Equity Research
Asia/Pacific

Economics

India and China: A Special Economic Analysis

Chetan Ahya
+91 22 2209 7940
Chetan.Ahya@morganstanley.com
Andy Xie
+852 2848 5220
Andy.Xie@morganstanley.com
Anil Agarwal
Denise Yam
Sharon Lam
Mihir Sheth

Economic Trends

July 26, 2004

New Tigers of Asia

- **India and China's GDP growth has been twice the global rate in past 20 years**
  Based on these trends, China's economy should be bigger than the US' in a decade, and India's should be bigger than Japan's, in terms of purchasing power parity.
- **China's fast-track model versus India's unique gradualism**
  China, with an FDI-driven, export-led model, has grown at an annual average of 9.7% since economic reforms were initiated in 1978. India has followed a consensual democratic market model; GDP has expanded at 5.8% a year since the economy was opened up in 1991.
- **China has left India far behind**
  In 1982, China's per-capita GDP of US$275 was marginally lower than India's US$280 (in nominal dollars). By 2003, China's per capita income was US$1,086, twice that of India. China's share in global goods and services trade has vaulted to 5.2%, against 0.9% for India.
- **Positive demographics will be the key driver behind these two global forces**
  By 2010, India should add 83 million workers to the global pool, and China 56 million (vs. 13 million in the US and 0.1 million in Europe). Rapid globalization means such low-cost and increasingly skilled workers will change the competitive dynamics in many markets.
- **India could lift its growth rate to 7% plus over the next 10 yrs**
  We believe that India's challenge is to introduce "big shift" reforms to cut its fiscal deficit and increase savings for infrastructure investments, which would make it a global competitor in manufacturing exports.
- **China will likely maintain its 8%-plus growth rate but is facing major hurdles**
  China has the capability to become a major player in global services in addition to maintaining its dominance in manufacturing. However, it needs to implement structural reforms to address its weak financial system and develop a more market-oriented institutional framework to maintain its high-growth trajectory.
- **The two development models could converge in 10-15 yrs…**
  …with India's increasing presence in manufacturing and China's in services. Both low-cost countries will be driving forces in global trade, with exports (after internalizing intra-euro trade) rising from a combined total of 12% today to a possible 20% by 2010 and 30% by 2030.

Contents

New Tigers of Asia

Andy Xie and Chetan Ahya

The rise of China and India is the most important economic force in the world. Together, they account for 40% of the global population of working age and 18% of the global economy, on the basis of purchasing power parity (PPP). For two decades, their economies have been growing twice as fast as the rest of the world. On present trends, it will take just two decades before their share of the global economic pie will match their share of the global population. Indeed, in a decade, China's economy should surpass that of the US and India's should be bigger than Japan's (using PPP).

This is mean reversion on a historical scale. Before industrialization, per capita income was roughly the same among major economies (see *A Century of Unrivalled Prosperity*, Rudi Dornbusch, April 1999). Living standards in the West took off in the nineteenth century after the industrial revolution. India's and China's agrarian economies could not compete in the global marketplace and were able to stand on their own only in the 1950s. Then, economic planning that was supposed to be a short cut to industrial progress turned out to be a cul-de-sac.

Later, economic liberalization at home and globalization abroad triggered two decades of sustained high growth for India and China. For the first time in two centuries, they are key players in the global economy. Moreover, they may determine global economic cycles in future, as they now account for the bulk of global growth.

China adopted the East Asian model of export-led growth – and with a vengeance. Overseas Chinese provided the expertise in manufacturing outsourcing, and in turn enjoyed much cheaper labor and infrastructure than at home. As China's age dependency (proportion of non-working to working population) declined, much of the income from exports was recycled to build up the infrastructure necessary to keep the export sector competitive. Such a virtuous cycle delivered average annual rises of 8% in per capita income over the past 25 years; the number of people living in town and cities doubled to 40% of the population in the same period.

India's relatively higher age dependency ratio was a hindrance to emulating China's success in manufacturing exports. Growth came from: (1) rationalizing its domestic economy (i.e., improving total productivity) and, more recently, (2) exporting IT and IT-enabled services. In the past 25 years, India's per capita income has expanded by 3.2% a year and urbanization has increased to 28%. Growth in per capita income has been back-end loaded, at 4.3% in the past 10 years from 2.4% in the previous 15 years.

China's most successful policy initiatives have been in modernizing its infrastructure, allowing labor mobility, welcoming foreign direct investment (FDI) and embracing competition. About 150 million workers have migrated from the farms to the dynamic local economies of coastal China. Money that these factory workers remitted home has helped develop the interior provinces. Competition in local markets has kept down prices and has allowed wages to stay low and globally competitive.

India has an established commercial class. Economic liberalization has been of the more traditional variety, with the private sector mainly driving the turnaround of the past decade or so. Conspicuously successful have been the local entrepreneurs who have created world-class companies after seizing the opportunity offered by the outsourcing of IT services.

China has relied on administrative power and flexibility, rather than market forces, to guide capital formation. Capital allocation is inefficient and prone to corruption as a result of which non-performing loans have piled up in the banking system. China's government recognizes that radical reform is necessary to avert a financial crisis. State banks are to be listed. NPLs are being sold. Global banks are being allowed strategic stakes in Chinese banks to bring in best-practice standards and practices. Even so, China is many years away from an independent and market-driven financial system.

India's challenge is to boost its savings rate to upgrade the country's infrastructure, which would cut the cost of doing business and boost growth. Net capital formation is a mere 15% of GDP. If the fiscal deficit could be reduced – from the current 10% of GDP –and resources freed up for investment, India could boost its growth rate by 1-2 percentage points, on our estimates. Increased income from exports of IT services – which we believe, on a conservative basis, could more than quadruple by 2010 – could play a key, if indirect, role in alleviating the infrastructure

Please see important disclosures starting on page !Unexpected End of Formula**.**

bottlenecks that are holding back India from being a major competitor to China in the export of manufactured goods.

China, by contrast, has yet to benefit from service exports, the new phase of globalization. With 3 million college students graduating every year, China has the skills base to become a major player in global services, once it identifies the segments in which it might have a competitive advantage.

Over the next 10-15 years, we see the development models of India and China converging. Both low-cost countries will be driving forces in the trade of goods and services, with their exports possibly rising from a combined 12% of the global total today to 20% by 2010 and 30% by 2030. (Our calculation internalizes euro-zone intra-regional trade.)

Such an outcome could result in a restructuring of the global economy, in several ways. Neither India nor China is self-sufficient in exhaustible natural resources – with a few exceptions in the case of India – and rising demand for such relatively scarce commodities will make them more expensive. The vast pools of low-cost workers in both countries will inevitably depress prices for manufactured goods and tradable services. While that might lower wages in some industries in other countries, consumers across the globe would have greater purchasing power.

Global companies are best poised to benefit from India's and China's greater annexation of overseas product and service markets. Indeed, most of the growth for such companies could come from the industrialization and globalization of India and China.

Globalization has underpinned the economic progress of China and India in the past 25 years. If the next quarter of a century were to unfold similarly, China and India would be mostly industrialized and in turn would be both economic exemplars and major markets for poorer countries.

Such a best-case scenario is by no means guaranteed, of course. Globalization could be held back by internal constraints in the US or Europe or by external forces. A slackening in the pace of globalization would rein back industrialization in India and China. Such vicissitudes, though, would delay rather derail their economic progress – and would be no big deal in a historical sense. In short, India and China look to be on track to emerge as developed economies within the next few decades.

China Far Ahead, But India Picking Up Speed

Chetan Ahya and Andy Xie

India and China – Grabbing the World's Attention

China and India have emphatically made their presence felt in the rapidly globalizing world economy. These two countries have been among the fastest-growing economies in the world. China and India together now account for 18% of world GDP on a PPP basis, compared with 10% in 1990. More importantly, these economies have emerged as the global growth engines. On a PPP basis, these two economies accounted for 32% of global GDP growth in 2003, compared with 13% in 1990. Nominal dollar GDP for China and India has grown at an average of 8.3% and 7.0%, respectively, over the past five years, compared with 4% for the World Ex China and India.

Positive Demographics and Structural Reforms

Both countries have adopted major internal and external structural reforms to accelerate growth. These reforms have positioned them firmly on the rising path of the S-curve for income growth. Both are using the opportunity presented by their rising working-age populations (declining age dependency). Declining dependency typically helps initiate the virtuous cycle of higher growth--savings-investment-growth. India and China already have a 17% and 23% share, respectively, of the global working-age population and should maintain their shares over the next five years. Indeed, by 2010, India and China should add a further 83 million and 56 million people, respectively, to the global labor pool. In comparison, the US and Europe should add only 13 million and 0.1 million people, respectively. The world's third-largest economy, Japan, should see a decline of 3 million in its working population in this period. While China has already successfully appended a significant proportion of its working-age population to the global labor supply chain, India is just beginning to follow suit.

Many Similarities, but China Has Left India Far Behind

The similarities between the two countries are many, including populations of more than a billion, and traditionally poor agrarian economies. In 1982, China's per capita nominal dollar GDP, at US$275, was marginally lower than India's, at US$280. However, over the past 21 years, China's growth has been far stronger than India's. During this period, China's real GDP increased by an average 9.7% a year compared with India's 5.7%. In 2003, as a result of this strong growth, China's GDP of

Exhibit 1

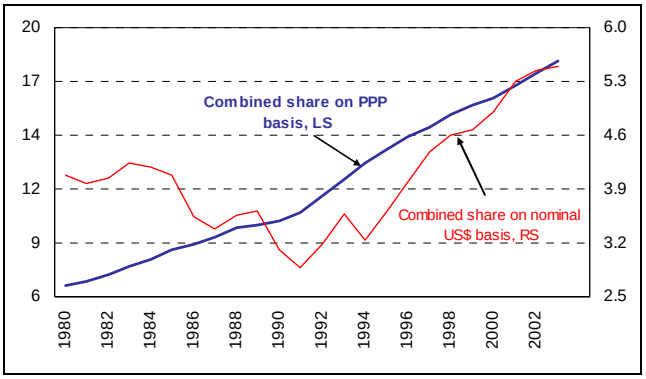
China and India: GDP Statistics

	1990		2003	
	India	China	India	China
Nominal (US$ Bn)	313	388	575	1410
PPP Basis (US$ Bn)	1120	1495	2886	6345
Growth (10 yrs CAGR, %)				
--Nominal	6.0	2.5	7.8	8.9
--PPP Basis	10.3	13.9	7.8	10.7
Share in World GDP (%)				
--Nominal	1.4	1.7	1.6	3.9
--PPP	4.3	5.7	5.7	12.6
Share in World GDP Growth (since 1990, %)				
--Nominal			1.9	7.5
--PPP			7.3	20.1

Source: IMF, Morgan Stanley Research

Exhibit 2

China and India: Combined Share in World GDP on PPP and Nominal US$ Basis (%)



Source: IMF, Morgan Stanley Research

US$1.4 trillion was 2.5 times India's GDP of US$575 billion, and its per capita income, at US$1,086, was twice that of India. Moreover, in terms of share of world nominal dollar GDP, China's 3.9% is much higher than India's 1.6%. In terms of PPP-based GDP, China's share is 12.6% compared with India's 5.7%.

China's Share in Global Exports Is Nearly 6x India's

China has been able to accelerate the process of integration into the global economy at a much faster pace than India. China's share in global goods and services trade is 5.2%, compared with just 0.9% for India. We believe that the inflexion points for both countries have been their decisions to embrace structural reforms and open their economies. However, China's exports have grown at a much faster pace than India's in the first few years post the implementation of reforms. China's exports of goods and services in the first 12 years post reforms expanded at a CAGR of 16.3%, while

Please see important disclosures starting on page !Unexpected End of Formula**.**

India's exports of goods have increased at a CAGR of 9.9% since 1991. The sharp differential in export and GDP growth rates can be explained by the differences in the two growth models and the pace of reforms.

China's Fast-Track Growth Model

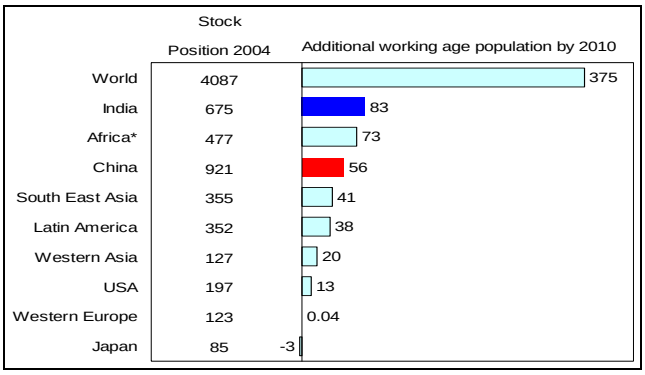
In the 25 years since China initiated reforms, it has grown at an average 9.4% a year, compared with average growth of 5.8% in the 25 years prior to reforms. This sharp acceleration in economic growth has been achieved by the implementing of major structural reforms. The government has focused on improving its human capital with a universal mandatory nine-year education requirement and by implementing aggressive labor reforms. Higher domestic savings, aided by positive demographic changes and rising FDI due to low foreign investment barriers, have helped increase capital accumulation. The accumulated capital has been rightly channelled into development of an infrastructure network to build scale of operation, which in turn enables the effective use of cheap labor. A focus on exports supplements domestic demand and improves cost competitiveness. The single-minded determination of the politicians to 'make it happen' differentiates China from other emerging countries. We expect China to maintain its 8%-plus growth trend over the next 10 years as long as it manages to reform its financial sector and establish a market-oriented institutional framework.

India's Unique Gradualism Growth Model

India has followed a gradual consensual approach to reforms. In that sense, India has been a unique emerging market model, which has put greater emphasis on evolving a well developed institutional framework. This includes the rule of law, protection of property, various market regulators, a democratic political set-up and redistribution agencies. Since the early 1990s, India has initiated internal and external reforms, including deregulation of business investments, deregulation of factor input and output prices, significant reductions in tax rates and relaxation of restrictions on foreign capital investment. However, India's average GDP growth of 5.8% in the post reform period (1992-2003) is the same as that in the 1980s. While economic reforms implemented in the past 12 years have not meaningfully helped to accelerate GDP growth, the big differences have been improved macro stability and reduced volatility in output. However, we believe that, in many ways, the growth trend in India does not reflect its full potential, resulting in a rising stock of unemployed. We see a good chance that India will achieve its potential

Exhibit 3

Global Growth in Working-Age Population (15-64) Over the Next Six Years (Mn)

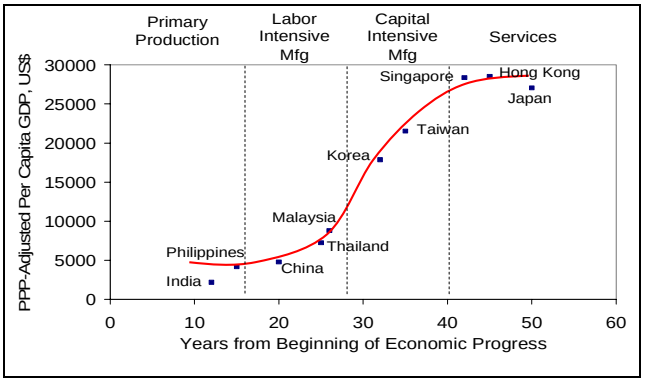


** Note: Africa includes a group of 56 countries.*

Source: UN, Morgan Stanley Research

Exhibit 4

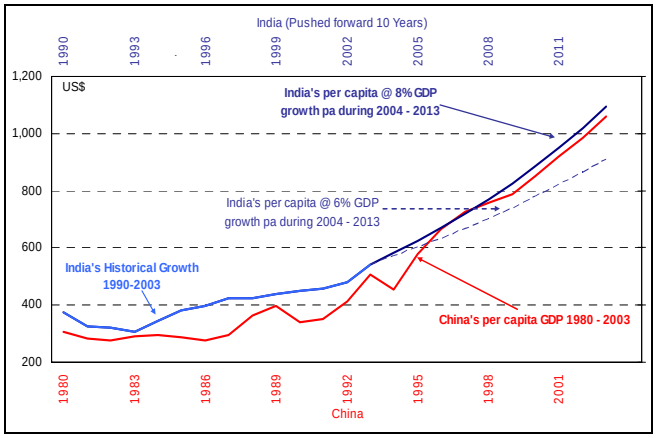
S-Curve for Income Growth in Asia



Source: IMF, Morgan Stanley Research

Exhibit 5

India's Per Capita GDP Trails China's by 10-13 Years**



*** India's per capita will reach China's current per capita in 13 years if India's real GDP grows at the current trend of 6% and in 10 years if India's real GDP grows at 8%; E = Morgan Stanley Research estimates*

Source: IMF, Morgan Stanley Research

growth of 7% plus over the next 10 years if it addresses its large government revenue deficit (tax and non-tax revenues less revenue expenditure) and its need for infrastructure development.

India Is Trailing China by 10-13 Years

India's per capita GDP will reach the current level in China in 13 years if India's real GDP grows at its current trend of 6%, or in 10 years if India's real GDP grows at 8%, on our estimates. India's overall GDP will take nine or seven years, respectively, to reach the current level in China if it grows at 6% or 8%, respectively. By 2015, if India and China maintain their average growth trends of the past 10 years, the nominal dollar GDP of the two economies will reach US$1.3 trillion and US$3.9 trillion, respectively. If India manages to grow at a higher rate of 8%, its GDP will reach US$1.6 trillion by 2015.

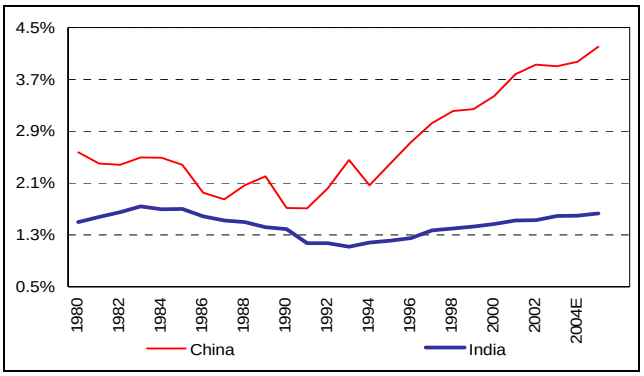
Competitiveness: Who's the Winner?

We believe that the recent trends in exports are a good measure of current competitiveness for the two countries. China's overwhelming presence in global trade is demonstrated in its superior overall share of global exports. On a sector basis, India's top exports are biased in favour of sectors with high labor intensity and low capital intensity. India's top five export segments are: commercial services, gems & jewellery, engineering goods, agricultural goods and textiles. In comparison, China has been able to succeed in almost all manufacturing segments. China's success is higher in segments with high labor and capital/infrastructure intensity. China's top five export segments are: electronics, computers & telecommunications, machinery, garments and services. Indeed, in terms of global export share, India leads China only in the steel and software sectors.

We believe that both India and China will continue to do well in *labor- and skill-intensive sectors.* However, we think India needs to implement aggressive reforms to match China's pace in labor- and skill-intensive manufacturing sectors. In *resource-based industries*, India could build an edge over China. Again, in this area, building scale would test India's capability to establish and maintain a network of critical physical infrastructure. In *infrastructure- and capital-intensive sectors*, we expect China to maintain its lead over India. We believe there is a good chance that India will start fighting for its space even in these sectors in five to 10 years as its savings improve, allowing the country to build critical physical infrastructure facilities.

Exhibit 6

China and India: Share of Global Nominal Dollar GDP

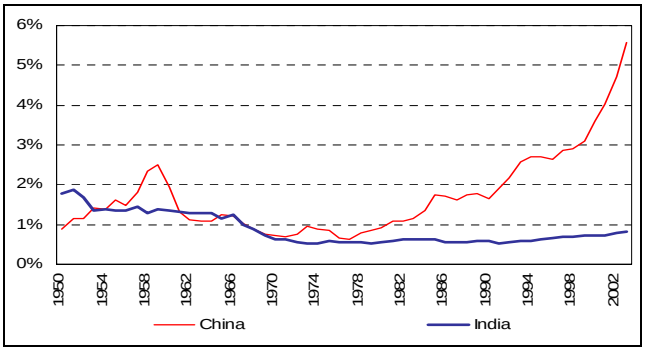


E = Morgan Stanley Research estimates

Source: IMF, Morgan Stanley Research

Exhibit 7

China and India: Share of World Exports of Goods & Services



Source: WTO, Morgan Stanley Research

Exhibit 8

India and China: GDP by 2015

US$ Bn	------2003------		------2015------	
	India	China	India	China
Nominal GDP				
If last 10 yrs growth maintained	575	1,410	1,409	3,922
If India grows at 8%	575	----	1,531	----
PPP Based GDP				
If last 10 yrs growth maintained	2,886	6,345	7,121	21,432

Source: IMF, Morgan Stanley Research

Many Challenges Ahead for the Two Economies

The structural story of these two high-growth economies is unlikely to reverse soon, in our opinion. There are no parallels to China's manufacturing success and the growing importance of India's services outsourcing platform. However, the near-term challenges facing these countries cannot be ignored. China's key challenge is to implement critical reforms to improve its institutional framework, especially the financial system, while India is facing the risk of delays to much-needed 'big shift' reforms.

We believe that India has to accelerate its economic reform process and create more productive job opportunities to ensure social stability. In our view, to accelerate its sustainable growth trend to 8%+, India needs to initiate the following seven-point program, among other reforms: (1) focus on developing its human capital, especially increasing the availability of primary education to its young population; (2) augment its savings rate through fiscal reforms; (3) increase capital accumulation through FDI and privatization; (4) kick-start investment in infrastructure; (5) reform the tax structure; (6) improve labor flexibility; and (7) initiate effective decentralization of government authority and responsibility.

China is facing its own set of challenges. In our view, the area in greatest need of reform is the financial sector. China's weak financial sector is already hurting its economy. The recent overheating of the economy, with fixed investment growing at 45% in C1Q04, is a case in point. Indeed, we estimate that the overshooting in the current economic cycle has resulted in excess investment of almost US$200 billion. The Chinese government has had to supplement monetary measures with administrative measures. We believe that it needs to implement major financial sector reforms and empower the central bank to act preemptively against any overshooting of the economic cycle. For China to sustain its 8-9% annual growth, we believe, the government needs to initiate the following four-point program, among other reforms: (1) install a more market-oriented institutional framework; (2) implement major financial sector reforms; (3) encourage greater participation from private-sector entrepreneurs; and (4) increase its focus on tertiary education to meet the growing needs of the competitive economy.

Conclusion

In today's rapidly globalizing world, the huge surplus working populations in India and China are making it imperative for the rest of the world to recognise these countries' key role in global competitive dynamics. India and China are creating new rules for global manufacturing and services output dynamics. Indeed, both countries are increasingly becoming an integral part of business strategy plans for global companies and should be the structural drivers for global productivity and disinflation. Surplus labor in China has already had a major impact on global inflation, and India has an increasing role to play in influencing this trend.

China has already achieved a 5.9% share of the US$7.5 trillion global goods export market. India, with its more recent entry into the services export arena, has built a 1.6% share of the US$1.7 trillion global services export market. We estimate that India's share has reached almost 2% (closer to 5% in the outsourcing market) of the US$450 billion global IT services market. It is likely to follow a similar trend in the IT-enabled business process outsourcing market of US$775 billion, where it currently has a share of only 0.5%. We believe that, in the next few decades, India and China will remain the two most dominant secular growth stories globally.

