

The Chinese Equity Market Paradox

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RESEARCH & INDEXES

In the decade following the ‘Great Recession’ that was triggered by the global financial crisis of 2007–2009, two nations have been the major drivers of global economic growth: China and the United States (together with a notable contribution from India). According to the World Economic Outlook published by the International Monetary Fund (IMF), as recently as last year and before the global economy was brought to a halt by the coronavirus pandemic, China and the U.S. were expected to account for almost 39% of the world’s growth in 2019–2020¹. Individually, the U.S. economy grew by more than 20% starting in 2010 through 2019. This translated into an annual growth rate of 2.3%. Absent the pandemic, the U.S. economy, with a total GDP of almost USD 21.5 trillion, was forecast to grow by around 3% in 2020, or by around USD 650 billion, an amount that is just shy of the GDP of Switzerland (the smallest of the G20 economies). Over the same period, with an annual growth rate of 7.6%, China’s economy more than doubled in size ending 2019 with a total GDP of USD 14.2 trillion.

With respect to their equity markets, for both the U.S and China, the total market capitalizations (price per share times the shares outstanding aggregated across all publicly traded companies) not only grew commensurately with their underlying economies but exceeded their GDP growth rates as risk assets appreciated considerably during the decade. The total market capitalization for the U.S. equity universe grew from USD 15.1 trillion starting in 2010 to USD 36.3 trillion through 2019 for a cumulative growth of 141%, or an annualized growth of 9.2%. Indeed, a passive investor owning a financial instrument tracking a total stock market benchmark such as the Russell 3000 Index, would have earned an annualized return of 10.9% (excluding dividends and trading costs).

Coincidentally, the total market capitalization of China’s domestic equity universe, which represents the second largest equity market in the world, grew by almost the same amount as the U.S. The total market capitalization of all stocks trading on the Shanghai and Shenzhen exchanges grew from USD 3.6 trillion starting in 2010 to USD 8.5 trillion through 2019, for a cumulative growth of 138%, or an annualized growth of 9.1%. However, un-

like the U.S., where investors were able to translate the growth in the total market capitalization into portfolio returns through exposure to the broad market, an investor in Chinese stocks trying to translate growth in China’s total market capitalization into portfolio returns would have been bitterly disappointed. Over the decade ending 2019, an investment in China’s broadest benchmark, the CSI All Share Index, would have resulted in a cumulative return of 17.1%, excluding dividends and trading costs, or an annualized return of 1.6%, which failed to even keep up with the country’s annualized rate of inflation of 2.5%². Figure 1 illustrates this remarkable dichotomy between the world’s two largest equity markets that we refer to as the Chinese Equity Market Paradox.

This paper seeks to answer two questions: First, is there a simple and reasonable explanation for the significant divergence between the growth of China’s economy and the performance of its equity market? Second, can a better understanding of this relationship be incorporated into the design of investment strategies so that investors can more successfully harness the economic growth of one of the world’s principal growth engines?

“ An investment in China’s total market benchmark in the last decade would have resulted in an annualized return of 1.6%, which failed to keep up with the country’s rate of inflation of 2.5%. ”

1. Source: World Economic Outlook 2019, International Monetary Fund.

2. Inflation, consumer prices (annual %) – China. Source: World Bank

Figure 1. The Chinese Equity Market Paradox

	United States				China			
	Real GDP Growth	Total Market Capitalization of Equity Market in USD at End of Year	Growth of Total Market Capitalization	Russell 3K Price Return (in USD)	Real GDP Growth	Total Market Capitalization of Equity Market in USD at End of Year	Growth of Total Market Capitalization	CSI China All Shares Price Return (in USD)
2009	-2.5%	15,077,285,740,000	30.1%	25.5%	9.4%	3,573,152,460,000	100.9%	106.4%
2010	2.6%	17,283,451,680,000	14.6%	14.8%	10.6%	4,027,840,300,000	12.7%	-0.3%
2011	1.6%	15,640,707,040,000	-9.5%	-0.9%	9.6%	3,412,108,290,000	-15.3%	-24.7%
2012	2.2%	18,668,333,210,000	19.4%	12.3%	7.9%	3,697,376,040,000	8.4%	8.0%
2013	1.8%	24,034,853,520,000	28.7%	30.9%	7.8%	3,949,143,490,000	6.8%	8.4%
2014	2.5%	26,330,589,190,000	9.6%	10.5%	7.3%	6,004,947,670,000	52.1%	42.2%
2015	2.9%	25,067,539,600,000	-4.8%	-1.5%	6.9%	8,188,019,320,000	36.4%	26.8%
2016	1.6%	27,352,200,720,000	9.1%	10.4%	6.7%	7,320,738,379,789	-10.6%	-20.0%
2017	2.2%	32,120,702,650,000	17.4%	17.9%	6.8%	8,711,267,220,000	19.0%	8.3%
2018	2.9%	30,436,313,050,000	-5.2%	-7.8%	6.6%	6,324,879,760,000	-27.4%	-34.7%
2019	2.3%	36,329,851,880,000	19.4%	28.5%	6.0%	8,515,504,380,000	34.6%	30.5%
Cumulative Growth	21.8%		141.0%	180.7%	108.0%		138.3%	17.1%
Annualized Growth (10 Yrs.)	2.3%		9.2%	10.9%	7.6%		9.1%	1.6%

Sources: International Monetary Fund (GDP), World Federation of Exchanges (Market Capitalization), Bloomberg (Index Returns)

Privatizations with ‘Chinese Characteristics’

Following an extended period of economic stagnation and stalled living standards globally, the late 1970s and early 1980s saw a wave of privatizations sweep through economies looking for a way out of their state-induced paralysis, a trend that would have profound repercussions in China a decade later. As countries such as Chile and the United Kingdom began to reconsider the economic and social benefits of state ownership of some the country’s largest companies, governments around the world took note, especially those in Eastern Europe and the Soviet Union, where the economy was slowly crumbling under the heavy hand of the state. In China this trend coincided with a grassroots movement that began in the countryside in the late 1970s, where millions of farmers and peasants sought to break free from the yoke of farm collectives that had decimated the country’s agricultural output and their livelihoods for decades. Their simple goal was to allow individual families to fill state production quotas more efficiently, enabling them to retain the surplus for their own consumption or to sell it in the fledgling street markets sprouting in cities throughout the country. This trend towards commercialization not only helped foster the beginning of urbanization in China, but by creating market incentives, increased the country’s agricultural output significantly and, more importantly, liberated the entrepreneurial spirit that had been repressed inside millions of Chinese during decades of communist rule. Contrary

to the common belief that China’s economic miracle was purely a result of government design, these peasants and farmers should be rightly seen as the source of China’s bottom up economic reform and their society’s original entrepreneurs³.

