Understanding China: an economic and investment perspective, part I

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No discussion of the health and future of the global economy is complete without including an analysis of China's economic development and integration into the global financial system. Admittedly, China is an immense subject to undertake. However, we have prepared a three-part series that is designed to provide readers with a summary overview of China's economy and financial markets. The first part provides a recent history of China's political economy, connecting the dynamics of party leadership and state-led economic growth. In the second part, we will turn our focus to the characteristics of, and recent developments in, China's financial markets, including China's version of stake-holder capitalism, where state influence is balanced against market forces. The last section in the series will focus on the changing investment opportunities in China.

Our hope is to provide a comprehensive and balanced description of China's capitalism with special features to facilitate a multi-dimensional perspective on investing in China. We believe that financial market participants must understand the nature of the Chinese economic and financial system as the country's influence continues to grow, so we seek to provide that perspective in this paper.[1]

China's political economy: 2000 through 2020

Each nation state has its own unique mixture of governmental regulation, capital market structures, and economic conditions. In the 1950s and 1960s, China's inward looking economic efforts focused on political consolidation and food security. In the 1970s and 1980s, China slowly opened to the global economy, in a deliberate change to its economic development strategy that incorporated elements of free markets and foreign trade. China eventually joined the World Trade Organization in December of 2001. In the decades prior to joining the WTO, state-owned enterprises dominated much of China's economic investment and growth. Foreign direct investment accelerated after accession to the WTO, resulting in a hybrid economic growth model where western and domestic private sector companies operated within the state-led economic system. This paper explores the evolution of China's political economy and the role of the state in its economic performance over the past twenty years.[2]

[1] Throughout this paper, we will utilize economic statistics reported by Chinese authorities. It is widely accepted that these statistics are not always reflective of reality. Decentralized data gathering, inconsistent calculation methods, and manipulation are potential contributors to the low quality of reported data. China's economic data also experiences substantial revisions, and suspiciously low volatility. Current Chinese Premier Li Keqiang himself admitted that he prefers to utilize alternative indicators of growth, giving rise to the "Li Keqiang Index." While Chinese statistics offer directional inference, we should emphasize that they should not be treated as quantitatively precise.

[2] Source for graphs: World Bank national accounts data, in constant 2010 US dollars (i.e., real/inflation-adjusted GDP). Data is not purchasing power parity-adjusted, which can have a significant influence on results – a debate on the merits of PPP adjustments is outside of the scope of this paper.

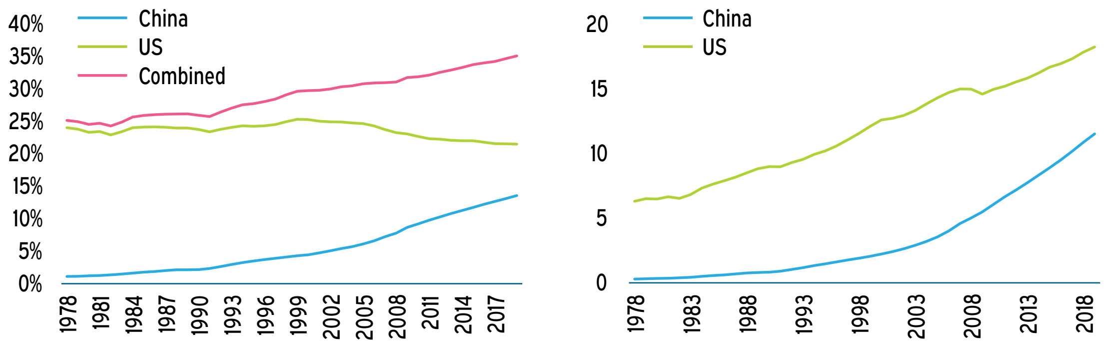


FIGURE 1
Percent of World GDP (left)
GDP ($, trillions) (right)

China's rise and reach: the economic story arc

After several decades of rapid growth, China is now the world's second largest economy, representing nearly one-fifth of global GDP. During most of this boom period, China's focus has been on utilizing aggressive, debt-driven investment, and a comparative advantage in labor costs, to boost domestic employment. However, after a debt-fueled boom coming out of the Global Financial Crisis, China's economic model began to shift considerably. A critical pivot came in 2013, when the ruling Communist Party of China (CPC) announced efforts to focus on domestic consumption while backing away from aggressive, debt-driven fixed asset investment. An increasing point of emphasis for the CPC today is "Made in China 2025" and other strategic plans aimed at moving China up the value chain into more technologically sophisticated end products. Alongside these phase shifts in internal economic strategy, China has turned outward. This includes an increased emphasis on globalization through efforts like the Belt and Road Initiative ("BRI"),[3] and the gradual relaxation of constraints on foreign investment. The knock-on effects of this evolution for China and the global economy are significant.

China's development in historical context

A full understanding of China's rise to economic prominence requires awareness of the country's modern history. While the roots of Chinese society trace back thousands of years, the structure of China's 21st century economy first began to take shape in the 1970s. The first half of the 20th century in China was dominated by turbulence and a search for identity. The century kicked off in 1900 with an escalation of the Boxer Rebellion, an uprising against occupying countries such as Great Britain, Japan, Russia, and the United States. Angst within China regarding imperialism increased with the invasion and occupation of China by Japan before and during World War II. The escalation of an ongoing civil war in China after the conclusion of World War II led to the founding of the People's Republic of China ("PRC") in 1949, and cemented single-party rule by the Communist Party of China ("CPC" or "CCP"), which continues today. The establishment of the PRC brought an end to what is often described as China's "century of humiliation." However, economic modernization was

[3] The BRI is an effort to initiate international agreements to improve infrastructure with an aim of developing trade linkages between China and other countries. The BRI is described in greater detail on page 10-13.

yet to occur in earnest. Chairman Mao Zedong, credited as the founding father of the PRC, presided over fits and starts of economic development. While he helped forge the PRC's modern identity, his totalitarian style of leadership, reflected in two key initiatives, the Great Leap Forward and the Cultural Revolution[4], prioritized political capital and the consolidation of power. At the time of Chairman Mao's death in 1976, the PRC's population exceeded 930 million, but annual GDP per capita was a paltry $263. Of the 160 countries for which per capita GDP data is available that year, only one, Myanmar, was lower. Global median per capita GDP in 1976 was $2,767; per capita GDP in the US in 1976 was $26,223, or nearly 100 times higher than China[5].

[4] The **Great Leap Forward** was a campaign initiated by Chairman Mao to transform China into an industrialized communist society from 1958-1962. The resulting policies exacerbated one of the largest famines in world history. The **Cultural Revolution** followed, from 1966-1976, and was an effort by Mao to eliminate capitalist and traditionalist thought from Chinese society.

[5] World Bank national accounts data, in constant 2010 US dollars.

Following Deng Xiaoping's ascendance to a de facto leadership role in 1978 after a brief succession struggle, aggressive reforms (e.g., the "Four Modernizations" of agriculture, industry, science & technology, and defense) accelerated China's economic growth off a very low base. A key tenet of Deng's growth strategy was capitalizing on China's large, growing population as a low-wage workforce to be mobilized. China historians often discuss the "social contract" that was put in place at the time[6]. In exchange for the implicit concession of individual freedoms under single party rule through tools like the Hukou migration system that would improve the distribution of labor in-country[7], the CPC would initiate growth-oriented reforms. This gave rise to what the CPC characterized as "Socialism with Chinese Characteristics," an effort to bring a large portion of the population out of poverty through social order, industrialization and eventually globalization[8]. In the early stage of the reform period, this effort was focused on China's agrarian economy, leading to increased agricultural productivity. Subsequently, focus was shifted toward the industrial economy, as the CPC emphasized the production of cheap exports at a lower labor cost than international competitors (i.e., "labor cost arbitrage").

[6] Tang, Wenfang and Parish, William L. "Chinese Urban Life Under Reform: The Changing Social Contract." 2000.

[7] Hukou is a system of household registration, which is used as a domestic passport that the CPC can use to regulate population distribution and, importantly, rural-to-urban migration.

