth is yet to come.

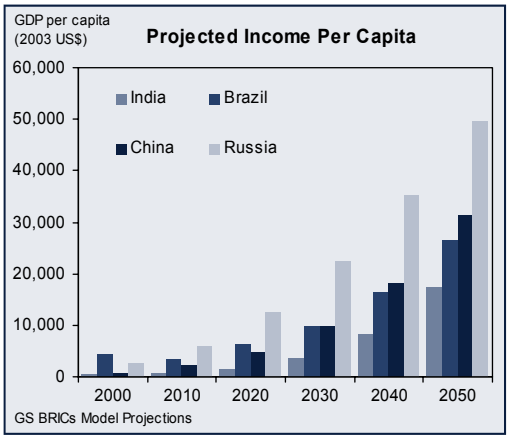
Separating Reality from Hype

Market interest in the world's fourth-largest economy (in PPP terms) has gathered momentum on the back of strong signals from India in recent years. Much of the interest stems from recent developments such as India's strength in IT services, cyclical factors such as the effects on demand of recent strong monsoons, and the growth of India's forex reserves.

Recent developments are encouraging, but more important is the story of improving growth over a sustained period. India's pace of reform, and the pace of growth, has been slower—at times painfully slower—than China's, but it is occurring steadily nonetheless. Taking a smoothed average, India's GDP growth has remained above 5% since the early 1990s, indicating a marked improvement in performance over the past decade compared with the period between the mid-1960s and the mid-1980s. And growth is taking place in an environment of low inflation and low interest rates, along with a balanced current account.

Our BRICs estimate of 5.9% average growth through 2010 is more conservative than the government's target of 8% growth over the Tenth Plan period (2002-2007). But both figures are in line with rates of growth seen across the region during the development process. Through the 1960s, Japan saw an average growth rate of 10.5%. Korea experienced 9.3% growth from the late 1960s through the 1970s. Malaysia, Taiwan, Korea and Singapore realised growth ranging from 8.4% to 9.3% on average from the late 1980s through the mid-1990s. And most recently, China's growth averaged 9.8% through the 1990s.

In order to experience the long-term growth path we envisage, it is crucial that India, like the other BRICs, maintains steady progress in strengthening conditions for growth. Chief among these are openness to trade and investment, sound macroeconomic policies, strong institutions and infrastructure, and high education levels. These conditions provide the key to delivering the kind of sustained higher productivity growth that has eluded India in the past.



Each of the BRICs faces its own challenges in strengthening the conditions for growth. India is starting from a low base, and maintaining reform momentum will be key over the long term. India lags China and Russia in levels of openness, basic education and physical infrastructure, leading us to caution that India has work to do to build the foundation for realising its long-term potential. But as we set out below, in each of these critical areas there are signs that things have been changing for the better, suggesting that India has an opportunity to achieve the productivity growth that would allow it to meet the BRICs projections. We address each of these areas in turn, before focusing on the crucial role of the services sector in India's development path.

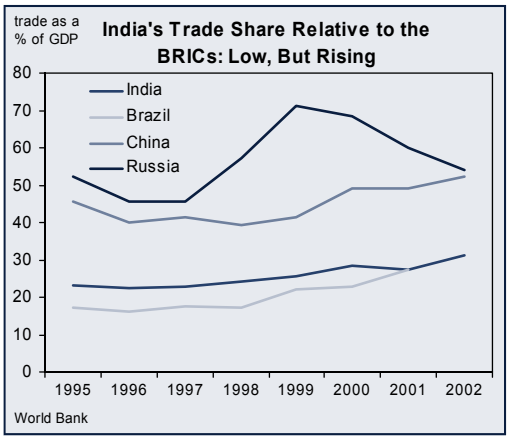
Openness and Institutional Progress Led by the Private Sector

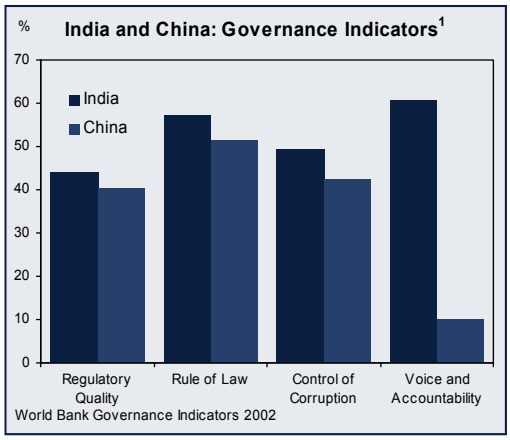
Dismantling the 'licence raj'. We see openness as a core condition for growth, which will allow the BRICs access to imported inputs, new technology and larger markets. India's economy is less open than most of the other BRICs: trade amounts to 31% of GDP in India, but 52% in China. Nonetheless, India is making encouraging moves towards more openness. Trade has roughly doubled to 31% of GDP from 15% in 1980.

Until the early 1990s, growth in the private sector was hampered by the licence raj—the system of industrial licensing, price controls, selected credit allocation and capital controls. This had been gradually dismantled since the early 1990s, setting the stage for growth in the external sector. Average weighted customs duties have been reduced significantly to 30% from 87% in 1991, and tax incentives to exports are gradually being phased out.

Alongside liberalisation, one of the most exciting developments in India is private-sector initiative. Globally competitive services firms, particularly in software and IT services, are raising the bar for internationally competitive products and strong corporate governance. Increased confidence has led top Indian companies in both the manufacturing and services sectors to join the global scene, seeking markets—and M&A targets—abroad.

Reforms in this area are a good example of progress in opening up the economy: previous ceilings on investment abroad by Indians have been removed, and firms will be able to raise loans abroad to fund overseas mergers and acquisitions. Corporate governance has gained increased attention, and accounting standards have become more stringent. Capital markets are expanding rapidly, with trading volumes rising in both the cash and the derivatives markets.





1. The chart on the right depicts the percentile rank on each governance indicator. Percentile rank indicates the percentage of countries worldwide that rate below the selected country (subject to margin of error).

Despite inefficiencies, India has the institutional building blocks in place to sustain growth in the private sector: a functioning independent judiciary, stronger property rights than in the rest of the BRICs, and public efforts to support market competition. For example, India has a quasi-judicial body to address antitrust issues (the Competition Commission of India), whereas China lacks a counterpart. India ranks higher than China on a number of governance indicators, including regulatory quality, rule of law and control of corruption, according to the World Bank.

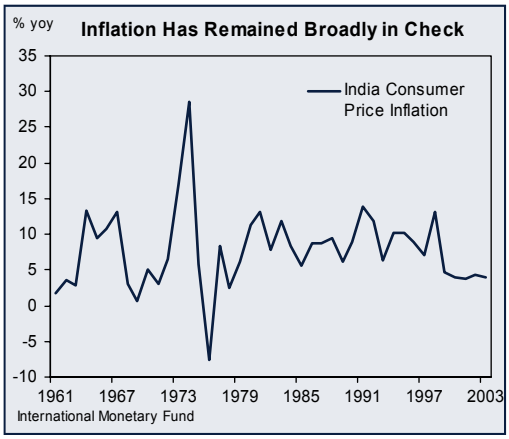
Cutting through the red-tape blues. India still needs to make significant strides in building an efficient administrative bureaucracy in order to support private entrepreneurship. Work done by the World Bank shows that it takes 88 days to start a business in India, twice the regional average. While the number of procedures required to start a business is higher than in other regional economies, it also takes almost twice as long to close a business in India than the regional average of 5.4 years. India has more regulation than others in the region regarding conditions of employment and labour market flexibility.

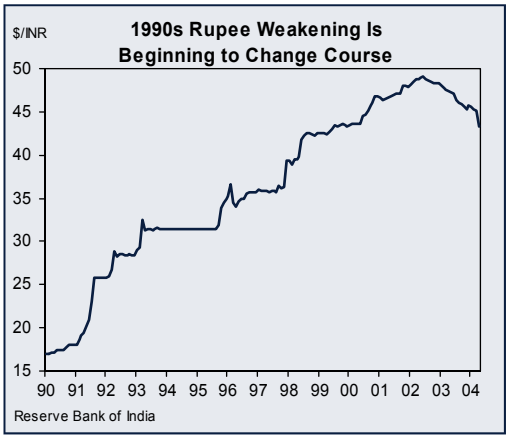
Macro Policy: Prudent Monetary and FX Policy Counter Daunting Fiscal Challenges

An unstable macro environment can hamper long-term growth by distorting prices and incentives. A key focus for macro policy is price stability, achieved through fiscal deficit reduction, tighter monetary policy and exchange-rate realignment. India's conservative monetary and exchange rate policies can be seen as attempts to compensate for its loose fiscal policy, which is the main challenge in India's macroeconomic policy management.

Monetary policy. India's central bank, the Reserve Bank of India (RBI), states that its objective is 'to regulate the issue of Bank Notes and keeping of reserves with a view to securing monetary stability in India and generally to operate the currency and credit system of the country to its advantage'. In the absence of an explicit inflation target, the major objectives of monetary policy in India have been maintaining price stability and ensuring an adequate flow of credit to the economy.

Compared with other developing countries, India has been able to maintain a moderate level of inflation. Inflation rates have mostly remained below 10%. Spikes into the double-digits have mainly been the result of supply shocks through rises in agricultural commodity prices or oil prices. Interest rates have been falling for several years and the key policy signaling rate is at a historically low level.





The Reserve Bank's current policy focus is management of the external sector. The RBI is optimistic about growth, and its recent statements can be read to indicate that the risks to its forecasts have shifted towards inflation, especially on the back of higher oil prices.

FX policy. India's FX reserves position, which has strengthened dramatically since the crisis of the early 1990s, is an important buffer for crisis prevention, which provides confidence to the markets and protects against exchange rate volatility. The RBI does not have a target or a range for the exchange rate, but important objectives include intervention in the currency market to contain volatility. Liquidity is also an important consideration in reserve management: India intervenes in the market to even out demand or supply imbalances, preventing destabilising speculation.

Fiscal policy. India's fiscal deficit has been running at 10% of GDP since the late 1990s, although the government is seeking to reduce it to 6.8% by 2007. General government debt is at 85% of GDP, with the debt of public-sector enterprises adding another 10% of GDP and contingent liabilities adding yet another 10% of GDP. These components as a share of GDP are markedly higher than they were at the start of the reform period in 1991.

Following the 1991 crisis, government financing shifted towards long-term domestic debt. Of the central government debt, 11% is external, and the rest domestic. Although there is little sign of an imminent crisis given a reduction in external vulnerability, this large deficit hampers growth by diverting much-needed funds for infrastructure, health and education to interest payments, now at 6.5% of GDP from 3.8% of GDP in the mid-1980s.

Progress on privatisations and divestitures would ease the deficit significantly, but the process is slow, and actual divestment has historically fallen short of targets. Improving the tax revenue to GDP ratio (currently at 10% of GDP) would also help reduce the burden. Passage of the Fiscal Responsibility and Budget Management Bill will bring structure and discipline to the budget process through targets and fiscal rules.

Services Focus Calls for Gains in Education and Infrastructure

If India could match China in the quality of its infrastructure and education, our BRICs model suggests that growth rates over the next five years could jump from an average of 6.1% to 8.1%. With improved infrastructure and education, India could see US Dollar GDP per capita in 2025 rise to US$4,200, almost double our current projections for that year.

Broadening Education

While India's demographics are a beneficial driving factor behind our long-term growth projections, the demands of a growing workforce will also fuel the need to fund education more effectively. As India continues down a path of services-led growth, investment in human capital will become key. The country's success in tertiary education on the back of public investment in higher education has been well documented. India's supply of engineers and knowledge workers has been an advantage for services activities. On the back of a steady flow of technical graduates, India should easily absorb demand from the domestic market as well as from the export market over the next decade.

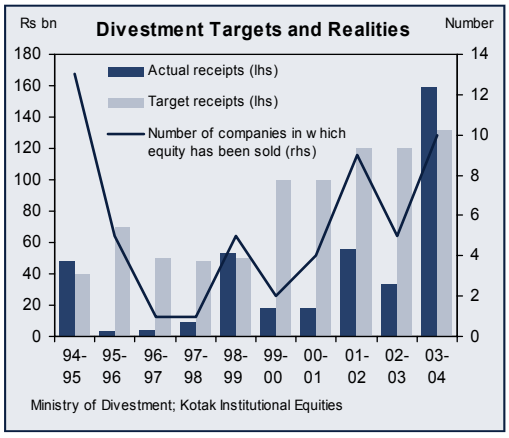
India's educated population is in fact relatively small. The US has three times as many people over age 25 with post-secondary education as does India. India has roughly the same number of people with tertiary education as do China and Russia.

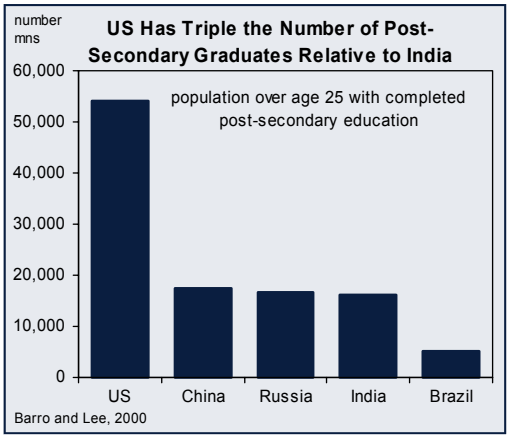
At a broader level, India's low levels of education, particularly at secondary level, are a major obstacle to achieving long-term growth potential. As of 2000, the proportion of the population over the age of 15 with no schooling was 44% (down from 72% in 1960), compared with 18% for China, 1% for Russia and 16% for Brazil. According to UNESCO, in 2000-2001, only half of the children who enter primary school in India reach class five, mainly because of inadequate public funding. The dropout rate is 53%, the poorest in South and East Asia.

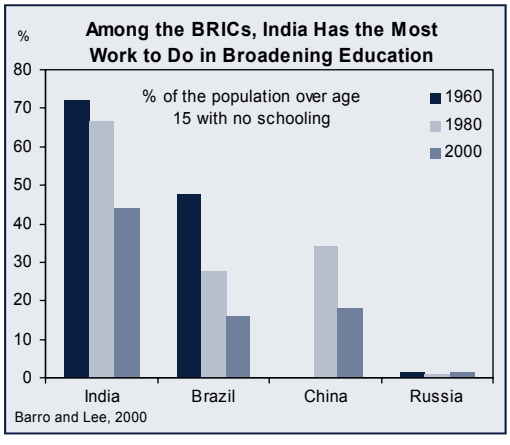
Opening the Infrastructure Bottlenecks

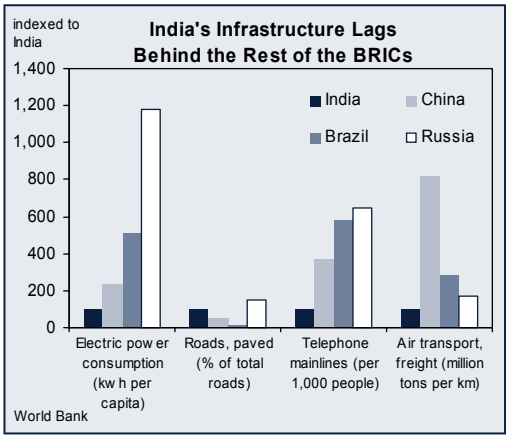
On most infrastructure indicators, India does not—and historically has not—measured up to other developing countries. India scores below the rest of the BRICs on many of the basic infrastructure indicators. For example, cargo transit time to the US from China is 2-3 weeks against 8-12 weeks from India. India's road network may be among the most extensive in the world—much bigger than China's or Brazil's—but the reality is that the quality needs to be substantially upgraded and connections between the major centres, as well as, crucially, rural-urban connections, need to be improved. Economic losses from congestion and poor roads are estimated to be as high as US$4-6bn a year.

Progress in infrastructure is a key focus of the government. Road-building plans, the most visible part of India's infrastructure story, include the completion of the Golden Quadrilateral,









which will connect Delhi, Mumbai, Chennai and Kolkata. Other ambitious road projects are scheduled to be completed by 2008. The ability to meet this target is debatable, but it is the only infrastructure project ahead of schedule. If completed, it would result in more kilometres of road being built than the total since Independence.

Different Growth Models Call for Different Infrastructure Measures

Physical and logistical infrastructure were crucial as Asia carved out a role in global manufacturing, and these factors remain important for the Indian economy. However, the provision of services is much more dependent on electrical power supply and communication infrastructure, and less reliant on physical transportation infrastructure.

In the power sector, fundamental problems affect generation, transmission and distribution. Energy demand shortages were around 8% and 12% on average between 2000 and 2003. The power sector has largely been in the hands of state electricity boards (SEBs), and losses made by SEBs contribute to India's fiscal deficit challenges. However, reform has led to significant changes in the power sector, which could see US$46bn investment in 2002-2007, translating into 91% growth vs. the previous five-year period, when investments fell short.

The services sector is another important user of information and communications technologies. India's communication services, as a subsector of services itself, registered growth of 14% a year during the 1990s, and made a significant contribution to services growth. Growth in communication was mostly due to telecom, which accounted for 80% of output and grew at 17% a year on average during the 1990s.

The opening up of the telecom sector and the rapid increase in the use of fixed-line and mobile phones contributed to a dramatic drop in telecom costs. For example, the cost of local telephone calls fell by over 60% during the 1990s. International outgoing call tariffs fell dramatically by 71% from 1995 to 2003. Meanwhile, the cellular subscriber base rose 75% in the same period. Although more needs to be done, arguably the reduction in costs and the growing availability of fixed-line and mobile communications spurred growth in the IT services sector and will continue to support overall services growth.

Cruising Past Manufacturing: India's Dynamic Services Sector

At the sector level, the path India is following to maximise its growth potential differs from that followed by much of the region. Traditionally, the move into services happens after an economy has been through a phase of manufacturing-led growth. This was the pattern in much of East Asia, led by Japan, Korea and Taiwan over the past 50 years, with China as the most recent example.

The shifting composition of the Indian economy towards the services sector highlights a departure from the manufacturing-led model for growth seen across most of Asia in recent history. India's services sector, led by strength in IT services, is considered by many to be the economy's engine of growth. The country has experienced a large sectoral transformation in its economy over a relatively short period of time. Services, at 35% of the economy in the early 1960s, now make up 56% of GDP.

India's dynamic IT services sector is only one part of a broader growth story in the Indian services sector. Trade and distribution services, followed by community, social and personal

services are the largest components of services. Banking and insurance, along with public administration and defence, are the other major subsectors within services.

Business services—the component that embodies services in the IT sector—has been the fastest-growing of the services subsectors in recent years. Throughout the 1990s, business services grew on average 20%, but this started from a low base (accounting for only 1% of services during this time). Beyond IT services, growth in the other major services subsectors, along with communications, has been impressive. Communications grew 22% in 2002-2003, while banking and insurance grew at 12%.

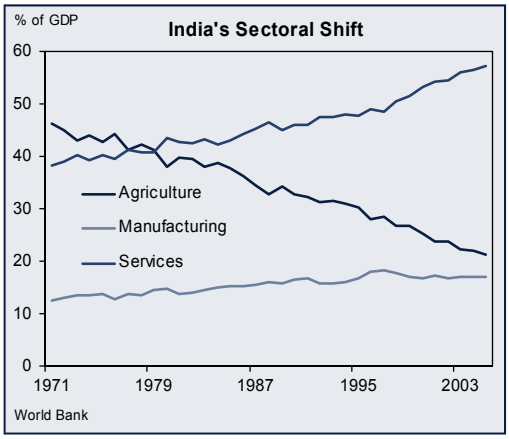
IT Sector Is Small But Growing

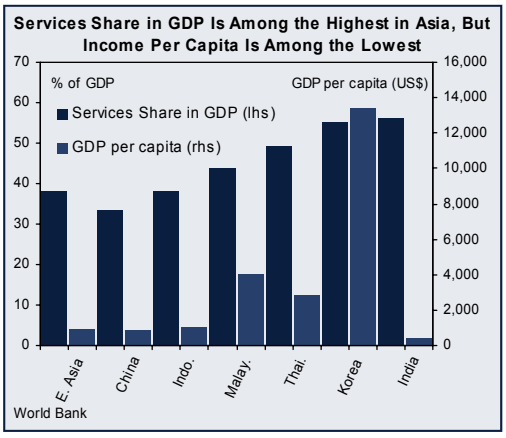
Although the IT sector accounts for just 3% of India's GDP today, it is projected to account for 8%-10% of GDP by 2008. Set against a backdrop of liberalisation during a period of global growth in demand for IT services, coupled with a global IT skill shortage, India's IT services exports benefited from a comparative advantage in knowledge workers with a specific set of software and language skills. A generally 'hands-off' policy by the government with respect to the software sector, along with encouragement of private investment in services infrastructure, sustained high growth in the sector.

India may have missed the wave of labour-intensive manufactured exports that contributed to growth across much of East Asia, but it may now be able to create a parallel process with labour-intensive software and IT services. The ongoing fragmentation of manufacturing and services, coupled with developments in telecommunications and information technology, has made what used to be 'non-tradable' now 'tradable'.

In contrast to manufacturing expansion, an extensive industrial base is not required for India's specialisation in services. India's supply of engineers and knowledge workers; its English-speaking population; and concurrent deregulation and liberalisation in the communications sector—dramatically reducing the cost of communication and fostering the development of a communications infrastructure—allows India to take advantage of the increased demand for services, both domestically and through external demand.

Services overall have grown at a rate above 6% since 1994. In contrast, manufacturing's presence in GDP has remained virtually unchanged since 1970. Manufacturing has grown to





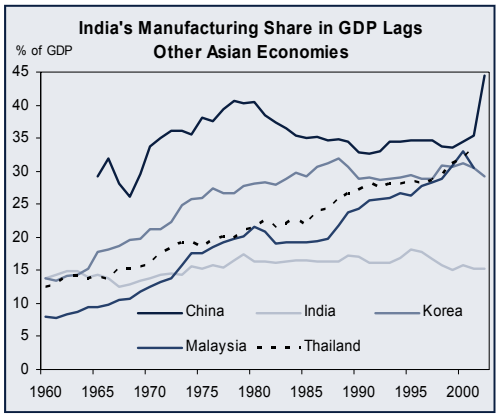
become only 22% of GDP from 15% in the early 1960s. The manufacturing sector has never taken the lead in growth—hampered by heavy state intervention, poor physical infrastructure and unproductive investment. Instead, the largely unregulated, 'dynamic services sector' has been taken by many to be the sustainable model for India's growth going forward. But is services really India's ticket to growth? While there are solid grounds for optimism, we also see reasons to temper the sentiment that this is a foregone conclusion.

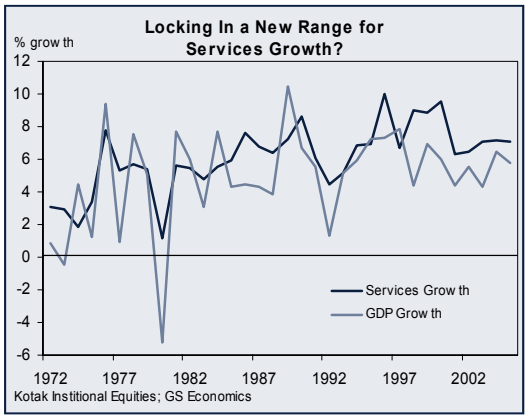
Sector Spillovers Are Positive for Growth

The IT sector can be a major driver of growth, along with other services sectors such as financial services, telecommunications and transport, because these sectors can fuel growth in a wide range of industries. The ability of IT to sustain innovation and promote organisational efficiencies can give the growth process an extra kick, enhancing productivity across the economy. The services sector has strong links to manufacturing and agriculture—particularly manufacturing— which increases the potential for growth spillovers to affect other parts of the economy. If there is significant interlinkage between these sectors, there is greater scope for growth in services to have beneficial impacts on other parts of the economy.

The process of breaking up manufacturing production into various steps performed in different geographical areas—which characterized growth in manufacturing exports across Asia—has moved further to include fragmenting services that were once produced in industry. For example, according to NASSCOM estimates, the manufacturing sector accounted for 12% of Indian software exports in 2002-03.

Within India, work by the Reserve Bank of India suggests that 70% of industry activities are services-intensive and 23% of services activities are industry-intensive, indicating a complementary relationship between the two. Key sectors in terms of backward linkages (the promotion of production in other sectors, which is used as an input into a given activity) and forward linkages (the extent to which a sector provides inputs for other sectors) are trade, transport services and other services, construction and other crops. On the back of these interlinkages, services have expansionary potential. However, the services sector is not an isolated growth engine; sustained services growth needs a growing manufacturing base too.





But Employment Will Remain an Issue

Despite the declining presence of agriculture in India's output, the share of employment in agriculture has remained roughly unchanged at 60% of the labour force. In contrast, services have grown in output with little change in employment. This is positive from the perspective of productivity: productivity in services has improved as services output growth has outpaced growth in services employment, lending support to the idea that services is increasingly moving towards skilled labour.

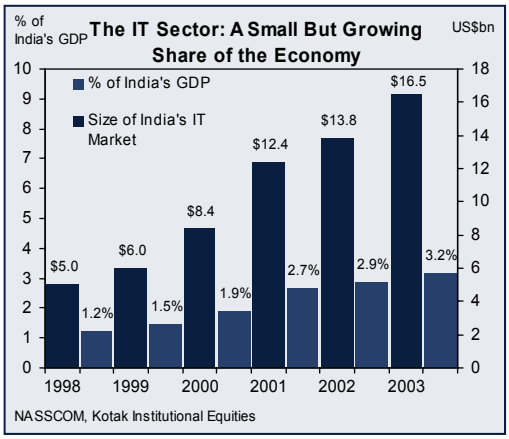
India's experience is in stark contrast to the shift into services seen in other economies. Traditionally, an economy's large-scale shift into services is characterised by a transition in the composition of employment towards services. The change in employment dynamics usually precedes a rising services share in output.