New Tigers of Asia: A Road Map

In this report, we break down the growth story for India and China into seven themes.

We start by contrasting the growth models, demographic profiles and consumption trends of these two Asian tigers in the first three themes. We then compare India's and China's competitive positions based on certain factors such as labor, capital, tax structure and infrastructure in themes four and five. In theme six, we ask: For key business segments, which country is the winner?

We conclude by examining where these countries need to go from here to consolidate their positions at the top of the emerging Asian league table.

Please see important disclosures starting on page !Unexpected End of Formula**.**

Theme 1: Varying Growth Mix

A Tale of Two Models

China Has Fired All Cylinders for Accelerating Growth

China has managed to grow at an average of 9.7% a year since 1991 compared with 5.8% for India. Taking advantage of a sharp rise in the working population ratio in the early 1970s, the Chinese government initiated major structural reforms in 1978, which allowed the virtuous interplay of labor and capital. In terms of segment growth mix, China has followed a model similar to that of other Asian countries. This relied on manufacturing exports as a key anchor for sustainable acceleration in growth and integration. As a result, China's manufacturing sector has recorded real growth of 11.5% a year since 1980.

However, this does not imply that there has been less emphasis on services and agriculture in China. The government has also pushed reforms in these sectors to achieve strong growth. In fact, in the 1980s, growth in services was higher than that in manufacturing. The strong growth in services was due in part to the low-base effect, but the government's measures also played a significant role.

The Chinese government also focused on agricultural reforms from the second half of the 1970s. It increased investment in rural infrastructure, pursued 'decollectivization', which allowed ownership of farmlands by individual laborers, reduced the mandatory delivery of output to the state by farmers and enabled farmers to have a more market-oriented output mix. This resulted in agricultural growth of almost 10% a year during 1980-1984 and average growth of 6.2% a year in the 1980s.

India Has Had Greater Focus on Building Macro Stability

India's economic growth witnessed a structural shift at the start of the 1980s. Growth has averaged 5.7% a year since that time compared with 3.5% in the prior three decades. The government initiated the reform process in the 1980s, which brought about acceleration in growth to 5.6% a year in 1980-90. In the 1980s, the government made an attitudinal shift in favor of the private sector. This resulted in a doubling of private corporate capital expenditure in the 1980s from the 1970s. However, a widening fiscal

Exhibit 9

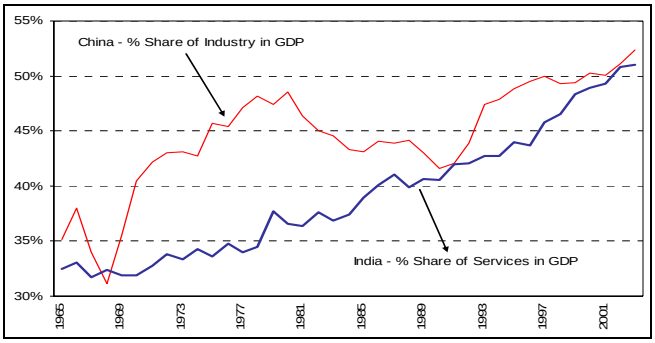
China and India: Segment Growth Rates

	1981 to 1990		1991 to 2003	
Average Growth pa %	China	India	China	India
GDP	9.3	5.6	9.7	5.8
---Agriculture	6.2	3.7	3.6	2.9
---Manufacturing	9.5	7.0	12.8	5.7
---Services	12.3	6.7	8.8	7.6

Source: CEIC, CSO, Morgan Stanley Research

Exhibit 10

Share of Key Segments



Source: CSO,CIEC, Morgan Stanley Research

imbalance at the end of the 1980s caused a balance of payments crisis, which led to the systemic initiation of the economic liberalization program. The economic reforms, which began in 1992, have successfully enabled the Indian economy to shake off the shackles of regulation and emerge as a deregulated, globally integrated market. Although, this has not resulted in higher growth, it has lent macro stability to the growth trend.

Services Is the Primary Driver for India

India's growth mix, however, has been significantly different from that of China. Over the past 13 years, India's services sector growth has averaged 7.6% a year compared with 5.7% for manufacturing. In comparison, China's manufacturing growth has been about 12.8% a year over this period versus 8.8% for services.

The importance of manufacturing to the Chinese economy is also evident in the huge 52% share of the sector in GDP compared with 15% for agriculture and 33% for services. In comparison, in India, the services sector contributes 51%,

agriculture 22% and industry 27%. In our opinion, the key reasons for the higher growth in India's services sector are the liberalization of financial services and the opening up of telecoms, which enabled a reduction in prices of telecom services by almost 85% in the three-year period, 1998-2001. This acted as a catalyst to growth in external demand for IT and IT enabled services.

Greater Openness in China

China has managed to increase its exports and foreign investment significantly over the past 20 years. China's exports plus imports (goods plus services) as a percentage of GDP increased to 67% in 2003 in comparison with 22% in 1982. For India, the share has risen to 28% of GDP from 15% in 1991, the year in which reforms were initiated. The slower growth in India has been due to the government's relative tardiness in removing trade barriers. On the other hand, China has drastically reduced its tariffs. In fact, its tariffs as a proportion of value of imports have dropped from 17% in 1985 to around 3% currently. In comparison, India has been slow to cut import tariffs, and tariffs as a proportion of the value of imports remain high at 15%. Similarly, India has not managed to attract significant foreign direct investment. FDI as a percentage of GDP in India has averaged around 1% over the last three years compared with approximately 4% for China.

Exhibit 11

China and India: Sector Breakdown of GDP

(%)	1960	1970	1980	1990	2003
India					
Agriculture	52	44	40	32	22
Industry	19	24	24	27	27
Services	29	32	37	41	51
China					
Agriculture	23	35	30	27	15
Industry	44	40	49	42	52
Services	32	24	21	31	33

Source: CSO, CEIC, Morgan Stanley Research

China Has Had Better Sequencing and Faster Implementation of Reforms

China ensured greater acceptance from the rural population for its open economy plan, as it initiated agricultural reforms first, which helped accelerate rural incomes. Moreover, China has implemented its industrial reforms at a much faster pace than India. India has not yet initiated a systematic set of reforms for the agricultural sector as reflected in its poor growth trend compared to China. Its slow pace of industrial reforms is reflected in its manufacturing sector's growth, which remains relatively low due to a plethora of gaps, most important among them being a lack of a world-class infrastructure, rigid labor laws, inefficient tax laws and government interference.

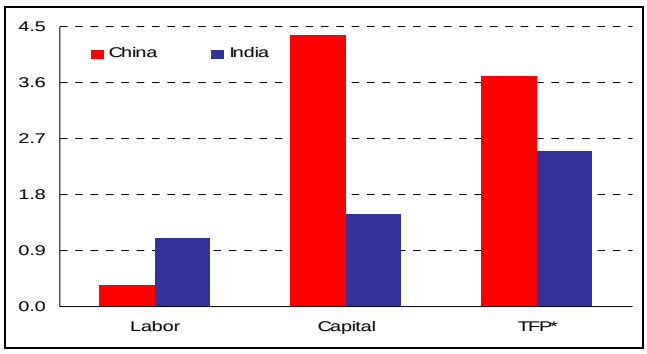
Accounting for Growth Differences

A simplistic way to account for growth in a country would be to consider the contributions from the three basic drivers: (1) labor force inputs, (2) capital accumulation (inputs) and (3) total factor productivity. Total factor productivity (TFP) is that part of non-factor inputs that enables higher growth with less application of factor inputs. In other words, TFP implies enhanced output per unit of input. It encompasses the contribution of technology and managerial aspects to the growth of real output.

The two major areas where India's growth suffers compared with that of China are capital accumulation and lower productivity growth. According to IMF estimates, capital accumulation explains a very large proportion of China's growth. Indeed, in the 1990s, on average, more than 4 percentage points of China's GDP growth was accounted for by capital accumulation, which was supported by its high national savings rate. In comparison, capital accumulation in India, contributed only about 1.5 percentage points of GDP growth. For India, a large proportion of its growth is accounted for by total factor productivity, although it was lower than that for China on average in 1990s. This analysis emphasizes the importance of improving the aggregate savings rate in India, which is being constrained by the government's higher revenue deficit as well as by the high age dependency ratio (the ratio of the non-working to the working population). The slower reform process is an additional constraint to India achieving its full growth potential.

Exhibit 12

China and India: Accounting for Growth Differences, 1990s (% pa)



**Total factor productivity growth.*

Source: IMF, Morgan Stanley Research

Theme 2: Demographics

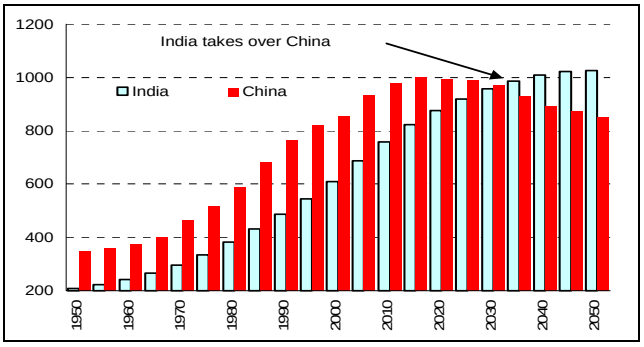
Threat or Opportunity?

China and India Changing Global Labor Supply Dynamics
China and India together account for almost 40% of the world's working-age population (people in the age group of 15-64 years) and 18% of global GDP on a PPP basis. This is one of the key reasons for the growing importance of these two economies in the global economy. The other important factor is the huge surplus working population in these countries, which is making it imperative for rest of the world to recognise their key role in global competitiveness and output dynamics. By 2010, India and China will contribute an additional 83 million and 56 million people, respectively, to the global labor pool. In comparison, the US will contribute 13 million people and Europe just 0.1 million people during this timeframe.

China Will Have a Larger Working Population Until 2025
China has benefited from a sharp fall in its age dependency ratio since the late 1960s. Although, India has also witnessed a reduction in age dependency since the 1970s, the pace of improvement has been much slower. While China's age dependency ratio fell sharply to 43% in 2003 from 79% in 1970, India's dependency ratio dropped to 61% in 2003 from 79% in 1970. In fact, China's age dependency ratio will continue to be lower than that of India until 2025 even though it is likely to bottom out at 40% in 2010. However, from 2025 China will suffer from a sharp rise in its age dependency ratio. More importantly, from 2010 the age dependency ratio in the US and Western Europe will start deteriorating significantly. In Japan, age dependency has been worsening since 2000. This further emphasizes the importance of India and China in global trade dynamics.

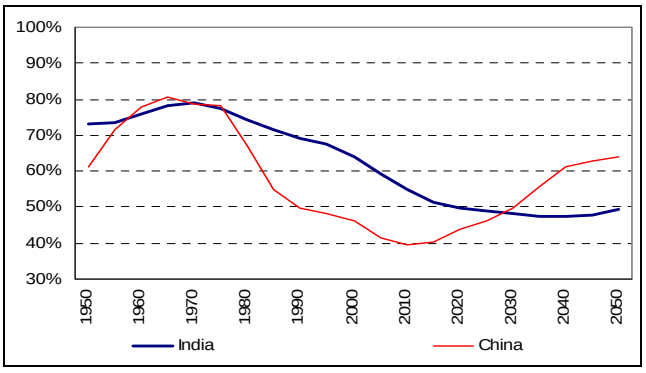
India's Population Will Soon Catch Up with China's
The one-child-policy followed by China since 1980 has resulted in a significant reduction in China's population growth over the past few years. On the other hand, even though India's population growth has peaked, it remains significantly higher than China's, resulting in its population closing in on China's. India's population is growing at a rate of 1.6% compared to China's 0.8%. Indeed, the United Nations expects India's population to have a CAGR of 0.9% over the period 2000-2050 compared to China's 0.2%, outstripping China's population in 2035.

Exhibit 13
China and India: Working Population Age 15-65* (mn)



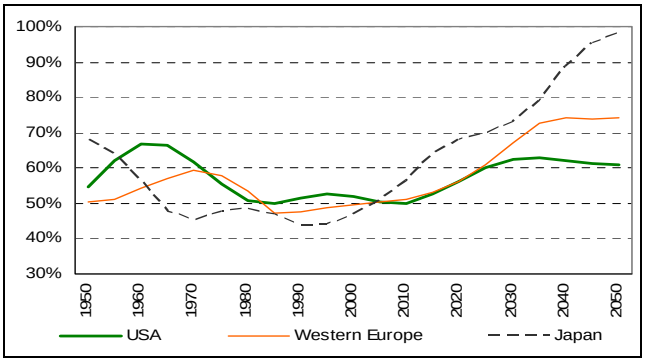
** People who could potentially be economically active.*
Source: UN

Exhibit 14
China and India: Age-Dependency Ratio (%)



Age dependency = Prop. of non-working to working population. Source: UN

Exhibit 15
Developed Countries: Age Dependency (%)



Age dependency = Prop. of non-working to working population. Source: UN

China Has Managed to Create a Virtuous Loop

China has managed to convert its increasing working population advantage into a virtuous loop of creating productive jobs for the rising work force translating into higher savings, investment and growth. China's age dependency peaked in 1965 at 80%. Since then its working population has been rising sharply. Its age dependency ratio fell to 67% 1980 and further to 46% in 2000. This growing working population has been able to find productive employment opportunities and, in turn, generate adequate savings to finance higher physical capital accumulation. China's savings rate has increased from about 25% at the start to mid-1960s to 34% in 1980, and likely improved to 45% in 2003. This, in turn, has financed the acceleration in growth of physical capital accumulation and GDP.

Improving Human Capital and …

China has also focused on improving its human capital. It implemented free nine-year compulsory education (six years Primary and three years Junior High) in 1986. This rule was passed to ensure that rural areas, which had only four to six years of compulsory schooling, were brought in line with their urban counterparts. This enabled a dramatic increase in literacy levels, especially in the rural areas. However, in India literacy has lagged because of the government's low emphasis on primary education. This is evident from the public expenditure on education. While per capita expenditure was higher in India (in US dollar terms) in the early 1990s, since then China has left India far behind.

The increased expenditure on education enabled the reduction in illiteracy rates in China from almost 23% in the early 1980s to just 6% in 2000. This compares with the current 35% overall illiteracy rate in India. This is despite the more rigorous definition of literacy followed in China. In India, a person is literate if he or she can just write his/her name, while in China a person who can read is classified as literate. Though India has lagged in primary education, it has focused on higher education, which is resulting in the availability of a large number of English-speaking graduates, enabling its participation in IT opportunities.

… Urbanization Are Important Elements of Virtuous Loop

Since China initiated reforms in 1978, there have been two big changes: (a) large-scale migration has resulted in people moving out of rural into urban areas and (b) as state owned enterprises have downsized, the urban private sector has

Exhibit 16

China and India: Savings and Age Dependency Trend

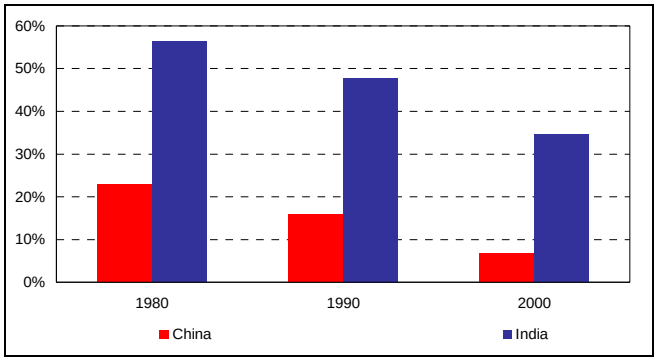
(%)	1960s	1970s	1980s	1990s	2002
India					
Age Dependency[1]	77.8%	76.8%	71.6%	66.9%	62.2%
Savings[2]	12.6%	17.5%	19.4%	23.1%	24.2%
Investments[3]	14.7%	17.6%	21.2%	24.5%	23.7%
China					
Age Dependency[1]	79.0%	74.8%	57.4%	48.1%	44.4%
Savings[2]	26.1%	34.8%	34.8%	40.6%	42.0%
Investments[3]	25.6%	34.7%	35.4%	38.5%	39.4%

1. Ratio of non-working to working population. 2. Gross national savings rate. 3. Gross capital formation.

Source: UN, CIEC, CSO, Morgan Stanley Research

Exhibit 17

China and India: Illiteracy Rates



Source: China Statistical Yearbook, CMIE, Morgan Stanley Research

emerged as a major source of employment generation. Urbanization has helped China's manufacturing sector improve productivity through efficient access to critical infrastructure. The large-scale urbanization in China is evident in the reduced share of the agricultural workforce. The share of employment in the low income-generating agricultural sector dropped to 45% in 2001 from 68% in 1981. However, such a shift in population to more productive areas of the economy has eluded India. Though the share of the workforce dependent on agriculture has fallen over the past two decades, the decline has been slow, down from 67% in 1981 to 58.5% in 2001.

Rising Hopes of India Building a Virtuous Loop Too

Measured only in terms of age dependency ratio trends, India is about 15 years behind China. India's age dependency ratio should improve, albeit gradually, over the next 20 years. Will this necessarily translate into higher savings, investments and growth for India? We do not believe that it will be an automatic process, and the realization of potential growth will depend on the pace of implementation of reforms. The trend over the past 13 years is a case in point. For instance, India's age

dependency ratio is estimated to have improved to 61% in 2003 from approximately 69% at the start of the 1990s. However, there has been a negligible improvement in the savings and investment rates in this period. Although household savings did rise during this period, aggregate savings remained relatively stagnant because of government overspending, which in turn was on account of the poor management of public finances and the slow pace of reforms. Over the next 10 years, there should be further improvement in India's age dependency trend, in turn improving its savings and growth potential. However, a comprehensive set of reforms will be necessary to achieve this growth potential, we believe.

Greater Focus on Manufacturing Is Inevitable for India

Although, the higher growth in services outsourcing will help, we believe that increased focus on manufacturing and construction of an adequate infrastructure will be inevitable for India. ***First,*** this will be necessary to create more productive employment opportunities for the large proportion of the relatively less educated section of the work force. According to the Indian Planning Commission, 44.0% of all workers in 1999-2000 were illiterate and a further 22.7% had schooling only up to the primary level. If we define the minimum level of education necessary to function in a modern economy as schooling up to the middle level, then only about 33.2% of the labor force had schooling of that level and above. ***Second***, employment elasticity within the industrial sector is not much lower than that for services. Indeed, our analysis shows that the employment elasticity of growth in services is the same as manufacturing. In other words, 1 percentage point of growth in both segments brings about the same change in employment growth. ***Third,*** the global trade opportunity is significantly higher in manufacturing. Currently, global trade in goods is US$7.5 trillion compared with US$1.8 trillion in services. More importantly, the global market in IT and IT-enabled services outsourcing, which is relevant for India, is even smaller.

However, a greater presence in manufacturing would require higher savings for India to be able to invest in the much needed development of its physical infrastructure. Our analysis shows that the capital intensity of manufacturing is significantly higher than that for services. While India will benefit from an improvement in its gross savings potential, due to the increasing proportion of working population, we believe that it will also be critical for the country to sharply reduce its revenue deficit and implement other critical reforms to augment resources for investment in infrastructure and manufacturing.

Exhibit 18

Contribution of Outsourcing to Employment Generation

(As of F2004)	Mn	Share
Total Employment in India	**354.0**	**100.0%**
Employed in IT	**0.7**	**0.2%**
---Software	0.4	0.1%
---ITES	0.2	0.1%
Manufacturing	**42.9**	**12.1%**
---Employed in Manf. Outsourcing	6.4	1.8%
Total employed in outsourcing	*7.1*	*2.0%*

Source: NASSCOM, Census of India, Morgan Stanley Research

Exhibit 19

China: Employment Composition

(mn)	1980	1990	1995	2000	2005	2010
Population	987	1,143	1,211	1,266	1,308	1,342
Working-Age Pop.	594	763	829	888	941	996
Labor Force	429	653	687	740	778	818

Source: IMF

Exhibit 20

India: Employment Composition

(mn)	1983	1993-94	1999-00	2001-02*	2006-07*
Population	718	894	1,004	1,036	1,112
Working Age Pop.	393	509	583	599	671
Labor Force	261	336	363	378	414
Employment					
-- Rural	188	241	251	256	274
-- Urban	52	75	86	88	94
Unemployment	22	20	27	35	46
Unemployment Rate (%)	8.3	6.0	7.3	9.2	11.0

** Assuming 6.5% growth over 10th Plan period (2002-07); projection of employment on a current daily status basis.*

Source: Planning Commission, Government of India

China May Need to Look for Opportunities in Services

With the next wave of globalization likely to be in services, China may need to start looking at opportunities in IT services exports and business process outsourcing. We believe that China is significantly behind India in both segments. China will need to work on three areas: *First*, while it probably has a greater amount of skilled labour (such as engineers), the surplus available for services is much lower than for India. *Second*, China's skilled labour force lacks fluency in English. *Third*, the lack of an established commercial class has meant less opportunity for home-grown entrepreneurs to participate in this growth segment. China's domestic companies will likely take some

time to build the management structure required for the services industry, which is a highly people-oriented industry. To combat these problems, the Chinese government is increasing the availability of a tertiary-educated workforce. In addition, we may see multinationals participate in the early stages of China's introduction to services outsourcing. We believe that China will take at least five years to reach India's current position even if it starts working on these areas immediately.

Threat to Stability?

There could be a threat to the stability of the two nations if significant portions of the rising population in the working age group are unemployed. By 2010, our estimates indicate that the working age population in India will rise by 83 million and in China by 56 million. We believe that China has already begun to work towards addressing this issue, but the recent trend in India has been worrying. Over the past five years, the job-creation record in India has been poor. The stock of jobless people appears to have risen significantly. India's problems are compounded because of the low employment elasticity observed over the past 10 years at 0.16 (i.e., for every 1% increase in GDP, employment rises by 0.16%). China's employment elasticity is estimated at around 0.50.

We believe that unless the two countries, especially India, initiate a well-planned program to create adequate employment, the boon of a rising work force could increasingly cause risks to social stability. For instance, in India, according to official estimates, the stock of unemployed will rise to 45.6 million (11% of the labor force) by 2006-2007 from 34.9 million (9.2%) in 2001-2002 and 26.6 million (7.3%) in 1999-2000, even if GDP grows at an average 6.5% a year compared with the past 10-year average of 6.1% a year. We should note in this regard that official figures underestimate the stock of unemployed because of the lack of accounting for underemployment and disguised employment in rural areas.

This trend, if continued, will have an adverse impact on social stability in India. Indeed, we believe that one of the reasons for the evolution of a political trend of coalition governments in India is the rising number of unemployed. People are increasingly voting for regional political parties, who are closer to them, in the hope that these regional parties would be better placed to understand their needs and be more accountable. Hence, we believe that acceleration of GDP growth to 8% plus a year through a commensurate push toward manufacturing, agriculture and construction is both inevitable and necessary for India. At current trends of 6% growth a year, demand from the poor section of the population is rising in the form of subsidies, resulting in the government having to impose burdens in various forms on the rest of the system.

