SPECIAL REPORT

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India and China: A Developmental Paradox

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Comparing China with India from an economic historical perspective is an intriguing exercise. It is fascinating because the two countries are so similar in terms of population size, cultivated land and ambition, yet so different politically, socially and now, economically. India's economy has all the seeming advantages — political, economic, legal and others — over China's. Yet, China has outgrown India by a huge margin since the early 1980s, something that has defied the fundamental assumptions of neoclassical economics. This represents a developmental paradox.

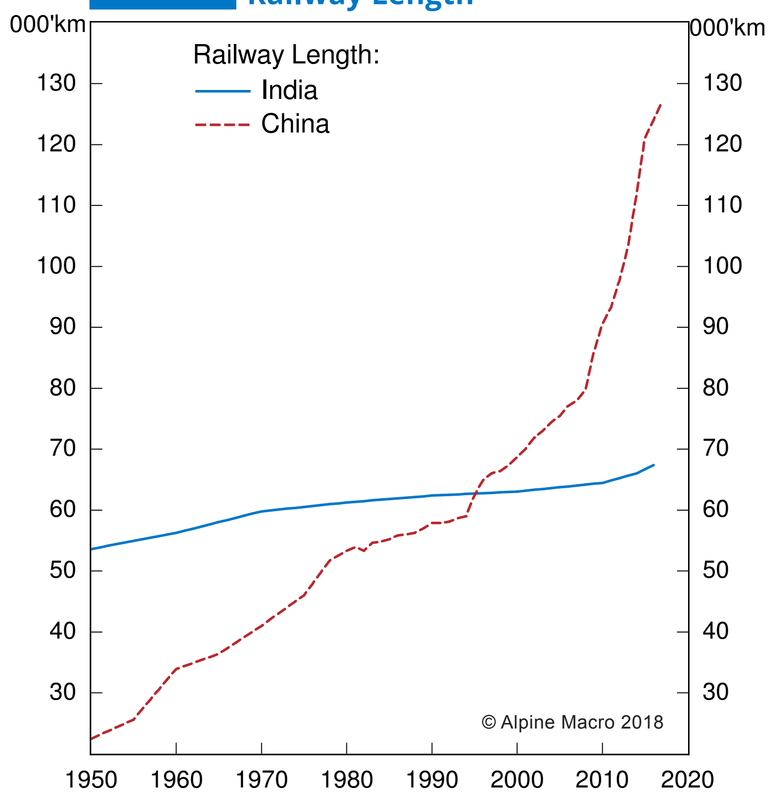
India's Natural Advantages

Compared to China, India indeed has many natural advantages when it comes to economic growth and development. These include:

- India is a parliamentary democracy and utilizes the inherited British common law system. Democracy and rule of law are considered essential to free market capitalism. China, on the other hand, has had an authoritarian regime since 1949. For most of its recent history, China has had no rule of law whatsoever.

- India has always had well-defined private property rights and free flows of factors of production. Farmland has been privately owned for hundreds of years, as have been productive assets in industrialized areas. China, however, eliminated private ownership outright in 1949. Only since the early 1990s has the Chinese government begun to restore private ownership in some sectors. Free movement of workers was barred until the 1990s.

Chart 1 India vs. China: Railway Length



- India's land mass, albeit only a third of China's, is much more fertile. In fact, India's fertile land exceeds China's by 54% because two-thirds of China's landmass is covered by mountains and rough terrain with little or no rainfall. India sits on a subcontinent that is warm and moist, with the fertile Indo-Gangetic plain stretching across most of northern, central and eastern India and the Deccan Plateau occupying most of the southern part of the country. Monsoon season usually brings plenty of rainfall across the subcontinent.

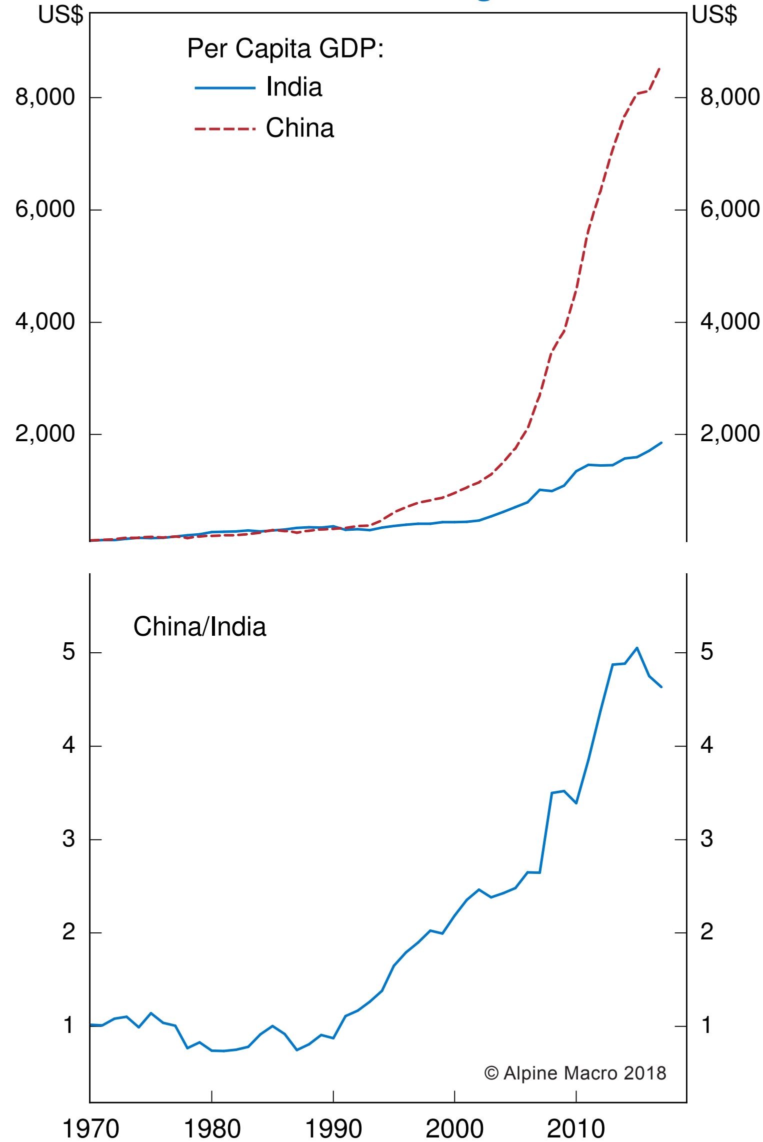
- In the 19th century, Great Britain helped India build the most advanced railway system in Asia. Until the late 1990s, India's total rail mileage far exceeded China's (**Chart 1**).

