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## ABOUT THIS REPORT

This report from The Conference Board China Center for Economics and Business explores the factors that appear to be driving China's turbo-charged growth of recent years and the extent to which some internal imbalances and the trade surplus have created a "fly-wheel" effect that represents a set of conditions outside of China's reform era experience.

# Can China's Growth Trajectory Be Sustained?

by Pieter Bottelier and Gail Fosler



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# Key Findings

## Setting the Context: Overdependence on Exports

Over the last three years and for the first time since the start of China's market reforms almost 30 years ago, the country's economy has moved toward a high-growth, high-investment, high-production, high-liquidity structure that appears to be self-reinforcing and outside of the normal administrative controls of the Chinese government.

These high economic growth rates are further associated with, and are potentially increasingly dependent upon, a sharply rising current account surplus, not just with the United States, but with the entire world. These changes, in what for many years was an economy that was relatively responsive to economic policy adjustments, are potentially worrisome. China has generally administered the economy with a gradualist approach that is proving less and less effective. Businesses operating in China can expect more disruptive policies going forward, including quite possibly faster revaluation of the renminbi (RMB).

Alternatively, China's trade surplus and increasing global export penetration may become an international political issue not just in industrial economies but increasingly in emerging markets. China's economy is operating in a cycle of high and rising corporate profits that is becoming increasingly dependent on high net export growth to satisfy its appetite for economic growth.

THE SITUATION	THE GOVERNMENT'S RESPONSE	THE IMPACT ON BUSINESS
<p>A unique convergence of factors and China's overreliance on an export-fueled current account surplus for the maintenance of high economic growth is creating a serious macro-economic imbalance that could eventually have serious adverse effects on the world economy.</p>	<p>China has generally administered the economy with a gradualist approach that is proving less and less effective. The government has initiated measures to reduce the trade surplus and promote more consumption-oriented growth at home.</p>	<p>Businesses operating in China can expect more disruptive policies going forward. Multinational businesses that have benefited the most from China's recent growth trajectory are likely to face a more adverse environment, either because of more rapid RMB appreciation or because of explicit investment and export controls that will slow rapidly growing markets.</p>

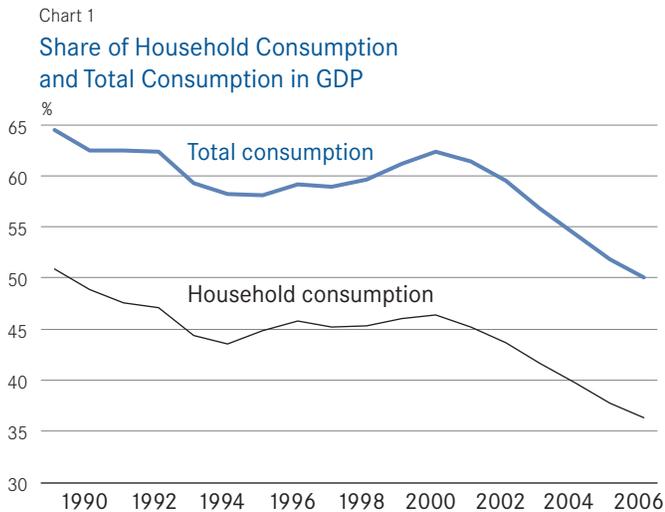
With a net export surplus that is the largest in the world in absolute value terms, China's growth trajectory does not appear to be on a sustainable path. The Chinese government clearly recognizes these risks and has initiated measures to reduce the trade surplus and promote more consumption-oriented growth at home, but it is proving difficult to reverse the trend of recent years. In the often quoted words of Herb Stein, former Chairman of the Council of Economic Advisors in the Nixon Administration, "that which is unsustainable tends not to be sustained." But, in the case of China, given the overwhelming and almost unique set of conditions that keep its growth dynamic going, there are few self-adjusting forces at work. In short, although the current situation is not sustainable, it is likely to continue for the foreseeable future in the absence of much more aggressive efforts to force change.

This report explores the factors that appear to be driving China's turbo growth of recent years and the extent to which some internal imbalances and the trade surplus have created a "fly-wheel" effect that represents a set of conditions outside of China's reform era experience. This fresh perspective shows how China's low consumption/GDP ratio, unusually high savings rate, high output and investment growth since the turn of the century, the apparent recent reversal of a long-term trend of declining energy intensity, and the sudden steep growth of China's trade surplus from the second half of 2004 are all interconnected. China's growth has not been fueled by its relatively low wages, but rather by high productivity growth, particularly in manufacturing, which has raised corporate profitability to near western industrial country standards in many industries.

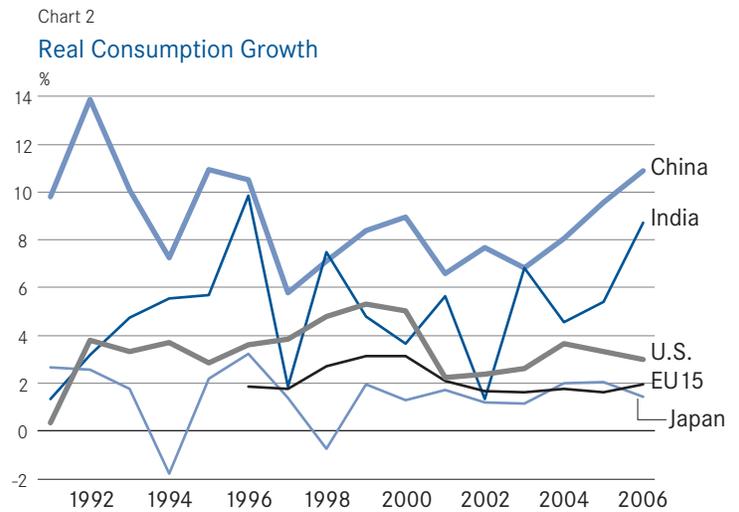
## Findings and Implications

- China's turbo growth and rapidly expanding trade surplus of recent years are driven by a number of factors that together have created a kind of "fly-wheel" effect that is hard to slow and may intensify internal and external economic imbalances for some years.
- Multinational businesses that have benefited the most from China's recent growth trajectory are likely to face a more adverse environment going forward, either because of more rapid RMB appreciation or because of explicit investment and export controls that will slow rapidly growing markets. A main growth driver is the high and rising profitability of "corporate China," which fuels unusually high levels of investment, especially in manufacturing for export and import substitution.
- Chinese profitability is driven by: (1) strong productivity growth, especially in manufacturing enterprises, (2) more efficient financial intermediation through the financial system, and (3) falling logistics costs due to heavy investment in infrastructure and the growing efficiency of domestic supply networks.
- As Chinese companies have now surpassed foreign-invested enterprises as the leading source of growth in exports, domestic companies will not be immune from changes in the policy environment. However, they will be able to draw on larger productivity gains than foreign firms in order to offset the effects on the bottom line.