China also suffers from similar pressures. Its official unemployment level at the end of 2002 was estimated to be 14 million (1.9% of the labor force). However, according to the Organization for Economic Cooperation and Development (OECD), the hidden unemployment in rural areas in China could be between 150 and 275 million (2002).

This potential social problem in the two countries is further demonstrated by the numbers (about 44%) of Indians (465 million) and Chinese (19%, 247 million) who live on a per capita income of less than US$1 a day.

Theme 3: Consumption Trends

India Needs 10-15 Years to Reach China's Market Size

China's Per Capita Consumption Penetration Well Ahead of India's

Not only is China well ahead of India in terms of exports, its domestic market for products is also much bigger. Penetration rates and per capita consumption are higher in China for most broad-based manufactured consumption items. In fact, real per capita private consumption expenditure in China has increased by an average of 7.4% a year over the past 10 years compared with 3.4% in India.

The penetration of most products is higher in China as its per capita income is more than twice that of India. The Indian consumption basket is still relatively primitive and more biased towards such products as food, beverages and tobacco. An average Indian spends about 48% of his/her expenditure on products other than food, beverages and tobacco compared with 62% in China. The other important factor influencing penetration rates for manufactured non-food related products in China has been the low price points of products. According to a study by CII-Mckinsey, consumer durables are on average 28-33% cheaper in China than in India.

Low employment growth has also been a factor affecting the poor penetration rates for broad-based products. Over the past seven to eight years, employment growth in India has dropped below the rate of growth for the total working population. Indeed, in the past five years, the stock of population employed in the organized sector has witnessed a decline at an annualized rate of 0.6% despite its rising share in overall output.

The trend of slow growth in productive employment opportunities is also reflected in the analysis of National Sample Survey data (2000-01) on household expenditure. According to this survey, in the 1990s the real per capita consumption expenditure of the bottom 70% of the total population, and particularly the bottom 80% of the rural population, has not shown any perceptible change. In fact, it showed a fall towards the end of this period.

Exhibit 21

China and India: Consumption Basket, 2002

(%)	China	India
Food, Beverages & Tobacco	38	52
Leisure & Education	11	4
Clothing & Footwear	11	5
Transport & Communication	7	14
Household Goods & Services	9	3
Housing	6	7
Medical & Health	5	5
Household Fuels	5	3
Miscellaneous	8	7

Source: Euromonitor, Morgan Stanley Research

Fixed Investment-Based Products – the Difference Gets Larger

In the case of fixed investment-driven products, the gap widens with Chinese consumption being multiples of that of India. Consumption of commodities like steel, cement, aluminium, copper and other similar products has been significantly higher in China. The consumption of these products has been a function of fixed investment generally and infrastructure investment specifically. This in turn is a function of the national savings rate and the amount of foreign capital invested (FDI). China's savings rate is much higher at 45% as compared to India's 24%, and FDI in China is 13 times that in India. In fact, in 2002, China's total capital spending on electricity, construction, transportation, telecom and real estate was US$260 billion (20.3% of GDP) compared with US31 billion in India (6.0% of GDP).

India's Market Size for Most Products: 1/5th to 1/10th

Our analysis indicates that India is about five to 20 years behind China in per capita consumption of key items, assuming the current growth trend is maintained. Even if it manages a big shift in growth rates and follows China's trend, it is likely still to be four to 15 years behind China across different products.

To approximate the amount of time the market size for the above products in India will take to reach China's current market size, we performed a regression analysis with China's and India's per capita consumption of various products being dependent on their respective per capita income levels.

Please see important disclosures starting on page !Unexpected End of Formula**.**

Based on this regression analysis we arrived at India's and China's respective per capita consumption to income slope levels, which explain the penetration trend to per capita trend relationship. These slopes help explain the relationship between past growth in per capita consumption and the increase in per capita income levels. We have projected per capita consumption and, in turn, the market size in India based on two scenarios:

- India will continue to follow its own past slope i.e., it follow its past penetration to per capita income trend; we call this Type I.

- India will shift to China's slope i.e., it follows China's penetration to per capita income trend; we call this Type II.

Exhibits 27 to 33 detail the growth in the total market size of individual products as the per capita income for India increases.

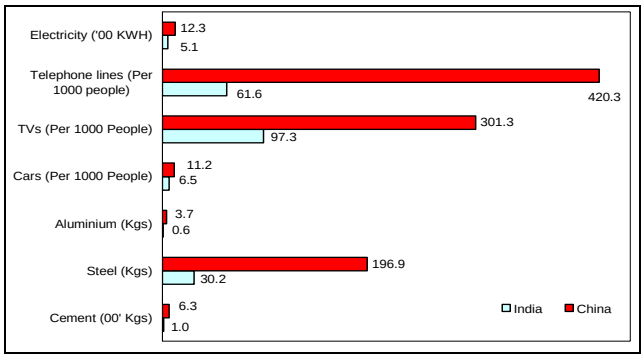
We have also provided alternative calculations, assuming two real GDP growth scenarios, 6 % and 8 % a year. We have forecast the number of years India will take to reach China's market size under these growth scenarios and under the two slope functions – one using India's past trend and the other using a shift to China's past trend (see Exhibits 24 and 25).

Our nominal GDP growth forecasts for India are based on a constant real GDP growth rate of 6-8% a year. For per capita calculations, we have used population growth as predicted by the UN.

The best outcome for India would be that its real GDP growth accelerates to 8% and it shifts to China's penetration to income ratio. The worst outcome would be for India's GDP to continue to grow at 6% and follow its own past penetration to income slope (see implied growth rates for demand in the tables below). The real outcome however is likely to lie between the two forecast outcomes.

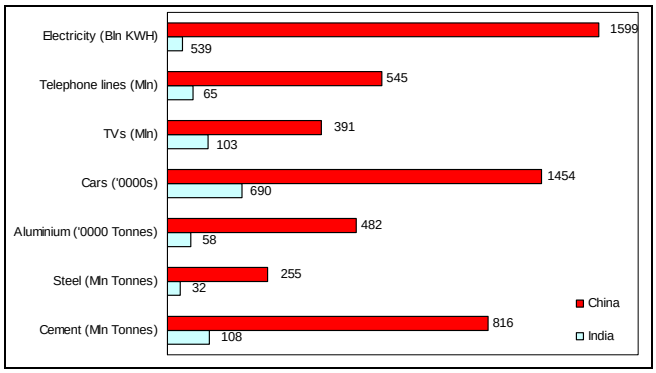
Our analysis also shows that out the seven products we have selected for study, electricity and autos take the fewest number of years to reach China's current market size.

Exhibit 22
China and India: Current Per Capita Consumption



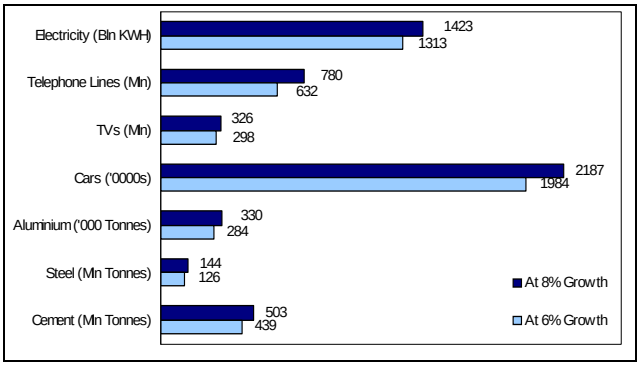
Source: Industry sources, Morgan Stanley Research

Exhibit 23
China and India: Current Market Volume



Source: Industry sources, Morgan Stanley Research

Exhibit 24
India: Estimated Market Volume in 2015 (if India follows China's Consumption to per Capita Income Slope)



Source: Morgan Stanley Research

Please see important disclosures starting on page 53.

Exhibit 25

No of Yrs Required for India to Reach China's Current Market Size if It Follows the Trend of Its Current Consumption to per Capita Income Slope (Type I)

	No of Years		Actual Growth	Implied Growth Forecast	
Assumed GDP Growth Rate of:	**6%**	**8%**		**6%**	**8%**
Electricity	17	14	5%	7%	8%
Telephone Lines	14	11	23%	16%	21%
TVs	15	12	11%	9%	12%
Cars	8	6	10%	10%	13%
Aluminium	47	36	3%	5%	6%
Steel	34	26	7%	6%	8%
Cement	29	23	8%	7%	9%

Source: Morgan Stanley Research estimates

Exhibit 26

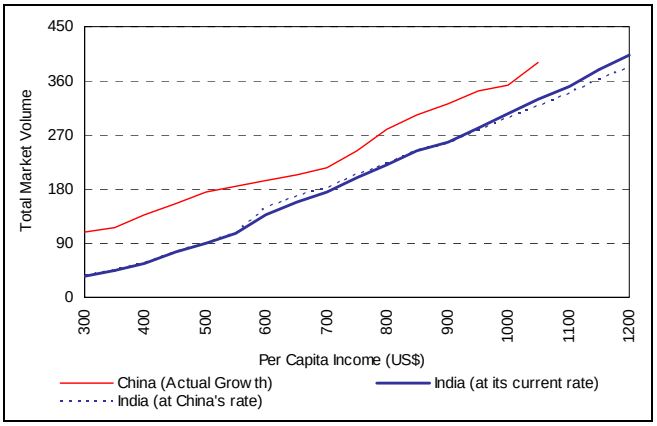
No of Yrs Required for India to Reach China's Current Market Size if It Follows China's Consumption to per Capita Income Slope (Type II)

	No of Years		Actual Growth	Implied Growth Forecast	
Assumed GDP Growth Rate of:	**6%**	**8%**		**6%**	**8%**
Electricity	14	10	5%	8%	11%
Telephone lines	9	7	23%	28%	39%
TVs	15	11	11%	9%	13%
Cars	6	4	10%	13%	20%
Aluminium	17	13	3%	13%	18%
Steel	20	15	7%	11%	15%
Cement	19	14	8%	12%	16%

Source: Morgan Stanley Research estimates

Exhibit 27

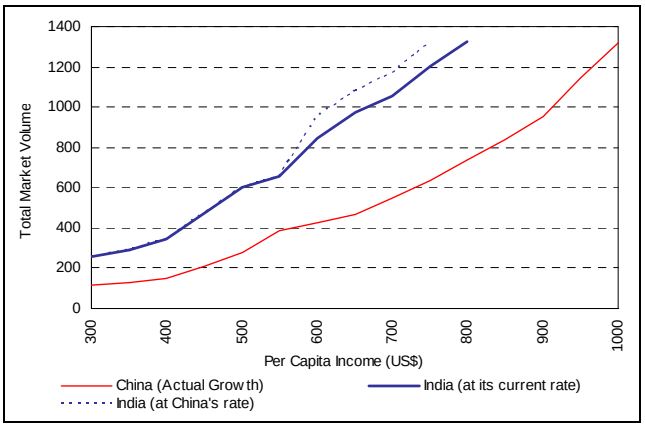
China and India: Market Volume of TV Sets (mn)



Source: Morgan Stanley Research estimates

Exhibit 28

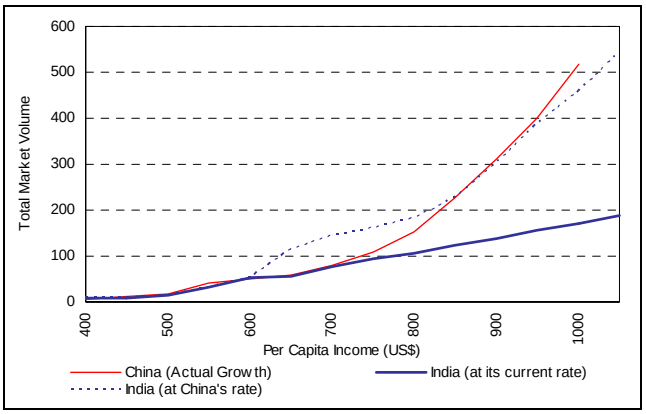
China and India: Market Volume of Cars ('0000s)



Source: Morgan Stanley Research estimates

Exhibit 29

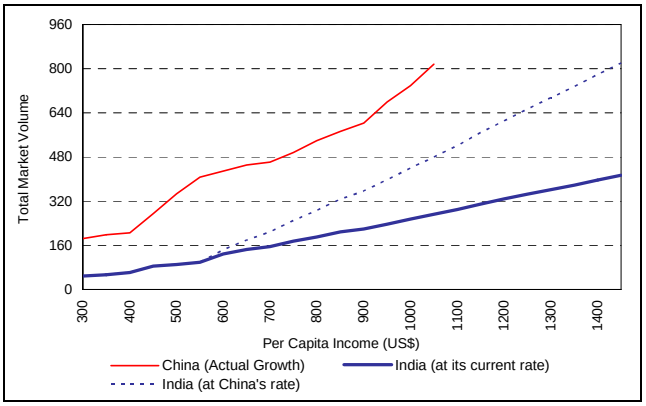
China and India: Market Volume of Fixed Telephone Lines (mn)



Source: Morgan Stanley Research estimates

Exhibit 30

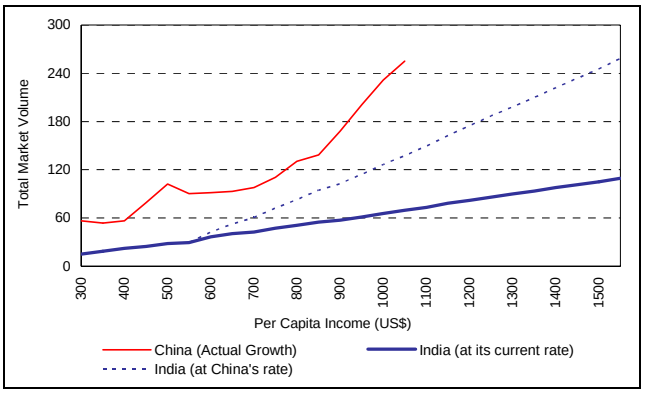
China and India: Market Volume of Cement (mn Tonnes)



Source: Morgan Stanley Research estimates

Exhibit 31

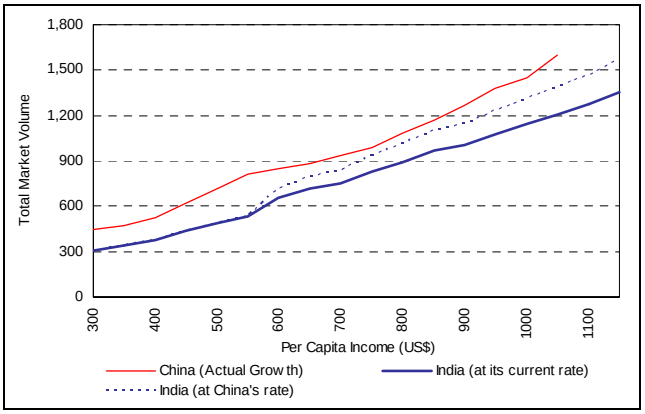
China and India: Market Volume of Steel (mn Tonnes)



Source: Morgan Stanley Research estimates

Exhibit 32

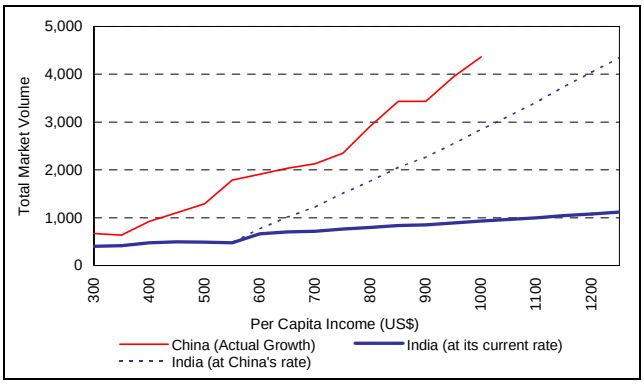
China and India: Market Volume of Electricity (bn KWH)



Source: Morgan Stanley Research estimates

Exhibit 33

China and India: Market Volume of Aluminium (000 Tonnes)



Source: Morgan Stanley Research estimates

Theme 4: Competitiveness Issues

Embracing External Sector-Led Growth Models

China's Share in Global Trade Is Six Times India's

One of the most reliable measures for comparing competitiveness would be a country's market share in global exports. On this parameter, India lags China substantially despite an improvement in the trend over the past few years. While India had a 2.2% share of global goods exports in 1948, this position has been steadily eroded, reaching a low of 0.5% in 1983 and around 0.7% currently. Even if we consider services, India's combined share in goods and services is 0.9% versus 0.5% in 1990 and 1980. In contrast, China's combined share in goods and services rose sharply to 5.2% in 2003 from 1.6% in 1990 and 0.9% in 1980.

India's Record in Global FDI Share Is Also Poor

One of the other measures for competitiveness is the trend in long-term equity-oriented capital flows, which reflects the participation by the rest of the world in a country's productive growth. India's share in global FDI remains poor at less than 1% compared with China's share of 12%. Indeed, China has received a cumulative inflow of US$480 billion since 1990 compared with US$33.1 billion in India. India's FDI inflows pale even when compared with other emerging markets. For instance, Mexico receives about US$10 billion compared with FDI inflows of US$4-5 billion a year in India.

Exhibit 34

China and India: Trend in Exports and Market Share

	India			China		
(US$bn)	1990	2003	CAGR	1990	2003	CAGR
Goods Exports	18	55	8.9%	62	438	16.2%
Share in world exp	*0.5%*	*0.7%*		*1.8%*	*5.9%*	
Services Exports*	4.6	28	14.9%	6	45	17.1%
Share in world exp	*0.6%*	*1.6%*		*0.7%*	*2.5%*	
Total Exports	22.6	82.7	10.5%	67.8	482.9	16.3%
Share in world exp	*0.5%*	*0.9%*		*1.6%*	*5.2%*	

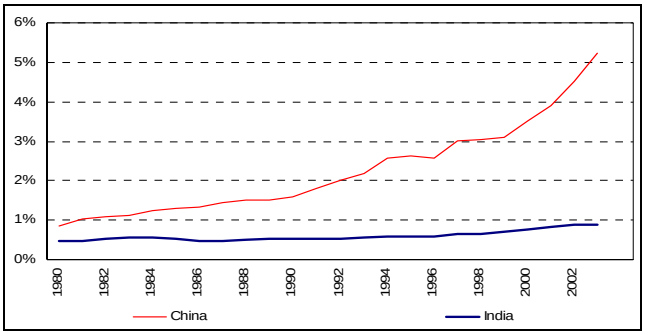
Total world exports of goods and services were US$4,232 bn in 1990, US$9,245 bn in 2003; a CAGR of 6.1%

** Services include travel, transportation and other commercial services.*

Source: WTO, Morgan Stanley Research

Exhibit 35

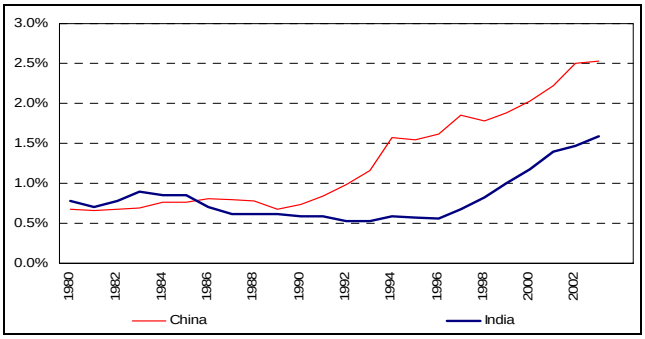
China and India: Share of World Good and Services Exports



Source: WTO, Morgan Stanley Research

Exhibit 36

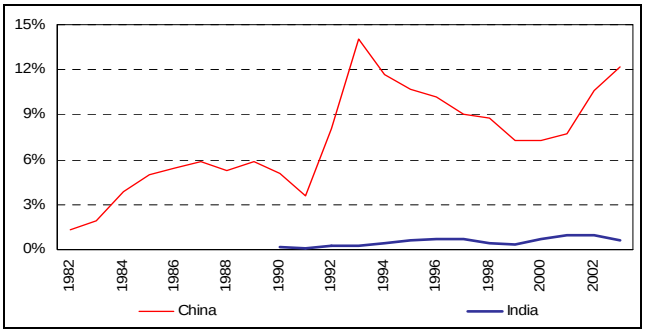
China and India: Share of Commercial Services Exports



Source: WTO, Morgan Stanley Research

Exhibit 37

China and India: Share of Global FDI



Source: WEO, RBI, CEIC, Morgan Stanley Research

India Taking the Lead in High-End Commercial Services

On an aggregate basis, China's share in world commercial services exports at 2.5% is higher than that for India of 1.6%. However, this includes tourism and transport revenues. China's total services exports are about US$45 billion compared with US$28 billion for India. The mix, however, is very different. In India's case, there is a bias towards scaleable IT services and software services. Currently, IT services and IT-enabled services (IT and ITES) account for 47% of India's total services exports. On a conservative estimate, we expect IT and ITES exports to rise to US$50 billion by 2010 (National Association for Software Companies estimates India's IT export revenues to be around US$50 billion by 2008). Due to strong growth in IT and ITES, India's commercial services exports are currently growing at 20% compared with 13% for China. We believe that India's aggregate share in the global commercial services trade will start outpacing China's share in the next five to six years.

Low Savings and Poor Business Environment Constrains India's Manufacturing

China's success in manufacturing is well demonstrated by its 5.9% share of global goods exports. China's goods exports recorded a CAGR of 16.2% from 1990 to 2003. One of the ways to measure competitiveness would be to compare the differences in domestic retail prices in India and China for some basic consumer goods, which would explain the differences in operational environment for manufacturing in the two countries. A study conducted by the Confederation of Indian Industries (CII) and McKinsey shows that Chinese manufactured products are around 28-33% cheaper than India's. We believe that India needs a major overhaul of its manufacturing business environment to follow China's lead in manufacturing.

Need to Find Productive Jobs for Surplus Labor

While China has been using exports to provide growth, India is increasingly trying to follow the same path. The export focus has stemmed from the two countries' economic goal of increasing productive employment opportunities for their huge surplus working-age populations, which are still growing at a high rate. This approach prompts us to compare the global competitiveness of the two countries' growth models on select parameters.

Analysing Competitiveness Issues

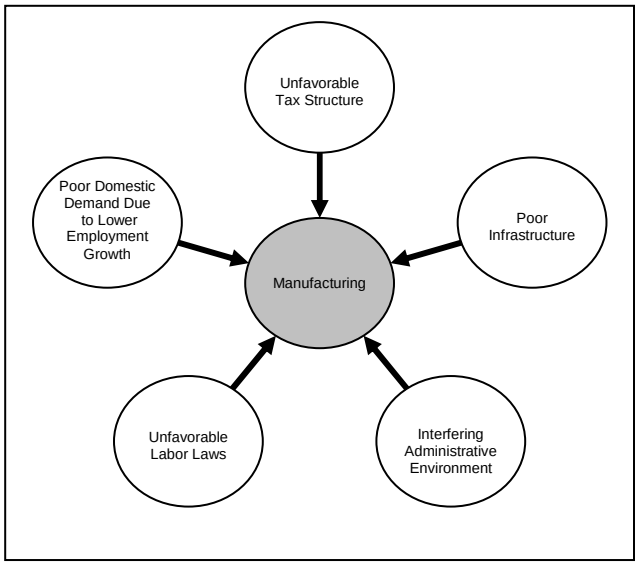
In the following few pages, we compare some key factors in India and China to assess the two countries' relative competitiveness. The factors included in our analysis are:

- *Labor cost, productivity and availability*
- *Capital cost, productivity and availability*
- *Direct and indirect tax structure*
- *Infrastructure costs and access*
- *Quality and sustainability of financial system*
- *Progress of overall institutional framework*

Towards the end of the section, we analyse how these factors influence competitive success for India and China across different sectors.