- India has seldom been subject to serious economic sanctions by Western powers, except in 1998 when its nuclear tests provoked economic measures by the U.S. and Europe. China, however, was largely isolated by the international community until Mao Zedong's death in 1976. Since 1989, China has been subject to sanctions by the West, barring exports of advanced technology to China.

- India has had a well-developed stock market and a fully functional banking system for a long time. In fact, the Bombay Stock Exchange has been operational since 1875. China, however, did not have a commercial banking system until 1983. Its stock market was shut down in 1949 and only reopened in 1992. Prior to 1983, the People's Bank of China was both a note-issuing bank and a commercial bank, as well as a subsidiary under the Ministry of Finance.

- India has a large English-speaking population, and, in fact, English is the country's second official language. By contrast, until the 1990s only a very small proportion of the Chinese population was proficient in English, though that percentage has increased over time. Nevertheless, compared with India, the level of English proficiency among the Chinese population is far behind and remains extremely low.

Chart 2 India vs. China: Economic Divergence



The list can be easily extended, but the message is clear: India's economy has been much better positioned to benefit from economic liberation and a free market system. Nevertheless, the economic reality has turned out to be much more disappointing for India-optimists.

Since the 1980s

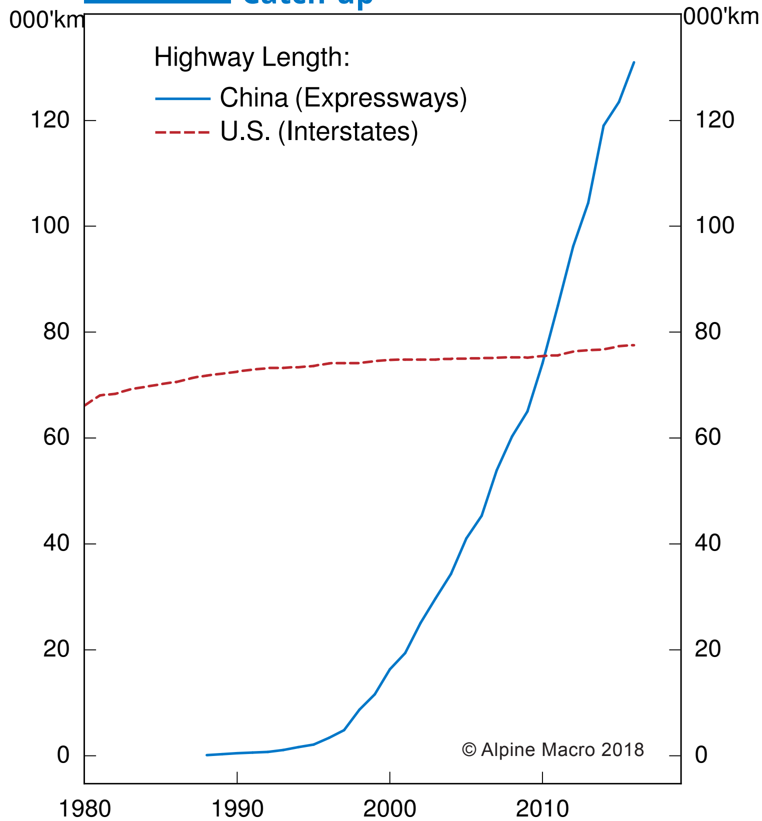
China began economic reforms in 1978, and since that time its economic growth has moved onto a fast track. India, however, has been on a slower trajectory. Although India's 1991 reforms lifted the country's economic growth rate from 4%-5% to 6%-7%, this pales in comparison with China's double-digit growth rate between the 1980s and 2000s. As a result, a huge gap between the two economies has opened.

In 1980, India was much wealthier than China: India's GDP per capita was US$264, while China's was US$195, making India's living standards 35% higher than those in China (**Chart 2**). Today, China's GDP per capita is around US$8600, while India's is US$1,850, making China's living standards about five times India's.

India's total GDP was about 25% smaller than China's in the 1980s, roughly reflecting its smaller population. Today, the population in both countries is essentially on par, at over 1.3 billion. However, China's GDP exceeds US$12 trillion versus India's US$2.5 trillion. On a purchasing power parity (measured in 2016 PPP dollars) basis, India's GDP was 915 billion in 1980 versus China's 455 billion. Today, China's GDP is valued at 23 trillion in PPP dollars, while India's is 9 trillion.

India has also fallen far behind in a wide range of economic activities. India's grain output (rice and wheat) is about half of China's, cash crop outputs (vegetables and fruits) are a third of China's. Keep in mind that, as mentioned earlier, India's fertile land exceeds China's by 54%, and only 15% of