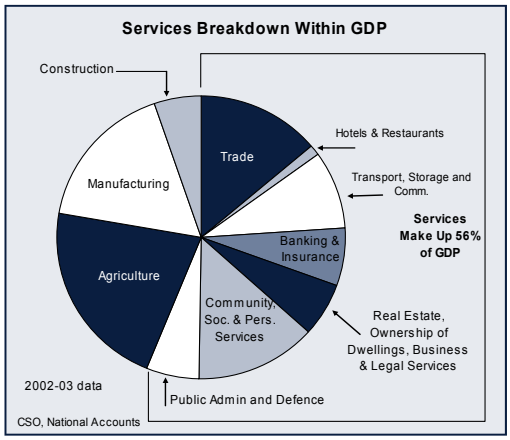
Growth in IT—and services overall—should not result in a massive shift in employment. India's services sector may provide some incremental job growth, but it will only be a drop in the bucket for the labour force. Services employment is expected to rise to 107 million by 2007 from 102mn currently, creating only 5mn new jobs in a roughly 500mn strong labour force. Employment in agriculture is expected to remain roughly stable at 190mn.

Moreover, services tend to concentrate in urban centres, potentially exacerbating the differences in income and development between the rural and urban sectors. A bias in activity and employment towards the urban sector could have significant effects on income distribution patterns, with implications for broad-based consumer market dynamics. Although India has not show much urban bias in its development experience, with 48% of services employment taking place in the rural sector and 52% of services employment occurring in urban centres, this is something to monitor.

Looking Ahead: Is India Poised to Be the Next China?

China and India have some important similarities. Both have experienced strong growth over the past decade, although China's growth performance has outshone that of India. India and China's GDP growth has outpaced world GDP growth since 1985. The growth rates of China and India contributed 1.6% to world growth last year (China contributed 1.2% and India contributed 0.4%). And both are expected to continue growing.





India and the Offshoring Debate

The offshoring of business services is a perennial political issue in the US, with commentators suggesting that the shift to offshore is hollowing out the US services sector. While offshoring opportunities in other industries are emerging quickly, IT services exports are leading the offshore model.

India's IT exports are a tiny share of the global market. Despite the public focus on India's offshoring capabilities, India's software and services exports industry only make up about 2% of worldwide IT spending. Although a small player in global IT services, India's IT services exports are crucial to India's IT industry. Software and services exports have already had a profound impact on India's balance of payments, with software and services exports clocking up annual growth of 30% in 2003 and accounting for 32% of India's exports.

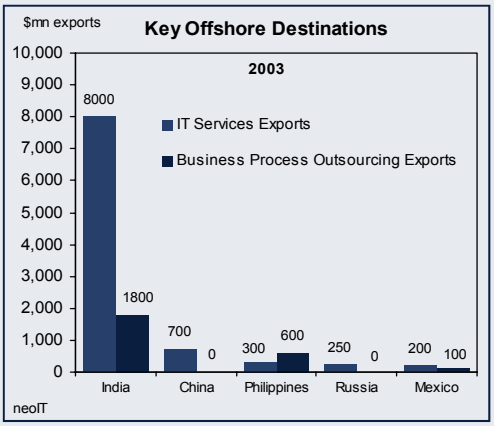
Beyond IT, offshoring opportunities exist in a number of industries, including accounting, financial services, medical services and pharmaceuticals. In the pharmaceutical sector alone, offshoring opportunities could double by 2007 to roughly US$50bn.

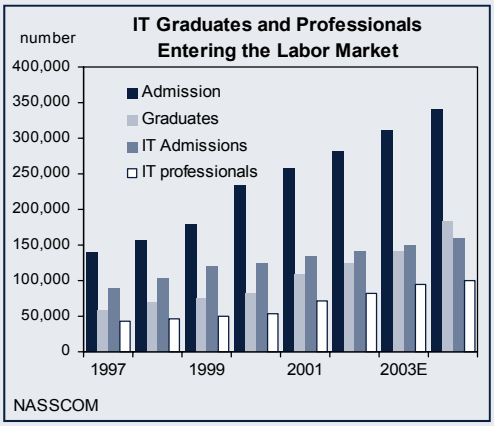
India can meet the offshoring demand. India's English-speaking population and the country's steady flow of knowledge workers will help it maintain its advantage over competitors in the medium term. Roughly 7% of India's population speaks English, making it the second-largest pool of English speakers in the world after the US.

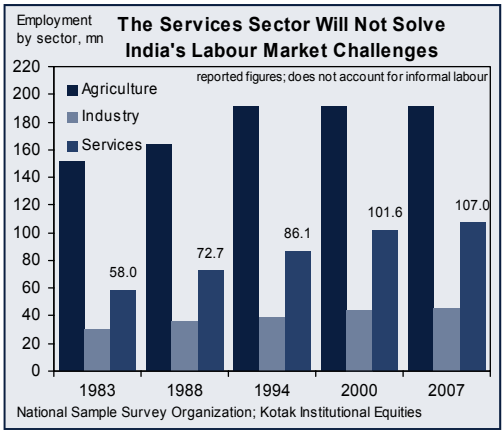
India's knowledge worker population has increased to 650,000 software and services professionals currently, from 6,800 in 1986. Our IT services team forecasts that the IT labour workforce could grow in size to a pool of 2 million in ten years. On some estimates, the supply of IT professionals will outstrip demand by 48,000 in 2008, suggesting that the healthy supply of IT workers will also curb wage inflation pressures.

The potential number of jobs for the Indian economy is a drop in the bucket for the Indian labour pool. Employment in tech and business services is a tiny share of total employment, and roughly 60% of the labour force is still in agriculture. IT professionals in fact make up only 0.1% of India's labour force.

Offshoring is not the answer to India's broader labour sector woes. India's labour force will average 520 million people over the next ten years (from 470 million currently). Estimates of the potential number of US offshorable professional services jobs range from three to four million over the next decade. Even if this number were doubled to consider potential offshoring jobs from other parts of the world, it would only represent 1.5% of India's labour pool.







Both countries also have massive labour force potential. The labour forces in China and India dwarf those of other BRICs and G6 economies, shaping the competitive advantage of labour–intensive goods and services for both economies. India's labour force is expected to overtake China's in 2028. While 66% of China's population currently falls in the productive cohort, the figure for India is 60%. However in 20 years, China's labour force will fall to 62%, while India's will rise to 64%. The bulge in the labour forces mirrors the previous demographic dynamics seen across much of East Asia that supported the rapid economic development in these countries.

In addition, both India and China have strong diasporas to participate in economic development. At 20 million, the Indian diaspora is second in size only to China's 55mn; its combined income is US$160bn, or 35% of India's GDP. However, the contribution of the two communities to home-country GDP is different. China's expatriates contribute over half of China's US$54bn in FDI; in contrast, overseas Indians account for only 9% of India's FDI. Instead, overseas Indians have been active in deposits and remittances. The stock of non-resident Indian (NRI) deposits now amounts to about US$28bn. Remittances from workers overseas are also important, averaging about US$7-8bn annually.

But that's about where the broad similarities end. The economic orientation of the two countries represents two different approaches to development, one manufacturing-led and the other services-led. Moreover, India and China are at completely different places in terms of their economic structure. India can learn from China in harnessing capital and managing the transition to a more open economy. At the same time, India's strength in services and incipient moves to support home-grown private-sector initiative provide good examples of more micro-level innovations to lead economic growth.

Misplaced Comparisons

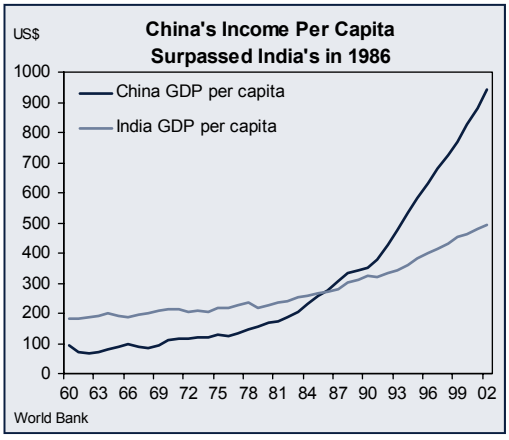
From a point in 1986 when per capita incomes in China and India were equal at US$275, China's per capita GDP has more than tripled, while India's per capita income has crawled up to US$494. China's export sector is nearly six times that of India. Much of China's improvement comes on the back of the country's reform programme—largely focused on the external sector—which began in earnest in 1978. India's liberalisation and reform period began about a decade later, and it is still about 10-15 years behind in the reform process. India's earlier stage of the reform process explains much of its lag behind China in areas such as openness and infrastructure described earlier. In addition, India's perennial coalition politics make it more complicated to push through reform than in China.

Approaches to investment have also differed. Investment rates over the past decade have averaged roughly 22% in India against China's 36%. According to the OECD, China was the world's third-largest R&D spender in 2001. Though India ranked among the top ten spenders globally, it spent just a third (US$19bn in PPP terms) of China's R&D expenditure.

Comparing India and China: A Snapshot	India	China
2003 Population (billions)	1.0	1.3
2050 Population (billions)	1.6	1.4
2005 Elderly Dependency Ratio*	8.0	11.0
2050 Elderly Dependency Ratio	22.0	37.0
Urban Population 2003 (% of total)	29.2	40.5
Rural Population 2003 (% of total)	70.8	59.5
Diaspora 2003 (millions)	20.0	55.0
Gross Investment 2003 (% of GDP)	23.3	43.9
Gross Savings 2003 (% of GDP)	24.2	44.3
Foreign Direct Investment 2003 (US$bn)	3.6	53.5
NPLs 2003 (% of GDP)**	1.3	50-55
Manufacturing Exports 2003 (% of total exports)	49.7	86.0
Services Exports 2003 (% of total exports)	32.3	9.7
Total Public Spending on Public Infrastructure 2003 (US$bn)	7.3	36.1
Literacy Rate 2003 (% of population)	65.4	86.4
Poverty Headcount 2000 (% of population)	28.6	4.6
Schooling 2000 (average number of years)	5.1	6.4
Post-Secondary Education 2000 (% of population over age 25)	2.2	2.1

CEIC; World Bank; Kotak Institutional Equities; GS Economics
*The elderly dependency ratio is the ratio of the population aged 65 years or over to the population aged 15-64
**India data refers to FY2003

At 5.1% of GDP against China's 36.2% of GDP, cumulative FDI plays a much smaller role in India. For China, FDI was a key driver of the country's export-led manufacturing boom. India has been moving in the direction of actively soliciting direct investment since the financial crisis of the early 1990s. On the back of investment policy reform (allowing up to 51% foreign equity in 'high-priority' sectors and the creation of export processing zones where 100% foreign ownership was allowed), the annual inflow of FDI in India ranged from US$2bn to US$3bn in the second half of the 1990s.



Despite the different routes to growth that the two 'economic giants' may follow, according to their own relative strengths, the prospects for sustained and accelerating reform are encouraging. While there is still much scope for reform, India's healthy progress in liberalisation, particularly in the services sector; the emergence of globally competitive firms from the country's historically protected private sector; broad-based political support for economic and structural reforms; and long-awaited infrastructure development suggest that India could be setting up the necessary conditions to support the type of long-term growth path we project. If these important conditions continue to strengthen, India may well realise its potential as the sleeper success story of the BRICs.

Roopa Purushothaman
April 2004

CHAPTER SEVEN

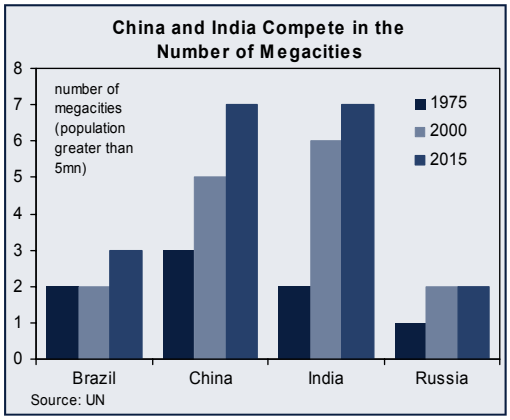
Where Are the BRICs Consumers?

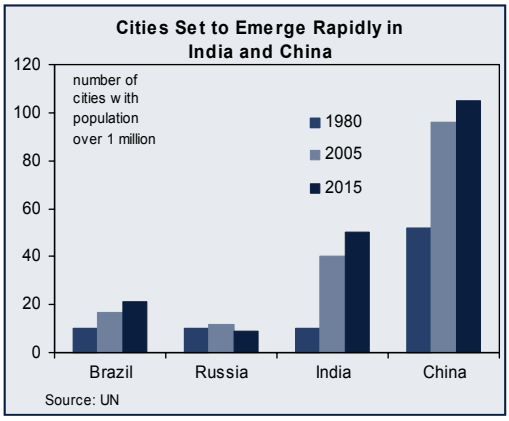
July 2005

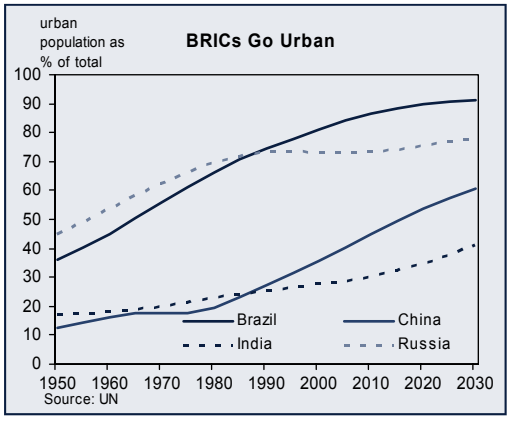
WHERE ARE THE BRICS CONSUMERS?

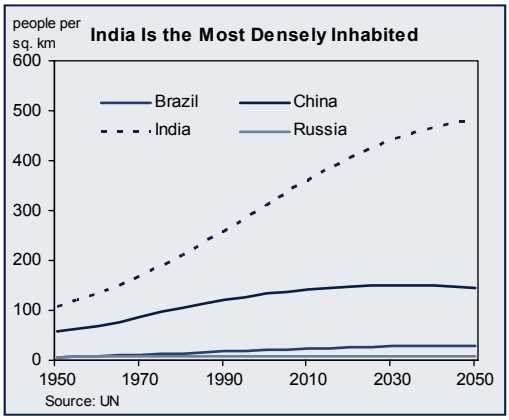
- BRICs consumers are increasingly likely to be found in major cities. India has six megacities (cities with a population over five million); China has five; Brazil and Russia each have two. The gap between India and China, on the one hand, and Brazil and Russia, on the other, is likely to grow in the next decade.
- China already has nearly 100 cities with a population over one million, well above all the other BRICS. Even India only has about around 40.
- Although China and India have the largest number of big cities, the share of their population living in urban areas is lower than in Brazil and Russia.
- Urbanisation is increasing significantly, especially in China. But it is starting from such a low base that, even in 25 years, China will still be less urbanised than Russia in the late 1960s and Brazil in the early 1970s. In 25 years India will only catch up to where China is today. The ongoing importance of rural consumers will have implications for distribution systems and product mix.
- Although India is less urbanised than the other BRICs, it is the most densely inhabited—by a significant margin. India's population density is 2.5 times China's, 15 times Brazil's and 40 times Russia's.
- The growth of the urban population in India is set to rise slightly in coming years, even as it declines in the other BRICs. This reflects both India's higher fertility rate and its urbanisation trajectory. Russia's urban population is set to shrink even more rapidly than its overall population.
- India and Brazil will remain 'younger' than the other BRICs over the foreseeable future. China, in contrast, is aging rapidly. This too will have important implications for the product mix in each country.

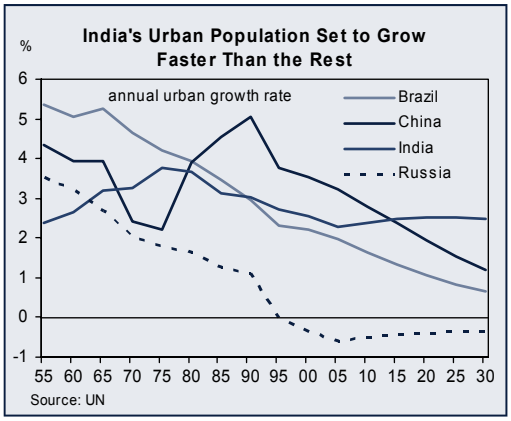
WHERE ARE THE BRICS CONSUMERS?

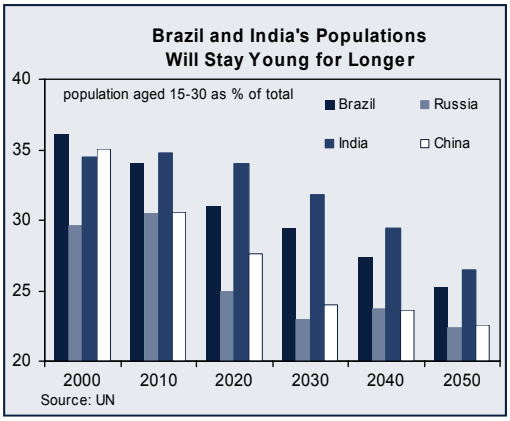








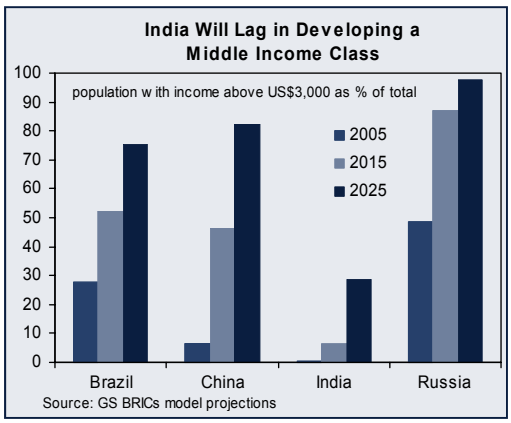


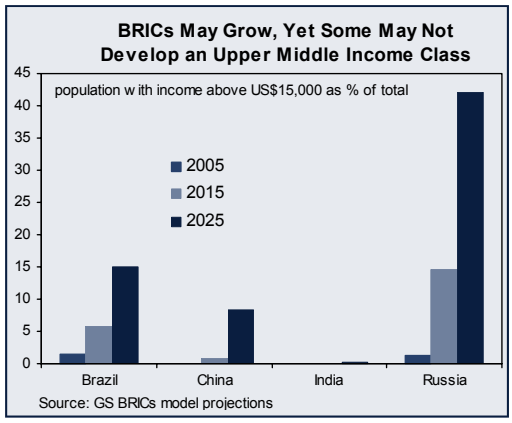


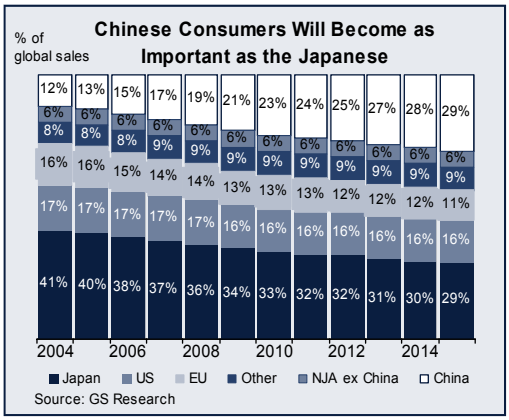
Middle Class and Luxury Consumption

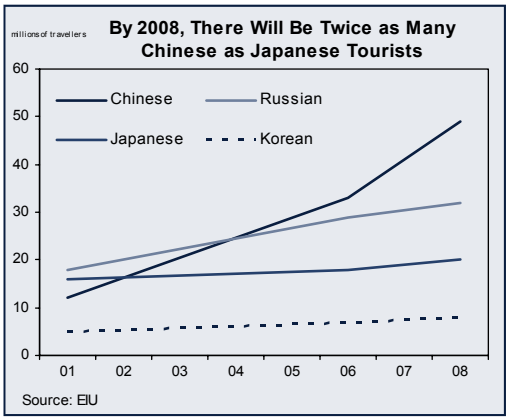
- Income of US$3,000 is the point at which demand for many consumer durables starts to take off. Much of China's population currently lies just below this key threshold.
- India is much poorer; even strong economic growth will not build a middle class any time soon.
- The net effect of the rise in the share of China's population that is middle-class, combined with the sheer size of the population, means that China's share of global luxury goods consumption is likely to rise from 12% last year to 29% in the next 10 years, equal to that of Japan.
- The emergence of a Chinese middle class, and the ongoing relaxation of travel restrictions, should mean that the number of Chinese travelling abroad will increase substantially—to roughly twice the number of Japanese tourists by 2008.

Roopa Purushothaman
July 2005









CHAPTER EIGHT

The Downside of Demographics: The Aging Challenge in the BRICs

November 2005

THE DOWNSIDE OF DEMOGRAPHICS: THE AGING CHALLENGE IN THE BRICS

- We expect the demographic advantages currently enjoyed by the BRICs to erode over the next 45 years, as the BRICs populations age faster than the G6. The transition is likely to be sharper and faster—and potentially more painful politically—in the BRICs than in the G6. Moreover, the BRICs will not be as wealthy as they age, so the challenges associated with aging in the OECD are likely to be magnified in the BRICs.

- Signs of the erosion of the BRICs' demographic advantage are evident in comparison with the annual growth rate of the US working age population, which is already higher than China's or Russia's. By 2045 the US labour force is forecast to grow faster than even India's.

- India will remain the youngest major country over the next half century, but its median age is forecast to rise by more than 14 years by 2050, putting it where European countries are today.

- Russia's population is already older than that of the US, and it is poised to age rapidly until 2040. By 2045, however, Russia will be younger than China.

- As in the G6, BRICs fertility rates are falling below replacement rates and are forecast to remain there until at least 2050. In China this process has been hastened by the one-child policy, but it is happening in India and Brazil as well, following a well-established pattern that sees fertility decline as living standards rise. Fertility in Russia is already lower than in many Western European countries.

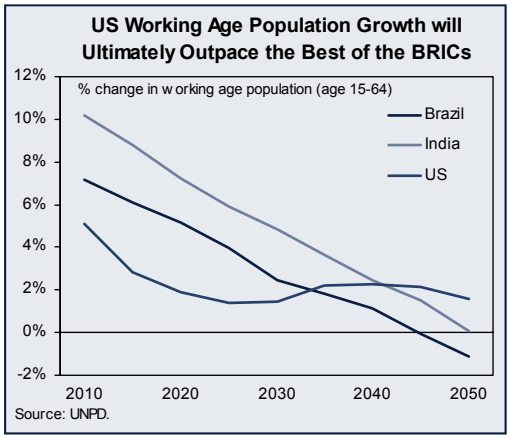
BRICs in the Demographic Window

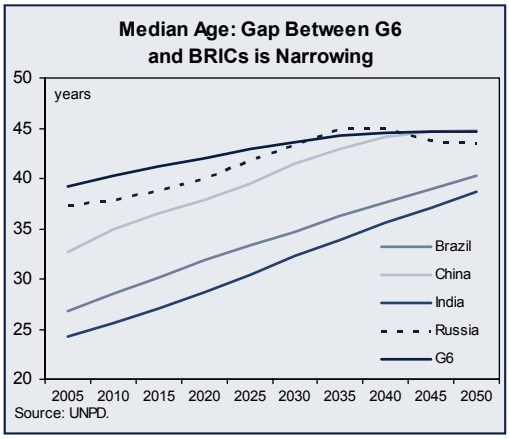
- The 'demographic window' is the period in which demographics are most conducive to economic growth. During this time, children account for less than 30% of the population and those 65 or older for less than 15%.

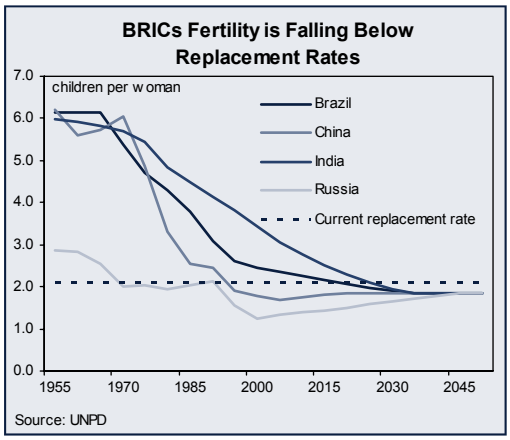
- Brazil and China are already within the demographic window, and India should enter this phase shortly. However, the window will not be 'open' for long, meaning that the BRICs will only have a few decades to create sustainable social and financial arrangements, including pensions, for their aging populations.

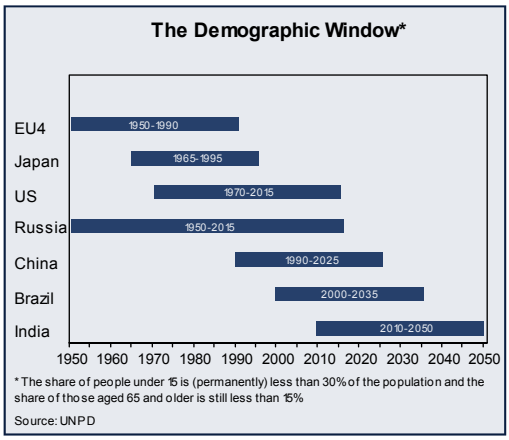
- The working age share of the population within the BRICs is likely to peak before the demographic window closes, further compressing the time available for the BRICs to build sustainable pension systems.