Exhibit 38

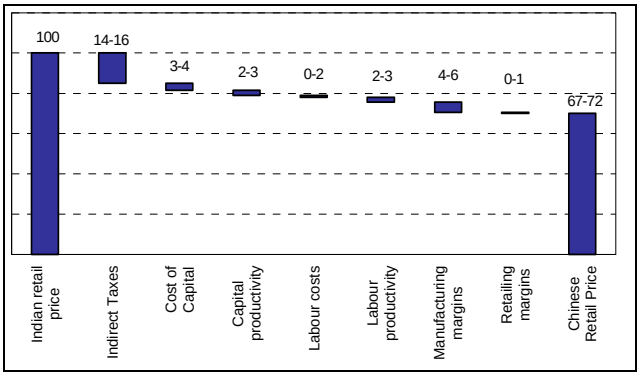
Manufacturing Environment in India



Source: Morgan Stanley Research

Exhibit 39

China and India: Drivers of Price Manufacturing Products' Differential



Source: CII Mckinsey Analysis

Theme 4: Competitiveness Issues

Labor: China Scores in Basic Education, India in Tertiary

China Had Higher Focus on Developing Basic Skills

China has been ahead of India in improving the basic education standards of its population. It ranks high on all parameters for primary education in comparison with India. While both countries have a gross primary school enrolment ratio at 100%, India ranks poorly on completion ratios. In India in 1999-2000, only 47% of all children had managed to survive through to grade five of the primary schooling, whereas in China this ratio was 98%. The condition of primary education facilities also ranks poorly in India when compared with China. The pupil-teacher ratio (number of students per teacher) for primary education in China is 20 compared with 40 in India.

Similarly, India ranks poorly on secondary schooling parameters too. As per UNESCO estimates in 2000, the secondary school (entrance age 10 years) enrolment ratio (percentage of relevant age group receiving full-time education) was low in India at 49% compared with 68% in China. The pupil-teacher ratio for secondary schooling in India is 34 versus 19 in China.

India has finally initiated a greater focus on schooling, but this realization has come late. In India, there are about 200 million children in the 6- to 14-year age group, but only 120 million are enrolled in schools and net attendance at the primary level is just 66% of the enrolment. According to World Bank estimates, youth male illiteracy in India is 20% compared with 1% in China. We believe that the government needs to provide new initiatives to train this large part of the population who will enter the work force without adequate education.

Exhibit 40

China and India: Education Data Comparison

Education	China	India
Primary Schooling		
Gross Enrollment Ratio (%)	114	102
Drop-Outs (%)	2	53
Pupil/Teacher Ratio	20	40
Secondary Schooling		
Gross Enrollment Ratio (%)	68	49
Pupil/Teacher Ratio	19	34
Literacy		
- Adult (%)	84	57
- Male (%)	92	68
- Female (%)	76	45

Source: UNESCO Institute for Statistics, World Bank, Morgan Stanley Research

India Does Relatively Better in Tertiary Education

The stock of tertiary educated population in China is higher than that in India, largely in line with the gap in the young population in the two countries. In terms of enrolment for tertiary education, 12.1 million students enrolled in China in 2000-01 compared with about 9.4 million students in 1999-00.

However, India is ahead in terms of the proportion of its population who have attained tertiary education. As per the IMD World Competitiveness Year Book (IMD), in 2001 about 8% of the population between the ages of 25 and 34 years had attained some tertiary education compared with 5% in China. Another edge for India is that a majority of the tertiary programs use English as the main medium of instruction. This is not the case in China. India adds about 2.3 million bachelor degree graduates and about 300,000 engineers annually. In terms of the degree that the university education system meets the competitive needs of the economy, IMD ranks India sixth among 30 nations with a score of 6.2 out 10 compared with a ranking of 25 for China with a score of 4.4 out of 10.

Please see important disclosures starting on page 53.

Exhibit 41

Higher Education Comparison (Students Enrolled)

(mn)	India 1999-00	China 2000-01
Post Secondary Non-Tertiary	0.38	0.69
Gross Tertiary	9.40	12.14
(a) Bachelor's and Master's Degree	9.27	6.63
(b) Technical Bachelor's Degree/ Non-University Tertiary	0.07	5.43
(c) MPhil/Doctorate	0.05	0.08

Source: UNESCO Institute for Statistics

India Has a Greater Pool of Surplus Skilled Labor

India, however, has a large pool of skilled labor, especially engineers, relative to its economy's needs. According to IMD, India ranks among the top three of 30 nations in terms of availability of skilled labor. In fact, it ranks India number one in terms of availability of qualified engineers, while China is in twenty-ninth place.

Labor Productivity

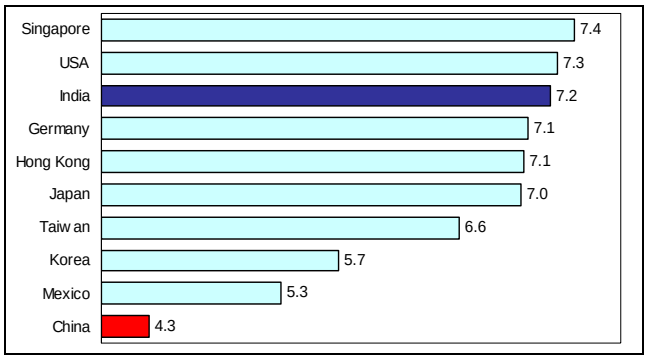
On an aggregate basis, China's productivity is marginally ahead of India's, which is reflected in higher compensation in China. According to IMD in 2002, China's labor productivity (measured in terms of PPP-based GDP/ employed person/ hour) is also higher at US$3.74 compared to India's US$3.47. However, in select industries in the organised sector this gap appears to be higher. According to a recent study by CII, labor productivity in China's organized sector is about 10 to 300% higher than in India for select large organized sector industries. For example in TV sets output, Chinese plants average 9.3 sets per operator per day whereas in India the ratio is 8.4 sets per operator per day. Similarly, for apparel in China, the output is 35 shirts per worker in an eight-hour shift whereas in India it is 20 shirts. There are significant differences even in simple industries such as ceiling fans. In China, the output for ceiling fans per worker per day was 53 compared with 35 in India.

Labor Flexibility in China

China has pursued major reforms in its labor market since it initiated its liberalization program in the late 1970s. Over the years it has adopted greater flexibility in labor, in terms of hiring as well as firing. While initially this policy was applicable in the private sector, in the 1990s China implemented a lay-off program for state-owned enterprises. According to an IMF study on China's labor market, an estimated 25 million workers were laid off in 1998-2002 from SOEs and collectives.

Exhibit 42

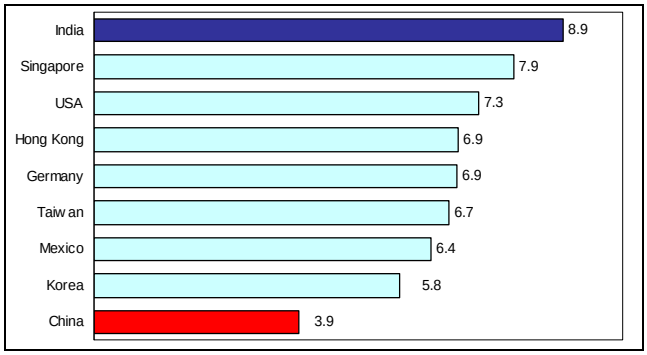
Availability of Skilled Labor, 2003 (1=low; 10=high)



Source: IMD Competitiveness Yearbook, 2003

Exhibit 43

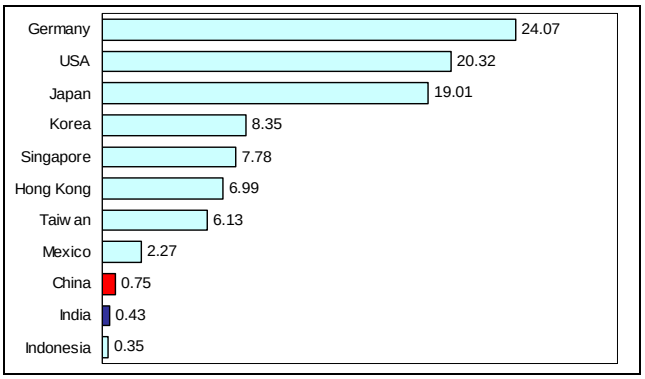
Availability of Qualified Engineers, 2003 (1=low; 10=high)



Source: IMD Competitiveness Yearbook, 2003

Exhibit 44

Total Compensation for Workers in Heavy Manufacturing (US$ per Hour)



Source: IMD Competitiveness Yearbook, 2003

Exhibit 45

Labor Reforms in China

Freedom of choice	In 1980, urban job seekers were allowed to find work in SOEs, collectives or the private sector. Enterprises were given more autonomy in hiring decisions. Instead of unilaterally allocating workers to manufacturing units, labor bureaus began introducing workers to units.
Wages	Firms were allowed to give bonuses to employees. The employer's discretion on wages was increased in 1994.
Contract labor	In the mid-1980s, it introduced a labor contracting system, a step change from the earlier life-time employment system. There were further reforms in 1994, which enabled the share of contract labor to increase.
Retrenchment	In the mid-1990s, the state enterprises were allowed to retrench labor but had to establish re-employment centers (RECs) to provide retraining, job search assistance and unemployment benefits to these laid off workers for three years. From 2004, the system of RECs will be phased out.

Source: IMF, Morgan Stanley Research

In comparison, India's labor laws remain restrictive. Indeed, the World Economic Forum's global competitiveness report (2003-04) ranks India 96th out if 102 countries on hiring and firing policies compared with a 26th ranking for China. Currently, any factory employing more than 100 people needs to go through a rigorous approval-seeking process not only for closing down but also for firing employees. Recent attempts to relax labor laws have met with stiff opposition from trade unions. These laws are effectively working only for the protection of labor employed in the organized sector, which accounts for only 10% of the total work force. In fact, to avoid these restrictive laws, a large majority of factories use 'casual' labor. Factories prefer to employ people on contract instead of taking them directly onto their payroll. However, the relaxing of labor laws by itself will not help unless some of the other relevant structural changes are made to ensure adequate growth in investment.

Theme 4: Competitiveness Issues

Capital: Relatively Low Savings Rate Constrains India

Low Capital Accumulation and Misallocation in India

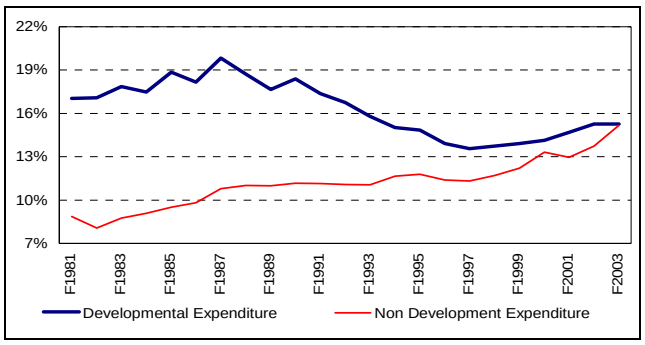
In emerging economies like India, capital as a factor of production tends to be the key constraint. As explained earlier in our discussion in *Theme 1: Varying Growth Mix*, one of the major factors explaining differences in growth between India and China is the level of capital accumulation. Relatively low saving and poor access to foreign investment have been major factors hampering India's growth environment. One of the key reasons for the high growth in Asia (excluding India and Japan) in the 1990s was the high savings rates of around 35% of GDP. However, in India savings rates are 24% of GDP and the FDI inflow is less than 1% of GDP, restricting capital formation to about 25% of GDP. Even if we assume a slightly optimistic average incremental capital output ratio (ICOR) of about 4%, it would be difficult to see sustained GDP growth of above 6-6.5% a year. We believe that, in the near term, a policy change targeting an increase in public savings and higher foreign direct investment could augment investment rates. Public savings represent savings from government administrative operations and its non-departmental enterprises (including involvement in the production of goods for commercial purposes).

The most important cause of a poor public savings trend is the government's revenue deficit. For India, we believe that it is the revenue deficit (revenue receipts [tax plus non-tax] less revenue [current consumption] expenditure) not the fiscal deficit (capital plus revenue receipts less capital plus revenue expenditure) per se that is a concern. The fiscal deficit includes the revenue deficit plus the capital deficit (gap for funding capital expenditure). The capital deficit is not as much a concern. For India, the revenue deficit is now 70% of the fiscal deficit.

Although, we do not expect a blow-out, we believe that India is suffering serious negative effects because of its high revenue deficit. *First*, the natural corollary of a high revenue deficit is, as we highlighted above, negative public savings. During F1997 to F2003, while household savings increased to 22.6% of GDP from 17%, the swing in government savings from a positive 1.7% to a negative 1.9% resulted in the overall savings rate stagnating at

Exhibit 46

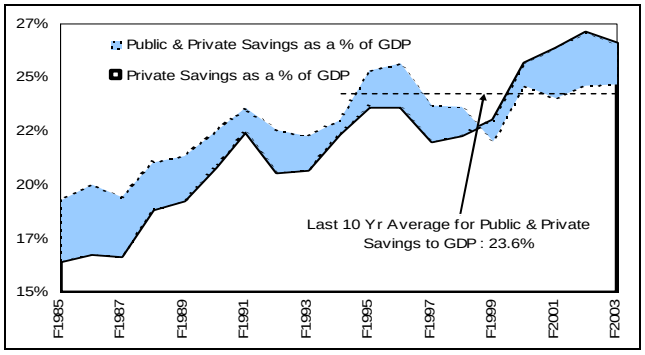
India: Allocation of Government Expenditure: Development vs. Non-Development Spend (% of GDP)



Source: Ministry of Finance, Morgan Stanley Research

Exhibit 47

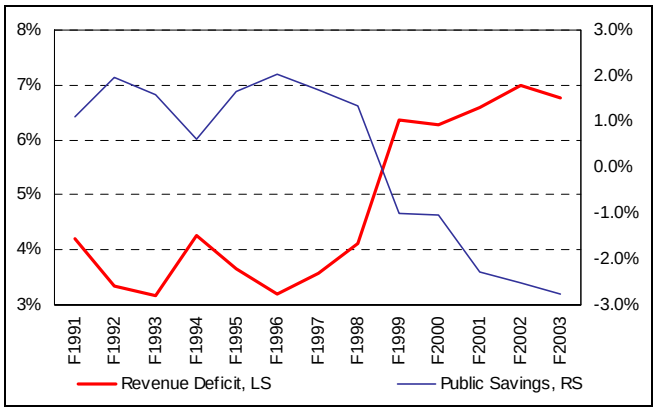
India: Public Dissaving Is Hurting Aggregate Savings



Source: Ministry of Finance, Morgan Stanley Research

Exhibit 48

India: Combined Deficit vs. Public Savings (% of GDP)



Source: RBI, Morgan Stanley Research

Please see important disclosures starting on page 53.

around 24%. This relatively low savings rate is a constraint on fixed investment and in the long term vitiates the growth outlook. For instance, if there is additional demand for fixed investment in infrastructure and manufacturing amounting to US$60 billion annually (about 9-10% of GDP) to accelerate real GDP growth to 8%, such investment could cause a significant upward spike in interest rates, in turn restraining growth.

Second, to control the rising deficit, the government has been steadily cutting expenditure on productive areas such as education, health and welfare, which in turn will reflect on long-term growth potential and social stability. This reduction in productive expenditure was reflected in the fall in combined (central plus states) development expenditure to 15.3% of GDP in F2003 from 17.4% at the commencement of the liberalization process in F1991, and 19.8%, which was the peak achieved in F1987. This in turn is affecting the overall efficiency of capital in the country.

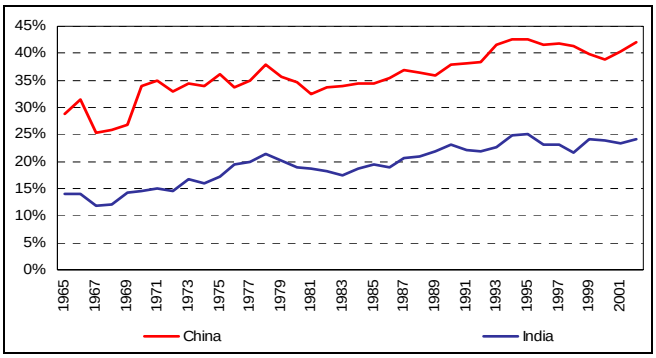
Third, the government has had to maintain a higher level of inherently regressive indirect taxes to fund rising non-development expenditure. Indirect taxes constitute almost 60% of total tax collections. Indirect taxes account for almost 15% of the retail price differential between India and China.

Capital Efficiency in India Has Room for Improvement

Given that its relatively low capital accumulation is India's key growth constraint, capital efficiency assumes a greater significance for India. In this discussion, for assessing capital efficiency behavior, we are using the Incremental-Capital Output Ratio (ICOR) as a proxy. Capital output ratio or its variant, the incremental capital-output ratio, is also usually used to estimate the capital formation for a required growth target. ICOR refers to the amount of capital required to produce one additional unit of output. Hence, the lower the ICOR the higher the output for a given level of capital formation. Usually this ratio is calculated by dividing the sum of investment in a specific period by the incremental output during that period.

Exhibit 49

China and India: Gross Savings Rate



Source: CSO, CEIC, Morgan Stanley Research

Exhibit 50

Investments Needed to Achieve 8% Growth

(%)	F1992-96	F1997-04	F2005-08E
Avg Investments	25.0	23.9	32.8
Avg ICOR	4.6	4.3	4.1
Avg GDP Growth	5.4	5.6	8.0

This implies an additional investment of US$ 60 bn pa.

E = Morgan Stanley Research estimates

Source: RBI, Morgan Stanley Research

Exhibit 51

Comparison of ICOR in Asia[1]

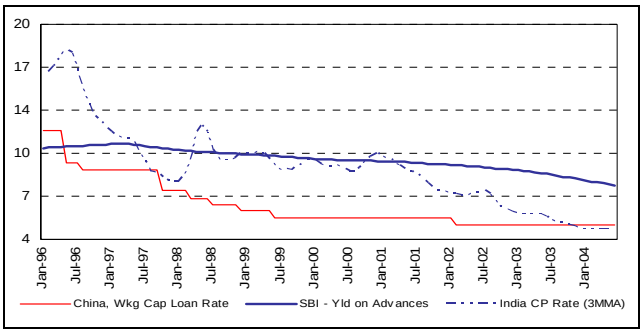
	1970s	1980s	1990 to 2003
India	5.4	3.9	4.6
China	4.8	3.9	4.3
Korea		3.5	5.2
Taiwan		2.7	4.1
Malaysia		6.0	3.4
Thailand		4.4	3.4

1. Our simplistic calculation ignores the gestation lag and there could be upward bias in investment upcycles. 2. For Malaysia, the average for 1980s is from 1983-89. Source: CIEC, CSO, IMF, Morgan Stanley Research

We have compared the trend in India's ICOR with that of other Asian countries. For simplicity, we have assumed no gestation lag. Therefore, our calculations are likely to overstate ICOR for a country if it is engaged in significant capital investment in long-gestation infrastructure sectors such electricity and construction. Although our analysis is simplistic, we believe that it gives a broad trend for Asian countries over the long term. India's ICOR has shown the improved trend since the 1980s. However, compared to other Asian countries, its ICOR is still high. During 1990-03, the average ICOR in India was 4.6 compared to 4.3 in China.

Exhibit 52

China and India: Interest Rates Comparison (%)



Source: CEIC, RBI, Bloomberg, Morgan Stanley Research

Cost and Access to Capital for SMEs Unfavourable in India

Although, greater financial integration has benefited large Indian companies by way of reduction in cost of capital, small and medium companies still suffer from relatively sticky interest rates. For instance, over the past five years, the yields on advances for the State Bank of India, India's largest bank, declined by only 2.3 percentage points compared with a 5.6 percentage point fall in 3-month commercial paper (the rate at which the top corporates are loaned money). Although, the RBI has initiated efforts to encourage banks reduce this gap, the effective rate for SMEs remains relatively high.

Please see important disclosures starting on page 53.

Theme 4: Competitiveness Issues

Tax Structure: India Suffers From High Rates

Indirect Taxes in India Are Among the Highest in Asia

Higher indirect tax rates for the organized sector in India is one of the key reasons for the country's higher manufactured product prices compared to China's. Indirect tax rates in India are much higher in terms of import tariffs as well as excise duties. Customs collections as a percentage of total value of imports in India are 15% compared with around 3% in China. Even in terms of excise duties, excise cum sales tax rates vary from 25% to 30%, whereas in China there is a flat value-added tax of 17%. In addition, the Indian tax system suffers from a multiplicity of rates and surcharges. There are taxes on input as well as output, which results in tax on tax. This complex system of taxation distorts production and resource-allocation decisions. In comparison, China charges a flat 17% under the value-added tax system, which reduces complexity and enables better resource allocation.

Low Collection Efficiency in India

Poor compliance of tax laws and a plethora of exemptions result in lower tax collections in India despite its higher tax rates. The tax to GDP ratio is lower in India than in China – in 2002, tax to GDP was 17% in China compared with 14.6% in India. While there are some segments that are outside the tax net, those that pay taxes get overburdened. For instance, the small-scale sector accounts for about 40% of value added in manufacturing but contributes only 3.4% of total excise collections. Similarly, the incidence of taxation on the fast growing services sector is also much lower than on manufacturing.

Higher Fiscal Deficit Limits Scope for Tax Rate Reduction

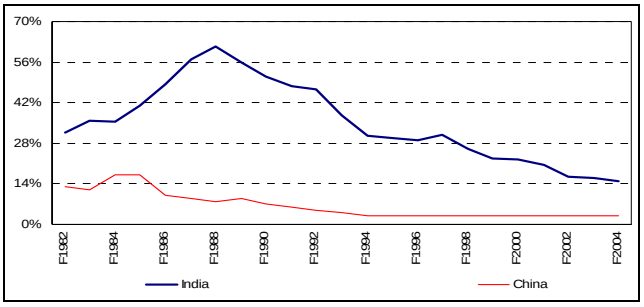
India's consolidated fiscal deficit, at over 10% of GDP, is one of the highest of the emerging markets. More importantly, the revenue deficit accounts for the about 70% of the total fiscal deficit. Hence, a large part of this deficit goes to fund current consumption. Considering the current political environment, we believe that there is little chance of reducing the revenue deficit in the near term. This has limited the government's ability to reduce tax rates.

