Economic Cracks in the Great Wall of China: Is China’s Current Economic Model Sustainable?

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Cover: A section of the Jiankou Great Wall under repair in Huairou District of Beijing, China. (Xinhua/Chen Zhonghao via Getty Images)
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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Summary</td>
<td>6</td>
</tr>
<tr>
<td>Chapter 1. Introduction</td>
<td>7</td>
</tr>
<tr>
<td>Chapter 2. China’s Structural Weaknesses</td>
<td>10</td>
</tr>
<tr>
<td>Chapter 3. Xi Jinping’s Turn to a Centralized Command and Control Economy</td>
<td>22</td>
</tr>
<tr>
<td>Chapter 4. China’s Growing Financial Crisis</td>
<td>25</td>
</tr>
<tr>
<td>Chapter 6. Policy Recommendations for the US and Allies</td>
<td>44</td>
</tr>
<tr>
<td>Chapter 7. Concluding Remarks</td>
<td>50</td>
</tr>
<tr>
<td>Endnotes</td>
<td>52</td>
</tr>
</tbody>
</table>
This paper explores the long-term structural and short-term economic problems in contemporary China, and in particular considers whether the Xi Jinping regime can avoid a financial crisis and effectively manage a transition to a stable new equilibrium. Structural issues include a looming downturn in the population and in the workforce; associated problems with an underdeveloped and underfinanced social safety and welfare net; income and regional inequality; environmental degradation; and domestic shortages of raw materials, agricultural production, and energy resources. The acute economic problems analyzed in the paper are a real estate bubble, the accumulation of dangerous levels of debt, dependence on external markets and financing, a difficult transition to a more consumer-oriented and less investment-driven economy, a crackdown on dynamic digital and financial sectors, a return to dominance of low-productivity state-owned enterprises and manufacturing firms, and weak governance from an increasingly authoritarian and unaccountable regime. Many of these acute issues result from Xi’s changes in policy since 2013. Xi’s turn toward greater economic self-reliance while maintaining mercantilist trade relations signals an effective decoupling from the US and allied economies.

Some historical examples of bubble economies and financial crises are discussed as possible analogies to the current situation in China. One conclusion is that the Middle Kingdom will see a much slower-growing economy, which makes addressing the structural issues much more difficult. Inability or lack of determination to address the large array of issues may also undermine the political legitimacy of the current regime, which has been buttressed since 1978 by a rapid growth model based on debt, real estate, and investment, including infrastructure.

The paper concludes with a discussion of policy tools that the United States and its allies could deploy to induce China to be a more responsible stakeholder in the world economy and a more reliable contributor to global sustainability. The tools considered in the study include trade policy and export controls, expanded oversight of foreign investment (both direct and portfolio investment), cooperation with allies on China policy, and defense-related sanctions. The paper also suggests that deployment of these tools could be a factor in weakening China’s economy as well as a means to convince its leadership to pursue less mercantilist and authoritarian global strategies, which are harmful to the US economy and to global stability.
Since Deng Xiaoping changed the trajectory of Chinese economic policy in 1978, the People’s Republic of China (PRC) has amassed an impressive record of economic growth. Starting as a poverty-stricken agricultural society under rigid socialist rule, the country has grown steadily and rapidly to become the second largest economy in the world and carved out a growth path whose strength and longevity is historically unprecedented. As the 21st century has unfolded, the PRC has become a near peer competitor to the United States and other developed countries in terms of economic and political power. It is deploying this power in multiple ways that explicitly challenge US leadership in both the economic and global political spheres. If the PRC manages to maintain recent growth rates of around 6 percent per year, it will soon overtake the United States as the world’s largest economy and enhance its ability to challenge the global US leadership position, which has been a pillar of stability since World War II. The US and its allies had hoped that the PRC would become a responsible stakeholder in a liberal international order, but these hopes have been undermined in recent years by China’s increasingly apparent mercantilist economic policies, its aggressive expansion of political power, the resurgent dominance of state-owned enterprises, and the ever-more evident suppression of political liberties and traditional cultures in its sphere of influence.

Many economists and political analysts, however, have come to question whether the top-down, mercantilist economic system in the PRC is sustainable in the medium to long term. A number of trends suggest weaknesses in the traditional economic and political structures that have propelled growth in China: growing...
private and public sector debt, adversely shifting demography, the return to prioritizing state-run enterprises over private firms, the continued reliance on an export-oriented economic system, growing weaknesses in the financial system, dependence on external commodity and technology suppliers, persistent economic and geographic inequality, and continued reliance on external financing. Recent economic data show that bankruptcies are growing, returns on investment are shrinking, and capital controls are contributing to unrealistic valuations of internal capital stock and housing stock. Additionally, regulations are stifling innovative sectors of the economy, and opaque and unregulated consumer financing products are undermining central bank monetary policy and contributing to over-leveraged balance sheets among consumers and small businesses. Consumer purchasing power that is consistently too weak to absorb domestic production, along with incentives to increase that production, has resulted in sustained trade surpluses that create a closed loop of increased investment in manufacturing and the need for growing external markets. More recently, US-led efforts to deny China access to certain high-technology products and materials have underscored Chinese vulnerabilities in key sectors like telecommunications and semiconductors.

This dynamic results in trade tensions with developing countries and in economically questionable investment in the developing world. These tensions, along with the undermining of developing world markets through subsidized PRC production, are increasingly causing costly disruptions in trade flows and placing pressure on the state banking system, which is the source of most external financing.

If the mounting problems with the current Chinese economic model result in material slowing of growth or even sustained recession in the PRC, this would have substantial impact on the United States and its allies in two important ways. First, given that the PRC is the second largest (or in some measures the largest) economy in the world and has been an engine of growth for economies in Europe and the rest of Asia, slower growth or recession in China would likely lead to a global slowdown or recession. Second, because growth has immense political salience in the PRC—it justifies the authoritarian system of governance—a significant slowdown or recession could lead to political instability. Given Chinese nationalist rhetoric and revisionist ambitions toward Taiwan, political instability could in turn motivate risky military activities that escalate into confrontations with democratic, market-oriented countries. From the perspective of the United States, a slowdown could exacerbate the already serious trade and economic tensions, especially if nationalist forces in China sought to cast the US as the scapegoat for its internal problems.

In sum, a better understanding of the weaknesses within the PRC growth model would allow policymakers to craft targeted tools when needed to support US policy objectives, either economic or political, and to deter PRC aggression or the undermining of US economic interests. Policy tools such as trade tariffs, export controls, and limitations on direct investments and access to US financial markets could have material impact on Chinese performance. A more robust understanding of the impact of these tools would help the United States and its allies craft overall strategies to meet the Chinese economic and political challenge.

While operating in a time frame longer than a year, many financial analysts have begun to describe the unfolding economic challenges in the PRC. The general public, including political opinion leaders and government analysts, have not generally understood the extent of the danger of economic crisis in China. Instead, the common assumption is that growth in the PRC, albeit a continuing economic threat to the US economy, is not in danger of faltering.

This paper takes a different view. It explores both the longer-term, structural weaknesses characterizing the current Chinese economic model and the recent policy changes initiated by President Xi Jinping. Its working assumption is that the com-
Combination of these two factors will result in a material weakening of the dynamic growth China has enjoyed since Deng Xiaoping set his country on a more Western-style growth path in the late 1970s. At a minimum various factors will slow growth to levels more characteristic of modern developed economies; and at the extreme these factors may possibly lead to negative growth and weakening of the political strength that underpins the dictatorship of the Chinese Communist Party (CCP).

The paper starts with a brief overview of relatively well-known structural problems before going on to the more recent and more destabilizing political, regulatory, financial, and foreign policy changes that are tending to sap the core strengths of the Chinese economic growth model of the past 40 years. It concludes with a discussion of the policy levers available to the United States and its allies for affecting the future economic performance of China, as well as the advantages and disadvantages of these levers.
CHAPTER 2. CHINA’S STRUCTURAL WEAKNESSES

Demography
The population of China, historically representing 25–35 percent of the world’s people, nearly doubled under the rule of Chairman Mao after the CCP took power in 1949. It reached nearly 970 million in 1979, when the one-child policy was put into place and ruthlessly enforced. Total population reached 1.4 billion by 2015. Due to the limits on family size (which were subsequently relaxed to allow two and sometimes three children) and improving standards of living, total fertility rates fell well below the replacement levels as early as the 1990s, and they have not recovered since then. The total fertility rate registered barely 1.3 births per female in 2020. Given Chinese culture’s traditional preference for male children, the one-child policy also resulted in a surfeit of men, with a nearly 20 percent higher survival rate for male births. As wealth and standards of living improved, life expectancies also dramatically improved, to 76 years by 2021. One result, of course, is a relatively faster increase in the older as compared to the younger (working-age) population. One-quarter of the population is now aged 55 years or more. Figures 1 and 2 provide some sense of recent trends.

Total population is estimated to fall to 1.357 billion by 2050, according to the World Bank.¹ The total numbers in the labor force are already declining. After peaking at some 767 million in 2017, these numbers are projected to fall to 661 million in 2037.² The World Bank estimates they will decline to 746 million by 2030. The United Nations (UN) forecasts that the labor participation

Photo: A worker cleans up the logo at a branch of China Merchants Bank on October 19, 2020 in Shanghai, China. (VCG/VCG via Getty Images)
rate, which was 79 percent in 1990 and 67 percent in 2020, will decline to 54 percent by 2045. The UN also projects that China will have nearly 500 million souls aged 60 or more by 2050. The decline in total and working age population, and the aging of the workforce, is obviously in itself a factor contributing to slower overall growth.

For comparative purposes one can note that the total US population is expected to increase over 20 percent by 2050, and the labor force to grow by 12 million by 2030. The labor force participation rate in the US fell from about 65 percent to around 61 percent during the pandemic shutdown, and had only slightly regained its higher average by the fourth quarter of 2021.

**The Social Welfare System in China**

The development of a modern style of social welfare has lagged in China. State-owned enterprises (SOEs) until recent decades were expected to provide health and old-age benefits. As late as 2009, less than 25 percent of the population had access to some form of pension. A national system was built in the 21st century that now covers much of the working population. Employers fund the basic retirement plan for their workers, who receive a modest pension based on years of service, with a minimum of 15 years to qualify. Benefits are partially indexed to inflation. The employer-funded plan is supplemented by a defined contribution program of personal accounts funded by employee contributions. In 2020, some 456 million people were covered by the employer-based urban plan and another 542 million by the supplementary urban and rural plan. This still leaves hundreds of millions not receiving pension support. Nonetheless, China by 2018 already had some 269 million pensioners drawing on the system, and these numbers are growing rapidly as the age structure trends toward retirees. Data show that revenues for both plans were roughly 10 percent below outlays in 2020 and required government subsidies to meet immediate obligations. Figure 3 shows the balance sheet for all government public pension funds since 2010, and figure 4 gives comparable figures for the more robust urban employee plans.

During the COVID-19 crisis authorities suspended some employer contributions, especially for small and medium enterprises. Local governments were required to make up some of the shortfalls. A study in 2019 concluded that the state pension fund would “run dry by 2035” due to the decline of the workforce, a trend accelerated by the one-child policy.
Government-provided health insurance now covers most of the population, according to official statistics. But service, in rural areas especially, is often unavailable, and hospital costs have sparse and uneven levels of coverage. China has a large population of urban migrants, numbering at least 150 million, who are not registered in large cities (often due to financial constraints), and they remain largely outside the health care insurance system.

A growing network of private health care insurers and providers has appeared as China has moved up the economic development ladder; these appeal to wealthier citizens. Innovative firms such as Alibaba Health and Ping An Healthcare offer newer services, such as remote consultations and AI diagnostics.