In addition to the peasants and farmers that participated in the grassroots movement, credit is also due to the country’s leadership under Deng Xiaoping, which allowed the green shoots of reform to take root and turn into a movement that improved the lives of millions of Chinese in meaningful ways. The Deng-led Chinese Communist Party (CCP) was wise to embrace this challenge by the country’s rural population to the “status quo” and eventually let it expand to other areas of the economy in the guise of policy platforms such as ‘reform and opening’ and the ‘four modernizations,’ that were put in motion by the state in the late 1970s and early 1980s. As these policies began to bear fruit and the country embarked on a path of industrialization, the Party’s leaders understood that the country would need two key elements that were essential to fuel this ongoing transformation: direct investment combined with managerial expertise and know-how. Having a scarcity of both domestically, they concluded, that the path forward was through the privatization, or sale, of state assets. Privatizations could rapidly attract foreign direct investment into a country with a massive

3. Paul R. Gregory and Kate Zhou, “How China Won and Russia Lost,” Hoover Institution Publications (December 1, 2009)

economic potential and an untapped consumer market, while simultaneously importing production efficiencies (economies of scale) and management know-how that could be implemented by the country's large but sclerotic state-owned enterprises (SOEs). China's urgent need for foreign direct investment to modernize its economy in the 1980s thus provided the primary impetus for the country's own privatization program and the subsequent creation of the country's stock exchanges. As the floodgates opened, foreign capital rushed into the country in a way not seen before or since among emerging markets (Figure 2), gradually turning China into a manufacturing juggernaut and, eventually, into one of the world's largest consumer markets (Figure 3).

Figure 2. Foreign Direct Investment, Brazil, China, India & Russia 1982–2012

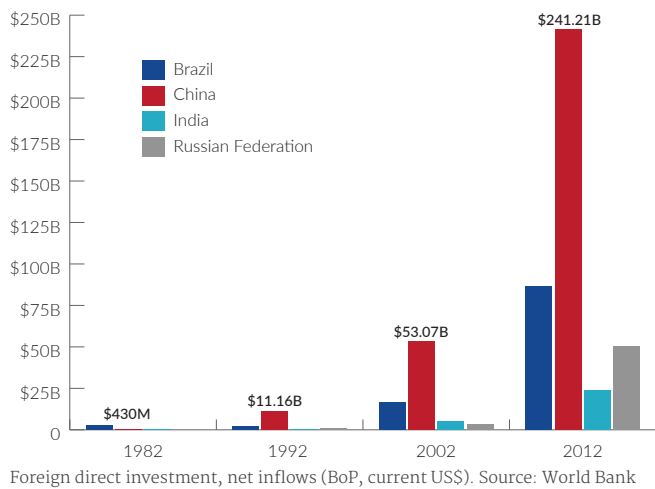
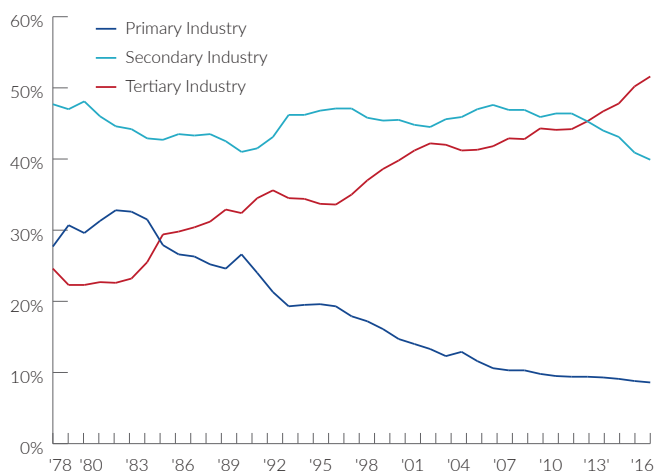


Figure 3. Composition of China's GDP by Three Strata of Industry 1978–2016



Primary Industry refers, essentially, to agriculture; Secondary Industry refers to mining, manufacturing, energy production and construction; and Tertiary Industry refers to consumption and services. Source: National Bureau of Statistics of China

Selling State Assets Without Giving up Control

The disastrous ‘privatization’ of state assets in Russia and the former members of the Soviet Union in the early 1990s informed a significant part of China’s privatization drive, with the Chinese Communist Party (CCP) determined not to give up ownership or to lose control over state assets despite their need to attract foreign direct investment into the country. The “shock” privatization schemes rolled out in Russia and in former Soviet republics consisted mostly, in simplistic terms, of the distribution of state assets among the population through a voucher program that allowed citizens to bid at auctions for shares in state enterprises at deeply discounted prices. The state, however, never established the legal and regulatory frameworks necessary for the operation of a market economy based on the principle of private property ownership and protection. Opportunistic investors, with access to relatively small amounts of capital compared to the scale of the assets on offer, were thus able to acquire massive stakes in state assets by scooping up vouchers from cash-strapped citizens who could no longer count on the state for sustenance. China, in contrast, made clear at the outset of its privatization campaign that the program’s key objective would be to preserve the state’s ownership of the assets it would contribute to its newly “corporatized” SOEs. It declared, therefore, that although shares in its SOEs would be sold to private investors, the state would nevertheless maintain absolute majority of the enterprises⁴. China, with its much larger population, was determined to avoid, at all costs, the social and political unrest Russia experienced after the Soviet Union’s disintegration. It did so, in part, by making SOEs the primary drivers of the state’s social policies.