New Government in India Aims to Reform Tax Structure

India is also planning to implement the VAT system. The committee appointed by the current government has proposed that a single national VAT of 20% on goods and services be levied, replacing excise, central value-added tax and service taxes currently being levied by the central government, and the sales tax and octroi levied by the states. This will simplify the indirect tax system and will improve resource allocation decisions in India. But the VAT system is facing opposition from traders and state governments. The previous central government had delayed implementation of VAT under pressure from this opposition. The new government elected in May 2004 is planning to implement VAT effective April 1, 2005. However, we believe that the pace of implementing the full plan is not clear. We believe that, if implemented, the VAT system will help significantly improve productivity within the Indian manufacturing sector and eventually help improve the tax to GDP ratio.

Exhibit 53

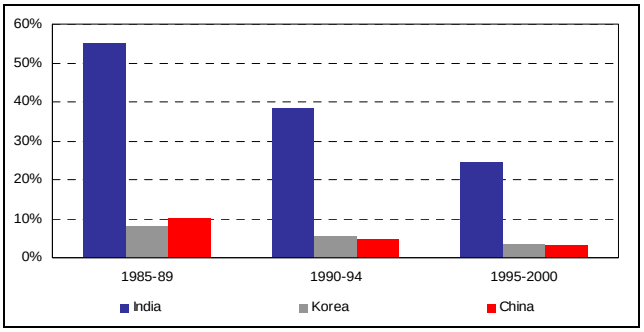
China and India: Customs Duty Collections as % of Imports



Source: RBI, Morgan Stanley Research

Exhibit 54

Weighted Import Tariff Trends



Source: IMF, Morgan Stanley Research

Please see important disclosures starting on page 53.

Exhibit 55

China and India: Comparison of Current Tax Structure

	China	India
Direct Tax		
Corporate Tax	The base tax rate for domestic companies is 33%. Joint-ventures/ foreign-invested enterprises are entitled to a preferential tax policy, which normally means a two-year tax free holiday after the first profitable year and a 50% discount on taxes for the next three years. They start paying the 33% base rate from the 6th year onward. In SEZs, the base tax rate could be lower but it varies across regions. For example in Pudong Shanghai, the base tax rate is 15%.	The taxability of a company's income depends on its domicile. Domestic companies are taxable in India on their total income earned across the world. Foreign companies are taxable on income that arises out of their Indian operations, or, in certain cases, income that is deemed to arise in India. Foreign companies have to pay 41% while domestic companies have to pay 35.8% on their profits as taxes.
Personal Income Tax	Individuals who have resided in China for less than one year are required to pay personal income tax on income derived from China. Individuals, who have resided in China for one year or more, are taxed on income from all sources. Income is taxed progressively from 5% to 45%. There are nine tax brackets starting from the income range of RMB 0-500 to the maximum of over RMB100,000.	Individuals are taxed progressively from 0-33%. There are 5 tax brackets starting from the income range of Rs 50,000 and going up to 33 %.
Indirect Taxes		
	Value-added tax on goods is charged at different stages of production. The tax is applicable to all enterprises engaged in sales of goods, importation of goods, provision of processing and repairs and replacement services within China. The standard value-added tax rate is 17%. Business tax is a turnover tax charged on the revenue generated from the provision of taxable services. It is applicable to enterprises engaged in the provision of taxable services, the transfer of intangible assets, or the sale of immovable properties within China. There are nine applicable rates ranging from 3% to 20%. Consumption tax is applicable to enterprises engaged in production, subcontracting for processing or purchasing taxable consumer goods within China. Tax rates range from 3% to 45%.	Excise duty is the tax charged on manufacture of goods within the country. The duty rates are either ad valorem (i.e. a fixed percentage of the cost of production), specified (a fixed rate depending on the nature of the manufactured item), or a combination of both. Excise duty is generally levied in 3 slabs - 8%.16% and 24% Sales tax is levied on the sale of a commodity, which is produced or imported and sold for the first time. Sales tax is levied by either the Central or the State Government, Central Sales tax or 4 per cent is generally levied on all inter-State sales. State sales taxes, which apply on sales made within a State, have rates that range from 4 to 15 per cent. Service Tax is charged only on the specified services provided in India @ 10% on the gross receipts. Currently around 75 services have been specified as taxable. Central Value Added Tax (CENVAT) provisions are used in Central Excise to implement concept of VAT at manufacturing stage by giving credit of duty paid on inputs The same is applicable on all stages of manufacturing, production & processing there are various rates specified for various goods, the one generally applicable is 16%.

Source: Morgan Stanley Research

Please see important disclosures starting on page 53.

Theme 5: Infrastructure

Physical Infrastructure: China Spends Eight Times More

Significantly Superior Basic Infrastructure in China

When China initiated reforms in the late 1970s, it focused on manufacturing as the key growth driver for the economy. Policymakers realized the importance of good infrastructure to attain their goals and have invested heavily in infrastructure creation since the early 1990s. However, in India investments in infrastructure have been lacking. Our analysis indicates that China is spending over eight times as much as what India is spending on infrastructure (including real estate) in absolute terms. In 2002, China's total capital spending on electricity, construction, transportation, telecom and real estate was US$260 billion (20.3% of GDP) compared with US31 billion in India (6.0% of GDP).

But India Has Had Success in Telecom Infrastructure

This is one area where there have been major changes over the past three years in India. The quality and the cost of the telecom infrastructure available in the country have changed drastically over the past five years. The cost of telecom services in India has fallen by 60-80% in this period. Indeed, with increased competition from the private sector, we believe that telecom costs in India will be the most competitive in the region.

Cost of Other Infrastructure in India Is Much Higher

In India, the cost of most infrastructure services is about 50% to 100% higher than that in China. For instance, average electricity costs for manufacturing in India are about double those in China. Railway transport costs in India are three times those in China. Similarly, the average cost of trade, as a percentage of landed costs is 11% in India compared to around 8% in developing countries and an overall global average of 6%.

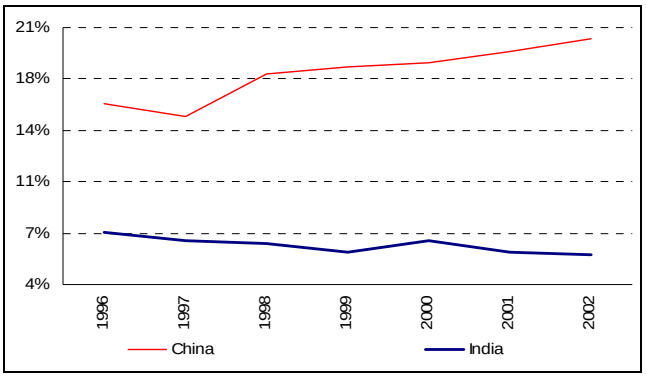
Electricity Is the Major Problem Area for India

Indian companies suffer from a lack of consistent and quality infrastructure services. In our opinion, the biggest infrastructure bottleneck in India is the electricity sector. In F2003, the shortfall in electricity was estimated at 9.1%, up from a 5.9% shortage in F1999. The shortfall was at 12.2% for peak demand in F2003. In fact, in almost all the Indian states except a select few cities, there are electricity supply cuts for about 2-6 hours each day. As a result, most of the large successful Indian companies tend to have captive infrastructure facilities, which are at times not necessarily of economic size. Apart from the poor availability of electricity, tariffs charged in India are among the highest in the world. An inefficient distribution setup and cross subsidization to residential customers and farmers result in a large part of the burden being borne by industrial customers.

The electricity sector in India needs a serious and immediate overhaul, in our view. Currently, about 20% of the electricity generated in the country is distributed to farmers at almost negligible charge. Another 40% is lost in transmission and distribution. Hence, in all about 60% of

Exhibit 56

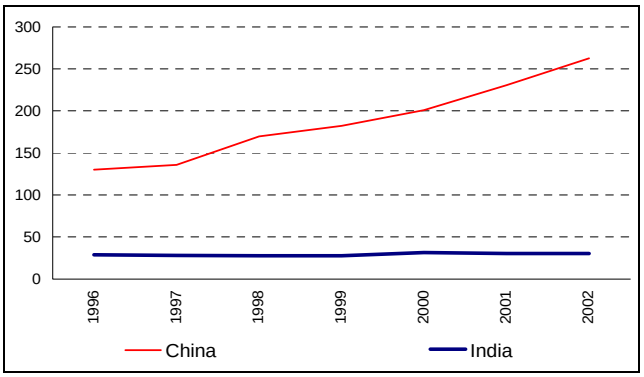
China and India: Infrastructure Investment* (% of GDP)



Source: China Statistical Yearbook, RBI, Morgan Stanley Research

Exhibit 57

China and India: Infrastructure Investment* (US$ bn)



** We have used the gross capital formation in electricity, construction, transportation, telecom and real estate as a proxy for infrastructure spends.*

Source: China Statistical Yearbook, RBI, Morgan Stanley Research

the total yields virtually no revenues. The profitability and viability of this business are unlikely to improve without a major shift in approach by the government. Although China is also suffering from some shortages, it is more an issue of overheating of the economy rather than a general case of inefficiency and mismanagement of the electricity sector.

China's Highway Network Is Seven Times Larger

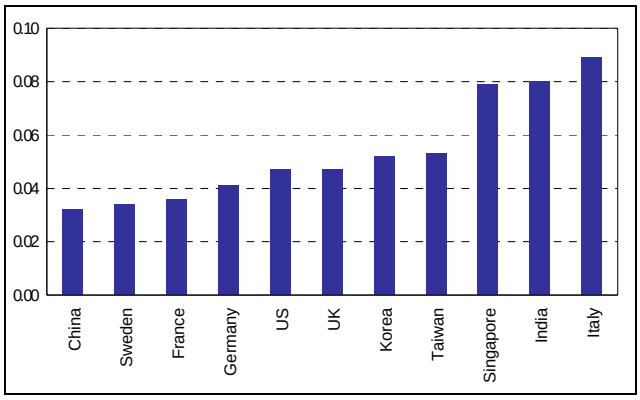
India's highway network covers about 200,000 km compared with 1.4 million km in China. A lack of funds has been a major constraint for road investment in India. Although the government has recently initiated some investments by raising revenue from taxes on diesel and petrol, these investments are still miniscule compared to those in China. For instance, the most talked-about large road project in India is the golden quadrangle and corridors project, which is likely to cost just about US$12 billion over a period of eight years (this equals US$1.5 billion a year or 0.3% of GDP a year). In comparison, China has been investing almost US$24 billion annually (2-2.5% of GDP) on improving its highways. In India, the government recently planned to increase spending on roads by seeking the participation of the private sector. We believe that the response from the private sector is unlikely to be high and the government needs to augment its own resources for road spending. In fact, in China, in the 1990s only about 9% of the total highway spending was funded by the private sector. About 70% of the investments was funded from road maintenance fees, vehicle purchase fees and other government revenue sources.

Indian Ports Are Still Inefficient

There has been a gradual improvement in the efficiency of India's port sector over the past few years with the rising trend of privatization. However, overall efficiency remains low and the cost of cargo movement at the Indian ports remains significantly higher than the global average. This is evident from higher freight payments as a percentage of total import value at about 11% compared with a 6% global average and 5% for developed countries. The higher costs at the Indian ports reflect low productivity at terminals, insufficient hinterland infrastructure facilities and delays at customs. Apart from higher costs, the inefficiency of port infrastructure results in a higher lead-time for trade. The lead-time for India's trade with the US is 6-12 weeks compared with China's 2-3 weeks. The overall inefficiency at the Indian ports has been a key reason for global shipping lines not making any of the Indian ports a hub in the region, preferring Singapore, Dubai and Colombo among others.

Exhibit 58

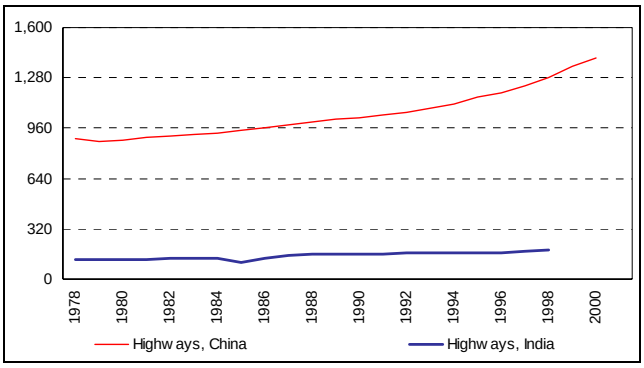
Electricity Costs for Industrial Clients, US$/KWH, 2002



Source: IMD

Exhibit 59

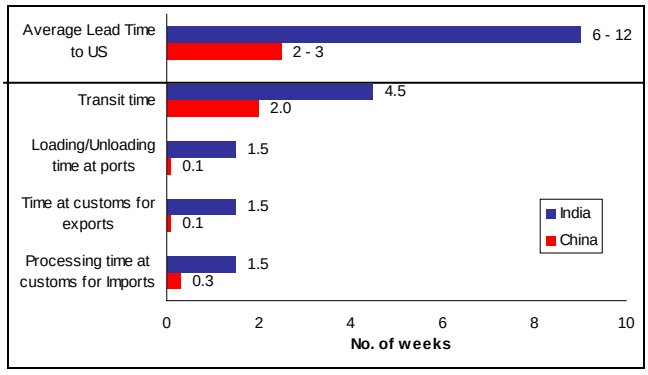
China and India: Road Creation Has Lagged In India (Length of Highways 000 km)



Source: China Statistical Yearbook, Morgan Stanley Research

Exhibit 60

China and India: Lead Time of Exports to US



Source: CII Mckinsey

We believe that a more aggressive push is needed in the form of a comprehensive and synchronized effort by the central as well the state governments to improve the competitiveness of Indian ports. The key measures needed, in our view, are: the integrated development of hinterland

infrastructure; labor rationalization; encouraging greater competition; improvement in regulatory environment and corporatization.

China has excellent port facilities, which are comparable with the best ports in the world. In fact, three of the top 10 ports in Asia are in China. The development of its ports has been important for China because of the export-driven growth in the country. The efficiency of Chinese ports when compared to those in India is evident in the fact that the average lead time for a consignment from India to the US takes 6-12 weeks in comparison with China's 2-3 weeks.

High Revenue Deficit Has Constrained Public Investment

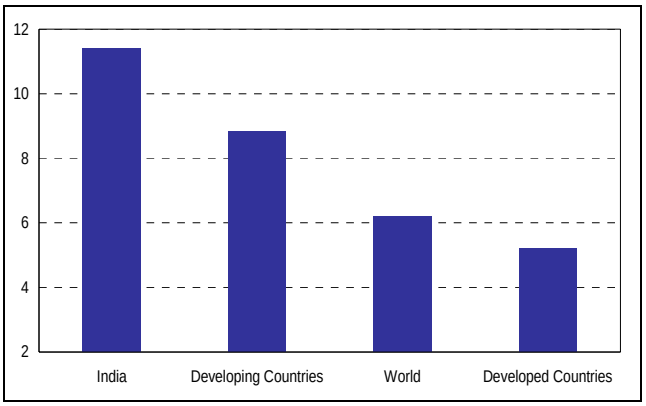
With a rising proportion of sticky revenue expenditure, the Indian government has been cutting capital expenditure. Over the past five years, the government's consolidated fiscal deficit has increased to a new high of over 10% of GDP. Since the beginning of liberalization in 1991, the government has been attempting to get the private sector to invest in infrastructure to bridge the gap. However, the lack of a conducive investment environment caused the private sector to shy away from participating in the process of infrastructure creation. We believe that infrastructure investments will need to be made by the government and are unlikely to come from the private sector. And for the government to be able to make these investments, it needs to cut the revenue deficit by 5% of GDP (about US$30 billion).

Key Enabler of Labor Arbitrage

We believe that an efficient and low-cost infrastructure facility is the key enabler of globalization and labor arbitrage. India has been able to achieve its potential in software services and business process outsourcing due to the availability of a high-quality telecom infrastructure, the infrastructure backbone for IT and ITES, at a reasonable cost. Similarly, China's success in manufacturing has also been enabled by the government's focus on the development of physical infrastructure such as roads, ports and electricity.

Exhibit 61

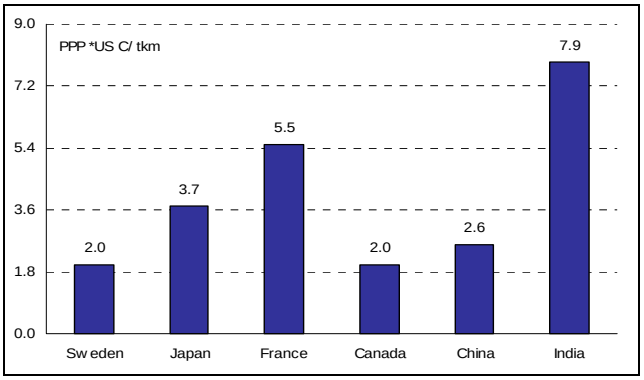
Ports: Average Cost of Freight for Imports



Source: CII Mckinsey

Exhibit 62

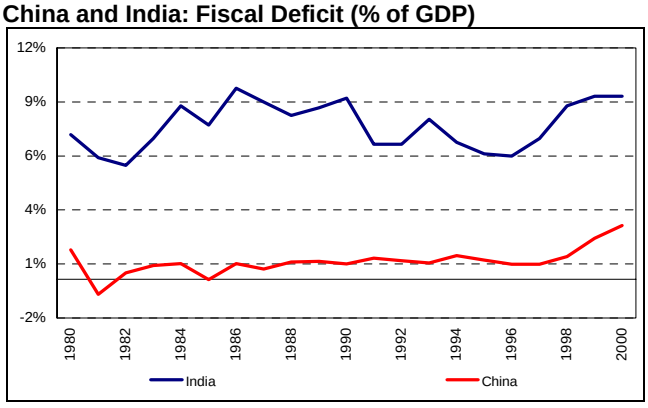
Railways: Comparatively Higher Tariffs in India



Source: TISCO

Exhibit 63

China and India: Fiscal Deficit (% of GDP)



Source: China Statistical Yearbook, RBI, Morgan Stanley Research

Indian Manufacturing Suffers from Poor Infrastructure

The Indian manufacturing sector is constrained by relatively inefficient and high-cost infrastructure facilities – namely electricity, roads and ports. We believe that the lack of adequate infrastructure is becoming a constraint to inter-state as well as global trade. With the exception of a select few like Reliance Industries, many Indian companies, which have a globally competitive cost structure, are not able to scale up their operations. We believe that, among other reasons, the lack of availability of quality infrastructure at reasonable cost is the key constraint. Among other factors, poor infrastructure facilities are hurting the competitiveness of the small-scale sector more than the large companies.

Moving in the Right Direction … Finally

Whilst in the 1990s India more or less ignored its infrastructure sector, there is now recognition among policymakers that investments in this area need to be initiated. Over the past three to four years, the government initiated a number of measures to improve investment in this area, particularly ports and roads. Although a beginning has been made, progress is somewhat slow, leaving the overall efficiency of India's infrastructure low compared to world averages.

SEZs Could Be a Good Intermediate Solution

We believe that developing a quality infrastructure setup nationwide will be difficult in India under the current political environment. Hence, it may be better off following China's example and focus on creating special economic zones (SEZs). This would help create excellent infrastructure in pockets and help to kick-start growth in manufacturing. Although the Indian government has recently initiated a plan to develop a SEZ near Mumbai, it is still pushing forward slowly on the plan. Our discussions with financial institutions indicate that the financial closure on the project will probably happen only by early 2005. In addition, we believe that the size of the investment planned for this project is not adequate to create a world-class SEZ. We understand that the current project size is just about US$1.4 billion. This size of investment may not be adequate for creating world-class infrastructure in the SEZ.

Please see important disclosures starting on page 53.

Theme 5: Infrastructure

Financial System: India on a Much Stronger Footing

Strong Financial System Is Key to Sustainable Growth

A strong banking sector is one of the key ingredients for faster and stable economic growth for transition economies. An efficient financial sector can promote savings and enable the flow of a larger share of savings into productive investments. The efficiency of the banking sector will be important for systemic stability of the financial system. Indeed, a weak banking sector was the genesis of many of the financial crises in transition economies in the 1980s and 1990s.

Exhibit 64

China and India: Banks – Snapshot Comparison

	China	India
Credit	2045	188
--As % of GDP	*144.5*	*31.4*
--Consumer Credit	190	42
--As % of GDP	*13.4*	*7.0*
Deposits	2655	337
--As % of GDP	*187.5*	*56.2*
Gross NPL Ratio (%)	18.7	8.8
--As % of GDP	*27*	*2.8*

Source: RBI, CBRC, Morgan Stanley Research

Many Challenges for the Chinese Banking System

The institutional framework of the Chinese banking system is in an early stage in comparison with international standards. The following are some of the key challenges facing the Chinese banking system:

Credit Appraisal Systems: The system of internal assessment and credit rating mechanisms in Chinese banks is not robust. There is a lack of adequate data collection on borrowers and facilities, which serve as a basis for a quantitative approach to measuring and managing credit risk. The Chinese banks are now gradually trying to overhaul their credit appraisal process, bringing in international best practices.

Credit Penetration: China's high savings rate, coupled with low real interest rates, has resulted in sharp growth in capital expenditure over the past few years. Indeed, there has been over-reliance on banks for funding business capex. We believe that this has caused a macroeconomic imbalance, as reflected in the country's credit to GDP ratio of 144%. The government has recognized this as a problem and has initiated measures to slow credit growth to unwind the excesses.

Asset Quality: The lack of an adequate risk assessment system has resulted in large balances in non-performing assets (NPA) in the banking system. As of end-September 2003, 18.7% of the loan assets of the banking sector were estimated to be non-performing as per China's five-category loan classification system – equivalent to 26% of GDP.

Capitalization: As of September 2003, the composite capital adequacy ratio of the state-owned commercial banks in China was a mere 4.6%. Although the government improved the CAR of two large banks (Bank of China and China Construction Bank) by injecting US$45 billion in January 2004, the CAR of the rest of the state-owned banks remains weak. Even for the joint-stock banks, the capital adequacy was just 6.8% compared to the Basle requirements of 8%.

Governance: The four large banks, which account for about 55% of the total assets of the banking system, have been traditionally operating under the strong influence of government bureaucracy and mandates. This has resulted in multiple and mixed business goals for banks. Their ownership structure and corporate governance have adversely influenced their ability to evolve a self-managing risk assessment system.

Competition: The People's Bank of China (PBOC) was the key bank in China until the early 1980s. Then the government created four new SOE banks and moved the responsibility of regulation to the PBOC. Until the late 1990s, there were no other commercial banks operating in China. Even though a few joint-stock banks have now been formed and foreign banks have been allowed a limited presence, the bulk of the market share still lies with the top four SOE banks. China is to open its banking sector to foreign investors in 2007, which would present a number of challenges to Chinese banks in areas including adequate risk-based pricing capability, product innovation, capital adequacy, and asset quality among others.

Please see important disclosures starting on page 53.

The government of China has initiated a number of reforms to inculcate a more market-oriented culture for the banking system. The government aims to pursue reforms for state-owned banks to convert them to modern banks through reforms of their ownership structure and corporate governance. CBRC, established as the regulator of the banking industry in 2003, formulates rules and regulations and has been a key player in promoting banking reform. It has pushed the banks to improve risk control systems, address the NPL situation, tighten capital adequacy restrictions, and intensify inspections.

India's Banking System – on a Much Better Footing

In comparison, the Indian banks are in a much stronger position regarding risk assessment systems, NPLs, capital base and effective central bank supervision.

