

China

The Next Chapter

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Although China has the longest continuous civilization of any country in the world's 3,500 years of recorded history, it can be argued that 'modern' China did not begin until 1978 when Deng Xiaoping, considered by most to be the father of modern China, rose to become the country's paramount leader. Deng's rise ushered in a breathtaking period of change that in 40 years would turn the country into the second largest economy in the world and in the process improve the lot of hundreds of millions of Chinese citizens. To better understand the magnitude of China's transformation, especially for foreigners who may see today's China through the prism of its ultramodern, skyscraper-filled mega cities, one only needs to consider the circumstances of the average Chinese citizen shortly after Deng's rise.

Modern China: Humble Beginnings

Almost eight out of every 10 Chinese lived in the countryside in 1980, in what was squarely an agrarian society. For every Chinese that earned a living in an urban setting, three did so in rural China. The adult literacy rate was 66% meaning that less than seven out of every 10 adults were literate, which lagged other emerging economies such as Malaysia (70%), Brazil (75%), South Africa (76%), Philippines (83%) and Mexico (83%)¹. The average Chinese citizen living in rural areas earned less than CNY 134 (\$20) per year, while those living in a city earned, on average, CNY 343 (\$50)². And while 210 million Chinese children attended primary or secondary schools in 1980, only one million young Chinese attended an institution of higher education.

While history books are replete with references to Deng's 'reform and opening up' to the outside world, the most pressing needs in the minds of Chinese leaders at the end of the 1970s were as basic as finding ways to feed the country's growing population and mitigating the abysmal living conditions of the country's poor and largely rural inhabitants. In 1980, China had 22 percent of the world's

population but only seven percent of its cultivated land³, most of it yielding little more than what a farmer needed to feed his family. The country's foreign trade, in per capita terms, was a pitiful USD \$25 and its Gross National Income (GNI) per capita was a woeful USD \$220, which was not only 42 times smaller than the OECD average of \$9,317, but also only a third of the average for Sub-Saharan Africa⁴.

'Reform and Opening' and the Embrace of Free Enterprise

Short-term reforms ushered immediately after Deng's rise to power were meant to liberate Chinese citizens from the strangling yoke of central planning and to give people a modest degree of freedom by which to engage in for-profit enterprise. Urban employers—mostly State-Owned Enterprises (SOEs)—were thus encouraged to pay employee bonuses to reward merit and productivity; private enterprises were allowed to form to produce and market new products and services; farmers were allowed to grow what they wanted to rather than what the state dictated; generally speaking, Chinese were told that the pursuit of material rewards would not only be acceptable but, in fact, encouraged.

Deng understood clearly that in order to transform its vast, backward country and to lift its citizenry out of poverty, drastic policy changes at the national level were urgently needed. These policy changes, encapsulated in the government's new 'Four Modernizations' platform—Modernizing Agriculture, Expanding Industry, Developing Science and Technology and Upgrading China's Defense Forces—provided for a fresh, yet imperfect blueprint. This blueprint together with the free enterprise system and a global trade framework that culminated in China's accession to the World Trade Organization (WTO) in 2001 would propel China from an economic backwater to the second largest economy in the world in 40 years — a growth rate that was nothing short of an economic miracle. As Deng sought to 'reform and open' China, he empowered his premier, Zhao Ziyang, to steer the rigid Chinese economy through market reforms that over time improved industrial efficiency and profitability without

1. UNESCO Institute for Statistics.

2. *Resident's income grows 7% annually since 1978*, China Daily, November 1, 2008. (http://www.chinadaily.com.cn/china/2008-11/01/content_7164734.htm)

3. *China Enters the 1980s*, Ross Terrill, Foreign Affairs, Spring 1980.

4. GNI per capita, Atlas method (current USD). Sources: World Bank national accounts data, and OECD National Accounts data files.

destabilizing society. He did so, in large part, by developing a dual-pricing system in which State enterprises were still required to meet centrally planned quotas which were sold at prices set by the state (these had choked profit incentives for decades); but beyond these quotas enterprises were free to sell surplus production at virtually any price the ‘market’ would pay. So, as the fledgling economy was taking off in the 1980s on the back of supply-side market-based incentives, the share of production under the price-controlled quotas became a shrinking portion of a rapidly expanding economic pie. This created a virtual growth cycle very similar to those that exist in free-market economies where supply increases to satisfy demand until the two are in equilibrium.

Less enlightened policies, such as the One Child Policy, implemented in 1979 in rural China and in 1980 in urban centers, underscored the sense of urgency and the lack of material prosperity on the minds of Chinese leaders as the country’s population approached one billion (it surpassed this mark in 1982).

While a brief look at China’s history in the last 40 years is important to understand the context of today’s China, the purpose of this paper is to illustrate how, in our view, the China of the 21st century will create the largest upper middle-class population segment in the world while remaining one of the primary engines of global economic growth. Keeping this premise in mind, this paper seeks to answer three fundamental questions.

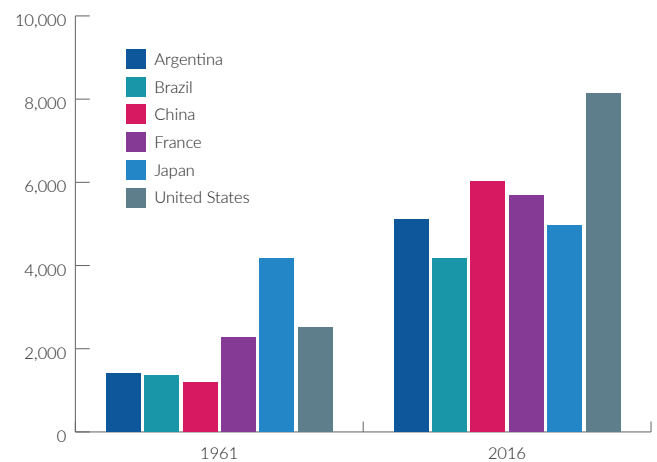
First, what will propel China’s growth in the next ten years and how will this growth benefit its own citizens? Second, as the country’s markets continue to open their doors to foreign capital, how can investors harness China’s future growth and avoid the pitfalls that bedevil many emerging market investment vehicles? And, third, why is now the time to partake in China’s ‘new economy’ and how is it different from past experience?

Emerging Market Pitfall: Avoiding the Middle-Income Trap

After the country’s ruinous Great Leap Forward (1958-1961), which was designed by the country’s central planners under Mao Zedong to rapidly accelerate the country’s agricultural output through the reorganization of rural

labor into decentralized communes, China’s agricultural industry lay in ruins. Not only did China fail to fulfill its promises of vastly expanding agricultural output whose surplus could be exported (much of it meant to repay Soviet loans) but, tragically, an estimated 45 million Chinese died of starvation as the country, largely closed off to the rest of the world, failed to produce enough food to sustain an expanding population while much of its grain was shipped to the Soviet Union⁵. According to World Bank figures, China’s cereal yield (measured in kilograms per hectare) in 1961, the Great Leap’s last year, was less than half that of the United States and less than a third that of Japan⁶. By contrast, in 2016 China had actually ‘leaped’ over Japan and was producing 20% more per hectare, while trailing the United States by only 26% (Figure 1).

Figure 1. Cereal Yield (kg per hectare) for Select Countries, 1961 & 2016



Source: World Bank, Food and Agriculture Organization

Improvements in agriculture were of utmost importance in predominantly rural China at the outset of the country’s reform and opening program, with almost 30% of the country’s GDP in 1980 derived from ‘Primary Industry’, or, more specifically, “agriculture, forestry, animal husbandry and fishery industries”⁷. ‘Secondary Industry’,

5. *China’s Great Famine: the true story*, The Guardian, January 1, 2013. <https://www.theguardian.com/world/2013/jan/01/china-great-famine-book-tombstone>

6. Source: World Bank, Food and Agriculture Organization. Cereal yield, measured as kilograms per hectare of harvested land, includes wheat, rice, maize, barley, oats, rye, millet, sorghum, buckwheat, and mixed grains.

7. The classification by the three strata of industry is based on the ‘Regulation on the Classification by Three Strata of Industry’ made by the National Bureau of Statistics [of China] in 2012.

which includes mining, manufacturing, energy production (electricity, steam, gas and water) and construction, accounted for 48% of the country's GDP that same year, as large State Owned Enterprises (SOEs) dominated the industrial landscape in China and employed the majority of non-rural workers in the country. Thus, as Deng began to implement his economic reforms, almost 80% of China's economy was dependent on basic agriculture, heavy industry and rudimentary manufacturing. Only 22% of China's economy, on the other hand, was driven by consumption and services, or 'Tertiary Industry' (Figure 2). And even though 1980 turned out to be the peak of Secondary Industry, as a percentage of the country's GDP, the sector would continue to propel China's emergence as an economic power in the next three decades. Only in 2016 did Secondary Industry drop below 40% of the country's

Figure 2. Composition of China's GDP by Three Strata of Industry in 1980

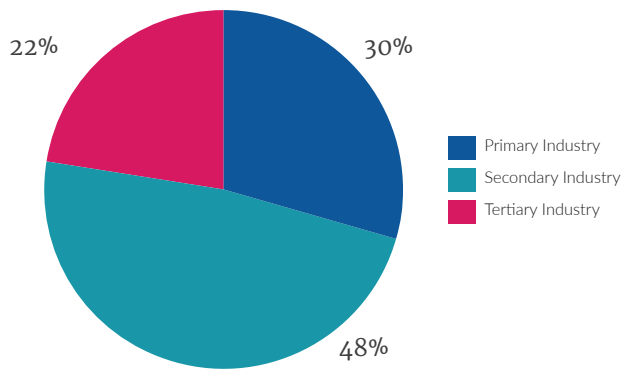
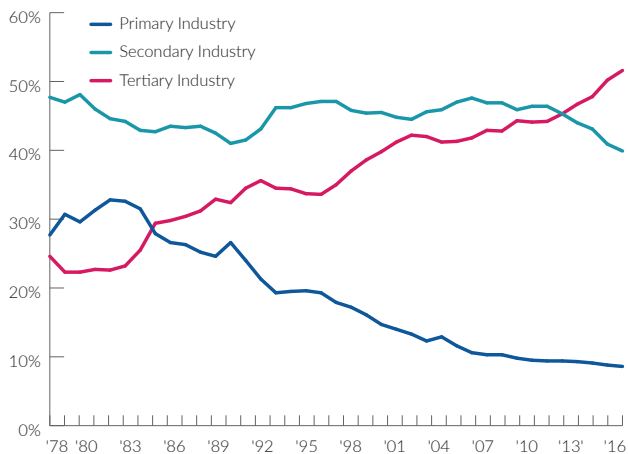


Figure 3. Composition of China's GDP by Three Strata of Industry 1978-2016

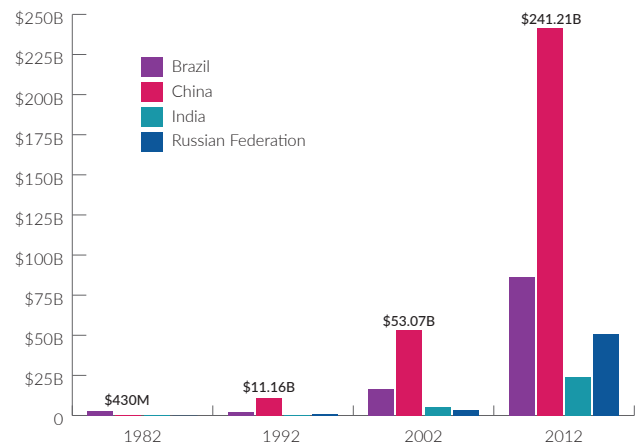


Source: National Bureau of Statistics of China

GDP. Meanwhile, agriculture, or Primary Industry, peaked in 1982 at 33% of economic output. It has since been in steady decline relative to Secondary and Tertiary Industries, accounting now for less than 10% of the country's economic output since 2009 (Figure 3).