China spends only about 5 percent of gross domestic product (GDP) on health care. Risk pools are aggregated at county and local levels and administered by public entities, and they suffer from inefficiency, poor service, and poor financial management. John Lee of Hudson Institute estimates that up to three-fourths of all local revenues are devoted to “social and public goods such as hospitals and schools.” Combined with the underdeveloped pension system, the relative lack of good medical coverage motivates most Chinese to save for contingencies, retirement, and health care emergencies. The total personal savings rate remains close to 50 percent.
Disparities in Income

In the course of China’s transition from a desperately poor to a middle-income nation after the 1970s, Chinese income levels have become some of the most unequal in the world.

Figure 5 provides some international context to this development over the last half century. Estimates of the Gini coefficient, measuring levels of income inequality, vary among sources. Figure 5 indicates that in 2013 it was around 0.40 in both the US and China. The direction of change after 1990, however, was stark for China. The International Monetary Fund (IMF) estimates that China’s Gini measure rose from 0.33 in 1990 to 0.53 in 2013, by far the highest in all of Asia. The IMF observed: “From being one of the most equitable economies in 1990, China now has inequality that is higher than in most regions, with inequality in urban regions rising more sharply.” A study using data from China’s National Bureau of Statistics has the Gini coefficient for China in 2012 at 0.47. As calculated by the World Bank, the top 10 percent of the population received more than 40 percent of total income in China in 2018, while the bottom half accounted for less than 15 percent. Those in the top 1 percent of the wealth ladder hold some 30 percent of all wealth, compared to about 35 percent of wealth for this group in the US. These numbers in 2020 are considerably worse in terms of inequality than in 1990, as social mobility worsens in the wake of increases in total GDP.
As the IMF analysis noted, urban-rural and regional income disparities persist in China, despite efforts by Beijing over many decades to reduce them. Figure 6 illustrates the unequal returns to work in urban and rural areas.

Per capita incomes in urban areas, largely in east and north-central China, remain about 2.5 times larger than in rural regions, mostly in western and southern China.

What is perhaps of even greater concern is that urban-rural differences in education are extreme. More than half of students in rural areas fail to complete secondary school. Economist Derek Scissors notes that absent improvement, by 2040 China will lag behind Zimbabwe in average schooling for adults; he argues that this represents a serious impediment to future growth. It will be seen throughout this paper that Chinese authorities, beginning at the top with President Xi, are extremely concerned about income disparities. At the pinnacle of the income scale the levels of wealth in China rival or exceed those of the Russian oligarchs. Xi is increasingly bold in taking concerted actions to address the socio-political problems resulting from inequality.

Figure 5. Gini Index Reflecting Income Disparity, Select Countries

Note: 0 = perfect equality and 100 = perfect inequality (i.e., one person has all the income).

Environmental Degradation

As China sought to increase incomes rapidly and build an industrial economy, environmental protection was largely neglected. China now is the world’s largest producer of greenhouse gases, emitting more than the total of all countries in the Organisation for Economic Co-operation and Development (OECD) in 2020. If China were to achieve its economic growth targets for 2035 as articulated in October 2020, its emissions would more than double absent some draconian change in policy, which seems unlikely given the country’s continued reliance on coal-fired electricity plants. China is the world’s largest coal producer and accounts for half of the coal consumed globally. While China has pledged to try to achieve carbon neutrality by 2060, it has yet to lay out a formal plan to do so.

Although air pollution is an endemic problem, water and soil pollution are arguably larger problems in the near term. With 20 percent of the world’s population but just 7 percent of its available fresh water, China is at risk of major water shortages as urbanization increases. The risk is especially high in the industrialized north of China. Beijing itself in 2016 had 178 cubic meters of water available per capita, compared to a United Nations benchmark for water stress at 1,700 cubic meters per capita per year. By 2030, it is expected that China could be...
facing a water shortage of 201 billion cubic meters. Additionally, the geographic location of water sources poses a logistical problem. Population density is much greater in northern China, while major water resources are largely located in the south. Water degradation has been accelerated by China’s swift industrial development but also by poor agricultural practices. According to a McKinsey & Company report, China is unlike most other large economies in that its industrial demand for water dominates overall demand growth.19 Figure 7 shows that rapid growth overpowered desultory attempts to maintain water sustainability within the mainland.

Industrialization also drastically degrades soil quality in China today. Approximately one-fifth of China’s arable land is contaminated; this situation, along with the degradation of the water supply, negatively impacts China’s food security. The large number of chemical factories and untreated industrial sites, along with electronic waste, rare earth and other mining residues, and overuse of pesticides, has led to rapid deterioration in soil quality.20 A soil pollution risk map prepared by the Beijing-based Institute of Public and Environmental Affairs in 2016 (figure 8) identifies 4,500 companies—3,998 of them state-controlled and 502 not state-controlled—within 729 industrial zones that are home to chemical, mining, and metal industries.21 As can be seen, regulatory oversight of these industries has fallen through the cracks. Only two years ago, in 2019, did China create its first

Figure 7. Increase in Annual Water Demand (2005–2030)

<table>
<thead>
<tr>
<th>Region</th>
<th>Agriculture</th>
<th>Industry</th>
<th>Municipal and Domestic</th>
<th>Change from 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>178</td>
<td>300</td>
<td>54</td>
<td>532B m³</td>
</tr>
<tr>
<td>India</td>
<td>338</td>
<td>89</td>
<td>40</td>
<td>468B m³</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>320</td>
<td>28</td>
<td>92</td>
<td>440B m³</td>
</tr>
<tr>
<td>Rest of Africa</td>
<td>243</td>
<td>117</td>
<td>80</td>
<td>440B m³</td>
</tr>
<tr>
<td>North America</td>
<td>181</td>
<td>124</td>
<td>21</td>
<td>326B m³</td>
</tr>
<tr>
<td>Europe</td>
<td>72</td>
<td>100</td>
<td>2</td>
<td>184B m³</td>
</tr>
<tr>
<td>South America</td>
<td>89</td>
<td>68</td>
<td>23</td>
<td>180B m³</td>
</tr>
<tr>
<td>MENA</td>
<td>85</td>
<td>6</td>
<td>9</td>
<td>99B m³</td>
</tr>
<tr>
<td>Oceania</td>
<td>2</td>
<td></td>
<td>7</td>
<td>28B m³</td>
</tr>
</tbody>
</table>

comprehensive regulation to address soil degradation, the Soil Pollution Control Law.

The impact of environmental degradation hinders both civilian well-being and future economic growth. Yanzhong Huang, a senior fellow at the Council on Foreign Relations, argues: “China cannot regain its greatness in the world if its people continue to breathe polluted air, drink toxic water, and eat tainted food.”

Additionally, environmental deterioration gradually undermines growth. According to the Ministry of Ecology and Environment, the cost of pollution in China was 1.5 trillion yuan, roughly 3.5 percent of GDP in 2010. (The ministry does not release these figures on a regular basis). From an economic standpoint, this cost is not sustainable. The negative impact of environmental degradation on China reached a cumulative level of 9 percent of national income in recent years, compared to 2 percent in the US and less than 1 percent in Germany and Japan, according to World Bank estimates. As the CCP shifts to new economic growth models, leaders will need to take the environment into consideration. If they do not, they threaten the future political and economic stability of the nation.

Relative Lack of Raw Materials

China is far from self-sufficient in the food and raw materials needed for its vast population and its industrial economy. China imported record amounts of grain in 2020: 11.3 million tons of
corn, 8.4 million tons of wheat, and 100 million tons of soybeans. Much of this was to feed its growing appetite for meat. The US Department of Agriculture projects that Chinese imports of raw meat and feed will increase by 29 percent in the next decade.

To supply its industrial economy China must import huge amounts of raw minerals and energy. China is the world’s largest manufacturer of steel, aluminum, and cement, and is reliant on miners in Australia, South America, Canada, Africa, and Southeast Asia for the lion’s share of the raw materials used in processing these and other industrial metals and other products. Importantly, to supply its growing high-technology sector, China also imports other metals like rare earths and copper, and the lithium, graphite, and cobalt needed for battery production. China is by far the world’s largest processor of most of these minerals.

China is also heavily dependent on the rest of the world for energy supplies. In recent years China has slowly begun to replace petroleum-based energy (and oil for chemical feedstocks) with natural gas. Imports of oil increased rapidly as China moved up the income and production ladder in the world economy, growing from around 2.5 million barrels per day around the turn of the century to over 10 million barrels per day in 2020. In the same year its imports of natural gas were already over 1.5 trillion cubic feet, and they grew by 31 percent in the first four months of 2021. China is by far the world’s largest consumer of coal and still produces 58 percent of its electricity using this mineral. China also remains the world’s largest producer of coal, but its voracious appetite for this carbon-rich material is such that it must import around 300 million tons per year.

In 2021 China experienced shortages of coal, partly because it cut off imports from Australia (to sanction the country for crit-
icizing Chinese stonewalling on the origins of the coronavirus pandemic). These shortages have led to higher prices for electricity and rolling blackouts of key industrial sectors, including semiconductors. They reverberate around the world and are perhaps a harbinger of what problems the future evolution of a globally integrated industrial sector must consider.

**The Return of SOE Primacy and Impacts of Mercantilist Trade Policy**

After Deng Xiaoping consolidated his leadership of the Chinese state, he embarked on what became a four-decade sprint of “reform and opening” in pursuit of economic growth and improved standards of living. Thus began China’s quest to reclaim its self-declared position as a fully independent and dominant global power. The ensuing unprecedented growth of the economy featured impressive, consistent gains led in large part by the private sector (though many of these firms had government sponsorship and financial help). By the 21st century, the private sector by some measures accounted for 60 percent of GDP, 80 percent of urban employment, and 60 percent of government revenues. But considering the rise of local government investment vehicles and opaque ownership structures that hide state or SOE ownership shares in private enterprises, the share of purely private enterprises may be as low as 20–30 percent, especially since Xi has pivoted to privileging SOEs in the economy. Since Xi came to power in 2013 he has systematically favored SOEs through regulation and direction of financing to SOEs and local government enterprises—at the expense of private sector companies. This is explored in more detail in the next chapters.

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**Figure 11. Contributions to China’s GDP Growth**

On a purchasing power basis, the Chinese economy now rivals that of the US as largest in the world. Its economy recovered more quickly than that of the US and other developed parts of the world following the economic debacles of the Great Recession and the COVID-19 pandemic.

Despite this impressive performance, the mercantilist structure of the Chinese economy—along with the consolidation of political power by the CCP—slowly created its own set of problems. The unencumbered dash to meet Beijing-set goals for growth through industrialization and infrastructure modernization often pitted one city or region against another for the political benefits of meeting or exceeding targets. This approach led to heavy subsidization of manufactured goods that had to find a market. Between 40 percent and 50 percent of GDP was devoted to investment for the last several decades, and the resulting overproduction flooded world markets and led to reaction from trading partners. Figure 11 above illustrates the continuing importance of capital investment to drive growth in China.

**How Investment Demand Drives Economic Growth**

China became the world’s largest exporter of merchandise and consistently produced a surplus in the merchandise account. The total trade surplus reached a high around 2006 at nearly 9 percent of GDP. The current account surplus, a much broader measure that includes services and capital flows, has declined since 2006 and in 2020 was about 2 percent of GDP. Total goods trade alone still represents about 18 percent of GDP, well over twice the US level, and is a rough indicator of the importance of exports to the Chinese economy. The merchandise trade surplus alone was around 10 percent of GDP as late as 2016 and still remained robust at around 3.6 percent in 2020.