THE DOWNSIDE OF DEMOGRAPHICS









The Downside of Demographics

- As in the G6, the share of the population that is of working age (15-64) is expected to peak in China and Russia within just a few years. Russia's decline is likely to be steeper, but China's ultimately more severe. India's working-age demographics are by far the most favourable among the BRICs over the next 45 years, though it too will eventually see competition from the US.

- Due to its one-child family policy, China already resembles a developed country demographically. In less than 20 years, its population will be older than that of the US. Worryingly, China will have to cope with aging when it is much poorer than the G6 or even the other BRICs. Chinese per capita income when aging hits in earnest will be just one-fifth the US level.

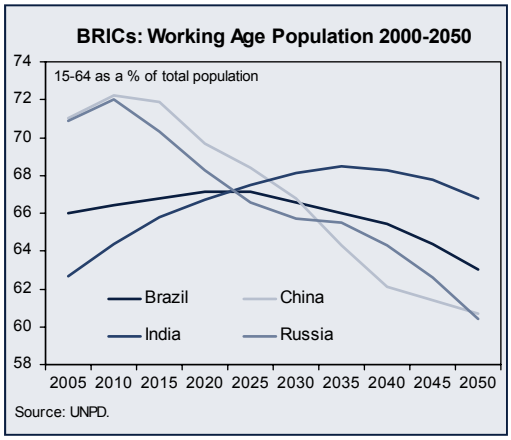
- As the BRICs converge on advanced-economy income levels, and start to exhibit a similar aging profile, spending on food should fall, while spending on housing and transport may rise. Spending on healthcare should also increase significantly.

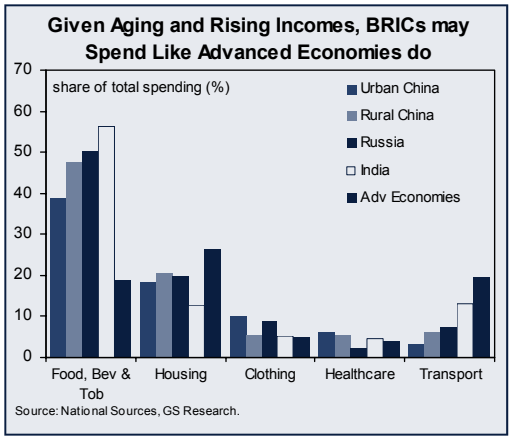
- The BRICs spend notably less on healthcare than do most developed countries. While their young populations may have had less need for healthcare, this will shortly change. Aging populations will mean pressure to spend greater resources—both public and private—on healthcare.

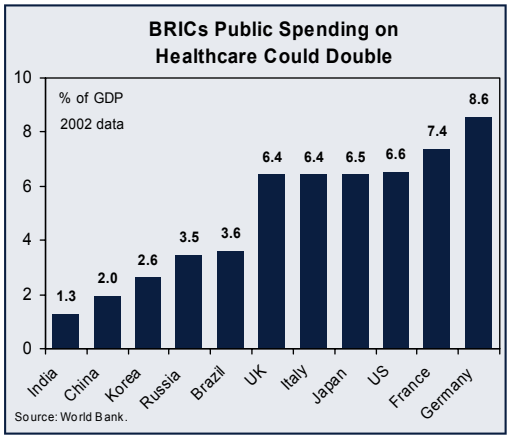
- The final chart on the following page shows the UN's extremely long-term population projections—stretching out to 2300. Admittedly, this is well beyond our forecasting range! Nonetheless, it offers an interesting insight into how the world may look three centuries from now. All the BRICs will be older, but India and Brazil may be the most dynamic, with strong population growth over the intervening centuries. The G6 does not fare as badly, demographically, as many might think.

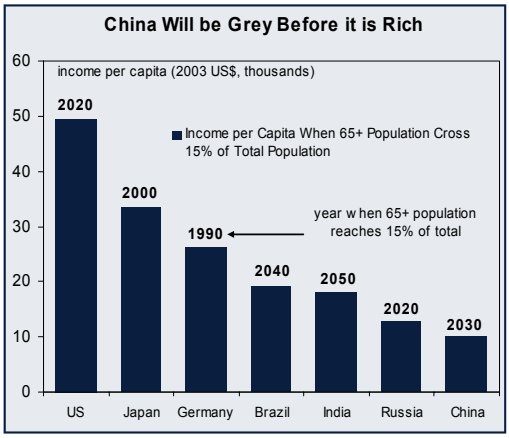
Sandra Lawson and Roopa Purushothaman
November 2005

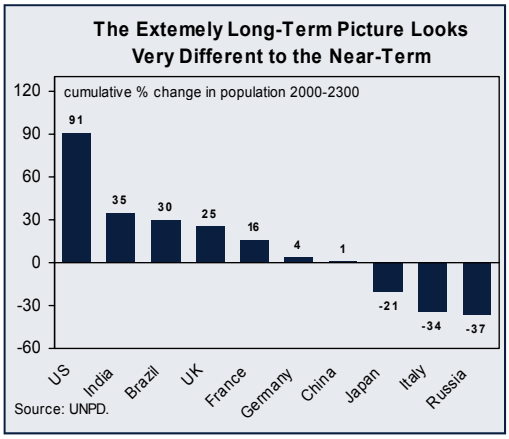
THE DOWNSIDE OF DEMOGRAPHICS





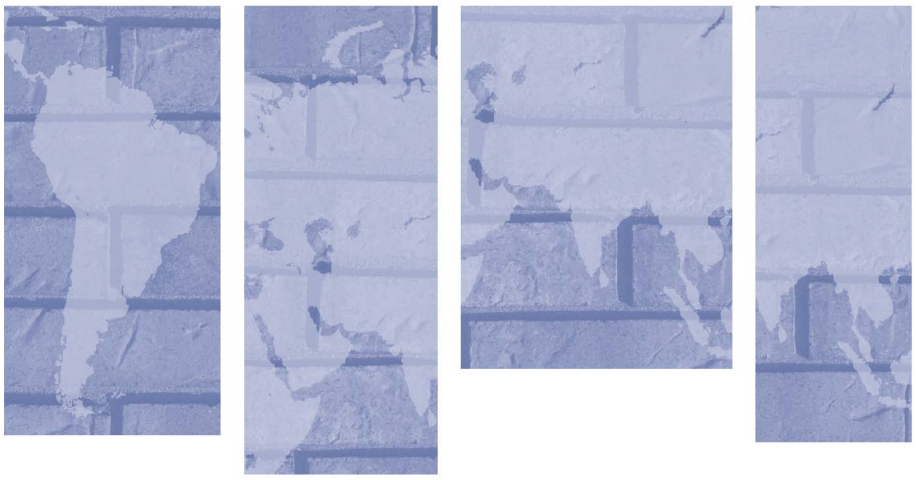






SECTION TWO

The BRICs and the World



CHAPTER NINE

Global Trend Growth Moving Higher

September 2005

GLOBAL TREND GROWTH MOVING HIGHER

The world economy has undergone significant changes over the past few decades. Globalisation, privatisation and deregulation have introduced more competition into markets and led to a surge in world trade. The resulting ongoing shift in the balance of power from developed economies towards the developing world has been an important theme of our research for some time.

The rising importance of the developing world may push trend global growth higher as it offsets softer growth elsewhere, especially in the G7. As we discussed briefly in our first BRICs report, our projections imply that global trend growth over the next decade could be close to 4%, above the 3.7% average for world growth over the last 20 years, in PPP (Purchasing Power Parity) terms.

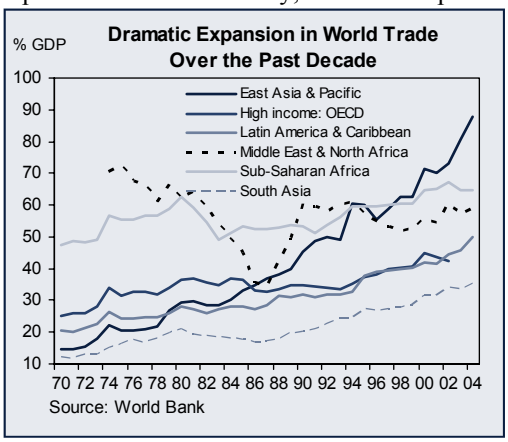
In fact, it now appears that global trend growth has already begun to rise. Our analysis shows a marked rise in global trend growth since the early 1990s (in PPP terms), mainly on the back of an impressive improvement in trend growth in the BRICs. We also find that the BRICs' contribution to world GDP growth in PPP terms has tripled from 20% in 1990 to around 60% currently.

Understanding how much potential growth has changed is fundamental for investors and policymakers. Beyond stronger demand growth from developing countries, and from the BRICs in particular, higher world trend GDP has other important implications. It suggests that demand growth globally can run faster before inflationary pressures are generated. This is an important consideration for central bankers in assessing external inflationary pressures. Stronger growth and more contained inflation are also positive for equities, as they should result in higher profit growth for companies.

Developing Countries Riding Today's Globalisation Wave

The last 25 years have seen unparalleled integration between economies around the world. The most important drivers of this process have been increased political liberalisation, trade openness, financial market deregulation, rising capital and labour mobility, and a widespread transfer of knowledge and technology.

While the benefits of globalisation are hotly debated in many quarters, there is little need to prove that this process has indeed been underway for several decades and continues today. But globalisation today is different from globalisation in the 1970s-1980s. We are now seeing signs of its evolution. One of the most important indications of this evolution is the growing importance of developing countries in the global economy.

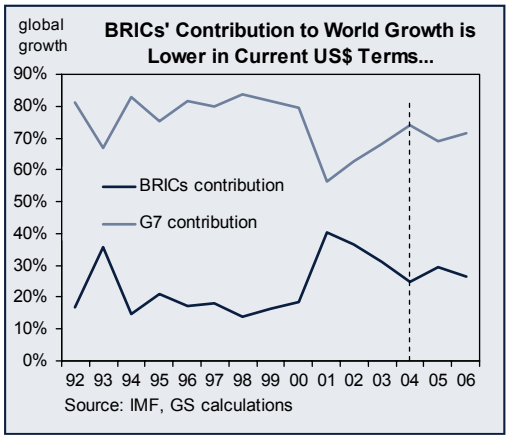


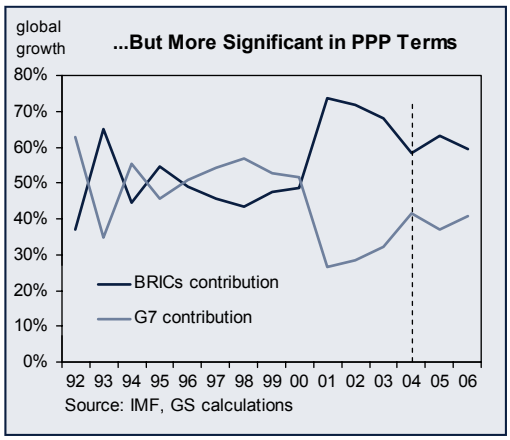
As countries have opened up to international markets, global trade has expanded dramatically, rising from about 24% of GDP in 1960 to over 50% in 2004. Developing countries' trade as a share of GDP has increased from around 20% in 1970 to over 60% of GDP in 2004; their share of world trade has grown by half, from 20% to over 30%, over the same period. However, these numbers conceal substantial variations across major regions: while emerging Asia has performed well, now accounting for about 20% of world trade, other regions, namely Africa, have not been successful. Asia has benefited from its relatively cheap cost base and thus has managed to expand its trade with advanced economies. By contrast, low-income economies, such as those in Africa, have relatively little trade among themselves and face unfavourable international trade terms for their primary exports.

Financial markets represent another important channel through which the integration has taken place. Financial deregulation of the post-Bretton Woods era led to a sharp increase in the overall capital flows, mainly accommodated by floating exchange rates and a removal of capital controls. Private capital flows to developing countries have risen substantially since the 1970s but declined in the wake of financial crises in the late 1990s (though they have recovered since). An important aspect of greater capital mobility has been a change in the composition of capital flows, with foreign direct investment becoming the main category. FDI now accounts for about 70% of all capital flows to developing countries, six times higher than official flows.

The cross-border movements of labour and technology represent another important dimension of globalisation, one in which developing countries are increasingly involved. The proportion of foreign labour force around the world has increased by roughly half in the last 35 years. The ease of transferring knowledge and technology via the internet and other means of communication has been a key factor in introducing cheap labour and products from the developing world to international competition.

While developing countries' experience in globalisation has been mixed, they have become a key source of global growth at the aggregate level. We have been highlighting the rising importance of the BRICs in the global macroeconomic landscape for some time. The contribution of these economies to world GDP growth in current US Dollar terms increased from 17% in 1992 to around 25% in 2004. This share could rise to 45% in the next 20 years. In PPP terms, the BRICs' contribution has risen from just over one-third to over two-thirds in the past decade.





In previous research we looked at the future of the BRICs, and their impact on world demand and various product markets. We now look at the supply-side, more specifically, the impact of the BRICs on trend global growth.

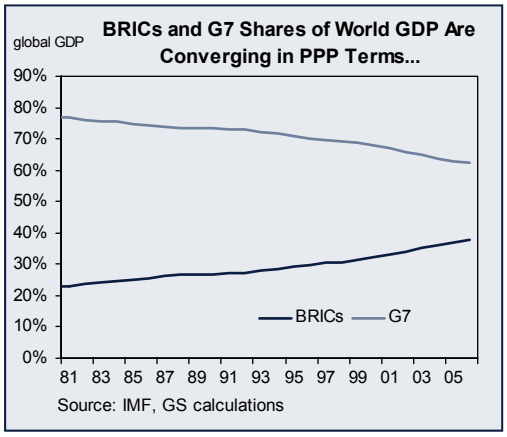
How Has Potential Global Growth Changed?

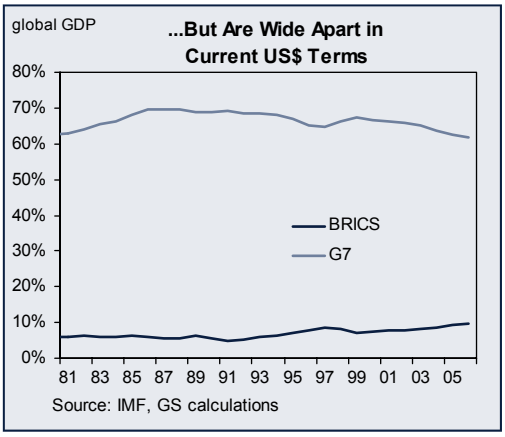
We typically look at the global economy from a cyclical perspective, and the trend component of it is sometimes overlooked. Understanding how much potential growth has changed is fundamental for investors and policymakers. Potential growth is the rate at which the global economy operates at full capacity without generating inflationary pressures. We find that global growth declined over the 1980s and part of the 1990s, but the emergence of the BRICs—India and China in particular—has pulled up trend growth over the past decade.

How We Calculate Potential Growth

The fact that the global potential output is not observable makes estimating its growth rate a controversial undertaking. Our previous work on the BRICs relied on a production function approach, in which we focused on differences among countries going forward. In this analysis we look at global potential growth and regional contributions from a historical perspective. While there is no perfect method, we derive global potential growth applying the Hodrick-Prescott filter to annual real GDP series starting in 1960.[1] We assume that the world economy is composed only of G7 countries and the BRICs, not an unreasonable assumption as these two groupings are roughly 70% of the actual world economy.

Aggregating global potential growth rates consists of calculating weighted averages of trend growth rates for individual countries, with the weights reflecting their relative size. Such weights intend to show countries' shares in global GDP trend growth. Differences in price levels across countries have to be taken into account. In theory, the exchange rate used to convert local currency to US Dollars should reflect a country's purchasing power relative to the US. This may or may not be the case in reality. By deciding whether to use market exchange rates (i.e. current US Dollar prices) or purchasing-power-parity exchange rates—the exchange rate that equates the cost of a 'typical' basket of goods across countries—one ultimately faces a choice with material bearing on the final results.





1. GDP data for Russia do not exist before 1992, so effectively Russia has a weight of zero prior to this year. However, PPP weights are available for Russia starting from 1980.

Adding up country trend growth rates using market exchange rates implies that a significant share of the global trend comes from advanced countries. A more genuine picture of global potential growth is one where the weighting scheme is based on PPP exchange rates. Because prices are generally lower and growth is often faster in developing economies, PPP measures of global potential growth will be higher.

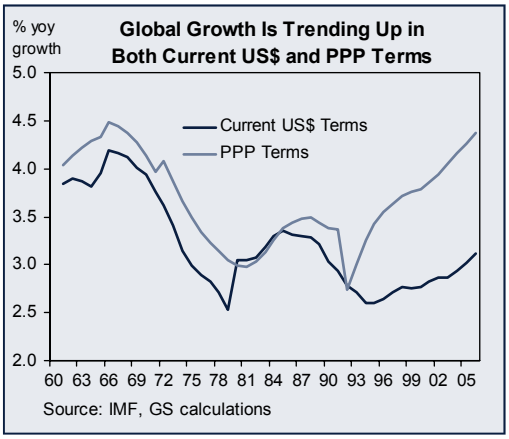
BRICs Boost Global Trend Growth

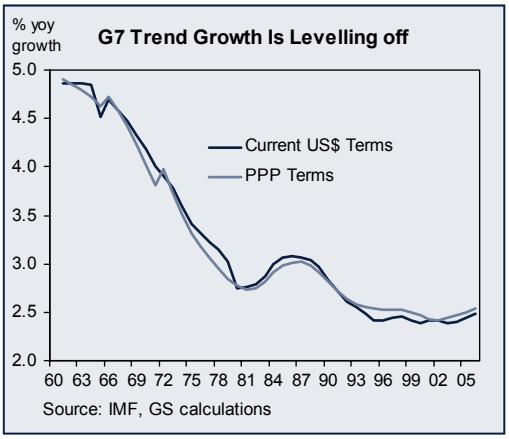
Over the past 45 years, global potential growth averaged 3.7% in PPP weights, but only 3.2% using market rates. This discrepancy has become even more pronounced in recent years. Since 1991, global potential growth averaged 2.8% only when using market rates but stayed at 3.7% in PPP terms. Why such a stark contrast? Using PPP weights mainly affects the share of rapidly growing economies, such as China or India, and, conversely, rapidly slowing economies, such as Japan and Italy. China's weight today in PPP terms is more than three times its current US Dollar weight.

PPP weights are therefore thought to provide a more impartial estimate of the relative balance between rich and poor countries, and a better measure of global economic well-being. Given that they are defined for a wide range of prices of tradables and non-tradables, they reduce the weight of advanced industrial countries in global output. Using stable real exchange rates—as implied by the use of PPPs—also overcomes short-term shifts in the relative importance of countries and regions. This measure is particularly useful for central bankers as it compensates for structural differences between countries and regions, and thus provides a truer reflection of demand for world resources.

Much of the upward trend in global potential growth since the early 1990s has been driven by the BRIC countries, while the major economies have dragged down the trend. Indeed, as we pointed out in our second BRICs report last year, global trend growth could be even higher if the developed economies of Europe and Japan were able to lift their own productivity and labour force growth.

Looking at trend growth in individual countries, potential output in India and Brazil has risen from 5.6% and 1.9% in 1990 to 6.4% and 2.9% in 2004, respectively. While China's economic growth has been impressive over the last 25 years, the upswing in its trend occurred during the early 1990s, and growth appears to have levelled off at about 8% in recent years. By contrast,





potential growth in Europe has declined dramatically over the past 15 years, falling from 2.7% to 1% in Germany and from 1.9% to 1.3% in Italy.

Our results suggest that the recent wave of globalisation has started to benefit the emerging market economies, in particular the BRICs—the most positive aspect of globalisation currently and going forward. On both market exchange rate and PPP weights, G7 potential growth declined from almost 5% in the early 1960s to about 3% in the early 1980s. It has hovered around this level ever since. The BRICs trend rate has increased from 3% in the early 1990s to about 6.5% in 2004 and is expected to remain around this level for the foreseeable future, until downward demographic pressures begin to take hold.

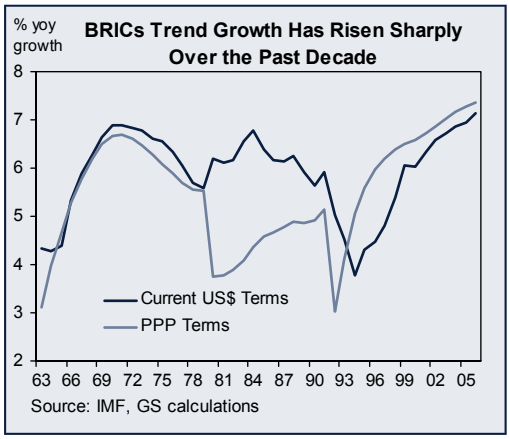
The volatile nature of the BRICs' potential growth rate over the 1980s and early 1990s reflects the challenges these countries have faced. The transition of Russia from a command economy into a decentralised market-oriented economy is reflected in the fall in BRICs' potential growth rate around the early 1990s. In addition, the uneven trend over the late 1980s and early 1990s also reflects debt crises in Latin America and the structural reforms in Brazil and China.

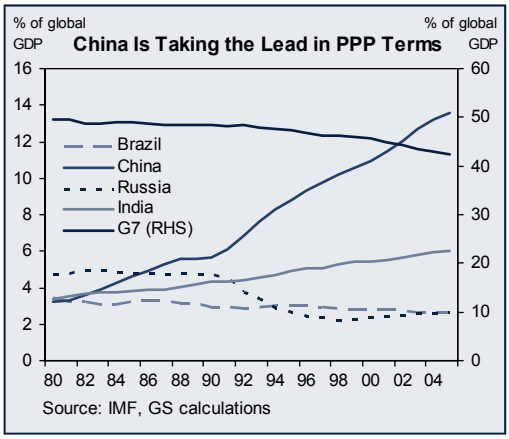
Implications: Lower Inflation, Higher Profits, Higher Volatility?

The impact of the shift in growth mainly towards China and India—and the overall higher pace of potential demand growth—suggests that the drivers of energy and other commodity demand growth are likely to stay strong. Our previous BRICs work showed that the peak demand pressure will be felt over the next decade or so as higher trend growth—and the rapid industrialisation of India and China—keep the underlying path for demand strong against the backdrop of constrained supply.

There are a number of other important implications:

Lower inflation. A higher trend rate of growth means that the world economy is more capable of containing inflationary pressures at higher level of demand. To the extent that some countries are prepared to save, demand growth in the rest of the world may be able to run above trend for a while. The positive supply shock resulting from the emergence of the BRICs has made central bankers' job on the inflation front a little easier. But while this has allowed a sustained period of low interest rates, it also has created bubble risks in other parts of the economy.





Higher profit growth. Higher trend growth should mean higher global profit growth. In principle, that should be good for global equities; it is most clearly beneficial for those firms with access to global demand growth. With a shift in growth away from developed markets, global strategies have become more important.

More volatility? The increased contribution to growth from developing markets may raise trend growth, but it might also be thought to raise the volatility of global growth relative to the past. The risk of fluctuations in growth in Brazil and Russia, in particular, and probably also in China and India, is probably higher than in advanced economies. However, the notion of less stable growth should not be exaggerated, particularly since the BRICs have not all behaved like 'conventional' emerging markets. China in particular has reported relatively stable growth for some time, and volatility in all of these economies may decline further as they develop.

Binit Patel, Mónica Fuentes and Anna Stupnytska
September 2005

CHAPTER TEN

The G8: Time for a Change

June 2004

THE G8: TIME FOR A CHANGE

Who should guide the international economy in this time of uncertain growth prospects, rising inflation and record high oil prices? Are existing international institutions up to the job? Or is it time to reform the global economic architecture and give greater voice to the emerging economies that will play an increasingly important role in the world economy in the years ahead?

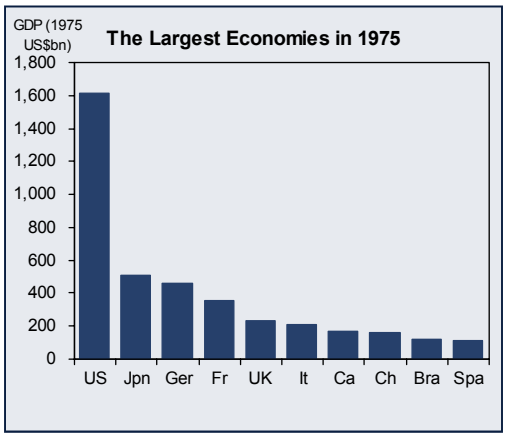
Our well-known view is that existing institutions, notably the G7, are outdated and should be overhauled. Further evidence of this came in the form of the G7 Finance Ministers statement in May, in which they called on oil-producing countries to expand production to restrain the upward rise in crude oil prices. To us, the most interesting aspect is that this is the fourth consecutive statement focusing on an issue over which the G7 has little to no direct control. The three previous G7 meetings were notable for the implied calls on non-G7 Asian nations to adopt more flexible currency regimes.

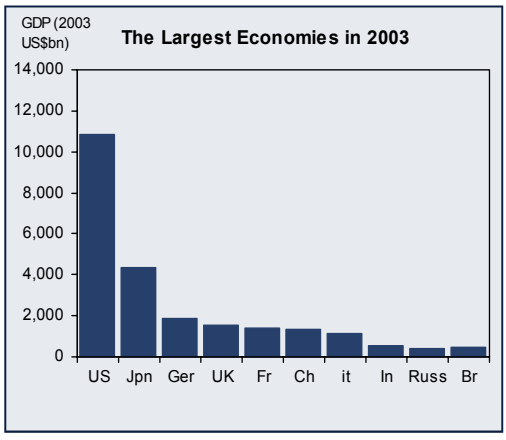
The G7 is right to point to policy action that will make for a more sustainable world economy. However, it is unlikely that the G7 can have any direct influence on these issues. Nor was it clear what incentives the G7 countries were ready to offer in order to persuade the target countries to adopt globally beneficial policies. All these communiqués highlight the diminished relevance of the G7 in the modern world.