As Deng's reforms took hold and China's borders were opened for business with the outside world, foreign capital poured in. For perspective, consider that in 1982, as reforms were getting under way, China received USD \$430 million in net foreign direct investment, or less than 15% of the amount of money investors plowed into Brazil that same year. Only ten years later, the USD \$11.15 billion invested by foreigners in China was five times the amount of capital invested in Brazil, nine and a half times what investors sent to a newly opened Russia and forty times what they invested in India, the world's second most populous country. Twenty years later, in 2012, with the spigot fully open, foreign direct investment in China totaled a staggering USD \$241 billion, outpacing Brazil by USD \$155 billion, Russia by USD \$191 billion and India by USD \$217 billion (Figure 4).

Figure 4. Foreign Direct Investment, Brazil, China, India & Russia 1982-2012



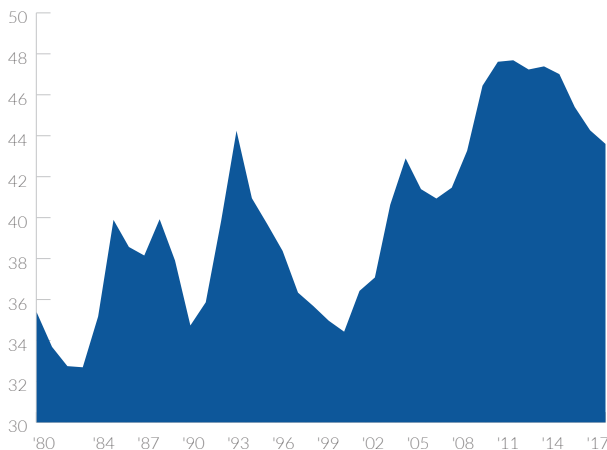
Foreign direct investment, net inflows (BoP, current US\$). Source: World Bank

As a result of the massive influx of foreign investment, China's economy took off as new factories were built, employing millions of its citizens. Many of these factories, which typically were joint ventures between private owners and the state, absorbed millions of migrant workers from the countryside looking for opportunity.

SOEs, which employed a large portion of the more ‘privileged’ urban workers, grew rapidly on the back of state investments, gradually becoming the country’s economic champions and providing not only salaried employment to millions of workers but also benefits such as health care and access to better housing. As the country built out its industrial capacity and infrastructure, gross capital formation rose from 33% of GDP in 1982 to a staggering 48% at its peak in 2011, a level that even today continues to outpace other emerging economies by wide margins. As a reference point, gross capital formation in India, the closest example of a large emerging economy, accounted for 30% of the country’s GDP in 2012, even though India is at an earlier stage of development than China, where infrastructure development and industrialization should play the role they did for China in the 1980s and 1990s. Other relatively large emerging economies have similar gross capital formation rates, such as Indonesia with 34%, while the likes of Mexico (24%), Russia (23%), South Africa (19%) and Brazil (15%) trail well behind. Highly industrialized economies in developed markets, such as the U.S. and the European Union have gross capital formation rates nearing 20% as their capital base is well formed and their industrial capacity and infrastructure well developed (Figures 5 & 6).

As fixed asset investment accelerated, gross capital for-

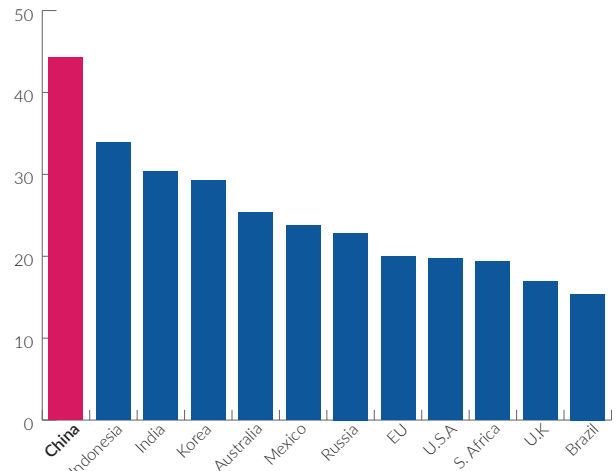
Figure 5. Gross Capital Formation as % of GDP in China, 1980–2017



Source: World Bank national accounts data and OECD National Accounts data files.

mation contributed an increasing share of China’s economic growth during the 1980s, 1990s and early 2000s, as measured in 10-year windows, which helps to smooth out the cyclicity from annual readings. So, whereas for the 1987 to 1996 period, gross capital formation contrib-

Figure 6. Gross Capital Formation as % of GDP for Select Countries, 2016

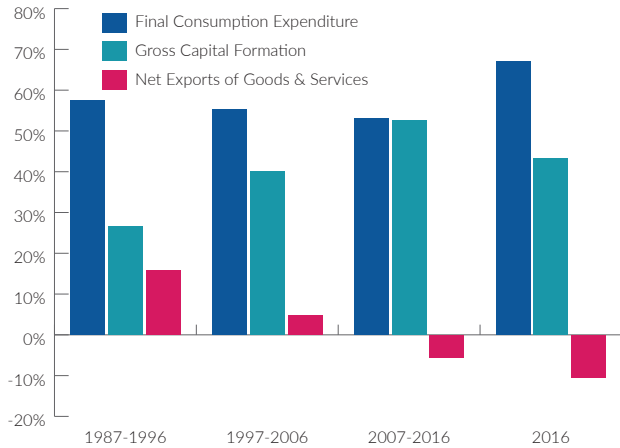


Source: World Bank national accounts data, and OECD National Accounts data files.
NOTE: Gross capital formation (formerly gross domestic investment) consists of outlays on additions to the fixed assets of the economy plus net changes in the level of inventories. Fixed assets include land improvements (fences, ditches, drains, and so on); plant, machinery, and equipment purchases; and the construction of roads, railways, and the like, including schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings. Inventories are stocks of goods held by firms to meet temporary or unexpected fluctuations in production or sales, and “work in progress.” According to the 1993 SNA, net acquisitions of valuables are also considered capital formation.

uted 26.7% of annual GDP growth in China, two decades later, for the 2007 to 2016 period, this number almost doubled, with gross capital formation contributing more than half of China’s annual GDP growth. Interestingly enough, as the country became the “world’s factory,” the contribution of net exports to GDP growth declined steadily from 15.8% of GDP growth in the 1987–1996 period, to a negative 5.6% in the 2007–2016 period. This is not to say that Chinese exports and overall trade did not play a significant role in the country’s growth but, rather, to emphasize how the country’s domestic economy absorbed a significant amount of its industrial capacity and manufacturing production, with hundreds of millions of new consumers entering the market in just a few years’ time. As they did, they gradually became the engine that drove true economic growth. Notably, as hundreds of millions of Chinese were lifted out of poverty, consumption steadily represented well over half of incremental GDP growth decade after decade (Figure 7), underscoring the purchasing power of a massive low- to middle-income segment of Chinese workers.

As fixed asset investment expanded, domestic credit expanded alongside providing the purchasing power needed by a voracious demand for the raw materials needed to build up the country’s industrial base and infrastructure. The banking sector, dominated by large state-owned

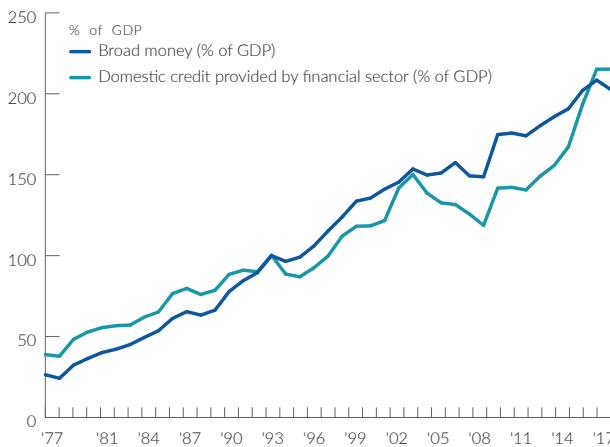
Figure 7. Average Contribution by Category to Annual GDP Growth, 1987–2016



Source: National Bureau of Statistics of China

banks, did its part, expanding credit to the economy’s private sector in tandem with the central government’s stimulus to SOEs and vast programs of public works across the country. Not surprisingly, the country’s money supply expanded in tandem by a factor of eight between 1978 and 2017 (Figure 8).

Figure 8. Growth in China’s Money Supply & Domestic Credit, 1977–2017



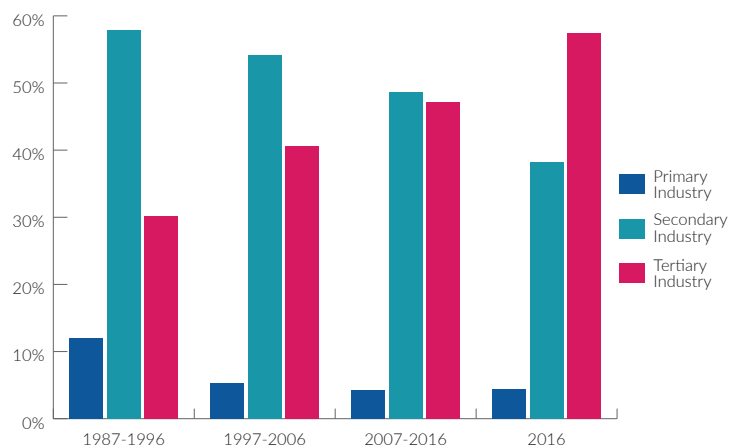
Source: International Monetary Fund, International Financial Statistics and data files, and World Bank and OECD GDP estimates.

With scale came a gradual decline in the rate of returns on capital in China, which is estimated to have plateaued at about 20% in the mid-2000s after reaching levels around 25% in the 1990s⁸. Overinvestment in some areas of the

8. *The Return To Capital In China*, December 2006, Chong-En Bai, Chang-Tai Hsieh, Yingyi Qian, National Bureau of Economic Research (U.S.).

economy, such as steel production and construction led to the misallocation of resources, environmental degradation and an increase in nonperforming loans among banks, not to mention write-offs incurred by the national and provincial governments of large fixed investments across the country. This prompted the Chinese central government, at the turn of the century, to rationalize its investment program and place a stronger emphasis on economic growth focused on Tertiary Industry, the consumer driven and services-based sector of the economy. This can be seen in Figure 5, which shows gross capital formation topping off at 47% of GDP in 2012 and gradually falling to under 44% in 2017, a figure we expect will continue to decline as fixed investment across the economy falls. As a result of this, the contribution of Secondary Industry to GDP growth fell steadily in the last two decades, falling below 50% in the early 2000s as shown in Figure 9. So, while in the decade through 2006 Secondary Industry had accounted for 54% of GDP growth to 41% for Tertiary Industry, the following decade, ended in 2016, both sectors of the economy were averaging an almost equal contribution to GDP growth of around 48%. By 2016, Tertiary Industry, led by the new Chinese consumer, had leaped over Secondary Industry and contributed over 57% of the country’s GDP growth, almost 20 percentage points higher than Secondary Industry. This suggests that the Chinese economy is moving into its final phase of development where Tertiary Industry accounts for the lion’s share of the GDP.