[8] Note that the Communist Party of China, as the name implies, still identifies as a communist party.

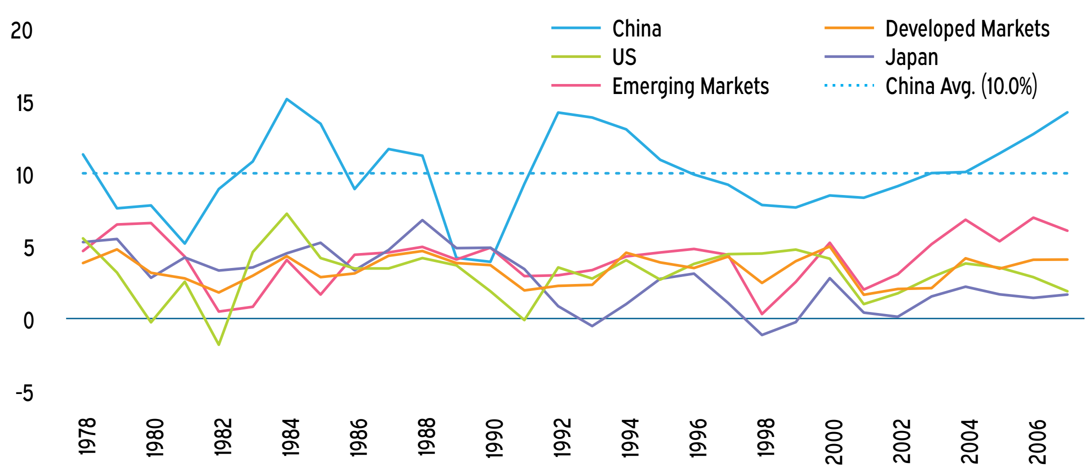


FIGURE 2

Annual GDP Growth, 1978-2007 (%, 2010 US dollars)[9]

[9] World Bank.

While China's growth path has been remarkable, it shares commonalities with past examples of rapid boom-periods in other economies that should not be ignored. It bears resemblance to the growth in the Soviet Union during the early and middle stages of the Cold War (1945 - 1970), at a time when many economists and politicians began to worry that the USSR would eventually overtake the US economy in size and power, threatening the global order[10]. However, unlike the former Soviet Union's failed attempt at global supremacy through the centralized means of production of classical communism, China successfully paired a production- and export-led growth model with numerous other factors throughout this reform period:

[10] Pettis, Michael. The Great Rebalancing. 2013.

→ Rapid population growth (so rapid that the "one-child policy" was introduced in 1980)
→ An increasing labor force participation rate
→ Increased education to enhance the technical skill level of workers
→ Reform and privatization of state-owned enterprises to improve efficiency
→ Debt growth and extensive domestic fixed asset investment
→ Increasing foreign direct investment ("FDI") into China
→ Technology/intellectual property transfer to Chinese companies
→ Currency devaluation
→ Suppression of debt costs for companies through "financial repression"
→ Willingness to accept environmental degradation as a social cost of growth
→ Improved relations with the US, initiated by President Nixon's visit to China in 1972

Among these key drivers, one of the most important catalysts for growth in China, which arguably persists today, has been the implicit transfer of wealth from households to corporations through financial repression, artificially low wages and high private savings rates due to the lack of a viable social safety net. In the 1980s and 1990s in particular, Beijing's deliberate industrial development plan ensured corporate profitability and competitiveness through low wage policies and curtailment of discretionary consumer demand. China is also able to exercise significant power through state control of the banking system, where bank boards and leadership positions are staffed with active party members. As a result, capital has been available at a very attractive cost to Chinese businesses. It might come as a surprise to investors that, even as Chinese real GDP growth far exceeded that of the US, the real rate of interest was actually much lower, suggesting that a greater share of national income may have accrued to corporations (borrowers) rather than individuals (savers).

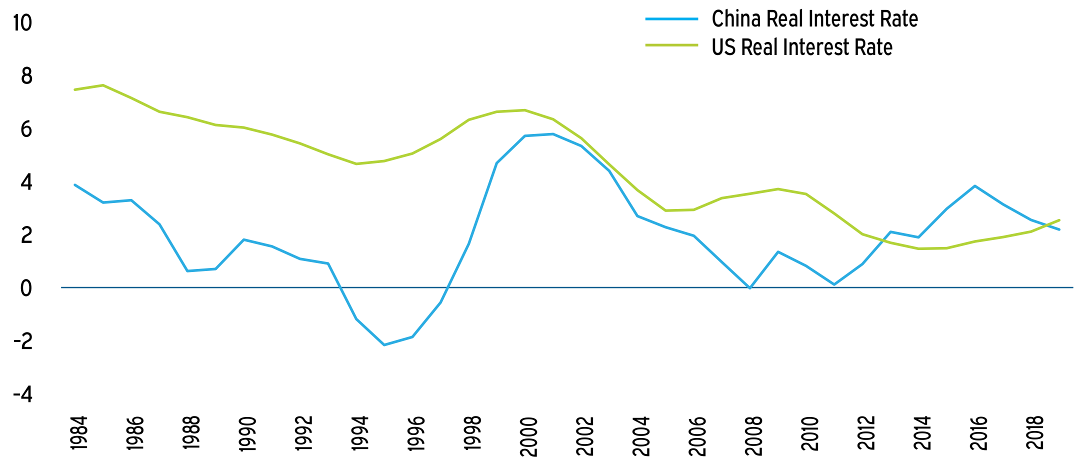


FIGURE 3
Five-Year Average Real Interest Rate Comparison[11]

[11] World Bank.

By 1990, China's GDP per capita had risen to $729; this was still extremely low relative to more developed economies, but represented nearly a doubling in real terms from 1976. The 1990s witnessed further acceleration of economic growth in China. The decade began with the opening of flagship stock markets in Shanghai and Shenzhen, which continue to represent the widely discussed China A shares market today. While the Asian Financial Crisis saw a period of volatility in the late 1990s, China's economic footprint continued to grow.

It would be difficult to evaluate the Chinese economy, both past and present, without acknowledging the importance of state-owned enterprises ("SOEs"), which are companies that are owned and operated by the CPC. China's SOE reforms accelerated in the 1990s with a strategy labeled "grasp the big, release the small" (essentially consolidating SOEs in strategically important industries, while privatizing less strategically important industries). Given that SOEs represented 50% of industrial output in China at the turn of the century, improved efficiency clearly represented a growth opportunity[12].

[12] Gang, Fan. "The Role of State-Owned Enterprises in the Chinese Economy." chinausfocus.com.

China's accession to the World Trade Organization in 2001, after a 15-year period of negotiation, marked a key development in international relations, and assured the country's ability to further integrate into the global supply chain. This gradual opening-up marked the culmination of a nearly 30-year process of China re-establishing relations with large global economies like the US[13]. With open access to global trade and capital markets, rapid GDP growth continued.

[13] Richard Nixon's 1972 visit to China is often cited as one of the key catalysts for this process.

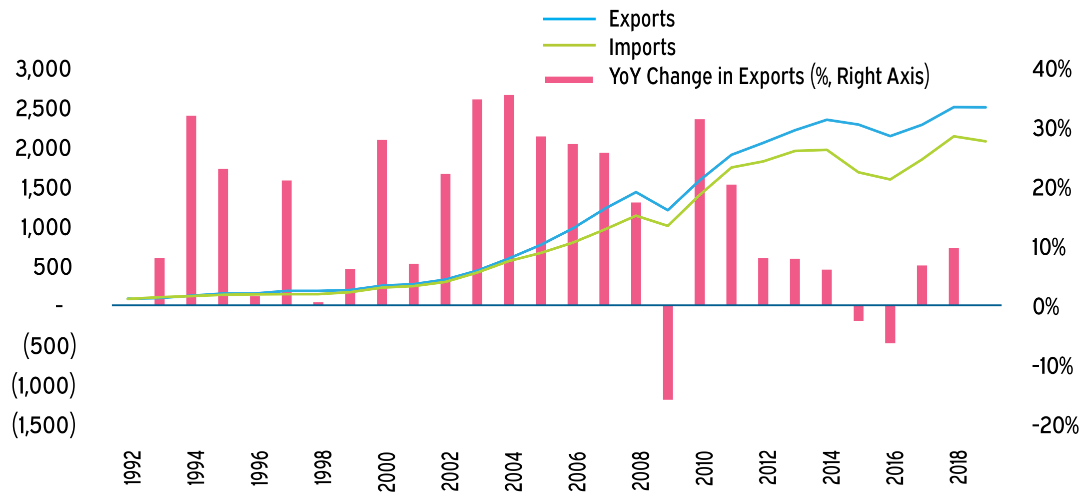


FIGURE 4
China Trade Balance ($ billions)[14]

[14] CEIC.