In order to achieve its dual goal of raising capital and maintaining control, the state authorized the creation of two types of shares for every entity it would privatize: “A-shares,” to be floated publicly and be freely tradable on the newly created stock markets and non-tradable shares, broadly defined as those with any affiliation to the state (and which eventually came to be known as ‘LP’ shares). These included shares distributed to local governments, which owned significant portions of the assets

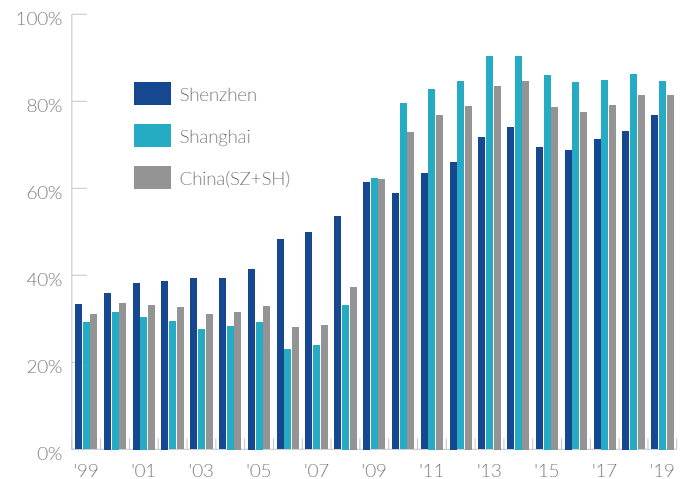
4. Privatizing China: Inside China’s Stock Markets. Carl E. Walter & Fraser J.T. Howie.

contributed into the newly corporatized SOEs and could not be sold or floated without the explicit consent of the central government. Thus, at the outset of the market experiment in China, a bifurcated market developed which would have lasting consequences on the development of its equity markets. This gradual privatization approach made China an outlier among countries on the privatization path, as it allowed its state-owned firms to continue to exist alongside an emerging private economy that rapidly overtook the state-directed portion of the economy in size. However, while this approach allowed the state to maintain control over its SOEs, most of the problems that plague the country's stock market to this day can be traced back to this system.

The State-Owned Enterprise Dilemma

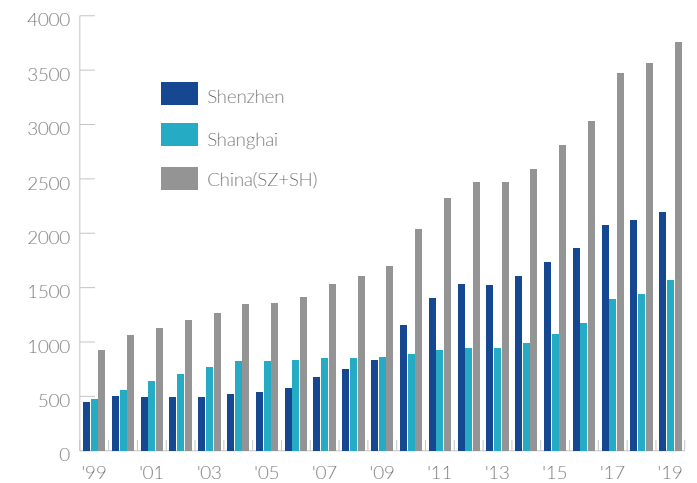
The dual-market system described above created two singular problems that would affect the performance of China's stock market for years to come and can be traced to a single source, namely, the SOEs. The first problem came from the overhang the state created for early stock market investors who rightly feared that, as the state sought additional capital to support the country's ongoing reforms, its gradual floating of 'non-tradable' shares would massively dilute the owners of the freely tradable A shares. In the stock market's early days, and as recently as the early 2000s, 'A share' investors owned only about 30% of the notional market capitalization of the average company listed publicly in China, underscoring the legitimacy of their concerns. This was a particular problem for investors buying shares on the Shanghai Stock Exchange, where most of the earliest SOEs listed. In contrast, the Shenzhen Stock Exchange began to attract private enterprises earlier than its Shanghai sibling, especially from companies based in and around the prosperous Guangdong province, where much of China's manufacturing and technology base lay down roots in the early days of the country's modernization drive. Figure 4 presents the gradual growth of both markets' negotiable market value relative to total market value for both exchanges and for China in the aggregate while Figure 5 displays the total number of (A Shares) listed companies between 1999 and 2019.

Figure 4. Negotiable Market Cap as % of Total Market Cap, China 1999–2019



Sources: Shanghai Stock Exchange & Shenzhen Stock Exchange

Figure 5. Number of Listed Companies in China Between 1999 and 2019

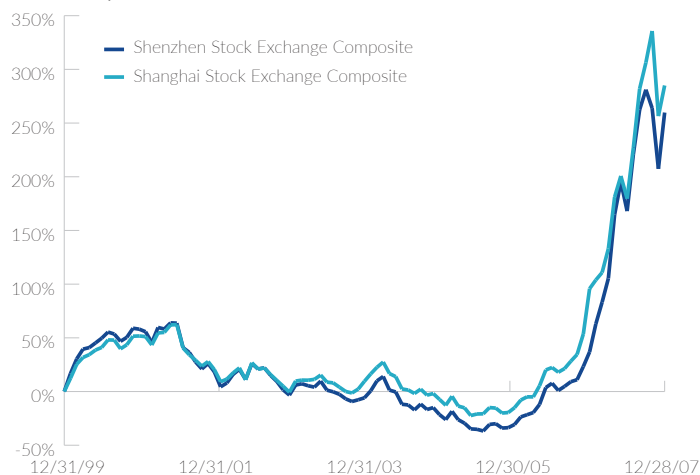


Sources: Shanghai Stock Exchange & Shenzhen Stock Exchange. Count includes only 'A Shares' and not 'B Shares,' which were companies listed in foreign currencies.

The overhang problem not only prevented a broader participation by private investors in China's equity markets but also resulted in abysmal stock market performance at the turn of the century, unsettling investors who became unwilling to allocate additional capital to listed companies given the uncertainty of how much their stakes in the SOEs would eventually be worth. Ultimately the state had to pay off A share investors by issuing additional shares in the SOEs whose shares it floated, partially compensating them for the massive dilution of their economic interests in the listed entities. It wasn't until such a mechanism was implemented, starting in 2005, that the market received the 'all clear' signal to take off, as illustrated in Figure 6. In other words, as the state's footprint in the stock market shrank, share prices rose and private inves-

tors gradually began to evaluate shares based more on the intrinsic value of the issuers and less on the role played by the state in the issuance (more on this later).

Figure 6. Shanghai Composite and Shenzhen Composite Performance, Dec. 1999 – Dec. 2007



Sources: Shanghai Stock Exchange & Shenzhen Stock Exchange.

As a result of this ‘compensation’ scheme, the specter of massive dilutions in SOEs receded but not entirely. In fact, today there are still over 1,100 SOEs listed in China’s exchanges with an aggregate market capitalization of USD 4.7 trillion. In the aggregate, only 36% of their shares are publicly traded, with the remaining 64% owned by the central or local governments or by entities controlled by the state. Furthermore, these companies account for almost 58% of China’s total domestic stock market⁵. This means that for many investors who gain exposure to Chinese equities through investment strategies tracking broad benchmarks, more than 50% of their allocation is to SOEs, thereby making the Chinese state their most significant investment partner. To illustrate this more clearly, in the next section we will examine a few popular benchmarks that are used by investors to gain access to the Chinese equity markets.