The time has come for institutional reform of organisations that preside over the world economy. We specifically propose an extension of the G8 Heads of State to include China, an elevated role for the G20 and creation of an F8 (Financial Eight) to replace the G7 finance and central bankers' meetings.

The G8 Speaks, But Who Listens?

The Group of Eight leaders face a far different world from the one their predecessors confronted when they initiated their summit conclaves in 1975. Then the international economy was dominated by the US, Japan and a handful of European nations that together accounted for the vast portion of world GDP, finance and commerce. These countries called





the shots on trade negotiations, currency realignments and most other international economic matters—except for oil. It was oil that catalysed the summit process, in 1975, when six Western leaders met to forge a strategy to overcome the recession caused by the Arab embargo following the 1973 Arab-Israeli war.

In the mid-1970s, China barely participated in world trade; its dramatic market reforms had not even begun. India's technology boom was two decades away. The European Union had only nine members. The USSR still existed as a communist state that sought to undermine the Western market economic system. Iraq was an ally of the US. Mutual assured destruction was the primary nuclear issue, not proliferation.

This initial summit differed from anything that had preceded it. It was not established by treaty or by a formal diplomatic conference, as were the IMF or World Bank. Instead, it was planned as a one-time event—an informal get-together—and was the idea of German Chancellor Helmut Schmidt and French President Valerie Giscard d'Estaing (both former finance ministers). Giscard invited Schmidt and their US, Japanese, British and Italian counterparts to seek ways to restore world economic growth and bring order to an international monetary system thrown into turmoil after the 1971 collapse of the Bretton Woods System of fixed exchange rates. The G7 was born when then US President Gerald Ford convened a second summit in 1976, and Canada was invited to balance the heavy European weighting of the original group.

From an ad hoc beginning in the mid-1970s, G7 summits (expanded to the G8 with the addition of Russia in 1998) have become a mainstay of the international diplomatic calendar. Finance ministers and central bank governors convene their own meetings, as do foreign ministers. Summits have addressed a widening range of issues, including AIDS, help for the poorest nations and terrorism.

Challenges Ahead for the World Economy

The global economy has changed markedly since the mid-1970s, given the spread of capitalism, the integration of global capital markets and global supply chains, the rise of outsourcing, expanding migration and the spread of terrorism and global diseases. A fresh review of the institutional architecture of the global economy should lead the G8 to consider a number of key questions. What are the central problems the world faces over the next decade? Which nations are vital to the solutions? Can an expanded G8 do the job? Is another group better suited? Are there some topics that an expanded G8 can do best and some that another group might address more effectively?

While reform of both the IMF and World Bank might make sense in view of the changing nature of the world economy, in this paper we focus on reform of the G7 and G8. By virtue of their membership, these institutions have an enormous responsibility for improving the health of the world economy.

The goal of institutional reform is not simply to put a few more countries around a table or to shift issues from one group to another. It is to put the right group of countries around the right tables to solve the most pressing problems the world faces. These include:

- Reducing global trade and current account imbalances without slowing the aggregate rate of global growth or causing disruptive movements in currencies.

- Successfully concluding the Doha Round of trade negotiations. Developed nations must recognise that this is a two-way street: it requires freer access for the goods and services of developing and emerging nations to industrialised nations' markets, as well as greater access for industrialised nations to the markets of developing and emerging nations. It also must address such key issues as protecting intellectual property rights.

- Strengthening the international financial system to avoid a recurrence of crises similar to those experienced in the 1990s, such as the Mexican Tequila crisis and the financial crises in Asia and Russia.

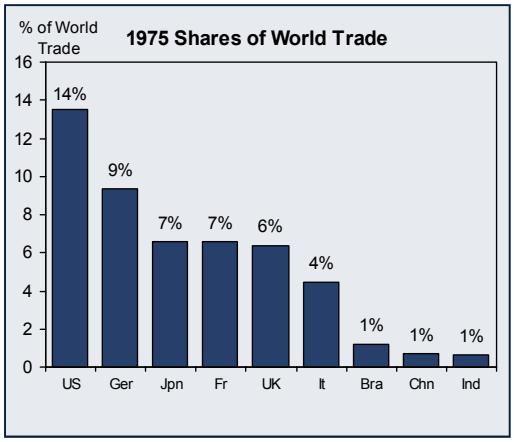
- Integrating into the global economy emerging nations that have dismantled ponderous government regulations and that have large pools of low-wage labour, without producing massive dislocations and job losses in the industrialised world. This must entail recognising the low-cost workers' strong comparative advantage in certain manufacturing activities and basic services, while also strengthening investment, training, education and other adjustment programmes in the industrialised countries to expand domestic jobs, especially through higher value added employment and exports.

- Addressing the enormous contingent costs of the growing numbers of retirees in both the industrialised world and in many emerging economies—and doing so without dramatically increasing government borrowing or taxes, which would disrupt financial markets and slow worldwide growth.

- Preventing funding of terrorists around the world, and strengthening the legal and intelligence frameworks to catch terrorists and bring them to swift justice.

- Devoting more resources to reducing hunger, poverty and disease in the world's poorest economies, at a time when budgets are already stretched in industrialised nations and when their own social security systems will face increased demands.

- Confronting the global dependence on imported oil and growing concerns about global warming by removing energy supply bottlenecks and taking bolder steps to conserve energy and to develop cleaner and renewable sources.



- Strengthening international efforts to fight HIV/AIDs and to contain the risk of global pandemics of other infectious diseases that spread rapidly across continents. SARS was but a sample of what virologists see as the prospects of much worse to come.

The successful resolution or management of virtually all of these problems will require the constructive participation of a number of emerging economies. If emerging nations are to be part of the solutions, they must be given a greater role in governance of the global economy. This means that the institutions, procedures and mechanisms of global economic governance must conform to changing economic realities. The question is how to engage them in the process of confronting such problems.

Moving from G7 to F8

One possibility is to enlarge the G7 Finance Ministers and Central Bankers group and the G8 Heads of State summits. An important, and, to many, obvious next step is to include China in much the same way that Russia was gradually incorporated into the G7 during the 1990s. China could be added more quickly than Russia was. Its top finance officials have already participated in four meetings with G7 finance and central bank officials. It would be a small step to formally add these officials to form a bigger group of F8 (Financial Eight).

This would also be an opportune time to further consolidate the financial group by reducing the participation of individual Eurozone members. Given that EMU has consolidated monetary and much macroeconomic policy, it seems logical that the Eurozone as a group participate as a single entity. Moreover, the EU has already demonstrated its ability to ensure efficient participation by and co-ordination among individual member states prior to major international decision-making conferences on trade and agriculture, and even on foreign policy discussions within the UN.

We propose that the current representation of France, Germany and Italy be replaced by a three-person delegation, consisting of the current president of the Eurogroup Ministers for Finance, the President of the European Commission and the President of the European Central Bank.

A revamped F8 would be a more realistic forum that could spur the necessary changes to reduce global economic imbalances in a non-inflationary manner. We have frequently written about the need a smaller US current account balance, a rebalancing of global financial conditions and stronger Asian currencies. To include China as a direct and equal participant would increase the likelihood of these things coming to pass.

Expanding the Role of the G20

A second possibility—which would not preclude the first—is to expand and elevate the role of the Group of 20. The G20, which currently meets at the finance minister level, was established in 1999. It comprises the G8 countries plus Australia and the country that is at the time president of the European Union. It also includes several important emerging economies, including China, India, Brazil and South Korea—which are already among the world's largest economies—as well as Argentina, Indonesia, Mexico, Saudi Arabia, South Africa and Turkey—which are of significant regional importance. Based on our projections, in 2050 these nations will account for well over 50% of world GDP, a significant amount of world trade and obviously much of the world's population.

Sitting around a table does not guarantee progress. If the G20 is to be successful it needs to base its deliberations around a key premise that has guided much of the work of the G7/G8: that interdependencies among economies have become so intense that fragmentation or division into antagonistic blocs would serve no one's interests. One of the enormous strengths of the G7/G8 process is that the 'sherpas' who prepare the summits develop a spirit of cooperation that generally results in a high degree of comity in the summits. This is not to say that confrontations have not occurred or that all summit results have been impressive steps forward for international cooperation (indeed many have accomplished little other than pious rhetoric). However, there is a presumption of common interest and an understanding that policymakers will go the extra mile for a mutually acceptable outcome.

This sense of common destiny and the need for mutual accommodation and harmonious solutions is especially important today. When the G7 was formed, economies were far less integrated than they are now. Recognition of porous borders, mutual vulnerability and mutual benefit must animate the discussions of the G20 if it is to make genuine progress.

The key to successful G20 summits will be to find the right balance—one that the G8 has been striving for—between informality and spontaneity on one hand and sufficient planning to produce concrete results on the other. Doing this with 20 participants is a lot harder than with seven or eight.

Reaching agreement among 20 nations on difficult issues will be another major challenge. It has been hard even within the smaller G8. G8 summits often address too many issues and spread their time too thinly among them. The best chance is to focus on one specific issue at a time. The revival of the Doha Round would be an excellent first topic for the G20 heads of state to address.

The prospect of G20 summits need not spell the end of the G8 any more than the advent of TV meant the end of radio or the rise of the internet lead to the end of TV. G20 summits might not be an annual event. They perhaps should be inaugurated as a single, one-time meeting; if that succeeds, the next step might be to plan such summits on a biannual basis. Important topics might include AIDS in Africa, the need for stable and sustainable energy supplies that do not worsen the environment, and ways to strengthen cooperation against future pandemics.

Unlike the G8 summits, G20 summits will probably need a secretariat and an orderly preparatory structure. The OECD might play that role. Although the OECD's membership is composed primarily of industrialised nations, it has reached out to many emerging economies and has established useful links to high-level government officials in these countries on specific topics. Its papers are generally considered of high quality and objectivity.

In any event, the G8 summits need not stop and G7 finance ministers and central bankers should continue to meet when appropriate. These summits will remain important for addressing issues essential to their members and to the global economy. They will become even more important and useful fora if China assumes a greater role. Issues such as foreign currency adjustment, macroeconomic policy cooperation and financial market stability will remain key items on the common agenda of these nations. The G8 summits should also continue the outreach of recent years.

Conclusion

Changes in the global economy warrant a new architecture for global economic cooperation. While we have attempted to offer a few suggestions, there are doubtless many others. The key is that different architectures are needed to address different issues. There is no one perfect way to address all the problems that the world economy will face in coming years.

There are a growing number of problems that the industrialised nations cannot solve themselves. They must reach out to the emerging economies, not as a political gesture but as a recognition of reality—a recognition of the fact that future prosperity in the world as a whole is interdependent and will require collective efforts. In the end, the best outcome will be when nations stop seeing one another as industrialised, emerging or developing and recognise that they are part of an integrated whole—and aim to find solutions that reflect this recognition.

Jim O'Neill and Robert Hormats
June 2004

CHAPTER ELEVEN

Can the G7 Afford to Have the BRICs Dreams Come True?

November 2004

CAN THE G7 AFFORD TO HAVE THE BRICS DREAMS COME TRUE?

Can the G7 afford to have the BRICs dream come true? Our answer is Yes—although, along the way, especially in the next 10 to 15 years, it might not feel as though it is necessarily in the interest of the current G7 economies.

We derive our Yes answer from the following rationale. Overall world GDP over the next 50 years is likely to grow more slowly than in recent decades. Accelerating growth in the BRICs economies does not imply that aggregate world GDP growth accelerates, but merely that the BRICs economies become a bigger share of the world total. Without the acceleration in BRICs' share of world growth, the rate of world GDP growth would probably slow more sharply. Aging populations, declining workforces and productivity challenges imply that real trend GDP growth will slow in most of the G7, especially the Eurozone and Japan. Sustained growth in the BRICs economies would give the export sector of the current G7 an important stimulus, without which overall G7 growth may be slower still.

We show that in the latter part of the 2004-2050 period real GDP growth in the BRICs economies will also slow as their own populations age and as the productivity catch-up process advances. These countries will then confront challenges similar to many of those facing the G7 today. India may be an exception, even in the latter part of the period, as its demographics remain favourable for longer than the other BRICs.

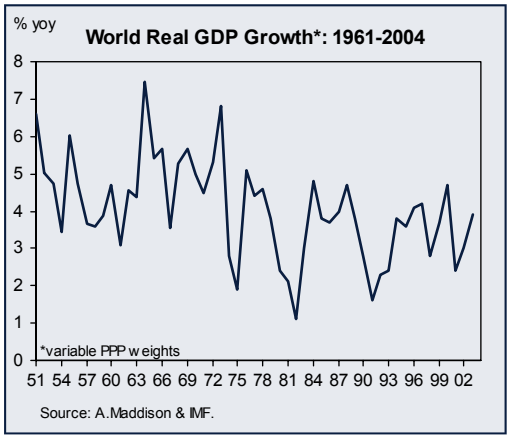
It is likely that over the next 10-15 years strong BRICs demand for energy and other commodities will raise the risk of higher inflation for all countries, including the G7. Combined energy demand from China and India, in particular, is likely to have a strong influence on markets during this period, which could result in challenges paralleling those of the 1970s. If either China or India grew by only half the rates we have assumed in our baseline scenario, energy demand would be less but still above the level seen over the past 20 years.

Analysis of the rapid emergence of Japan during the 1960s and 1970s suggests that the challenges facing the world over the next 10-15 years could involve some similarities. Increasing share of world growth for China, India and the other BRICs would come at the expense of current major economics, especially Europe and Japan. At the same time, terms of trade shocks from world markets would imply inflationary risks to the G7, requiring a more restrictive monetary policy than otherwise.

Contributions to World Growth*

%		1981-90	1991-2000	2001-10	2011-20	2021-30	2031-40	2041-50
Advanced industrial countries		1.3	1.2	0.9	0.9	0.7	0.7	0.6
Of which:	**United States**	0.6	0.7	0.6	0.5	0.5	0.6	0.5
	Euro area	0.3	0.3	0.2	0.2	0.1	0.1	0.1
	Japan	0.4	0.1	0.1	0.1	0.1	0.0	0.0
China and India		0.6	0.9	1.2	1.5	1.6	1.6	1.6
Rest of the World		1.4	1.2	1.7	1.1	0.9	1.0	0.9
World Growth (%yoy)		3.4	3.3	3.8	3.5	3.3	3.3	3.1

* PPP weights. Source: IMF, National Sources. Projections based on GS BRICs Model.



The same challenges existed during the difficult days of the 1970s. In the early part of that decade, G7 policymakers chose to support economic growth at the risk of higher inflation, and in the latter part they curtailed growth to contain any further pick-up in inflation. These challenges are likely to be real for the remainder of this decade and beyond. Amid these complex policy choices, as well as the social consequences of aging societies, current G7 nations should conclude that ultimately the emergence of the BRICs nations—and maybe other large emerging market nations such as Turkey—is good news for all. A larger pie means more for all to take a piece of!

World Growth Over the Past 50 Years

Over the past 50 years, world GDP has averaged about 4.1% in PPP terms. But world GDP growth appears to have slowed since the 1960s, and especially during the last 20 years. This is probably due to the relative weakness of Western Europe and Japan. The 1960s showed the highest growth, while the subsequent decade included dramatic volatility. It is conceivable that the emergence of Japan may have indirectly contributed to commodity price pressures, inflation and the volatile nature of the 1970s world economy. Parallels with this era for the possible period ahead may be valid.

Similar to the projected BRICs path, Japan's share of GDP started to rise sharply in the 1960s, and this was a trend that continued until the early 1990s and the bursting of Japan's 'bubble'. Can Japan's experience from 1960 to 1990 be applied to China and India, and indeed to the rest of the BRICs?

World Growth by Decade (PPP weights)

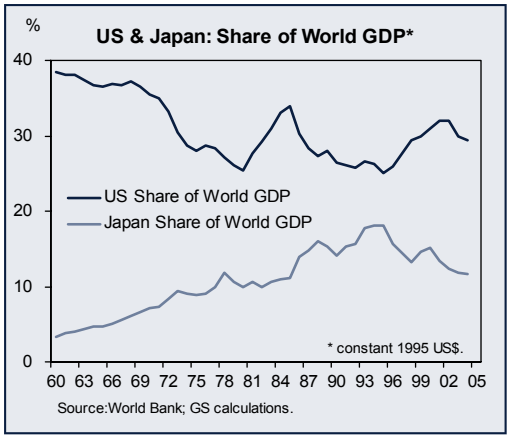
%	Japan	US	EMU*	World
1951-1960	8.9	3.4	6.6	4.6
1961-1970	10.5	4.2	5.1	5.0
1971-1980	4.5	3.2	3.2	4.2
1981-1990	4.0	3.3	2.4	3.4
1991-2000	1.5	3.3	2.1	3.3

*EMU 1951-1970 refers to Germany, France and Italy only.
Source: World Bank; IMF; Angus Maddison, OECD; GS estimates.

Real GDP Growth* and Share of the World for Selected Countries and Regions

%	Real GDP 1961-2004			Share of World (USD-terms)		
	1961-04	1985-04	1995-04	1961-04	1985-04	1995-04
World	3.6	2.9	2.8	-	-	-
US	3.4	3.2	3.3	30.9	28.6	29.2
Japan	4.8	2.5	1.6	10.8	14.6	14.0
EMU	2.4**	2.2	2.0	22.7**	22.5	21.9
Brazil	4.5	2.6	2.3	1.8	1.9	2.0
Russia	n/a	-1.6***	2.9	n/a	1.4***	1.1
India	4.7	5.8	6.1	1.8	1.4	1.5
China	7.7	9.4	8.6	2.7	2.6	3.3

*constant 1995 US$. **1971-2004 for Eurozone. ***1990-2004 for Russia.
Source: World Bank; GS estimates.



Share of Oil Consumption

	Share of	China	Japan
1965	of US	1.9	15.0
	of World	0.7	5.5
1970	of US	3.8	26.7
	of World	1.2	8.5
1980	of US	10.4	28.9
	of World	2.9	8.0
1990	of US	13.3	31.2
	of World	3.4	8.0
2003	of US	29.8	27.2
	of World	7.7	7.0

Source: BP Statistical Review 2004.

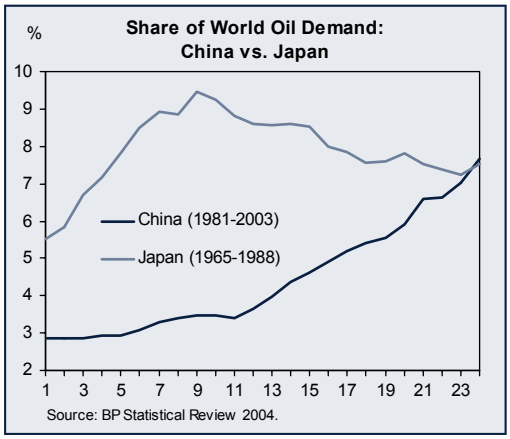
It is interesting to note that, while the Eurozone has not—at least, not yet—recovered its share of world GDP, the United States has. It is perhaps not inevitable that Europe will continue to decline in the future. Productivity-enhancing economic reforms could mitigate the trend, just as they have in the US since the late 1990s.

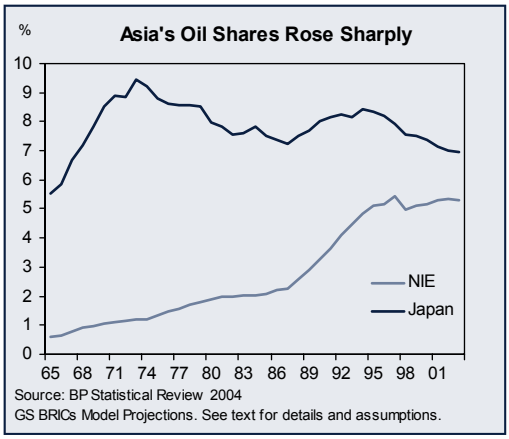
China's Appetite for Commodities Today Is Similar to Japan's in the 1960s

Linked to Japan's sharply rising share of GDP from the late 1950s through to the 1960s, the nation's consumption of energy and other commodities rose sharply. Drawing parallels for China's experience and the other BRICs, today and in the future, seems justified.

Japan's share of world oil consumption rose from 5% in the early 1960s to above 9% in the early 1970s, where it remained for much of the decade. NIE countries in Asia have interestingly seen a more gradual rise in their oil demand. China's rapidly rising share of world oil demand has now overtaken Japan's in terms of absolute levels. The speed of China's relative increase is similar to that of Japan from the late 1950s to 1970s.

Our BRICs projections indicate that China's share is likely to continue to rise, approaching 15% of total oil demand within ten years. This may have a further powerful impact on energy prices, and comparisons with the 1970s are easily understandable.





Commonality between China now and Japan in the 1970s comes largely from the urbanisation process. From the 1950s onwards, as Japan urbanised, GDP per capita started to rise sharply and Japan's commodity usage surged. It is highly likely that so long as China continues to urbanise, similar demand influences can occur.

It is also interesting to observe that similar increases in demand occurred for other commodities with the rise of Japan (and to a lesser degree, also Korea). Japan's share of other commodities, such as copper and steel, rose sharply also.

While it is dangerous to exaggerate the impact of Japan's rising demand for commodities on world inflation, it is presumably no coincidence that Japanese and OECD inflation rose significantly in the 1970s. Obviously, supply shocks and easy global monetary policy were part of the story, but without Japan's emergence those challenges would have probably been less significant.

It is no surprise that some observers fear that the emergence of China's economy, as well as that of the other BRICs, may cause difficulties similar to those experienced in the 1970s. As we will argue later, the next 10 to 15 years will be the most challenging.

BRICs Projections and the Impact on World GDP

We project world GDP growth of 3.4% on average from 2001 to 2050 on a PPP basis. This compares to 4.1% over the last 50 years, according to the OECD and IMF. Our projections show slightly softer trend growth as the next 50 years proceed. Stronger BRICs growth is more than likely to be offset by softer growth elsewhere, especially in the G7. In fact, as can be seen, the US is likely to be the only current major economy outside the BRICs that will enjoy real GDP growth above 2.0% throughout the period. Growth in France and Germany, and especially Italy and Japan, is likely to trend broadly lower. Consequently, should our BRICs projections not materialise, world GDP growth would slow even more.

Some G6 countries might not relish the prospect of relative decline. Rational policymakers, however, should be relieved by the opportunities offered by the emergence of the BRICs. Export growth opportunities may be important positive avenues for the aging G6 members to exploit. It could also be advantageous for investors from G7 countries to seek higher probable returns from the BRICs-type economies, which could help to supplement savings to support their aging societies.

In addition, if growth throughout the period up to 2050 is likely to be softer than that of the past 50 years, then while there may be upward pressure on commodity prices over the next 10-15 years, pressure should ease beyond that period.

The relative shift of economic power will also result in significant shifts in world political balance of power and social arrangements. In order to manage these challenges better, we believe it is critical that the world's major economic policymaking institutions are reformed. The case for a revamp of the G7/G8 forum, in particular, is vital and urgent.

We showed earlier that Japan's rapid emergence after the 1960s coincided with a decade of economic turbulence. The 1970s were a decade of significant disruption, two oil price crises, subsequent inflation and significant global economic weakness. It is quite possible that during the current and next decade, similar turbulence may unfold. In this regard, some might believe

that it would be 'better' if the growth surge of all the BRICs does not appear at the same time. The risk of considerable upward pressure on commodity prices and of significant upside surprises to inflation is real. G7 nations could be forced to tighten monetary policy in order to compensate for rapid BRICs growth.

Alternative Growth Paths

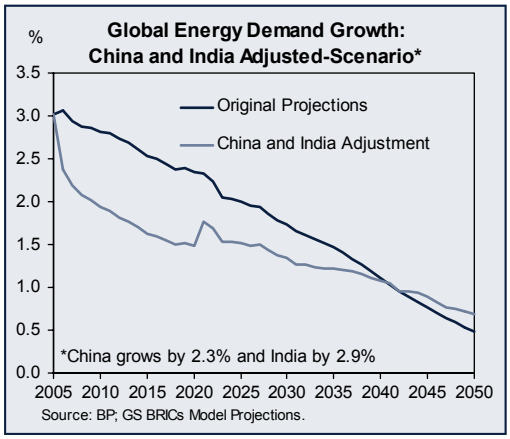
One way of stress-testing the implications of our robust energy demand projections is to vary the assumptions about our BRICs forecasts. This is an interesting exercise in its own right because, as we readily acknowledge, our BRICs 'dreams' may not materialise. There is a reasonable probability that at least one of the four BRICs will not succeed, at least over the next 50 years. Given their particular importance for world demand patterns, we focus on China and India. We decided to re-run our energy demand projections to assess the implications if one or the other grows at only half the rate assumed in our baseline scenario for 2004-2050.

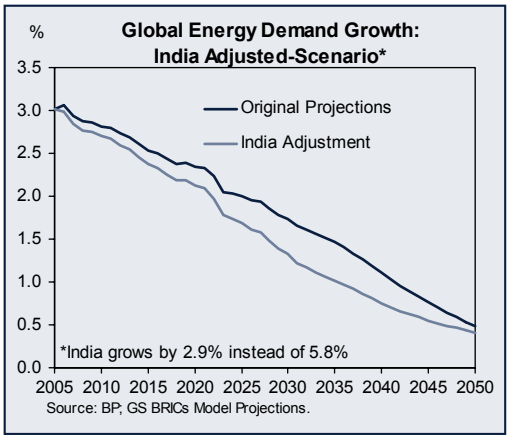
In one scenario, China grows by 2.3% instead of 4.9%, while India still grows by 5.8%. In the second scenario, India grows by 2.9%, while China still grows by 4.9%. In a third scenario, we re-run our estimates if both China and India grow at only half the baseline assumption.