- A number of incidental factors, such as the privatization of urban housing, the privatization of state enterprises, and the transfer of financial responsibility for social services from state enterprises to the state have not only generated additional cash flow to finance the investment boom but have created a wealth effect that, though difficult to quantify exactly, further accelerate growth.
- China's unusually low consumption/GDP ratio is not the result of slow consumption growth per se, but rather that the economic and incentive structures favor high investment growth and a widening trade surplus over domestic consumption growth. China's consumption growth rate is, in fact, one of the highest in the world—more than 3 times that of the United States (Charts 1 and 2). China's employment growth is slow relative to its economic growth and, although real wages are rising rapidly, the share of household disposable income in GDP has continued to fall. This, combined with the high precautionary savings of Chinese consumers, is a large part of the explanation of why consumption growth has continued to lag GDP growth.

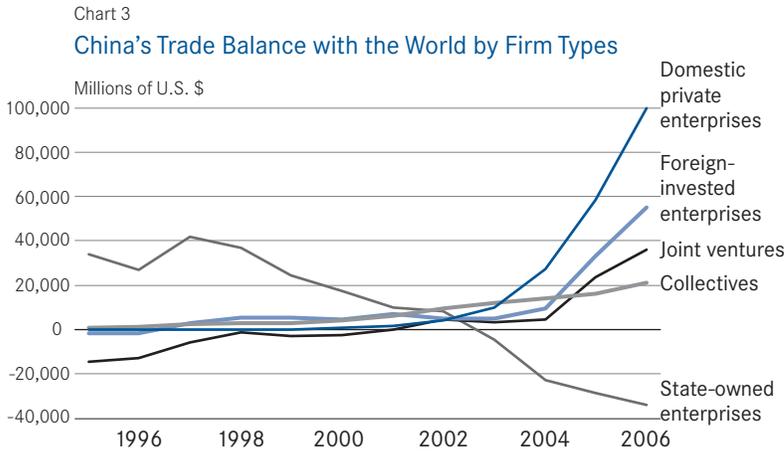


Sources: CEIC, The Conference Board



Sources: CEIC, Datastream, The Conference Board

- The rapid widening Chinese trade surplus is mainly due to: (1) “over investment” in manufacturing; (2) an incentive framework that favors exports over imports; (3) international market access combined with high competitiveness of exports; and (4) rising export prices and stable or falling raw material import prices.
- China's undervalued exchange rate contributes to the country's internal and external imbalances, but it is neither the root cause of these imbalances nor is exchange rate adjustment the only or principal cure. Faster currency appreciation, especially when combined with greater flexibility, would make it easier for the government to redress internal and external economic imbalances, but it is not a panacea and appropriate calibration is difficult. Other instruments, including fiscal policies, have to be used as well.
- Rapid productivity growth in manufacturing is the main factor underlying the emergence of an undervalued exchange rate in recent years. Although China is moving in the direction of a convertible currency system, it is understandable why the government considered it too risky to float the exchange rate or to fully adjust it to compensate for relative productivity gains in manufacturing.



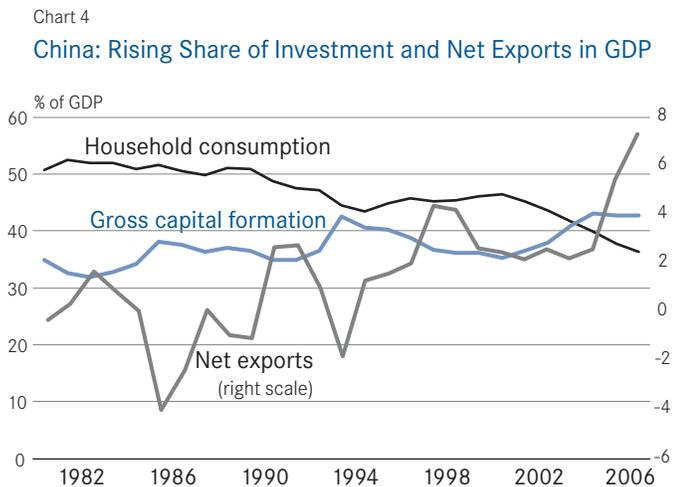
Source: Zhi Wang, ITC, based on China Customs statistics

- The sectors mainly responsible for China's rapidly widening trade surplus (export growth plus import substitution) since the second half of 2004 are: (1) steel and steel products; (2) heavy machinery; (3) textiles, garments, electronics, and other light manufactures.
- Firms responsible for the growing trade surplus are domestic private companies, foreign-invested enterprises and joint ventures, in that order. State-owned enterprises as a group show an increasingly negative trade balance (Chart 3).

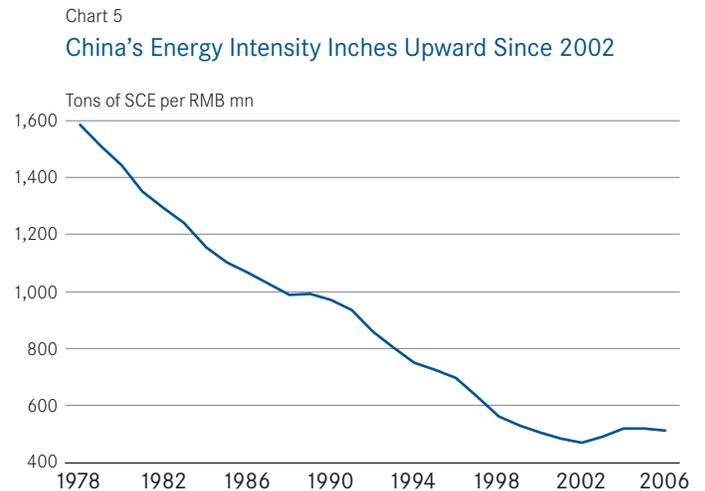
## The Gathering Storm: Addressing China's Internal Imbalances

**Investment-Consumption Imbalance** China's overreliance on capital formation and net exports for the maintenance of high growth is the most serious macro-economic imbalance recognized by the government. To make the country's growth model more sustainable, the government has been trying, especially since 2003, to promote consumption growth relative to income and investment growth. But the share of wages and household disposable income has continued to lag GDP growth and investment growth, while the share of profits in GDP increased (Chart 4).

**Energy Demand Imbalance** The government is also very concerned about what appears to be a reversal of the trend of gradually improving energy efficiency. The lack of further progress in this area since around 2002 (Chart 5) is mainly due to a relative shift in manufacturing toward heavy industry and to energy-intensive processing in China of ores and minerals on behalf of foreign customers (tolling).