Figure 9. Average Contribution to Annual GDP Growth by Three Strata of Industry, 1987–2016



Source: National Bureau of Statistics of China

Thanks in no small part to the massive influx of foreign investment into China since the early 1980s, Deng's economic reforms lifted 800 million Chinese out of poverty in only 40 years. In the process, infant mortality rates fell by 85 percent and life expectancy for the average Chinese increased by almost nine years⁹. Today, China's per capita GDP of almost USD \$9,000 is 57 times larger than it was in 1978 (Figure 10), when 'reform and opening' began under Deng. While astonishing, it is well below the country's potential, and still trails such emerging economies as Mexico, Brazil and Malaysia, not to mention the OECD average of USD \$38,000. It trails large advanced economies such as the US, Japan and Europe by \$58,000, \$30,000 and \$25,000 per capita, respectively (Figure 11). This, however, is not an indictment on the country's growth or the makeup of its economy; on the contrary, the upside in per-capita GDP growth highlights the magnitude of the opportunity for nimble investors to partake in the next leg of the country's growth as China moves into its next stage of development and climbs the ranks of advanced economies. In order for China to do so, it needs a much

different economic playbook than the one that got it here, as growth in and of itself will no longer move the needle for the 1.4 billion Chinese today, especially as credit-fueled fixed investment no longer offers the same bang for the buck that it did in preceding decades. And while the pace of change will continue to be dependent to some degree on the central government's dictums and the degree to which they allow market forces to allocate capital, it is China's middle-class, which is already a significant share of the population, that will be one of the primary sources of growth, both domestic and global, in the years ahead. According to the IMF, in 2017, 25% of global economic growth was contributed by the world's advanced economies. By 2023, their share of global GDP growth will have shrunk to 15% while China alone will be responsible for 31% of the world's GDP growth (Figure 12). Considering that almost a third of the country's growth is already driven by consumer goods and services, it is not hard to imagine how the bulk of China's economic growth and over a quarter of the world's economic growth will come from what we refer to as China's 'New Economy.'

Figure 10. China's GDP Per Capita (Current US\$), 1978-2017

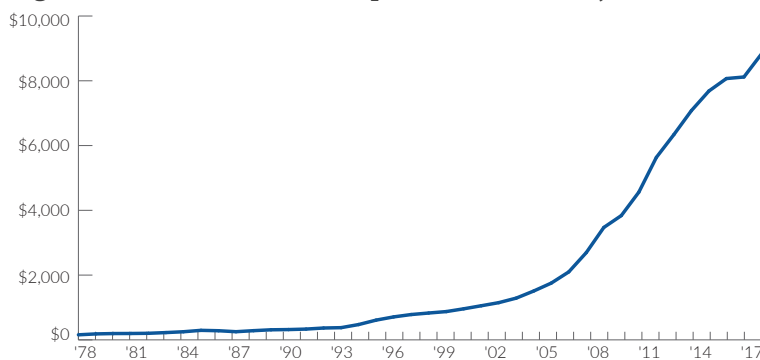
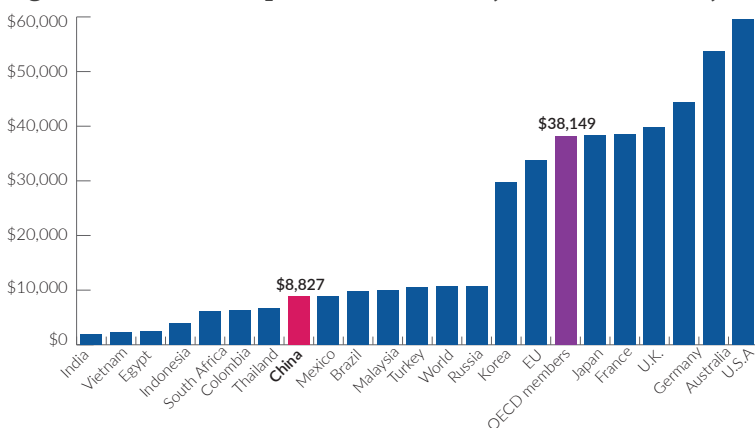


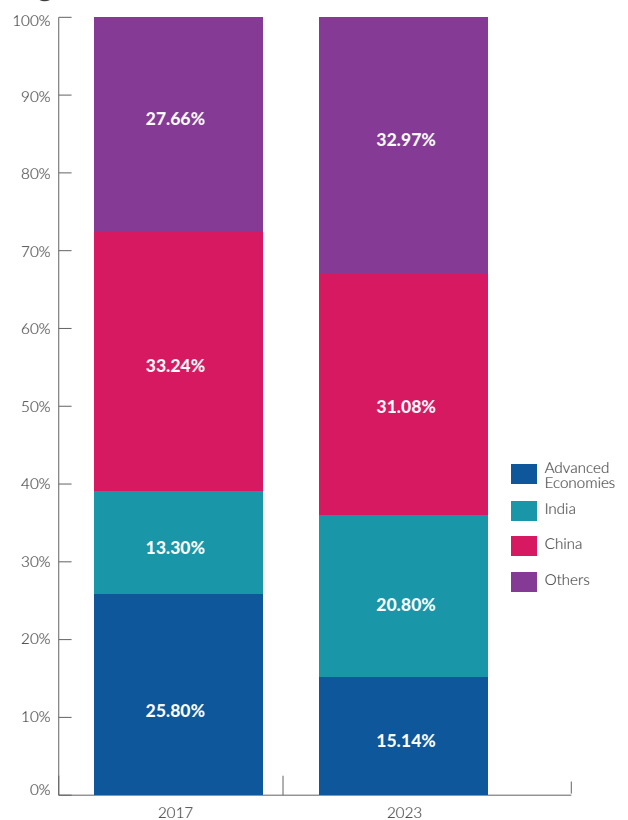
Figure 11. GDP Per Capita (Current US\$), Select Countries, 2017



Source: World Bank national accounts data, and OECD National Accounts data files.

9. World Health Organization, Global Health Observatory (infant mortality). National Bureau of Statistics of China (life expectancy).

Figure 12. Contributions to World GDP



Source: World Economic Outlook, April 2018: Cyclical Upswing, Structural Change, International Monetary Fund

China's 'New Economy'

Before taking a closer look at the investment opportunities being created by the rapidly changing dynamics in China's economy, it's important to define what MarketGrader refers to as China's 'new economy.' The old economy, as described above, has been largely dependent on fixed asset investments, needed to build up the country's industrial and manufacturing base; it focused on large scale urbanization and the development of massive infrastructure projects; and on the development of 'national champions' used by the state to direct investments and allocate capital to preferred enterprises. This, as outlined above, lifted hundreds of millions of people out of poverty, raised living standards broadly and put China on the global economic map. The country's rapid industrialization also engendered a series of unintended consequences and excesses, including a very significant level of environmental degradation and pollution, a rapid build-up of debt at both the public and private levels and imbalances across large swaths of the economy. The growth of SOEs in heavy industry led to overcapacity across many areas of the economy, as inefficient 'national champions,' who employ millions of workers, prioritized size over efficiency and profitability.

The 'new economy', in contrast, is defined as one where the market—at least in the Chinese sense of the word—will play a more active role in the allocation of resources, most likely in fits and starts as government policy still often gets in the way of this. It's an economic model driven by consumption of goods and services as a means to lift people's incomes to par with global middle-class standards. It is also an economic model where intellectual property, which underlies an increasing portion of the 21st century global economy, is expected to contribute significantly to economic growth through technological innovation, a goal that has been clearly stated by economic planners in China. To be clear, while China's private sector is significantly larger and more influential today than when the country embarked upon 'reform and opening,' the state continues to play an outsized role in the country's economic development. Ironically, while detrimental in many ways to the flourishing of the country's private sector, the state's role and its central planning serves as a useful guide to investors seeking to gain exposure to

the fastest growing and most profitable parts of China's economy.

From the consumer's point of view, China's 'new economy' is one where the consumer appetites of the country's rising middle-class go beyond owning 'things' and increasingly focus on life experiences such as wellness, travel, leisure, education and overall personal wellbeing. It is one that goes beyond fulfilling the basic necessities of its citizens to one where discretionary forms of spending have a greater influence over the consumer economy. To be clear though, as China continues to be in many ways a relatively poor country, with almost 40% of its citizens still living in rural areas, future consumption patterns won't be completely dictated by affluent urban consumers focused on experiences. Much room for growth still remains in raising the living standards of Chinese in poverty. Together these trends should benefit companies in both the consumer discretionary and consumer staples sectors as affluent Chinese seek better products, better life experiences and a greater variety of services, while less affluent Chinese work to improve their lot and acquire the goods heretofore afforded only by members of the middle-class.

Another sector that will benefit from China's new economy is health care. In its basic form, health care is a consumption good with different health care companies producing goods and services for a wide range of consumers on the economic spectrum. Therefore, just like the consumer discretionary and consumer staples sectors, the health care sector will cater to the affluent as well as the millions of poor Chinese still seeking higher living standards. In addition, as China's society ages, spending on health care by both the public and private sectors will increase. Beneficiaries of this trend include traditional pharmaceutical companies that will compete with large Western firms, as well as 'Chinese' medicine purveyors of more 'traditional' remedies and health solutions. Biotechnology, an important part of the government's drive to become a global pioneer in cutting edge technologies, should also benefit from increased government and private spending on R&D and innovation. Medical device manufacturers and managed health care facilities such as nursing homes and hospital will also be the obvious beneficiaries of higher per capita health care spending across China.

Technology and the Role of ‘Made in China 2025’

Made in China 2025 (MIC 2025) is an ambitious ten-year plan announced by China’s State Council in 2015, whose goal, ostensibly, is to provide a comprehensive national policy for the upgrade of Chinese industry into a global leadership role in advanced manufacturing¹⁰. And while many of the ten specific areas on which it focuses might be deemed as ‘Industrial’ sectors, MIC 2025’s primary focus on ‘smart manufacturing’ is tied directly to connecting all elements of the country’s new industrial base to the Internet. As such, much of the underlying architecture of this new manufacturing drive will be built on advanced, Internet-based technologies such as artificial intelligence, fifth-generation Internet networks (5G), cloud computing, robotics, semiconductor manufacturing and, generally speaking, the setting of global Internet technology standards in support of Chinese companies becoming global ‘champions.’ The following are MIC 2025’s ten priority sectors:

- Next-generation information technology
- High-end numerical control machinery and robotics
- Aerospace and aviation equipment
- Maritime engineering equipment and high-tech maritime vessel manufacturing
- Advanced rail equipment
- Energy-saving and new energy vehicles
- Electrical equipment
- New materials
- Biomedicine and high-performance medical devices
- Agricultural machinery and equipment

An important aspect of MIC 2025, with potentially profound consequences to what we call the ‘new economy,’ is the plan’s focus on what it calls “indigenous innovation.” This refers to basing R&D in the plan’s priority sectors domestically, in an effort to develop indigenous technology, intellectual property and brands. This means domestic technology companies in the areas listed above stand to gain market share from traditional overseas players, an area that should be of interest to investors seeking a direct exposure to China. Furthermore, the plan calls ex-

PLICITLY for the substitution of technologies being provided by international players with those developed locally as part of the indigenous innovation program, clearly a direct threat to foreign technology companies operating in China. Explicit targets in the plan for the substitution of foreign technology in key areas of ‘smart manufacturing’ call for 70% of all robotics manufacturing, 60% of all cloud computing and big data and 60% of all IT for smart manufacturing (to name a few) to be domestically sourced by 2025¹¹. Likewise, MIC 2025 extends to the Health Care sector, with explicit references by China’s Ministry of Industry and Information Technology (MIIT) to supporting the development of locally produced medical devices and indigenous capabilities in health innovations. Such ‘support’ includes the ‘encouragement’ of health care institutions to procure and use domestically produced medical devices. Additionally, government officials have, on numerous occasions, lamented the country’s dependence on foreign companies for the vast majority of patented pharmaceuticals used in the country and emphasized the development of biomedicines in China.

MIC 2025 is not limited, however, to high-end manufacturing, Internet technology and biomedicines alone. The plan explicitly calls for indigenous brands to account for the lion’s share in the manufacturing of consumer goods such as TVs, air conditioning units and refrigerators, with so-called self-sufficiency rates of at least 80%¹². The magnitude of the opportunity for domestic companies to benefit from rising consumer demand as a result of China’s swelling middle-class is not lost on Chinese officials. This is explicit in government pronouncements, such as the following press communication by China’s State Council:

The State Council, The People’s Republic of China

“China will make more efforts to elevate the quality of consumer goods and promote the “Made in China” brand to meet growing demand, Premier Li Keqiang said.