China grows by 2.3% instead of 4.9%; India unchanged. In such a scenario, with all other projections held unchanged, China's US Dollar GDP would rise to US$11.4 trillion by 2050 instead of US$44.1 trillion. Its share of world GDP would rise to only 7% and 8% by 2025 and 2050, respectively, instead of 16% and 24%. With all other countries growing at the rate assumed in our baseline 'Dream Scenario', the world economy would expand at an average 2.6% (US Dollar GDP-weighted) or 3.0% (PPP-weighted) instead of 2.9% (US$) or 3.4% (PPP). From now until 2050, global energy demand would on average rise by 1.7% throughout the period, not 1.8%. Growth of energy demand during the peak period between 2005-2020 would now rise by 2% instead of 2.5%. Oil demand growth would rise by 1.7% over the next 15 years, instead of 2.2%.

This might still pose some dilemmas for world commodity prices, although considerably less than before.

India grows by 2.9% instead of 5.8%; China unchanged. If the same exercise is repeated for India, the impact on world growth and energy demand would be different in two main respects.





Firstly, if China grew in line with our baseline 'Dream Scenario', strong energy demand would still occur over the next decade or so. Instead of growing by 2.5% on average to 2020, it would now grow by 2.4%, not significantly different. In the second part of the period, however, energy demand would be substantially lower. Over this period, India's previously assumed relatively strong growth would have had a major impact on world growth (as China slows sharply in the latter part of the period). Over the whole period, energy demand would now rise by 1.5% instead of 1.8% in the baseline, and from 2025 to 2050, by 0.9% instead of 1.2%. Over the whole period, oil demand would now rise by 1.3% instead of 1.6% in the baseline, and from 2025 to 2050, by 0.8% instead of 1.1%.

This alternative scenario shows the dilemmas facing both policymakers and commodity producers. If China grows as assumed in our baseline scenario, then disappointing growth from India over the next decade would not significantly affect world energy and oil demand. However, Chinese growth will slow as we move closer to 2050; if India were to disappoint, then the world would see a considerably larger slowdown in energy demand.

China grows by 2.3%; India by 2.9%. In this third scenario, energy demand would grow much more in line with patterns of the past 20 years, and price disruptions would be much less likely to occur. Energy demand from 2004 to 2050 would rise by 1.4%; even during the 'peak decade', demand would grow by a much more manageable 1.8%.

It is clear from this analysis that it may be in the interests of other energy importing countries if China and India grew at slower rates, especially during the next 10-15 years. However, we believe G7 nations should pursue policies that allow them to benefit from the opportunities posed by the BRICs, rather than worry about the consequences.

The Appropriate G7 Policy Response: Bring in the BRICs!

The previous analysis underscores why we believe that the current structure of the G7 is not appropriate for the modern challenges of the world economy. With the emergence of China, especially, but also India, Russia and, to a lesser degree, Brazil, the need for these nations to play a more central role in global macro policy coordination is obvious. As world economic conditions have demonstrated in 2004, the need to incorporate China is compelling. Indeed, the justification for both an F8 and a broader role for the G20, will become more compelling as time passes.

As we demonstrated earlier, there are possible challenges ahead in the next 10-15 years, especially with respect to the demand for energy and other natural resources. What better than to use the G7 process—one that includes China—to develop a sensible global demand energy plan? Such a development could smooth the path of energy going forward, and diminish the risks outlined earlier in this paper.

The Growing Need for G7 Economic Reforms

In addition to reforming the G7 process, there is need for economic reform in those G7 nations that are likely to continue to see their absolute real growth trend diminish by 2050. Risks seem particularly acute for France, Germany, and especially Italy and Japan. The degree of the challenge for the latter two countries is linked to a likely rapid decline in their labour force over the next 46 years. Trend growth in all four of these economies will slow further in the

years ahead unless there is a major boost to productivity and labour force growth is supplemented with strong positive immigration strategies. In aggregate, the three big Eurozone members today make up around 12% of world GDP in PPP terms (or 16% in US Dollar terms). By 2050, collectively they could be significantly smaller than each of China and India.

In many of Europe's capitals, political leaders are failing to respond to the competitive challenges we have outlined. Even within the expanding EU, some European policymakers resist free movement of labour and capital—key ingredients necessary to boost Europe's flagging productivity. The heightened tension about Turkey's possible invitation to join the EU is an example of the unfocused thinking dominating today's agenda. It is reasonable to demand that Turkey continues to make significant social and economic reforms to meet EU standards. In terms of its substantial influence on labour flexibility and productivity, EU leaders should embrace such new members given their positive population dynamics.

The recent Kok Report concluded that the EU is failing to deliver its promise made at the beginning of the decade to become the world's most competitive economy by 2010. Without major reform and with a continued lack of determined political action, the EU's potential growth rate by 2010 will be significantly lower than its current level of around 2%. Independent of whether BRICs economies achieve their potential or not, it is crucial for European policy to respond to its demographic and productivity challenges. BRICs development may, if anything, help by highlighting the positive alternatives available in the world.

The same general issues are valid for Japan. While the economic reform agenda of the Koizumi Administration and the associated improvements in productivity in recent years have probably halted the decline of Japan's long-term growth potential, further reforms and an active plan to supplement Japan's labour force are urgently needed.

Our research finds that Japan would have to boost its immigrant population by around 22 million to simply maintain its current working age population. Germany would need to boost its immigrant population by nearly 20 million.

It will be very difficult for these economies to shift gear to the degree that is necessary. They should at least start to try.

For both Japan and much of Europe, failure of the BRICs economies to emerge will not 'help' but simply reduce an export opportunity, and highlight even more the slow decline of their potential. Economic policy reform with or without the BRICs is the solution.

Jim O'Neill
November 2004

CHAPTER TWELVE

A Realistic Look at Latin America's Trade Relations With China

December 2004, updated February 2006

A Realistic Look at Latin America's Trade Relations With China

In November 2004, Chinese President Hu Jintao led a high-level official delegation to Argentina, Brazil, Chile and Cuba. A key objective was to strengthen bilateral relations by expanding trade and financial links between China and Latin America. The visit received wide press coverage and local authorities heralded the signing of sizable trade and investment agreements as opening a new and promising stage of economic and financial relations with distant Asia.

In this paper we review trade and financial flows between China and Latin America to gauge whether their relative importance to key economic variables lives up to the hype generated by the official Chinese visit. Although the growing presence of China is, on aggregate, a net positive for the region, we conclude that the benefits are not equally distributed across Latin America. Certain countries stand to gain from tighter economic and financial links with China, while others will probably have to deal with sizable and growing adverse shocks to their balance of payments and economic welfare.

A Framework to Analyse Trade Relations With China

We believe that the rapidly-growing trade flows between China and Latin America are potentially positive for South America (if complemented by macro and institutional reforms)—but not necessarily for those reasons advanced by national authorities during the official Chinese visit.

Five main concepts from international trade theory should heighten our understanding of the relevant issues behind this growing trade partnership:

- For Latin America, the main economic benefit from a fast-growing China stems from the fact that China's vigorous real GDP growth, and therefore robust import demand, continues to drive up global demand for raw materials. This increase in global demand (some elements of which will most likely be permanent) has allowed Latin America—which is richly endowed with natural resources—to boost export revenues as a result of both higher export volumes and unit prices. This transmission channel leads to stronger balance of payments and stronger local currencies, and gives an added impulse to real GDP growth through net exports.

- Given that the global supply of some of these commodities is less elastic in the short run than in the long run, the upward shift in global demand for raw materials creates a short-term rent for commodity exporters in Latin America, and in particular boosts the return on capital in these sectors.

- In view of Latin America's perennially low savings ratios, local firms and governments often do not benefit from access to an adequate pool of domestic savings, and hence lack the 'capital muscle' to invest in and expand export capacity to meet growing demand from China. Therefore, foreign direct investment or debt financing flows from China would help the region to invest in and expand existing exporting capacity and related infrastructure. However, the rent that accrues to capital would in that case be transferred to capital of Chinese origin, as opposed to domestic or other multinational capital.

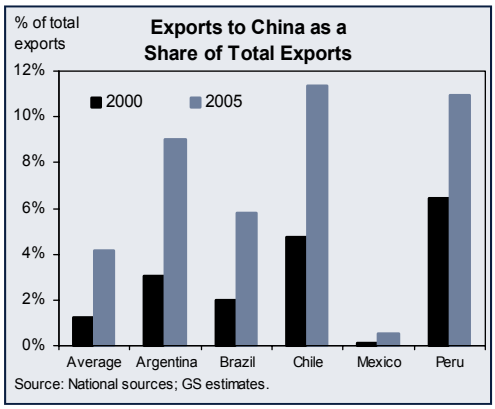
- The growing penetration of Chinese imports is likely to generate intra-regional trade dislocations (trade diversion), particularly among the Mercosur countries. This implies that local firms would switch to cheaper Chinese manufacturing products for necessary inputs and consumer goods, thus reducing intra-regional trade flows. Cheaper imports typically increase the welfare of local consumers as import penetration rises; this has already occurred on a massive scale in Mexico. However, policy makers in Latin America should strive to make markets more flexible by speeding up much-needed labour, tax, social security, energy and other productivity-enhancing reforms that could contribute to close the current large China-Latin American unit labour cost gap. With these reforms, Latin American economies would be in a better position to compete globally in manufactured products, thus mitigating the trade balance and employment effects of competition with low-cost suppliers.

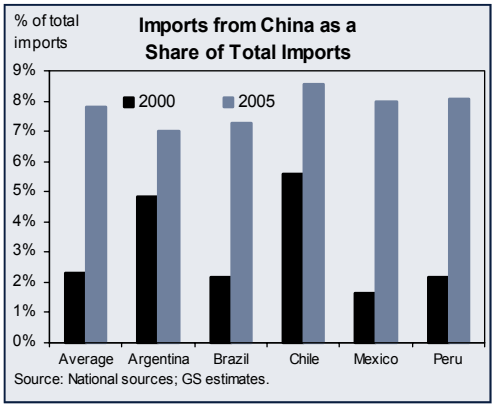
- Policy makers in Latin America should devise policies to boost the value-added content of the region's exports, rather than specialising solely in the export of raw materials. In particular, we believe that FDI flows oriented largely towards the extraction of raw materials make only a limited contribution to bolstering technological progress in the region and diversifying the export book of these countries towards higher value-added manufacturing products.

The Evolving Latin-Chinese Trade Relationship

Over the last five years, trade flows between China and Latin America have increased rapidly. That said, China and Latin America are only in the initial phase of mutual discovery in terms of direct trade and financial relations. For example, in 2005 less than 3% of Chinese imports originated from Latin America, and only about 4% of Latin exports went to China. Chinese FDI in the region has been insignificant to date.

China has had greater success with import penetration in Latin markets, and is now the source of 8% of all Latin imports—particularly in Mexico, where Chinese imports have increased by over 500% since 2000 and are now twice as large as Mexico's overall trade deficit. In fact, the region's commercial deficit with China grew from US$2.9bn in 2000 to a projected US$10.6bn in 2005, with Mexico alone witnessing a deterioration in its bilateral trade balance with China from US$2.7bn in 2000 to an estimated US$16.6bn in 2005.





The impact of China's rapidly increasing trade flows is heterogeneous. Commodity and raw-material exporters, such as Argentina, Brazil and Chile, benefit from strong trade complementarities with China. In contrast, textile and garment industry exporters such as Mexico, Central America and the Caribbean are suffering from direct competition with China. Peru and Colombia are arguably in a position both to benefit and to suffer, given that they share characteristics of both groups.

However, we would caution that the dichotomy between winners and losers is merely a short-term characterisation of the recent trade dynamics. If the region does not find a way to boost productivity, it risks facing a sustained barrage of imports from China, which would displace of local producers. Without reforms, in the long run even the main regional commodity exporters (short-term winners) could stand to lose from the emergence of China as a formidable competitor across a whole range of non-commodity industrial and commercial sectors.

Commodity and Raw Materials Exporters Gain …

The region's commodity and raw material exporters benefit in three ways. First, China's growing demand is increasing export volumes. Second, China's positive impact on global prices is increasing the unit value of these exports, whether they go to China or to a third market. And third, the higher US Dollar proceeds stemming from growing exports of commodities and raw materials is increasing the profitability of the sector, generating new investments and expanding export capacity.

In turn, these benefits are boosting the relevant Latin economies through improving trade and current account balances, higher fiscal revenues and a significant external sector contribution to growth. Going forward, the noteworthy expansion of the tradable sector of these economies should also require smaller relative movements in exchange rates and domestic interest rates to rebalance the external sector in the presence of adverse external shocks.

In fairness, despite the growing presence of China, the reality is that the bulk of these exports are of products with low elasticity to income, whose prices should therefore tend to fall in real terms as the world becomes richer. Therefore, we would caution that even the apparent winners in Latin America might have to give back part of today's windfall due to the transitory nature of part of the current high prices.

… But Low Value-Added Manufacturing Suffers

The textile/garment and lower-value-added manufacturing exporters suffer on three counts. First, they are losing market share to China in third markets, particularly in the US. Second, China's low-cost presence as a major supplier in the same range of products is reducing global prices for goods such as textiles and low-value-added electronics. And third, these countries for the most part have very little to offer that could be exported to China.

Mexico is a prime example. Its bilateral trade balance deteriorated from a deficit of US$2.7bn in 2000 to close to US$17bn in 2005. Mexico's exports to the US are undermined by Chinese competition in machinery, transport equipment, computers, telecommunications equipment and other manufactured goods. In fact, Mexico is not only losing market share to China in some export products, but is also exporting at lower unit values, which magnifies the first

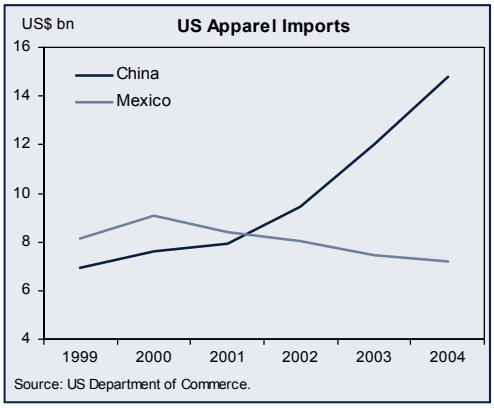
effect. Finally, although Mexico has increased metal exports to China, Mexico's total exports to China are extremely small relative to total exports, and thus do not offset growing trade losses in third markets and vigorous import penetration of Chinese goods in Mexican markets.

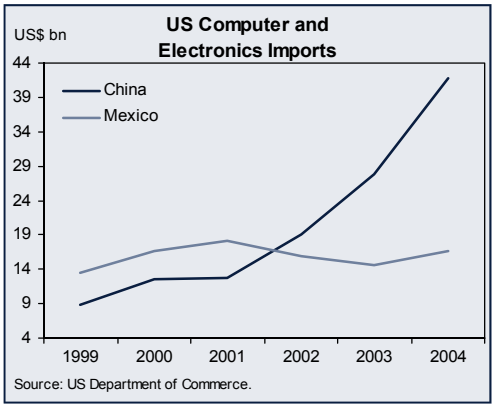
The potentially negative impact of China is also particularly noteworthy in Central America and the Caribbean. On average, these countries ship over 80% of their exports to the US—of which 55% are concentrated in apparel and accessories. Countries such as El Salvador and Honduras are particularly vulnerable due to their almost exclusive dependence on this sector. In 2003, China surpassed this group of Central American and Caribbean countries in terms of US Dollar value of exports of apparel and accessories to the US.

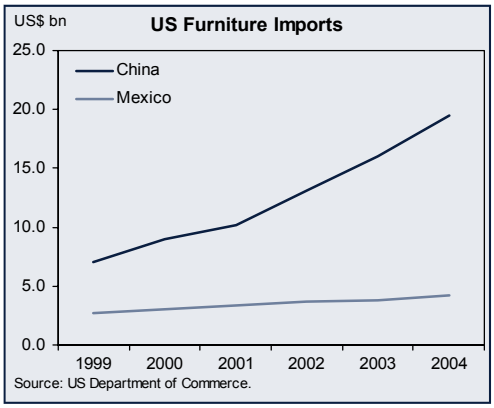
China's import penetration and gains in market share relative to these countries is all the more impressive in light of the significantly higher tariff barriers that it faces relative to the trade preferences afforded Mexico (NAFTA) and Central America/Caribbean (the Caribbean Basin Initiative or the recently approved, but yet to be implemented, CAFTA-DR). The elimination of the quotas placed on China's exports of these goods to the United States under the WTO Agreement on Clothing and Textiles has further undermined Latin American competitiveness.

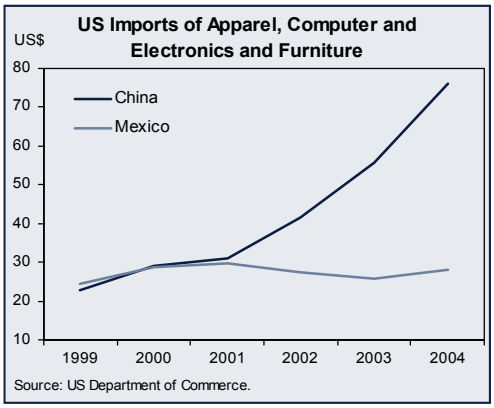
Going Forward, Larger Trade Deficits and Modest Increases in Investment

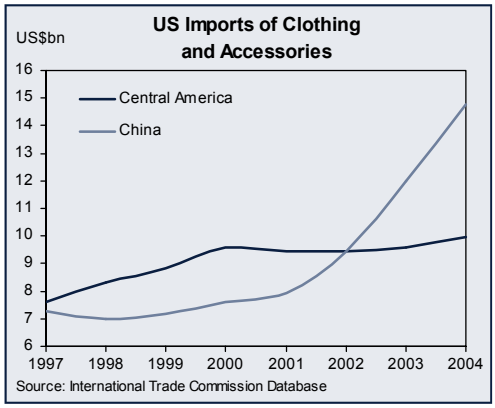
With respect to trade in goods, the Chinese mission resulted in several steps that should help deepen flows between China and Latin America in coming years. China opened its market to key Brazilian and Argentine exports, China and Chile agreed to initiate negotiations towards a

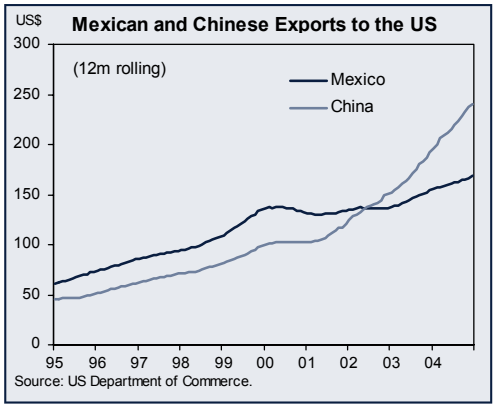












bilateral free trade agreement (which was concluded at the end of 2005), and four Latin economies (Argentina, Brazil, Chile and Peru) agreed to recognise China as a 'market economy'. The latter means removing quantitative restrictions on Chinese imports, which effectively opens up these markets significantly for China.

Easier access to China's booming domestic market is particularly important for some of the main regional exports, including agricultural products, foodstuffs, raw materials and some manufactured products. To date, only two products (soy and copper) have gained meaningful penetration in the Chinese market, which suggests substantial upside potential. Accordingly, we estimate that LatAm exports to China could double by 2010.

But this comes with an important offset. Recognition of China as a 'market economy' would be particularly important for increasing Chinese import penetration in Latin America. Latin countries will henceforth find it harder to raise non-tariff barriers—such as anti-dumping measures—on Chinese products. Chinese import penetration in Latin America has already quadrupled since 2000, and should deepen even further in coming years.

In addition, we forecast that the volume of trade between Latin America and China would rise conservatively by some 75% over the next five years to over US$80bn. This means increasing the degree of trade openness of the region and lowering the elasticity of the real exchange rate to external financial shocks, which is particularly important in light of the frequency of such shocks and the size of external liabilities in Latin America.

With respect to investment flows, the 2004 Chinese official visit was rich in announcements. Chinese companies reportedly would invest as much as US$30bn in Brazil and Argentina over the next 10 years. This is particularly noteworthy in light of the marked absence of such flows from China in recent years. Evidence to date is that for practical purposes such investments have been negligible.

We see an increase in these flows as inevitable, given the trade complementarities between the two regions. Latin America faces a growing need to expand its current infrastructure to service rising demand for its exports, since bottlenecks are already capping export growth potential. Furthermore, Latin America lacks the requisite capital to finance such improvements and will need to rely on foreign savings. It thus makes sense that China would be a critical source for such investments.

Total Latin American Exports by Country

US$bn	1995	2000	2003	2004	2005
TOTAL	**168.8**	**273.8**	**297.8**	**363.7**	**428.4**
Argentina	21.2	26.4	29.4	34.6	40.0
Brazil	46.5	55.1	73.1	96.5	118.3
Chile	16.0	19.2	21.5	32.0	39.4
Mexico	79.5	166.1	164.8	188.0	213.7
Peru	5.6	7.0	9.1	12.6	17.0

Source: National sources and Goldman Sachs

Latin American Exports to China

US$bn	1995	2000	2003	2005E	2010F
TOTAL	**2.3**	**3.4**	**10.5**	**17.9**	**33.5**
Argentina	0.3	0.8	2.4	3.6	5.7
Brazil	1.2	1.1	4.5	6.8	13.5
Chile	0.4	0.9	1.9	4.5	9.2
Mexico	0.0	0.2	1.0	1.1	1.8
Peru	0.4	0.4	0.7	1.9	3.3

Source: National sources and Goldman Sachs

Latin American Imports from China

US$bn	1995	2000	2003	2005E	2010F
TOTAL	**3.0**	**6.4**	**13.8**	**28.5**	**49.7**
Argentina	0.6	1.2	0.7	1.9	3.4
Brazil	1.0	1.2	2.1	5.4	12.8
Chile	0.7	1.0	1.3	2.6	4.3
Mexico	0.5	2.9	9.4	17.7	27.7
Peru	0.1	0.2	0.3	1.0	1.6

Source: National sources and Goldman Sachs

Latin American Trade Balance with China

US$bn	1995	2000	2003	2005E	2010F
TOTAL	**-0.6**	**-2.9**	**-3.4**	**-10.6**	**-16.3**
Argentina	-0.3	-0.4	1.7	1.7	2.4
Brazil	0.2	-0.1	2.4	1.5	0.6
Chile	-0.3	0.0	0.6	1.9	4.9
Mexico	-0.5	-2.7	-8.4	-16.6	-25.9
Peru	0.3	0.3	0.4	0.9	1.7

Source: National sources; GS estimates.

However, we are sceptical that FDI will reach the levels announced by the Chinese delegation, largely because of the vagueness of the announcements and the weak track record to date of FDI of Chinese origin. For example, the US$20bn in promised Chinese investments in Argentina refer to projects that would be 'subject to further study before materialising', and may have Chinese participation via debt as opposed to equity-financing flows. In the case of Brazil, the government announced FDI plans worth US$10bn, most of which would be in the infrastructure, mining and agricultural areas. While we believe that FDI inflows will rise, we doubt they will reach even US$1bn a year. In all, we expect total cumulative FDI inflows from China to Latin America to amount to at most US$10bn by 2010, or about one-third of the headline figures. The real amount is likely to be only a fraction of our estimate.

Policy Recommendations for Latin America

We think the policy implications of this dynamic for Latin America and the international community are clear. First, Latin governments need to invest this initial trade windfall from China responsibly and make a genuine effort to implement needed reforms to reduce the competitiveness gap with China. Critical prices, such as wages, must be allowed to adjust to restore competitiveness. Latin America's high non-wage labour benefits and taxes increase unit labour costs, outstripping productivity gains and reducing profitability. High and distortionary tax burdens, high cost of capital, and high effective rate of protection all encourage informality and discourage the adoption of technologies aimed at bolstering competitiveness and productivity.

Latin American Exports to China

US$bn	2003	2005E	2010F
TOTAL	**10.5**	**17.9**	**33.5**
Argentina	2.4	3.6	5.7
of which soy products	2.0	2.7	4.0
Brazil	4.5	6.8	13.5
of which soy products	1.6	1.9	4.8
of which iron products	1.9	2.1	2.5
Chile	1.9	4.5	9.2
of which copper produ	1.3	3.1	6.4
Mexico	1.0	1.1	1.8
Peru	0.7	1.9	3.3

Source: National sources; GS estimates.

Second, Latin America's resounding comparative advantage in agriculture raises the future stakes for trade liberalisation,

Chinese FDI in Latin America (as of 2004)

US$mn	Stock	Recent flows	Recent annoucements
TOTAL	**286**	**19**	**29,700**
Argentina	0	0	19,700
Brazil	80	19	10,000
Chile	84	0	0
Mexico	0	0	0
Peru	122	0	0

Source: National Sources; press reports.

which would allow greater access for primary goods in industrialised markets (through the removal of trade barriers and agricultural subsidies in developed countries). In this context, we are discouraged by the inability of WTO members to agree on agricultural issues and by the dimming prospects for the Free Trade Area of the Americas initiative. Progress to date on the trade negotiations front have been limited almost exclusively to bilateral trade arrangements between the US and some Central American and Andean countries. The problem is that from the region's perspective, these arrangements are known to lead to significant trade diversion and are thus welfare-reducing in the long run.