Chart 3 **China's Infrastructure Catch-up**

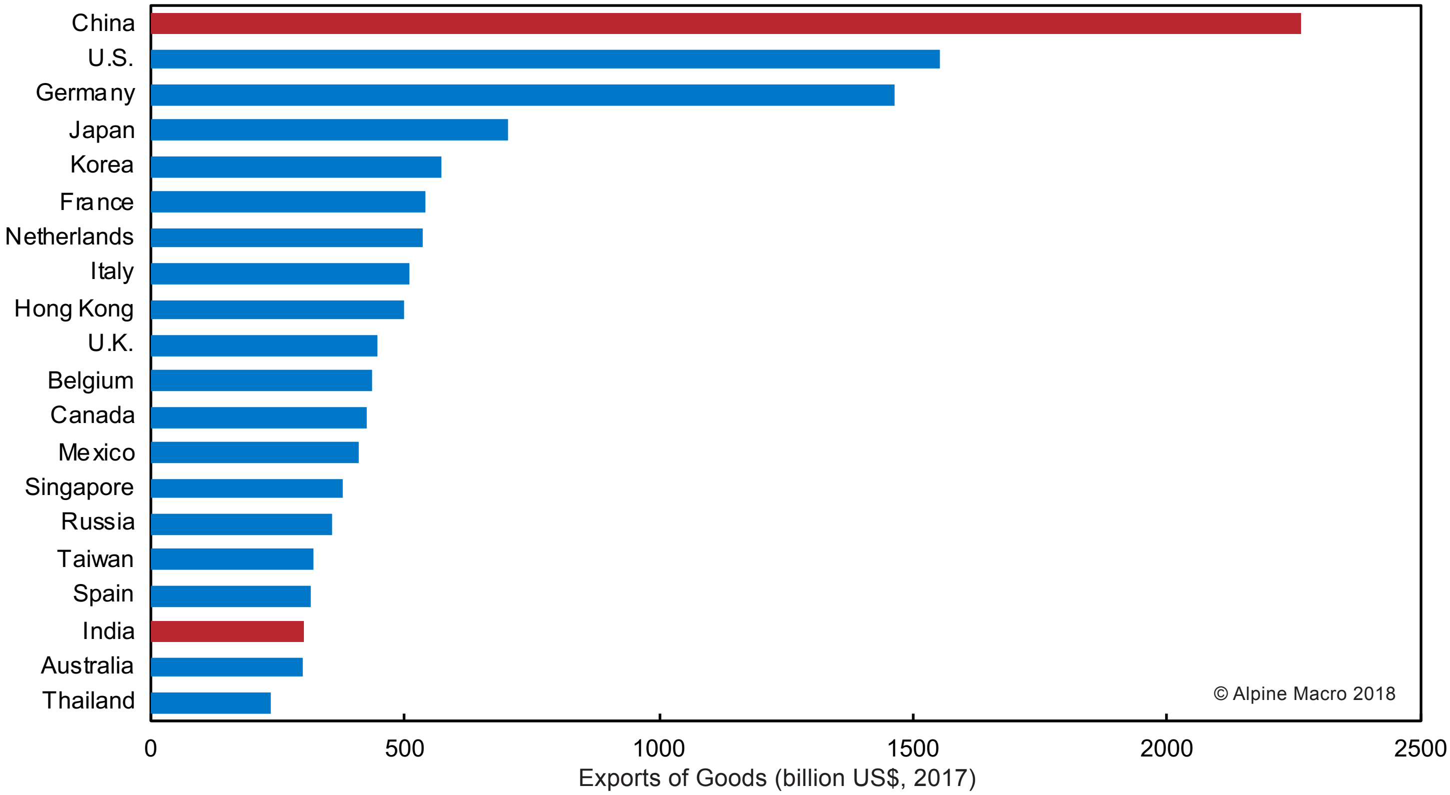


China's landmass is suitable for agricultural production, while 50% of India's landmass is fertile.

Although India has a network of highways stretching some 115,000 kilometers, the total length of expressways is only 1,450 kilometers today. China virtually had no expressways in 1990. Today, the total length of expressways is well over 135,000 kilometers, far surpassing that of the U.S. (**Chart 3**). This is not to mention China's high-speed train network, which is both the longest and most advanced in the world.

In other areas, China is also far ahead: India's steel output is one-tenth of China's, and cement output is one-ninth. China has seven of the 10 largest ports in the world, while India has none in the top 30. Both countries' exports were negligible four

Chart 4 The World Trade League



decades ago. Today China is the world's biggest exporter, with exports valued at about eight times that of India's.

The key point here is that China and India set out in an economic race at roughly similar starting points, but the former has by far outpaced the latter. Why have the growth paths of the two countries been so different, and what key factors explain the diverging trends in income growth and wealth generation? More importantly, what can be learned?

Was the WTO a Watershed Event?

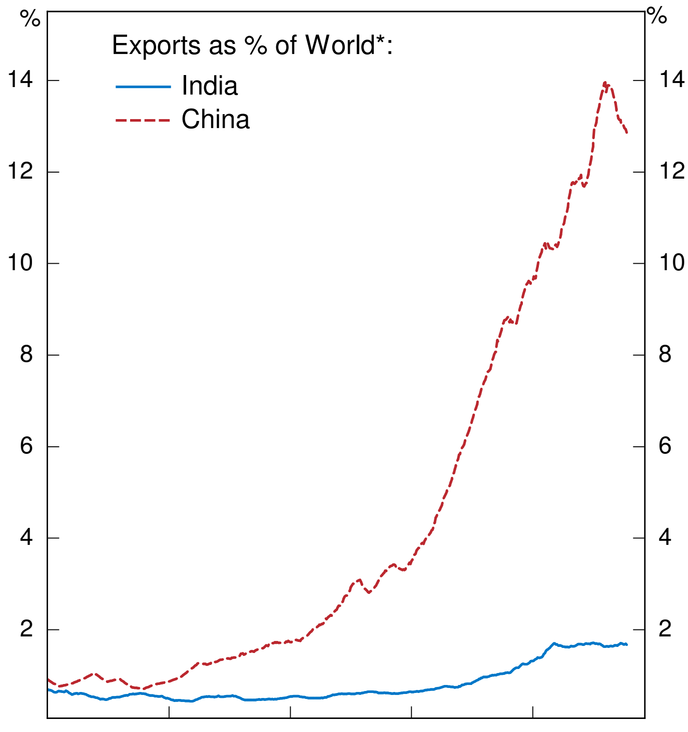
A popular view is that China's joining the World Trade Organization (WTO) in 2001 was a watershed event in the country's economic growth trajectory that allowed it to take full advantage of its cheap labor force and quickly develop its export industries.

China's export growth has indeed taken off since the 1990s, with the trend accelerating significantly after it joined the WTO. Nevertheless, to say that China's economic success is mainly due to its WTO membership is an exaggeration.