Changes over this 30-year period certainly catalyzed rapid growth, but its sustainability can be questioned. Economists who have studied the period argue that China was able to monetize the base effects of a very low starting level of productivity and efficiency as it emerged from the Maoist era of the mid-20th century. Data quality is often cited as a reason to discount historical growth statistics, but existing evidence suggests that the "low hanging fruit" of China climbing the curve of industrialization and integration into the world economy was gradually harvested. Many of the widely cited catalysts for growth that were previously highlighted exhibit diminishing marginal returns, indicating the likelihood of a gradual moderation of their impact on potential growth.

The Global Financial Crisis was the most significant challenge to China's growth streak. The collapse of consumer demand in the US and the EU implicitly threatened Beijing's export-led growth model, which might have unleashed domestic unrest as factories closed and laid-off workers. In the face of global demand collapse, CPC officials responded aggressively by initiating a debt-financed fixed asset investment binge to soften the GFC's blow. Further, Beijing began a longer-term process of refocusing their economic growth model by unleashing formerly suppressed domestic (consumer) demand.

While it is not often highlighted in discussions of the Crisis, China directed commercial banks to dramatically increase lending, which totaled over $1 trillion in the first half of 2009 alone[15]. Not only were new loans given, but existing loans were rolled and extended on generous terms. Wages were raised in the countryside and in second tier cities. Migration to first tier cities was encouraged with a dramatic increase in hukuo licenses[16], increasing domestic mobility and demand for infrastructure, cars, homes and consumer goods. This marked an important shift in China's growth strategy from a balance sheet perspective. The country's willingness to finance investment growth through the banking sector and consumer debt resulted in a rapid increase

[15] Yu, Y. (2009, Nov. 25). China's policy responses to the global financial crisis. *Australian Government*

[16] Kam Wing Chai, "The Chinese Hukou System at 50", Eurasian Geography and Economics, 2009. http://courses.washington.edu/chinageo/Chan-Hukou50-EGE2009.pdf. The Hukou license is a type of residence permit which allows access to social services, education, and medical care dependent on income and stable place of residence. Migrant workers to cities in China have had less access to social services based on their temporary housing status. Since 2000 various reform efforts have increased access to urban hukou licenses.

in leverage. China's government and consumer debt burden had been on the rise prior to the GFC, but it accelerated meaningfully, through a wider array of channels, during and after.

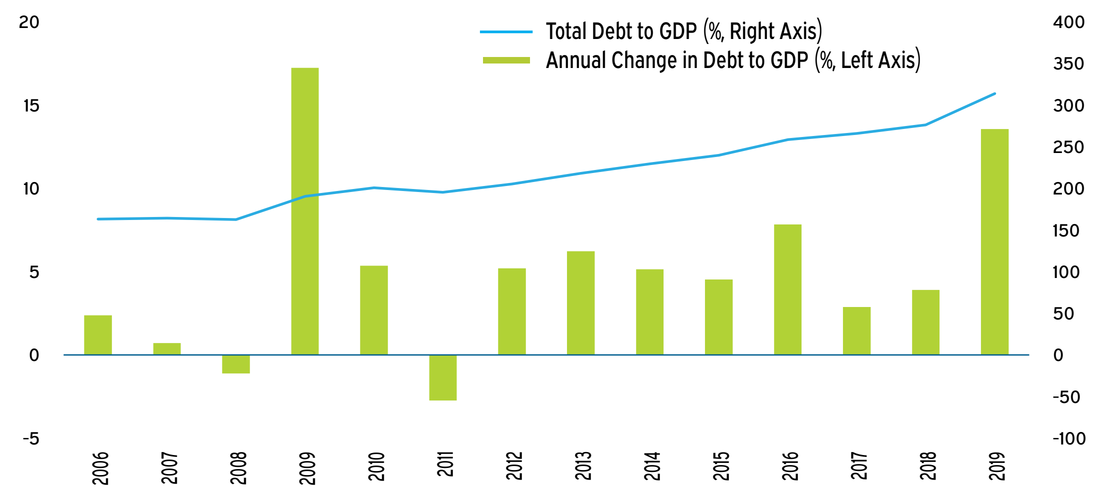


FIGURE 5

Rapid Debt Growth[17]

[17] Source: Bloomberg. Reflects total public and private debt.

While the official national sovereign debt remained low as a percentage of GDP, the explosion of private rates of indebtedness quickly reached levels associated with advanced economies. With loose regulatory constraints, meaningful political corruption, artificially low interest rates, and yield-starved investors, the post-GFC China financial climate gave rise to speculation. The CPC directed commercial banks to reduce lending in the early 2010s. However, the shadow banking sector, with its wealth management products ("WMPs") guaranteeing high rates of return, allowed commercial banks to take assets off of their balance sheets and fed the risk appetite. Implicitly, borrowers unable to gain access to traditional credit were able to access financing via the shadow banking sector, exacerbating the growing debt burden in China, and potentially reducing debt quality. Research has found that commercial banks are more willing to offer guaranteed rates of return when they are closer to insolvency, likely increasing systematic risk during a liquidation event[18]. Chinese regulators have since clamped down on WMP growth. According to official data, the WMP industry peaked in 2018, with total market value approaching $5 trillion. The market has since contracted to $3.9 trillion as of the end of 2019[19].

[18] Huag, Ji, Zongbo, Huang, and Xiang, Shao. "The Risk of Implicit Guarantees: Evidence from the Shadow Interbank Market in China."

[19] CEIC, NBS, China Banking News. Note that China has only selectively reported official statistics on WMPs.

It is often posited that credit is the lifeblood of economic growth. A surge in debt in China during and after the GFC produced the CPC's desired outcome. Growth re-accelerated, although the pace of growth remained moderate relative to the prior two decades. However, the quality of incremental growth in China remained relatively low. The efficiency of debt-financed growth, which had already been in decline, weakened further. The Incremental Capital to Output Ratio ("ICOR") in China has risen over the past decade, demonstrating that a dollar of investment does not go nearly as far as it once did.

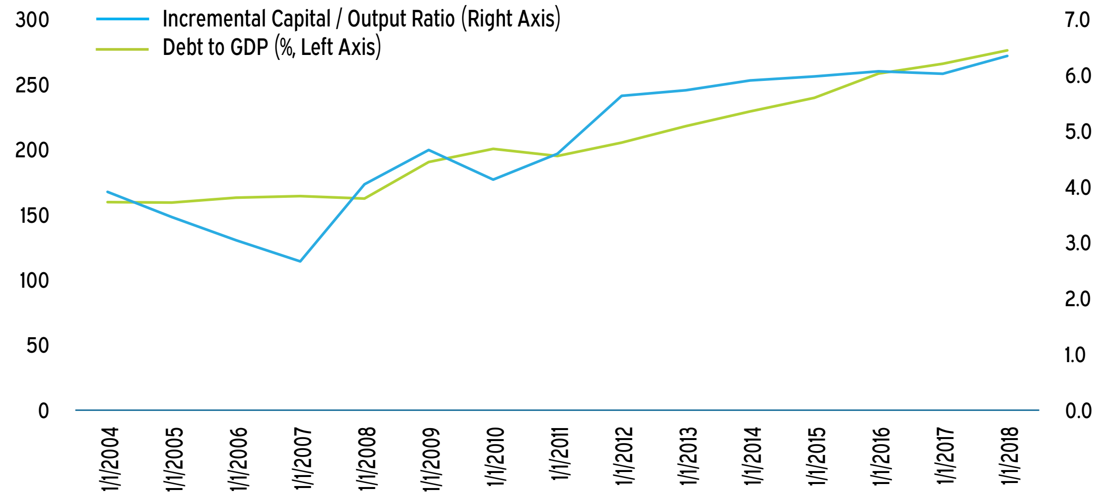


FIGURE 6

Debt Growth and Diminishing Productivity[20]

[20] World Bank. ICOR is calculated as the investment share of GDP divided by the growth rate of GDP.