Relatively Better Risk Assessment Systems: In India, the risk appraisal system is much more robust than in China. This is especially the case with the private sector and foreign banks, which have implemented IT solutions, enabling a centralized credit appraisal system. In the case of public sector banks, the risk assessment systems are inferior to those at the private and foreign banks (evident in higher NPLs), but are still superior to those at the Chinese banks.

Adequate capitalization: The RBI has implemented a much stricter capital requirement norm, with the minimum CAR of 9% for Indian banks versus the Basle requirement of 8%. This has resulted in a relatively strong capital base in India, with the average CAR at 12.5% in March 2003. The Indian banks, especially the state-owned banks, have been helped in this regard over the past three years by the continued decline in interest rates, which has resulted in higher earnings and hence an improved capital base.

Exhibit 65

China and India: Banks – Capital Adequacy Ratios

2002/F2003 (%)	China	India
Industry	NA	12.6
SOE Banks	4.6	12.5
Non-SOE Banks	6.8	12.6

Source: CBRC, RBI, Morgan Stanley Research

Stricter supervision by Central Bank: The RBI has been at the forefront in terms of laying down strict norms to ensure stability of the Indian banking system. Some of the key regulations laid down by RBI are as follows.

- Setting the CAR at 9%, which is higher than the Basle requirement of 8%.
- Setting an investment fluctuation reserve of 5%, which all banks have to maintain by March 2005. This will help the banks in the event of adverse movements in interest rates.
- Changing the NPL recognition norm to 90 days in March 2004, from the previous norm of 180 days, to ensure that the asset quality of the banks remains good.
- Ensuring that only banks with a strong capital base and good asset quality are allowed to pay dividends.

Manageable level of NPAs: The asset quality of Indian banks has improved significantly over the past few years, with the gross NPL ratio improving to 8.8% in March 2003 from 15.7% in March 1997. As a percentage of GDP, too, gross NPLs are small, at just 2.8%, compared with 25.7% in China. This sharp improvement has been brought about due to better credit appraisal methods adopted by the Indian banks and an improvement in the business cycle, which has resulted in older NPLs turning into performing assets.

Competition: In the mid-1990s, the RBI allowed the private sector to open new banks, which has increased the level of competition. In fact, in F2003 the share of SOE banks in system assets was 74%, compared with almost 85% in F1996. The increased competition has also created the need for implementation of technology solutions at the SOE banks, as they have lost market share in deposits, fees and advances to the private-sector banks due to a lack of good infrastructure in the form of ATMs and networked branches. The competition from foreign banks, which used to operate as branches in India, is likely to increase as they have been allowed to set up subsidiaries.

Exhibit 66

China and India: Banks – Market Share of Loans

2002/F2003 (%)	India	China
SOE Banks	74	85
---Top 4	39	58
Private Banks	19	14
Foreign Banks	7	1

Source: CBRC, RBI, Morgan Stanley Research

India's Own Set of Challenges

The biggest risk to the Indian banking system, in our view, is its high level of exposure to long-tenure government bonds. On average, about 40% of their total assets are in

government bonds. The Indian public-sector banks, which account for almost two-thirds of total deposits, have chosen to increase the average maturity of their government securities investment portfolios as interest rates have been pushed below sustainable levels. Although the average maturity of the Indian banks' bond portfolio is not available, we believe it has increased significantly. The government increased the average maturity of debt to 8.5 years in F2002, compared with 6.6 years in F1999. We believe that, if there were a sudden and sharp rise in interest rates to the extent of 250-300 bps in 10-year paper, it would pose a big threat to the health of the Indian banking system.

The second problem for Indian banks is in respect of the mandatory lending to priority sectors. Banks have to lend 40% of their overall loans to agriculture, small-scale industries and other weaker sections of society. Such lending had given rise to higher NPLs in the banking system historically.

The third problem is the low capability of the government's balance sheet to absorb banking system losses, if these were to occur. In India, public debt to GDP is already high, at close to 80%, compared with around 27% in China. This restricts the government's ability to bear the burden of any significant write-offs of banking sector bad debts or inject capital. Hence, maintaining strict controls on the banking system is imperative for the government.

Exhibit 67

China and India: Banks

	China	India
Competitive Structure	The biggest players in the Chinese banking system are the four state-owned banks, which have a market share of 58% of loans; policy banks have a market share of 8%, while joint stock banks (mainly owned by government) have a share of 15%. Foreign banks have a share of only 1%	In 1969, most of the banks in India were nationalized, and, until the mid 90s, banking in India was dominated by the state-owned banks, with a few very small private banks and a few foreign banks operating through branches. However, since then, new banks have been allowed to be set up by the private sector, which has increased competition in the sector. Recently, the government has also allowed the foreign banks to open subsidiaries in India. This is likely to result in increased competition.
Asset Quality	The banking system has adopted the more rigorous five-category loan classification system compared with the four-category system previously. System wide NPL ratio was high at 17.8% in 2003. Over 1999-2000, the four state owned banks transferred RMB 1.4 trillion worth of NPLs to four AMCs.	Historically, Indian banks have also suffered from the problem of high NPLs. However, the Indian government has enacted a foreclosure law, which is likely to result in an improvement in asset quality.
Capital Base	The minimum CAR in China is 8%, but most banks have much lower CARs. The government has recapitalized the state-run banks twice. Once in the late 1990s with RMB270 bn and again in January 2004 with US$45 bn. The latter capital infusion was in Bank of China and China Construction Bank, which have been selected to be made comparable to the leading global banks in terms of capital base and other financial parameters.	The minimum capital adequacy requirement in India is 9%, even though the Basle requirement is 8%. Most of the banks have CARs above the 9% benchmark. In the mid 1990s, many of the state-run banks had weak capital bases. The government recapitalized them by injecting around US$5 bn during the 1990s. The recent improvement in the capital base has been enabled by the decline in interest rates over the last three years, which has helped the banks improve their capital bases through booking of higher treasury income.
Interest Rates	Interest rates are still controlled to a large extent and more so relating to deposit rate than lending rate.	Indian interest rates were decontrolled in the mid 1990s, with the banks being given freedom to set lending and deposit rates (except for rates on savings deposits, which are still governed by the RBI).
Credit Appraisal Process	This has been the weak point in the Chinese banking system. In the recent past, banks have put in place some internal controls, for instance separating the origination and approval processes. However, the pace of reform beyond the regulators' requirements varies greatly across the industry. There is lack of nationwide credit bureau.	Although the credit appraisal process in India is not very strong either, it is better than that in China. Additionally, India has set up the Credit Information Bureau, which should enable an improvement in credit appraisal.

Source: RBI, CBRC, Morgan Stanley Research

Please see important disclosures starting on page 53.

Theme 5: Infrastructure

Institutional Framework: India Leading the Way

Although China has left India far behind in implementing most of its macro reforms, it has not really focused on the creation of an institutional framework in terms of its legal system, capital markets and banking system. In contrast, India has developed a much stronger public institutional and regulatory infrastructure. India's relatively more evolved institutional framework is reflected in its less volatile growth environment. In particular, it has made significant progress in this area over the past 13 years of liberalization. It has already taken on the hard work of building a number of economic and political institutions – a stable democratic polity, reasonable rule of law and protection of property rights. Against this, China has achieved strong growth over the past 20 years, but will now face the major challenge of large-scale institutional transformation to reduce the risk of a major slowdown.

Exhibit 68

China and India: World Competitiveness (Ranked Out of 102 Countries, Lower Is Better), 2004

	India	China
Freedom of Press	26	99
Judicial Independence	25	62
Property Rights	43	64
Public Trust of Politicians	82	20
Favoritism in Decisions of Govt. Officials	57	43

Source: World Economic Forum

India's institutional framework encompasses a strong legal system, a well-controlled banking system under the active supervision of central bank, parliamentary bureaucracy, independence of the press, etc. A large number of public institutional authorities have been around since independence, and many have been continuously strengthened to meet new challenges.

In the following paragraphs, we have given a brief overview of the institutional framework for India and China is some of the key areas.

Judiciary systems: Though the Chinese legal system has developed substantially in the last two decades (for instance, the number of lawyers in China increased from just 5,500 in 1981 to around 110,000 in 1998), it remains far behind that of India. India has strong legal remedies. However, even in India, the efficacy of the legal system is questionable. Court cases take unduly long to get resolved, resulting in a large number of pending cases. For instance, in 2001, the total number of pending cases in the country was around 3.4 million. Hence, though India's legal system is ahead of China's, its efficiency needs to be improved.

Capital markets regulation: China's capital market history is very recent, with the first stock exchange opened in Shanghai in December 1990 and the second in Shenzhen in February 1991. In contrast, the Indian stock market has a 129-year history. Its capital markets operate with greater efficiency and transparency than China's. This has been due mainly to the earlier deregulation of the capital markets in the country.

India has been regularly strengthening the regulatory and institutional framework of its capital markets since 1991. One of the steps taken was the abolition of a controller of capital issues. This allowed free market pricing for IPOs. The government later also appointed an independent regulator for capital markets, the Securities and Exchange Board of India (SEBI). SEBI has been actively monitoring capital market developments and has also initiated necessary reforms from time to time. For instance, it initiated major corrective reforms post a couple of instances in the last five years, where large-scale manipulation resulted in major shocks in the capital markets.

In contrast, the Chinese capital markets are relatively underdeveloped. They lack depth since the free float in Chinese markets is currently around 30%, with the rest in the hands of government or other affiliated bodies. We think vibrant capital markets have been one of the key reasons for maintenance of a 'return consciousness' among Indian companies.

Telecom regulations: In telecom regulation, both China and India initiated reforms in 1994. However, India is ahead in creating a business and regulatory environment to ensure greater participation from private and foreign entrepreneurs.

One of the key reasons for India's success in IT and IT-enabled services has been the dramatic improvement in

Please see important disclosures starting on page 53.

quality and decline in costs of its telecom services. This has been brought about by constant reforms introduced in the sector since 1994, when the sector was opened up to private players and licenses for offering cellular services were awarded. Since then, the government has established the Telecom Regulatory Authority of India (TRAI) as the key regulatory body in the sector, allowed private players to enter into the wire-line segment, allowed up to four licenses for each cellular circle and allowed private players to enter the international telephony arena. All these measures have enabled a telecom revolution in the country.

China took the first steps towards telecom reforms in 1994 when the government created the Ministry of Information Industry (MII) to act as a regulator. Subsequently, it divided China Telecom, which had a monopoly in providing telecom services based on geography and business. However, it continues to lag India in inducing private sector participation, and thus ensuring greater competition in the domestic industry. There are still significant restrictions to foreign and private players offering telecom services and the domestic market remains concentrated in the hands of a few players. In fact, only two players currently provide cell phone services in China. Hence, India is ahead of China in terms of higher competition and allowing foreign players to access the telecom sector.

Insurance regulations: Insurance is a sunrise sector in both India and China due to the recent opening of the sector in the two countries. Both countries are now opening up the insurance sector to foreign and private entrepreneurs. China initiated reforms in insurance in 1996 when it divided its sole insurance company into three subsidiaries based on business activities. Subsequently, this was broken into four separate legal entities. It established the China Insurance Regulatory Commission (CIRC) in 1998 as the regulator of insurance business. Prior to that, the People's Bank of China was the regulator of both banks and insurance companies. It also allowed foreign players to establish branches or joint ventures with up to 50% ownership in 2001, post WTO accession. However, foreign players are currently allowed to offer only specific policies. From December 2004, all geographical and product restrictions on foreign players will be removed.

In India, all the insurance companies were nationalized in 1956; subsequently, life insurance was a monopoly of Life Insurance Corporation (LIC), while general insurance was offered by four state-owned companies. However, India has taken measures to open up the sector. It established the Insurance Regulatory and Development Authority (IRDA) in 2000 to be the regulator for this industry. It allowed the private sector to enter both the life and non-life insurance sectors. Foreign participation was allowed up to 26%. The current government has proposed to increase the foreign stake in insurance companies to 49%. However, unlike China, there is no limitation on the kind of products that can be offered by these players.

The insurance industry, especially life insurance, is concentrated among state-owned companies in both countries. In China, the top three players (all state-owned) make up almost 90% of premium income. In India, too, the state-owned company LIC accounts for 86% of premium income. However, the non-state-owned sector is growing very fast in both countries and should become the main driver of growth over the next five years.

Electricity regulations: The electricity sector for both the countries has been very tightly regulated. While there have been some piece-meal attempts to improve the situation over the last decade, the overall situation remains poor. On a comparative basis, India seems to have made greater progress in terms of opening the sector and setting up regulatory bodies. Some of the key reforms initiated in India are: (a) formation of state level regulatory bodies by 19 out of a total 29 states; (b) issuance of tariff rationalisation orders by 15 states; (c) unbundling of state-owned electricity business into separate entities for generation, distribution and transmission; and (d) privatisation of state-owned electricity, which has happened in two states so far. Finally, the government intends to overhaul the overall regulatory and business environment through a new Electricity Act, which lays the foundations for greater participation by the private sector. However, the implementation of reforms on an overall basis is still not fast enough to improve the efficiency and delivery of these critical infrastructure service across the country, in our view.

China initiated electricity reforms in the mid 1980s to encourage investment in this sector by local governments, private corporate entities and foreign investors in generation. This did enable an increase in foreign investments in the country initially. However, the interest of foreign investors has reduced, as the Chinese government no longer guarantees a return on capital. Electricity tariffs continue to be set by the government. All the transmission and distribution assets in the country are government-owned.

Please see important disclosures starting on page 53.

Presence of media: A relatively independent media is important for transparency and monitoring of the performance of public institutions. Both India and China used to be completely closed to foreign media until the beginning of 1990s. However, since then, while India has made rapid strides in opening up the sector, China still lags.

The Indian government allowed satellite television in India in 1990-91, and, since then, there has been a rapid proliferation of television media. It allowed foreign channels to transmit different genres of content, including news. However, the Indian government has been comparatively less forthcoming in terms of reforming the print media. Foreign ownership is restricted and foreign newspapers are not allowed to be printed in the country.

In comparison, in China, there is a plethora of regulations governing the media sector. Most of these regulations attempt to exercise tight controls over the media. For instance, foreign channels are not permitted to be televised in China, except in hotels and residential apartments used exclusively by overseas personnel.

Conclusion: Although one could argue that the efficacy of many of the public institutions in India is much less than desirable, the country's progress in developing the required infrastructure is still commendable. While India has been slow in the development of physical infrastructure, it has steadily accelerated the pace at which it has strengthened its major public institutions.

Please see important disclosures starting on page 53.

Theme 6:

Who Is the Winner?

Our Bias Towards Export Competitiveness

As discussed elsewhere in this report, both China and now increasingly India, are focused on exports to lift their GDP growth and for finding additional productive employment opportunities for their surplus populations. In the following paragraphs, our discussion centres on the overall and sector export competitiveness of the two countries. First, we have analysed the past trend in the countries' exports and then we present our views on the outlook.

India's and China's Top Ten Exports Segments

If we plot India and China's exports, we can clearly see India's current bias towards higher labor/skill-intensive sectors. India's top export segments include software and IT-enabled services, agricultural products, textiles, and gems and jewellery. Whereas China has been able to succeed in almost all manufacturing segments, its success is greater in segments with higher labor and capital/infrastructure intensity. China's top export segments are electric and electronic products, computer and telecommunications equipment, machinery and garments.

India Beats China Only in Software and Steel

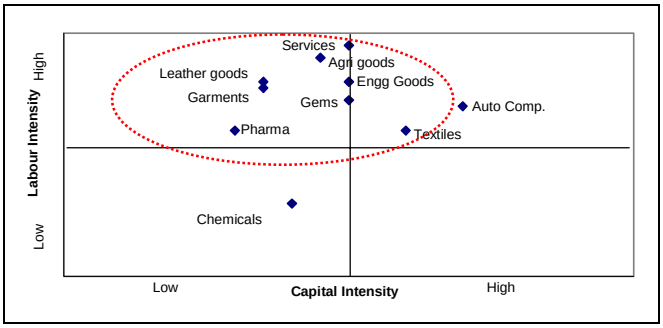
Our analysis of major export segments indicates that India has achieved significant success over the last few years in exports of software and iron and steel. In 2002, for these sectors, India's market share in global exports was 1.6% and 2.7%, respectively, compared with China's 0.1% and 2.3%. The point to be noted here is that China is a net importer of steel, hence India's position is even better on a net basis. In almost all other segments China's exports represent a big multiple of India's exports. China has achieved significant market shares in ready-made garments, textiles, and office machines/telecom equipment. In 2002, China's market shares in these segments were 20.6%, 13.5% and 9.0%, respectively, versus 3.1%, 4.1% and 0.1% for India. In fact, China's dominance is evident in the fact that its exports of office machines/telecom equipment alone are 1.5 times India's total exports.

Labor-Intensive Sectors – India Should Do Well

Going forward, we believe both India and China will do well in labor-intensive sectors. These are the sectors where we think India is most likely to increase its market share. However, India needs to implement aggressive reforms to match China's pace. It has already become a big player in software services, IT-enabled services and pharmaceuticals. We expect IT services and IT-enabled services to be key drivers of GDP growth in India over the next 10 years. The IT services sector employed around 540,000 people, generating total export revenues of around US$9 billion, in F2004. The key driver of this trend is the fact that the average salary of a fresh IT sector employee is about 15% of that in the US. This sector is less infrastructure- (and capital-) intensive than traditional manufacturing sectors. By 2010, we expect this sector to employ 1.2 million people and generate export revenues of US$32 billion, representing about 4% of the global IT services outsourcing market.

Exhibit 69

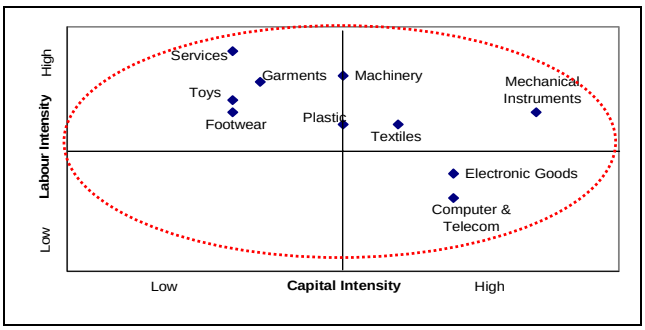
India Has Done Well In Exports of Labor-Intensive Products



Source: Morgan Stanley Research

Exhibit 70

China Has Done Well in Almost All Manufacturing Sectors



Source: Morgan Stanley Research

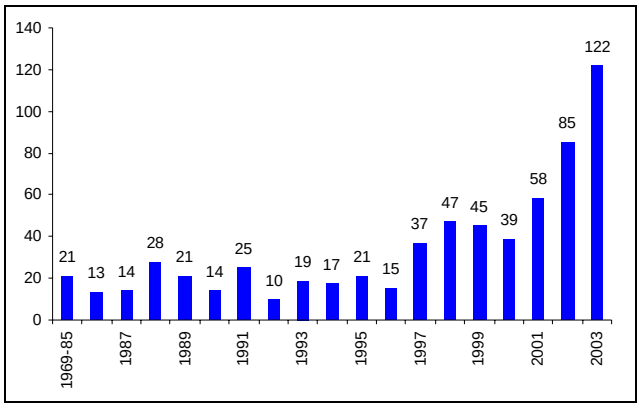
According to NASSCOM, 245,500 people were employed in the IT-enabled business processing services sector as of March 2004, generating export revenues of about US$3.6 billion. The primary reason for the strong growth in this sector has been the wage cost savings enjoyed by MNCs. In fact, according to NASSCOM, US companies can enjoy up to 80% savings on operating costs by outsourcing to India. Even if we consider additional management costs due to offshore work, cost savings are still likely to be about 60%. We estimate that by 2010, this sector will provide jobs to 1.3 million people and earn export revenues of around US$25 billion, representing a share of around 7% in the global ITES outsourcing market. In fact, we expect IT/ITES to be one of the largest employment-generating sectors over the next five years in India.

The other big area of opportunity for India, in our view, is the pharmaceuticals sector. This is emerging as a major area, creating job opportunities for Indian scientists, doctors and laboratory analysts, whose costs in India are about one-fifth to one-eighth of those in the US. The sector is already generating revenues of about US$2.5 billion a year. Currently, the key sources of revenue are contract manufacturing of bulk drugs and development/sale of generic drugs globally, while, in future, development of proprietary drugs may become an important revenue driver. For India, the most promising area seems to be global generic market exports. Globally, about US$40 billion-worth of drugs are going off patent over the next four to five years. This will throw open a big opportunity for Indian companies. The number of product filings with the US FDA by Indian companies over the past three years has risen sharply. A point to note is that, although India currently has a 2% market share in US generic drugs, it has accounted for 30% of the incremental relevant filings over the past four quarters. Our Indian pharmaceuticals analyst, Sameer Baisiwala, expects these export revenues to grow to US$6.5 billion by 2010. His estimates exclude the other promising area of clinical research by MNCs and contract research organisations.

We believe that India has the potential to attain greater market share in other labor- and skill-intensive sectors, such as engineering goods, textiles and, to some extent, auto components and automobiles. However, to capitalize on these opportunities, India needs to be aggressive in implementing critical structural reforms.

Exhibit 71

Product Filings by Indian Pharma Cos. with FDA (Nos.)



Source: US FDA, Morgan Stanley Research

Infrastructure- and Capital-Intensive Sectors – Will Be Tough for India to Win

This is one area where India lags and is unlikely to pick up in the near term until good infrastructure facilities are set up. Although the government is now recognizing the importance of infrastructure, the current rate of progress is not fast enough to encourage any optimism. We believe that there will be pockets of success, especially among large private-sector companies, but a broad-based presence in this area may be constrained over the next three to four years. Infrastructure creation has been hampered by the continuing low level of savings.

The biggest impact of inadequate infrastructure has been on the small manufacturing companies. The top companies in India have to some extent found a way to deal with the lack of infrastructure by creating their own facilities – for example, captive power plants. The argument is well demonstrated via a productivity data comparison for the top 50 Indian companies versus aggregate manufacturing. According to a recent study by the Department of Economics & Statistics, the all-India factories' total factor productivity growth (TFPG) has improved in the post-reforms period to 0.97% from 0.68% pre-reforms. (Note that productivity growth for the top 50 private companies is healthy, at 3.5%, but it is the aggregate trend that will be relevant for policy-makers). We believe that it is the small manufacturing enterprises that suffer from the poor public investment in infrastructure. For instance, there are regular electricity black-outs in most parts of the country except in a select few cities, where distribution is owned by the private sector. This is bound to affect the overall productivity of players who are dependent on government-owned electricity and other public infrastructure services.

Please see important disclosures starting on page 53.

Resource-Based Industries – India Can Win

China is resources-short. India has the inherent advantage in select critical resource-based industries of having access to raw materials for products such as aluminum, steel, agricultural commodities, paper and, to a limited extent, zinc. However, we believe that the country's ability to scale up in these sectors will be challenged by lack of developed infrastructure and less supportive overall manufacturing business environment. For instance, the operating cost of US$160 per ton of flat steel at Tata Steel, the largest private sector steel company in India, is equal to that of POSCO (in South Korea). However, Tata Steel's capacity is just 3.7 million tons, compared with 28 million tons for POSCO. Lack of support from the government in infrastructure has deterred the corporate sector from aggressively expanding its capacity to cater to exports. In this sense, until India improves its infrastructure investments, many of its strongest companies will remain 'globally competitive but only in India'. India will likely become a sizeable global player in 5- 10 years in these sectors as its savings rate improves and infrastructure investments rise.