Another problem plaguing China’s market at the start of the century had to do with the goals the newly corporatized SOEs had to pursue in serving two different masters with different objectives, namely, the state and private shareholders. Many times these objectives could be contradictory. For the state, SOEs played a significant role that went beyond helping to monetize state assets; they acted—and many still do—as an extension of the state

itself, not only as some of the country’s biggest employers, but also as providers of social services including education, health insurance and social security to their employees, retirees and their families. Extracting SOEs from such a role early in China’s privatization process would not only have affected tens of millions of Chinese families but, the state feared, could have also undermined the entire market experiment, creating political instability for the CCP. Inside each of these entities, however, was a productive enterprise with a mandate, after privatization, to maximize profits and shareholder returns. Having to satisfy these contradictory objectives of playing a social role for employees on behalf of the Chinese state and maximizing profits on behalf of shareholders impeded the development of SOEs into efficient, professionally managed enterprises that would allow China to compete on a global stage. At this time China was preparing to gradually enter the World Trade Organization (WTO) between 2001 and 2006.

It is ironic that by holding on to its majority ownership in SOEs and by limiting their ability to act purely on behalf of their newly created private owners, the state held them back from becoming the blue-chip Chinese companies it sought them to become through the privatization model. In addition, within many of the SOEs, this dual mission of serving the state in spite of its private shareholders fostered a culture of stagnation, inefficiency and bureaucracy, resulting in dismal stock returns, which still plagues their shareholders to this day. In the early days of China’s domestic equity markets, when listing approvals and investment decisions were largely political, these companies dominated China’s domestic equity markets. Therefore, many of China’s private companies, especially the ones which required increasingly large amounts of capital to propel their rapid growth, chose foreign stock markets to list their shares, especially Hong Kong and, later, the United States. For international investors this created yet another class of Chinese shares to track, often incentivizing them to bypass the complex, political, and largely inaccessible A share market altogether. Thus, many of today’s allocations by international investors to Chinese equities continue to be limited to listings in Hong Kong and the U.S., which miss the opportunities available in China’s domestic stock market.

5. Source: China Securities Index Co.

The Role of State-Owned Enterprises in China's Stock Market Today

In recent years, the number of SOEs as a proportion of all listings, has declined considerably in China's equity market universe. However, because of their size, SOEs still account for an estimated 58% of the total market capitalization of China's domestic equity market⁶. In addition, despite the ongoing reform and privatization efforts described above, only 36% of the notional value of all of China's SOEs is freely tradable, with the rest closely held by the central government, local governments or state-affiliated parties. Furthermore, some of the largest companies in China (and in some cases some of the largest companies within their sectors globally) are still owned by the state, which means that any investor gaining exposure to Chinese equities through a broad market cap weighted investment strategy, is likely to have a significant exposure in their portfolio to SOEs. Consequently, broad Chinese benchmarks with large exposures to the country's SOEs have also performed dismally and offered investors almost no long-term capital returns. For example, the CSI 300 Index, which is comprised of the largest and most liquid stocks in China and is the A-Share market's most widely followed benchmark, has delivered no appreciation in the last 10 years. An investment of \$100 in an investment strategy tracking the CSI 300 a decade ago would have earned a meager \$6.20 (excluding dividends and trading costs) during a 10-year period that the market capitalization of the country's equity market more than doubled in size. The All-Shares market index only fared marginally better. An investment of \$100 in an investment strategy tracking all of China's investable universe would have earned \$8.80 (excluding dividends and trading costs). But as poor as both of these investments were in the last decade, they outperformed China's SOEs, where a \$100 investment would have *lost* \$1.42. These results are illustrated in Figure 7.

Figure 7. \$100 Investment in China's Benchmarks a Decade Ago (March 2010 - March 2020)



Source: China Securities Index Company (CSI).

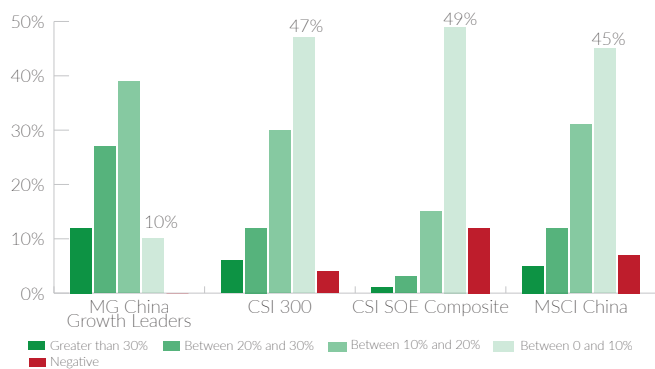
The Relationship Between Capital Misallocation and Poor Investment Returns

The source of the problems with SOEs—and the performance of their stocks—can be traced to the role these companies are expected to play in China, where private shareholders usually take a back seat to the state's demands and capital allocation directives that have little to do with maximizing shareholder value. State mandates for its SOEs have, over many years, saddled these companies with excess capacity, bloated payrolls and cost structures, massive debt loads and very poor returns on invested capital. This last characteristic is particularly important for investors in their public shares, as capital allocation decisions that are made at the behest of the state often times run counter to the best interests of private shareholders. SOEs are, in fact, the state's primary means of executing its fiscal policy as it directs specific capital allocations to preferred political objectives with relatively little regard for the return on invested capital. In many cases these directives go hand in hand with China's foreign policy objectives, as exemplified by its Belt and Road Initiative that encompasses infrastructure projects in Europe, Africa, the Middle East and throughout all of Asia. While this is a government initiative seeking to bring an increasing number of countries within China's economic and military orbit, most of its execution is left to SOEs acting on the government's behalf. As an example, when choosing to engage in infrastructure spending both abroad and domestically—a favorite fiscal policy

6. Based on the aggregate market capitalization of the CSI State-Owned Enterprises Composite Index relative to the aggregate market capitalization of the CSI All Share Index, the broadest measure of China's domestic stock market, as of April 15, 2020. Source: China Securities Index Co. (CSI).

tool of the Chinese government—the state might instruct specific state-owned banks to direct capital to particular projects, usually at below market rates; materials used in its construction are often procured from state-owned cement and steel makers, for example, and construction is done by state-owned builders and engineering firms. Nowhere in this cycle of state-directed capital allocation are private shareholders more than passive co-investors with the state. It is no surprise then that the quality of these companies’ financials are suboptimal and, in many cases, divorced from the most dynamic sources of growth underpinning China’s development. The extent of this misallocation of capital problem for SOEs is presented in Figure 8 which shows that more than 60% of all of the country’s publicly traded SOEs have returns on invested capital below 10%.