India was a founding party of the General Agreement on Tariffs and Trade (GATT) and hence has been a member of the WTO since its creation in 1995 to subsume the GATT. It also has a vast pool of cheap labor. Yet, India's export industry has only grown slowly. In 2017, India's total exports amounted to US$300 billion, ranking 18th in the world. In other words, WTO membership did not make a huge difference in terms of India's economic growth (**Chart 4**).

China's annual exports, however, have soared to US$2.2 trillion from a mere 18 billion in 1980. It has surpassed the U.S. since 2007 and is currently the

Chart 5 **Globalization: India Has Missed Out**



*Shown as 12-month moving average

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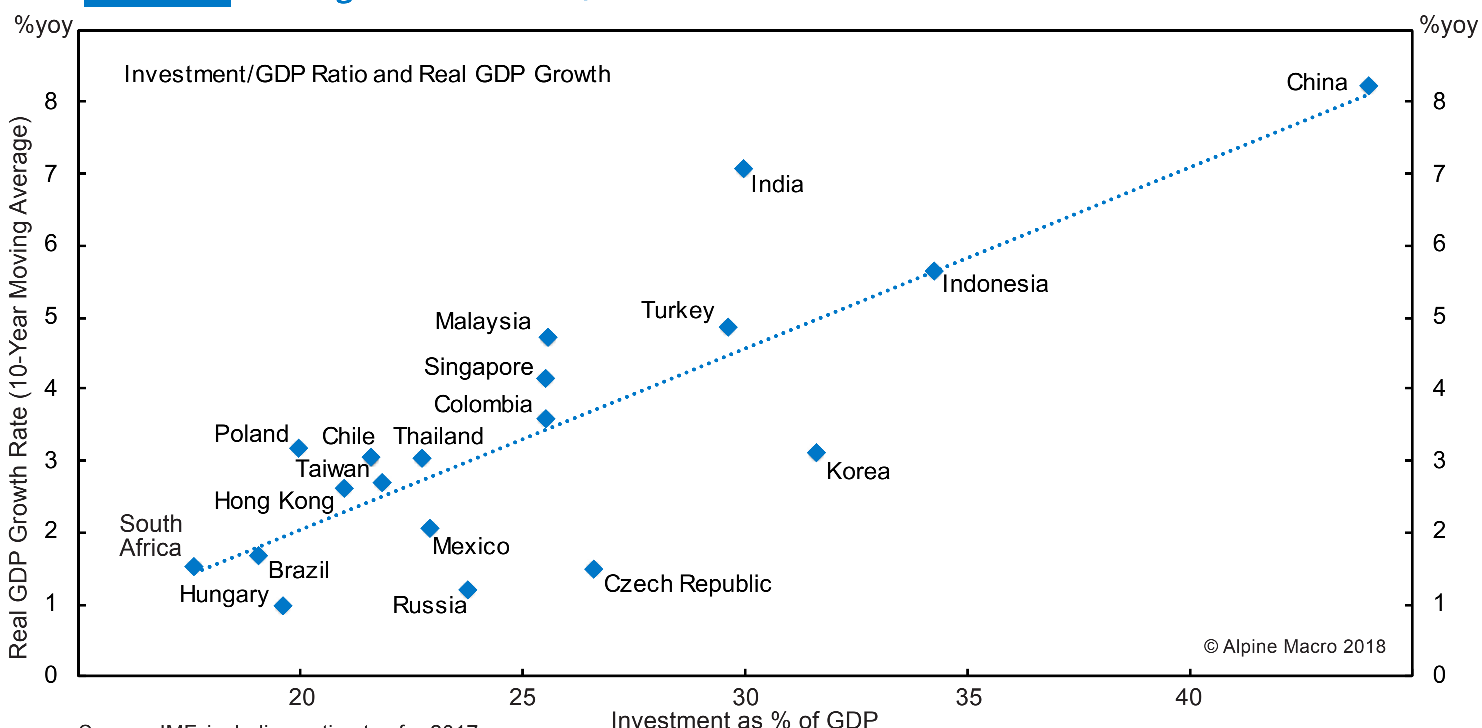
world's biggest exporter. Put in context, the total value of Indian exports was roughly on par with China's in the 1970s; the ratio shrunk to about 1/3 in the 1980s and 1/8 over the past decade.

All of these statistics suggest that WTO membership may have been a necessary but not sufficient condition for China to quickly develop its export industry. There are other much more important factors explaining the difference in export performance between China and India (**Chart 5**).

Divergence Explained

The reasons holding back India's growth are complicated. There are political, social and cultural factors. For instance, India's caste system, while eroding, has been a huge factor in political, social and economic life. It is a big negative for economic growth. Nevertheless, from an economic viewpoint, there are three big reasons explaining the economic divergence

Chart 6 **The Higher Investment, the Faster Economic Growth**



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Source: IMF, including estimates for 2017 between the two countries: savings/investment rates, labor market flexibility and government economic policies.