Conclusion: Is It Really India OR China?

Identifying the winner between these two countries is probably an area of great interest to many of us. Over the next three to four years, we believe that these countries will continue to be complementary destinations in the global business environment, with China being the factory for global manufacturing and India the services workshop to the world. However, India is keen to participate in manufacturing outsourcing and China will eventually build a presence in services. Hence, the case for taking a view on India OR China may arise in five to 10 years but, in the meantime, we believe that today it is India AND China.

Please see important disclosures starting on page 53.

Exhibit 72

China and India: Competitiveness in Exports

2002	Total Exports				Share in global Exports		Outlook for Next Five Years for India
US$bn	World	China	India	China x times India	China	India	
Merchandise Exports							
All Merch. products	**6,477**	**325.6**	**49.3**	**6.6**	**5.0%**	**0.8%**	
Agricultural Products	583	18.8	7.2	2.6	3.2%	1.2%	There have been virtually no reforms in this sector in the last 20 years or so. India can do much better if reforms to improve productivity are implemented.
Mining Products	788	15.0	6.9	2.2	1.9%	0.9%	India can do well in these sectors as it has greater availability of resources such as iron ore, bauxite and thermal coal.
Ores and Other Minerals	63	3.5	1.9	1.8	5.6%	3.0%	
Non-Ferrous Metals	110	3.8	2.6	1.5	3.5%	2.4%	
Manufactures	**4,708**	**292.6**	**38.5**	**7.6**	**6.2%**	**0.8%**	
Iron and Steel	142	3.3	3.9	0.9	2.3%	2.7%	India has done relatively well in iron and steel exports, but can become bigger if the infrastructure availability improves.
Chemicals	660	15.3	5.0	3.1	2.3%	0.8%	Within this segment, we see greater potential in pharmaceuticals and specialty chemicals.
Automotive Products	621	2.7	0.7	3.8	0.4%	0.1%	The exports of automotive products have increased in India in the last three to four years. We expect India's share to improve, especially through higher exports of two-wheelers and auto components.
Office Machines & Telecom Equipment	838	75.5	0.7	104.5	9.0%	0.1%	We do not expect any improvement in India's performance in this area in the near term
Textiles	152	20.6	6.2	3.3	13.5%	4.1%	There is potential for strong growth when the quota regime for textile exports is lifted next year. However, we see limited opportunity in this sector until reforms are undertaken.
Ready-Made Garments	201	41.3	6.3	6.5	20.6%	3.1%	
Other Manf. Products	**2,094**	**133.8**	**15.7**	**8.5**	**6.4%**	**0.7%**	
Services Exports							
All Commercial Services	**1,570**	**39.7**	**25.0**	**1.6**	**2.5%**	**1.6%**	
Travel & Transportation	830	26.6	5.6	4.8	3.2%	0.7%	There may be some increase in this share as the number of tourists increases. Additionally, a gradual increase in share in global trade should enable an improvement.
Other Commercial Services	131	13.0	6.8	1.9	9.9%	5.2%	
Grand Total	**8047**	**365**	**74**	**4.9**	**4.5%^**	**0.9%**	
IT Services & IT Enabled Services*	609	0.6	9.6	0.1	0.1%	1.6%	This will remain a growth driver for the country as more corporates from across the world outsource their needs, both IT and non IT, to India.

** These numbers represent the total outsourcing market for IT Services & IT Enabled Services. ^ Has increased to 5.2% in 2003.*

Source: WTO, Morgan Stanley Research

Please see important disclosures starting on page 53.

Theme 7: Lessons for India

Niche in Services Sector Is Not Enough

Niche in Services Sector for India Not Enough

While we see great potential for India to become the key destination for outsourcing of services, this is unlikely to be sufficient to accelerate overall economic growth and maintain social stability. We believe that increased investment in manufacturing, construction and agriculture is necessary for mass employment generation, ensuring that the lower income strata can participate in economic progress. A rising share of the working population alone will not be enough. Accelerating growth in the stock of people employed in productive work would act as a virtuous driver for higher income, savings and investments. Based on our above detailed discussion of several key themes, we believe that India needs to work on following areas to accelerate its growth trend.

#1 Develop Human Capital

While India has been successful in creating an educated work force for the tertiary sector, primary level education still needs to be improved. The government has already taken a number of measures in this area recently. While enrolment for primary education has improved significantly, there is still a high incidence of dropouts. In 2000-01 about 53% of primary school students dropped out of school. Apart from increasing the focus on primary education, we think the government needs to complement this with programs that help train the work force. This measure will be particularly important for those members of the work force who have either not attended school at all, or who have been early dropouts.

 # 2 Augment Savings Rate Through Fiscal Reforms

India's savings rate is still lower than for most other Asian economies. One of the key reasons for the high growth in Asia (excl. Japan and India) has been the average savings rates of around 35% of GDP in the 1990s. In India, the savings rate has averaged at 24% of GDP for the past 10 years, restricting total capital formation. Even if India's average incremental capital output ratio (ICOR) improves to about 4% from 4.4 currently, it is difficult to see sustained GDP growth of above 6.5% unless the savings rate increases. One of the major reasons for the stagnation in India's savings rate despite an improving age dependency ratio is the government's 'dis-saving'. We believe that a policy change targeting a turnaround in public savings and allocation of resources targeting creation of productive employment opportunities are critical for improving overall savings.

#3 Increase in Capital Accumulation Through FDI and Privatization

While we think efforts to improve the domestic savings rate are critical, fixed investment can also be augmented by attracting foreign direct investment and privatization by way of selling stakes in SOEs to foreign investors. Total FDI as a proportion of GDP is significantly lower in India than in China, averaging less than 1% of GDP over the past three years compared with 3.9% in China. India's average share of global FDI inflows over the past three years is a mere 0.9%, compared with 10.2% for China. Although the government has opened many sectors to FDI, we see a need to improve the overall business environment.

By comparison, China has demonstrated success in privatization. It has collected over US$40 billion in privatization revenues so far, compared with approximately US$11 billion collected by India. China's government has been quick and decisive in its privatization efforts. The most important difference has been that privatization proceeds have been largely infused into public sector companies to improve their efficiency, modernization or welfare of retrenched employees. In India, politicians so far have delayed privatization efforts on account of potential opposition. Privatization has always faced opposition on the grounds that it is adverse to labor and that companies are sold off cheaply. We believe that the government can implement the privatization process faster, with transparency, if it markets the efforts as more beneficial. For instance, this could be demonstrated by collecting funds from divestments and using these for visible social benefits, such as welfare for retrenched employees of public sector companies or critical urban or rural social and physical infrastructure.

#4 Kick-start Investments in Infrastructure

Since the liberalization effort was started in 1991, the government has pulled back from investing in infrastructure, assuming that the private sector will participate. However,

Please see important disclosures starting on page 53.

we believe that this is unlikely to happen in the medium term. In addition, we think that rebuilding infrastructure on a nationwide basis may take longer. Therefore, in the near term, the government could partially address this issue by developing special economic zones at strategic locations with world-class infrastructure. We believe that investment in infrastructure sectors needs to be increased to at least 9% of GDP (about US$65 billion) from about 6% currently to sustain GDP growth of 7%.

#5 Reform Tax Structure

Indian tax rates are currently among the highest in emerging economies. In today's fast-globalising world, where import tariff barriers are reduced by all countries, India still has inter-state trade taxes. We think India needs to move to a consolidated value-added tax, instead of multiple point and multiple rate production and sales taxes. Moreover, indirect taxes are inherently regressive and affect productivity adversely. Hence, there is a need to improve the compliance of direct taxes to reduce the pressure on collecting higher indirect taxes through high rates.

#6 Improve Labor Flexibility

India's labor laws remain restrictive. Currently, any factory employing more than 100 people needs to go through a rigorous approval process before dismissals can take place. Although some political leaders have recently attempted to relax labor laws, this has met with stiff opposition from the trade unions. These laws are effectively working only for the protection of the labor employed in the organised sector, which accounts for only 10% of the total work force. In fact, to avoid these restrictive laws, a large majority of factories use 'casual' labor. Factories prefer to employ people on contract instead of taking them directly onto their payroll. We think there is an urgent need to relax labor laws to enable flexibility of labor. However, relaxing only the labor laws will not help unless some of the other relevant reforms, such as encouraging investment in labor-intensive sectors — for example, agriculture, rural non-farm activities (village industries) and construction — are made to reduce the negative impact of restructuring-related job losses.

 # 7 Decentralize

China may have traditionally been a centralized economy, it is currently operating in a completely decentralized structure. State governments actively compete with each other in wooing foreign direct and domestic private investment, ensuring a progressive business environment. We believe that in India decentralisation of authority and responsibility is crucial to encourage reform. In fact, a critical part of the unfinished reforms agenda, especially as regards fiscal reforms and infrastructure development, should be active participation by the state governments, in our view.

Please see important disclosures starting on page 53.

Theme 7: Lessons for China

A Need to Strengthen the Institutional Framework

#1 Strengthen Institutional Framework

Development of its institutional framework is China's biggest challenge in sustaining its current high growth trend. Although China has left India far behind in terms of success in implementing many of the macro reforms, it has not really focused on the creation of an institutional framework, especially in terms of legal system, capital markets and financial markets. China's biggest problems relate to its banking system. The NPLs in its banking system are approximately 20% of overall credit and 26% of GDP. There is hardly any competition in the banking system and there is over-dependence on the banking system to finance business investments. However, China has realized this problem and has taken steps to improve its banks. China also suffers from an underdeveloped legal system. It has few lawyers and even fewer judges. It needs to work on its legal system to ensure that there are independent means of redress. The government also needs to set up regulatory bodies to ensure that competition is fostered among players offering services like telecoms, electricity and insurance.

#2 Ensure Environment to Encourage Private Entrepreneurs

Unlike India, China has created limited opportunities for home-grown private entrepreneurs. The government continues to be the major player, owning by far the majority of the country's production facilities. In India, only about 22% of industrial output comes from government-owned enterprises. By comparison, in China, 47% of the output is through state-owned and state-controlled enterprises, and 9.4% is through collectively owned enterprises. Indeed, China's weaker institutional framework acts to discourage private sector investment in the country.

#3 Increase Focus on Tertiary Education

As discussed earlier, in terms of university education meeting the competitive needs of the economy, IMD ranks India sixth of 30 nations, with a score of 6.2 out of 10, versus a ranking of 25th for China, with a score of 4.4 out of 10. Although, China reasonably placed greater emphasis on primary education at the initial stages of the development of economy, it now needs to ensure adequate emphasis on tertiary education to match its growing needs.

#4 Implement Financial Sector Reforms

A strong banking sector is one of the key pre-requisites for faster and stable economic growth for transition economies. An efficient financial sector can promote savings and enable the flow of a larger share of savings into productive investments. Implementing financial sector reforms is by far is the most pressing priority for China, in our view. So far, China's high growth has been accompanied by considerable wastage of capital because of the accumulation of non-performing assets in the financial system. The government's high level of influence on the financial system has been one of the key factors behind the high level of NPAs in China.

We believe that China needs to build market orientation in its financial system, reducing the undue influence of government agencies in decision-making. Currently, the central bank's monetary policy is not effective in managing economic cycles. The recent overheating of the economy, with fixed investments growing at 45% in C1Q04, is a case in point. Indeed, we estimate that the overheating in the current economic cycle has resulted in overinvestment of US$200 billion. The government has had to supplement monetary measures with administrative measures to manage the economic cycles. The government needs to implement major financial sector reforms empowering the central bank to act preemptively against overshooting of the economic cycle, in our view.

Please see important disclosures starting on page 53.

Appendix 1: Summary of Key Reforms in China and India

Exhibit 73

	India	China
External Sector Reforms		
Trade Reforms		
Exchange Rate	The macro economic reforms commenced with the devaluation of the rupee by 19% to Rs26 per US$ from Rs21 in July 1991. The rupee was subsequently floated on the current account. Over the years, the Reserve Bank of India has allowed market-oriented movements in currency. Its interventions have usually been with the aim of checking volatility rather than direction.	China implemented the current account convertibility of renminbi (RMB) in 1996. But it follows a fixed exchange rate regime. In 1998, it established a peg of 8.3 RMB to the US$.
Tariffs	India lowered its weighted average import tariff rate from 87% in F1991 to 47% in F1994 to around 25% now. The peak rate was reduced from 355% in F1992 to 35% in F2001 and 20% in 2004.	China has also lowered import tariffs dramatically. Import tariffs averaged well over 50% in the early 1980s, but have been reduced to just 10.4% now. It intends to reduce the tariffs to 9.8% by 2010, according to WTO commitments.
Capital Account Reforms		
FDI	India liberalized FDI policy in 1991 and has subsequently adopted one of the most liberal FDI regimes in the world. It allows 100% FDI in most of its manufacturing sectors, except those pertaining to defense equipment, oil marketing and petroleum refineries. 100% FDI is allowed in infrastructure sectors except airports, civil aviation, telecoms and oil and gas pipelines. Even in services most sectors are allowed 100% FDI, except banking, insurance and professional services. However, even then, the FDI inflow in India has been poor due to bureaucracy, poor infrastructure, rigid labor laws and an unfavorable tax structure.	In 1979, the Chinese government granted legal status to foreign investment in China. The establishment of SEZs in 1980 also improved the climate for FDI flows into China. In 1986, new provisions were passed, which included reducing fees for labor and land use; establishing a limited foreign currency market for joint ventures; and extending the maximum duration of a joint-venture agreement beyond 50 years. The FDI climate further improved in 1990, when a number of provisions were adopted to make China an attractive destination for FDI (for instance, protection from nationalization). China's accession to WTO in 2002 also contributed to strong FDI flows.
Portfolio Investments	In September 1992, the government allowed FIIs to invest in the Indian capital markets. A single FII is allowed to invest up to 10% in a company. Investment limits by a group of FIIs exist at a sector level.	The Shanghai and Shenzhen stock exchanges were established in 1990. China allowed FIIs to invest in B shares. Subsequently, China has allowed Qualified FIIs to invest in the A share market recently. In terms of investment limit, for any stock it is 10% of the total share capital for each QFII, with a 20% maximum for all QFIIs combined.
Internal Sector Reforms		
Industrial Reforms	*The Key industrial reforms implemented in India were:* *Removal of licensing regime:* The government abolished licensing requirements for setting up industries. Now, licenses are required only in industries such as alcohol, tobacco products and those pertaining to defense equipment. *Removal of undue control of trade and business*: The government also abolished the Monopolies and Restrictive Trade Practices Act, which aimed to restrain corporate acquisitions and over-regulate business practices. *Deregulation of product prices:* The prices of various goods, such as steel, cement, fertilizer paper and pulp, have been deregulated since the reform process began. The government also dismantled the Administered Price Mechanism (APM) of petroleum products from April 1, 2002. Now most manufactured product prices are determined by market forces. *Reduction of protection to SME sector:* The government has over the years been reducing the reservations for small-scale industries (SSI). Number of items reserved has been brought down from the peak of 873 items in 1984 to 590 in 2004. However, we believe that the government has been much slower	*The Key industrial reforms implemented in China were:* *Reforming SOEs:* In 1979 the government allowed state-owned enterprises to retain profits. Gradually, the government is trying to build professional management within SOEs. It has also adopted SOE labor reforms, such as contacting of labor, retrenchment and performance-linked pay. The reform process really picked up in 1995 when the central government adopted the idea of 'grasping the large and letting go the small', wherein it intended to keep about 1,000 enterprises as state-owned and privatize the rest. *Deregulation of product prices:* China adopted a dual-track approach to price liberalization, wherein price determination was through both planned and market forces. By the mid 1990s, prices of most products in China were completely liberalized. *SME reforms:* Since 1978, the importance of Township and Village Enterprises (TVEs) in China has increased manifold. The TVEs are hybrid institutions – alliances between TVE entrepreneurs and local government officials (acting in the capacity of 'owners'). TVEs have emerged as one of the key growth drivers of industrial output in China.

Please see important disclosures starting on page 53.

	India	China
	to reform this area as a large number of items are still reserved for SSI. *Privatization of SOEs:* In India, the disinvestment process initially focused on the transfer of minority rights to public and financial institutions. However, no controlling right was sold to the private sector. Recently, the government has privatized a few public sector enterprises, where it passed the controlling interest to strategic investors. However, in the near future, the sale of controlling stakes is unlikely to take place in India, with a clear change in government policy in this area. *Labor reforms:* India still lags on labor reforms. Current regulations require enterprises employing more than 100 people to undergo a complex approval process before retrenching employees.	*Encouraging private and joint sector*: The government has allowed non-state owned enterprises to operate in China and they have proven to be a primary driver of economic growth in the country since the 1980s. *Privatization of SOEs:* China has pursued a limited form of privatization by way of sale of stakes in state-owned companies to public and foreign institutional shareholders. The government has used this as an opportunity to strengthen state-owned enterprises. China has collected multiples of the amount collected by India through the sale of stakes in SOEs. *Labor reforms:* China has been successful in introducing a flexible labor system. China has over the years transitioned to greater flexibility of labor in terms of both hiring and firing.
Agricultural Reforms	Although after independence India initiated some land reforms by dividing land among the tenants, and also introduced the green revolution, which increased agricultural output in the 1960s, there have not been any major reforms in agriculture since the reforms process began. The government's spending on infrastructure for agriculture has been very low. Only about 40% of the land is irrigated, leaving farmers exposed to the vagaries of monsoons.	The first reforms in China were in agriculture. China collectivized agriculture in 1950s, with the establishment of the commune system. However, in the late 1970s a household responsibility system was developed, under which the communes' land was divided among households. This gave a big impetus to the rural economy, with rural incomes increasing by up to 50% over 1978-84. The Chinese government has also spent higher amounts on creating rural infrastructure. In China, too, about 40% of the land is irrigated and farmers depend on rains for proper output.
Fiscal Reforms	*Tax Structure:* India initiated major tax reforms in the early 1990s. It has reduced the marginal rate of personal tax from 56% in F1992 to 30% currently, reduced the corporate tax rate to 35%, and cut the peak excise and import tariff to 25% and 20%, respectively. Since the mid-1990s, the government has expanded the tax net by levying taxes on services. However, India's indirect structure still suffers from a number of anomalies. India's indirect tax rates are still among the highest in Asia, yet still, due to poor collection efficiency and a plethora of exemptions, India's tax to GDP ratio is lower, at just 14.6%, versus China's 17% *Fiscal Prudence:* India pursued some public finance reforms from the early 1990s to the mid-1990s by reining in expenditure and augmenting revenues. This helped reduce the consolidated fiscal deficit to 6.4% of GDP in F1997 from 9.4% in F1992. However, since then, the emergence of coalition government at the centre has resulted in major slippage in government finances, pushing the fiscal to deficit to a new high of 10% in F2002. The recently elected Congress-party-led coalition promises to initiate new reforms in this area, but we think significantly improvement is unlikely in the near term.	*Tax Structure:* China has also implemented major changes in its tax structure over the last 20 years. It has already cut its import tariff, such that the total import tariff as a proportion of the value of imports is already 3%, compared with 15% in India. China also adopted the Value Added Tax system in the mid 1990s, which further improved the efficiency of the tax system. *Fiscal Prudence:* China has initiated a number of measures for better management of government finances. Previously, all government revenue and expenditure had to go through the central government. However, in the 1980s, the process was decentralized, with the local government transferring a negotiated amount to the central government and keeping the rest. This gave increased incentives to the local governments to improve revenue collection and tax efficiencies. Government accounts in China are relatively better placed. The aggregate fiscal deficit in China has remained under 4% of GDP over the last 10 years.
Banking sector reforms	India has steadily strengthened its banking system, improving the regulatory framework, imposing strict prudential norms and encouraging greater competition. The government has allowed private sector entry since the mid-1990s. Private players have already built a 26% share of loan assets in the banking system. The prudential norms in terms of capital adequacy requirements have gradually tightened, and currently banks are required to maintain CARs of 9%. Recently, the government enacted the Foreclosure Act, which gave lenders powers to forfeit assets of defaulting borrowers, enabling quick recovery of NPAs.	Although China has initiated reforms for banking sector, its progress pales when compared with India. Until 1980, there was hardly any competition. The government then created four large banks. Subsequently, joint stock banks were formed and foreign banks were also allowed to open branches. By 2005 foreign banks will be allowed greater access under the WTO agreement. The government has taken steps to reduce NPLs and has recapitalized the weaker banks. The government also needs to ensure greater independence for the central bank, in our view.

Please see important disclosures starting on page 53.

	India	China
Infrastructure Reforms	Except for telecoms, overall progress in other infrastructure areas remains slow in India. *Electricity:* Measures to attract private investment in power generation were taken in F1993, but investors' response has been lackluster. While the government has initiated several measures over the last five years, the effective implementation of reforms in this area is far slower than required. *Roads:* While the overall regulatory framework for the roads sector is not necessarily lacking, aggregate investments in this long-gestation sector remain low. The government has now initiated innovative measures to generate revenues for funding additional investments, but this will still be far less than required. *Ports:* The government has accelerated reforms in this area over the last three to four years, especially in terms of attracting private-sector investment. We estimate that 35% of India's port capacity is already with the private sector. However, the government needs to continue with reforms to reduce India's overall port transport costs to the global average of 6% of import value, from 11% currently. *Telecoms:* Government opened up services like cellular, radio paging, and data services to the private sector in F1993 and followed it up with the opening up of basic telephony to private participation and foreign equity (up to 49%) in F1995. It also fixed a 49% foreign investment limit for cellular telephony which it has recently proposed to increase to 74%. Overall progress in this sector is commendable, we think. *SEZs:* There has been very little progress made by the Indian government in building world-class special economic zones.	While the overall regulatory system in China is still fairly weak, the government has undertaken major initiatives to encourage adequate investments in infrastructure. *Electricity:* The power sector is still completely government-owned and there is no tariff authority. *Roads:* China has largely relied on government investments in this area and therefore efforts to attract the private sector through regulatory changes have been minimal. *Ports:* China has built world-class port infrastructure. A large part of the port infrastructure in China is owned and developed by the government. *Telecoms:* Prior to 1994, the Ministry of Post and Telecommunications (MPT) was the regulator as well as the biggest player in the Chinese market through its arm China Telecom. Subsequently, the arm was split into two parts: the Ministry of Information Industry (MII), the operational arm, and China Telecom. Later China Telecom was further divided on the basis of geography and business. Currently, foreign investment is not allowed in telecoms, but, under the WTO agreement, China will have to allow foreign participation up to 50% in telecoms. *SEZs*: In 1980 China created four Special Economic Zones (SEZs), which enjoyed special policy benefits like lower tax rates in addition to good infrastructure facilities. The success of these SEZs led to the creation of more SEZs and this has been one of the cornerstones of the success of China's reforms

Source: Morgan Stanley Research

Please see important disclosures starting on page 53.