From 2013 to the present: a shift in strategy

While a fixed-asset boom post-GFC was beneficial in the short term, China's growth model was showing signs of strain even in the late 2000s. Like other 20th century growth "miracles" before it, such as those of the Soviet Union, Brazil, and Japan, the pace of growth proved to be unsustainable. The one-child policy, implemented in 1980, took several decades to manifest in slower population growth, but this trend has emerged strongly in the 21st century. Scholars began to highlight (and continue to discuss) the Chinese "Lewis turning point" at which surplus labor is fully absorbed into the manufacturing sector, leading to rising wages and thus lower export competitiveness[21].

[21] Das, Mitali and Papa, N'Diaye. "Has China Reached the Lewis Turning Point?" IMF. 2013. Xiaobo, Zhang, Yang, Jin and Wang, Shenglin. "China has Reached the Lewis Turning Point." China Economic Review. 2011.

Empirical research seems to confirm what was hypothesized at the time: the fixed asset investment that had fueled China's post-Crisis boom had a limited and unsustainable impact on productivity. Further, China's GDP growth continued to be dominated by investment spending, perpetuating the dominance of corporations, both private and state owned, within the economy.

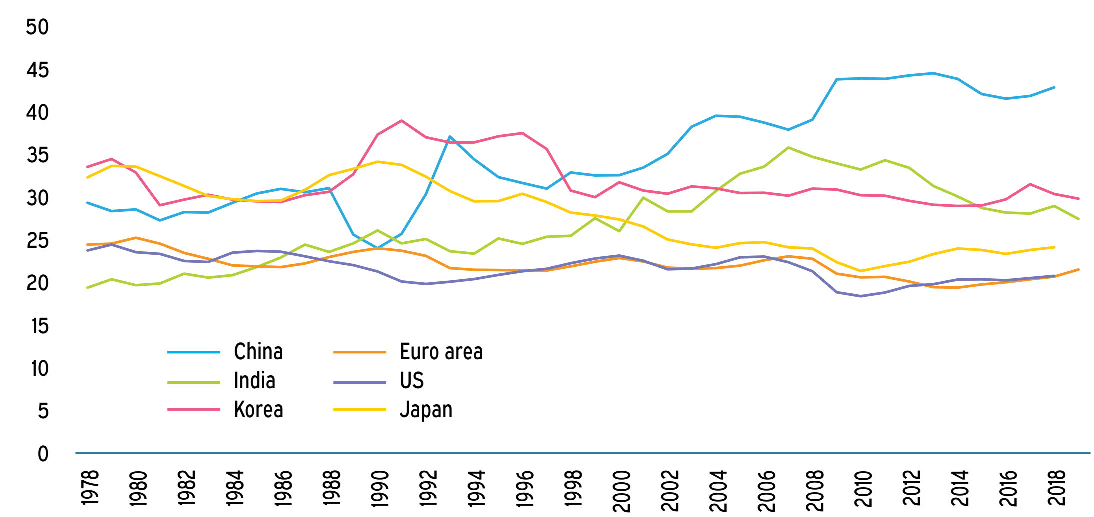


FIGURE 7

Investment Share of GDP (%)[22]

[22] World Bank.

Outside observers began highlighting evidence of a weakening growth model, citing the appearance of "bridges to nowhere" and "ghost cities" as evidence of unproductive infrastructure made possible by an excessive credit binge. Investors entertained the possibility of a "hard landing" in which a forced deleveraging of built-up excesses in the Chinese financial system could lead to its collapse, or a "soft landing" in which these excesses were managed down over time. It was this backdrop that underpinned Xi Jinping's ascension to the presidency of China, when he succeeded Hu Jintao in 2013.

With recognition both domestically and internationally that the existing debt-driven growth model was showing signs of strain, Chinese policymakers under President Xi began to signal a shift in strategy. It is important to emphasize that because of the centralized model of leadership utilized in the CPC government, any announcement of significant changes by CPC leadership is worthy of close attention. One of the most important directional shifts in policy in China was made at their 2013 plenary session, a central planning meeting held every five years. The Xi administration signaled a transition from debt-driven investment spending toward domestic consumption, technological advancement, and increased market openness. This represented a tacit admission of the need for an economic "rebalancing."

FIGURE 8
General Structure of the Communist Party of China[23]

Party Secretary: Xi Jinping Premier: Li Keqiang	→ Party Secretary (head of state) Holds authority over all Party decisions. → Party Secretary Xi is also the Chairman of the Central Military Commission → Premier (head of State Council) is the second ranking official in the Party
Politburo Standing Committee: 7 Members (Including the Party Secretary and Premier)	→ The inner circle of the Chinese Communist Party government → Advisory role, with Xi Jinping as a central participant
Politburo 25 Members Central Committee	→ All government authorities, all courts, and the military report to the Politburo, which includes members of the Politburo Standing Committee → The Central Committee is the larger governing group within the Party Congress
Key Groups	→ **State Council**: central government, runs all ministries, including the central bank, the **People's Bank of China** → **Central Military Commission** → **Supervision Commission**: watchdog for public workers → **Central Political and Legal Affaris Commission**: judiciary → **National People's Congress**: implements Party decisions as a "rubber stamp" agency (the Congress has never vetoed a party decision)

[23] South China Morning Post.

The implications of this transition were not paid substantial attention by international investors until they began to manifest in global financial markets in subsequent years. China moved to moderate the growth of financial leverage, raising policy rates and encouraging the state banking sector to reduce loan activity. The 2014 to 2015 collapse in a decade-long commodity boom is often associated with the end of China's fixed asset investment boom after a period of unsustainably high demand[24]. China followed the Third Plenum by announcing the "Made in China 2025" initiative in 2015. This made explicit China's aspirations to move up the value chain to seek independence from foreign suppliers and accelerate domestic technological development.

[24] Warell, Linda. "An Analysis of Iron Ore Prices During the Latest Commodity Boom." Mineral Economics. 2018. Hammouden, Shawkat, Nguyen, Duc, Sousa, Ricardo. "China's Omentary Policy and Commodity Prices." IPAG Business School. 2014. Klotz, Philipp, Lin, Tsoyu, Hsu, Shih-Hsun. "Global Commodity Prices, Economic Activity, and Monetary Policy: The Relevance of China." Resources Policy. 2014

One belt, one road initiative

An additional initiative first floated by President Xi in 2013 was the One Belt, One Road policy. Now referred to as the Belt and Road Initiative ("BRI"), the originally stated scope was to establish strategic agreements with trade partners, though the true aim has always been somewhat ambiguous. The BRI can be described as a continuous stream of infrastructure investments in countries outside of China, financed using loans primarily made by Chinese state-owned banks. While it is extremely difficult to properly measure the full scale of the BRI, and the estimates of its total scope are inconsistent[25], it has been posited that financing of the BRI by China could eventually total between $1 trillion and $8 trillion over a period of 5 to 10 years[26]. While the scale of BRI financing may appear impressive, when compared to the country's annual GDP of approximately $20 trillion, the multi-year program may not have had a meaningful economic impact on the Chinese economy as a whole. However, for certain legacy State Owned Enterprises in the energy and construction sectors, the BRI program may have been strategically beneficial, boosting employment and enmeshing developing country governments with China's financing and diplomatic interests.

[25] Horn, Sebastian, Reinhart, Carmen, and Trebesch, Christoph. "China's Overseas Lending." NBER. 2020.