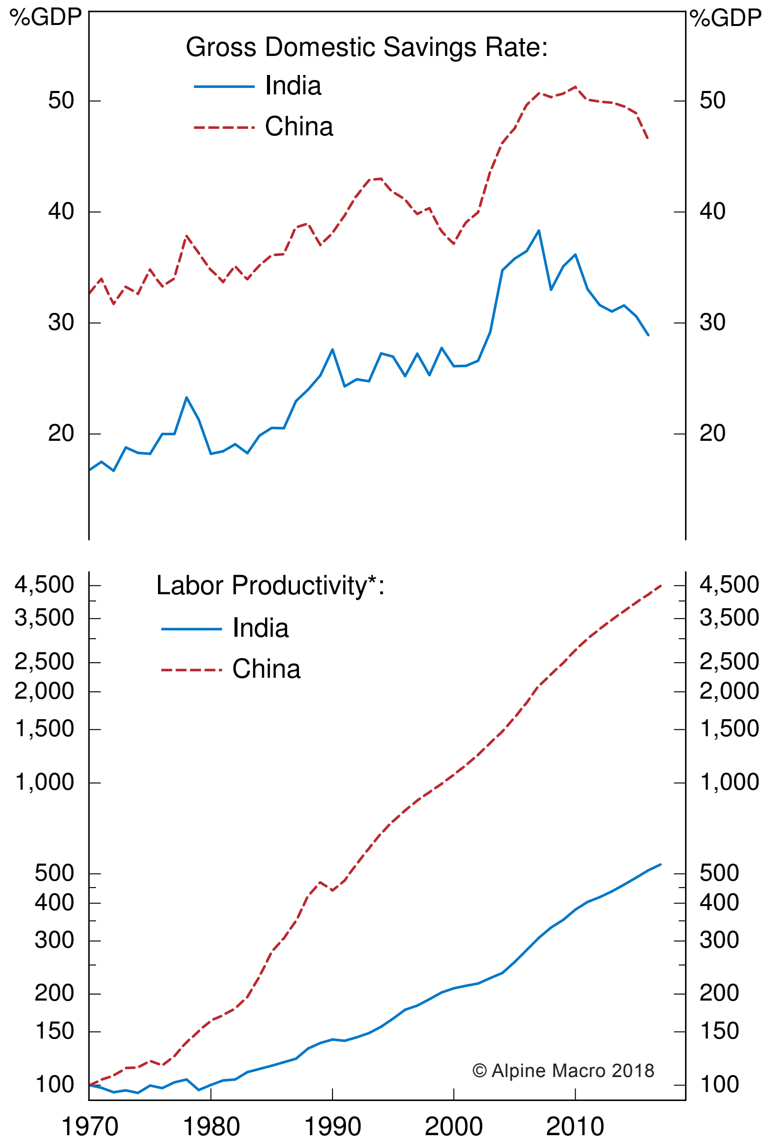
On the first point, China's high savings rate has given it a huge advantage in terms of increasing capital stock. The crucial role played by the national savings rate in the economic growth process was first articulated by Professor Robert Solow in the 1950s. Solow argued that the key variables explaining the economic growth difference among nations are the savings and investment rates. Simply put, nations with sustainably high savings and investment rates tend to outgrow countries with lower rates.

This observation is rooted in the simple fact that economic growth is ultimately determined by labor productivity growth, and the level of labor productivity is a positive function of the capital stock to labor ratio (CLR): the higher the CLR, the higher the level of labor productivity, and the only way to increase the CLR is by investing. **Chart 6** illustrates our cross-country analysis that shows a strong positive correlation between GDP growth and investment rates.

China's gross national savings rate has been significantly higher than that of India since the early 1980s, with the savings gap between the two exceeding 10% of GDP for most of the time. With China's CLR rising at a much faster pace than India's, it comes as no surprise that China's productivity growth has far exceeded India's since 1980 (**Chart 7**).

There is a long list of reasons why China's saving rate is high. It includes factors ranging from cultural to political and economic, but the lack of entitlement and social safety net have been the two key forces fostering a strong culture of thrift among the Chinese citizens.

Chart 7 **Savings Rate and Labor Productivity**



*Source: Conference Board Total Economy Database

China's high savings rate has allowed it to self-finance its entire industrialization process without encountering any significant financial crisis. Faced with inadequate domestic savings, many developing countries often borrow from abroad to finance domestic investment. Invariably, this option plunges debtor countries into periodic financial crises, setting back their economic development for years, if not decades.

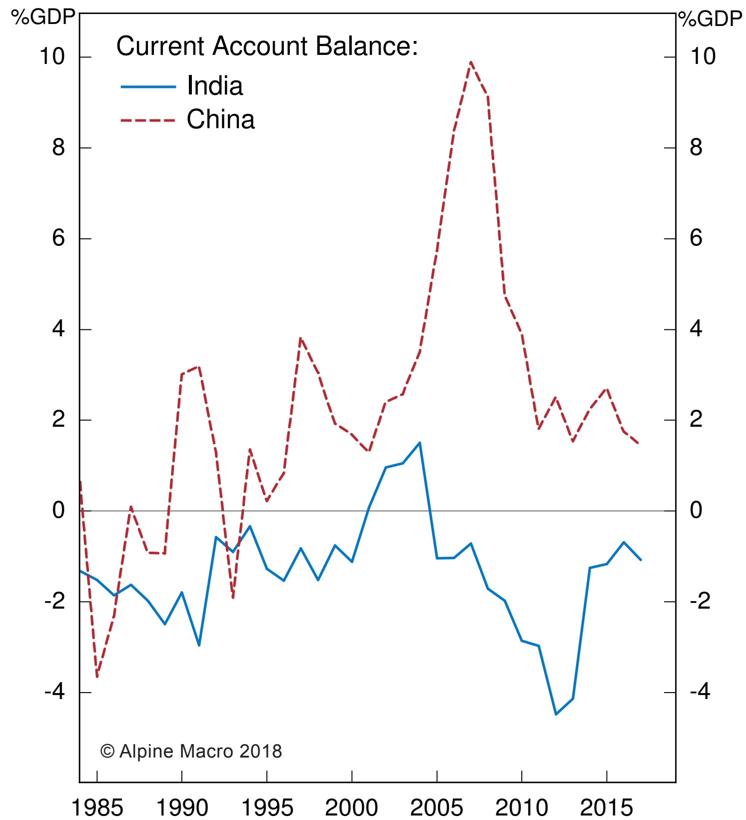
India has had its fair share of financial instability. The 1991 economic crisis occurred in the wake of a ballooning current account deficit and heavy borrowing from abroad (**Chart 8**). This culminated in a 45% drop in the rupee's exchange rate against the dollar, pushing the economy into a severe slump.

As recently as 2013, India was struck by a bout of financial instability caused by the "taper tantrum" — the fear that the Fed would soon reduce monetary stimulus. Inadequate domestic savings, slow productivity growth and external imbalances have always been the key culprits behind India's financial instability. **Chart 9** shows how the Indian rupee has fallen on a secular basis and the key reason for the currency weakness is India's chronic high inflation.

China has largely avoided financial crises since its economic reforms began in the late 1970s, which I attribute to relative economic stability at the hand of the country's high savings rate. In fact, its savings rate is so high that it not only allows sufficient capital accumulation and the CLR to grow quickly, but also creates a steady savings surplus, securing a creditor position to the rest of the world over the past two decades.