A recent quantitative study of subsidies by major exporters gives evidence of growing Chinese use of this tool to support its mercantilist economy since the Great Recession. Nearly 40 percent of global goods trade faces competition from subsidized Chinese firms. Protection of the domestic market is even greater, as over 84 percent of goods imported into China face subsidized Chinese competitors.

The COVID-19 pandemic led to resurgent demand for Chinese products and a new Chinese record for merchandise exports. Export growth reflected increased global demand for computers and office equipment, furniture, bikes, and personal protective equipment. At the same time, China’s savings rate crept back up to over 45 percent of GDP as consumer spending slowed in the pandemic environment. These developments delay even further the professed goal of Xi to rebalance the Chinese economy away from reliance on external demand.

The poster child for this self-reinforcing cycle of overexpansion and export dumping is the steel industry. China accounts for over one-half of global production and uses carbon-rich manufacturing processes. Rapid growth of exports led to punitive tariffs from the US and equivalent quotas from Europe on Chinese steel producers. Looking ahead, China’s Made in China 2025 (MIC2025) program targets the electric vehicle (EV) industry, as well as nine other industries important to the growth economy of the future that China is promoting. Already by 2018 there were almost 500 EV startups throughout China, most receiving subsidies from local governments competing with each other and responding to central government investment objectives. According to data from the Semiconductor Industry Association, in 2020 alone there were over 22,000 new semiconductor companies set up in China. If as seems plausible China can become competitive in this important global industry, the response from the US, Japan, and Europe, in defense of their own industries, is likely to be harsh.

Due in part to the requirement to find ever-growing markets for manufacturing and in part to stubbornly weak consumption, which is constrained by the need for savings discussed earlier, China has continued to aggressively expand its export markets. The so-called Belt and Road Initiative (BRI), which
fosters investment across Asia and into Europe with development and construction aid, was in some substantial part motivated by this need to build markets for Chinese industry. Over $1 trillion has been committed under the auspices of the BRI, mostly but not exclusively to developing countries and predominantly in the form of loans and construction assistance. In the last few years, however, it has become clear that much of the debt resulting from this program will never be repaid. One report estimates that 35 percent of the infrastructure projects face problems such as corruption and public opposition, and many suffer from poor construction and inadequate returns on investments.

A Financial Times analysis characterized the BRI as “unraveling into what could become China’s first overseas debt crisis.” The co-author of the classic analysis of the origins of financial crises, Carmen Reinhart, has examined the financing of the BRI; she and her co-authors note that about one-half of China’s overseas loans to developing countries are “hidden.” Such opaqueness is not unusual in Chinese finance in general, but the result is that total levels of bad debts associated with the Chinese model are often understated.

As part of its drive to industrialize and expand in foreign markets, China has frequently abused its commitments as a member of the World Trade Organization (WTO) to refrain from forced technology transfer, subsidization of enterprises, protection of intellectual property (IP), and sales of products abroad at less than production costs and fair market value (aka “dumping”). The MIC2025 program expands China’s ambitions to high-technology areas like semiconductors, biopharmaceuticals, and aerospace. China is already a leader in some financial technologies such as electronic payments, but its advantage was achieved by refusing to open its markets to competing Western firms, despite being required to do so by its WTO accession commitments.

The presidency of Donald Trump marked the beginning of significant pushback by developed countries to China’s aggressive drive to capture markets for both mature industries and the industries of the future. Developed countries had approved China’s entry to the WTO in the hope that it would become a responsible stakeholder in the global trading system; but by the second decade of the 21st century this hope had largely been dashed by Chinese mercantilism. Reactions by the US and others, which include denying access to advanced technologies in the defense, telecommunications, and semiconductor sectors, have become an impediment to future Chinese growth, as China’s indigenous innovation lags behind that of the West in many advanced technologies.
When Xi Jinping took over the leadership of the CCP and the Chinese government, he in many ways reversed course in economic policy, but also reinforced the trend toward self-sufficiency or autarchy. Especially after the Trump administration challenged Chinese economic policies such as dumping, IP theft, and industrial subsidies, Xi began what clearly is a considered, coherent, and long-term program reinforcing the political and economic dominance of the CCP. This program also includes the effort to dominate the technology industries of the future. Xi and his ideologist cadres describe the newest tendency as the “dual circulation” model. The idea is to move the economy to become stronger in terms of domestic consumption and thus enhance self-sufficiency while maintaining export strength.

These trends, however, are undermining the economic dynamism of the country. In the first place, Xi’s government has direct-

Photo: A man photographs a wall showing images of Communist Party Chairman and Xi Jinping as part of a display at the newly built Museum of the Communist Party of China on June 25, 2021 in Beijing, China. (Kevin Frayer/Getty Images)
ed state banks (which account for some 80 percent of traditional commercial lending) to prioritize SOEs, at the expense of private enterprises. SOEs are much less productive and less innovative than private firms. Wall Street Journal economist Greg Ip noted in a recent column the problem with shifting resources back to SOEs: “In a study published earlier this year, economists at the IMF compared thousands of state-owned firms with private companies and found that a company in which state investors had a majority control was 30 percent less productive than its private equivalent. That was because it invested less efficiently.”

A Bank of Japan study from 2021 calculates that manufacturing productivity in China is still roughly 20 percent of the US level, and finds that service sector companies are even worse. The study also notes that the return on capital investments overall in China has been diminishing, especially for the state-dominated firms and sectors. A study by two economists at the University of Chicago found that the return on assets for private firms is three times that of SOEs. John Lee notes that private sector profits have been declining since 2014, while those of SOEs have been growing since 2015. The US-China Economic and Security Review Commission noted in its 2020 report to Congress that under the Xi policy to support SOEs, the interest rates charged to private firms appear to be about 300 basis points higher than those charged to SOEs.

Xi’s program is thus a recipe for lower growth in both the economy and personal income, as it channels investment resources into the less productive “real” economy, primarily defined as the production of goods and traditional services like banking. Given the persistent demographic stagnation, productivity growth is key to maintain higher growth rates.

A second factor helping to undermine economic dynamism in China is Xi’s reinforcement of the government’s regulatory powers and strengthening of CCP operatives’ role in the operations of private firms. Barry Naughton of UC San Diego, a longtime China watcher, labels this turn as creating a “government steered economy.” As part of this strategy to restore CCP dominance, the Xi regime has also targeted many successful and wealthy Chinese entrepreneurs.

“Supervision” over foreign capital flowing into China—such as the last-minute refusal to allow Ant Financial and some ridesharing firms to list on foreign stock exchanges, and new restrictions on Didi’s ridesharing services—has had serious consequences for firms. Most notably, it has compromised the ability of dynamic new financial firms to operate and serve as innovation-enhancing competition with China’s sclerotic commercial banks and to channel capital to innovative domestic firms. As part of China’s 2001 accession agreement to the WTO and later as part of President Trump’s Phase I accord, China promised to allow foreign banks and money management firms to establish operations in China. Access to these institutions would likely be very important to China because its champion savers (mostly individuals but also corporations) need alternatives for achieving better returns on their deposits, as China generally limits choices for savings vehicles, keeps interest rates at levels below inflation, and restricts capital outflows.

The new turn toward increased CCP and regulatory oversight has extended to the private education sector, which has emerged as parents strive to give their children advantages in the highly competitive education system; the private education sector compensates for a generally weak primary and secondary public system and helps Chinese students gain entry to foreign universities. Xi has also targeted private health care providers for debilitating new regulations, and in addition the state-run system is being charged to reduce costs, using tools such as price controls on pharmaceuticals and hospitals. Innovative firms Alibaba Health and Ping An Healthcare saw their stock prices decline by 30 percent or more after the announcement of new rules for private sector health care. Ridesharing and the large gaming sector have also felt the sting of punitive new regulations. In the case of the $120 billion private tutoring business, new regulations essentially eliminate innovative and...
popular private services perceived by Chinese families as a requirement for success in the modern economy.50

A third factor undermining newer and more productive sectors of the economy flows from Xi’s speeches, which consistently draw a distinction between what he calls the “fictional” economy and the “genuine” or “real” economy. The latter is generally the goods-oriented manufacturing sector, including high-technology industries such as semiconductors, and the construction and extraction industries. The former includes some of the more innovative sectors of the economy: finance, social media, online gaming, digital commerce, and even real estate when investment turns into speculation. The problem with this development is that, again, Xi is doubling down on the traditional goods-oriented, export-dependent parts of the economy. These are not always the most productive or innovative parts of the economy, and reinforcing them will further complicate already fraught trade relations with much of the developed world.

Growth will almost certainly be undermined by the combination of increased control by the state, focus on the older, less innovative, and state-owned parts of the economy, and the undermining of the faster-growing sectors. As a means of cautioning potential political rivals, Xi’s policies also have targeted successful entrepreneurs such as Jack Ma and many prominent, successful business and cultural leaders, often in the guise of a crackdown on corruption.

These measures will also increase frictions with trading partners and motivate retaliatory actions by competitors in the United States and a growing number of other nations whose industries are threatened by (often) subsidized Chinese firms, which grew behind the protective walls of the giant Chinese economy. The US campaign to sanction Huawei shows that China’s industries are still vulnerable in areas where its technology does not lead—for example, in semiconductors and aerospace. Huawei lost more than one-third of its market in 5G mobile devices because the US has banned exports of advanced communication chips and chip-making equipment.51 A study by the Mercator Institute for China Studies (MERICS) on the Chinese semiconductor industry concludes that it would be “impossible for Chinese IP suppliers to provide internationally competitive IP for all or most categories within the next ten years.”52 The Chinese aerospace industry too depends on Western suppliers for the most sophisticated components of commercial airliners, engines, and avionics. One commentator has claimed that “the West can in fact torpedo China’s aircraft industry. It just chooses not to.”53 Policymakers in the future may change this approach.
In addition to the longer-term structural issues and those associated with Xi’s return to more centralized economic planning under CCP control, problems related to the Chinese economy’s increased reliance on debt financing have become more visible. The total accumulated debt in the aggregate, for the government and commercial sectors and for specific sectors led by real estate, have reached levels never before seen for a country still on the road to mature developed nation status. Total debt is well over 300 percent of GDP, and bond defaults and bankruptcies are at the highest levels on record for Communist China. The debt-to-GDP ratio is up by almost 45 percent in the last five years alone. Xi’s latest China Dream project aims to achieve a “dual circulation” economy in which growth in domestic consumption gradually balances the economic drivers of capital investment and exports. This policy too risks new problems. For instance, bolstering domestic incomes to increase consumption will raise costs and, in combination with policies favoring SOEs over the private sector, will undermine global competitiveness in the long run. Part of Xi’s strategy is reducing debt levels and reliance on leverage for growth; but this effort will contribute to slower growth and risk acute crises, since these factors have been a large part of the growth model for generations in China. A closer look at China’s debt problem will provide context for a discussion of the overall sustainability.
of the Chinese economic model, and of the possible political implications of its problems.

**Real Estate Bubbles, Debt, and Government Finance**

The most pressing of China’s debt problems is the real estate industry. Economists Kenneth Rogoff and Yuanchen Wang calculate that about 29 percent of Chinese GDP and about 18 percent of urban employment have been directly tied in recent years to this sector. Real estate loans grew by 20 percent annually for the years 2014–2018 and represented 40 percent of new loans in financial institutions. By the time of the pandemic, Chinese development firms were beginning to totter on the brink of bankruptcy. Major land development firms Evergrande, Fantasia, China Fortune Land, Sichuan Languang, Sinic, Oceanwide, Modern Land, and Sunac all have deferred or defaulted on real estate development loans or bonds, as land sales have slowed and price increases have abated in recent years. Data for October 2021 indicate that 24 of 59 large land development companies saw their bond ratings reach junk status, with yields above 20 percent. Any sustained crisis in the real estate markets could potentially spread to other areas of the Chinese economy since real estate constitutes some 40 percent of collateral for all loan transactions. John Lee has described the need to ratchet back the speculative elements of the industry without undermining overall growth as a difficult dilemma for Beijing.