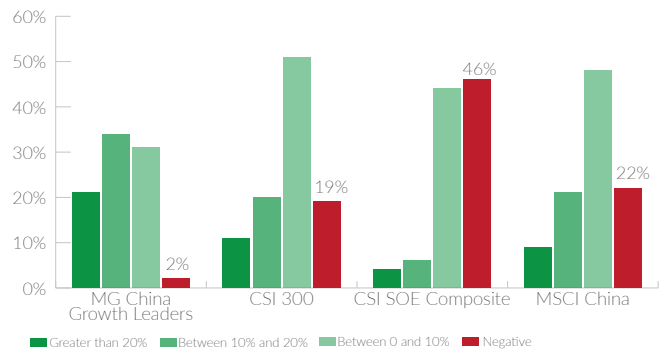
Figure 8. Returns on Invested Capital for Select China Equity Indexes



Data is as of April, 2020 and excludes all indexes’ constituents in the Financials sector. Sources: FactSet, MarketGrader, China Securities Index Co.:

When taking the cost of capital into account, including the cost of equity and debt, the problem is even more dire, with 46% of all publicly traded SOEs failing to generate a high enough return to cover their costs of capital, as measured by the ‘economic value added’ or EVA, of their total invested capital. Astonishingly, 90% of all SOEs have an economic value added below 10%, and this is after *excluding* SOEs in the Financial sector, which require different return metrics. This is presented in Figure 9.

Figure 9. Economic Value Added for Select China Equity Indexes



Data is as of April, 2020 and excludes all indexes’ constituents in the Financials sector. Sources: FactSet, MarketGrader, China Securities Index Co.

The problem isn’t confined to the SOE benchmark, considering that SOEs still comprise a very large portion of China’s overall equity market, which makes them ubiquitous among all of the country’s widely followed market capitalization-weighted indexes. Given that SOEs, with an aggregate market capitalization of USD 4.7 trillion, account for 58% of the entire A share market, they represent massive portions of the country’s most widely followed benchmarks, which investors use as proxies for Chinese stock market performance. For example, in the CSI 300 Index SOEs comprise 69% of the benchmark’s total market capitalization. Furthermore, the problem isn’t limited to domestic benchmark providers. SOEs represent 50% of the total market capitalization of the MSCI China Index and 48% of the FTSE China 50 Index. These two benchmarks are followed closely by international investors, who might be unaware of the extent to which they’re partnering with the Chinese government when buying into Chinese equities through investment strategies tracking those benchmarks. In fact, when measuring the total market capitalization of all SOEs in China, investors should consider that only 36% of these companies’ total market cap is freely tradable, with the remaining 64% in the hands of various state players⁷. This problem isn’t simply one of index weighting but also one of *selection*, since, by definition, market cap weighted benchmarks must select the largest companies to track, regardless of quality. In China this often leads to the selection of SOEs, especially for benchmarks that exclude the issues of private Chinese companies listed overseas, especially in Hong Kong and the United States.

7. Sources: China Securities Index Co. for CSI SOE Composite and CSI 300; FactSet for MSCI China and FTSE China 50 constituents.

MarketGrader’s Approach: Focused on Company Selection

Investors interested in China’s stock market can avoid the pitfalls of overexposure to SOEs by following a different set of benchmarks that are more attuned to the true drivers of Chinese economic growth. Many would argue that the simplest way to achieve this would be to exclude SOEs from the benchmark or from an investment portfolio, but this is a blunt solution to a problem that requires a finer approach; especially because there are plenty of high quality SOEs in dynamic areas of China’s economy which could prove beneficial for investors. MarketGrader’s approach to the Chinese equity market is to focus on stock selection based on company quality. More specifically, MarketGrader’s approach selects companies that are growing at a faster rate than the overall economy and that possess attributes associated with sound capital stewardship and robust fundamentals, but whose future value is not yet reflected in their share price. Essentially, the stock selection can be summarized as a GARP (growth-at-a-reasonable-price) approach with a goal of identifying what we refer to as ‘growth compounders,’ or companies that we believe are the most consistent creators of long-term shareholder value. In addition, when taking a broad look at China, we think company domicile is more important than listing venue, which for decades has been a function of Chinese government policies that made it harder for foreign investors to own Chinese companies listed on Mainland exchanges. As these lines have blurred, and foreign capital has been allowed to move more freely in and out China, we believe a comprehensive benchmark of the best Chinese stocks should include Hong Kong and U.S. listed issues in addition to those listed in Mainland. Consistent with these beliefs, in 2020 MarketGrader launched the MarketGrader China All-Cap Growth Leaders Index, our flagship China index whose goal is to benchmark the performance of growth compounders within Chinese equities, and hence the capital appreciation opportunities in one of the world’s fastest growing economies. The MarketGrader China All-Cap Growth Leaders Index complements our lineup of China A Share indexes.

The process of identifying China’s growth compounders begins with the analysis of every publicly traded company in the equity universe, which for China totals more than 3,700 companies. In our analysis we apply 24 fundamen-

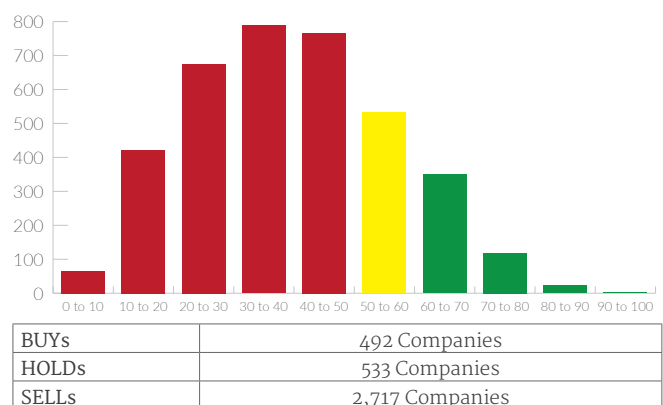
tal metrics to every company, dividing all indicators into four categories: Growth, Value (GARP part of the analysis), Profitability and Cash Flow (Quality part of the analysis). Each one of the 24 indicators is assigned an individual grade and all 24 grades are aggregated into a final MarketGrader Score (MG Score™) between zero and 100. We then rate as ‘BUY’ all of those with an MG Score™ greater than 60 and as ‘SELL’ all of those with an MG Score™ below 50. The remaining companies are rated ‘HOLD’.