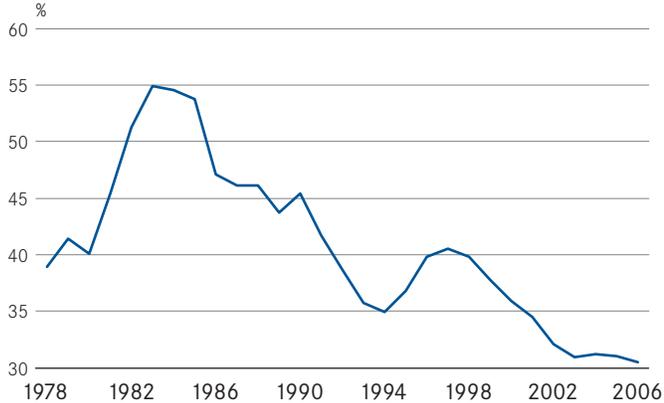
Sources: CEIC, The Conference Board



Sources: CEIC, The Conference Board

Chart 6

## Ratio of Average Net Rural Income to Urban Income



Sources: CEIC, The Conference Board

**Social Imbalances** Social inequality—whether measured in terms of the urban/rural income gap (Chart 6), interpersonal income distribution, or coastal regions versus interior ones—is getting worse. The rate at which inequality is growing would almost certainly have been greater without the government’s aggressive efforts to promote investment in interior provinces and autonomous regions since the late 1990s, its extensive anti-poverty projects for low-income counties, and its more recent efforts to channel additional subsidies to basic rural education and healthcare.

**Growth-Environment Imbalance** Environmental degradation is another source of deep concern to the government and the focus of much international attention.<sup>1</sup> Many of the problems appear to be related to insufficient enforcement of official laws and regulations, especially at the local level. The incentive framework facing local officials and economic agents is often inconsistent with the priority assigned to environmental protection by the central authorities in Beijing.

To address these imbalances in a more systematic and scientific way, the government of President Hu Jintao and Prime Minister Wen Jiabao launched a number of new policies and programs in 2003. The government’s top priority is now defined as the promotion of a “*Harmonious Society*.” Most of these policies (including inter alia a higher threshold for personal income tax, elimination of the agricultural tax, subsidies for rural education and healthcare, and stricter enforcement of environmental laws) are fairly recent. Not only have these imbalances not reversed, they appear to have intensified. High output growth, including export growth, appears to remain at the top of the priority list of both central and local governments.

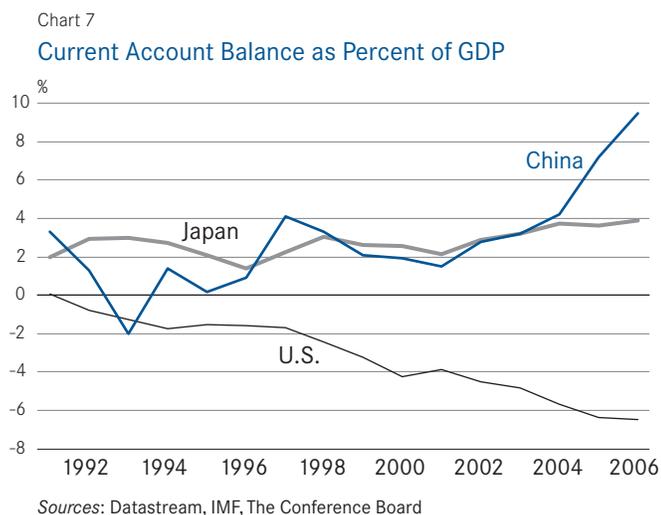
<sup>1</sup> For specific examples, see Elizabeth C. Economy, “The Great Leap Backward? The Costs of China’s Environmental Crisis,” *Foreign Affairs*, September/October 2007, and Joseph Kahn & Jim Yardley, “As China Roars, Pollution Reaches Deadly Extremes,” *New York Times*, 26 August 2007.

## The Special Challenge of External Balance

China's current account was never more than a few percentage points of GDP in surplus or in deficit (the last time it was in deficit was 1993), but turned sharply positive from the second half of 2004. The surplus reached 9.5 percent of GDP in 2006 when China became the largest surplus economy in absolute terms and a major contributor to global trade imbalances. During the first half of 2007, China's trade surplus, which accounts for the lion's share of the current account balance, continued its steep incline. In spite of efforts to slow down export growth through the reduction or elimination of VAT export rebates on about 36 percent of all exports (by value) from July 2007, China's external surplus

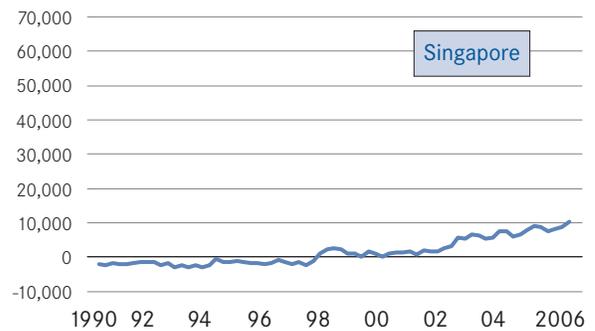
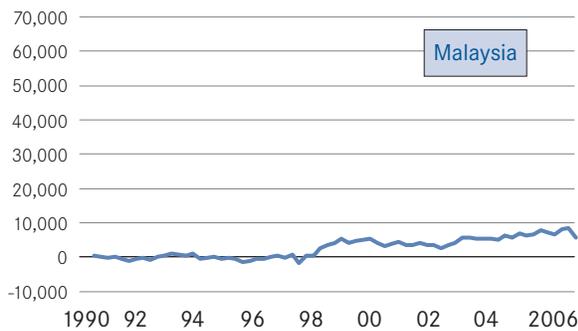
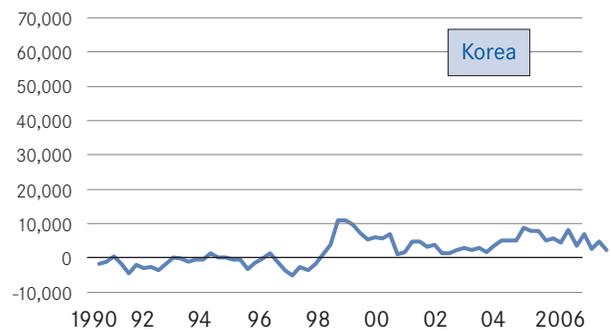
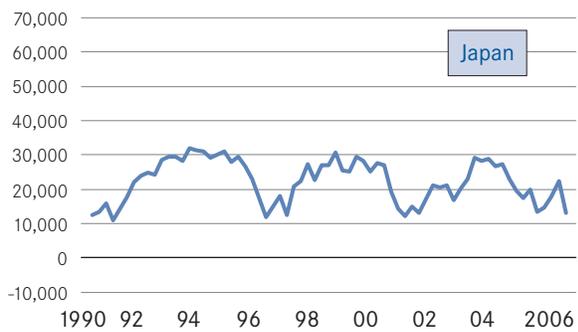
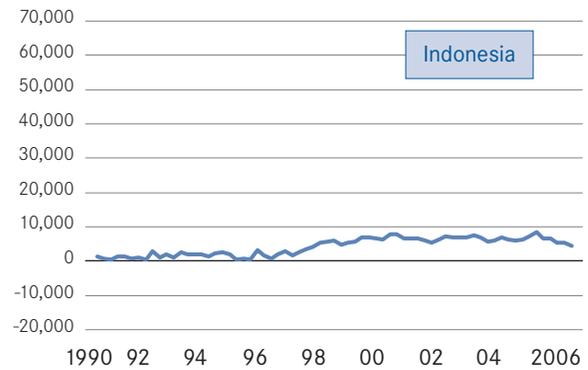
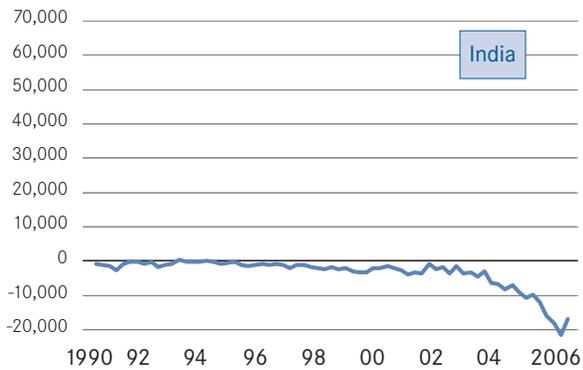
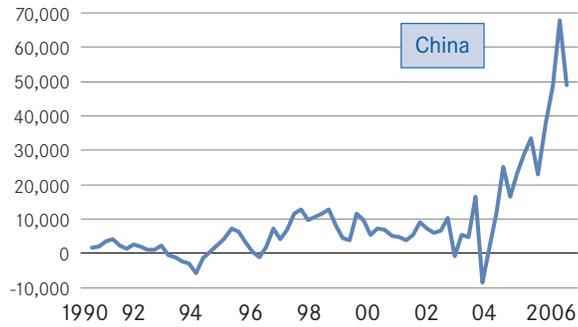
may continue to expand for some time. The United States has the largest bilateral trade deficit with China, but Europe is not far behind. East Asia's current account surplus (especially that of China and Japan) and the deficit of the United States are interrelated and at the core of unprecedented global trade imbalances (Charts 7 and 8).