Another key reason explaining the growth difference between India and China has to do with the structural differences in the countries' labor markets. Simply put, India has a much more protective and rigid labor market than China. Even though India is a developing country, it has had well-defined labor laws for a long time. There are 45 laws at the national level and close to four times that number at the state level that monitor the functioning of labor markets. As a result, labor market rigidity is a serious problem, unduly increasing operational costs for Indian companies.

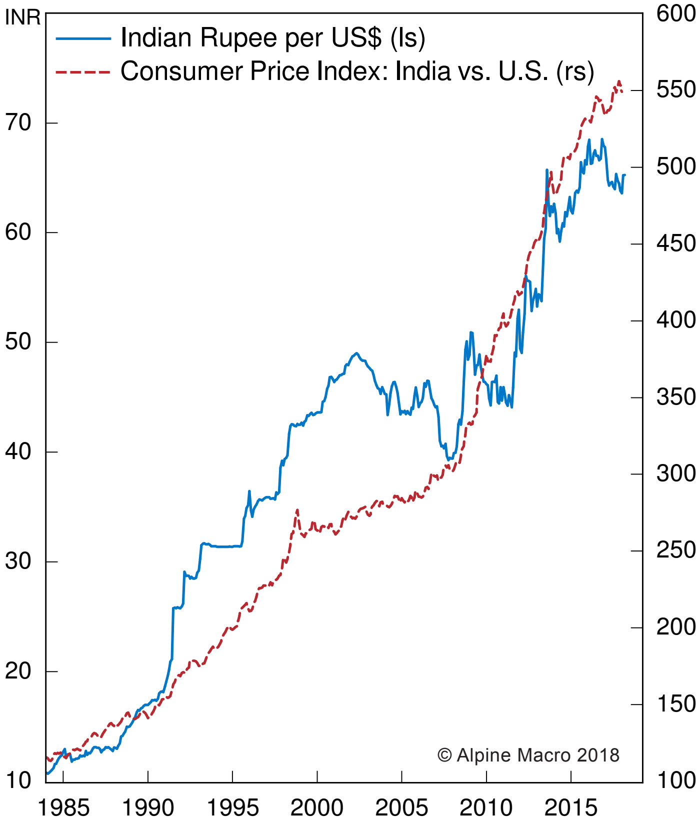
Chart 8 **China and India: Creditor vs. Debtor**



For example, no Indian factories, mines or plants with more than 100 employees can lay off workers without government permission. Overtime pay for employees is 200% of regular hourly wages, and paid maternity leave was recently upgraded to 26 weeks from 14 weeks. Companies with more than 50 employees must have on-site child care.

The complicated legal framework governing the labor market has created a strong disincentive for entrepreneurs and businesses to create new jobs. Although many Indian workers are employed by the black market, large companies are reluctant to hire more employees if they cannot easily fire workers. Firms are therefore disincentivized to employ more than a handful of people in a corporation. As a result, employment

Chart 9 India's Chronic Problem: Weaker Currency and Higher Inflation



growth has been lagging working age population growth, and labor productivity growth has been frustratingly slow.

It is ironic that China, though a nominally communist country where it is often boasted that workers are "masters of the country", did not have a codified labor law until 2011. Prior to that time, Chinese workers had virtually no protection whatsoever, nor did they have access to various social services such as medical care or a social safety net.

This decade, the Chinese government has begun to pay attention to workers' rights and has set up various social security networks such as pension plans, medicare funds and social insurance funds to protect workers' rights. Nevertheless, protection for workers remains at a bare minimum, and migrant workers are still not entitled to any of the social services or pension schemes.

In other words, the Chinese labor market has been clearly tilted in favor of capital owners, entrepreneurs and businesses. There are labor unions, but they are de facto communist party organizations. It is not an exaggeration to say that, despite the recent introduction of new laws, the Chinese labor market remains a buyer's market. This has been the key reason why wage rates have roughly kept in line with productivity, producing China's low inflationary economic growth over the past few decades. Meanwhile, it has proven that a less-protected labor force tends to be more productive than a well-protected one.

Finally, politics and government policies have also made a huge difference in economic performance between the two countries. It is true that democracy fosters political, social and economic stability, while authoritarian regimes are associated with unpredictable policies and political uncertainty.

Indeed, during the Mao era, China was trapped in endless political turmoil, power struggles, bloody purges, various "political movements" and a cultural revolution that plunged the country into total chaos. The Great Leap Forward of the late 1950s turned into the Great Famine of the early 1960s, which killed more than 33 million people. The economy was stuck in stagnation during the entire Mao era, and the Chinese farming sector was in a prolonged depression from 1950 to 1978.

India, however, did not fare any better in terms of lifting per capita GDP growth during this period. Although the country enjoyed relative political tranquility and social stability, the Congress Party pursued a populist economic policy aimed at ridding the country of any colonial influence. As a result, all vital businesses were nationalized, tight government controls were implemented, trade and commerce were centralized and heavy regulations were imposed across the entire economy. To protect farmers and gain votes in rural areas, the government in the 1950s began to provide heavy subsidies to the agricultural sector.

These policies produced disastrous results, turning the Indian economy into a basket case with high and rising inflation, sustained economic stagnation and repeated financial crises from the 1950s right through to the early 1990s. India's per capita GDP growth from 1950 to 1980 averaged zero — meaning there was virtually no productivity growth during this long period of time.

Since Mao's death, however, the Chinese Communist Party has made a dramatic turn, abandoning communist doctrines and refocusing its attention on economic growth. Although there have been many personnel changes in the Communist Party's high echelons since 1980, the Party has never deviated from its sharp focus on growing the economy.

In hindsight, China's interventionist policies seem to have followed a certain logical path that is suitable for different stages of economic development. For example:

- In the 1980s, the Chinese government purposely dismantled the centrally planned system and reintroduced the free market system to the countryside.
- In the 1990s, economic reforms were brought into cities, turning a huge number of state factories into private enterprises. Foreign direct investment inflows skyrocketed.
- In the 2000s, a boom in foreign trade took place on the back of WTO membership. Meanwhile, Beijing began a massive investment program to build the country's transportation network.
- This decade, the government has been focusing on environmental protection, new technology and an overall upgrade of the economic structure.