[26] Chatzky, Andrew and McBride, James. China's Massive Belt and Road Initiative. Council on Foreign Relations. 2020. Hillman, J. China's Belt and Road Initiative: Five Years Later. CSIS: Center for Strategic & International Studies. 2018.

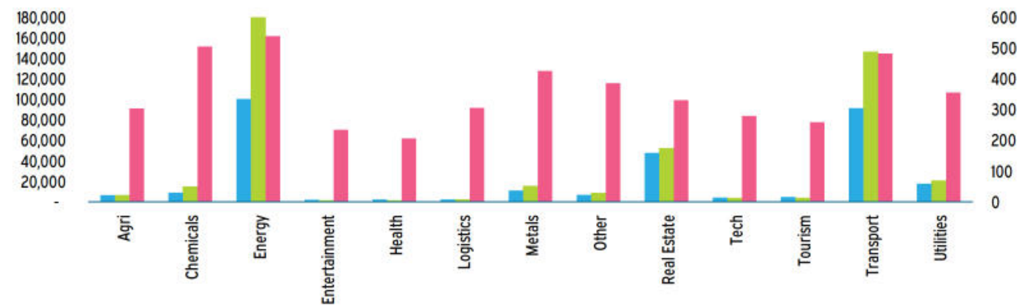
TABLE 1
Belt & Road Initiative Finance Mechanisms (USD Bn)

Institutions	Loan Size (authorized)	Lending Per Year (est. 2015-2019)	Anticipated Annual Lending (2020-2025)
Multilateral Development Banks			
Asian Development Bank	$100	$1.7	$10-15
New Development Bank	$100	$1-1.5	$5-7
Silk Road Fund	$40	$2-3	$2-3
Commercial Banks — (China)	Est. $90bn annual lending by the big four banks		
China Policy Banks			
China Development Bank (CDB)		$15 (2015)	
Export-Import Bank of China (EXIM)		$24 (2015)	

Source: Oxford Economics, compiled from government and company annual reports and press releases.

Delving briefly into the mechanics of the BRI, Chinese commercial bank, state banks and international development banks make low-interest loans to recipient countries. These loans require the signing of Memoranda of Understanding ("MOUs"). 149 of these agreements between China and other countries exist today[27]. The loans are utilized to finance a variety of development projects in other nations. China has targeted energy and transport, based on Oxford Economics investment data for the BRI. The projects are broad in scope, but seem to focus on increasing China's sphere of influence.

[27] Xinhua (2018, Jul. 9). China signs MOUs with 37 African countries, AU on B&R development. *XinhuaNet.*



	Agri	Chemicals	Energy	Entertainment	Health	Logistics	Metals	Other	Real Estate	Tech	Tourism	Transport	Utilities
Sum ($M L-Axis)	6,670	15,130	179,840	1,640	1,650	2,440	15,720	8,860	52,490	3,910	4,140	146,430	20,950
Count (R-Axis)	22	30	334	7	8	8	37	23	159	14	16	304	59
Ave Project Cost (R-Axis)	303	504	538	234	206	305	425	385	330	279	259	482	355

FIGURE 9
Belt & Road Initiative Construction Projects by Sector
(2013-2020
USD millions – AEI China Global Investment Tracker)

Examples of BRI investments:

- → Cambodia – Sihanoukville Special Economic Zone (factories, ports) and express train funded by China Communications Construction Company. Access to Cambodian ports for Chinese merchants, and potentially government use
- → Pakistan – China - Pakistan Economic Corridor (highways, railroads, pipelines, power plants, port development)
- → Kenya – railway development (Nairobi to Mombasa)
- → Greece – China purchased majority stake in Port of Piraeus in 2016
- → Portugal – Huawei agrees to build out 5G network with local company Altice Portugal

Why does the BRI matter?

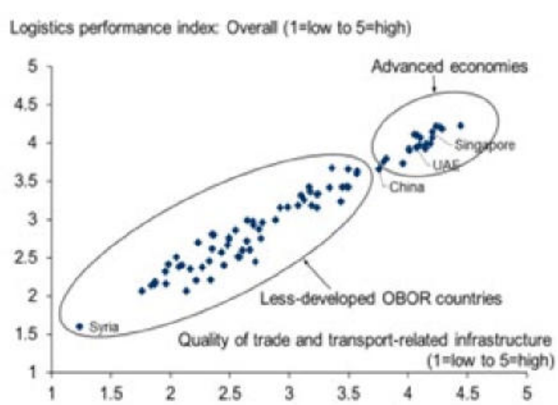


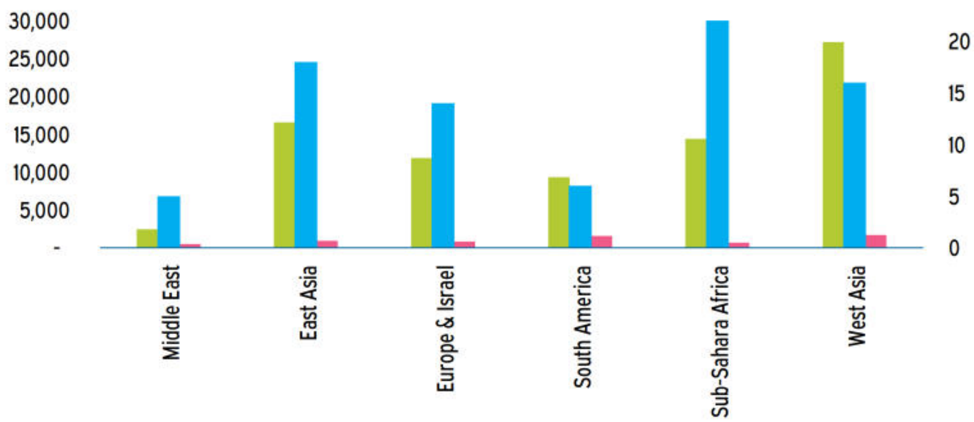
FIGURE 10
Logistics and Infrastructure

Source: Oxford Economics / World Development Indicators.

An important consequence of the BRI, outside of the implicit increase in China's international influence, has been weaker balance sheet positions in the countries that choose to sign MOUs. For example, recently, Sri Lanka could no longer make the payments on a financed port project and surrendered ownership.

While BRI investments often create opportunities in local markets and represent a path towards development, they potentially represent a Faustian bargain. The headline agreements draw much fanfare and potentially signal upward mobility for recipient countries, where the prospect of infrastructure improvements and job opportunities are appealing. However, in many instances, China insists that the projects utilize China's domestic companies and labor supply. While BRI investment recipient countries are asked to foot the bill, they might not ultimately be receiving enough benefit through employment opportunities and domestic development to offset greater indebtedness.[28]

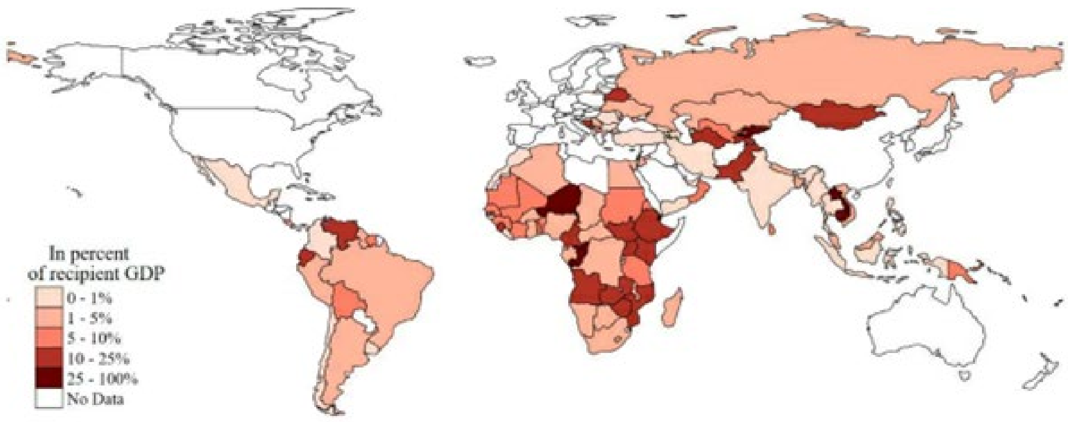
[28] American Enterprise Institute; *China Investment Tracker*: https://www.aei.org/articles/chinas-troubled-ma-deals-do-not-signal-overseas-hostility/. "Troubled projects" includes delayed or foregone investment, under-investment; incomplete projects, or lack of agreement of scale and scope of project with Chinese government annual investment accounting.