The government's main response to the widening trade surplus has been to lower or eliminate export tax rebates<sup>2</sup> and to impose export taxes on selected steel products. Energy-intensive tolling of iron ore, pig iron, ferroalloys and certain non-ferrous metals for foreign customers was banned in 2005–2006 to simultaneously reduce export growth and energy consumption.



<sup>2</sup> On 1 July 2007 the government eliminated VAT rebates on exports of more than 500 products and reduced the rebate on more than 2,000 others. The exports affected account for about 36 percent of all 2006 commodity exports. Contrary to expectations based on the effect of these measures, China's trade surplus continued to widen in the month of July.

Chart 8  
Trade Balance in Asian Countries  
(Millions of U.S. \$)



Sources: CEIC, The Conference Board

## Exchange Rate Policy and Foreign Reserves

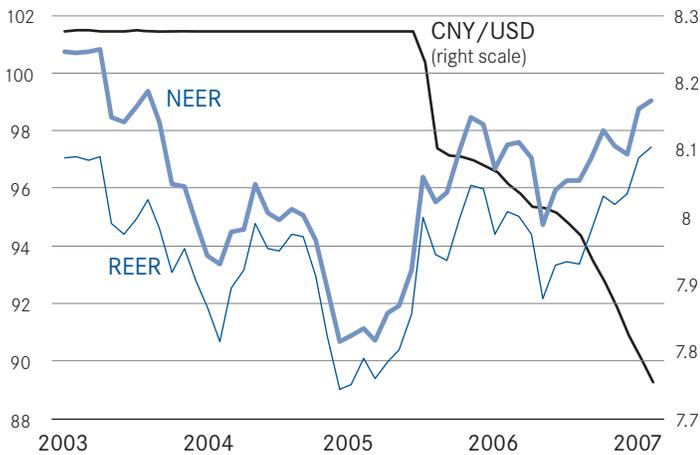
The government remains averse to using nominal exchange rate appreciation aggressively for fear of triggering unemployment. Between July 2005 (when the RMB was officially de-linked from the U.S. dollar) and the end of July 2007,

the nominal RMB/USD rate appreciated about 9 percent, but China's trade-weighted exchange rate and real effective exchange rate (the trade-weighted rate adjusted for inflation differences between trading partners) both slightly depreciated (Chart 9).<sup>3</sup>

To slow the growth of foreign exchange reserves—\$1.33 trillion at the end of June 2007—the government has significantly relaxed controls on private capital outflows, including access to the Hong Kong stock exchange, and is promoting outward investment by state corporations. It is also starting a large foreign exchange investment fund, initially valued at some \$200 billion, similar to Singapore's Government Investment Corporation.

Chart 9

China's Nominal Trade-Weighted (NEER), Real Effective Exchange Rate (REER), and Spot CNY/USD (1995=100)



Source: IMF

## China's Unique Productivity Story

An important driver of both China's economic growth and the growing competitiveness and profitability of Chinese firms is the country's extraordinary productivity growth, especially in manufacturing. While questions remain about the measurement of China's year-to-year growth and trade surplus in recent years, there is little doubt that average annual growth since the start of market reforms in the late 1970s was extremely high—close to 10 percent. In the first half of the 1980s agriculture was the main source of economic growth. Income distribution changed in favor of rural areas during that period.

Urban development and manufacturing took over as the main engines of growth from the mid-1980s. From then on income distribution changed in favor of urban areas and growth was higher in coastal provinces where most foreign direct investment and international trade was concentrated. During all of this time, Chinese productivity was growing, but at more moderate rates than in later years.

<sup>3</sup> During the same period (July 2005 – July 2007) the RMB/Yen cross rate appreciated by some 18 percent (because the Japanese Yen depreciated against the USD). Since the overlap between Japanese and Chinese exports in third markets is rapidly growing, it is likely that Chinese concerns over Yen depreciation contributed to the extreme caution that characterized their own exchange rate policy since July 2005.

Beginning in the early 1990s, foreign investment and associated technological and trade development became a major factor; restructuring of the industrial sector intensified significantly in the mid-1990s. The share of non-state enterprises in manufacturing output rose from 20 percent in 1990 to well over 50 percent in 2006. China has showed an almost unprecedented willingness to allow dynamic competition to shape the marketplace and, in particular, to reshape and restructure state-owned enterprises which paid handsome returns in terms of productivity gains.

There were also, of course, costs. Employment in state-owned enterprises peaked in 1995. In spite of continuing output growth, total recorded employment in manufacturing, including both state and non-state enterprises, fell by an estimated 18 million jobs between 1995 and 2003, at least 5 times higher than manufacturing job losses in the United States during the same period.<sup>4</sup> The enormous scale and intensity of China's industrial restructuring since the mid-1990s is hard to imagine and may not be fully appreciated internationally. Total employment in China did not fall by much during this period of intense industrial restructuring, because other parts of the fast-growing economy—in particular construction, communications, other service sectors and horticulture—were able to absorb many of those who had been laid off in manufacturing. Manufacturing employment, principally in private Chinese firms and in foreign invested enterprises, started growing again, but very slowly, from 2004.