It is a matter of debate whether government guidance and heavy-handed industrial policies are optimal or not. Critics point out that too much government involvement is not desirable because it increases the risk of misallocation of resources, creates distortions and produces wasteful investment.

Indeed, there have been many ill-conceived projects, wasted investments and misallocations of resources throughout the Chinese economic growth process, and many of these problems can be traced back to government meddling. The saving grace is that China's savings rate is so high that misallocations of resources and wasted investment have not materially slowed down the capital accumulation process, which is essential for the industrialization of an economy.

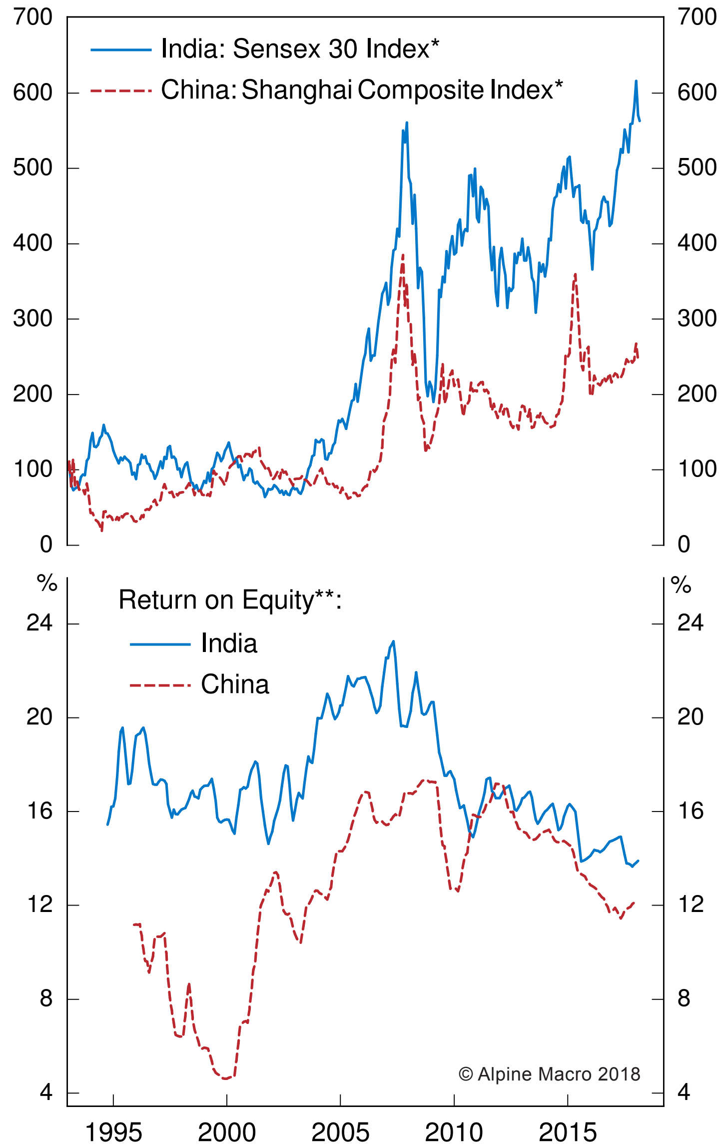
India's problem, however, is that although it is a democracy, the government's economic policies have lacked consistency over the years. The instinct of politicians in a democracy is to appease the electorate, but popular demands from the electorate are not always in line with the best interests or long-term strategy of developing an economy. The alternation of ruling parties between the Congress Party and the BJP has resulted a stop-go pattern in economic reforms.

Even some of the recent actions taken by the Modi government are not necessarily consistent. On the positive side, the most ambitious tax reform package ever is now complete, and India for the first time has a national GST, which has replaced the outdated and convoluted state system. The Modi government has also begun to remove retrospective taxation on cross-border investments. If implemented, this will remove a major uncertainty for foreign investment.

However, the Modi government has taken a sharp turn toward protectionism. Modi's latest financial plans call for substantial import duty increases aimed squarely at China. These new tariffs are worrisome because they signal that the Modi government is retreating from globalization and reverting to the old habit of protecting domestic suppliers and import substitution. The Indian economy was operating in such a highly protective environment prior to the 1991 reforms and the result was disastrous.

The debate over the pros and cons of democracy versus an authoritarian regime in economic development will continue for a long time, and there is no foregone conclusion. Although China seems to have won the race so far, both countries have a long way ahead of them in developing their respective economies. The result is uncertain.

Chart 10 **India vs. China: Stock Prices and ROE**



*In US$ terms
**Shown as 3-month moving average; source: MSCI

Investment Implications

While China is an exciting macro story, India is a successful micro story. **Chart 10** shows that India's ROE outperformed China's prior to 2012. The Sensex Index has also outperformed the Chinese equity index since 2003, although India's GDP growth has lagged far behind and inflation has been much higher than China's.

India's better stock market performance has much to do with the fact that it is a capitalist economy with many well-managed companies despite a poor macro picture, while China is a transitional economy where the corporate sector is strongly influenced by state ownership and government policies. This will remain the case for the foreseeable future.