	Middle East	East Asia	Europe & Israel	South America	Sub-Sahara Africa	West Asia
Sum ($M L-Axis)	2,460	16.560	11,869	9,330	14,390	27,170
Ave Project Cost (L-Axis)	492	920	847	1,555	685	1,698
Count (R-Axis)	5	18	14	6	22	16

FIGURE 11
Belt & Road Initiative Troubled Projects by Region
(2013-2020 USD M — AEI China Global Investment Tracker)

With debt that is largely unreported to global financial market participants reaching potential record levels, considerably more balance sheet risk might exist in some emerging markets than is otherwise assumed. It is apparent from this map that a number of countries in Asia, Africa, and South America have considerable obligations to China.



Note: The debt estimates are based on loan-level data (see text and Appendix I). They exclude Chinese portfolio debt holdings and short-term trade debt. GDP data is from the IMF World Economic Outlook.

FIGURE 12

World Map of External Debt to China[29]

[29] See "China's Overseas Lending" citation. As of 2017, direct loans only.

Where China stands today

It is important to distinguish the Chinese system's nature and level of development from that of the US and regional peers. China's political system is unique, its population is massive, and from a productivity per capita standpoint, it is well behind countries like the US, Korea, and Japan, which have climbed the curve to the distinction of middle- or high-income. The path that these countries took to economic "emergence" are paid close attention by CPC policy makers.

	China	US	Korea	Japan
Political System	**Communism**	Democracy	Democracy	Democracy
Governing Bodies	CPC	Federal and State	Centralized	Centralized
Currency Type	Managed Peg	Floating	Floating	Floating
Population	**1,398 million**	328 million	52 million	126 million
10-Year Average GDP Growth	**7.7%**	2.3%	3.3%	1.3%
GDP Per Capita	**$8,254**	$55,670	$28,606	$49,188
Consumption % of GDP	**38.5%**	60.2%	48.6%	55.6%
Current Account Balance	**$141 billion**	-$498 billion	$60 billion	$185 billion

TABLE 2

Structural Divide: Political and Economic

Source: World Bank as of 12/31/19.

Trends associated with the 2013 Plenum's focus on domestic consumption and market reforms, the BRI, and a corruption crackdown have had several key impacts on the Chinese economy over the past seven years. The most evident is that the path of reported growth statistics continues to indicate a "soft landing," as the pace of debt creation and infrastructure spending slows. As China-focused economists have highlighted, it is more difficult in practice to "rebalance" an economy than it is to do so in theory. All else equal, for consumption to increase as a percentage of GDP, another source of growth must give way. Efforts to rebalance the economy while managing a more cautious pace of leverage growth (as debt to GDP pushes above 300%), have undoubtedly resulted in a slower pace of GDP growth itself.

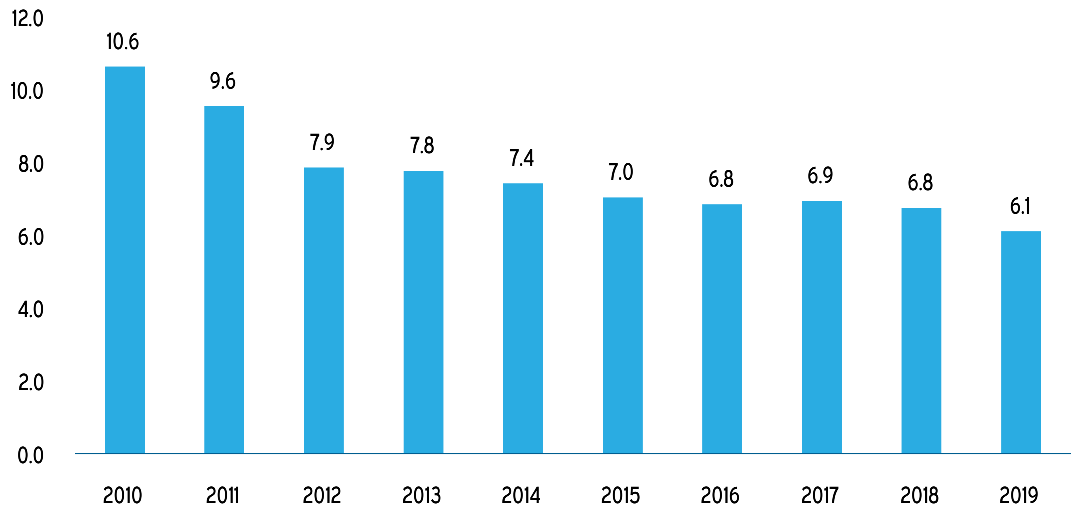


FIGURE 13
China Annual GDP Growth: Post GFC[30]

[30] World Bank.

The gradual retrenchment of the traditional growth model in China has led to a bifurcation in the Chinese economy. The materials, industrials, energy, and financials sectors, which once enjoyed strong, consistent activity and growth, have grown at a more moderate pace. Investors and economists often refer to the widening spread between the "Old Economy" in China, reliant upon credit growth and infrastructure spending, and the "New Economy" that continues to grow as a result of the CPC's initiatives. Critically for old economy companies, which once enjoyed implicit debt guarantees from the CPC, slower growth has also been accompanied by a slightly increased willingness to allow defaults on debt obligations, especially since 2015. Relatively unproductive companies, saddled with large debt burdens, have been forced to declare insolvency in some cases. The losses implied by default are often absorbed by China's larger state-owned banks at the direction of the CPC.

The broader SOE sector in China remains robust. SOEs account for 39% of corporate assets, 27% of corporate revenues, and 18% of employment. Chinese financial SOEs represent 84% of financial system assets in China. "SOE reform" occupies a nearly continuous place at the top of the CPC's priorities, which is not a surprise considering that SOEs represent approximately 25% of China's GDP, and 4.5% of global GDP[31]. However, follow-through on reforms has been mixed. SOEs continue to underperform private enterprises on a return-on-assets basis, and have experienced diminishing asset efficiency, as measured by asset turnover (revenue/average total assets)[32].

[31] Zhang, Chunlin. "How Much Do State-Owned Enterprises Contribute to China's GDP and Employment?" World Bank. 2019.

[32] Gavekal Dragonomics – Nonfinancial Sector ROA, and SOE Debt and Efficiency graphs also sourced from Gavekal Dragonomics.

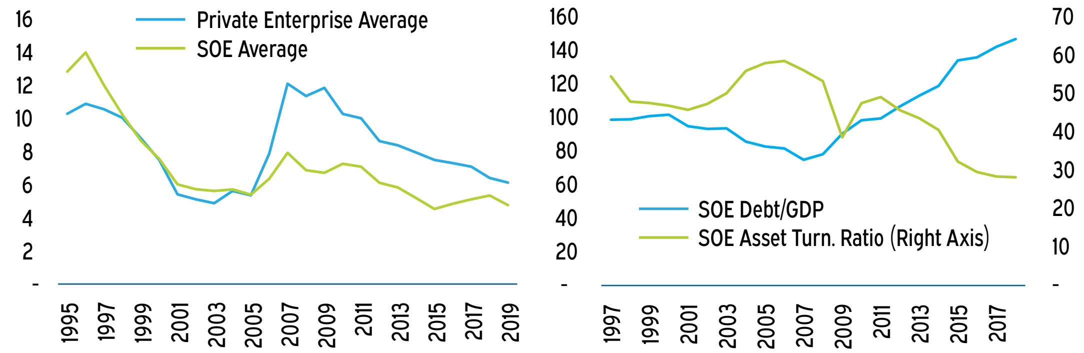


FIGURE 14

Nonfinancial Sector Rtn. on Assets (%) (left)

SOE Debt and Efficiency (right)

China's economic development depended heavily on hydrocarbon fuels, and in 2007, China became the single largest emitter of CO2 emissions. In 2008 China elevated the State Environmental Protection Agency to the State Council and reorganized it as a Ministry with expanded powers and authority. While the CCP has prioritized cleaning up air quality, progress has been slow. China's small hazardous airborne particles (PM2.5) are, on average, three times higher than the WHO's recommended maximum upper limit of 10 PM2.5 micrograms per metre. Industrial cities frequently experience PM2.5 levels twenty times higher than the WHO's recommend limit.[33]

[33] Source: China Ministry of Ecology and Environment; The Ministry website provides daily air quality reports by city with relevant safety recommendations see http://english.mee.gov.cn/. See also "China targets to allow air pollution to rise slightly in 2021," Reuters February 2021.