The early stages of Chinese growth, roughly the 20 years after Deng’s reforms, could be characterized as a period of primitive capital accumulation. Manufacturing was prioritized along with infrastructure modernization, and exports were promoted to propel rapid growth in an investment-driven economy. In the late 1990s, according to Lee, real estate development came to be increasingly promoted as a driver of domestic economic and social growth, reflecting the pressing need for housing in an urbanizing economy with rising living standards. Michael Pettis estimates that what Xi has now labeled as “fictional growth,” including excess real estate investment, came to represent almost half of all growth in the entire economy since the late 1990s. The sector directly accounted for only 4 percent of GDP in 2007 but expanded to 9 percent in 2008 and stands at some 15 percent today. Property-related services contribute another 14 percent to reach the figure of 29 percent cited by Rogoff and Yang. This level is well above the roughly 18 percent achieved at the height of the housing bubble in the US, and higher than comparable bubbles that caused steep recessions in Spain and the UK at roughly the same time as the Great Recession.

In China, real estate became by design a major engine of economic growth. Lee estimates that one-third of domestic investment has been in real estate in recent years. Up to one-half of all Chinese debt is tied to the sector. Chinese planners facilitated this growth by selling land (which required displacing up to 70 million farmers from lands they formerly occupied), accelerating credit via nonfinancial corporations (aka “shadow banking”) and local government bonds (not widely permitted before the 1990s), and promoting ambitious targets for housing construction. Lee puts the total local government debt related to the housing sector at near $7 trillion. Chinese leaders saw access to housing as part of the modernization process and a political asset in the sense that it helped fulfill the Chinese “dream” of home ownership.

Important to the process was that investment in housing became a channel for the accumulation and protection of wealth in China. Given the absence of a strong social safety net, and the Chinese central bank’s consistent policy of keeping interest rates below the rate of inflation, such a channel became a vital part of individual and commercial financial planning. Moody’s estimates that between 70 percent and 80 percent of household wealth in China is held in real estate. Not surprisingly real estate became a source of speculation itself. In 2021, up to 40 percent of apartment sales are for second properties and at
least 10 percent are for third properties or more by individual owners. Partly because of this speculative, capital-accumulating activity, housing for as many as 90 million people remains vacant. Pettis estimates that 20–25 percent of total housing stock is owned by "speculative buyers." Prices for housing have moved relentlessly upward to the point that the ratio of housing costs to personal incomes is by far the highest in the world. Lee observes that demand for future housing growth is limited, as some 90 percent of the urban population already owns their own property. Moreover, with already-built housing capable of absorbing 90 million new urban immigrants, China already can "meet the country’s urbanization needs for the next decade and beyond based on current urbanization rates." One can argue that the Chinese real estate development market is a modified version of a Ponzi scheme. Companies, exemplified by Evergrande, operate by borrowing heavily to build ever-increasing volumes of housing and commercial real estate. They service the costs in part by pre-selling units to buyers seeking modern housing but also a safe investment. Increasing prices facilitate a spiral of new development and increased demand. As of 2021 Evergrande alone had pre-sold 1.4 million units that had not been built. The company’s possible bankruptcy threatens lenders and bondholders, but the most politically sensitive issue will concern the individuals trying to recoup their life savings in pre-sold apartments and houses.

In the last three to four years demand has begun to waver; prices have vacillated and even declined in certain periods, and developers are increasingly squeezed. Data for September 2021 show that sales by the largest 100 developers declined between 36 percent and 44 percent on a year-over-year basis. Price increases are also slowing, as figure 12 shows. Figure 13 demonstrates the secular decline in housing prices in the last five years.

As figure 14 illustrates, total new space and sales for commercial properties are in steep decline in 2021 after a brief surge in growth as the pandemic abated.
Chinese authorities are accelerating this trend by imposing new measures to limit price increases and new credit in an effort to arrest the debt and price spiral. Government regulators have begun since 2020 to implement and enforce the so-called three red lines for property developers, which establish strict limits on ratios of debt to equity, debt to assets, and cash to short-term debt.\(^69\)

The impact of a crisis in the real estate markets would be from substantial to disastrous for China. Rogoff and Yang concluded their close study with this assessment: “A 20% fall in the housing sector and related activities… could lead to a roughly 5–10% decline in the level of output.”\(^70\) And this result does not take into account secondary effects such as a banking crisis or the amplification of defaults where real estate is used as collateral for other loans. Among the other issues, a crisis in real estate is potentially a huge political problem, since developers may be unable to deliver on millions of pre-sales. Finally, the trillions in accumulated real estate bonds and nonbank debt from local government institutions would be put at risk in a severe crisis.

The second major issue related to the real estate bubble is its crucial importance to the finances of local governments. A landmark decision by President Jiang Zemin in 1994 redirected most tax revenues to the central government. Local governments were forced to find new sources of income, as Beijing continued to rely on subnational units of government to promote growth and meet social welfare obligations. All land prior to that time was deemed to belong to the state, and individuals were unable to buy their homes or properties. Subsequently, as a means of meeting the revenue gap at the local level, Beijing began to approve local governments’ requests to lease land to developers, and later to issue bonds and create “government finance vehicles” that in turn issued debt to support priority projects, especially infrastructure and land development. University of Michigan professor Y. Y. Ang summarized this evolution: “It was this twin source of credit—leasing land and borrowing money—that financed China’s massive infrastructure boom.”\(^71\) It also resulted in the unprecedented growth of local government debt noted earlier. This debt was often priced considerably higher than the official, artificially low interest rates maintained by the Bank of China and by large commercial banks.

Long-term land leases and later outright sales became the most important new source of revenues for local governments after these developments.\(^72\) The cycle of growth that evolved over the next 25 years was self-reinforcing in the sense that local officials needed constantly to offer more land and development rights, encourage the housing price boom, and promote the acquisition of housing and commercial properties.

Income derived from the development boom came to dominate local government finance. Estimates of the contribution of land sales alone to aggregate local government revenues vary by different sources and over time, partly due to development cycles. Lee puts this number at one-third in recent years.\(^73\) Rogoff and Yang have the proportion at 37 percent.\(^74\) A study done for the Japanese Ministry of Finance has it at 33 percent in 2017 and 38 percent in 2018.\(^75\) More recent data from the Chinese Min-

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Figure 13. Growth Trends in Housing Prices in China (Percentage Growth Year over Year)

The Ministry of Finance indicates a ratio of 38 percent for 2019 and 44 percent for 2020. If one includes local government tax income related to land use and development (resource tax, city maintenance and construction tax, urban land use tax, land appreciation tax, farmland and urban occupation tax, and deed tax), the proportion is 54 percent in 2019 and 48 percent in 2020.\textsuperscript{76}

Writing for the Japanese Ministry of Finance’s \textit{Public Policy Review} in 2020, Professor Jiro Naito concludes: “The structure of local public finance in China is heavily dependent on revenues from the transfer of right-to-use land. It is... a major factor behind the high land prices in the country... This dependence also works as an incentive for local authorities to prevent a price crash.” He starkly asserts that “local government debt is the main problem for China’s financial health,”\textsuperscript{77} and notes in addition that this system is an important source of corruption.

President Xi’s anti-corruption campaign, along with his exhortations to rein in housing prices and debt and to shift officially directed financing to the “real” economy, thus has run headlong into the entrenched role of real estate as an engine of growth of the Chinese economy, as both Lee and Pettis argue. Propping up huge firms such as Evergrande and Sunac would perpetuate the ingrained role of real estate but also contribute to the overall debt problem—or bubble—that could ramify into a more systemic financial crisis.
The next section of this paper explores the broader, systemic problem of dangerously high levels of accumulated debt in China and the role of foreign capital as a growing crutch for the current Chinese economy, which is so reliant on debt-fueled investment.

**Debt and Growth: Systemic Problems from Accelerating Accumulation of Debt**

According to the Bank for International Settlements, total indebtedness in China at the end of 2020 was 290 percent of GDP, approximately double the level seen at the end of 2008. This breaks down into 67 percent for government, 62 percent for households, and 161 percent for nonfinancial corporations (NFCs). Much of the NFC debt is effectively issued or guaranteed by the various levels of government through SOEs, local government enterprises, or local government financing vehicles. British economist and China watcher George Magnus puts the total effective indebtedness figures much higher, at 329 percent of GDP in 2017 and relentlessly growing since then.

The financial system is dominated by six large, state-owned commercial banks, which hold over 40 percent of all bank assets in China according to official statistics, but perhaps as much as 50 percent, according to US-China Commission analyses. The top four banks rank numbers one through four among the largest banks in the world. As noted earlier, these and other state-owned banks are directed to favor SOEs and large industrial players in China to meet growth, sustainable self-reliance, and technology leadership goals set by the PRC. Smaller private firms depend on hundreds of medium-size banks and the growing shadow banking sector. These more nimble institutions generally must look to shorter, more volatile, and more expensive sources of deposits than the large commercial banks, which still dominate household deposit and interbank loan assets.

Debt financing has been a key driver of economic growth since the start of the Chinese economic surge after Deng Xiaoping. As the economic miracle gathered strength and Chinese firms became more engaged in global markets, wages began to rise and China experienced competition from developing nations, largely in continental Asia. Especially after the Great Recession, with the need for massive stimulus to maintain targets for growth and improvements in living standards, authorities used government borrowings (and directives to SOEs and local governments to take on increased lending) to sustain growth. The COVID-19 crisis resulted in a second round of debt-driven stimulus. Government debt alone grew by 230 percent after 2008.

The sizable role of real estate in this debt-dependent growth model was discussed above, but the problems with the sustainability of the model go beyond real estate. In the first place, government debt—along with debt of SOEs, government-sponsored firms, financing vehicles, and various public-private entities whose debt is all but guaranteed by Beijing—produces enormous sustainability problems in a country whose tax resources represent only around 10 percent of GDP. The implicit guarantees to banks, SOEs, and local governments that have slowly hardened in China over the years generate a very real form of moral hazard, which is self-reinforcing. The Bank of China has in recent years bailed out failing smaller banks, adding to the moral hazard that is endemic in this system, and that leads to inordinate risk taking throughout the economy, especially to meet aggressive goals for growth in GDP and in personal incomes.

Reinhardt and Rogoff’s seminal work on the history of financial crises suggests that when the level of government debt creeps above 90 percent of GDP, the risk of deep financial crisis materially increases. Even though narrowly defined sovereign debt in China remains below this level in official statistics, at 67 percent in 2020, the interlocking system of sovereign debt and implied or explicit guarantees far exceeds this trigger.

Chapter 2 discussed the underdeveloped state of the social welfare system in China, and the growing gap between...
revenues and outlays. It is difficult to imagine, given the importance of this system to the CCP’s social compact with Chinese people, that the authorities would not continue to increase expenditures for these programs. This suggests a need for greatly expanding the tax base or taking on even more debt.