10. The State Council, The People’s Republic of China. <http://english.gov.cn/2016special/madeinchina2025/>

11. *Made in China 2025, The making of a high-tech superpower and consequences for industrial countries*, Jost Wubbeke, Mirjam Meissner, Max J. Zenglein, Jaqueline Ives, Bjorn Conrad, December 2016. Mercator Institute for China Studies. <https://www.merics.org/en/papers-on-china/made-china-2025>

12. *Made in China 2025: Global Ambitions Built on Local Protections*. U.S. Chamber of Commerce, 2017. https://www.uschamber.com/sites/default/files/final_made_in_china_2025_report_full.pdf

The government will introduce compulsory standards on quality, intensify supervision and spur businesses to improve products, according to a statement released on Aug 25 [2016] after a State Council conference chaired by the Premier.

Sectors including food, home appliances, electronics, clothing, cosmetics, daily chemical products and sports goods were highlighted at the meeting.

China is seeking an upgrade of its manufacturing sector to meet increasing demand from domestic consumers. An array of measures, such as the supply-side structural reform, have been carried out.”¹³

Relevance of MIC 2025 to the New Economy

In a country where central planning still plays an outsized role in economic development, it's inevitable that China's MIC 2025 plan will result in the picking of 'winners' and 'losers' in the years ahead. In our view, the government's stated desire to become a leading global force in advanced manufacturing and technology, combined with a rising middle-class and a consumer-driven economy will unquestionably result in greater opportunities for 'new economy' sectors over 'old economy' ones. Consumer-oriented products, brands and services, as stated by the Chinese government, stand to benefit enormously from the country's next leg of development. Likewise, domestic technology and high value-added manufacturing companies together with domestic companies producing pharmaceuticals, biomedicines and medical devices, all rank high in the government's list of companies and industries it would like see leading the country's development in the next decade. And, to be clear, while not all of these companies are publicly traded and thus accessible to foreign investors, many of them are, with the number of listed companies in the Consumer Discretionary, Consumer Staples, Health Care and Technology sectors totaling almost 1,400. Additionally, China's focus on allowing private markets to play an increasingly larger role in the allocation of capital does mean that many of China's fu-

ture winners will look to the capital markets as a source of funding for future growth initiatives. By the end of 2017, the backlog of companies awaiting regulatory approval from the China Securities Regulatory Commission (CSRC) topped 400 for the first time ever¹⁴, which goes to show the voracious appetite for private capital among fledgling enterprises across the country. As these firms go public, MarketGrader will cover them, rate them, making them eligible for selection to our New Economy Index¹⁵, affording investors a forward-looking means to access China's growing public markets.

The next section of this paper describes in greater detail the economic trends that will power the areas of China's new economy described above. This will be followed by a discussion of how investors in China's public markets may take advantage of these opportunities by owning certain segments of China's domestic equity market.

China's New Economy Winners: The Consumer, Health Care & Technology

The Consumer

As 'reform and opening' got underway, China's consumer class was virtually non-existent. The average urban-dwelling Chinese household had an annual disposable income of CNY 478 (less than USD \$300) in 1980, which in itself was two and a half times the amount of disposable income for the average Chinese household in rural China (CNY 191). Only six out of every one hundred households nationwide owned a washing machine while less than one in every hundred owned a refrigerator or a color television. In 1981, annual cash expenditures on food accounted for 92% of the total annual cash expenditure by the average Chinese citizen living in a city, leaving little room for other forms of discretionary spending. By 1992 this number had shrunk to 55% and by 2016, annual expenditures for food by urban Chinese accounted for only 29% of all cash expenditures¹⁶ (Figure 13).

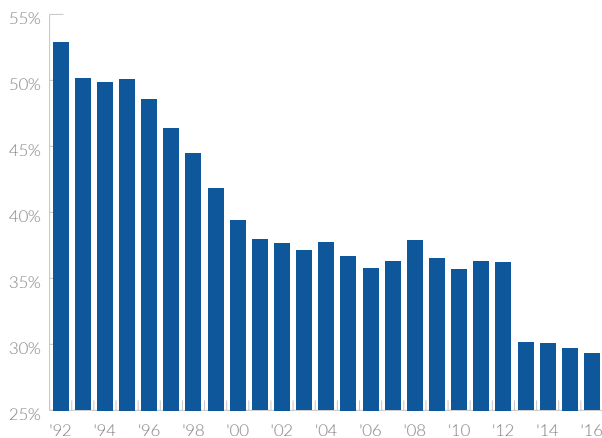
14. EY Global IPO Market Study Report: 2017 Review and 2018 Outlook, Ernst & Young Global Limited.

15. See 'CSI MarketGrader China New Economy Index' www.MarketGrader.com.

16. Basic Conditions of Urban Households, National Bureau of Statistics of China.

13. The State Council, The People's Republic of China. http://english.gov.cn/premier/news/2016/08/26/content_281475426120906.htm

Figure 13. Per Capita Annual Food Expenditure as % of Total Consumption Expenditure

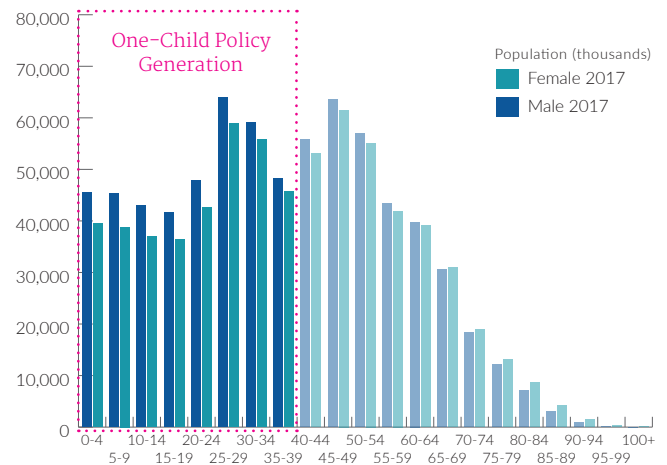


Source: National Bureau of Statistics of China

While the period between 1978 and 1980 marked China’s transition from ‘class struggle’ to economic development under Deng’s ‘Four Modernizations’, in our view no other policy from that time will have a larger impact in the next leg of China’s development than the one-child policy. Often overlooked as a relic of China’s past, the one-child policy defined the generation now coming of age in China’s urban, sophisticated and educated middle-class households. More specifically, over half of China’s current population (53%) were born under the policy (ages 0–38 today), and have grown up in a country that is vastly different from that of their parents and grandparents (Figure 14). And despite the fact that China is an ageing society with a declining birth rate (more on this later), it is the one-child policy generation that will define spending and consumption patterns in China as the country evolves into a developed economy, giving this cohort unique power to steer the country’s economic direction and, therefore, define future investment winners and losers.

By definition, the one-child policy generation born after 1980 is part of the world’s so-called Millennial generation, which as we know is having a profound impact in global spending patterns. In China, their impact is arguably much greater than in other parts of the world, considering that virtually all of these millennials are single children, which differentiates them in important ways from their global counterparts. For example, virtually none of them have student debt as they begin their professional careers, with their education having been paid for entirely by the

Figure 14. China’s Population by Age Group, 2017



Source: United Nations, Department of Economic and Social Affairs – Population Division

state or by their parents and grandparents. This is in stark contrast with many millennials in the United States, who often graduate from a college or university with tens of thousands of dollars in student loan debt. Many Chinese millennials also own a home since early adulthood, which has often been gifted to them by their parents or grandparents. Also, as they mostly came of age in an era of abundance, increasing prosperity and an optimistic view of their country’s economic future, they are willing to spend more of their income on discretionary goods than their parents. While these millennials are altering consumption patterns globally, the impact they are having in China exceeds anything seen elsewhere by the sheer magnitude of their numbers. Consider, for example, that over 400 million millennials in China today exceed the entire population of the United States, where millennials total a ‘mere’ 65 million, or 20% of the country’s population. In Europe they account for just over 18% of the total population. And while approximately one billion of the world’s millennials live in the Asia-Pacific region, a full third of them live in China. Perhaps more important to our thesis about the influence this generation is having on consumption patterns in China is the fact that Chinese millennials are, at this stage in their lives, much better off than their parents were in their 20s and 30s. Many, in fact, trail the older generation’s overall spending just marginally, creating a very different consumption dynamic to the one between baby boomers and millennials in advanced economies such as the U.S. and Europe.

According to a KPMG study published in 2017, Chinese millennials born between 1985 and 1989 spent on average about RMB 5,852 a month, only slightly less than RMB 6,040 a month spent on average by the older generation. Their average monthly income was estimated at RMB 11,738 compared to RMB 12,423 for the rest of country's population. But 59% of millennials surveyed in the study expected an increase in their level of income in the next five years with 31% of them expecting a significant increase¹⁷. So, how are Chinese millennials affecting consumer patterns? The simple answer lies in their preferences for spending on experiences and goods that improve their overall wellbeing rather than the purchase of 'things.' These preferences cover healthier eating habits; healthier lifestyles including exercise and overall wellbeing; looking more beautiful; having more fun, including more entertainment and travel; more education and learning; spending more on luxury items as symbols of status; owning a better and more beautiful home; and doing more online, especially on their mobile phones.

The impact these spending patterns, not only by millennials but also by China's increasingly affluent middle-class, are having on expenditures in China are already visible and profound. Travel by Chinese tourists offers a good example. In 1997 Chinese tourists made a total of 644 million trips domestically for leisurely purposes (vacations, sight-seeing, shopping, visiting relatives, etc.). While not inconsequential, the number is dwarfed by the 4.4 billion domestic trips taken by Chinese tourists in 2016 (Figure 15). Equally impressive is the growth in outbound tourism, with Chinese citizens taking over 135 million trips overseas in 2016, a 25-fold increase from 20 years earlier (Figure 16). Furthermore, collective spending by Chinese tourists traveling domestically in 2016 totaled almost RMB 4 trillion in 2016 compared to a little over RMB 200 billion in 1997 (Figure 17). This growth is having a discernible impact on online travel websites, cruise and hotel operators, airlines, travel agencies, retailers and all manner of industries connected to the burgeoning travel trade.