Some of our 24 indicators vary based on industry, sector or size in order to account for differences across companies (for example, the balance sheet of a large bank looks very different from that of a software company), yet all indicators always adhere to our GARP plus Quality approach. In the end, the system’s goal is to identify *sustainable* growth compounders with the following characteristics:

- Consistent top to bottom line growth—not just explosive short-term growth—with sustainable margins and high cash flow generation.
- A sound capital structure that doesn’t impair operating growth, combined with high returns on invested capital and low capital intensity.
- Reasonable valuations relative to sustainable growth rates, and not based just on absolute, out of context, valuation multiples.

Since MarketGrader began covering the Chinese equity market, our BUYs have averaged 16% of the universe and our SELLs have averaged 67%. Figure 10 shows MarketGrader’s breakdown of all companies under coverage in our Chinese investable universe by MarketGrader Score and by rating.

Figure 10. Decile Grade Breakdown for China, April 2020

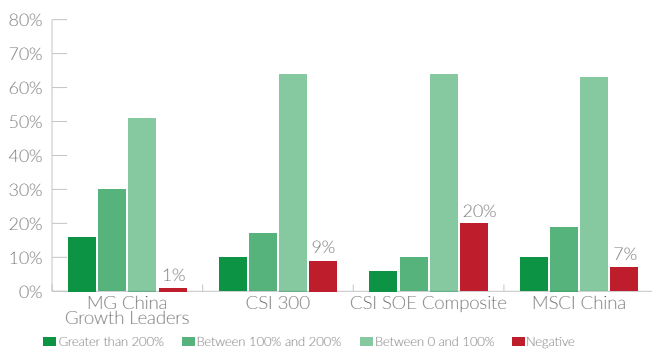


Source: MarketGrader.

Quality Growth

The methodology outlined above allows MarketGrader to select companies with much better fundamental profiles than those benchmarks which select their constituents on the basis of size. Unsurprisingly, when we compare the constituents of our Growth Leaders Index to some of the broad benchmarks, their growth and quality metrics are superior to the benchmarks' constituents as shown in Figures 11 through 16. For example, per Figure 11, 46% of the constituents of MarketGrader's Growth Leaders Index have more than doubled sales in the last three years (in fact 16% have more than tripled sales), compared to only 27% for the constituents of the CSI 300 Index, and 29% of the constituents of the the MSCI China Index. Furthermore, 57% of MarketGrader's constituents have at least doubled their operating income in the last three years, compared to only 22% of the CSI 300 constituents and 24% of the constituents in the MSCI China index. And in a clear illustration of the importance of knowing what to exclude as much as knowing what to include, Figure 12 shows that 37% of CSI 300 companies and 33% of MSCI China's companies had negative operating income growth in the last three years, compared to only 5% of MarketGrader's companies. For the CSI SOE Composite Index, the number was 41%.

Figure 11. Percentage of Index Constituents with 3-Year Sales Growth by Select Ranges

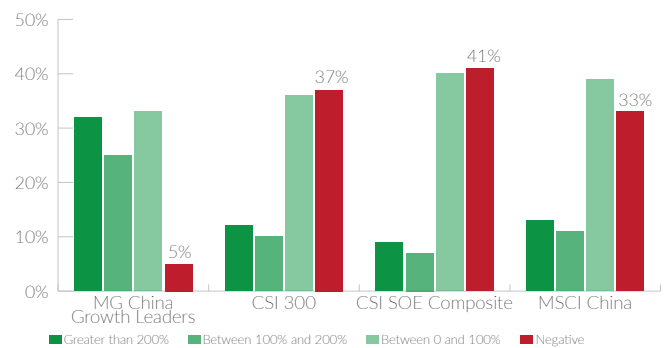


Sales growth is measured as the most recent trailing 12-month figures compared to the figures for the 12 months ended three years earlier, excluding companies in the Financial sector. Sources: FactSet, MarketGrader, China Securities Index Co.

Not surprisingly, the growth in sales and operating income described above are also reflected in each index's profitability measures as presented in Figure 13. For MarketGrader, 47% of the constituents had a trailing 12-month operating margin in excess of 20%, compared to only 18% for the CSI 300, 11% for the CSI SOE Composite, and 22% for MSCI China. Perhaps the most telling amongst all the metrics, especially in the context of the oversized

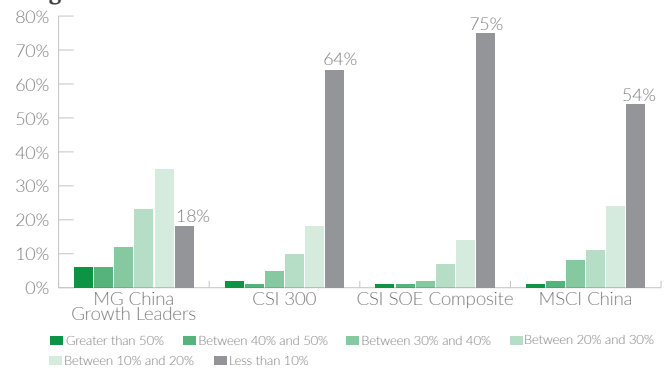
role SOEs play in China's equity market as highlighted throughout this paper, is that three quarters of all SOEs in China have a return on equity below 10%, confirming our thesis that these companies' financial decisions have little to do with generating shareholder returns and much to do with acting as agents on behalf the Chinese state in its various forms. By comparison, 42% of all companies in the CSI 300 Index and the MSCI China Index had a return on equity below 10%. For MarketGrader's Growth Leaders, the number was only 11%.