Policy Recommendations for Mexico

In the absence of productivity-enhancing reforms, Mexico will require a significant real exchange rate depreciation to restore external and internal balances. To achieve only a 'moderate' depreciation, Mexico should undertake deep structural reforms to increase competition and productivity. We believe that the five-pronged reform programme described below would mitigate the long-term effects of the trade shock on growth, inflation and employment.

- **Political reform**. The multi-party system in which the governing party has no majority in Congress, or among state governors, makes it very difficult for the government to implement economic reforms at the speed required for Mexico to regain competitiveness and bolster productivity.

- **Energy sector reform**. Mexico is undergoing a permanent real trade shock. Drawing down its wealth—the substantial oil and gas reserves in the Gulf of Mexico—would smooth its effects on growth and consumption. This strategy would boost FDI inflows and increase energy exports over the next ten years, giving the government time and resources to put in place the needed structural reforms, and allowing the private sector to reorient its industry toward higher-value-added products, so as to reduce direct competition with Asian exporters.

- **Tax reform**. Without a broader tax base, the government will not have the fiscal resources to invest in physical infrastructure (roads, ports, airports, water and sanitation) and human capital (better education and health). Both are crucial to increase competitiveness and productivity. In addition, without an increase in tax revenue, the government will not be able to maintain a balanced budget and at the same time reduce the tax burden on the state oil company.

- **Labour reform**. Reform should be aimed at reducing high non-wage labour costs (including pecuniary and non-pecuniary labour benefits) and increasing flexibility on hiring and firing. Together, these steps would reduce the high costs of labour mobility. Mexico's labour legislation was crafted for a more centralised economy, where the

China's Trade Shock For Mexico Is Large

Thanks to the adoption of free-market policies and membership of the North American Free Trade Agreement (NAFTA), Mexico's exports increased rapidly during the 1990s. By 2000, Mexico had almost tripled its share of total world trade, reaching a market share of 2.6% and becoming the second-largest trade partner of the US, after Canada. However, as of 2001, Mexico's export performance lost some impetus. Its share of total world trade declined to 2.0%, its share in the US market also declined, and it lost, to China, its former position as the US' second-largest trading partner.

China's rise as a global export powerhouse has had a strong negative impact on Mexico. The two countries compete directly in the same segment of the international trade market: labour-intensive manufacturing products. Lower labour costs and increasing labour productivity have given China a competitive edge over Mexico, which explains why China has gained a larger share in the US market at the expense of Mexico in recent years.

A recent study by the Bank of Mexico (Banxico) shows that in all segments of the US market where Mexico has lost market share, China's share has increased. This has been particularly important in the markets for video-cameras, computers, TV sets, computer parts and clothing. Banxico estimated that, had Mexico's share in the US market remained constant, in 2005 its exports would have been US$27bn, or 13%, higher than they were. In turn, real GDP growth would have been 1 percentage point higher (4% instead of 3%) in 2005. Naturally, had growth been stronger, the Mexican economy would have also created more jobs than it did.

In sum, the size of China's trade shock for Mexico is already large and its impact on growth is not negligible. Mexico's relative export growth underperformance cannot be attributed only to Chinese competition. As Banxico's study showed, Mexico has also lost share in the US market to countries other than China. However, the biggest loss has been against China, and the 'Chinese shock' is unlikely to subside any time soon. On the contrary, it is likely to become more significant over time. In light of this, we reiterate what has long been one of our key policy recommendations: to overcome the 'Chinese shock' and boost external competitiveness, Mexico should seek efficiency gains by resuming its stalled economic reform agenda. This includes passing fiscal reforms, increasing the efficiency of the public-services sector (e.g., electricity, transportation, communications) and making the labour market more flexible.

government distributed oil and the monopoly rents of state enterprises. This legislation is no longer suitable for a market economy trying to compete in the global arena. The size of current labour benefits and costly obstacles to rapid labour mobility in Mexico raise unit labour costs, displacing Mexican firms from competitive global markets.

- **Price system reform**. Policy makers should improve the effectiveness of the price system by seeking the most efficient resource allocation through deregulation; reducing barriers to entry and exit; and developing policies to limit the adverse effects of monopolies on competitiveness (as a result of higher service tariffs or lower quality services). In addition, reform of the judiciary and law enforcement systems would improve the enforcement of contracts and property rights.

Conclusions

We believe that deepening the trade and financial relations between Latin America and China could be a net positive for South American countries through higher trade volumes, improved terms of trade and, possibly, some FDI inflows from China. In all, this should be positive for the trade balance and for growth in South American economies presenting trade complementarities with China.

However, we believe that stronger trade competition with China will continue to be a net negative for Mexico and some Central American countries, because cheaper Chinese manufacturing products are likely to continue to displace locally-produced goods, particularly in US markets. This impact would be all the more powerful as China is granted increasing access to the US market in sensitive export categories.

We believe that the recent announcements on enhanced trade and financial flows between Latin America and China do not constitute a 'pot of gold' for the region. They represent an opportunity. Unless Latin America does its homework, however, they could also present a serious problem for the region's competitiveness. Therefore, the net effects for the balance of payments and regional exchange rates should not be overestimated. Similarly, the trade effects could pose a significant risk to long-term real exchange rates in Central and North American countries.

These developments suggest that policy makers in the region should not perceive the deepening of trade relations with China as a substitute for faster progress on structural reforms. On the contrary, we believe that regional political leaders would be well advised to take advantage of some of the positive aspects of this enhanced trade relationship to speed up reforms, particularly those aimed at bolstering competitiveness and labour productivity, which will be most important for those countries directly competing with China in the US.

Commmodities Consumption in Selected Countries

% of world consumption	China	US	Japan	India
Wheat	17.2	5.5	1.0	11.8
Soybeans	16.0	24.7	2.1	2.7
Cotton	34.1	5.8	0.7	13.6
Copper	19.8	14.9	7.8	2.0
Aluminum	19.0	20.3	7.4	2.8
Steel	26.5	11.9	8.0	-
Petroleum	7.7	25.2	6.6	2.8

Source: IMF, WEO September 2004.

Another important policy implication is that trade relations with China should not be seen as a substitute for far-reaching trade liberalisation agreements between Latin America and the US and the European Union. In all, we believe that the gains from trade with China are relatively small when compared with the gains that Latin America would make by striking trade agreements with much larger markets in the US and Europe, particularly because they would likely allow the region to export higher-value-added manufacturing products, instead of specialising increasingly in the supply of low-value-added commodities.

Paulo Leme, Alberto Ramos and Pablo Morra
December 2004, updated February 2006

CHAPTER THIRTEEN

China and Asia's Future Monetary System

September 2005

China and Asia's Future Monetary System

Beijing's decision in mid-2005 to allow greater currency flexibility is likely to be the beginning of a series of shifts in Chinese and other Asian FX policies over the next decade. By 2015, China will have moved its FX management policy closer to Japan's, so that both countries will be pursuing managed floats. Most other Asian countries will pursue some sort of trade-weighted basket management in which the Chinese Yuan, Japanese Yen and US Dollar are major components. Korea and India are likely to be closer to the managed floats seen in China and Japan.

The key to the emergence of this structure will be the continued rise of the Chinese economy and China's prominence as a trading partner within Asia. As we have shown in our well-known studies of the BRICs economies, China's GDP in current US Dollars could be as large as Japan's soon after 2015. If this materialises, and domestic demand accounts for an increasing share of Chinese GDP growth, Chinese FX policy will resemble that of Japan's management of the Yen today. If China's economy fails to materialise in this manner, then the Yuan will remain even more heavily managed and will not be quite as critical to the other Asian economies.

An Asian monetary union is unlikely to develop in the next 15-20 years, despite possible efforts by some to emulate Europe's achievements in this area. In view of the potential for rapid and different speeds of development for both China and India, and the possible relative economic decline of Japan, the scope for surprise over the next decade is large. Indeed, while the most likely outcome in 2015 is managed floats for the Japanese Yen, Chinese Yuan, Korean Won and Indian Rupee, and trade-weighted basket management systems elsewhere, there is likely to be considerable volatility along the way.

Determinants of an Optimal Currency Regime

In 2004, Rogoff et al ('Evolution and Performance of Exchange Rate Regimes', *IMF Occasional Paper* 229) presented detailed findings about factors that determine an optimal currency area. They cite 'the degree of openness, stage of economic development, size of the economy, inflation differentials, capital mobility, geographical trade concentration and degree of international financial integration'. They also cite research highlighting other factors that might be relevant for the actual (as opposed to optimal) currency regime. A long list of economic factors is cited, along with some key political factors, such as political stability and central bank independence.

Rogoff et al cite three variables as especially critical: the degree of openness, the degree of geographic trade concentration, and the stage of economic development.

For open economies, the optimal regime seems to be to manage the nominal or real exchange rate actively. This would appear to be the optimal regime for many Asian currencies today, including the Yuan but excluding the Yen. Many Asian economies exhibit a very large degree of openness. China currently has a very large trade sector, unlike Japan, the US or the Eurozone. This suggests, all else being equal, that China is justified in trying to manage the value of its currency. As China develops further, and, **if** domestic demand, especially private sector demand, grows as a share of GDP, China's FX policy would need to shift. India does not have a very open economy, suggesting that an overly rigid an FX policy would be inappropriate.

A second critical variable is the degree of geographic trade concentration. Many European participants in EMU conduct most of their trade with other EMU members. It is easy to argue that EMU is the optimal currency area choice for many, especially for the early joiners.

In Asia, the geographical concentration of trade varies. Japan, which is less open to trade than the rest of the region, conducts at least half of its own trade with Asia. Japan's trade with China is rising and will soon be higher than its trade with the US. This suggests that although Japan should pursue a 'dirty float', movements relative to the Yuan will become increasingly important.

Pegging directly to the Yuan may become an increasingly attractive option for many other Asian countries, namely those with open economies and with rising trade share with China.

China's current situation is somewhat different. China is very open to trade, but its trade, especially exports, is balanced among the US, the Eurozone and Japan. Its recent shift to managing the Yuan with reference to a basket of currencies makes sense for now, as we discuss below. As China develops and its citizens' net wealth grows, trade may well become a smaller share of GDP. At a later stage, therefore, it will become less obvious that China needs to actively manage the value of its currency as closely as it does today.

The third key variable is, broadly speaking, the stage of a country's economic and financial development. The more developed the financial markets, the more likely that some form of floating exchange rate would offer the best advantages. Similarly, the more developed, sophisticated and independent the central bank, the more likely a floating exchange rate would be appropriate. In this regard, successful Inflation Targeting central banks, whether developed or developing, happen to be in those countries whose currencies tend to float most freely. Australia, Brazil and the UK are three very different economies that share these characteristics. Some central banks claim that they have made a major shift to Inflation Targeting, but often still seem somewhat preoccupied with currency stability and values. For countries where national institutions lack lengthy and stable histories, linking the exchange rate to a foreign currency arguably provides an important anchor. Formal Inflation Targeting would also be an alternative. It may be appropriate for both China and India to introduce Inflation Targeting as they develop.

Openness: Share of Trade as % of GDP

Country/Region	2004 trade as % GDP
Japan	24
China	75
India	24
ASEAN	115
Malaysia	222
Thailand	135
Philippines	100
Indonesia	58
NIE	146
Hong Kong	371
Singapore	248
Taiwan	128
Korea	84
NJA	107
Euroland	37
US	25
Australia	40
New Zealand	70

Source: CEIC; national statistics; GS estimates.

European Countries' Share of Trade with Other EMU Members

Country	Trade with EMU12 as % total trade, 2004
Austria	60
Belgium	63
Finland	37
France	55
Germany	46
Greece	48
Ireland	37
Italy	48
Netherlands	54
Portugal	69
Spain	58

Source: Eurostat; GS Economics.

Changing Asian Trade Patterns

For Asia as a whole, like the rest of the world, the past decade has seen a significant rise in the role of trade with China. Japan exported nearly 20% of its total exports to China and Hong Kong in 2004, more than double the share of the early 1990s. This was primarily at the expense of the US, which for now remains Japan's biggest export market (but barely). ASEAN countries show a similar pattern: China's share in ASEAN exports has doubled, although this has come more at the expense of Japan than of the US.

Of course, for China, the US has seen a large increase in their share of total exports, now more than 20%. For India, exports to China are also rising coincident with a declining share to Japan. China, as of yet, is less important for Indian exports than many others.

Across non-Japan Asia overall, export shares of both Japan and the US have declined modestly, while the share of China and the rest of Asia have risen. Similar broad trends can be observed through import shares, with China becoming more important for all. Japanese imports from China have risen sharply and overtaken the US as a source of imports. Total trade with China, exports and imports, is now considerably higher than with the US.

For ASEAN countries, imports from China and Hong Kong have more than doubled and imports from the rest of non-Japan Asia have risen sharply. Declining import shares from the EU and Japan have been the primary offset.

In contrast to exports, Chinese imports from the US have become less important. Imports from Japan and the rest of Asia have risen sharply. Taken as a whole, total NJA imports from China and the rest of Asia have risen at the expense of declining imports from each of Japan, the EU and the US.

Combining both import and export data yields a picture of rising trade within Asia (greatly influenced by China) and declining trade with other regions. In addition to the high share that trade contributes to overall GDP performance, this suggests that exchange rate stability against other Asian countries may become more important than exchange rate stability against the Dollar and the Euro.

If Asian trade patterns develop similarly over the next decade, then a reasonably straightforward conclusion could probably be made about the likely exchange rate system that might suit Asia.

However, prospects for rapid growth and development in China and India, and the fact that China should see domestic private-sector demand increase as a share of GDP, suggest that the future needs of any Asian exchange rate system may be different from today's. The growing importance of both China and India suggests that the Yuan and the Indian Rupee will become increasingly important factors in FX policy in many Asian countries. If trade declines as a share of GDP for China and remains as low as it currently is for India, then less focus on exchange rate stability and greater scope for flexibility, especially relative to the Dollar and Euro, would seem appropriate for these countries. Since Japan's economy is likely to remain large, three large Asian economies, China, India and Japan, will be managing quite 'flexible' exchange rate policies, while most others will be trying to manage some form of stability relative to some of, or all of, the Yuan, Rupee and Yen. Korea and its currency will probably play a role closer to that of China, India and Japan, albeit a less important one.

Asian Monetary Cooperation and Possible Currency Regimes

Since the Asian currency crisis of 1997, the notion of Asian currency cooperation has garnered strength with a number of different initiatives. Some policy advisers are actively pursuing a goal of Asian monetary union. This is in part because, although many dispute the exact causes of the Asian crisis, there is broad agreement that unsuitable exchange rate policies by a number of Asian countries probably played a role. Senior Japanese and Chinese officials have played intensified roles since the Asian crisis, with each of them offering a variety of initiatives.

- In late 1997, Sakakibara, then the Vice Minister of Finance for International Affairs of the MoF, proposed the establishment of an Asian Monetary Fund on the basis that many in the region felt that the IMF had been unhelpful in the crisis. This initiative received little support from international bodies such as the IMF, or from other important countries, including the US. China was also reported to be lukewarm.

- In 2000, Chinese policymakers proposed the Chiang Mai Initiative (CMI), designed around a set of bilateral swap arrangements between ASEAN countries and China, Korea and Japan, with the latter three playing a crucial role. This initiative received wider backing from within the region, and a number of bilateral swap deals have been agreed since. These are designed to strengthen Asia's regional self-help mechanisms in the event of future periods of exchange rate pressures. Perhaps most importantly, the CMI initiative and the commitment of China, Korea and Japan to meet regularly provides an important basis for regular detailed discussions about economic and monetary co-operation, including the area of exchange rates.

- Separately, the creation of an Asian Bond Fund (ABF) was agreed in mid-2003, with the Japanese Finance Ministry an eager proponent once more. The ABF can perhaps be regarded as supplementary to the CMI. According to the MoF website, the ABF 'is designed to eliminate mismatches of currency and maturity in regional financing and to utilise the domestic savings in Asian countries for regional investment. Concrete outcomes have already been achieved, such as the issuance of ringgit-denominated bonds with a partial credit guarantee by the Japan Bank for International Cooperation and Nippon Export and Investment Insurance in Thailand last year. The Korean Primary Collateralised Bond Obligation, the so-called Pan-Asian Bond, was also formulated with a guarantee by the JBIC.'

Given the very high level of savings in many Asian countries, the creation of an Asian Bond Fund and broader related efforts to stimulate local Asian bond markets was, and still is, seen by many Asian policymakers as serving the need to reinvest excess savings locally. As can be observed with both the large growth in Asian FX reserves and evidence of ongoing Asian purchases of US and European bonds, the ABF is a 'work in progress', despite much discussion among Asian officials and policymakers.

Most of the Asian policy initiatives since 1997, with the possible exception of the CMI, are largely conceptual. As many observers do note, EMU was not created in a hurry either, and modest incremental steps may be the best way to achieve a more stable Asian monetary system in the future.

An Asian Currency Union?

In late 2002, several Japanese academics presented the case for the creation of a common Asian currency (the ACU). Mori et al (2002) argued that the creation of the ECU served the basis for fostering the development of European financial markets and argued that an ACU could perform the same function ahead of ultimate monetary union in Asia. The authors argue that such an ACU would be formed initially by a basket of Dollars, Yen and Euro, with the Yuan and other Asian currencies becoming components over time as their convertibility developed. To help maintain and develop momentum for the ultimate creation of ACU, Mori et al argue that Asian currencies should be managed against a basket of Euro, Yen and Dollars.

Many of the proposals for a move towards a common currency in Asia ignore some of the key dynamics we mentioned earlier with respect to an optimal currency area. In particular, the two key variables of degree of openness and the stage of development of financial markets and the economy seem to be partially overlooked. If our BRICs projections are considered, there could be grave risks from any specific plans to introduce a common currency in Asia.

Consider alternative paths for relative GDP growth in the region. At one extreme consider our BRICs projections. Under this scenario, by 2035, both China and India would be larger than Japan and considerably larger than others in Asia; China would be nearly as large as the US. Trade would still be a relatively small share of the overall economy in both Japan and India, meaning that flexible FX policies would suit them best. If China develops as we expect, trade will also become a smaller share of GDP. For most other smaller Asian economies, managing their currencies around movements in the Yen, Yuan and Rupee (and possibly Won) would be important, along with movements in the Dollar and Euro.

At the other extreme, if neither China nor India fulfils its BRICs potential, today's relative GDP sizes might persist. In this type of environment, more strongly managed FX regimes might remain appropriate for China, and perhaps even for India, despite its relatively low share of trade in GDP.

Both extremes are possible, but they imply sharply different paths for Asia's economic structure. Given the high degree of divergence, a confident pursuit of an Asian monetary union seems highly ambitious and possibly inappropriate.

Moreover, in addition to the obvious economic structural differences with Europe, there are probably major political dilemmas to overcome. Most discussions about the optimality of EMU in Europe would disagree on many points, but common ground would be generally found on the size and nature of some of the key economies, their similar stage of development and their desire for political cooperation. EMU, at least for a core group, had many justifiable grounds.

In Asia, in addition to the vastly different stages of economic development, there are large political uncertainties. Complex disputes such as North and South Korea, China and Taiwan, and India and Pakistan are all unlikely to be resolved in the near future. The risk of serious political turmoil is not insignificant.

A Viable Plan for 2015

Faced with this complex outlook, it is possible to conceive of a viable medium-term monetary structure for Asia. In essence there would be three strands:

- FX policies that supplement some form of Inflation Targeting as the core anchor to monetary policy in the Big 4 of China, Korea, India and Japan;
- Managed floats for the currencies of the Big 4; and
- Managed trade-weighted currency baskets for most other Asian countries, with the value of the Yuan, Rupee and Yen as key influences on the FX management policies of these countries, along with the value of the Dollar and the Euro, and possibly the Won.

We have previously argued that Inflation Targeting (IT) has been key for the successful operation of modern monetary policy in both developed and developing countries. The attractions of Inflation Targeting are obvious for Asian countries (both developed and developing) where external trade is a relatively small share of GDP. Successful IT can bring large benefits beyond the obvious one of low inflation. Consistency, clarity of purpose, openness and integrity are just a few. For some Asian economies with complex histories in these areas—including all of the Big 4—credible Inflation Targeting could be very powerful.

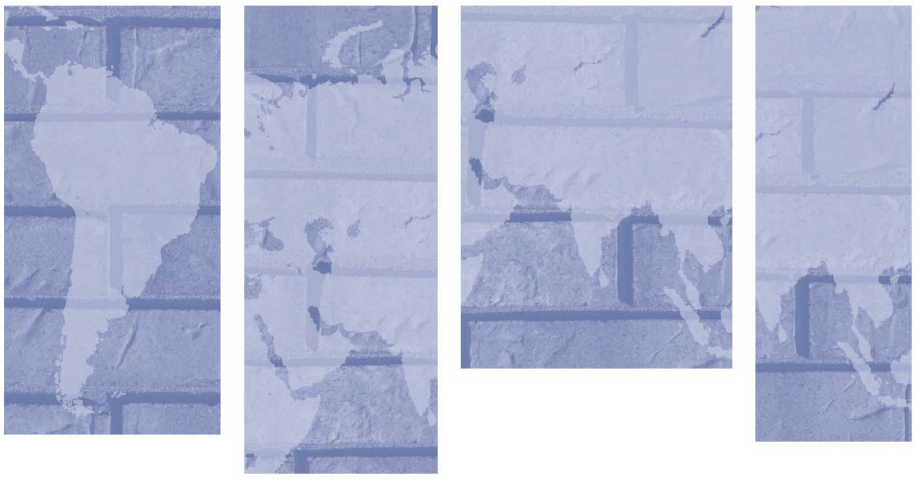
Many of the countries that have chosen to adopt IT as a core principle of monetary policy (with the exception of the US) are also typically those that allow the most flexibility of their currencies. Many Asian countries should adopt similar behaviour. The 'managed' float policy of the Yen since the mid-1980s may be more of a model for policy towards the Won, Rupee and especially Yuan in the future.

For most other Asian countries, as we showed earlier, trade is generally a large contribution to their overall GDP. In this context, more heavily managed exchange rates are a sensible policy prescription. As we also showed, their trade relationships, while differing, are greatly centred on China, Japan and the US. Consequently, some mechanism of active trade-weighted currency management, with different weights for different countries, makes sense today and is likely to remain the case over the next decade

Jim O'Neill
September 2005

SECTION THREE

Beyond the BRICs



CHAPTER FOURTEEN

Africa's Long Road Ahead: Laying Down the Potential

March 2005

AFRICA'S LONG ROAD AHEAD: LAYING DOWN THE POTENTIAL

Africa has recently received increased attention because of an overall improvement in its macroeconomic performance, following many years of weak growth and increasing poverty. Other current positive news from the region includes the successful efforts, through the African Union, to resolve regional conflicts and a home-grown plan—the New Partnership for Africa's Development (NEPAD)—to boost economic growth and reduce poverty. However, the region still accounts for most of the world's poor. The unprecedented decline in absolute global poverty of the last 30 years has largely bypassed Africa. In 1970, 11% of the world's poor were in Africa and 76% in Asia. Thirty years later, Africa had 66% of the poor and Asia only 15%.

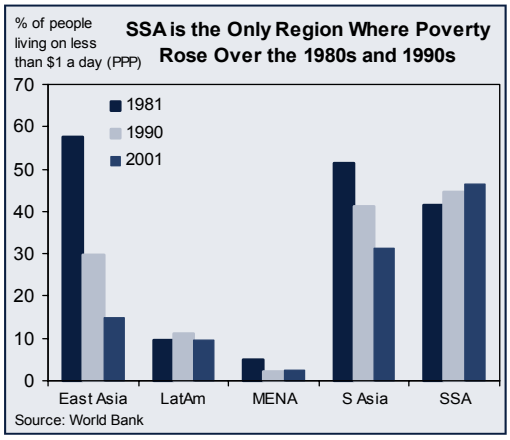
The adoption of the Millennium Development Goals (MDGs) in 2001 has increased the focus on Sub-Saharan Africa. These goals include specific targets for hunger, education and public health, and are to be backed by a doubling of aid flows. We are now one-third through the 15-year focus period for the MDGs. Asia seems to be doing well and moving towards achieving the MDGs, but Sub-Saharan Africa is lagging far behind. Another recent initiative directed at assisting the region is the Commission for Africa, whose aim is to encourage greater international support for the continent.

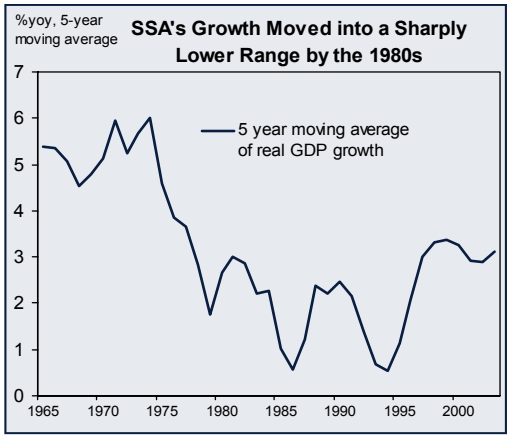
In this paper we employ a Cobb-Douglas production function (similar to the long-term model of growth we used in our analysis of the BRICs) to assess the outlook for Sub-Saharan African's potential growth and the region's contribution to the global economy. Acknowledging the inherent challenges in projecting long-term growth—particularly for Sub-Saharan Africa—we believe it is important to gauge the region's potential using a clear, flexible framework.

Sub-Saharan Africa's Stagnation

Robust growth in Sub-Saharan Africa (SSA) during the 1960s and early 1970s gave way to substantial deterioration in the 1980s and early 1990s. Since the late 1990s, growth in the region has recovered, but to rates that still lag those of the 1960s and early 1970s. The region's contribution to global GDP has remained broadly static at just over 1%.