The CPC continues to focus on domestic consumers as a potential engine of growth. Over the past seven years, consumption as a percentage of GDP has increased, albeit off a very low base. Growth in Chinese consumption spending can be observed in business trends in China. China boasts the largest market for smartphones, the largest e-commerce market, and the largest consumer base in the world. Chinese citizens are increasingly online, increasing domestic usage of search engines, social media platforms, online gaming, and other online venues. Smartphone penetration in China has increased to 60%, which is far higher than regional developing economies like India (37%) and Indonesia (31%) but is lower than the United States (79%)[34]. Rapid development of technology infrastructure has catalyzed growth in information technology, communication services, and industrial technology companies as well.

[34] Newzoo Global Mobile Market Report 2019 – Light Version.

Rising wages in China have meant less labor competitiveness than at the turn of the 21st century. It has been reported that the manufacturing wage level per person in China now exceeds most Latin American countries, and many emerging economies in Asia[35]. However, to say China's role in the global industrial complex is compromised would be misleading. In 2018, China represented 28% of the global manufacturing sector's value add[36]. The country remains a key player in globalized supply chains for hard and soft commodities, industrial and consumer goods, and technology development. China is an important trading partner with many countries in Asia, Africa, Europe, and the Americas.

[35] Euromonitor.

[36] Shen, Jianguang. "China's stimulus Sceptics Need Not Fear Side Effects This Time." Financial Times. May 2020.

Although wages are rising, China is also aging quickly, and the lack of a social safety net for many retirees has kept savings rates high. China's NDRC estimates that 25% of China's population will be over the age of 60 by the year 2030, and most of the elderly cannot afford to move to nursing homes. The one-child policy means that fewer children and grandchildren can offer additional support. China offers universal health insurance through three national health insurance schemes, one each for urban employed and retired, registered urban residents, and rural residents. However, the quality of primary health care remains poor and uneven.[37]

[37] https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30122-7/fulltext

Importantly, GDP growth remains relatively robust in China, and investment spending has not ceased. China continues to build infrastructure at a pace that would be unimaginable in most countries. As one small, illustrative example of the scale of China's economy, the country has built over 100 civil airports since 2005, and nearly 1 million miles of road infrastructure since 2009[38]. The scale of development has been extraordinary.

[38] Statista, as of 2019.

Looking ahead

China is the world's most populous country, enjoys an improving standard of living, continues to expand its reach outside its own borders, and is climbing the development curve. China has grown at nearly 10% per annum in real GDP terms over the past 40 years, the longest sustained period of country-specific growth in recorded history. Absent an extraordinary positive shock to growth, the evidence suggests that this feat will not be repeated over the next 40 years. Thus, it is important to assess the evolution of key drivers of GDP growth going forward.

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China's financial system has been weakened by aggressive credit creation over the course of China's rise. While government debt levels remain moderate when compared to other large economies, nonfinancial corporate debt in China continues to rise. The Institute of International Finance's research suggests that system-wide debt is well over 300% of China's annual GDP[39], with nonfinancial corporate debt representing over 150% alone. Historically, country-specific growth booms have generally preceded growth slowdowns or financial crises[40]. China's large debt burden creates an implicit constraint on China's ability to finance future growth with aggressive credit creation. Clearly, the CPC will have to carefully manage debt both inside and outside of the financial system.

Officials within China are clearly sensitive to the country's fiscal position. The CPC's reaction to recent slowdowns has been tempered relative to their past inclination to aggressively deploy infrastructure-focused fiscal stimulus. China cut benchmark rates in the wake of COVID-19, and has engaged in fiscal stimulus, but has not initiated the same level of investment as in previous downturns[41]. The government went as far as eliminating its traditional use of an annual GDP target for 2020, instead choosing to focus on job creation. This suggests that the CPC has shifted away from the traditional model in favor of a more measured approach, given a stretched debt burden relative to most major global economies.

China's population is the largest in the world. Continued population growth is considered a key input to growth expectations in long-term GDP growth models, so close attention should be paid to its trajectory. The evidence points toward deceleration in population growth and, more importantly, working age population growth. Largely as a result of the one-child policy, which was finally ended in 2015, China's demographic trajectory has weakened. Immigration has failed to bridge the decline in domestic population growth; China's immigrant population as a percentage of the total population was the second lowest of any country for which the UN's Population Division maintains data, as of 2019. As a result, China's long-term population growth trend appears to be following a similar trajectory to large developed economies like the US and Japan. As is now the case in the US, Japan, and many European countries, the ratio of retirees relative to the productive workforce continues to increase, per UN Population Division data.

[39] Unlike other countries, China's local government debt is combined with private credit so that public levels of indebtedness is understated at the level of sovereign debt. The hybrid of municipal, provincial and state-owned enterprise debt is combined with private debt and named social financing.

[40] Chen, Sally and Kang, Joong Shik. Credit Booms – Is China Different? IMF. 2018.

[41] Gavekal, The Economist, The Financial Times, South China Morning Post, Fitch.

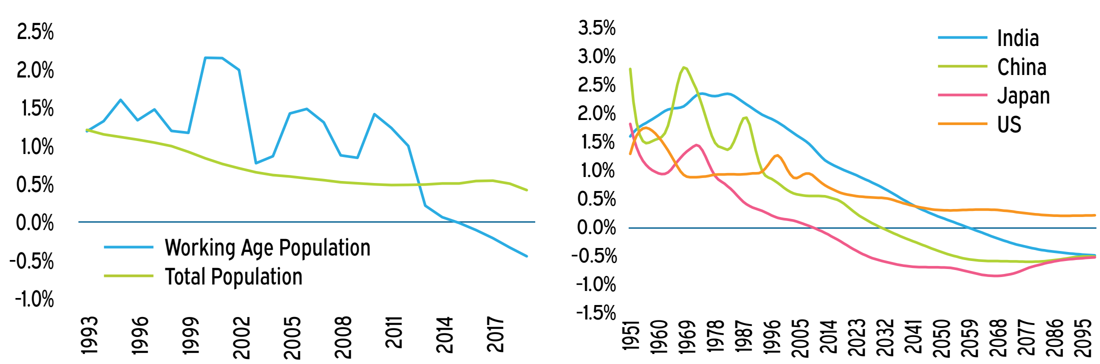

FIGURE 15

China Population Growth: 3-Year Average (left) Population Growth: Realized and Projected (right)

These gradual changes in China's growth trajectory will have important implications for future economic growth. With the availability of capital in decline due to less aggressive credit growth, and the availability of labor in decline due to less favorable population dynamics, consumption and productivity will be the center of attention. China has increasingly chosen to focus on the domestic consumer, which authorities now view as a key engine of growth. The government continues to announce targeted measures, such as improved access to brick and mortar retail and e-commerce for citizens, relaxation of restrictions on the purchase of automobiles, and even cleaning up streets to develop urban gathering places[42]. Unfortunately, in order to increase consumption's share of GDP, investment will have to decrease as a share of GDP, all else equal[43]. Inevitably, China's continued efforts to re-balance should result in a downward trajectory of GDP growth going forward.

[42] Leng, Sidney. "China's big plan to boost domestic consumption in midst of US trade war." South China Morning Post. August 2019.