Figure 15. Domestic Visitors

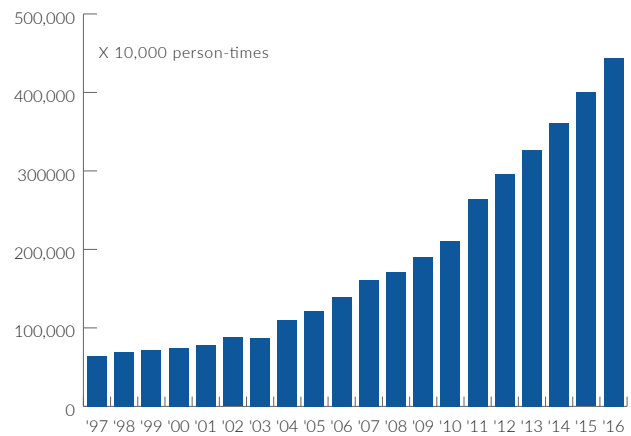


Figure 16. Chinese Outbound Visitors

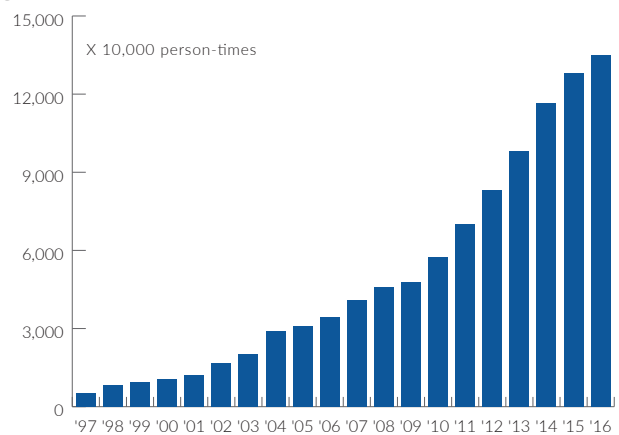
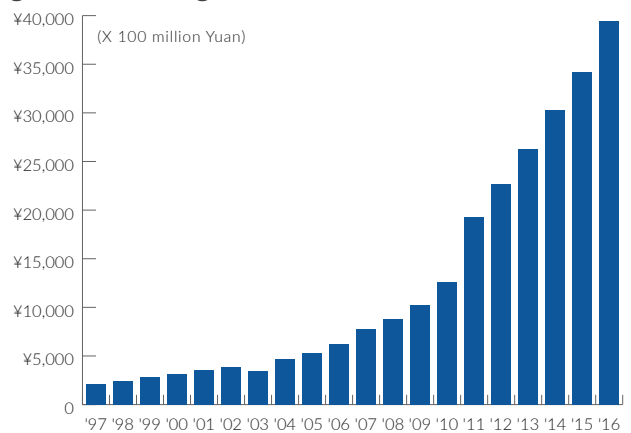


Figure 17. Earnings from Domestic Tourism



Source: National Bureau of Statistics of China

Another area of rapid growth that reinforces our story about Chinese consumers' desire for healthier living is the organic food industry. China has rapidly climbed the global ranks to become the fourth largest market for packaged food and beverages, based on USD \$2.8 billion in sales in 2017, according to the U.S. Organic Trade Associa-

17. *China's Connected Consumers – The rise of the Millennials*, 2017. KPMG & Mei.com.

tion (USOTA)¹⁸. On a per capita basis, however China ranks only as the 32nd largest market in the world, with a mere USD \$2.50 spent per capita on packaged organic products, underscoring the immense room for growth for local providers of organic products. In fact, USOTA forecasts future annual growth of 14.3% in China's organic foods market, ranking it third in the world by this metric. In 2018 alone, China's market is expected to grow by 20%, outpacing the Asia Pacific region's expected growth of 10%.

Similar spending patterns are visible across broad segments of the consumer discretionary sector including apparel, home furnishings, household appliances, movies and entertainment, beer and liquor, restaurants and beauty products. Such trends aren't lost on government officials who explicitly aim to recapture much of the Chinese consumer's spending domestically as opposed to what is now directed overseas or spent on foreign brands. In fact, China's State Council has explicitly referred multiple times in official communications to the importance of improving standards in consumer goods among domestic manufacturers as a means to capture a growing market share from China's growing middle-class.

The State Council, The People's Republic of China

“By 2020, standards of consumer goods are expected to reach, or approximate, international standards in key areas, Tian Shihong, president of the Standardization Administration, said over the weekend [August 2016].

The value of well-known Chinese brands will be significantly enhanced, he added.

“After 30 years of reform and opening-up focusing on economic development, people no longer just want food and accommodation but thirst for goods that can make their lives easier, more comfortable

and inspiring,” said Xia Xueluan, a professor of sociology at Peking University.

“As the number of middle-class families increas-

es, the high-end market is expanding fast, which drives the government to focus on basic demands and high-end ones too,” said Feng Liguo, a researcher at the China Enterprise Confederation. Meanwhile, much of domestic consumption was attracted to overseas markets in developed economies where standards and quality of goods can out-do those sold at home.

Chinese tourists spent 1.5 trillion yuan (\$226 billion) while traveling in other countries last year, half of the expenditure went to shopping, according to the Ministry of Commerce.

Chinese consumers now desire higher-quality goods than before and domestic manufacturers should understand the changing demand as well as perfect current technologies and pursue new ones to make better products, said Huang Qunhui, director of the Institute of Industrial Economics at the Chinese Academy of Social Sciences.

In addition, Chinese investors and buyers were estimated to purchase overseas real estate properties with \$150 billion last year, said Wang Jianlin, chairman of Wanda Group, a Dalian-based developer.

All together, Chinese buyers spent more than 2.5 trillion yuan (\$374.4 billion) overseas last year and this spending should be drawn back only with higher-quality products, Wang said.

“We must be sober about this phenomenon, that it's impossible to restrict or stop Chinese spending overseas. But we can find ways to win their purchasing power back,” Wang said.”¹⁹

18. Global Organic Trade Guide, Organic Trade Association. <https://globalorganictrade.com/country/china>

19. The State Council, The People's Republic of China. http://english.gov.cn/policies/policy_watch/2016/08/30/content_281475429181659.htm

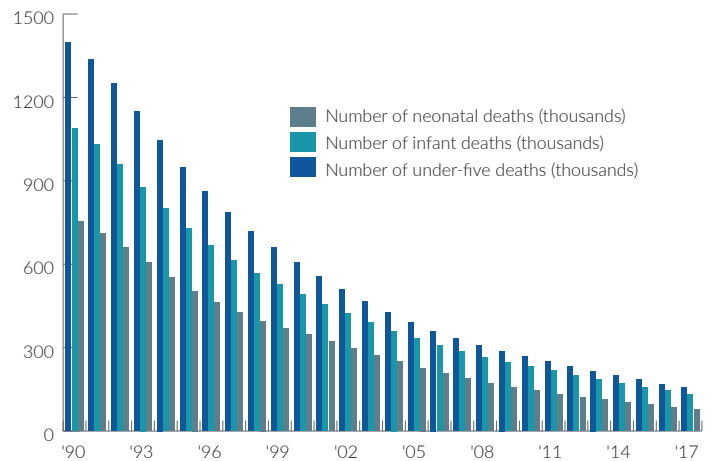
Health Care

In MarketGrader's view, the case for significant and sustained increases in health care expenditures is not only a Chinese phenomenon but is also connected to a global secular trend that is derived from three particular factors. The first factor is demographic, which is causing a dramatic increase in much of the world's ageing population, including in China. The second factor is economic, which is leading to a significant rise in living standards and disposable incomes for large swaths of the global population in the last few decades, and is particularly impacting China as a result of its dramatic economic transformation. The third factor is technological, which is having a massive impact on the development of health care products that are better targeted to specific diseases; have fewer side effects than prior treatments; and are more widely available to broader segments of the world's population at relatively affordable prices. Like it is with all consumption goods, the impact of these three factors is magnified in China given the country's size and its stage of development.

By any meaningful measure, China's strides in improving the health of its citizens since the beginning of 'reform and opening' has been a resounding success. Since the late 1970s, life expectancy for the average Chinese has increased by almost nine years and infant mortality rates have declined by 88% (Figure 18). The country now has 265 licensed doctors for every 10,000 people, a four-fold increase since 1978, although the country's numbers differ from those of international organizations based on how 'licensed doctors' are classified and counted in China²⁰. Overall, health care is more widely available, of higher quality and producing better outcomes than it was forty years ago. In our view, though, much room remains for improvement in order for China to join the ranks of developed economies in terms of health outcomes, especially as its population ages and its growing middle-class demands access to better care.

Our first trend, the ageing of China's population, will have a profound impact on health care expenditures in the next decade. Consider that while today only 16% of the country's population, or 229 million, are over the age of 60,

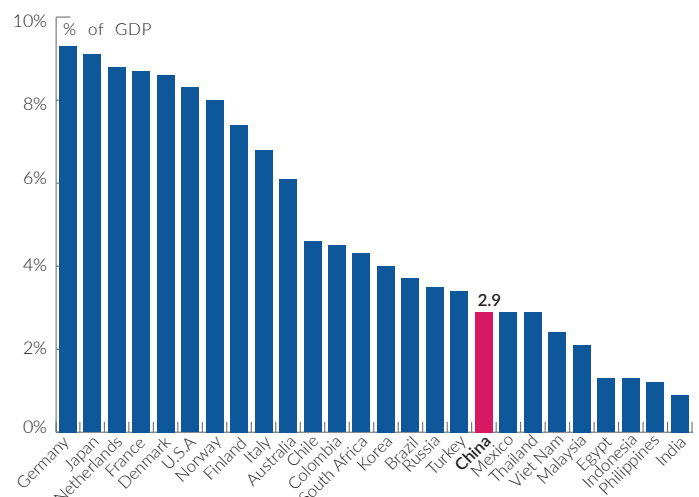
Figure 18. China's Infant Mortality Rates Between 1990-2017



Source: World Health Organization, Global Health Observatory

their ranks have been growing at an average annual rate of 4.5% during most of the past decade. By 2030 a quarter of China's population, or 362 million people, will be 60 years or older²¹. And yet, according World Health Organization figures, China spends only 2.9% of gross domestic product (GDP) on health expenditures, trailing ageing societies like Germany (9.3%) and Japan (9.1%) by wide margins. And while China's figure is higher than that of other Southeast Asian emerging economies such as Thailand, Vietnam, Malaysia and Indonesia, it trails other emerging markets such as Colombia, South Africa, Brazil and Russia (Figure 19).

Figure 19. Government Health Expenditure as a Percentage of GDP, Select Countries, 2014



Source: World Health Organization

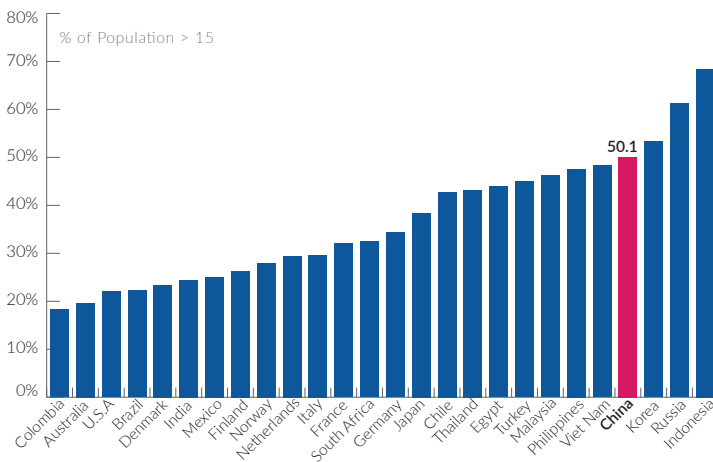
20. National Bureau of Statistics of China.

21. Profiles of Aging 2017, United Nations, Department of Economic and Social Affairs - Population Division.

Furthermore, China's ageing population is expected to face significant health problems as a result of poor life-style choices made in recent decades, including high rates of tobacco and alcohol consumption (Figure 20) and poor exercise habits. In addition, even though the government is taking urgent measures to curb environmental degradation and clean up the country's air, water and natural resources, the country's air, water and natural resources,

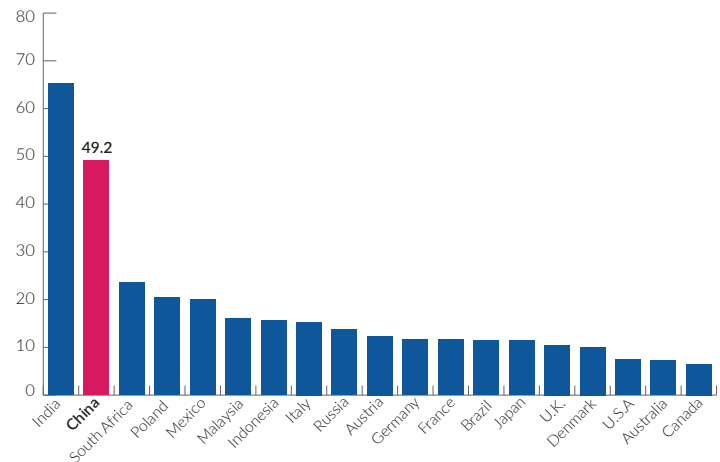
its damaged environment is likely to result in poor health conditions for millions of Chinese, a phenomenon now visible in health metrics across the country (Figures 21 & 22). In fact, the only category of fixed asset investment (FAI) trending upward in China is what the government classifies as 'Management of Water Conservancy, Environmental and Public Facilities,' which is growing at annualized rates above 20%, as seen in Figure 23.