Figure 12. Percentage of Index Constituents with 3-Year Operating Income Growth by Select Ranges



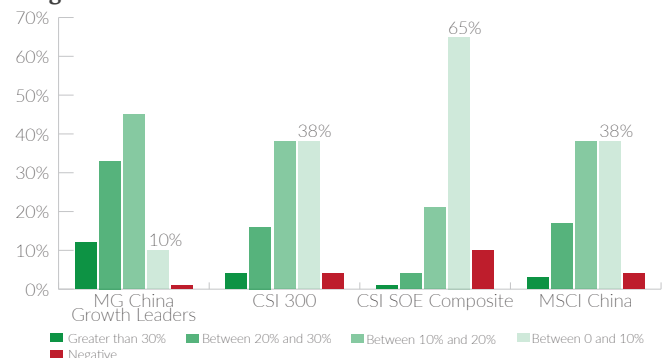
Operating income growth is measured as the most recent trailing 12-month figures compared to the figures for the 12 months ended three years earlier, excluding companies in the Financial sector. Sources: FactSet, MarketGrader, China Securities Index Co.

Figure 13. Operating Margin, Trailing 12 Months, by Select Ranges



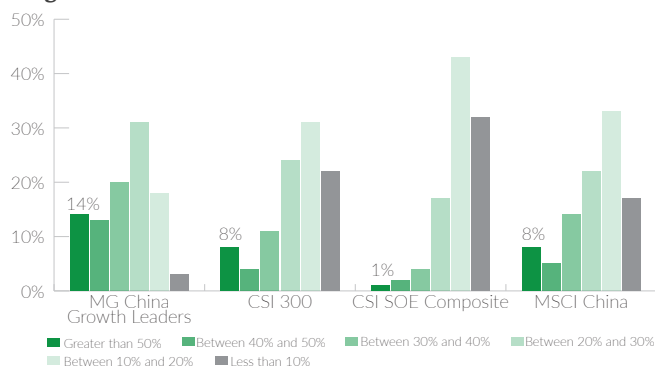
Data is as of April, 2020 and excludes all indexes' constituents in the Financials sector. Sources: FactSet, MarketGrader, China Securities Index Co.

Figure 14. Return on Equity, Trailing 12 Months, by Select Ranges



Data is as of April, 2020 and excludes all indexes' constituents in the Financials sector. Sources: FactSet, MarketGrader, China Securities Index Co.

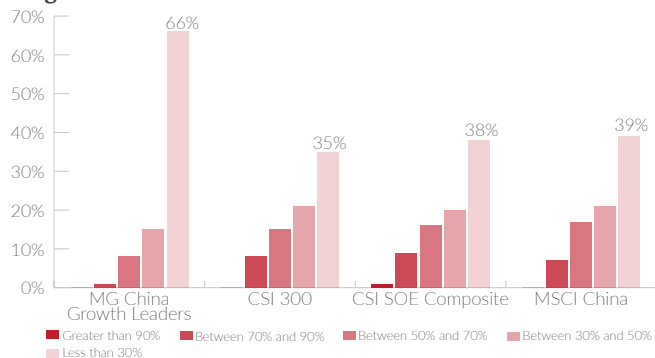
Figure 15. Gross Profitability, Trailing 12 Months, by Select Ranges



Gross Profitability is measured as trailing 12-month sales minus costs of goods sold as a percentage of total assets. It excludes all companies in the Financial Sector. Sources: FactSet, MarketGrader, China Securities Index Co.

Figure 16 shows the stark difference in leverage between MarketGrader’s Growth Leaders and the benchmarks. Whereas for two thirds of MarketGrader’s constituents total debt makes up less than 30% of their capital structure, for the CSI 300, the CSI SOE Composite and MSCI China indexes only 35%, 38% and 39% of constituents have less than 30% of their capital as debt. And ten percent of the CSI SOE Composite Index constituents have a capital structure where debt accounts for at least 70% of total capital.

Figure 16. Total Debt as a Percentage of Total Capital by Select Ranges

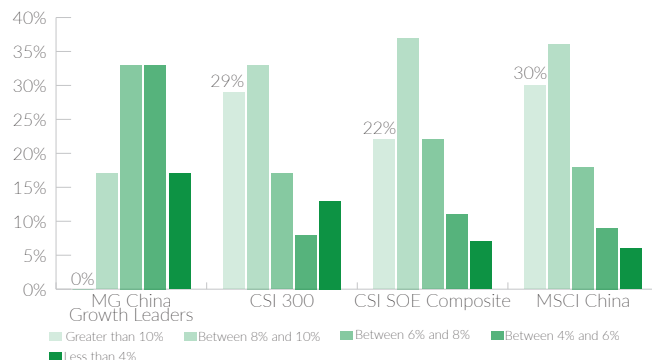


Data is as of April, 2020 and excludes all indexes’ constituents in the Financials sector. Sources: FactSet, MarketGrader, China Securities Index Co.

Another source of concern for investors should be the large stakes the benchmarks own in some of the country’s banks, many of which are highly leveraged, particularly among SOEs. One of our preferred ways of measuring bank leverage is by calculating what we call Tangible Equity Ratio, which refers to the percentage that each bank’s non-performing assets represent relative to its tangible equity and its loss reserves. As shown in Figure

17, 29% of all banks in the CSI 300 Index have non-performing assets that exceed 10% of their tangible equity plus their loss reserves, while for the SOE benchmark the number is 22% and, surprisingly, for MSCI China it is 30%. Among the six banks in MarketGrader’s Growth Leaders, none have a ratio that exceeds 10%.

Figure 17. Tangible Equity Ratio, April 2020, by Select Ranges



Tangible Equity Ratio is measured as non-performing assets as a percentage to total tangible equity and reserves for loans and asset losses. It is used only for Banks. Sources: FactSet, MarketGrader, China Securities Index Co.

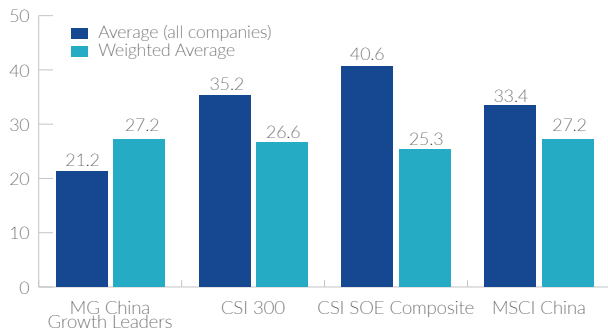
Does GARP Work in China?