China's industrial restructuring (involving management changes, layoffs, plant closures, plant resizing, mergers, the privatization of numerous state-owned enterprises, and pervasive technological upgrading) led to sharply improved productivity from around the mid-1990s, both in state and in non-state enterprises. When the restructuring of state-owned enterprises got under way in the mid-1990s, initial productivity gains were mainly due to the shedding of redundant labor, but in later years technical/managerial/labor upgrading, combined with falling logistics costs became more important factors. Since non-state enterprises are on average more efficient than state enterprises, the rapidly growing share of private enterprise in total industrial output accelerated average productivity growth. And, for workers, the new jobs were in growing competitive firms, many of which could provide rising real wages and some benefits.

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<sup>4</sup> The estimate of manufacturing job losses is based on the work of Judith Banister, senior advisor to The Conference Board. Her estimates of manufacturing employment from 1990–2004 will be reflected in a forthcoming article. The government's own estimates, which are of similar magnitude, are reflected in *China Statistical Yearbook 2006*, tables 5-4 and 5-5.

It is important to realize that the restructuring process has had a huge impact on the state-owned sector—substantially reducing the number of loss-making firms. In both state and non-state enterprises, technological upgrading, facilitated by relatively inexpensive capital, was seen as the only way to stay in business. Domestic competition became even more intense as a result of China's membership in the WTO (December 2001) and contributed to falling prices in many sectors of the modern economy until recently.

Researchers for The Conference Board<sup>5</sup> calculate that average annual labor productivity growth in large- and medium-sized industrial enterprises during the period 1995–2003 was 20.4 percent, an astonishingly high number by international standards. This number is consistent with the findings of other empirical studies undertaken by Chinese researchers at Peking University. Although high labor productivity growth is not necessarily matched by corresponding improvement in overall production efficiency, there are nonetheless strong indications of sharply improved competitiveness in numerous Chinese industries since the mid-1990s.<sup>6</sup>

Manufacturing productivity growth was reinforced by reforms in China's financial sector which led to a more efficient allocation of resources, and by large increases in government spending on infrastructure, which lowered the cost of logistics for enterprises.<sup>7</sup> Average *national* labor productivity gains (7.3 percent p.a. between 1995 and 2004 according to official data) were a multiple of those achieved during the same period in the United States (2.4 percent), the European Union-15 (1.4 percent), Japan (2 percent), and much higher than in India (3.9 percent).

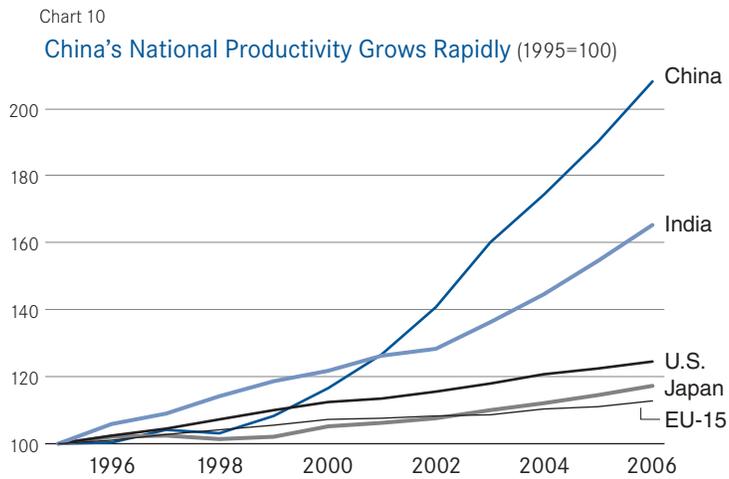
## Productivity, Not the Exchange Rate, Is the Main Driver of Competitiveness

China's economic success is not in the first place based on low wages or on an undervalued exchange rate. China has been willing to forgo short-term employment gains to restructure its enterprises into more efficient, market-

<sup>5</sup> Haiyang Deng, John Haltiwanger and Robert McGuckin, *China's Productivity Boom: The Contribution of Restructuring to Growth and Competitiveness*, The Conference Board, Research Report R-1411-07-RR.

<sup>6</sup> In mature market economies, labor productivity growth is normally a fairly reliable indicator of improvements in overall efficiency. In China's case a special caveat is needed. Because rapid labor productivity growth from the mid-1990s was associated with a sharp relative increase in the use of capital and a sharp relative decline of the share of state enterprises in total output, the sources of labor productivity growth are hard to measure. A significant source was undoubtedly the growing share of private enterprise in the economy. There are no official estimates of the contribution of total factor productivity (TFP). Scholars disagree on the precise numbers, or even the trend. Some have suggested TFP growth acceleration in China's industrial sector since the mid-1990s (see, for example, Barry Bosworth and Susan Collins, *Accounting for Growth: Comparing China and India*. NBER Working Paper # 12943, February 2007). Others suggest that the trend has been essentially flat (for example, Dwight Perkins and Thomas Rawski, *Forecasting China's Economic Growth over the Next Two Decades*, chapter for a forthcoming book), or even declining (for example, Jing Cao, Mun S. Ho, Dale W. Jorgenson, Ren Ruoan and Sun Linlin, *Industrial and Aggregate Measures of Productivity Growth in China, 1982-2000*. Harvard University & Beihang University, 2006).

<sup>7</sup> The increase in government investment in infrastructure from 1998 was part of a fiscal stimulus program aimed at avoiding a deep domestic recession following the Asian financial crisis of 1997/98.



Sources: Groningen Growth and Development Centre, The Conference Board

responsive economic businesses. Fast productivity growth (Chart 10) is a more important factor explaining China's international competitiveness than the exchange rate, which, by most standards, did not become undervalued until 2003 or 2004.<sup>8</sup> It is also a key factor underlying China's accelerated growth since the turn of the century and the emergence of a large and rapidly growing trade surplus from the second half of 2004. Indeed, part of the durability of the new high-investment, high-production, high-profitability economic dynamic arises precisely because China was willing to encourage such wide-ranging and intensive enterprise restructuring.

Did the exchange rate play a role? To be sure, the stability of the nominal exchange rate in the face of these remarkable productivity gains provided important support during this time of restructuring and employment losses. Nevertheless, it is highly doubtful that China could have adjusted its nominal exchange rate fast enough to compensate fully for relative productivity gains in manufacturing (which accounts for most of China's exports) without risking economic dislocation in sectors with little or no productivity growth. Floating the currency was not a practical option either; it would have been too risky given the semi-reformed nature of China's financial sector. Hence, some degree of currency undervaluation may be seen as an unavoidable result of China's massive industrial transformation and growth. Although China could probably have appreciated the currency faster than it did (since de-linking the RMB from the U.S. dollar in July 2005), calibrating the "appropriate" timing and pace of adjustment is admittedly difficult. Although an undervalued currency contributes to China's trade surplus, it is not a primary cause of it and has very little to do with the bilateral United States-China trade deficit.<sup>9</sup>