Figure 20. Prevalence of Smoking Tobacco Among Males Aged Over 15, 2010



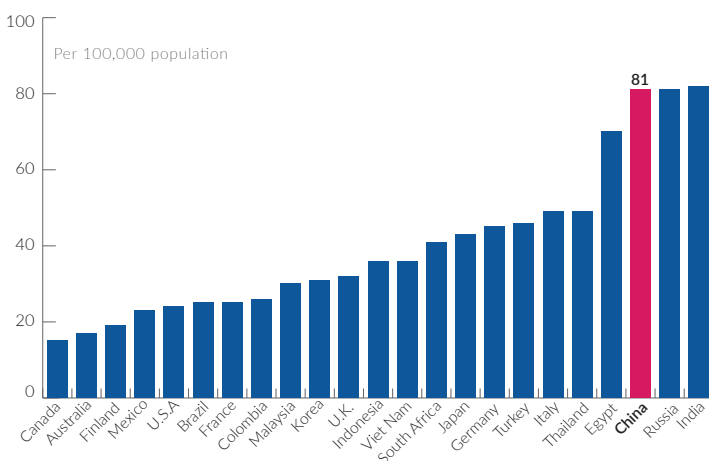
Source: World Health Organization

Figure 21. Concentrations of Fine Particular Matter* - 2018 (WHO)



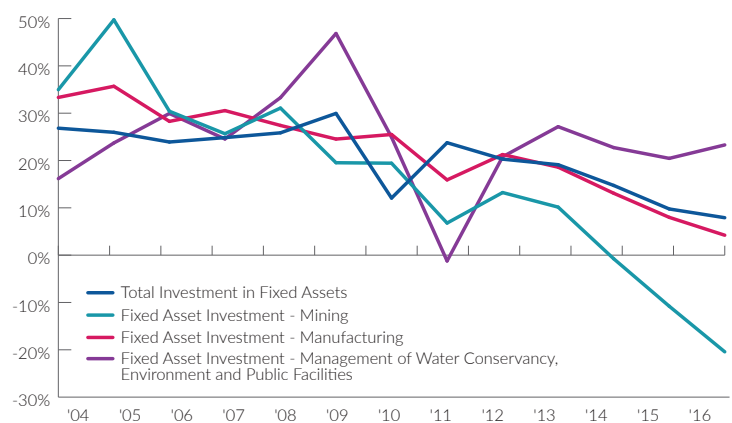
Source: World Health Organization *PM2.5 refers to fine inhalable particles, with diameters that are generally 2.5 micrometers and smaller.

Figure 22. Ambient Air Pollution Attributable Death Rate - 2016



Source: World Health Organization

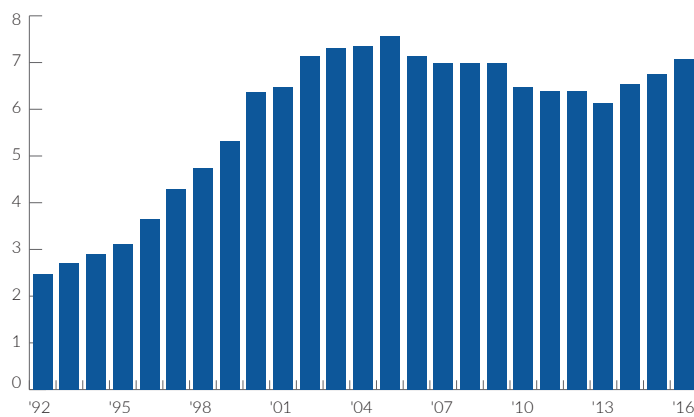
Figure 23. Investment in Fixed Assets - Select Categories 2004-2016



Source: National Bureau of Statistics of China

Even though health care expenditures per capita in China have grown by a factor of 13 in the last 20 years, Chinese only consume an average of CNY 3,351 annually in health care (less than USD \$500). For rural Chinese the figure is a paltry CNY 1,412 (about USD \$200)²². With the country's rising middle-class, higher government expenditures in health care and a steady rise in disposable income, we expect these figures to increase significantly in the next decade. In fact, between 1992 and 2016, Chinese dwelling in urban areas, on average almost tripled the amount spent annually on health care and medical services as a percentage of their total consumption expenditure. As incomes rose in the last three decades, basic expenditures on food and shelter declined gradually, making room for other forms of spending. Health care was among the largest beneficiaries as Chinese gained access to doctors, hospitals, specialists and new medical therapies (Figure 24). However, there's plenty of room for improvement, especially as more of the country's rural population moves into the cities. It will require higher expenditures across the board on health services in order for China to be on par with advanced economies in areas such as prevalence of doctors (Figure 25), availability of basic medicines (Figure 26), and the widespread use of advanced medical devices and technologies.

Figure 24. Per Capita Annual Health Care & Medical Services Expenditure as % of Total Consumption Expenditure (Urban Households)



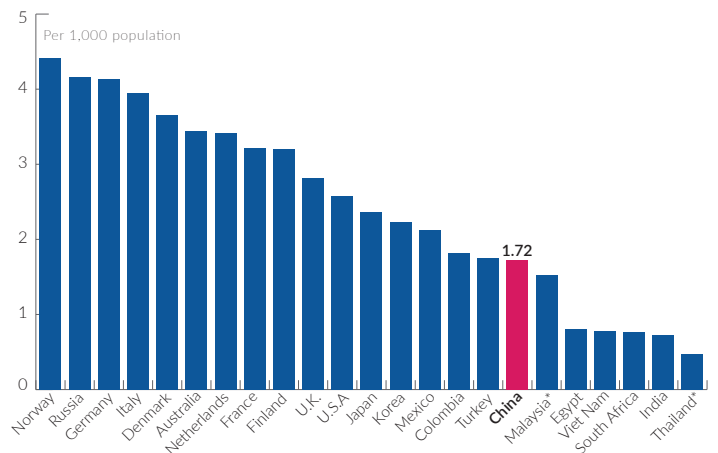
Source: National Bureau of Statistics of China

Lastly, although a sizable measure of the increase in health care expenditures is expected to come from higher

22. Per Capita Health Expenditure (2016), National Bureau of Statistics of China

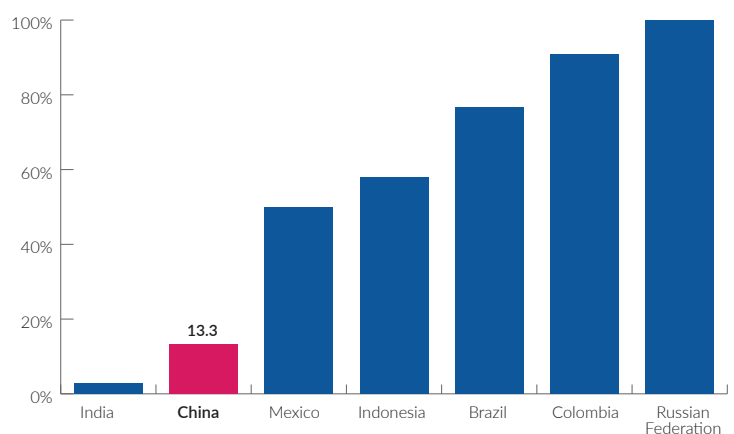
disposable incomes among China's middle-class, a large portion of overall spending on health care nationwide will come from the government. In fact, China's State Council embarked on a health care reform program in 2016 aimed at increasing nationwide coverage, delivering better health care to rural areas of the country and to its large migrant population. The State Council reported in 2017 that it had enrolled 200 cities across the country by the end of 2016 in its 'pilot' health care reform initiative, which includes a national health insurance program that combines public and private plans. Such plans, according to the State Council, covered 1.34 billion Chinese in 2017. An important feature of the government's health reform plan includes a new national reimbursement system, by

Figure 25. Physicians Density for Select Countries, 2014



Source: World Health Organization. *Malaysia and Thailand figures are from 2015.

Figure 26. Availability of Generic Medicines In Private Health Facilities, 2007-2013



Source: World Health Organization

which people enrolled in an insurance plan may submit their medical records in their home regions for direct reimbursement, in theory streamlining the reimbursement process. Such a system is expected to be operational on a national basis in 2019. The relevance of the central government's health reform initiative to investors lays not in the evaluation of the merits of public vs. private health insurance schemes but rather on the expectation that health care expenditures in China are certain to rise as a percent of GDP in the decade ahead. So, a combination of rising middle-class disposable incomes, higher expenditures by the national and provincial governments on health care and an emphasis by China's central planners on the development of biomedicines and medical devices domestically are all positive trends that favor Chinese health care providers.

Technology

Perhaps no sector in China's economy is feeling a bigger impact from the Made in China 2025 (MIC 2025) policy plan than technology, especially the infrastructure underpinning Internet technologies. MIC 2025, which focuses on developing a 'smart manufacturing' framework, is explicitly modeled after Germany's 'Industry 4.0' and the 'Industrial Internet' developed in the United States. In essence, smart manufacturing seeks to marry traditional industrial segments of the economy such as automotive, aviation, robotics, railways, medical devices, etc., with the so-called Internet of Things. Which is why the domestic development of 5G Internet network protocols, telecommunications equipment, semiconductors, cloud computing, big data and the overall architecture of the Internet is so important to China's planners. More specifically, in the context of this paper that focuses on the country's 'new economy,' we expect Chinese companies in the above-referenced industries to gradually displace foreign industries in pursuit of MIC 2025 goals. The country's Premier, Li Keqiang, has stated it explicitly:

The State Council, The People's Republic of China

"Manufacturing has to become 'smarter', relying on technology such as the internet, cloud computing and big data."

The "Made in China 2025" strategy and Internet Plus are inseparable, as we must upgrade the manufacturing industry and boost intelligent manufacturing, said the Premier. [June 28, 2016]²³

Premier Li Keqiang called for bigger efforts by local governments and enterprises to press ahead with integration between manufacturing and the Internet to build China's modern industry.

"Internet Plus is an important support for the 'Made in China 2025' strategy, so we need to promote the integrated development of the manufacturing industry and the Internet," Premier Li said at the executive meeting of the State Council on May 4 [2016].

Premier Li said that China has taken the lead in e-commerce development of the world, but the pace for developing the manufacturing industry via the Internet needs to be accelerated. "China has become an industrial country, but has yet to be an industrial power. Hence, we should accelerate the in-depth integration of the manufacturing industry and the Internet," said the Premier.

The Premier cited the examples of Germany and the United States, saying that Germany's Industry 4.0 is mainly manufacturing plus the Internet, while the US features Internet plus manufacturing. Although the methods and paths are varied, both strategies can enhance the levels of their manufacturing industries, said the Premier, urging China to draw on the experiences of both, to become an industrial power in the world.

"The distinguishing feature of the Internet is 'mass wisdom', which can greatly save manpower and intelligence. This is the essential course to achieve the development of the modern industry," said the Premier.

Premier Li stressed that the innovative development of the manufacturing industry lies in the col-

23. The State Council, The People's Republic of China. http://english.gov.cn/premier/news/2016/08/13/content_281475416027923.htm

laborative innovation of large enterprises and small and medium-sized enterprises. Governments at local levels should support manufacturing enterprises to establish online platforms for mass entrepreneurship and innovation.