Another major issue with the Chinese socialist-capitalist amalgam is that state-driven, debt-dependent investment is inherently inefficient. The second chapter of this paper noted that SOEs often misallocate capital in ways that dampen productivity improvements. In the last decade the stimulus packages erected to buttress growth have also emphasized infrastructure development. More and more frequently, however, projects are economically inefficient and squander investment resources; examples include the construction of what end up as “ghost cities” or uninhabited new housing complexes. A study from the Oxford Review of Economic Policy found that cost overruns in Chinese infrastructure projects account for some one-third of total debt in China.83 Airports have been built in small provincial cities; prestige projects such as the railroad connection across the Himalayan plains to Tibet are abandoned or lack any hope of profitability; and the BRI program has funneled over $1.5 trillion outside China with mixed results at best for both recipient countries and the Chinese economy itself. Chapter 2 cited studies showing that the BRI program is deeply troubled by bad debts.84
Due to the priority given to SOEs and infrastructure, China's investment is much less efficient than that in more market-oriented economies because its allocation decisions are inevitably politicized. Magnus has assembled data on the problem showing that China has become even less effective in allocating investments in the last two decades: “Between 1978 and 2006… China spent between two and four Yuan of investment to get one additional Yuan of GDP. Since then, the amount has risen steadily to reach almost nine Yuan in 2015.” He also summarized IMF research showing that the amount of credit required to produce incremental units of GDP has quintupled since 2007-2008.\(^8\) Figure 15 shows some of the impacts of this problem.

An emerging issue for China is its increasing need to attract foreign capital. The voracious appetite for debt, along with the effort to shift toward a more consumption-oriented economy with an aging and shrinking workforce and reduced savings, has led to a more systematic effort to attract foreign capital in the last decade. China committed to open its financial markets to foreign investment and participation in banking, underwriting, and wealth management businesses when it entered the WTO in 2001. But it deployed its well-tested strategy of minimizing the actual opening for two decades after accession to protect the development of indigenous national champions. By 2018 foreign banks accounted for 1.7 percent of total banking assets, and that number was still at 2 percent in 2020. In the Phase I trade agreement with the United States, China reiterated its long-standing commitments in the financial sector. But it was after the Great Recession that Beijing recognized a growing need to find new sources of capital, especially from external sources. In addition to the crisis of nonperforming loans and structural weakness in savings (which are estimated to decline by 6 percent of GDP by 2050), the IMF estimates that China will see a current account deficit of over $6 billion next year.\(^8\) Morgan Stanley analysts project that China will need at least $210 billion annually in foreign capital inflows to finance this deficit.\(^8\)

The US-China Commission in its 2020 report to Congress outlined what is now a systematic effort to attract foreign capital,
even as China restricts capital outflows and pursues a program of national economic autarchy; “China is taking gradual steps to further develop its capital markets and achieve its twin ambitions of encouraging Chinese companies to list at home rather than abroad [and] drawing in ever greater amounts of foreign capital to alleviate debt pressures.” Chinese firms are also tapping dollar-denominated bond markets to finance their activities. Real estate developers have accumulated over $207 billion in dollar bonds, including $65 billion of new issues in 2020. In a sign of the distress in real estate, one-half of all dollar bonds rated at the junk level originate in this sector. Figure 16 provides some perspective on the rapid growth of foreign purchases of Chinese debt.

Figure 16. Annual Value of China-US FDI Transactions

China has long encouraged foreign direct investment (FDI) to acquire technology and process expertise. FDI has, however, slowed in recent years. Both FDI and venture capital (VC) investments from the United States into China have materially declined in recent years, as figures 17 and 18 indicate. VC investment has picked up again after the pandemic, however.

One sector where US VC investment into China appears to be focusing is the semiconductor industry. US VC investors, either directly from the states or from their China subsidiaries, have tripled their investments into China’s semiconductor industry since 2013. Taiwanese FDI into China, which has been nearly as large as US FDI in some years, dropped by nearly 70 percent between 2010 and 2019. Overall, net FDI inflows into China as a percentage of GDP declined by more than half from 2010 to 2019, as illustrated by figure 19 and according to research by the World Bank.
An early indicator of the inability of the banking sector to easily handle the growing debt level was the formation in 1999 of “asset management companies,” which acquire nonperforming loans from Chinese banks to get them off bank balance sheets. Measures of the size of nonperforming loans are buried in opaque and misleading indicators. The US-China Commission notes for example that in 2018, “Chinese banks reported disposing of more [nonperforming loans] ($283.2 billion) than they supposedly had on their balance sheets at the beginning of the year ($242.2 billion).”\textsuperscript{94} The IMF estimated that these loans represent about 7 percent of total GDP, and private analysts maintain that 22 percent of all loans are nonperforming.\textsuperscript{95} The US-China Commission concludes that the sizable level of unrecognized nonperforming loans “means China’s banks are effectively undercapitalized.”\textsuperscript{96}

After the Phase I agreements, US distressed debt managers such as Oaktree eagerly took advantage of the Chinese agreement to allow them to enter the distressed debt business.

China has permitted, and until the last year encouraged, domestic firms to list on foreign exchanges, and in the last decades it has slowly opened its own exchanges to foreign traders. As of late 2020 there were 217 Chinese firms listed on US
exchanges with a total market cap of $2.2 trillion, although the legal status of foreign holders of Chinese shares is ambiguous and unclear. US mutual and pension funds have included Chinese shares in their portfolios, expanding even further China’s ability to tap foreign capital.

Among the mounting issues related to the servicing of China’s debt, not the least is the diversion of funds away from the perceived and continually articulated need to expand social welfare and educational opportunity as part of Xi’s drive for a dual circulation economy. The shortfalls in pension and health care insurance were described earlier. On a net present value basis, according to the IMF, projected pension and health care spending is already 132 percent of GDP. An internal Beijing study put the equivalent “funding gap” for social welfare programs at 122 percent of GDP in 2017.

One last indicator of the growing desperation to close gaps in debt servicing should be noted: Xi’s crackdown on successful Chinese firms has included pressure to make “voluntary” contributions to government entities to help with their growing responsibilities. Jack Ma pledged $15.7 billion to help with a variety of problems; Tencent pledged $7.8 billion; and Moutai, the world’s largest liquor brewer, chipped in $8 billion to assist debt-laden Guizhou Province, where it is headquartered. The Financial Times estimates that donations to politically motivated campaigns featuring Xi’s “shared prosperity” themes have grown by 300 percent in the last 10 years.

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**Figure 19. FDI and Net Inflows as a Percentage of GDP in China**

![Graph showing FDI and Net Inflows as a Percentage of GDP in China](https://data.worldbank.org/indicator/BX.KLT.DINV.WD.GD.ZS?end=2019&locations=CN&start=2009&view=chart)

CHAPTER 5. CAN BEIJING MANAGE AN ECONOMIC TRANSITION WITH GROWING STRUCTURAL AND FINANCIAL CHALLENGES?

Xi’s New Era and Slowing Growth
To evaluate the sustainability of China’s current economic trajectory, the place to start is Xi Jinping’s vision of reinventing and imposing a state-directed, CCP-dominated model.100 In his emerging vision, economic efficiency and rapid growth take second place to more overtly political goals. At China’s March 2021 Party Congress, Xi Jinping outlined plans to double per capita income in China by 2035. His overall strategy emphasizes several elements: increasing China’s economic self-sufficiency while making the world more dependent on its economy; enhancing China’s economy and military in ways that exploit the vulnerabilities of other countries; and increasing China’s world leadership in high-technology industries while amassing leverage over global resource flows such as minerals and energy supplies. Domestically the project privileges the requirements of CCP top-down direction as well as bottom-up micromanagement, in part by requiring all state-owned banks and private enterprises to have CCP members on their management committees. It also cracks down on wealthy entrepreneurs’

Photo: An Evergrande construction site pictured on October 18, 2021 in Suihua, Heilongjiang province, China. (VCG/VCG via Getty Images)
and well-connected political operatives’ use of their position to amass wealth and jobs in private firms. Xi targets political rivals, such as Bo Xilai early in his presidency, as part of his anti-corruption campaign. Importantly, the program pretends to revive the “real economy” at the expense of the more dynamic services or digital-oriented sectors.

In an August 2021 speech, Xi summarized the new direction: “It is necessary to implement the requirements for a comprehensive and strict governance of the party, enhance the supervisory capabilities of the cadres in the financial system,… prevent and control risks as a whole, accelerate reform of key areas and do a good job of guiding public opinion in the financial market.” This sweeping agenda for CCP dominance also identified the need to “rationally regulate high incomes and rectify income distribution disorders.” Finally, Xi reiterated the need for income redistribution.101 On November 11, 2021, the CCP passed a resolution celebrating Xi, effectively elevating him to China’s Mount Rushmore; the resolution solidifies his hold on power in advance of his now-assured election next year to another five-year term as head of the party. It appears likely that the position will be his for life.102 Xi now holds a revered place in China’s history similar to that of Mao Zedong.

The seriousness of Xi’s all-encompassing program is gauged partly by the reinvigoration of the Mao-era Central Commission for Discipline Inspection (CCDI) as an extra-legal tool to track and control perceived corruption and malfeasance. Economic czar Liu He, for instance, was forced to perform a “self-criticism” as part of this effort, and the CCDI has been unleashed to investigate real estate and insurance magnates and even to monitor the work of important agencies such as the People’s Bank of China and the Securities Regulatory Commission.103

Because of the complexity of large segments of the Chinese economy and Beijing’s new controls on the economic press and online resources, the overall impacts of the shift away from a “socialist market” system to a more statist economy cannot yet be unraveled. Growth-oriented programs such as the MIC2025 and the BRI continue unabated, and even in 2021 Beijing has taken measures to loosen credit for stimulus. But it is highly likely that these new measures, in combination with structural problems that require shifts in resources, will slow economic growth considerably.

After bouncing back strongly with 18 percent GDP growth in the first quarter, growth slowed to 7.9 percent and 4.9 percent in the next two quarters. Global supply chain issues, energy shortfalls, and the persistence of COVID-19—and China’s zero tolerance for its spread—help explain the slowdown. In 2021 China has been beset by energy and especially electricity shortages, which have resulted in rolling blackouts and forced plant shutdowns. Difficulties in acquiring basic supplies of coal and liquified natural gas (LNG), along with a drought that reduced hydroelectric power production, have undermined manufacturing production. Indexes for growth in this sector have been negative in the second half of 2021.104

The more direct impact of the newer policies can be seen in the digital technology sector and in real estate. As discussed earlier, developments in both of these key sectors will weaken the economy and corroborate the conclusion that Xi is willing to tolerate slower growth as he implements his new politico-economic program. In the new economy industries, the authorities have put in place punishing new regulations for—or have banned outright—leading innovative companies Alibaba, Didi, and Tencent and the private tutoring and ridesharing businesses. In the fall of 2020, Beijing launched what it is calling “Operation Cyber Sword.” According to the German-based China watcher MERICS:

This is a wide-ranging campaign involving 14 ministries and agencies aimed at regulating China’s tech sector. The regulatory actors were given six tasks: regulating live-commerce platforms, cracking down on unfair competition in online markets, strengthen-
ing the supervision of internet advertising, centralizing control of online sales, and ending illegal animal and plant trade on e-commerce platforms.\textsuperscript{105}

MERICS asserts that since then hundreds of firms have been fined more than $3 billion, apps have been purged, and a “regulatory onslaught” has been unleashed.\textsuperscript{106} The result of this effort is reduced innovation and risk taking and a climate of fear among some of China’s best-performing digital technology companies.