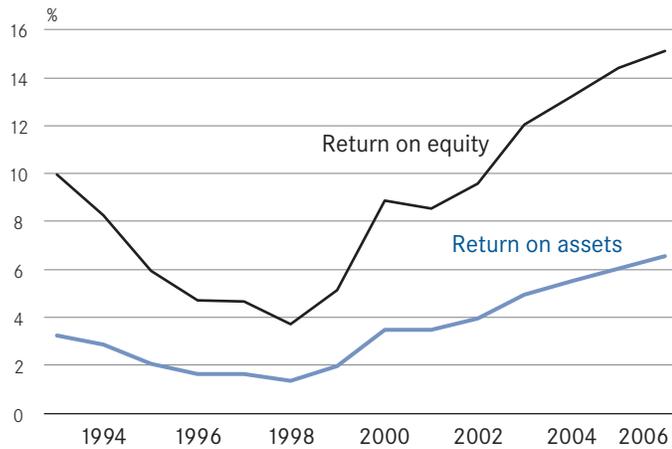
### Productivity Raises Business Profitability

In spite of fast labor productivity growth, returns on capital continued to decline for a few years after the start of major industrial reforms in the mid-1990s. It wasn't until the late 1990s that profit margins began to improve in important

<sup>8</sup> Different methodologies for calculating a currency's under- or over valuation yield different results. Most economists agree that sustained large-scale, one-way intervention in the currency market to prevent appreciation points to a structural misalignment of the currency. In China such intervention started in the second half of 2003.

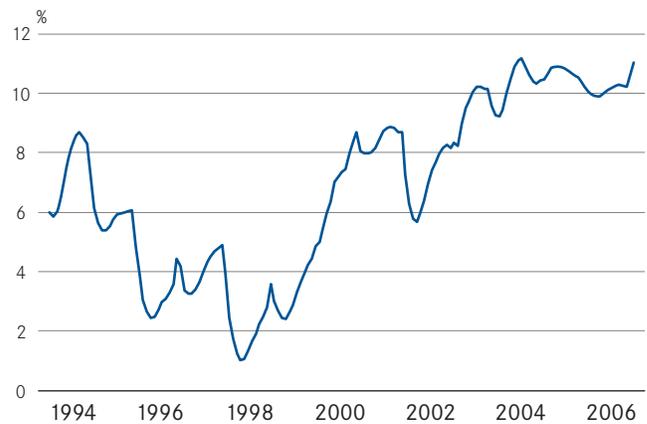
<sup>9</sup> The United States bilateral trade deficit with China has been growing since the mid-1980s, even when China's exchange rate was substantially overvalued (until 1994). See Fred Bergsten et al, *China: The Balance Sheet. What the World Needs to Know About the Emerging Superpower*. IIE & CSIS 2006.

Chart 11  
Return on Capital Has Improved Significantly Since 1998



Sources: CEIC, The Conference Board

Chart 12  
5000 Principal Industrial Enterprises:  
Ratio of Profits to Sales (6-month moving average)



Source: PBoC

parts of the manufacturing sector. With ups and downs, the upward trend in corporate profitability has continued through the present time (Charts 11 and 12).<sup>10</sup>

Chinese companies have become considerably more profitable in recent years and in some cases more profitable than their foreign competitors. The improvement in profitability applies to companies of different ownership, including state-owned enterprises (SOEs), domestic private enterprises (PVTs), and foreign-invested enterprises (FIEs) as shown in Chart 13.<sup>11</sup> Many manufacturing enterprises were able to: (1) increase real wages by 10–15 percent per annum since 2000 while reducing unit labor costs,<sup>12</sup> (2) maintain or reduce export prices to gain market share, at least until 2006, when many Chinese export prices began to rise, and (3) increase profitability, all at the same time, an otherwise unusual combination of achievements.

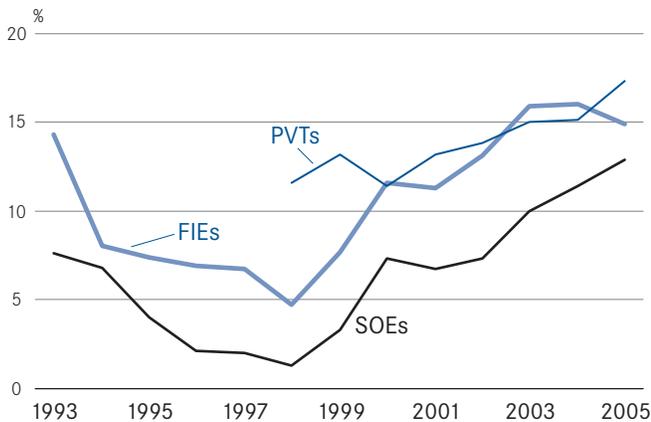
<sup>10</sup> A detailed analysis of the profitability of manufacturing enterprises in China is included in: Sean Dougherty, Richard Herd and Ping He, "Has a private sector emerged in China's industry? Evidence from a quarter of a million Chinese firms." *China Economic Review*, 18 (2007), pp 309–334.

<sup>11</sup> From the late 1990s the rate at which SOE profitability increased is higher than for either foreign-invested or domestic private enterprises. This may be due to the fact that SOEs enjoyed not only the advantages of privatized urban housing, but also the gradual shift of responsibility for health and education expenditures from state enterprises to the state itself and to employees. For a more detailed analysis of this see Feng Lu et al., "Profitability of China's Industrial Firms (1978-2006)," *China Economic Journal*, 2007 (forthcoming).

<sup>12</sup> Real wage increases are notoriously hard to measure in China; most sources agree that 10–15 percent p.a. since the turn of the century, in reporting manufacturing enterprises, is a reasonable estimate. See for example Judith Banister, "Manufacturing earnings and compensation in China," *Monthly Labor Review*, August 2005, and Erin Lett & Judith Banister, "Labor costs of manufacturing employees in China: an update to 2003-04," *Monthly Labor Review*, November 2006. See also Bart van Ark, Judith Banister and Catherine Guillemineau, *Comparative Advantage of "Low-Wage" Countries Often Exaggerated*. The Conference Board, Executive Action Series, No. 212, October 2006.

Chart 13

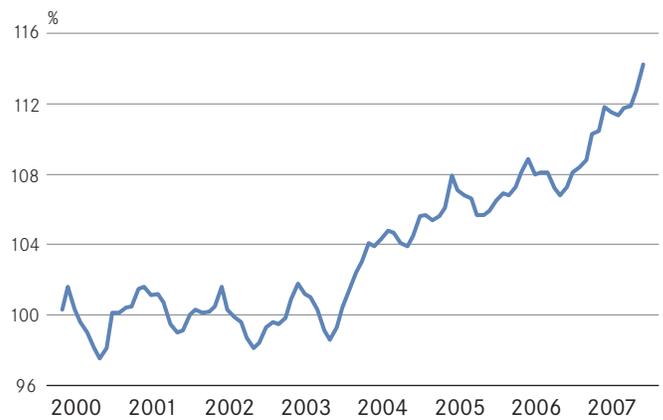
## Pre-tax Return on Equity for Manufacturing Firms of Different Ownership



Source: China Statistical Yearbook

Chart 14

## China: Consumer Price Index (2000=100)



Source: PBoC

But rapid productivity growth is not the only factor that played a role. A number of growth-enhancing structural and incidental factors (discussed in following pages) converged to create turbo growth with relatively little inflation during the period of most intensive reforms (Chart 14).<sup>13</sup> It is as though a large “fly-wheel” was set in motion by different factors that reinforced each other. Productivity-driven corporate profit increases and additional cash from other sources financed higher levels of corporate investment and output matched by growing internal and external demand, and so on.