The Premier also talked of making use of the Internet's big data to alter the traditional manufacturing industry. He mentioned the example of suit designs in China's clothing industry, saying that in the past, given the difficulty of data collecting, we didn't have our own designs for making suits and always copied those of Japan and Europe. But now, big data of the Internet era brought new paths for the industry. For instance, a clothing enterprise in Jiangsu province accumulated over 2 million data for suit designs, the Premier said.

"Relying on new technologies, including big data, the innovation level of traditional manufacturing enterprises has been remarkably enhanced," said the Premier.²⁴

So, what is the relevance of MIC 2025 and Internet Plus policies on our 'new economy' thesis? The largest and most obvious one is a marked acceleration in the level of investment in the new technologies outlined above. More specifically, the government is explicitly seeking to benefit companies that can demonstrably show high levels of "indigenous" IP, particularly over foreign competitors. Furthermore, contrary to the government's rhetoric on the importance of free global trade and fair competition, these policies place specific restrictions on market access to foreign firms as a means to protect domestic enterprise. Putting aside the repercussions such policies may have politically, the point here is to illustrate an environment that is highly conducive to an accelerated growth curve for domestic technology companies. According to a U.S. Chamber of Commerce (USCC) report published in 2017²⁵, "current [market access] restrictions impact half

of the priority industries in MIC 2025²⁶ ... These restrictions either block opportunities for foreign companies to operate in the market, or, in some cases, create a de facto technology transfer requirement to the Chinese partner as a pre-condition for market access."

Other similar instances cited by the USCC report directly impact Internet-related technologies, including the ones mentioned in this paper, underscoring our thesis for direct ownership of Chinese companies active in such sectors. Additional examples of market access restrictions include the denial of so-called "value-added telecommunications services (VATs) licenses, required to operate in the industry domestically. While 29,000 such licenses have been issued since 2013 to domestic suppliers only 41 have been issued to foreign suppliers. Likewise, so-called Internet Data Center (IDC) licenses are required for the operation of cloud computing services in China. Foreign companies are not permitted to obtain such licenses.²⁷

The investment figures across all categories of expenditures in high-tech industries in China, as reported by the National Bureau of Statistics (NBS), provide perhaps the most compelling evidence of the important role played by Internet-related technologies in the ongoing development of the country's high-tech industry. According to 2016 figures published by China's National Bureau of Statistics (latest available), of a total expenditure of RMB 356 billion at the national level in the development of new products in the "High-Tech Industry," a full 63% was spent on the "Electronic and Communication Equipment" category, as can be seen in Figure 27.

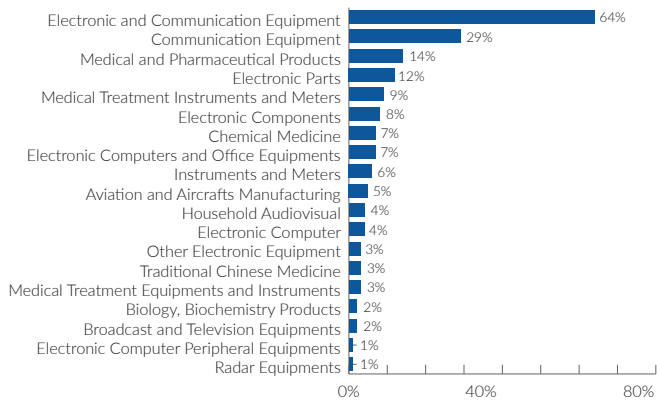
24. The State Council, The People's Republic of China. http://english.gov.cn/premier/news/2016/05/05/content_281475342318415.htm

25. *Made in China 2025: Global Ambitions Built on Local Protections*. U.S. Chamber of Commerce, 2017. https://www.uschamber.com/sites/default/files/final_made_in_china_2025_report_full.pdf

26. Guiding Catalogue on Foreign Investment in Industry (NDRC, MOFCOM, March 2015) http://www.ndrc.gov.cn/zcfb/zcfbl/201503/t20150313_667332.html

27. "2016 Report to Congress on China's WTO Compliance," (USTR, January 2017) <https://ustr.gov/sites/default/files/2016-China-Report-to-Congress.pdf>

Figure 27. Annual Expenditure on New Product Development in High-Tech Industry in China, 2016



Source: National Bureau of Statistics of China

The New Economy Index

From an investor’s point of view, China’s new economy is a paradox. While many of the trends described herein have become plainly visible in recent years, harnessing the opportunities being created by the country’s economic transformation is not a simple task. Many may argue on behalf of an active investment approach, especially given the perceived opacity of China’s public markets, while others have opted for a more traditional—and cautious—passive approach. At MarketGrader we believe in a middle of the road between the two. More specifically, we believe marrying some of the best attributes of both approaches may yield the most optimal results when thinking about ‘buying into’ the China new economy story.

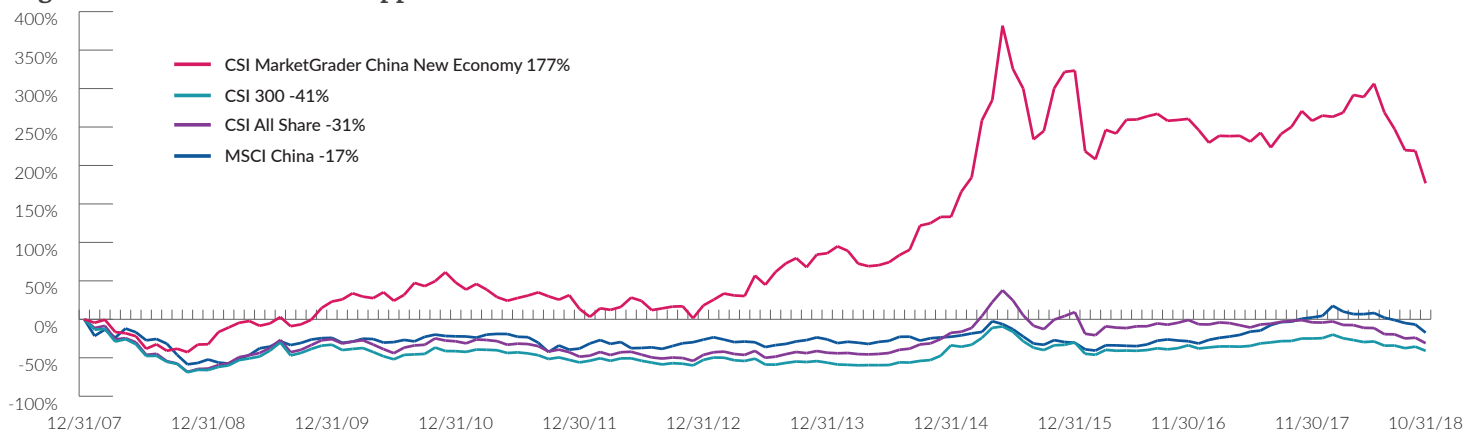
First, we believe fundamental company analysis, in the traditional sense of the word, is of utmost importance in China in order to identify the truly best companies

within the new economy sectors. MarketGrader does this by rating the financial statements of virtually all public companies in the country, employing a rigorous growth-at-a-reasonable-price (GARP) approach that has served us well in other markets, in both the emerging and the developed world. Once all companies are rated (on a daily basis), MarketGrader then selects the cream of the crop to the New Economy Index (about 4% of all companies listed publicly in China). The reason for selecting its constituents based on their fundamentals is simple: we believe that in the long run the best creators of shareholder value are today’s most consistent creators of economic value. In other words, new or old economy, we insist on owning companies growing profitably, managed prudently and in the best interest of its shareholders and in buying their stocks at reasonable valuations.

Second, we believe investors are best served by applying such approach within the context of a rules-based, transparent and replicable passive methodology. This, we think, serves investors in China’s volatile markets well, as a passive approach provides the discipline that often abandons most investors when markets behave irrationally and emotions govern investor behavior.

In summary, the CSI MarketGrader China New Economy Index was developed over four years ago as a tool to help investors harness the powerful trends described in this paper as China’s ‘new economy’ without abandoning important, time-tested principles of traditional equity investing. While not devoid of the volatility inherent in China’s equity market, the results so far have proven promising (Figure 28).

Figure 28. Cumulative Price Appreciation of Select China Benchmarks Since 2008 Financial Crisis



Source: Bloomberg. Chart uses price-only returns through Oct. 31, 2018. New Economy Index in AUD, all other benchmarks in local currency.

Conclusions

Simplistic arguments about China's investment prospects suggest that since the country's economy is no longer growing at double-digit rates, its best days are behind it. Most of this argument focuses on total GDP growth, gross capital formation rates, levels of fixed asset investment and gross export growth, to name a few of the indicators from China's 1990s and early 2000s investment playbook. If these macro indicators were the most relevant to investing in China in the years ahead we would concur that the best investment opportunities lay behind us. This approach, however, focuses on seeking answers to the wrong question. It focuses too much on the 'what' (what will be China's GDP growth this year?) instead of on the 'how' (how will China's economy grow this year?). The needs and wants of China's population today are very different than those of 40 years ago. Therefore, it is even more imperative to frame the questions around growth appropriately.

Which brings us to two important questions: How will the Chinese economy grow in the near future? And what are the factors that will propel this growth? In our view, the biggest factor in propelling China's future growth is the increasing purchasing power of a massive middle-class. Coupled with the government's concerted efforts to become a global technological leader and ample pools of capital, the arguments for 'owning' a piece of the Chinese new economy are compelling.

Investors, however, need a new playbook to avoid the pitfalls that befall many investors in emerging markets. For starters, recognition that China is more of a standalone investment category rather than a piece of the traditional emerging market pie is important. The primary reason for this is scale. Not only is China's economy too big to be grouped with all other emerging markets in a single category, but also the country's massive foreign exchange reserves, deep savings base and position as net creditor to the world allow it to march to the tune of its own drum. Thus, an allocation to Chinese equities, in our view, should stand separate from an investor's emerging markets allocation.

Understanding the sources of volatility in China's stock markets will also play an important role in helping foreign investors know how to react (or not) to market drawdowns in China as many try to apply traditional tactical asset allocation tools to an inherently volatile market. Foreign investors must realize that despite the size of China's domestic stock market (second largest in the world behind only the U.S.), stock ownership in China is still in its infancy, as less than 5% of the country's population owns stocks. Investment management, as an industry, is still in its infancy and rules and regulations are still being drafted. How-

ever, it is our view that China's capital markets will play a central role in the modernization of the country's economy for the simple reason that this will be the most effective means by which the Chinese will be able to partake in the successful growth of their own country's economy. For this to happen, however, China's markets must be institutionalized. In our view, this is currently underway based on the latest round of financial industry reforms being implemented since the conclusion of last year's National People's Congress. Pension reform, also underway, will help underpin such transition to deeper capital markets with broader investor participation.

Lastly, it is natural for an investor to ask why allocate to China now, especially in light of current trade tensions between China and the U.S., a perceived rise in so called "global protectionism" and domestic Chinese issues such as high debt levels and slowdowns in certain parts of the country's export and manufacturing complex? The simplest answer to that question is valuations. Following 2018's 25%+ drawdown in Chinese equities, high quality, publicly traded Chinese companies are trading not only at historically low multiples of earnings and book value but at their highest discount in years in comparison to companies within developed market equities. As any good investor may tell you, no other factor has a bigger incidence on long-term capital appreciation of an investment than the price paid for it. By this metric, now is as good a time as there has ever been to own a piece of the Chinese new economy.