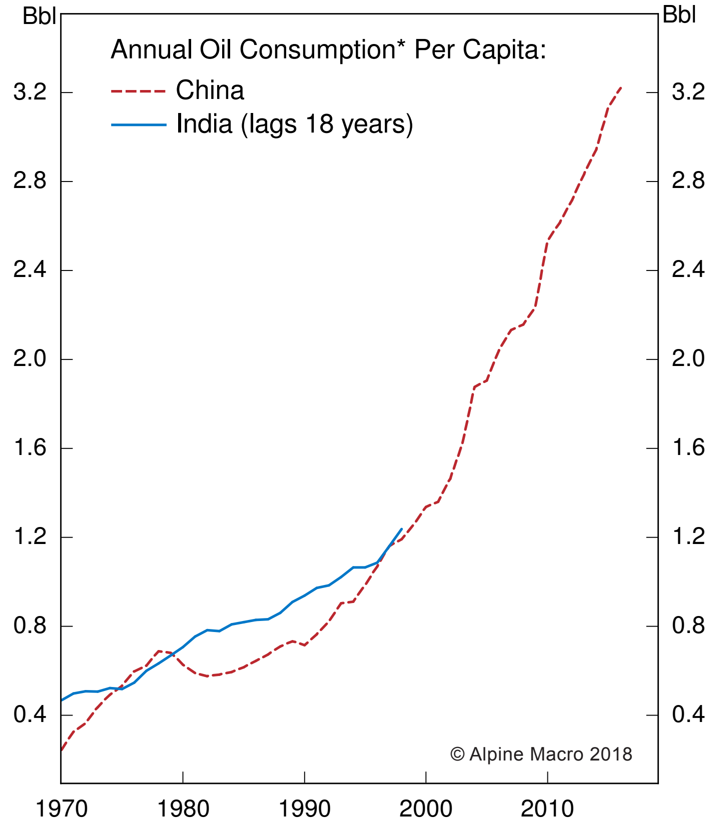
The effectiveness of Modi's reforms will be judged by whether the economy can sustain 7% growth without provoking a rise in inflation and a significant deterioration in the current account. This will ultimately require a sustained rise in the national savings rate, and a substantial increase in labor productivity.

Should this combination occur, India's steady state economic growth could quicken to well above 7%. This could produce a significant impact on the global economy and financial markets. For example, India's per capita GDP today is at similar levels to China's in the early 2000s — a time when China's commodities consumption began to take off along with rapid economic expansion (**Chart 11**).

There is no guarantee that India will follow the exact same track as the Chinese economy. But if President Modi's economic reforms enhance India's long-term non-inflationary growth, the country could become a very big player in the global commodity market.

Simple extrapolation suggests that if India's non-inflationary economic growth can be lifted above 7% per annum, the economy could double in size in the next 10 years. This implies that per capita oil consumption in India will escalate to 2.5 barrels in 2028, translating into a net import of crude over 9 million barrels a day from India. This is a non-trivial increase for the global energy market, with total demand currently at about 97 million barrels per day.

Chart 11 **India Today vs. China in 2000**



*Source: BP Statistical Review of World Energy

Chen Zhao
Chief Global Strategist

Investment Recommendations

Strategic Positions (6 - 12 months)

Recommendations	Open Date	Open Levels	Closing Date	Closing Levels	P&L Since Inception
Long EM / S&P 500	11/3/2017	0.435	–	–	0.3%
Long Oil / S&P 500	11/3/2017	0.0212	–	–	1.2%
Underweight / Short 10-Year Bunds	11/3/2017	0.37%	–	–	26 bps
Long Nikkei 225	12/15/2017	22,694	–	–	0.3%

Tactical Investment Positions (3 - 6 months)

Recommendations	Open Date	Open Levels	Stop	Closing Date	Closing Levels	P&L Since Inception
Long Gold	11/3/2017	1277	1213	–	–	3.1%
Long GBP / USD	11/3/2017	1.311	1.37	–	–	4.8%
Short USD / MXN	11/3/2017	18.98	18.98	–	–	4.3%
Long 10-Year Brazilian Sovereign Bonds Unhedged	11/3/2017	10.36%	–	–	–	4.2%
Long 10-Year Russian Sovereign Bonds Unhedged	11/23/2017	7.59%	–	–	–	7.4%
Long Copper	12/15/2017	3.0725	3.0725	–	–	-0.2%
Short OIL / NOK	2/9/2018	60.31/7.934	-5%	–	–	0.8%
Long S&P 500 / Dividend Aristocrats	2/23/2018	2703/2443	-5%	–	–	0.5%

Note: Our currency trades include carry. P&L is calculated using futures contracts.

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Our Leadership

Chen Zhao, Founding Partner and Chief Global Strategist From 2015 to 2016, Chen was Co-Director of Macro Research at Brandywine Global Investment Management. Prior to Brandywine Global, Chen spent 23 years at BCA Research. As a Partner, Managing Editor and Chief Global Strategist, Chen developed and wrote BCA's China and Emerging Markets publications in the 1990s. Chen became the firm's Chief Global Strategist in the 2000s and was the author of BCA's flagship publication, Global Investment Strategy from 2005 to 2015. He holds an MA in economics from the Central University of Finance and Economics, was a visiting scholar at the University of Illinois at Urbana-Champaign and pursued post graduate studies with a PhD candidacy at McGill University.

J. Anthony Boeckh, PhD, Founding Partner, CEO & Editor-In-Chief Tony was previously Founder, Chairman, Chief Executive and Editor-In-Chief of Montreal-based BCA Research for 34 years. He authored The Great Reflation (Wiley) in 2010 and was publisher of, among others, the Bank Credit Analyst, a monthly big-picture analysis of the U.S. and global economies and financial markets. He is a founding trustee of the Fraser Institute in Vancouver, British Columbia — an economic "think tank" dedicated to free market principles. Tony has a PhD in Finance and Economics from the Wharton School, University of Pennsylvania, and a B.Com. from the University of Toronto.

David Abramson, Partner and Senior Strategist David was a Macro Strategist holding a variety of senior roles at BCA Research. Most recently, he was Chief U.S. Strategist and also Director of Research for the firm. During his tenure at BCA Research, David launched and managed the European Strategy and Commodity & Energy Strategy services. In addition, he was the Managing Editor for the Foreign Exchange Strategy and the China Investment Strategy services. He has taught international finance to MBAs at McGill University for 20 years, and is on the Client Committee of the Kenneth Woods Portfolio Management Program at Concordia University.

Yan Wang, Partner and Chief Emerging Markets and China (EMC) Strategist Prior to Alpine Macro, Yan spent 15 years at BCA Research, as Managing Editor and Chief Strategist for BCA's China Investment Strategy service, and played a major role in formulating BCA's view on the Greater China region and emerging Asia. Prior to joining BCA, he spent six years as an equity analyst in China and Hong Kong. Yan holds an MBA in Finance from McGill University, an M.A. in Economics from Tianjin Institute of Finance and a B.A. in Finance from Nankai University. He also holds the CFA designation.