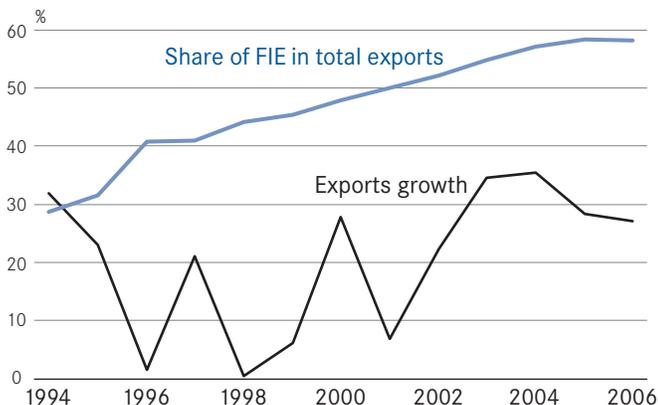
The State Council’s recent decision to require profitable central government-owned enterprises to start paying dividends may be an important step in the right direction. It could reduce the “fly-wheel” effect, provided dividend proceeds are not used to finance additional production capacity. On the other hand, as with private firms, state-owned enterprises could respond to this new directive by further increasing their investment, thereby reducing their free cash flow and the apparent surplus available for dividends. Moreover, if these dividends are used instead to finance increased government spending on well-targeted subsidies for the poor and improved social security, the new dividend policy offers real potential to help redress current economic imbalances. Many details of the new policy remain to be worked out and it is not clear if or when the policy will be rolled out to enterprises controlled by lower-level governments.

<sup>13</sup> However, since the first quarter of 2007 inflation has been on the rise and there is growing concern that the food price inflation, which initially underpinned a rising CPI, may lead to a more general inflation problem.

# China's Trade Surplus and Globalization

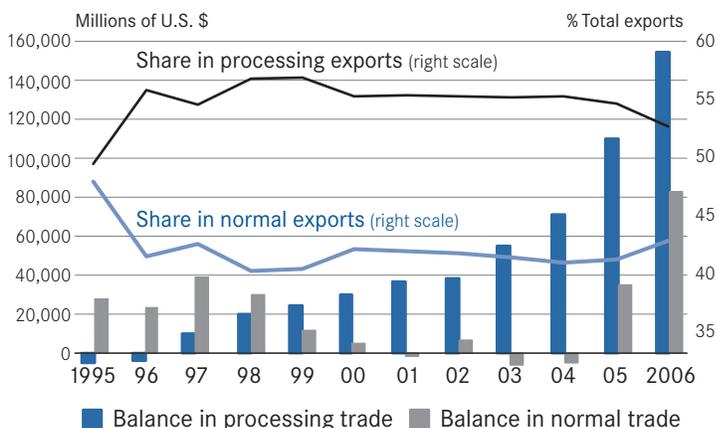
From the early 1990s, foreign enterprises accounted for a rapidly growing proportion of China's exports, many of which used China as a manufacturing or assembly platform for export. This generated "processing trade," which almost automatically creates its own trade surplus. Chinese companies also contributed to the rapid growth of "processing trade," especially in textiles, garments, appliances and electronics. China became a key link in globally integrated production processes for numerous products, including advanced technology products. The "internationalization" of its economy, which started well before China joined the WTO, has contributed to China's current trade surplus (Charts 15 and 16).

Chart 15  
Export Growth and Share of Foreign-Invested Enterprises in Total Exports



Sources: CEIC, The Conference Board

Chart 16  
China's Processing Trade and Normal Trade



Sources: CEIC, The Conference Board

## A "fly-wheel" effect kicked in at the turn of the century...

Several factors combined to bring about the resumption of high GDP growth and even higher investment growth from around the turn of the century and the development of a large and growing external surplus from the second half of 2004. First, from 2001 investment in manufacturing began to grow much faster than either GDP or total investment (Chart 17). Second, we also observe that a growing proportion of corporate investment—currently over 60 percent—is financed from "self-raised funds," mostly own capital, corporate profits, and depreciation (Chart 18). One implication of this unusually high degree of self-financing is that corporate investment in China has become less sensitive to possible policy-induced cost increases for intermediated funds (mainly bank loans and other debt). This helps to explain why the government's recent efforts to cool the economy have shown little result. Third, rising corporate profits tend

to make domestic “over-investment” in manufacturing and net-export growth mutually reinforcing, because Chinese companies typically reinvest after-tax profits, paying little or no dividend. Higher manufacturing investment yields higher profits, which yield higher investments, and so on. Obviously, this cycle cannot continue indefinitely, but it does not yet appear close to burn-out.

...almost all economic trends conspired to foster this “fly-wheel” effect

Domestic demand picked up as result of the government’s fiscal stimulus program and accelerated privatization of urban housing. Both policy measures were taken in 1998 to avoid a deep recession in the wake of the Asian financial crisis. Their full effects began to be felt a few years later.

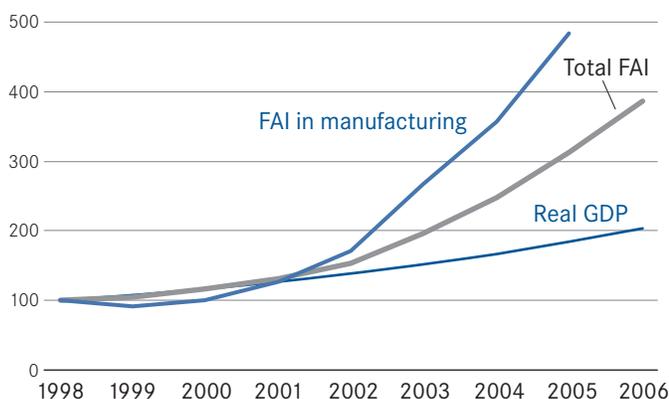
External demand picked up as Japan’s decade of stagnation came to an end at about the same time that the United States economy recovered from a short recession in 2001 (following the NASDAQ collapse of 2000). The wave of liquidity that was created in the United States as a result of anti-recession monetary policy and the tax cuts of 2001 also stimulated demand for imports from China. From 2005 European demand for Chinese exports also accelerated sharply. The European Union has since become China’s largest trading partner.

Strong internal and external demand growth, combined with labor productivity growth well in excess of real wage increases, led to a reversal of the decline in return on capital in the late 1990s.

China’s WTO membership (since December 2001) undoubtedly contributed to foreign investment inflows and business confidence in China. It also facilitated trade expansion and promoted productivity growth through intensified competition and other factors.