The decline in living standards in the region is even more stark. Over the period 1975-1999, GDP per capita (in constant PPP terms) declined for 16 of the 31 countries for which there is comparable data; half of these saw income per capita fall by 20% or more. Even more worrying





than the level of GDP per capita is the drop-off in GDP per capita *growth* over the past two decades. Taking an average of income per capita growth from 1980-2002, SSA is the only region globally that experienced negative growth. Looking individually at countries worldwide that have experienced negative income per capita growth rates over this period, roughly 40% are in SSA. Half of its people live on less than US$1 a day.

Underlying the poor growth numbers have been low investment rates and weak productivity growth. Investment rates in the 1970s were as high as 26% of GDP, but declined to 17% in the 1990s; only in the last five years has there been some improvement. Similarly, total factor productivity contributed strongly to growth in the 1960s but declined in the subsequent 30 years.

Striking Macroeconomic Divergence Within the Region

However, the regional macroeconomic aggregates mask striking divergences within SSA. Examples of the macroeconomic differences across countries can be found in GDP growth rates, which have ranged from declines of over 4% per annum to increases of more than 6% per annum; in per capita GDP levels, which range from under US$200 to over US$3,000; in investment rates, which have in recent years ranged from over 30% of GDP in some countries to less than 10% in others; in inflation rates, which have ranged from less than 5% to over 100%; in the growth of total factor productivity; in fiscal balances; and in the levels of external debt.

Sub-Saharan African Countries Included in Our Projections

Country	Share of Regional Economy (%)
South Africa	38.7
Nigeria	11.3
Sudan	5.6
Ethiopia	4.0
Ghana	3.7
Uganda	3.0
Cameroon	2.7
Kenya	2.7
Angola	2.6
Zimbabwe	2.5
Cote d'Ivoire	2.0
Tanzania	1.8
Mozambique	1.7
Senegal	1.4
Botswana	1.2
Burkina Faso	1.2
Madagascar	1.1
Mauritius	1.1
Namibia	1.0
Mali	0.9
Rwanda	0.9
Chad	0.8
Niger	0.8
Gabon	0.7
Zambia	0.7
Benin	0.6
Malawi	0.6
Togo	0.6
Burundi	0.4
Lesotho	0.4
Sierra Leone	0.4
Swaziland	0.4
Central African Republic	0.3
Eritrea	0.3
Cape Verde	0.2
The Gambia	0.2
Guinea-Bissau	0.1
Mauritania	0.0
Equatorial Guinea	(--)

The best consistent performers in the region in terms of GDP growth have been Botswana and Mauritius, which generated growth rates comparable to some of the star performers in Asia during the 1980s and 1990s. Botswana grew at 6% per annum in the 1980s—one of the fastest growth rates in the world—before slowing in the 1990s. For the decade 1992-2002, Botswana and Mauritius averaged 4.8% and 5.3% growth, respectively. Other good performers include Ghana and Uganda. In the middle tier, we find, for example, South Africa and Nigeria, whose GDP growth rates averaged 2.3% and 2.4% respectively from 1992-2002. Nigerian GDP growth over this period did not keep up with the country's 3% population growth. At the other end of the spectrum, GDP in the Democratic Republic of Congo (formerly Zaire) and Burundi fell by 4.2% and 1.3% per annum over the same period.

A Long List of Difficulties

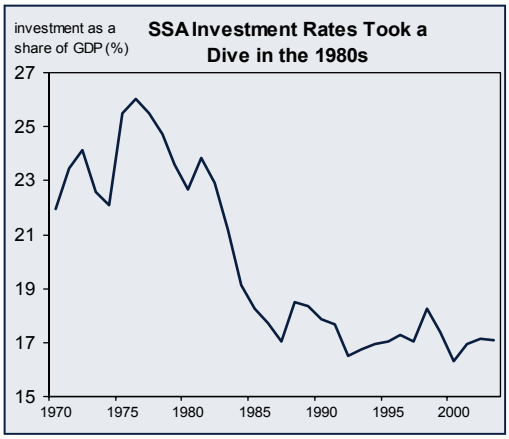
Interestingly, some of the long-term growth analyses of Sub-Saharan Africa done in the 1960s put potential growth in the region above East Asia's, but clearly the potential was never met. The reasons are numerous: colonialism, political instability and conflict, disease, droughts and other natural disasters, sharp movements in the terms of trade, and incomplete domestic reforms, all leading to major macroeconomic imbalances. This has limited the ability to invest in infrastructure and human capital, which has left the region dependent on the extraction and export of mineral and agricultural commodities. What FDI the region attracted has been concentrated among only a few countries and generally only in the resource sector—energy and metals. Other sectors have generally just been too unproductive to attract investment.

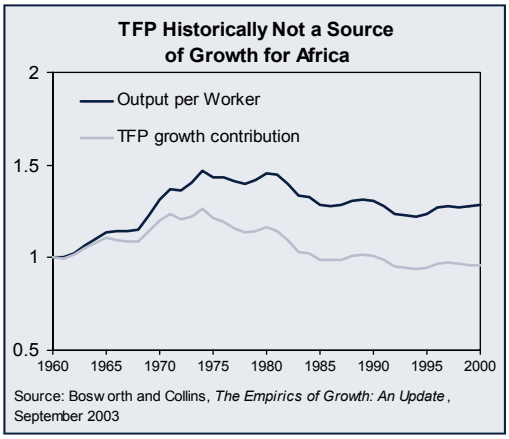
As with the divergences in macroeconomic performances mentioned above, there have also been large divergences in governance issues (such as the levels of political stability, the application of the rule of law, the quality of the regulatory environment, and the control of corruption) and in macroeconomic policies within the region. Free-market policies have not been widespread, with economies remaining closed and state intervention pervasive. The exceptions have been countries such as Botswana and Mauritius, where good governance coupled with generally orthodox economic policies has made these countries the best performers in the region.

Lessons from Growth and Development Models

Botswana and Mauritius show that Sub-Saharan African countries are able to grow at a rapid pace and generate high income per capita when the conditions are right. There are few grounds for the idea that the inherent structure of SSA economies make them unsuitable for the application of growth drivers that have worked in other settings. The growth drivers that have worked in other settings should also work in SSA. The global evidence is compelling—economic development calls for:

- **Political stability.** Peace and security are essential prerequisites for sustainable growth and development.
- **Macroeconomic stability.** Empirical research confirms that high inflation, large budget deficits, unsustainable debt burdens and distorted foreign exchange markets reduce growth.





- **A sound investment climate.** Clearly-defined property rights backed by an effective legal system, openness to trade, a robust and well-regulated financial sector and competitive private markets will encourage private and especially foreign investment.

- **Transparency in government.** Reliable and timely data on the monetary and fiscal position, including debt and the health of the banking system, is essential to minimise corruption and reassure potential investors.

- **Local ownership of the reform programme.** While conditional aid can help bring about appropriate reforms, it is critical for the recipient governments to believe in and implement the reforms themselves.

For many of the SSA countries we analyse, these conditions for growth have not been in place, making it difficult to realise a path for convergence with developed economies. This makes projecting long-term growth more difficult, and any projections are subject to a great deal of uncertainty. Nevertheless, it is still important to have a view on the potential of these economies, informed by a sensible framework, which is in turn based on clear assumptions.

Our Model of SSA Development

To build an operational and quantitative model of growth for SSA, we turn to some simple growth accounting. Higher GDP growth rates can stem from three sources:

- **Growth in employment.** This can come about through higher labour force participation as unemployment falls or female participation in the formal sector rises, or through longer-term demographic changes.

- **Growth in the capital stock.** New gross investment is required to offset depreciation of existing assets.

- **Technical progress,** or the growth in total factor productivity (TFP). This occurs in all economies but is typically easier for developing economies as they can catch up to richer economies by adopting existing technology.

Developing economies have the potential to post higher growth rates than the developed world because of two broad factors. First, developing economies have less capital (per worker) than developed economies, so the returns on capital are higher (perhaps partly associated with capital controls and greater institutional risk) and a given investment rate can result in higher growth in output. Second, the developing economies may be able to use technologies available in developed counties to 'catch up' with them. The extent to which higher returns on investment lead to higher levels of investment, and the speed with which that generates productivity 'catch-up' will be partly determined by the fundamental factors outlined above. Typically, as countries develop, these forces fade and growth rates tend to slow towards developed country levels.

To assess Sub-Saharan Africa's economic growth potential over the next few decades, we model each of the components of GDP growth: employment, capital stock and TFP for each of the countries in the region.

- To forecast employment growth, we use the US Census Bureau's demographic projections.

- To forecast capital stock growth, we make assumptions about the investment rate, the depreciation rate and capital's share of income.

- To forecast TFP growth, we assume that the larger the income gap between the economies of Sub-Saharan Africa and developed economies, the greater is the potential for catch-up and the stronger is TFP growth. We make assumptions about the speed of convergence for individual economies on the back of governance indicators (from the World Bank), education levels and other factors, based on the approach to development outlined in the section above.

- Finally, we use the projections for productivity growth to map out the path for real exchange rates.

A Look Back in Time: What Would Our Model Have Said in 1970?

To see how SSA could have grown since the early 1970s—and thus gauge the scope of the disappointment since then—we run our model using data from that period. In the early 1970s, the population growth rate was around 3% per annum. The investment rate in the region averaged approximately 23% of GDP. In the late 1960s and early 1970s the contribution of TFP to GDP growth was at its highest in ten years, growing at rates as high as 5%, up from an average of 2% in the 1960s. To project GDP growth forward from that time, we make the following assumptions:

- The investment rate remained at 23% of GDP from 1970 to 2003. This compares to an actual average of 20% (peaking at 26% in 1976 and falling as low as 16.4% in the early 1990s);

- The population grew at an average 3% per year, the actual rate over the period, peaking at 3.4% in the mid-1980s before declining to 2.2% by 2003; and

- TFP growth averaged the same as in the 1960s, 2% a year from 1970 to 2003, compared with actual negative growth.

The projected outcome is an average potential GDP growth rate of 6.0% compared with an actual 2.8% for the period 1970-2003, highlighting the disappointing actual growth performance relative to potential due to the difficulties in meeting the conditions for growth discussed earlier. For countries such as Botswana, where policy settings were growth-supportive, real growth outpaced what our models would have suggested. Botswana's real growth averaged 9.8% from 1970-2000, against our projections of 7.4%.

Three Fundamental Questions

The divergence between actual growth (2.8%) and the potential growth (6.0%) over the past 30 years is so large that it raises three fundamental questions:

First, is the model appropriate to measure potential growth for this region? The model's central driver is the notion of convergence, or catch-up, to more developed economies. Although SSA as a whole has failed in this regard, individual countries, such as Botswana and Mauritius, have not. The difference between those that failed and those that have had success is clearly visible in their policies. The former (by far a bigger collection of countries) did not implement growth-conducive policies, which hurt investment rates and TFP growth. There is no reasons why African countries cannot generate higher growth if the conditions are right.

Second, what is Sub-Saharan Africa's growth potential now? Third, what is the likelihood that growth-conducive policies will be implemented widely in order to help SSA meet its potential?

What Is Potential Growth Now?

To estimate a baseline potential growth path for the region going forward, we make the following assumptions:

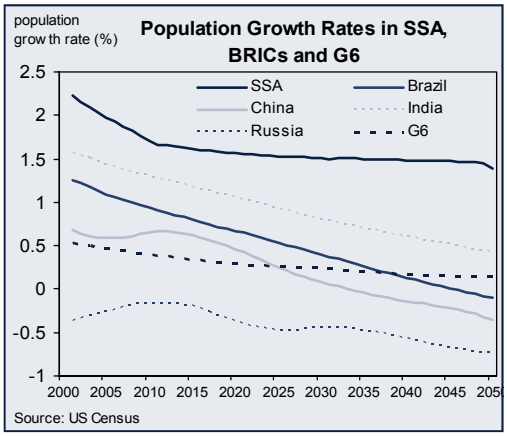
- We assume that the investment rate on aggregate improves over the next 10 years to 22% of GDP (from an average of 17% in recent years) and remains at this level for the rest of the period. This assumption is premised on the view that the very recent general improvement in the trend of investment rates continues. Also, unlike the projection from 1970, the region is now coming off a very low base on investment rates. For comparison, in the BRICs analysis we assumed that investment rates remained similar to recent history, with Brazil at 19%, India at 22%, Russia at 25% and China at 36%, until 2010 and then 30% thereafter.

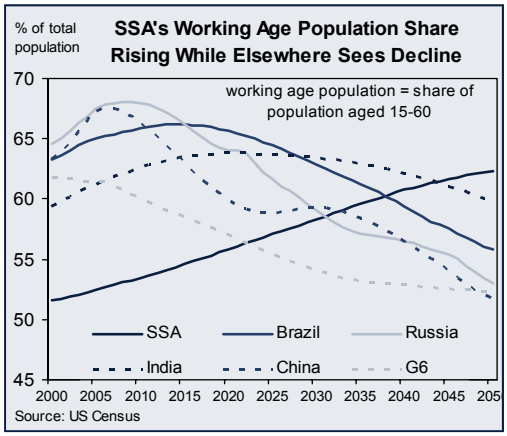
- For TFP growth we assume a steady average growth rate of 2% a year for the next ten years, compared with long-run US TFP growth of 1.33%. As with the investment rate, compared with the early 1970s, TFP growth is now coming off a very low base. Within our assumptions there continue to be large differences in investment rates and TFP growth across countries. We make assumptions for each of these variables for each economy in the region.

- For the growth in the labour force we use the US Census Bureau's demographic projections. These projections take the impact of AIDS into account. Annual population growth declines from a current 2.2% to 1.6% by 2015, and further thereafter, which is much lower than experienced since 1970. The labour force participation rate increases from 52% to 59%.

The outcome of these assumptions is as follows:

Economic growth: GDP growth accelerates to an average of 4.9% a year over the next ten years, compared with 3.8% in recent years. The 4.9% compares favourably to the growth rates that we estimate for Brazil (4.1%) and Russia (4.4%), but is lower than that expected for China (6.7%) and India (6.0%) over that period. All experience a slowdown in GDP growth in the





Sub-Saharan Africa Baseline Snapshot							
Average	GDP Growth	GDP (US$bn)	GDP Per Capita ($)	Investment Rate (% of GDP)	Population Growth	TFP Growth	Participation Rate
2000-2004	3.8%	400.9	643	17	2.1%	2.1%	52%
2005-2015	4.9%	657.1	908	22	1.8%	2.0%	53%
2016-2050	4.0%	2943.8	2686	22	1.5%	1.7%	59%

period 2016-2050. Our results are more cautious than the Commission for Africa's call for 7% average growth by the end of the decade and NEPAD's call for 7% a year for the next 15 years.

Economic size: Sub-Saharan Africa's share of world GDP increases to 2% by 2015 from 1.2% in recent years. By 2025, the region accounts for 2.4% of world GDP. In US Dollar terms, GDP doubles to US$900bn by 2015 and reaches US$1,600bn by 2025. The region's US Dollar GDP only begins to exceed some of the G6 members by around 2035, compared with the BRICs economies, which will begin to rival G6 members over the next decade.

Incomes and demographics: Faster economic growth coupled with slower population growth leads to a 78% increase in per capita GDP to just over US$1,100 by 2015 and three times higher at US$1,800 by 2025. Some countries should experience GDP per capita levels in excess of the BRICs, such as Botswana, Gabon, Mauritius, Namibia and South Africa, but individuals in Sub-Saharan Africa will remain poorer on average than individuals in the BRICs economies.

Global demand patterns: The incremental demand from Sub-Saharan Africa will remain small relative to that of the BRICs, where the annual increase in US Dollar spending could be greater than that of the G6 as early as 2009. By 2030 the annual increase in US Dollar spending from the BRICs could be twice that of the G6, and four times higher by 2050. In contrast, incremental demand from Sub-Saharan Africa will be equivalent to only 8% of that of the BRICs in 2010 and 6% in 2030.

Currency movements: Rising exchange rates contribute significantly to the increase in US Dollar GDP. Approximately one-third of the increase in US Dollar GDP in Sub-Saharan Africa over the period may come from rising currencies, with the other two-thirds from faster growth. Sub-Saharan Africa's real exchange rates could appreciate by 100% over the next 50 years, capturing the higher productivity growth in the region. In the baseline scenario, the region's currencies on average experience real appreciation of approximately 2.4% a year over the next ten years

Equity markets: Under our baseline projections for GDP, the region's market capitalisation increases from approximately 1% of global market capitalisation in recent years to 1.7% by 2015 and 2.3% by 2025. The 14 currently active individual country equity markets in the region have, on a total US Dollar return basis, outperformed most developed and emerging markets in recent years and have experienced significant growth in their market capitalisations, though this growth has been driven primarily by South Africa.

A Closer Look at the Bigger Economies in the Region

Our assumptions for the biggest economies in Sub-Saharan Africa clearly will have a big impact on the region's potential economic growth rate and the other macroeconomic indicators listed above. South Africa, Nigeria and Kenya alone account for 54% of the region's GDP.

Demographics and AIDS

With roughly 728 million people, Sub-Saharan Africa accounts for 11% of the world's population. Its population growth rates are the highest in the world and will remain so until at least 2050, though they will decline from current levels. By 2050, the region's population could more than double, to 1.5 billion, or 17% of the world's total. SSA is practically the only region where fertility rates have not declined significantly since the 1960s; at just over five children per woman, fertility is twice the world average.

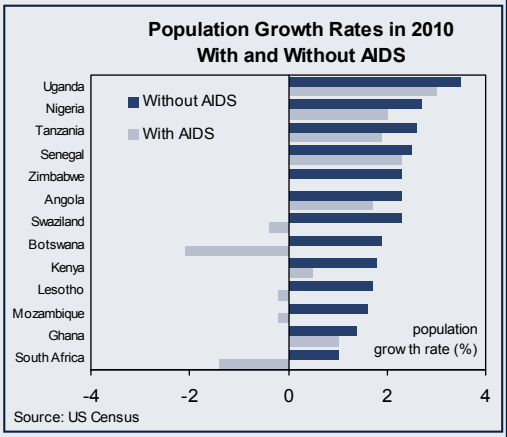
High population growth should give SSA a distinct demographic advantage over the G6 and many of the BRICs. Indeed, SSA's labour force (the population aged 15-60) is projected to rise from 52% of the total population today to 62% by 2050. This is in stark contrast to the declining share in the G6.

Yet the demographic challenge brought on by HIV/AIDS will have an acute impact on the labour forces in some of the key countries. A 2004 US Census Bureau report (*The AIDS Pandemic in the 21st Century*) highlights the AIDS impact on SSA demographics. Life expectancies have fallen dramatically from levels they could have reached without AIDS, and Botswana and South Africa are expected to experience negative population growth on the back of AIDS mortality. In South Africa, population growth is already less than half what it might have been without AIDS. In other countries the impact is less severe: population growth rates in Guinea, Niger and Senegal are relatively less affected by HIV/AIDS.

While it is difficult to estimate the economic impact of this human tragedy, there are a number of general effects to consider. Perhaps most fundamentally, AIDS is likely to have a larger impact on economic growth than other diseases (for a given incidence of infection), because its primary victims are otherwise healthy and productive young adults. AIDS strikes at a population that is not only highly productive in its own right, but one that is also passing on skills to the next generation.

Moreover, direct healthcare expenditures are likely to rise (diverting funds away from other uses, including physical and human capital formation); households will have less time to accumulate wealth (reducing national savings); orphans are less likely to learn social and other skills (reducing productivity); and shorter working lives means skills are lost prematurely, and more must be invested in training replacements (lowering productivity and/ or requiring higher investment in training and education).

All of these factors reduce not just real GDP growth (which would fall with any decline in the labour force), but also real GDP per capita (which in the simplest of models could actually rise if the existing capital stock was spread over a smaller population). In our model, the impact of AIDS is to reduce both the size of the labour force and total factor productivity. It is also likely to lower the rate of capital accumulation (both a lower savings rate domestically and lower inward investment).



In one of the most thorough assessments of the impact of AIDS, an IMF report on Botswana (Country Report 04/212) finds that the impact of AIDS depends very much on the intervention strategy. If a sensible strategy is implemented in the next few years, AIDS would lower Botswana's (non-mining) growth rate by an average 1.4ppt per annum over the next ten years, with the population growth rate 1.9ppt lower per annum. If no strategy is pursued, then AIDS could cut growth by 2.3ppt.

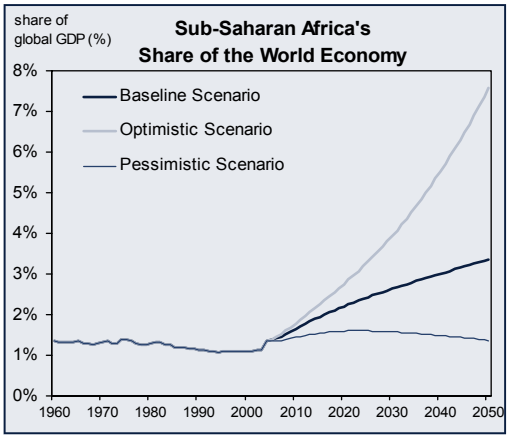
For South Africa, where HIV prevalence is estimated to be between 11% and 20%, one of the most comprehensive studies shows that GDP growth is likely to be 0.5ppt lower per annum over the next ten years because of the impact of AIDS (which lowers the population growth rate by 1.3ppt per annum). However, real per capita GDP growth rates are higher as a smaller labour force is applied to the existing capital stock.

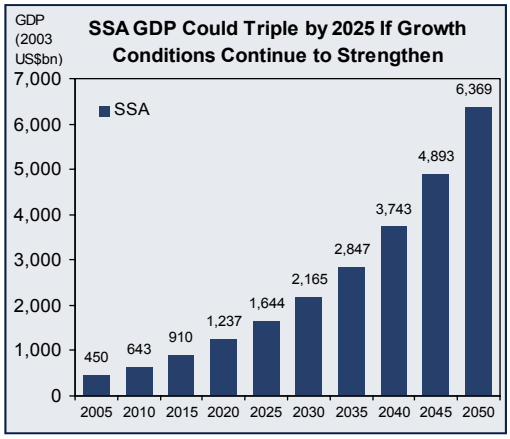
The Botswana and South Africa examples suggest that for each 1ppt decline in annual population growth as a result of AIDS, GDP falls by 0.6ppt annually.

- In our baseline scenario we assume that **South Africa's** investment rate will increase steadily to 25% by 2010 (from an average of 16% in the past ten years) before declining to 24% for the rest of the period. For TFP growth we assume South Africa is one of the economies that 'catches up' fastest to the developed economies, implying an average annual growth of around 2.3% (compared with 1.33% for long-run US TFP growth) over the next ten years, declining to an average 1.7% for the rest of the period. This scenario produces acceleration in GDP growth to 5% by 2010, before slowing to 4% by 2015 and easing further thereafter.

- For **Nigeria**, we also assume that the investment rate increases to 25% over the next ten years (compared with 20% in the past ten years), and then declines back to 20% for the rest of the period. We assume Nigeria's convergence speed is one of the slower ones in Africa. Coupled with the large income gap relative to developed economies, this implied a TFP growth rate of 1.3% a year. This produces average GDP growth of 4.9% over the next ten years before declining to an average 4.2% for the rest of the period.

- For **Kenya**, we assume that the investment rate increases to 25% over the next ten years (from 15% in the past ten years). Annual TFP growth is similar to South Africa's at 2%.





Under such assumptions, average GDP growth increases to close to 5% over the next ten years, declining to an average 3.8% thereafter.

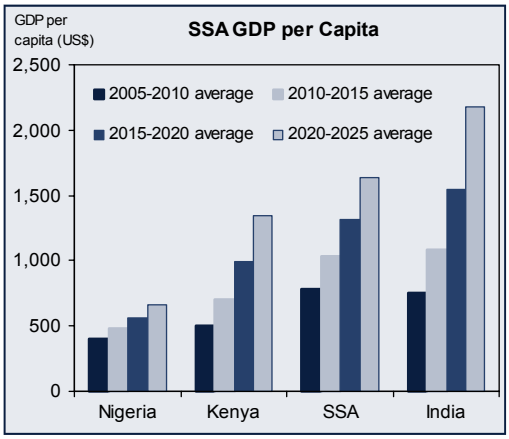
Looking Ahead: The Prospects for Achieving Potential Growth

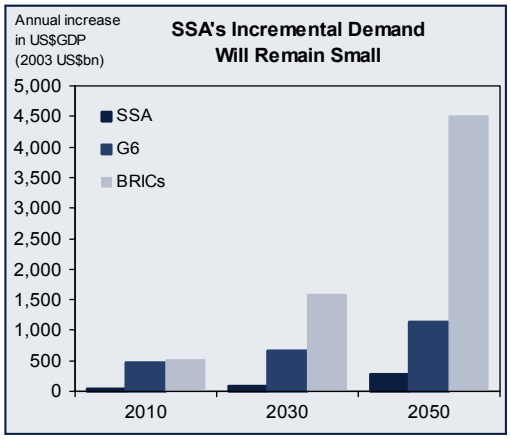
Potential growth for the next ten years (5%) is now lower than we would have estimated for the 1970s (6%). The main reason is the significantly lower population growth rate, given that the projected investment rates and TFP growth rates for the next ten years are similar to what was being projected in 1970. Recent developments suggest that the region now has a higher probability of meeting potential growth and sustaining it, but the risks of underachievement are still high.