[43] This is a very simple description of a nuanced economic concept laid out extensively by China scholar Michael Pettis.

The CPC has turned aggressively to the channels of potential growth that remain available: consumption and technological advancement. However, neither guarantees economic success.

China has also turned to technological progress as a source of productivity gains. Made in China 2025 remains a key initiative. The goal of the program is to indigenize key technologies, gain favorable positions in global supply chains, win market share within China from international firms, and capture more global market share. The plan originally called for China to become a dominant player in 10 sectors: IT, manufacturing, aerospace, maritime engineering, railways, electric vehicles, electrical equipment, materials, biomedicine, and agricultural equipment[44]. The precise targets of Made in China are likely to evolve further, but the project's scope has already impacted the economy. China has rapidly increased research and development spending, with R&D totaling $468 billion in 2018, second only to the US at $582 billion, according to the Organization for Economic Cooperation and Development. According to the 2019 Global Innovation Index, which factors in 80 indicators including political environment, education, infrastructure and business sophistication, China moved up three spots since the previous year to 14th.

[44] Doshi, Rush. "The United States, China, and the contest for the Fourth Industrial Revolution." Testimony to US Senate Committee on Commerce, Science, and Transportation. July 2020.

A focus on technology has given rise to corporate success as well. Currently, two of the five largest private "unicorn" companies globally, Bytedance (internet technology, Toutiao content platform) and Didi Chuxing (Didi car-for-hire service) are based In China[45]. Ant Group's $14 billion 2018 fundraising, which valued the company at $150 billion, was the largest fundraising ever by a private company. Additionally, publicly traded Chinese conglomerates, such as Alibaba (e-commerce), Baidu (internet

[45] CB Insights as of March 2021.

search), and Tencent (gaming and social media), draw comparisons to US technology giants Amazon, Alphabet, and Facebook. While not necessarily household names in most countries, these homegrown companies in China are increasing their reach.

In addition, China has introduced the China Standards 2035 project, which endorses and builds upon Made in China 2025. In effect, the goal of the former – to transform China into a leading technology innovator and producer – is simply a supplement to Made in China 2025. For example, China is pushing the development of automation and artificial intelligence. An initiative to develop technology is one thing, while the actual development of technology is another. China has gone to great lengths to improve the ease of conducting business, resulting in an improved Doing Business ranking of 31st out of 180 ranked countries for 2019, an improvement from its ranking of 78th two years prior[46]. However, China ranks just 103rd in the Heritage economic freedom score, owing to low property rights, government integrity, financial freedom, and fiscal health[47].

[46] World Bank IBRD – IDA. Doing Business Rankings as of 2020.

[47] Heritage.org. 2020 Index of Economic Freedom.

The last important forward-looking development in China is the trajectory of notable reform efforts. While China is focusing on reform in a variety of arenas, continuing reform of SOEs, improvement of the Hukou system, and strengthening of land ownership rights are worth close attention. SOEs continue to structurally under-earn relative to private competitors. An effort to increase their competitiveness could prove to be beneficial to the SOEs and their investors. China's governing body for SOEs, the State-owned Assets Supervision and Administration of the State Council (SASAC) continues to pursue a reform agenda originally laid out by Xi Jinping at the Third Plenum. Key initiatives include deleveraging SOEs and consolidating them to improve their ability to compete internationally.

However, reform in the context of heavy government involvement has proven to be challenging. In many instances, the government has merged large companies, thereby reducing competition rather than fostering it[48]. Hukou reform is cited as an effort to improve the distribution of labor while strengthening the rights of migrant workers and improving education opportunities for migrant families, but progress has been slow[49]. Likewise, an improvement in land ownership rights for citizens could stimulate additional demand and increased investment. However, as with SOE reform, land reform is an extremely complex endeavor. Land sales are a major source of fiscal revenue for local authorities; strengthening land rights for Chinese citizens would reduce the ability of local officials to expropriate property and resell it. In short, reforming decades-old systems will not be achieved overnight.

[48] Mitchell, Tom. "Why China's State Oil Company Merger Looks Like an Unusual Step." Financial Times. April 2020.

[49] Yu, Sun. "China's Migrant Workers Spurn Cherished 'hukou'." Financial Times. June 2020.

Conclusions

Ultimately, China's challenge in the 21st century is clear: how can growth be perpetuated? China could continue to experience a reversion to a lower long-term average, as has almost always happened in the past, especially after periods of prolonged credit expansion[50]. The risk is that this glide path slope becomes steeper than expected, exposing excesses in system-wide leverage and potentially leading to a financial crisis. Chinese President Xi Jinping himself has admitted a keen focus on ways in which China can avoid succumbing to the "middle income trap," which refers to the stagnation of growth as wages push production costs higher. In order to escape the Middle Income Trap, Beijing will have to engineer maximum wealth creation while growth rates are high; as GDP growth normalizes to a lower rate, escaping the Middle Income trap may become more challenging. Chinese policymakers are acutely aware of the risk that evolving demographics result in China "growing old before it grows rich," as China's working age population growth rate has recently turned negative.

[50] Pritchett, Lant, and Summers, Lawrence. "Asiaphoria Meets Regression to the Mean." Asia Economic Policy Conference. October 2014.

The CPC has turned aggressively to the channels of potential growth that remain available: consumption and technological advancement. However, neither guarantees economic success. Consumption growth must replace investment growth, and it has not bridged the gap yet. Investment spending is not a guarantee of technological innovation. A five-year study in 2018 revealed that 91% of Chinese design patents, 61% of utility patents, and 37% of invention patents were discarded after five years (fewer than 15% of US patents were disposed of during the same period)[51].

[51] Chen, Lulu. "China Claims More Patents Than Any Country – Most Are Worthless." Bloomberg. September 2018.

While creative strategies to absorb excess capacity like the Belt & Road Initiative have provided financing for the goods and services of China's construction and energy companies, the level of indebtedness of some under-developed countries may well have reached maximum levels. The more debt China chooses to utilize, both at home and abroad, the more likely that structural imbalances created during the boom-period from the late 1970s to the 2010s are likely to act as headwinds for China in the coming decades.

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Appendix 1: China Currency Dynamics

After closely managing a peg to the US dollar (which allowed China to suppress the value of the renminbi (Rmb), making exports more competitive) a managed float was introduced in the 2000s (and it was re-introduced in the 2008 Crisis temporarily). China subsequently introduced an offshore version of the renminbi ("CNH," deliverable in Hong Kong) as a first step towards currency internationalization in 2010[52].

[52] CME Group. "Offshore Chinese Renminbi Market (CNH)." 2014.

The CNY is regulated by China's State Administration of Foreign Exchange, while the CNH is regulated by the Hong Kong Monetary Authority. International investors can freely transact in CNH through Hong Kong, but China restricts transactions in CNY to approved market participants, in financial market transactions and direct investments. As a result, CNH tends to more closely resemble the likely fair market value of the renminbi as long as the PBoC allows reasonable fluctuations of CNY. Since 2015, the yuan has been pegged to a basket of major currencies. The People's Bank of China announces a reference rate for the yuan versus the US dollar and other currencies on a daily basis.

The value of the renminbi relative to other global benchmark currencies is watched closely by global market participants as China becomes increasingly integrated into the global economy. Fluctuations in the value of CNY/CNH have been a source of considerable market volatility in the past. In 2015, for example, after a considerable drawdown in foreign reserves resulting from capital flight and relative economic weakness, China unexpectedly devalued its currency over several days, setting the USD/CNY reference rate higher than 7.0 for the first time in more than 10 years.

Global market volatility spiked, with participants viewing the move as an admission of economic weakness in China and therefore slowing global growth. Importantly, any investor outside of China with Chinese security holdings realized an immediate, one-off devaluation[53]. As is the case with any international investment, and is especially the case for economic systems undergoing meaningful change, currency dynamics merit close attention as they inherently represent a potential mismatch between assets and obligations. Additional pressure on the renminbi, leading to devaluation, remains a risk for international investors.

[53] Provided that they were not invested in Chinese companies that were net currency importers.

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