Chart 17

Manufacturing Investment Is Outpacing Total Investment and GDP Growth by a Large Margin (1998=100)

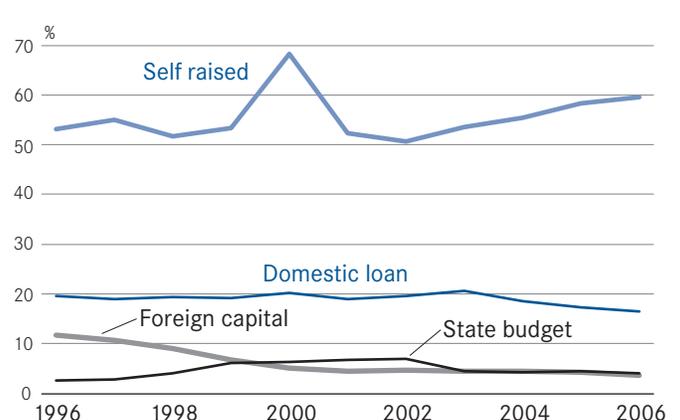


Note: We use sum of manufacturing in total capital construction and innovation as proxy of FAI in manufacturing until 2002 due to the data availability.

Sources: CEIC, The Conference Board

Chart 18

Fixed Asset Investment: Source of Funds



Sources: CEIC, The Conference Board

The privatization of urban housing at a fraction of market value created powerful wealth effects that compounded other positive forces in the economy.<sup>14</sup> For example, it promoted labor mobility, which contributed to accelerated urbanization and productivity growth.

The privatization of urban housing in China created not only wealth effects for the new owners (usually the prior occupants), but it also generated additional cash for the previous corporate owners and relieved them of the obligation to maintain existing houses or build new ones. There is no reliable estimate of the effect of these two factors on corporate cash-flow or the additional investment thus financed, but the amount could easily run into tens of billions of U.S. dollar equivalent per annum since the late 1990s.

The gradual shift in responsibility for the financing of health, education, and other social services from state enterprises to the state, starting in the mid-1990s, similarly created additional cash-flow for those enterprises.

The (partial) privatization of numerous Chinese state-owned enterprises since the mid-1990s, a process that was accelerated in the late 1990s, generated additional cash-flow for the very corporations that were being privatized; in China (with exception of 10 percent of the proceeds of domestic IPOs that accrue to the National Pension Fund), privatization proceeds accrue to the company that is being privatized or its holding company. Except for IPO proceeds, there is no reliable estimate of corporate privatization proceeds in China, but the amounts are undoubtedly significant.

China's rapidly improving infrastructure allowed reductions in the cost of logistics in and between the three largest industrial agglomerations: the Pearl River Delta, the Ningbo-Shanghai-Suzhou area, and the Beijing-Tianjin corridor.

The SARS epidemic of 2003 was short-lived, but the rapid expansion of bank credit (designed to counter the sharp economic downturn that followed the outbreak in the second quarter of that year) continued long thereafter. This provided significant additional liquidity to the corporate sector, which was already enjoying improved returns on capital.

### If There Is “Over Investment” in Manufacturing, Why Don't We See More Evidence of Excess Capacity?

As a result of the investment surge since the turn of the century, excess capacity in several manufacturing industries (e.g., automobiles, steel and other construction materials) did in fact emerge in 2004 and 2005 and profit margins fell, especially

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<sup>14</sup> Since 1998 the provision of housing to workers is no longer the responsibility of employers in China. Private home ownership in urban China is now about 80 percent, higher than in the United States. The accelerated privatization of urban housing from 1998 stimulated the growth of a huge commercial residential construction, home improvement and house rental industry. It also promoted the development of a mortgage industry and other financial sector improvements. Privately owned houses may be used as collateral for bank loans since 1996.

in heavy industry. This caused a great deal of concern on the part of the government, which reacted by stepping up infrastructure investment to create additional domestic demand for construction materials and by encouraging exports generally. It is believed that many local governments provided additional incentives for export-oriented industries.<sup>15</sup> The strongest effect on China's trade balance, however, came not from export growth, but from import substitution, especially in steel and heavy machinery. By the middle of 2006, practically all visible signs of excess capacity had disappeared except in stainless steel.<sup>16</sup> Profit margins were up again, inventories as a share of total output were down and capacity utilization in most industries was back to normal. In the process, China also became a fairly significant exporter of heavy machinery for the first time, a trend that is likely to continue in the years ahead.

China's official and unofficial (local government) incentive framework, including the exchange rate, was supportive of these developments, but continued high productivity growth was almost certainly the most important factor. To the extent domestic demand fell short, China was able to increase exports without loss of corporate profitability in most cases, because productivity growth was so high. Moreover, there is some evidence to suggest that export prices tend to be higher than domestic prices, because competition in China is often even more intense than in export markets. This is another factor that may be driving net export growth, but more research on this needed, because the available price information is mostly anecdotal in nature.

Average corporate profits continued to rise through the first half of 2007. In this context, it is important to note that the companies responsible for China's growing net-exports since 2004 are domestic private enterprises, foreign-invested enterprises and, to a much smaller extent, collectively owned enterprises. State-owned companies are still important in China, but their share in total industrial output continues to fall while their contribution to net exports is becoming increasingly negative (Chart 3 on page 8). Another point worth noting is that since 2006, many Chinese exporters have been able to pass on at least some domestic cost increases to foreign customers. This reversal in the trend is probably due to the fact that Chinese exporters have increased their market share in export markets to the point that the largest firms can afford to act as price leaders. One implication of this is that currency appreciation may become less effective in slowing export growth. Excess capacity may begin to emerge again when the domestic economy and/or global growth weakens, as is bound to happen at some point.

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<sup>15</sup> Local incentives are not necessarily sanctioned by the central government and can take many (often non-transparent) forms such as, for example, land price reductions, subsidized financing, relaxed environmental controls, etc.

<sup>16</sup> Stainless steel producers in China agreed to voluntary production cuts in July 2007 in an effort to support the price.

# Is China's Turbo-Growth Model Sustainable?

The model of China's investment, output, and net-export growth since around the turn of the century is not sustainable. Correcting forces in the form of a decline in corporate profits due to rising unit labor costs, an appreciating exchange rate, rising land and utility costs, etc. will undoubtedly kick in at some point, but for the moment it seems that the cycle of high profits and high investment is still intensifying. China will probably continue to enjoy cost advantages in many industries for years. Internal and external imbalances may grow significantly worse before the current cycle burns out.

Because inflation has remained relatively modest, it is hard to argue that China's overall investment rate is too high. However, there is a problem with the composition of total investment. The worsening of China's internal and external economic imbalances suggests that there is too much investment in manufacturing and too little in social infrastructure (health, education, and social security), low-cost housing, and environmental clean-up. Additional measures aimed at slowing investment growth in manufacturing, are needed, along with measures to reduce the need for pre-cautionary household savings and promote consumption. Faster exchange rate appreciation, especially if combined with greater flexibility, could support such measures by reducing net exports and by shifting the domestic incentive framework in favor of non-tradables. This would be desirable since most non-tradables are produced in service industries, which have remained relatively underdeveloped in China, but offer enormous potential for future employment growth. If current dynamics are allowed to continue, the trade surplus is likely to balloon, which will intensify international trade frictions with unpredictable consequences.

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