Finally, while current global trade dynamics could certainly prove disruptive to markets for some time, we believe the long-term consequences of the current shakeout in the global trade foundation will prove beneficial in the long term for two reasons as it relates to China. First, the impact U.S. tariffs will have on China's economy will hasten domestic reform and accelerate many of the trends described in this paper. Capital allocation distortions will be corrected perhaps at a faster clip and domestic imbalances will be worked out as there is really no other way for the Chinese to complete their transition to a consumer-based economy and avoid the infamous 'middle income trap' that has bedeviled many other emerging economies. It is also our view that trade disputes with the U.S., and, frankly speaking, the rest of the world at large will not be rapidly solved with simple commitments to reduce trade imbalances between China and its trading partners. Only deeper, more lasting structural changes will do that, some of which will take time, such as adjustments to the governance framework at the WTO and in the realignment of supply chains; others will happen, we hope, internally, as China eliminates or at least softens some of the most pernicious aspects of some of its industrial policies such as MIC 2025 and Internet Plus. Such changes inform the second reason why we think that in the long-term current dynamics will prove beneficial to China's economy: a more balanced, fairer global trade and economic environment will contribute more to China's growth and ongoing development than any inward-looking policies ever will.

Appendix. CSI MarketGrader China New Economy Index Constituents (November 2018)

Ticker	Company Name	Market Cap RMB	Sel*.
Consumer Discretionary			
002032.CN	Zhejiang Supor Co.,Ltd	40,732.80	16
002035.CN	VATTI CORPORATION LIMITED	8,551.47	12
300144.CN	SONGCHENG PERFORMANCE DEV.	32,799.90	9
002508.CN	Hangzhou Robam Appliances Co Ltd	21,172.90	8
002572.CN	Suofeiya Home Collection Co Ltd	18,089.90	8
000418.CN	Wuxi Little Swan Co Ltd	30,580.80	7
300182.CN	Beijing Jetsen Technology Co Ltd	13,285.80	7
601888.CN	China International Travel Service Co Ltd	113,673.00	7
600828.CN	Maoye Commercial Co., Ltd.	8,746.50	6
603898.CN	Guangzhou Holike Creative Home Co.,Ltd.	5,350.46	6
002677.CN	Zhejiang Meida Industrial Co., Ltd.	7,893.73	5
002027.CN	Focus Media Information Tech.	99,032.30	5
000681.CN	VISUAL CHINA GROUP CO.,LTD.	17,647.50	4
002327.CN	Shenzhen Fuanna Bedding and Fur.	6,673.07	4
300258.CN	Jiangsu Pacific Precision Forging Co Ltd	4,868.10	4
603788.CN	Ningbo Gaofa Automotive Control Sys.	3,561.86	3
603808.CN	SHENZHEN ELLASSAY FASHION CO.	5,510.00	2
603816.CN	Jason Furniture (Hangzhou) Co.,Ltd.	20,088.50	2
603518.CN	V-GRASS Fashion Co.,Ltd.	2,430.38	2
603579.CN	Shanghai Rongtai Health Tech.	4,396.00	2
603037.CN	Shanghai Carthane Co.,Ltd.	1,856.41	2
603306.CN	HMT (Xiamen) New Technical Mat.	4,651.48	2
600398.CN	Heilan Home Co.,Ltd	36,840.60	2
300176.CN	GuangDong HongTeo Technology Co., Ltd.	13,190.80	2
002101.CN	Guangdong Hongtu Technology	4,008.90	2
002283.CN	Tianrun Crankshaft Co Ltd	3,878.77	2
002343.CN	Ciwen Media Co.,Ltd.	5,604.41	1
002003.CN	Zhejiang Weixing Industrial Dev.	5,595.26	1
300343.CN	LECRON INTERNET MEDIA IND.	4,388.18	1
300577.CN	Anhui Korrun Co., Ltd.	7,604.36	1
Consumer Staples			
600519.CN	Kweichow Moutai Co Ltd	753,594.00	23
000858.CN	Wuliangye Yibin Co Ltd	208,404.00	20
000568.CN	Luzhou Lao Jiao Co Ltd	60,054.80	20
000848.CN	He Bei Cheng De Lolo Co Ltd	7,662.15	19
600887.CN	Inner Mongolia Yili Industrial Gr.	143,190.00	18
600809.CN	Shanxi Xinghuaacun Fen Wine Fac.	30,166.10	17
600197.CN	Xinjiang Yilite Industry Co Ltd	6,010.83	16
002304.CN	Jiangsu Yanghe Brewery Joint-Stock	151,724.00	16
600298.CN	Angel Yeast Co Ltd	18,747.80	12
603288.CN	Foshan Haitian Flavouring and Food Co.	183,928.00	9
002507.CN	Chongqing Fuling Zhacai Group Co Ltd	17,523.70	9
000596.CN	Anhui Gujing Distillery Co Ltd	30,195.90	8
000799.CN	Jiugui Liquor Co Ltd	5,137.13	7
600737.CN	COFCO TUNHE SUGAR CO.,LTD.	14,116.90	7
600779.CN	Sichuan Swellfun Co., Ltd.	14,715.00	7
600419.CN	Xinjiang Tianrun Dairy Co., Ltd.	3,137.78	5
603589.CN	Anhui Kouzi Distillery Co., Ltd.	20,898.00	5
002661.CN	KEMEN NOODLE MANUFAC.	4,366.26	5
600438.CN	Tongwei Co Ltd	27,293.10	4
600305.CN	Jiangsu Hengshun Vinegar-Ind.	7,718.06	4
600872.CN	Jonjee Hi-Tech Industrial and Co.	21,015.30	4
603369.CN	Jiangsu King's Luck Brewery Joint-	19,507.50	4
600132.CN	Chongqing Brewery Co Ltd	13,517.30	3
600598.CN	Heilongjiang Agriculture Co Ltd	15,821.40	3
603866.CN	Toly Bread Co., Ltd.	23,427.80	3
002094.CN	Qingdao Kingking Applied Chem.	3,573.57	3
002695.CN	Jiangxi Huangshanghuang Group Food	5,534.52	2
300087.CN	Winall Hi-tech Seed Co Ltd	4,208.63	1
603919.CN	JINHUI LIQUOR Co.,Ltd.	4,870.32	1
603198.CN	ANHUI YINGJIA DISTILLERY CO., LTD.	11,760.00	1

Ticker	Company Name	Market Cap RMB	Sel*.
Health Care			
600763.CN	Top Choice Medical Investment Co.,Inc.	16,006.30	16
002001.CN	Zhejiang NHU Co Ltd	31,563.80	14
600436.CN	Zhangzhou Pientzehuang Pharma.	50,002.90	12
600201.CN	Jinyu Bio-Technology Co.,Ltd.	20,139.80	12
600572.CN	Zhejiang Conba Pharmaceutical Co Ltd	16,857.50	11
000650.CN	Renhe Pharmacy Co.,Ltd	9,101.80	9
000661.CN	Chang Chun High and New Tech.	32,270.20	9
000513.CN	Livzon Pharmaceutical Group Inc	23,031.20	7
002019.CN	YIFAN PHARMACEUTICAL CO.,LTD	13,662.90	7
300357.CN	Zhejiang Wolwo Bio-pharma.	10,817.80	7
600566.CN	HUBEI JUMPCAN PHARMA.	34,344.50	7
600867.CN	Tonghua Dongbao Pharma.	29,324.80	7
300009.CN	Anhui Anke Biotechnology (Group) Co Ltd	15,371.10	5
002680.CN	Changsheng Bio-technology Co., Ltd.	22,492.25	4
300482.CN	GUANGZHOU WONDFO BIOTECH CO.,LTD	9,904.05	4
300326.CN	Shanghai kinetic medical co., ltd.	6,566.57	4
000813.CN	Xinjiang Tianshan Wool Tex Stock Co Ltd	21,325.40	4
002626.CN	Xiamen Kingdomway Group Company	7,619.72	3
300595.CN	AUTEK CHINA INC.	8,815.06	3
603658.CN	Autobio Diagnostics Co., Ltd.	24,704.40	2
300122.CN	Chongqing Zhifei Bio.	61,536.00	2
300401.CN	Zhejiang Garden Bio-chemical	6,010.27	2
300485.CN	Beijing Science Sun Pharma.	5,127.32	1
002737.CN	SUNFLOWER PHARMA.	11,055.10	1
002562.CN	Brother Enterprises Holding Co Ltd	3,689.54	1
002435.CN	ChangjiangRunfa Medicine Co., Ltd.	4,922.49	1
002365.CN	Qianjiang Yongan Pharmaceutical Co Ltd	3,418.32	1
300233.CN	Shandong Jincheng Pharma.	5,370.46	1
600332.CN	GUANGZHOU BAIYUNSHAN PHARMA.	62,414.10	1
600781.CN	Furen Pharmaceutical Group Ind.	9,401.10	1
Technology			
002415.CN	Hangzhou Hikvision Digital Tech.	258,456.00	13
300113.CN	Hangzhou Shunwang Technology Co Ltd	10,692.00	7
300219.CN	Hongli Zhihui Group Co.,Ltd.	5,868.86	6
300296.CN	Leyard Optoelectronic Co.,Ltd.	21,563.60	5
002517.CN	Taiya Shoes Co Ltd	8,739.23	4
002555.CN	Wuhu Shunrong Sanqi Interac.	27,155.80	4
002815.CN	Suntak Technology Co., Ltd.	12,626.20	3
603444.CN	G-bits Network Technology	8,999.71	3
603025.CN	Beijing Dahao Technology Co.	11,477.50	2
300571.CN	Hangzhou Anysoft Information Tech.	4,864.80	2
002636.CN	Goldenmax International Technology Ltd	5,307.12	2
300036.CN	Beijing Supermap Software Co Ltd	9,125.60	2
300127.CN	Chengdu Galaxy Magnets Co Ltd	3,864.83	2
300395.CN	HUBEI FEILIHUA QUARTZ GLASS CO.LTD	4,572.19	2
002449.CN	Foshan NationStar Optoelectronics Co Ltd	6,704.29	2
002619.CN	EGLS CO.,LTD	6,393.30	1
002425.CN	Kaiser (China) Culture Co., LTD	4,369.81	1
002247.CN	Zhejiang Dilong Culture Dev.	4,095.67	1
000636.CN	Guangdong Fenghua Advanced Tech.	12,936.10	1
300349.CN	Goldcard Smart Group Co.,Ltd.	6,949.09	1
300567.CN	Wuhan Jingce Electronic Tech.	9,408.00	1
300459.CN	Zhejiang Jinke Culture Industry Co., LTD.	13,936.60	1
300467.CN	Sichuan Xun You Network Tech.	5,351.64	1
300323.CN	HC SemiTek Corporation	10,768.70	1
300338.CN	Changsha Kaiyuan Instruments Co., Ltd.	2,722.16	1
300232.CN	Unilumin Group Co Ltd	7,121.83	1
300137.CN	Hebei Sailhero Environmental Pr.	4,347.65	1
300165.CN	Jiangsu Skyray Instrument Co Ltd	1,883.98	1
002724.CN	Ocean's King Lighting Science & Tech.	3,816.00	1
603660.CN	Suzhou Keda Technology Co.,Ltd	6,706.33	1

*Number of times selected to the index since its base date on Dec. 31, 2007.

Carlos Diez

Carlos founded MarketGrader in 1999 and built a quantitative research engine to rate public companies using a fundamentals-based scoring system that follows a growth-at-a-reasonable-price (GARP) methodology. In 2003 the firm developed a family of U.S. equity indexes, with stock selection based on MarketGrader's fundamental scores, weighing all constituents equally rather than by market capitalization. MarketGrader then partnered with Barron's and Dow Jones Indexes in 2006 to construct the Barron's 400 Index, which collects the most fundamentally attractive companies in the U.S. The Barron's 400 Index was the basis of the Barron's 400 ETF (NYSE: BFOR), which was successfully launched in partnership with ALPS Advisors in 2013. In 2017, MarketGrader partnered with China Securities Index Co. to develop next-generation indexes for China's A-share market. Today MarketGrader rates 35,000 public companies in 93 countries and publishes over 50 global indexes utilizing its proprietary GARP methodology.

Carlos earned a BS in Economics from Pepperdine University.

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