Other technology subsectors, especially telecommunications, computers, and defense-related industries, have been weakened by US-led efforts to control access to advanced semiconductors and other sensitive products. One can also note that Chinese exports are heavily dependent on foreign intermediate goods as well as on basic technology from more advanced nations. The OECD and the WTO estimated in 2015 that one-third of the value of all Chinese exports was foreign sourced, and the share for information technology was over 50 percent.\textsuperscript{107} This adds to the case that Chinese self-sufficiency will be difficult to achieve when domestic policy discourages innovation and foreign competitors limit access to leading technologies and products.

The rolling series of debt deferrals, credit downgrades, and defaults on real estate debt in 2021 evidences not only an overleveraged and bubble-like sector but also Beijing’s determination to address this problem. Thus far it appears that the authorities are attempting to avoid an acute, systemic financial crisis by managing the orderly disposal of failing companies’ assets.\textsuperscript{108} Evergrande was ordered to sell off assets to avoid outright default, and some of those assets, especially unfinished construction projects, were assumed by local government entities. The latter then became responsible for protecting homebuyers by completing projects that had been purchased in advance. Other development firms have defaulted, largely on their dollar-denominated bonds, indicating that the authorities are probably trying to continue the deleveraging campaign while avoiding a Lehman-type moment of panic and a cycle of financial distress. This approach also repeats a well-known tactic of privileging domestic over foreign creditors in managing bankruptcy settlements.\textsuperscript{109}

Even as Chinese mandarins are lurching from one developer crisis to another and thus far successfully avoiding a cycle of defaults, the real estate market has begun a steep decline in both prices and sales. In both September and October of 2021 property sales slumped by over 30 percent. Prices fell steeply in October for the first time since a 2015 financial crisis and have been trending down since 2019. In the fall of 2021, the inventory of land parcels on the market reached its highest level since at least 2018. In October 2021, new funding from both domestic and foreign lenders was down 27 percent from a year earlier.\textsuperscript{110}

This engine of growth and backstop for local government finance—that is, land sales and property development—is thus signaling weakness at best and a looming crisis at worst. The $870 billion offshore junk bond market is experiencing record drops in valuation. Some $64 billion of a total $207 billion in real estate junk bonds is classified as distressed by Bloomberg. This market has already seen defaults totaling over $20 billion, with tens of billions in dollar coupons coming due each month. This level of stress cannot fail to weaken the animal spirits for further foreign investment in China. Chapter 4 outlined the probable high level of nonperforming loans in China’s commercial banking sector, which has at a minimum $5–7 trillion in exposure to real estate assets and trillions more in loans with property as collateral. The small bank sector is particularly at risk.\textsuperscript{111}

**Historical Analogies and Governance Issues**

All historical analogies are imperfect, but they can often add perspective on similar issues occurring over time. In this case the question is whether China’s real estate bubble and associated financial problems will result in a severe and/or prolonged
ECONOMIC CRACKS IN THE GREAT WALL OF CHINA: IS CHINA’S CURRENT ECONOMIC MODEL SUSTAINABLE?

recession. Related is the question of whether the Middle Kingdom’s authoritarian government is skillful enough and has the necessary resources to work through a problem with serious economic or political repercussions. The Reinhardt and Rogoff standard history of financial crises certainly suggests a recession of some sort is likely, given the historically high levels of total and government debt, which are well above their recession trigger at around 90 percent of GDP.\textsuperscript{112}

More recent and in many ways more comparable bubbles—in Japan in the 1980s and the US in 2008 and after—are more instructive. Both instances included real estate and stock market frothiness and severe, prolonged recession. China’s episode is almost exclusively a real estate phenomenon, as stock indexes have not inflated in tandem with real estate.\textsuperscript{113} As discussed earlier, wealth accumulation in China has been narrowly centered in real property. Real estate’s growth in China has exceeded that in the US, although Japan’s monumental property price inflation in the 1980s is comparable. Tokyo land prices tripled between 1985 and 1987.\textsuperscript{114} Both the US and Japanese bubbles were followed by long recovery periods. The US required some four years to recover, and a longer period for manufacturing to regain previous peaks. Japan entered a period of sustained weakness lasting decades.

Nobel prize-winning economist Edward Prescott and University of Tokyo economist Fumio Hayashi found that the total factor productivity (TFP) slowdown in Japan was a major factor in its “lost decade” and contributed to significant increases in the capital-output ratio, which plagued the country for the recovery period.\textsuperscript{115} These same factors are glaringly apparent in China today and predated the pandemic-induced recession.

A first-order conclusion is that China will very likely see a recession as it works to tame its real estate bubble and tries to work a gradual deleveraging of its economy. Xi and his associates have clearly reflected on this problem and have decided to take the risk of slower growth as part of their longer-term plan to resocialize and transform the economy to a “dual circulation” model with the “real” sector as its pillar. But it is questionable if they can manage the deleveraging while addressing the country’s many other structural problems (discussed in chapter 2). In a prescient analysis offered over 20 years ago, David Asher and Andrew Smithers noted the extreme difficulty of systemic overhaul of a bubble economy and accurately foresaw a long, slow, painful recovery for Japan:

Absence a radical reorientation of Japan’s economic system away from debt toward equity, from producers toward consumers, and from excess state interference in markets toward freer competition, a large portion of Japan’s considerable wealth and economic potential stands to be frittered away in the coming decades just as they were in the 1990s.\textsuperscript{116}

The evidence adduced thus far in this paper suggests that China is not moving in the directions outlined for Japan, which was then a much more state-driven economy than it is today, and that China could follow a path similar to Japan’s deceleration from rapid growth.

A major consideration in determining the value of this analogy is that China has not reached nearly the same level of wealth as the Japanese, or the Americans for that matter, as it approaches deceleration and a potential bubble crisis. Disparities in wealth and incomes are much more pronounced in China as well, at least in comparison to Japan. Wealthy Chinese will probably resist change in any case, and the vast bulk of homeowners will be harmed by a real estate correction since so much of their retirement, education, and health care savings are related to property. Additionally, China is not a well-governed, democratic polity as were Japan and the US at the times of their bubble crises. If policy tools to address a crisis failed or were perceived to fail in the two democracies, the people had recourse and could register disapproval and change governments. China has no such functioning safety valve to satisfy legitimate grievanc-
es, and a crisis could lead to popular discontent and political instability.

Another consideration in judging China’s ability to work through a crisis is that it has not improved its capital efficiency or its TFP in the last decade, and therefore its growth rate is in structural decline. As it moves under Xi’s direction to allocate capital to the “real” economy and punish the newer digital and internet economies, this performance is not likely to improve. This is not to say that Chinese investments—for example, in semiconductors, AI, or commercial aviation—are being squandered; but their effectiveness has been undercut by duplication of resources, as local and provincial governments compete to be centers of production. For instance, as mentioned in chapter 2, China has over 500 EV startups and over 22,000 semiconductor firms. SOEs are frequently too politicized and inefficient to become leaders in new technologies and products.

On a larger scale, the World Economic Forum’s annual assessment of countries’ economic competitiveness is relevant: China has languished for the last decade in the middle of the pack of advanced economies, lagging behind countries such as Spain, the United Arab Emirates, and Malaysia as well as most of the OECD countries. Its overall global ranking is 28th out of 130 countries, and it ranks 39th in macroeconomic stability, 64th in skills, 72nd in labor markets, 27th in innovation, 36th in business dynamics, and 29th in financial markets. China has improved its performance immensely since the Maoist era but has reached a plateau in the view of World Economic Forum experts. We cannot expect a return to Mao’s authoritarianism to improve its position and ignite a new growth spurt through new innovations and increases in efficiency.

A further consideration is that since so much household wealth and local government finance is tied up in the real estate market, the pivot to deleveraging and to a consumer-oriented economy is a narrow one. Increasing consumer purchasing power by increasing wages weakens the global competitiveness of China’s comparatively less productive industrial firms. During the pandemic and into 2021, China’s reliance on external markets increased even further, and its trade surplus reached record levels. Reducing external demand would put even more pressure on improving the efficiency of investments and innovation, which is not easily accomplished in a politically dominated, state-driven economy.

Population decline and an aging workforce contribute further to a weak outlook for finding the sources of growth to satisfy consumer demand and address gaps in social welfare and medical coverage.

**Political Problems in the New Economic Model**

The more narrowly economic issues outlined above are in many ways exacerbated by the structural issues described in chapter 2. The implied governing paradigm in China is that Beijing provides a steady path of growth and increased livings standards in return for supine acceptance of the authority of the CCP and Chairman Xi. The scope of this central authority is growing as the CCP extends its surveillance state and narrows the universe of acceptable social and cultural behavior.

The diminishing path to strong growth also severely constrains the resources available to authorities for addressing the need for cleaner air and water, better health care and diets, improved education opportunities, and a secure retirement. After 2019, local government finances—which depend heavily on land sales and property development—came under even more stress than during the boom years for real estate. In an effort to prop up the pandemic economy, employer contributions to pension funds were temporarily waived. In 2019 alone 18 percent of local government revenues were required to subsidize the pension system. Total local revenues fell by 6.2 percent during the first half of 2020 in a continuation of pandemic-in-
duced stress. New or higher taxes on property, income, and consumption may be needed to meet growing shortfalls in local government finance and in addressing pensions, health care, and other issues.

To achieve the goal of transition to a largely self-sufficient, consumer-driven economy will require exceptional leadership, efficient regulation, and unusual social cohesion. Given the typically complex, corrupt, and opaque quality of Chinese governance, and the increasingly skillful control of the media in the internet age, it is not easy to determine how effectively the Xi regime and lower levels of government are performing, much less how the population perceives their performance. Various measures are available that suggest that the Chinese government has not overcome its traditional problems of heavy-handedness and resistance to change and public accountability.

In the Transparency International ranking on the “perception of corruption,” China ranked 78th of 180 nations in 2020. In 2010 it was ranked 78th, so Xi’s regime has not improved one important measure. In the World Bank’s analysis of government performance in 2019, China was in the 7th percentile for voice and accountability, the 45th percentile for rule of law, the 43rd in regulatory quality, 45th in control of corruption, and 72nd in government effectiveness (figure 20). The World Bank’s Ease of Doing Business ranking had China in position 46 in 2019, jumping up from 78th in 2018 and 84th in 2016, but this report came under criticism for favoring Chinese interests and was discontinued after 2020.

In the Fraser Institute Foundation’s Human Freedom Index, China ranked 135th of 162 countries in 2018, down from 117th in 2008. Turkey and Russia both were ahead of China in the

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**Figure 20. Worldwide Governance Indicators: China**

![Graph showing percentile ranking for various governance indicators over time](https://info.worldbank.org/governance/wgi/Home/Reports)

annual rankings in 2018. The Middle Kingdom’s economic freedom ranking was 124th of 162 countries in that year, down from 114th 10 years earlier. In the Freedom House Index of Global Freedom, China’s score is the ninth lowest, behind Iran (16th) and Cuba (13th) but ahead of North Korea (3rd).

In sum, multiple independent experts rate China as undemocratic and relatively poorly governed. Economic management fares somewhat better but China is rarely in the upper half of all countries in terms of this crucial governance and competitiveness function.