Increased macroeconomic stability. The region has in recent years experienced an improvement in a wide range of macroeconomic variables, the most important being a marked improvement in GDP growth (3.8% average over the past four years) and in the growth of real per capita GDP. Underlying these headline numbers are signs of increased macroeconomic stability, as reflected in declining inflation, slower money growth, narrower fiscal deficits and marginally higher savings rates. Exports as a percentage of GDP have increased every year since 2000 and the current account deficit has narrowed. Investment rates appear to be improving, although they are still at low levels, as is the contribution from TFP. However, external debt levels remain high.

Increased political stability. On the political front, there are signs of increased stability. According to Freedom House, the number of free democracies in Africa has nearly tripled from four to 11 over the past decade, and more than half of the countries in the region are in the transition process toward full and free democracy. The end of the Cold War helped bring an end to many conflicts in the region. Nevertheless, there are still failed states, weak institutions and problems with governance and natural resource revenue management.

The Commission for Africa's recent report highlighted an upcoming 28-country study undertaken by the Economic Commission for Africa (the African Governance Report), which shows that the governance environment has improved notably from a decade ago. Still, there is a wide divergence between countries, with Liberia, Cote d'Ivoire and Zimbabwe on the weak end of the governance scale and Mali, Mozambique and Uganda exhibiting strong improvement.

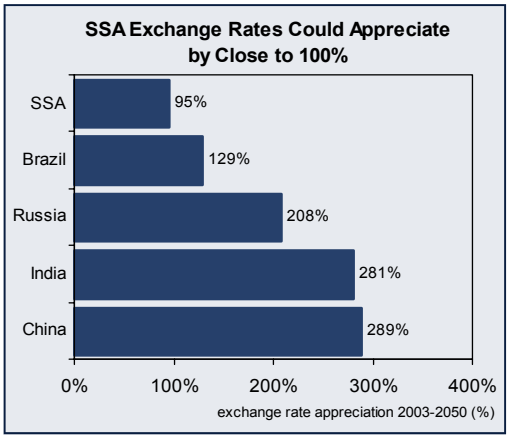


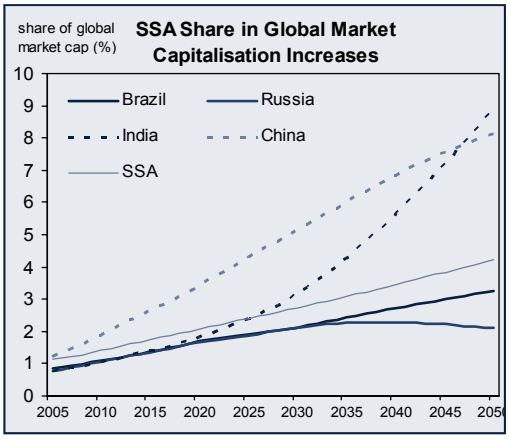


A new vision in NEPAD. The New Partnership for Africa's Development (NEPAD) provides the vision to implement growth-conducive policies. Its long-term objectives are to eradicate poverty; place Africa on a path of sustainable growth and development; and integrate the continent fully into the world economy. Its specific goals are (a) to achieve and sustain an average gross domestic product (GDP) growth rate of above 7% per annum for the next 15 years; and (b) to ensure that the continent achieves the International Development Goals (IDGs), which include, among others, reducing the proportion of people living in extreme poverty by half between 1990 and 2015.

Underlying these objectives and goals is the increased acceptance in the region that peace and security, good governance and sound institutions are necessary to implement appropriate macroeconomic policies, to create an enabling environment for the private sector. Encouragingly, NEPAD's vision is backed by a programme of action, directed at strengthening the political and administrative frameworks of participating countries and enhancing the quality of economic and public financial management. A programme of action also extends to sectoral initiatives in communication, energy, transport, water and sanitation, education, health, agriculture, science and technology and the environment. A number of specific projects have already started to help fast-track these programmes. If these programmes are implemented across a broader set of countries and with benefits that flow more widely among populations, the political stability of the region will be enhanced, providing a sustainable platform for long-term growth.

A more supportive global environment. The relatively benign macroeconomic environment that we expect for the global economy over the next two years—trend growth, well-behaved inflation, moderate central bank tightening, a weaker US Dollar and high commodity prices—offers an opportunity for SSA to entrench its macroeconomic gains of recent years and to implement NEPAD. Furthermore, the prospects for freer international trade, in particular agricultural trade, will improve if progress is made in the Doha Development Round, and could provide a significant boost to the region (depending on how the current free access to the EU for some countries is handled). There is also increased political will among developed nations to help African development, as reflected in the UK's Commission for Africa and the US's Millennium Challenge Account.





Optimistic and Pessimistic Scenarios

The region has made progress in some of the areas we highlighted as drivers of growth. But there remains much to be done and there are signs that widespread implementation of NEPAD will take longer than desired. Investments in human capital and infrastructure, and establishing the credibility of political and economic institutions of macroeconomic management take time, and the speed with which this occurs could vary substantially. We try to capture the region's growth potential looking at various 'speeds' of convergence.

In our baseline scenario we have assumed an increase in the region's investment rate. We have also assumed that TFP growth remains well above that of long-run US TFP growth, the implicit expectation being that the region continues to make progress in the implementation of the policies envisaged through NEPAD. The risk is that if these policies are not implemented, then investment may be unproductive, the returns to investment too low and the contribution of TFP remains small. Alternatively, a rapid and more widespread implementation of NEPAD's policies could entrench peace, democracy and macroeconomic stability, helping push growth to its potential more quickly.

Given that total factor productivity has historically had a negative contribution to growth in the region, it holds the greatest opportunity for boosting GDP growth. For illustrative purposes, we adjust only the TFP growth rates in our model, keeping the investment rate the same as in the baseline (in practice the investment rate would not remain unaffected), to see what kind of economic growth rates emerge.

In a **pessimistic scenario**, TFP growth slows to just 0.7% a year over the next ten years and then declines further. Under such a scenario, Sub-Saharan Africa's GDP growth rate would slow to 3.4% over the next ten years, its contribution to world GDP would remain broadly at current levels, and GDP per capita would remain unchanged. Currency appreciation would also be limited to only 0.9% a year over the next ten years compared with 2.4% in the baseline scenario.

In an **optimistic scenario**, TFP growth accelerates to 2.7% per annum over the next ten years, before declining to a still-strong 2.2% a year thereafter. Under such a scenario, the region

Sub-Saharan African Macroeconomic Indicators Show Improvement

	1997-2001	2002	2003	2004	2005
Real GDP Growth (%)	3.0	3.4	3.5	4.5	5.7
Real GDP per Capita (US$)	578.3	585.0	589.6	598.6	613.3
GDP per Capita Growth (%)	0.2	0.6	0.7	1.6	2.5
Consumer Prices (annual avg % chg)	14.7	12.4	13.3	10.1	9.9
Total Investment (% of GDP)	18.4	17.4	18.2	17.9	18.5
Domestic Saving (% of GDP)	15.0	14.7	15.6	16.0	16.2
Overall Fiscal Balance (% of GDP)	-2.9	-2.9	-1.9	-0.9	0.0
Government Revenue (% of GDP)	21.8	22.1	22.5	23.4	23.8
Government Expenditure (% of GDP)	25.8	26.1	25.7	25.7	25.3
Broad Money Growth (%)	21.3	28.1	19.6	15.2	13.4
Exports (% of GDP)	32.1	33.9	34.4	36.0	36.3
Imports (% of GDP)	32.5	34.3	33.9	34.0	33.9
Trade Balance (% of GDP)	3.4	3.7	4.3	5.9	6.2
Terms of Trade (Index, 1990=100)	97.6	101.8	104.2	111.6	112.4
External Current Account (% of GDP)	-2.7	-3.2	-2.1	-1.1	-1.0
Official Grants (% of GDP)	1.0	1.1	1.1	1.2	1.0
Total External Debt (US$bn)	194.2	181.8	196.0	194.7	197.6

Source: IMF Regional Economic Outlook 2004.

Sub-Saharan Africa Pessimistic Snapshot							
Average	GDP Growth	GDP (US$bn)	GDP Per Capita ($)	Investment Rate (% of GDP)	Population Growth	TFP Growth	Participation Rate
2000-2004	3.8%	400.9	643	17	2.1%	2.1%	52%
2005-2015	3.4%	567.5	787	22	1.8%	0.7%	53%
2016-2050	2.1%	1505.5	1411	22	1.5%	0.3%	59%

Sub-Saharan Africa Optimistic Snapshot							
Average	GDP Growth	GDP (US$bn)	GDP Per Capita ($)	Investment Rate (% of GDP)	Population Growth	MFP Growth	Participation Rate
2000-2004	3.8%	400.9	643	17	2.1%	2.1%	52%
2005-2015	5.6%	718.1	990	22	1.8%	2.7%	53%
2016-2050	4.7%	5465.0	4856	22	1.5%	2.2%	59%

would grow on average 5.6% a year over the next ten years and its contribution to world GDP would increase to 3.3% by 2025. GDP per capita would increase by 100% by 2015 and by close to 300% by 2025. Currency appreciation would be in the range of 3.3% a year over the next ten years.

Carlos Teixeira, Roopa Purushothaman and Mike Buchanan
March 2005

OUR PROJECTIONS IN DETAIL: SSA, BRICS AND G6

Projected US$GDP							
2003 US$bn	SSA	Brazil	Russia	India	China	BRICs	G6
2005	450	512	550	675	1,753	3,490	24,962
2010	643	739	876	1,042	3,109	5,766	27,564
2015	910	1,062	1,274	1,583	4,957	8,876	30,220
2020	1,237	1,500	1,791	2,354	7,357	13,003	33,071
2025	1,644	1,926	2,312	3,528	10,571	18,337	36,079
2030	2,165	2,513	3,017	5,431	14,704	25,665	39,590
2035	2,847	3,333	3,747	8,529	19,971	35,580	43,637
2040	3,743	4,389	4,441	13,237	26,690	48,758	48,418
2045	4,893	5,685	5,080	19,886	34,810	65,460	53,705
2050	6,369	7,270	5,732	28,936	44,074	86,012	59,667

Projected US$GDP Per Capita							
	SSA	Brazil	Russia	India	China	BRICs	G6
2005	686	2,751	3,825	625	1,346	1,287	36,452
2010	896	3,778	6,155	902	2,315	2,033	39,396
2015	1,170	5,205	9,031	1,290	3,574	2,999	42,413
2020	1,470	7,094	12,887	1,815	5,166	4,233	45,703
2025	1,810	8,841	17,007	2,591	7,298	5,796	49,191
2030	2,211	11,277	22,710	3,822	10,078	7,933	53,315
2035	2,696	14,722	28,848	5,785	13,685	10,815	58,123
2040	3,292	19,214	35,109	8,695	18,382	14,645	63,903
2045	3,999	24,811	41,456	12,710	24,200	19,513	70,334
2050	4,844	31,825	48,482	18,074	31,090	25,559	77,594

Projected Real GDP Growth											
%yoy	SSA	Brazil	Russia	India	China	France	Germany	Italy	Japan	UK	US
2005	4.7	3.5	6.0	6.0	8.1	2.3	2.3	2.0	1.4	2.4	3.1
2010	5.0	4.3	4.1	6.1	6.7	1.6	1.5	1.6	0.6	2.2	2.4
2015	4.6	4.0	3.5	5.8	5.2	1.8	1.4	1.6	1.3	2.1	2.1
2020	4.2	3.8	3.2	5.5	5.0	1.7	0.9	1.3	1.4	1.7	2.1
2025	4.0	3.9	3.5	5.7	4.2	1.6	0.5	0.6	1.0	1.4	2.4
2030	4.0	4.0	3.3	5.9	3.8	1.5	0.9	0.5	0.6	1.6	2.5
2035	3.9	4.1	2.7	6.0	3.8	1.7	1.7	0.5	0.2	2.0	2.8
2040	3.9	3.8	2.3	5.7	3.6	1.7	1.5	1.2	0.7	1.8	2.6
2045	3.8	3.6	1.9	5.3	3.2	1.7	1.4	1.5	0.9	1.7	2.6
2050	3.6	3.5	2.0	4.9	2.6	1.7	1.2	1.5	1.3	1.5	2.5

CHAPTER FIFTEEN

G8 Debt Relief: A Small Step on the Road to a Stronger Africa

June 2005

G8 Debt Relief: A Small Step on the Road to a Stronger Africa

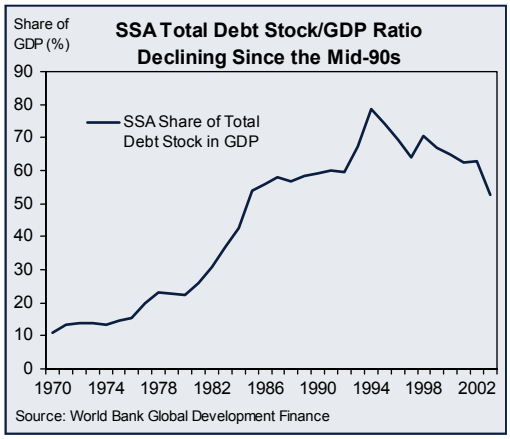
Efforts to promote African development received a boost in June 2005, when G8 finance ministers approved a debt relief package that effectively cancelled US$40bn in outstanding multilateral debt obligations for 18 Highly Indebted Poor Countries (HIPC), 14 of which are in Sub-Saharan Africa. Putting debt relief on the G8 agenda is part of a broader initiative to meet the Millennium Development Goals by 2015. These goals, which seek to improve health, education, infrastructure and environmental standards, are essential steps on the path to a more robust future in Africa.

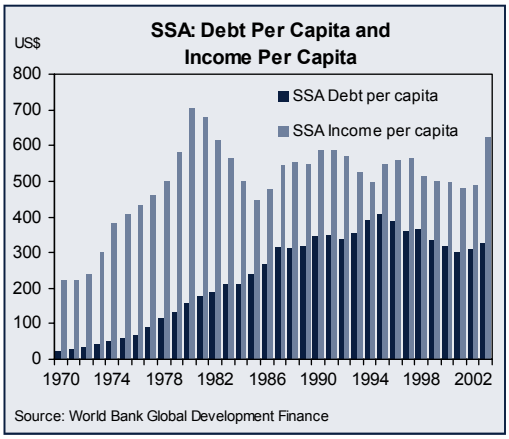
While impressive on paper, this new round of debt relief may have a limited impact on the ground. A look at the debt profile of the recipient countries suggests that the cash savings are likely to be small. Annual debt service in the targeted Sub-Saharan African countries is just US$500mn, one quarter of that region's annual multilateral debt service obligations. Extending the programme to cover other major debtors—Nigeria alone accounts for one-quarter of the region's multilateral annual debt service—could significantly increase its impact (as well as its cost).

Nonetheless, debt relief has the potential to be helpful by removing a major economic and psychological overhang, and by creating a climate more conducive to private investment. It could be most helpful if it encourages local governments to invest more in education and health—two of the major challenges holding back long-term development. Our research suggests that investments in human capital will be the key to labour force and productivity growth—and thus to Africa's long-term economic growth prospects. Applying the savings from debt forgiveness towards spending on health and education could help Africa to push trend GDP growth from our baseline estimate of 4.9% over the coming decade to as high as 5.6%.

An Impressive Step on Paper…

Finance ministers of the G8 have agreed to cancel 100% of the US$40bn debt owed to the World Bank, IMF and African Development Bank by 18 highly indebted poor countries





(HIPC), 14 of which are in Sub-Saharan Africa.[1] These countries, while crossing the IMF's and World Bank's thresholds for high debt and low income, have also made significant progress in macroeconomic and poverty-reduction management in recent years.

With the stroke of a pen, the G8 effectively achieved the equivalent of two decades of debt relief, considering that these countries have received just over US$2bn of debt forgiveness each year on average over the past ten years. This is the first time that the major multilateral creditors together have agreed to forgive 100% of the debt owed to them. Multilateral debt averages 60% of total debt for these 18 countries, ranging from 83% of the total in Uganda to 36% in Mozambique. Many of these have already received essentially 100% forgiveness from other official creditors as well.

...A Smaller Impact on the Ground

While the initiative is a welcome start to reducing the debt overhang in these HIPC countries, the impact on the ground will be more limited than the headlines suggest.

Sub-Saharan Africa's debt problem is primarily a holdover from the 1970s, when debt decisions were driven by ideology rather than by sensible analysis of investment risk or development needs. Though much of the debt today is owed to multilateral rather than bilateral creditors, in many cases the multilateral donors simply stepped into existing debt quagmires. SSA total external debt today (not just that owed to multilateral institutions) is 33 times the level in 1970, although it has risen 'only' fourfold since 1980. The region's total external debt is now US$328 per capita, against income per capita of US$624 and aid per capita of US$34.

The 14 African countries that qualify for the G8 proposal owe roughly US$36bn to multilateral institutions, meaning that they will be the primary beneficiaries of the US$40bn in debt relief. Their annual debt service payments to multilateral institutions, however, have been relatively small—slightly more than US$500mn a year, or just 0.8% of their combined GDP. The other four qualifying countries in Latin America together pay nearly as much in debt service each year—as does Nigeria, which does not qualify for the relief. In fact the 14 SSA countries that do qualify together account for just one-quarter of Sub-Saharan Africa's total annual multilateral debt service of US$2bn.

Thus, while this programme is an important start, it is not the end of the story for African debt. The key missing element in any comprehensive programme is Nigeria, which accounts for 17.5% of the region's population and 14% of its GDP. Although Nigeria's annual multilateral debt burden is 24% of Sub-Saharan Africa's total, its stock of debt is not high enough to qualify for debt relief status. At US$35bn, total external debt is 120% of (oil-driven) exports, compared with more than 400% for Zambia and Ethiopia. Weak policy performance has also kept Nigeria from qualifying for broader debt relief. Nonetheless, servicing the debt is a serious fiscal and political burden. The problem here is not one of extensive borrowing, but of years of arrears, interest and penalties during military rule, which have caused the debt stock to mushroom.

1. The 14 African countries are Benin, Burkina Faso, Ethiopia, Ghana, Madagascar, Mali, Mauritania, Mozambique, Niger, Rwanda, Senegal, Tanzania, Uganda and Zambia. Four Latin American countries (Bolivia, Guyana, Honduras and Nicaragua) make up the balance.

A Longer-Term Impetus for Investment?

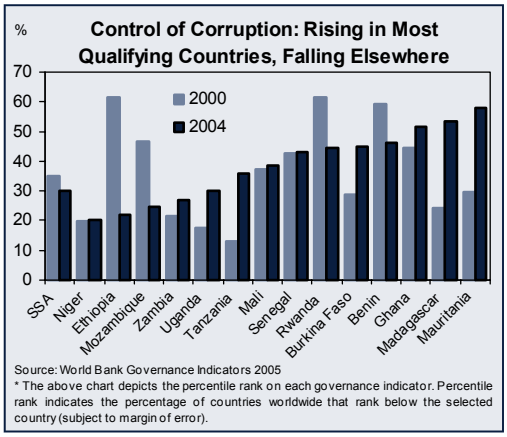
The international focus on Africa comes at an opportune time for the continent. After two decades of disappointing economic growth and declining living standards, the region has posted stronger performance in recent years. Real GDP growth has averaged 3.8% over the past four years, well ahead of the 3.0% in the prior five and starkly better than the 1.8% seen from 1980-1995. Growth in per capita GDP is also running well ahead of the 1980s and early 1990s. There are ample signs of increased macroeconomic stability, and political stability is improving as well. The New Partnership for Africa's Development (NEPAD), a regional initiative launched in 2001, has brought an increased focus on governance and development.

Our own work, as well as recent independent research on Africa, indicates that the policy environment is critical to growth. Sustainable growth requires political and macroeconomic stability; transparency; a sound investment climate; a robust and well-regulated financial system; and openness to trade and to competitive private markets.

Local ownership of the reform programme is also essential. In contrast to previous reform efforts, which pushed change from the outside, the G8 initiative is being effected in concert with NEPAD and other African-led steps to boost growth. The G8 agreement also focuses on the importance of policies that encourage growth, sustainable development and poverty reduction, along with institutional development, macroeconomic stability, transparency and steps to raise private investment.

In this way the debt relief seeks to build on recent improvements in local governance and policies—and to offer debt relief not just to the poorest or most indebted countries, but to those that are also apt to use the money productively. While it can certainly be argued that the most indebted countries are not necessarily the most deserving of assistance, the HIPC and G8 proposals seem designed to strike a balance between helping the 'worst off' countries and those most likely to use the money well.

Countries qualifying under the HIPC criteria have already moved to reduce poverty by increasing spending on healthcare and raising education levels, particularly among girls. Their poverty-reducing expenditure—which includes spending on health, education, basic sanitation, and urban and rural development—has risen to 48% of government revenue in 2003 from 41% in 1999, and to 8% of GDP from 6%. Clearly much more needs to be done, but across a range



of governance indicators, the 14 SSA countries slated to receive debt relief score well above the regional average, particularly on measures such as effectiveness of government, regulatory quality and control of corruption.

Removing the Debt Overhang

Even if the direct financial impact of debt relief is smaller than the headline figures might suggest, the programme is potentially an important step for Africa's growth prospects. Beyond freeing up resources for future spending—which we discuss in the following section—debt relief has important indirect consequences. By eliminating or at least vastly reducing the debt overhang, it improves the climate for private investment. Debt relief can reduce uncertainty about government finances and macroeconomic stability, result in lower tax burdens and greater clarity about future taxes, and raise productivity by encouraging investors to pursue projects with longer-term returns. Debt relief also frees up government resources that would otherwise be dedicated to negotiations on debt rescheduling, allowing human capital to be deployed towards designing and implementing forward-looking policies.

But does debt relief entail a moral hazard problem that is likely to lead governments into ill-advised borrowing in the future? By eliminating any future conditionality, are donor governments encouraging or allowing recipients to spend carelessly?

To some extent, only time will tell whether recipient governments are truly committed to implementing growth-enhancing policies, strengthening institutions and improving governance. But the HIPC initiative, which the G8 programme extends, has sought to link debt relief to improvements in governance and poverty reduction for nearly a decade. The countries now slated for debt relief are those from the pool of highly indebted poor countries that have done the most to achieve the HIPC goals. And although donor governments will no longer be able to exercise conditionality over these funds, this will not prevent them from linking future aid to specific development or governance goals. Given the relatively small amount of 'new' funds that the G8 programme will actually generate for Sub-Saharan Africa, this does not appear to be simply 'free money' that will encourage poor policy decisions and reckless spending in the future.

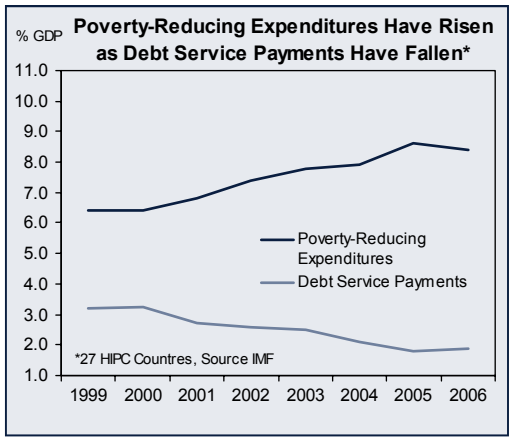
As for the moral hazard problem, we do not see the G8 programme as akin to the emerging market bailouts of recent years. The key difference is that the creditors themselves—the World Bank and the IMF—are canceling obligations owed to them. They are not 'bailing out' private creditors and thus skewing third parties' risk assessments.

The Returns on Investment in Human Capital

Sub-Saharan Africa still faces significant challenges. We estimate that potential GDP growth for the next decade—what we might expect if all goes reasonably close to 'right'—is 5%. This is lower than the 6% we would have estimated for the 1970s, reflecting the impact of HIV/AIDS and other public health problems on population and productivity growth. Our 5% estimate is also below NEPAD's objective of 7% a year for the next 15 years.

Our own work, discussed at length in the previous chapter of this book, conducts a BRICs-style analysis of the determinants of long-term growth. Our model measures GDP growth as a function of three factors: growth in employment, growth in capital stock, and technical

progress (or the growth in total factor productivity, TFP). Sub-Saharan Africa shows weakness in all three factors.



- The labour force is already suffering from declining population growth. The working age population is growing at just 2.4% annually; this is likely to drop to 2.1% in a decade, and to decline further thereafter, as HIV/AIDS and other public health problems take their toll.

- Investment rates are low, averaging 17% in recent years. Our analysis assumes that investment will rise to 22%, extending the recent upturn. This compares to our BRICs estimates, based on recent experience, ranging from 19% in Brazil to 36% in China. Debt relief could play an important, albeit indirect, role in boosting private investment in much of the region, as we discuss above.

- In general, African TFP growth rates are lower than those for the BRICs economies—in some cases considerably lower—reflecting lower education rates, limited technological uptake and the economic importance of the relatively unmodernised agricultural sector. TFP has historically been a drag on African growth, rather than the contributor it should be and indeed has been in other regions.

With Sub-Saharan Africa (outside South Africa) currently spending less than US$10bn each year on education and health combined, directing the US$500mn in 'saved' debt service toward development programmes could have a fairly significant impact. If the current debt relief programme were expanded to include Nigeria (worth up to another US$500mn a year) or the rest of Sub-Saharan Africa (up to another US$1bn), and if the saved funds were spent on development, then total health and educational spending could rise by as much as 20%.

If Africa did invest its debt savings in development, this could help to boost TFP closer towards the 2% average rate in our baseline projections for the next decade. In fact, if we see sustained improvement, the region may move into an 'optimistic' scenario—one in which growth could average 5.6% over the next decade, against our baseline estimate of 4.9%. There is much that will need to go right for this rosier outlook to materialise. Debt relief is just the start, and policy decisions will be critical in the years ahead.

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June 2005

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