Appendix 2: Fact Sheet

Exhibit 74

Economy & Markets	India	China
National Income Statistics		
Nominal GDP (2003, US$bn)	575	1410
Real GDP Growth (1980-1990)	5.8%	9.3%
Real GDP Growth (1991-2003)	5.8%	9.7%
Population (mn, 2002)	1036	1285
Population Growth (CAGR, 1992-2002)	1.9%	0.9%
Per Capita GDP (2003, US$)	545	1087
GDP Per Capita Growth (%, 1991-2003)	4.2%	9.9%
Composition of GDP (As of 2003)		
Agriculture	22.2%	14.6%
Industry	26.8%	52.3%
Services	51.0%	33.1%
Current Market Statistics		
Market Capitalization (US$bn)*	226	540
MSCI Weight (Asia Pacific)*	4.1%	7.1%
Average Daily Volumes (US$bn)*	1.5	2.9
Total Domestic Mutual Fund Assets (US$mn)*	34457	22221
FII Ownership (% of Market Cap)*	20%	0.3%
Key Valuation Metrics:		
Trailing P/E**	13.6	13.7
Trailing P/BV**	2.7	2.0
ROE (%)**	20	15

** As of May 2004.*

*** Priced as of July 16, 2004; data for MSCI India & China respectively.*

Note: For India except for the national income statistics, the corresponding financial year-end numbers have been stated.

Source: IMF, World Bank, CEIC, CSO, Morgan Stanley Research

Agriculture: Some Facts		
Agriculture		
---Share in GDP (2003) (%)	22	15
---Share in Employment (1999) (%)	58.4	46.9
-- Production of Rice (mn Tonnes)	132	182
-- Production of Wheat (mn Tonnes)	69	94
% of Non-Irrigated Land - Rain Dependent (1997)	62%	59%

Note: For India, the corresponding financial year-end numbers have been stated.

Source: CSO, Morgan Stanley Research, Statistical Outline of India 2003-04

Savings and Investments (As of 2002)		
Saving (% of GDP)	24	42
Gross Fixed Capital Formation (US$ Bn)	114.7	509.3
Gross Fixed Capital Formation (% of GDP)	22	40
Level of FDI (US$ Bn)	4.7	53
FDI as % of GDP	0.8	4.1

Note: For India, the corresponding financial year-end numbers have been stated.

Source: CSO, Morgan Stanley Research

Exhibit 75

Social Environment	India	China
Employment (As of 2001)		
Total Labor Force (mn)	378^	744
Female (% of total)	32	41.5
Agricultural Workforce (% of total)	58*	45.2
Unemployment (% of total workforce)	9.2^	3.6

** As of F2000.^Planning Commission Estimates*

Source: CSO, Planning Commission, Government of India, Statistical Outline of India, Morgan Stanley Research

Percentage Share of Income/Consumption		
Lowest 20%	8.1	5.9
Second 20%	11.6	10.2
Third 20%	15	15.1
Fourth 20%	19.3	22.2
Highest 20%	46.1	46.6

** Survey Year for India: 1997, Survey Year for China: 1998*

Source: World Bank, Morgan Stanley Research

Education		
Gross enrollment ratio in primary schools (%)*	102	114
Gross enrollment ratio in secondary schools (%)*	49	68
Gross enrollment ratio in tertiary education (%)*	10	13
Literacy (%)*		
Male	68	92
Female	45	78
Total Public Expenditure on Education (% of GDP)*	4	2.2
Total Public Expenditure on Education (Per Capita US$)*	18.4	19.5

** As of 2000/2001.*

Source: Statistical Outline of India 2003-04, UNESCO Institute for Statistics, World Bank, IMD, Morgan Stanley Research

Health*		
Physicians (per 1,000 people)	0.4	2
Health Expenditure (% of GDP)	5	5
Health Expenditure per Capita (US$)	23	45

** Data pertains to the latest available period 1999-2002*

Source: Statistical Outline of India 2003-04

(As of 2003)	Per capita consumption			Total market volume		
	Units	India	China	Units	India	China
Cement	'00 kg	1	6	mn Tonnes	108	816
Steel	kg	30	197	mn Tonnes	32	255
Aluminium	kg	0.6	3.7	000 Tonnes	582	4822
Cars	Per 000 Ppl	7	11	0000s	690	1455
TVs	Per 000 Ppl	97	301	mn	103	391
Telephone Lines	Per 000 Ppl	62	420	mn	65	545
Electricity	'00 KWH	5	12	bn KWH	539	1599

Source: Industry Sources, Morgan Stanley Research

Please see important disclosures starting on page 53.

Exhibit 76

Government Debt

	India	China
Aggregate Fiscal Deficit (2003, US$ Bn)	56.4	35.2
Aggregate Fiscal Deficit (2003, % of GDP)	9.6%	2.5%

Sovereign ratings	**India**		**China**
	Foreign Ccy	Local Ccy	Local Ccy
S&P	BB	BB+	BBB+
Fitch	BB+	BB+	A

Debt Structure, 2002		
External Debt (% of GDP)	20.1	13.5
Short Term Debt/Total (%)	15.5	39.8
Public Debt (% of GDP)	84.0	32.0

Source: Standard & Poor, Moody's, Fitch, Morgan Stanley Research

Exhibit 77

Trade (As of 2002)

	India	China
Trade Data (% of GDP)		
Exports	10.3	25.7
Imports	12.8	23.3
Trade Balance	-2.5	2.4
Current Account Balance	0.8	2.8
Main Export Destinations (% share in total exports)		
Asian Countries (Ex-Japan)	24.7	32.1
USA	20.8	21.1
Japan	3.6	13.6
EU	21.7	16.4
Main Import Origins (% share in total imports)#		
Asian Countries (Ex-Japan)	18.9	37.7
Japan	3.0	18.0
EU	20.4	12.9
USA	7.2	8.2
Share of World Goods Exports		
1950s	1.4%	1.5%
1960s	0.9%	1.3%
1970s	0.5%	0.8%
1980s	0.5%	1.3%
1990s	0.6%	2.7%
2003	0.7%	5.9%
Share of World Services Exports		
1980s	0.7%	0.6%*
1990s	0.6%	1.4%
2003	1.4%	2.5%

^ For India, F2003 numbers represent the numbers for the period 2002.

 # For India, the imports number does not include the share of petroleum and crude products since the country-wise break up for the same is unavailable.

** Data for China is available from 1982 onwards. Hence, the average for 1980s has been computed using the period 1982-1989.*

Source: World Trade Organisation, RBI, CMIE, Morgan Stanley Research

Exhibit 78

Monetary Aggregates (As of 2003)

	India	China
GDP (US$ Bn)*	601	1409
M3/GDP* (for China M2/GDP)	73.9%	189.6%
M1/GDP*	21.3%	72.1%
Bank Credit/GDP*	31.0%	136.2%
Bank Deposit/GDP*	55.5%	178.3%
Bank PLR^	10.6%	5.3%
1 Yr Deposit Rate^	5.5%	2.0%
Inflation (CPI) ^	3.8%	1.2%
Forex Reserves (US$ Bn)	110.3	403.3

^Average for the year 2003.

** For India, F2004 numbers represent the numbers for the period 2003.*

Source: RBI, Morgan Stanley Research

Exhibit 79

Infrastructure (As of 2002)

	India	China
Cost		
Railways (PPP US C/TKM^)	7.9	2.60
Electricity Costs for Industrial Clients, US$ per kwh	0.08	0.03

	India		China	
Spending	US$bn	% of GDP	US$bn	% of GDP
Energy*	8.7	1.4%	54.2	3.8%
Construction*	1.4	0.2%	4.6	0.3%
Transport, Storage and Telecom*	9.7	1.6%	73.5	5.2%
Real Estate*	10.9	1.8%	129.6	9.2%
Total	**30.6**	**5.1%**	**261.9**	**18.6**

** For India, F2003 numbers represent the numbers for the period 2002.*

^ US Cents per Ton Kilometer

Source: TISCO, IMD, CSO, CEIC, Morgan Stanley Research

Please see important disclosures starting on page 53.

Appendix 3: Key Economic Indicators – India

Years Ending March 31	F1999	F2000	F2001	F2002	F2003	F2004	F2005E	F2006E
National Income								
GDP at Factor cost Rs bn	10,827	11,484	11,987	12,678	13,183	14,245	15,182	16,118
GDP (at current mkt prices) Rs bn	17,410	19,369	21,043	22,821	24,696	27,608	30,459	33,784
GDP (US$bn)	413	446	459	479	510	601	670	724
Real Growth rates								
Gross domestic product	6.5%	6.1%	4.4%	5.8%	4.0%	8.2%	6.4%	6.2%
Agriculture and Allied activities (incl. mining)	5.9%	0.6%	-0.1%	6.4%	-4.0%	8.6%	2.9%	2.6%
Manufacturing, Constn, Electricity	3.8%	5.0%	7.0%	3.4%	6.2%	6.9%	7.0%	6.6%
Services	8.4%	10.1%	5.6%	6.6%	7.1%	8.7%	7.8%	7.6%
Money and Banking								
Money Supply (M3) growth	19.4%	14.6%	15.3%	16.5%	14.1%	13.0%	14.0%	14.5%
Bank non-food credit (y-y increase)	14.3%	15.2%	19.5%	12.4%	17.0%	16.0%	16.5%	16.0%
Interest rates								
Commercial banks' prime lending rate	13.0%	12.0%	11.5%	11.5%	10.8%	10.3%	10.5%	10.5%
Bank Rate	8.0%	7.0%	7.0%	6.5%	6.3%	6.0%	6.0%	6.5%
Prices								
Wholesale price index (avg y-y increase)	5.9%	3.3%	7.0%	3.6%	3.1%	5.2%	5.4%	4.8%
Consumer price index (avg y-y increase)	11.5%	3.5%	4.1%	4.3%	4.0%	3.9%	3.5%	3.8%
External sector								
Current account								
Exports (US$bn)	34.3	37.5	44.9	44.9	52.5	63.0	70.0	78.3
Imports (US$bn)	47.5	55.4	59.3	57.6	65.4	79.7	97.0	108.6
Trade balance (US$bn)	-13.2	-17.8	-14.4	-12.7	-12.9	-16.7	-27.0	-30.3
Exports as % of Imports	72.1%	67.8%	75.8%	78.0%	80.3%	79.0%	72.2%	72.1%
Invisibles, net (US$bn)	9.2	13.1	11.8	13.5	17.0	25.4	24.0	25.7
Current account balance (US$bn)	(4.0)	(4.7)	(2.6)	0.8	4.1	8.7	(3.0)	(4.6)
Current account Balance as a % of GDP	(1.0%)	(1.1%)	(0.6%)	0.2%	0.8%	1.5%	(0.4%)	(0.6%)
Capital account								
Debt creating capital inflows (US$bn)	5.7	2.5	6.7	2.3	-1.8	8.2	6.0	6.5
Foreign investment (US$bn)	2.4	5.2	6.9	8.1	5.6	15.0	11.0	11.5
Total capital -net (US$bn)	8.0	10.2	9.0	10.6	12.1	35.5	21.7	22.2
Capital inflow as a % of GDP	1.9%	2.3%	2.0%	2.2%	2.4%	5.9%	3.2%	3.1%
Reserves								
Foreign currency reserves (US$bn)	29.8	35.1	39.5	51.1	71.1	115.3	127.6	145.3
Foreign currency reserves as no. of months imports	7.5	7.6	8.0	10.6	13.0	17.4	15.8	16.1
Exchange rate								
Average exchange rate (Rs/US$1)	42.2	43.4	45.8	47.69	48.39	45.94	45.44	46.26
Year end exchange rate (Rs/US$1)	42.4	43.6	46.6	48.7	47.64	44.96	45.80	46.50
External debt								
External debt (US$bn)	96.9	98.3	99.7	98.8	104.2	109.2	111.7	114.2
External debt as a percentage of GDP	23.6%	22.1%	22.1%	21.1%	20.1%	17.8%	16.8%	15.7%
Short term debt as a proportion of total	4.4%	4.0%	3.5%	2.8%	3.0%	3.0%	3.0%	3.0%
Debt service ratio (Payments over currents receipts)	17.8%	16.2%	17.3%	14.1%	15.0%	15.5%	15.5%	15.5%
Public Finance								
Fiscal deficit (Rs bn)								
-----Central government	1133	1047	1188	1410	1451	1485	1553	1665
-----State government	743	915	873	960	1167	1215	1310	1444
-----Consolidated Deficit **	1567	1840	1999	2259	2371	2589	2757	2973
Fiscal deficit (As % of GDP)								
-----Central government	6.5%	5.4%	5.6%	6.2%	5.9%	5.4%	5.1%	4.9%
-----State government	4.3%	4.7%	4.1%	4.2%	4.8%	4.4%	4.3%	4.3%
-----Consolidated Deficit **	9.0%	9.5%	9.5%	9.9%	9.6%	9.4%	9.1%	8.8%

E = Morgan Stanley Research Estimates

Source: RBI, CSO, Budget Documents, and Morgan Stanley Research

Please see important disclosures starting on page 53.

Appendix 4: Key Economic Indicators – China

Years Ending March 31	1998	1999	2000	2001	2002	2003	2004E	2005E
National Income								
GDP (at current mkt prices) RMB bn	7,835	8,207	8,947	9,731	10,517	11,690	12,950	14,197
GDP (US$bn)	946	991	1,080	1,159	1,265	1,409	1,564	1,711
Real Growth rates								
Gross domestic product	7.8%	7.1%	8.0%	7.5%	8.3%	9.1%	7.8%	7.5%
Agriculture and Allied activities (incl. mining)	3.5%	2.8%	2.4%	2.8%	2.9%	2.5%	na	na
Manufacturing, Constn, Electricity	8.9%	8.1%	9.4%	8.4%	9.8%	12.6%	na	na
Services	8.3%	7.7%	8.1%	8.4%	8.7%	6.6%	na	na
Money and Banking								
Money Supply (M2) growth	15.3%	14.7%	14.0%	14.4%	16.8%	19.6%	16.0%	15.0%
Financial Institution Loans (y-y increase)	15.5%	12.5%	13.4%	11.6%	15.8%	21.1%	16.7%	na
Interest rates								
Base Lending: 1Y Working Capital Rate	6.4%	5.8%	5.8%	5.8%	5.3%	5.3%	5.8%	6.3%
Deposit Rate: 3M Time Deposit	2.8%	2.0%	2.0%	2.0%	1.7%	1.7%	2.2%	2.7%
Prices								
Consumer price index (avg y-y increase)	-0.8%	-1.4%	0.4%	0.7%	-0.8%	1.2%	2.5%	2.0%
Producer price index (avg y-y increase)	-4.3%	-2.9%	2.7%	-1.3%	-2.2%	2.3%	na	na
External sector								
Current account								
Exports (US$bn)	183.8	194.9	249.2	266.1	325.6	438.5	526.2	578.8
Imports (US$bn)	140.2	165.7	225.1	243.6	295.2	413.1	551.5	590.1
Trade balance (US$bn)	43.6	29.2	24.1	22.5	30.4	25.4	-25.3	-11.3
Exports as % of Imports	131.1%	117.6%	110.7%	109.3%	110.3%	106.1%	95.4%	98.1%
Invisibles, net (US$bn)	(4.9)	(7.5)	(5.6)	(5.9)	(6.8)	(8.6)	(9.0)	(10.0)
Current account balance (US$bn)	29.3	15.7	20.5	17.4	35.4	45.9	(5.9)	8.9
Current account Balance as a % of GDP	3.1%	1.6%	1.9%	1.5%	2.8%	3.3%	(0.4%)	0.5%
Financial Account								
Financial Account (US$bn)	-6.3	7.7	2.0	34.8	32.3	52.8	na	na
Financial Account as a % of GDP	-0.7%	0.8%	0.2%	3.0%	2.6%	3.7%	na	na
Foreign Direct investment (US$bn)	45.6	40.4	40.8	46.9	52.7	53.5	55.0	50.0
FDI as % of GDP	4.8%	4.1%	3.8%	4.0%	4.2%	3.8%	3.5%	2.9%
Reserves								
Foreign currency reserves (US$bn)	145.0	154.7	165.6	212.2	286.4	403.3	470.0	500.0
Foreign currency reserves as no. of months imports	12.4	11.2	8.8	10.5	11.6	11.7	10.2	10.2
Exchange rate								
Average exchange rate (Rs/US$1)	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.30
Year end exchange rate (Rs/US$1)	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.35
External debt								
External debt (US$bn)	146.0	151.8	145.7	170.1	168.5	193.6	na	na
External debt as a percentage of GDP	15.4%	15.3%	13.5%	14.7%	13.3%	13.7%	na	na
Short term debt as a proportion of total	11.9%	10.0%	9.0%	29.7%	31.4%	39.8%	na	na
Public Finance								
Fiscal deficit (RMB bn)								
-----Central government	177	170	147	341	362	na	na	na
-----State government	-269	-344	-396	-593	-677	na	na	na
-----Consolidated Deficit **	-92	-174	-249	-252	-315	-292	-320	-355
Fiscal deficit (As % of GDP)								
-----Central government	2.3%	2.1%	1.6%	3.5%	3.4%	na	na	na
-----State government	-3.4%	-4.2%	-4.4%	-6.1%	-6.4%	na	na	na
-----Consolidated Deficit **	-1.2%	-2.1%	-2.8%	-2.6%	-3.0%	-2.5%	-2.5%	-2.5%

E = Morgan Stanley Research Estimates *Source: CIEC and Morgan Stanley Research*

Please see important disclosures starting on page 56.

Glossary

Working Age Population: Population in the age group of 15-64 years.

Age Dependency Ratio: Ratio of dependents (people younger than 15 and older than 64) to the working age population (those between the ages of 15-64).

Revenue Deficit: Refers to the excess of Revenue (current consumption) expenditure less revenue receipts (tax plus non-tax).

Fiscal Deficit: Fiscal deficit includes revenue deficit plus capital deficit (gap for funding capital expenditure). This indicates the total borrowing requirements of Government from all sources.

Total Factor Productivity (TFP): That part of non-factor inputs, which enables higher growth with lesser application of factor inputs. In other words, TFP implies enhanced output per unit of input. TFP broadly encompasses the contribution of technology and managerial aspects to the growth of real output.

Labor Productivity: Quantity of output per unit of time spent. Could be measured in, for example, US$ GDP per person employed per hour.

Incremental Capital Output Ratio (ICOR): The amount of capital required to produce one additional unit of output. Hence, the lower the ICOR the higher the output for a given level of capital formation. Usually this ratio is calculated by dividing the sum of investment in a specific period by the incremental output during that period. For example, if a country's investment to GDP is 25% and GDP growth is 6%, its capital output ratio would be 4.2 (i.e. 25% divided by 6%).

Public Saving: Represents savings from government administrative operations and its non-departmental enterprises (including engaged production of goods for commercial purposes).

Please see important disclosures starting on page 56.

Please see important disclosures starting on page 56.

Please see important disclosures starting on page 56.

Important US Regulatory Disclosures on Subject Companies

The information and opinions in this report were prepared or are disseminated by Morgan Stanley Dean Witter Asia Limited and/or Morgan Stanley Dean Witter Asia (Singapore) Pte. and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd and/or Morgan Stanley & Co. International Limited, Taipei Branch and/or Morgan Stanley & Co International Limited, Seoul Branch, and/or Morgan Stanley Dean Witter Australia Limited (A.B.N. 67 003 734 576, holder of Australian financial services licence No. 233742, which accepts responsibility for its contents), and/or JM Morgan Stanley Securities Private Limited (collectively and with their affiliates, "Morgan Stanley").

The research analysts, strategists, or research associates principally responsible for the preparation of this research report have received compensation based upon various factors, including quality of research, investor client feedback, stock picking, competitive factors, firm revenues and overall investment banking revenues.

Error! Objects cannot be created from editing field codes.

Other Important Disclosures

This research report has been published in accordance with our conflict management policy, which is available at www.morganstanley.com/institutional/research/conflictpolicies.

For a discussion, if applicable, of the valuation methods used to determine the price targets included in this summary and the risks related to achieving these targets, please refer to the latest relevant published research on these stocks. Research is available through your sales representative or on Client Link at www.morganstanley.com and other electronic systems.

This report does not provide individually tailored investment advice. It has been prepared without regard to the individual financial circumstances and objectives of persons who receive it. The securities discussed in this report may not be suitable for all investors. Morgan Stanley recommends that investors independently evaluate particular investments and strategies, and encourages investors to seek the advice of a financial adviser. The appropriateness of a particular investment or strategy will depend on an investor's individual circumstances and objectives.

This report is not an offer to buy or sell any security or to participate in any trading strategy. In addition to any holdings disclosed in the section entitled "Important US Regulatory Disclosures on Subject Companies", Morgan Stanley and/or its employees not involved in the preparation of this report may have investments in securities or derivatives of securities of companies mentioned in this report, and may trade them in ways different from those discussed in this report. Derivatives may be issued by Morgan Stanley or associated persons.

Morgan Stanley & Co. Incorporated and its affiliate companies do business that relates to companies covered in its research reports, including market making and specialized trading, risk arbitrage and other proprietary trading, fund management, investment services and investment banking. Morgan Stanley sells to and buys from customers the equity securities of companies covered in its research reports on a principal basis.

Morgan Stanley makes every effort to use reliable, comprehensive information, but we make no representation that it is accurate or complete. We have no obligation to tell you when opinions or information in this report change apart from when we intend to discontinue research coverage of a subject company.

With the exception of information regarding Morgan Stanley, reports prepared by Morgan Stanley research personnel are based on public information. Facts and views presented in this report have not been reviewed by, and may not reflect information known to, professionals in other Morgan Stanley business areas, including investment banking personnel.

Morgan Stanley research personnel conduct site visits from time to time but are prohibited from accepting payment or reimbursement by the company of travel expenses for such visits.

The value of and income from your investments may vary because of changes in interest rates or foreign exchange rates, securities prices or market indexes, operational or financial conditions of companies or other factors. There may be time limitations on the exercise of options or other rights in your securities transactions. Past performance is not necessarily a guide to future performance. Estimates of future performance are based on assumptions that may not be realized.

To our readers in Taiwan: Information on securities that trade in Taiwan is distributed by Morgan Stanley & Co. International Limited, Taipei Branch (the "Branch"). Such information is for your reference only. The reader should independently evaluate the investment risks and is solely responsible for their investment decisions. **This publication may not be distributed to the public media or quoted or used by the public media without the express written consent of Morgan Stanley.** Information on securities that do not trade in Taiwan is for informational purposes only and is not to be construed as a recommendation or a solicitation to trade in such securities. The Branch may not execute transactions for clients in these securities.

Certain information in this report was sourced by employees of the Shanghai Representative Office of Morgan Stanley Dean Witter Asia Limited for the use of Morgan Stanley Dean Witter Asia Limited.

Morgan Stanley

The Americas
1585 Broadway
New York, NY 10036-8293
United States
Tel: +1 (1)212 761 4000

Europe
25 Cabot Square, Canary Wharf
London E14 4QA
United Kingdom
Tel: +44 (0)20 7425 8000

Japan
20-3, Ebisu 4-chome
Shibuya-ku,
Tokyo 150-6008, Japan
Tel: +81 (0)3 5424 5000

Asia/Pacific
Three Exchange Square
Central
Hong Kong
Tel: +852 2848 5200