There is a long history of civil unrest in China, often interpreted as a weakening of the Mandate of Heaven for traditional dynasties and signaling a breakdown in the implied social contract. Civil unrest was also important in China in the tumultuous 20th century, starting with the 1912 revolution and continuing with the Communist rebellions of the 1920s and after as well as the Tiananmen Square demonstrations of 1989. Evidence of any popular unrest in contemporary China is more and more difficult to obtain due to increasingly sophisticated censorship. But data prior to 2008 on “mass incidents,” which include everything...
from sit-ins and marches to riots, show that protest actions rose steadily from an observed 8,700 in 1993, to 60,000 in 2003, and to 120,000 in 2008.\textsuperscript{127} The Hong Kong–based nonprofit research firm China Labour Bulletin attempts to track strike activity. As shown in figure 21, strike activity peaked around 2015, a time of economic uncertainty and some financial turmoil in China. The China Labour Bulletin reported 590 strikes in the first half of 2021. Strikes were concentrated in the construction and manufacturing sectors, the leading drivers of growth in the last decade. The available data almost certainly underestimate the extent of strikes and labor protests, but it does appear that activity has waned since Xi accelerated his concentration of power and control over society. The uptick around the 2015 episode of financial stress is instructive.\textsuperscript{128} These findings are worth mentioning if only to show that CCP control cannot totally suppress important forms of civil unrest.

It can be inferred that elite circles, high-level officials, and business tycoons remain a source of opposition to Xi in China; the evidence is the individuals publicly targeted, disappeared, jailed, or worse. During the Xi tenure some 432 “tigers” or high-level officials or politicians have felt the sting of Xi’s anti-corruption campaigns or purges, as have some 4 million lower-grade cadres, as of mid-2021. Business leaders perceived by the CCP as threats, notably the heads of Anbang Insurance, the investment conglomerate HNA, China Energy, and Dalian Wanda group, were not as fortunate as Jack Ma and Liu He, who escaped jail or worse punishment. Bloomberg reports that “powerful security chief” Zhou Yongkang and “rising star” Sun Zhengcai were, respectively, jailed for life and purged from the CCP, apparently for reasons of corruption.\textsuperscript{129} It is widely reported that a “Shanghai group” centered around former president Jiang Zemin remains a quiet counterforce to Xi.\textsuperscript{130}

To summarize, Xi’s regime faces daunting challenges. It seeks to manage a long-term shift or rebalancing that will possibly trigger a financial crisis but almost certainly result in much slower economic growth. An acute crisis for overleveraged banks and local governments, all dependent on a fragile real estate market and access to external markets and capital, would also be a blow to household wealth. The accumulation of pension and health care weakness, environmental degradation, and social and regional inequality represents volatile political tinder that could turn into widespread popular discontent, especially given the relatively poor government performance and almost total lack of democratic accountability.

The final word on possibilities for resistance goes to long-time China analyst Orville Schell, who sees at least a glimmer of hope that the Chinese people will not permanently tolerate the dictatorship:

\begin{quote}
Might China just be different from everyone else, especially those in the West? Perhaps, some say, Chinese citizens will prove content to gain wealth and power alone, without those aspects of life that other societies have commonly considered fundamental to being human. Such an assumption seems unrealistic, not to say patronizing. In the end, the Chinese people will likely prove little different in that yearning from Canadians, Czechs, Japanese or Koreans. Stilled for the moment, they have appeared again and again in the past and are bound to reappear in the future.\textsuperscript{131}
\end{quote}
CHAPTER 6. POLICY RECOMMENDATIONS FOR THE US AND ALLIES

Since the era of Deng Xiaoping the US has consistently tried to work with China in the hopes that it would become, on the model of other East Asian economic powers, a responsible stakeholder in an international system defined in the rules of the WTO, the UN, the Bretton Woods institutions, and the World Health Organization. Hopes for achieving this objective are increasingly distant. China is moving resolutely toward a form of self-sufficiency or autarchy that is in many ways antithetical to the liberal world order and to US economic interests. It is also a serious national security challenge to the global order elaborated by the US since the Second World War. US policy should at a minimum try to limit the damage to US economic and security interests. It is beyond the scope of this paper to cover the national security issues, but increasingly the dual-use nature of modern technology makes it imperative to consider the national security elements of both commercial and defense-specific applications.

The 16 policy suggestions that follow outline some of the more important levers available to the US to both limit further economic damage to the United States and incentivize China to become a more positive contributor to the 21st-century economic and defense order. The recommendations concentrate on tools that are likely to have the most impact based on the analysis in this report and the ‘economic cracks’ in the Chinese economic model.

Photo: Chinese Vice Premier Hu Chunhua presides over a symposium on the development of foreign-invested enterprises in Beijing, China, Dec. 2, 2021. (Li Xiang/Xinhua via Getty Images)
Recommendation #1. Vigorously enforce existing trade rules

The US-China Economic and Security Review Commission provides numerous well-articulated recommendations that are an excellent source for US policy. The overall principle and first suggestion of the commission’s 2020 report is to rigorously enforce reciprocity in economic, commercial, and diplomatic relations. Trade policy is the obvious place to start, since the principle itself is enshrined in the rules of the WTO and the US has already used its dispute settlement procedures to combat Chinese theft of IP, dumping and subsidization of goods exported to the US, and forced technology transfer. The Trump administration expanded the use of domestic trade law, especially section 301 of the Trade Act of 1974 and section 232 of the Trade Expansion Act of 1962; the former combats unfair trade practices not easily sanctioned in the WTO and the latter restricts trade found to harm national security.

US trade law also permits bans on exports of sensitive defense-related and dual-use technologies that are harmful to US interests. Bans on 5G products and important components of semiconductor supply chains were employed by the Trump administration and are part of the reason China lags behind the US in these industries. Under US law governing foreign direct investment, the oversight of the Committee on Foreign Investment in the United States (CFIUS) has been effectively used to prevent Chinese acquisition of sensitive technology owned or controlled by US or allied firms. CFIUS was established to review Chinese and other foreign source acquisitions of US firms and block those that might harm US national security interests. The overall impact of these policies is to slow down or impede Chinese technology development.

Recommendation #3. Slow technology acquisition by subsidized Chinese firms

The US ought to consider additional actions to slow technology acquisition. A US-China Commission recommendation, put into bipartisan legislation by Representatives Fitzgerald, Stanton, Speier, and Loudermilk, would require the Federal Trade Commission and Department of Transportation to “take foreign government subsidies into account in premerger notification processes.” Negative findings could then justify denying approval for the probably broad expanse of subsidized Chinese firms trying to enter the US market or purchase technology.

Recommendation #4. Limit US investment in China

US policymakers might also consider a “reverse CFIUS” procedure to limit US investments in China. The importance of foreign investment to financing Chinese innovation was noted above. In the same spirit, Senators Cornyn and Casey “are sponsoring legislation that would screen outbound US investments and the offshoring of critical supply chains and tech industry resources to adversaries like China and Russia.” According to press reports in November 2021, the Biden administration is already considering limits on the expansion plans of US semiconductor firms in China due to concerns about technology transfer. The newest report of the US-China Economic and Security Review Commission also endorses a form of screening and controls on foreign direct investments.
**Recommendation #5. Strengthen WTO subsidy rules**

Strengthening WTO subsidy rules, although a difficult task in a somewhat dysfunctional WTO reform process, would be another initiative that could weaken the Chinese economic model.\(^{137}\)

**Recommendation #6. Promote reciprocal cross-border data flows**

China is now employing severe restrictions on cross-border data flows to meet its self-declared national security needs but also to help domestic firms achieve technological leads in important new sectors such as AI, autonomous vehicles, and the Internet of Things. This is another area where the US should work with allies to cement multilateral or bilateral agreements to facilitate cross-border data flows, and supplement any trade agreement with the reciprocity requirement barring Chinese digital firms from US markets so long as US firms cannot move data in and out of China.

**Recommendation #7. Rejoin the Comprehensive and Progressive Agreement for Trans-Pacific Partnership**

Since 2018, a joint US–European Union (EU)–Japan dialogue has addressed the need for subsidy reform, and the US–Japan digital agreement has restrictions on data localization. The EU is reluctant to join the US on the issue of data localization and rejected the idea of freer cross-border data flows in its free trade agreement with Japan. Effective new subsidy and digital trade rules are incorporated into the new US-Mexico-Canada agreement and the Trans-Pacific Partnership, now called the Comprehensive and Progressive Agreement for Trans-Pacific Partnership. The US ought to rejoin that agreement and build economic heft in favor of both subsidy limits and digital trade freedom.\(^{138}\)

**Recommendation #8. Combat China’s efforts to dominate international standard-setting**

The US-China Commission has long argued, with the support of the author and many others, that the US should coordinate China policy with like-minded allies to multiply the impact of efforts to achieve change in Chinese behavior.\(^{138}\) This is obviously an important consideration, especially with regard to working for reforms in international institutions such as the WTO. One important emerging field for cooperation is the battle for technology standards.

China’s drive to dominate the technologies of the future and solidify what might be labeled a “Greater Chinese Co-Prosperity Sphere” is embodied domestically in the BRI and MIC2025 programs, and in a newer China Standards 2035 program.\(^{140}\) The standards component has uncanny echoes of the Third Reich technology policies of the 1930s. To accomplish its ambition to export standards, China is flooding the meetings of international standards-making bodies—like the International Standards Organization and the 3GPP, which adopts global telecommunications standards—with Chinese firms; the goal is to weight the voting toward its own proprietary standards. The numbers of Chinese delegates to the 3GPP meetings has increased by a factor of 10 since 2000. China also unleashes thousands of patent filings in an attempt to crowd out technical standards from competitor firms. Huawei, for instance, is the leading holder of 5G patents, and Chinese firms now propose over 30 percent of all cell phone standards, compared with only 11 percent for US firms.\(^{141}\) Private sector firms do not always have the financial means to participate in meetings or file waves of patents, while Chinese firms have the full support of their government in many cases. The US-China Commission suggests that the US government should more actively help the private sector combat these tactics and should seek cooperation with its allies to reinforce the traditionally private sector–led process. US authorities should also create grant programs to support the participation of small and medium-size firms in international standards meetings.\(^{142}\)

**Recommendation #9. Utilize US-EU Trade and Technology Council**

While Japan, Australia, Canada, and many of the Asian tigers are generally willing to cooperate with the US on various com-
ponents of its China policy, it remains an open question whether Europe will join the battle. The EU’s decision to finalize an investment agreement with China on the verge of President Biden’s inauguration is emblematic of its unwillingness to “take sides” in the US-China confrontations. Perhaps the Chinese action to sanction EU parliamentarians for criticizing China on human rights issues (thus motivating the EU to freeze the investment agreement) will cause a reconsideration by the EU. The Biden team has tried to reverse the Trump-era antagonism with Europe on trade, but thus far there is little evidence it will convince the EU to change. The new US-EU Trade and Technology Council established in 2021 could provide a vehicle to coordinate some joint policies on China’s technology challenge to transatlantic economies. Private sector firms in Europe are beginning to recognize the problems with selling to and investing in China, and with being eager for Chinese trade and inward investment; but they have not systematically decided to engage with EU leadership to argue for confronting Chinese mercantilism.143

**Recommendation #10. Encourage open access to India’s markets**

India has a larger trade deficit with China than the US and harbors historical grievances with its neighbor dating back many centuries. It has joined with the US, Japan, and Australia to form the Quadrilateral Security Dialogue, or QUAD, and works with them to protect a “Free and Open Pacific,” a vision that also includes the Indian Ocean. India is the world’s third largest economy in terms of purchasing power parity. If it were to embrace a more open economic model, which is far from certain under the current leadership, it could also play a useful role in combating China’s mercantilism and provide an alternative to China as a manufacturing location for US, East Asian, and European industrial powers.

**Recommendation #11. Strictly enforce the Holding Foreign Companies Accountable Act**

Another major area in which the principle of reciprocity—as well as that of national economic interest—is at stake is financial market relations. Chapters 3 and 4 outlined the growing level of Chinese access to and dependence on US (and to a lesser extent European and Japanese) capital markets. There is growing sentiment in the US Congress for more reciprocity of access as well as more effective protection for US investors in China’s financial markets.

The Holding Foreign Companies Accountable Act, signed into law in December 2020 with broad bipartisan support, requires firms seeking to be listed on US stock exchanges to “prove they are not owned or controlled by a foreign government” and to submit to the same auditing transparency and oversight requirements as all American and Western firms listed on the exchanges. Some 250 Chinese firms with over $2 trillion in market capitalization are already listed on US exchanges. They were granted three years to come into compliance with the new law. The need for enforcing this law became painfully clear when Beijing suddenly quashed the public listing of Alibaba’s Ant Financial in 2020, and when in 2021 it undermined the business model of Didi Global a few days after its initial public offering in New York. This year Chinese coffee retailer Luckin, listed on US exchanges as well, admitted to fabricating income in its financial reports, and its stock was delisted by NASDAQ. These episodes cost investors in US-listed Chinese firms some $400 billion and brought home in a painful way the risks involved with Chinese firms in terms of transparency and basic trustworthiness.144 The Securities and Exchange Commission (SEC) has been slow in implementing the new law, although in late 2021 it stepped up the pace of implementation.145 US authorities ought to strictly enforce the new law and urge allies to adopt similar legislation.146

In 2021 China has taken actions to discourage foreign listings by its marquee companies. The Didi affair was one result of the new direction. One commentator argues that this strategy is in large part due to a recognition by authorities of China’s growing dependence on foreign markets and a desire to escape from it.147
Recommendation #12. Enforce close scrutiny of China-listed companies

Chapter 4 noted the growth of US mutual funds and exchange-traded funds (ETFs) investing in China. These vehicles have increasingly incorporated Chinese stocks in their holdings, both in specialized foreign funds and broader index funds. Three major index fund providers, MCSI, FTSE-Russell, and S&P Dow Jones, all now include Chinese shares. Already in 2019 over $400 billion in Chinese shares had been acquired due to the weightings of these indexes, with one-third held by Americans. The MSCI emerging markets index, with $1.7 trillion in total holdings in 2020, had a 37 percent weighting in Chinese shares.148

US regulators should at a minimum consider close scrutiny of China-listed shares’ transparency and completeness of disclosure, since these shares are owned by tens of millions of Americans through their pensions and mutual fund holdings. In 2019, the Trump administration considered limits on such holdings and issued an executive order for the Thrift Savings Plan, part of the federal retirement program, to disinvest from its Chinese share holdings. Senators Rubio and Hassan had previously introduced legislation to the same end. Senator Tuberville introduced similar legislation in early 2021 to ensure that the intent and effect of the ban would not be changed by the new administration or the Federal Retirement Thrift Investment Board.149

Recommendation #13. Establish forced labor and Entity List connections as part of ESG reporting

Another recommendation of the US-China Commission should be considered. It suggests in its 2021 report that Congress should “direct” the SEC to include information about the use of forced labor by firms in China or about connections to companies on the Department of Commerce “Entity List,” as part of the environment, social, and governance (ESG) reporting required for publicly listed companies in the US.150

Recommendation #14. Strengthen reporting requirements for Chinese bonds

China’s offshore bond market, primarily dollar and euro denominated, has become another major source of financing for Chinese firms. Research described earlier in this paper points to a continuing and growing need for external financing. China’s debt load will in short continue to grow from current, record levels and will be extremely difficult to finance from internal resources. It is certainly true that Chinese bonds have yielded well above US, European, or Japanese sovereign or agency bonds, especially since the Great Recession. A November 2021 $4.6 billion eurobond issue for China was completed with an oversubscription and featured negative rates for its five-year tranche. Even this level was much higher than that for German bonds.151 The onshore bond market in China shares this advantage, but with the challenge of volatility in exchange rate and capital control risks. The dollar bond market at least avoids some of this risk.

US and other foreign investors are at substantial risk in the overseas dollar and euro markets, especially in the growing junk bond market so widely deployed to finance the real estate driver of the modern economy. The bond market in China is no more transparent than the stock market, and it also lacks the type of oversight available in foreign markets. The US-China Commission noted one crippling flaw in the system: “While China possesses a full credit ratings ecosystem, systematic ratings inflation by Chinese ratings agencies compromises the integrity of credit rating in China, obfuscates the debt risk, and may ultimately harm overseas investors exposed to China’s fixed income markets… Foreign credit ratings agencies on average rate bonds by the same Chinese issuer a staggering six to seven grades lower than mainland Chinese ratings agencies.”152

US policymakers ought to consider developing tools that promote better disclosures for Chinese bond market issues, at least those denominated in dollars and floated in international exchanges. The issuing disclosures for these bonds are likely no more complete or transparent than those approved for new
Recommendation #15. Increase research on China’s dual-use technologies

In June 2021 the Biden administration issued Executive Order 14032, which (among other quite astounding requirements) restricts capital market investments in PRC firms identified as being tied to the Chinese military in any way. It is likely that the People’s Liberation Army (PLA) is closely tied to many new technology projects, especially those in the MIC2025 program, which are frequently dual use. In conjunction with Congress, the administration ought to undertake a series of studies to better understand the involvement of the PLA in commercial activities, and to catalog the threat to vital US commercial interests. Such work could set the stage for more nuanced and comprehensive efforts to limit US investments in China in sectors of strategic importance to the US. It might also unveil the extent to which the PLA has ties to the lucrative (at least formerly lucrative) real estate sector.

Recommendation #16. Expand sanctions to include Chinese-owned mineral mines

The US has inconsistently but justifiably applied financial and other sanctions to Chinese individuals and firms for human rights abuses. The cultural genocide and forced labor in Xinjiang were recently cited as causes for a ban on imports of polysilicon, an essential component for solar cells and largely sourced from this province for US production. Companies producing and deploying abusive surveillance technologies, often for military use, have also been targeted. Similar actions could be broadened in the future to include other Chinese abuses of human rights and international standards for labor. A good target stems from the dismal conditions created by Chinese-owned mines for cobalt and other minerals in Africa and South America. These mines are crucial to Chinese dominance of the battery supply chain, so important to the future of EVs. Wider use of sanctions could weaken the exploitative economic model of China and also supplement trade-related sanctions.
CHAPTER 7. CONCLUDING REMARKS

China is fast approaching a reckoning for its debt-driven economy. The Xi regime has chosen to attempt to manage a deleveraging process and engineer a transition to a more balanced economy. But it is unclear what could be the drivers of growth to replace the increasingly capital-inefficient real estate and infrastructure construction engines. The PRC is systematically undermining many of the most successful technology companies that grew so rapidly in the 21st century, and the shift toward SOEs and manufacturing favors less productive sectors as well. This return to manufacturing and drive to dominate the technologies of the future will also exacerbate tension with competitor nations, not only the US and Japan, but increasingly Europe, whose industrial economy is experiencing a silent recession partly due to Chinese competition in sectors like autos and machinery.\textsuperscript{155} Large importing nations are to a growing extent rejecting further expansion of China’s export-driven model and are challenging China in the WTO and with unilateral trade actions. They are also turning toward domestic rebuilding programs exemplified by the inward-looking Build Back Better program, and thus to some extent mirroring China’s program of decoupling.

The slowdown in growth in China, which historical examples suggest could last long or result in recession touched off by fragile financial markets, will be a problem difficult to manage due to the already dangerous levels of debt for both the public and private sectors. Moreover, the structural problems outlined in this paper—demographic stagnation, geographic and vertical wealth inequality, environmental degradation, a weak social and health care safety net, shaky local govern-

Photo: Workers carry out maintenance on the exterior of the Nanjing City Wall on March 17, 2021 in Nanjing, Jiangsu Province, China. (Yang Bo/China News Service via Getty Images)
ment finances, and the need to build household wealth apart from property holdings—all require significant new resources to resolve.

By challenging the mercantilist, exploitative, human rights-abusing structure of China, the US and its allies might add to Chinese governance problems and legitimacy if the authorities do not modify their programs. It should be noted, as the US Federal Reserve Board did in a recent report, that an economic crisis in China will have negative effects on the global economy: “Given the size of China’s economy and financial system as well as its extensive trade linkages with the rest of the world, financial stresses in China could strain global financial markets through a deterioration of risk sentiment, pose risks to global economic growth, and affect the United States.” US policy-makers will have to weigh the risks of a financial crisis against the damage the current economic trajectory in China poses for US national security interests, the financial interests of firms and investors, and the US position as a consistent defender of the liberal global order and humanitarian concerns.

The authoritarian surveillance state of Xi Jinping provides less and less flexibility for change and increasingly fewer political outlets for a frustrated citizenry. Popular discontent may be intensified by economic stasis and lingering structural problems. Effectively managing these problems, especially an overleveraged economy and potentially a financial crisis, will be a difficult exercise. It will take the wisdom of Solomon to work through the many issues. Xi is no Solomon, and the Chinese people do not have infinite patience.
ENDNOTES


2 GlobalDemographics, “China’s Labor Force Is, and Is Not, Growing!,” https://www.globaldemographics.com/china-labour-force#:~:text=As%20the%20propensity%20of%20these%20people%20to%20be,employed%20persons%20is%20entirely%20in%20the%20rural%20areas.


12 Jain-Chandra et al., “Sharing the Growth Dividend.”


20 Maizland, “China’s Fight against Climate Change and Environmental Degradation.”

21 Adams et al., “Charting Our Water Future.”

22 Maizland, “China’s Fight against Climate Change and Environmental Degradation.”

23 Ibid.


25 Susan Reidy, “China Imports Record Amount of Grains in 2020,”
ECONOMIC CRACKS IN THE GREAT WALL OF CHINA: IS CHINA'S CURRENT ECONOMIC MODEL SUSTAINABLE?


31 Magnus, Red Flags, 65.


34 World Bank data; see also Magnus, Red Flags, 54.

35 See Simon Evenett and Johannes Fritz, Subsidies and Market Access: Towards an Inventory of Corporate Subsidies by China, the European Union and the United States (Brussels: CEPR Press, 2021), 37, 45–46.


46 Lee, “Xi Jinping’s Evergrande Dilemma.”


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57 Ibid.

58 Magnus, Red Flags, 89.

59 Lee, “Xi Jinping’s Evergrande Dilemma.”

60 Ibid.


62 Rogoff and Yang, “Peak China Housing,” 11–12.

63 Lee, “Xi Jinping’s Evergrande Dilemma.”

64 Ibid.


66 Pettis, “China Financial Markets.”


68 Webb and Xie, “Beyond Evergrande.”

69 Pettis, “China Financial Markets.”

70 Rogoff and Yang, “Peak China Housing,” 36.


74 Rogoff and Yang, “Peak China Housing.”


80 Magnus, Red Flags, 81ff.


84 On problems with the BRI program, see also Magnus, Red Flags, 189ff.
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85 Ibid., 57.
91 O’Keefe, Somerville, and Jie, “U.S. Companies Aid China’s Bid for Chip Dominance.”
92 Ibid., 27.
95 Magnus, Red Flags, 81.
97 Ibid., 267 ff.
106 Ibid.
112 Reinhart and Rogoff, *This Time Is Different*.
ECONOMIC CRACKS IN THE GREAT WALL OF CHINA: IS CHINA’S CURRENT ECONOMIC MODEL SUSTAINABLE?


146 The US-China Commission also essentially calls for US regulators to bar prospective investments in the share ownership of Chinese companies, which is enabled through a legally ambiguous security called a Variable Interest Entity, or VIE, which does not give direct equity interest in the underlying stock of a Chinese company. The VIE fiction was adopted by the Chinese authorities when it opened its stock markets to foreign investors. These instruments also are used for Chinese debt issues. See 2021 Report to Congress, 30.