While absolute valuation multiples such as price to earnings, price to book, price to sales and price to cash flow ratios are useful to help investors understand the price the market is willing to pay for a particular company’s stock, they lack context. This is especially true when comparing companies of different sizes and business models that operate in different industries and sectors and in different countries. Peer averages help to provide some context but don’t tell the whole story, since they don’t tell us much about the value of a company’s underlying business; or, more specifically, about the growth underlying such business. This is where GARP is useful, since it looks at a stock’s valuation in the context of the growth in its underlying business, through the lens of fundamentals such as sales, cash flow and net income. It is a methodology that instead of focusing on stock valuations first, analyzes companies in a way that is always tethered to growth, affording investors flexibility instead of rigidly adhering to fixed valuation multiples. In the case of the Chinese equity universe, this approach is particularly useful given the dichotomy described earlier, between the country’s rapid economic growth and the poor economic returns generated by a large portion of its publicly traded

companies. GARP—along with quality metrics—allows us to identify companies that are harnessing the country’s rapid growth rates, across all sectors, while ensuring that the stock prices of these companies are trading in line with their growth expectations. A useful metric in identifying relative value is the PEG ratio, which measures not just the stock’s price relative to its earnings but rather to its earnings growth.

A cursory analysis of the stock valuations of MarketGrader’s Growth Leaders in China shows that, based on the average trailing price to earnings (P/E) ratios, the Index itself is not that much cheaper than the benchmarks. In fact, as shown in Figure 18, the weighted P/E ratio (based on the weights of each index’s constituents), MarketGrader’s Index appears marginally more expensive than the CSI 300 Index and the CSI SOE Composite. This may be seen in Figure 18.

Figure 18. Average Trailing P/E Ratios

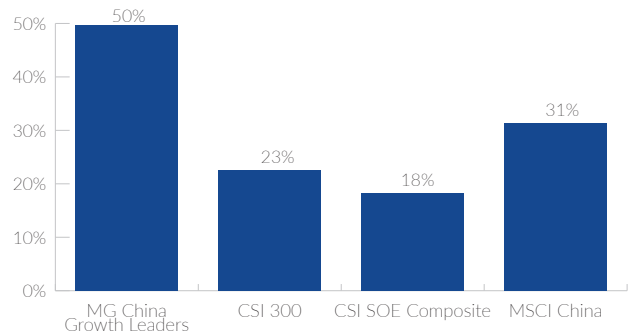


Tangible Equity Ratio is measured as non-performing assets as a percentage to total tangible equity and reserves for loans and asset losses. It is used only for Banks. Sources: FactSet, MarketGrader, China Securities Index Co.

However, as described earlier, all of these indexes are comprised of very different types of companies with very different fundamental profiles and, more importantly, very different growth rates in their underlying businesses. In fact, when looking at earnings per share growth, it is clear that the constituents of the MarketGrader China Growth Leaders are growing at a much faster rate than those of the other benchmarks (Figures 19 and 20). In other words, on a forward basis, based on estimates of future growth, the difference between MarketGrader and the benchmarks is even more pronounced, especially compared to the CSI Indexes as may be seen in Figure 21. Forward growth figures, however, are not as reliable in China where many companies lack analyst coverage and

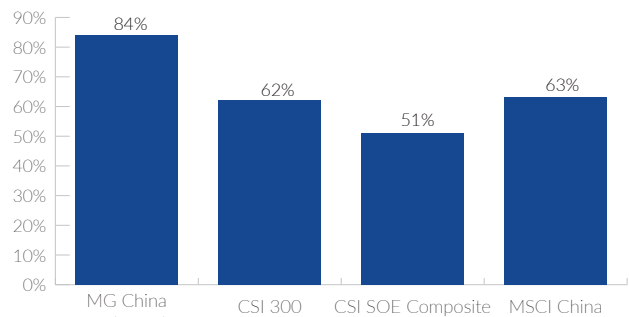
thus have no forward estimates. Therefore, the number of companies from which forward growth rates are deduced is much smaller than the underlying index⁸.

Figure 19. 1-Year Trailing EPS Growth, Weighted Average



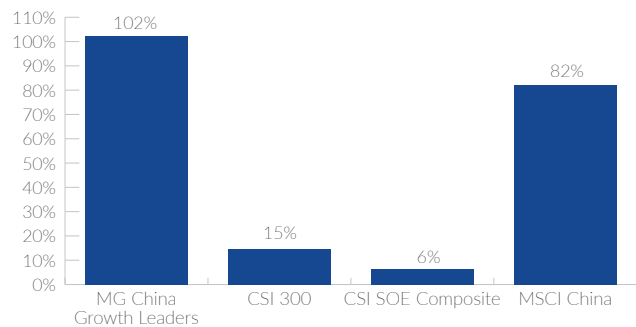
Sources: FactSet, MarketGrader, China Securities Index Co.

Figure 20. Percentage of Companies with Positive 1-Yr. Trailing EPS Growth by Index



Sources: FactSet, MarketGrader, China Securities Index Co.

Figure 21. 1-Year Forward EPS Growth, Weighted Average



Sources: FactSet, MarketGrader, China Securities Index Co.

The growth rates shown above provide the context for the evaluation of the MarketGrader China Growth Leaders and the benchmarks from a value perspective that is more useful than looking at standalone P/E ratios. When combining P/E ratios with the earnings growth rates (based on trailing growth) of each index’s constituents, the differ-

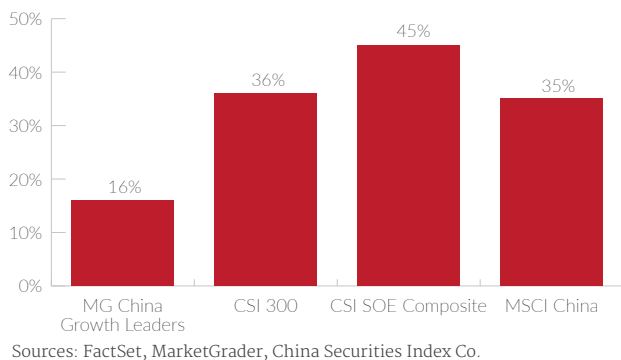
8. The forward EPS estimates illustrated in Figure 21 are based on the following analyst coverage of each benchmark’s total constituents: MarketGrader China All-Cap Growth Leaders: 66% coverage; CSI 300 Index: 77% coverage; CSI SOE Composite: 35% coverage; MSCI China Index: 84% coverage. Source: FactSet

ences are clear. Among all members of the MarketGrader China Growth Leaders, 54% have a PEG ratio between zero (0) and one (1), which is considered a very attractive valuation relative to the companies' underlying growth rate. Put differently, more than half of MarketGrader's constituents are valued at less than one unit of P/E for every unit of earnings growth. By comparison, the percentage of companies in the CSI 300, CSI SOE Composite and MSCI China indexes with PEGs between zero and one are 38%, 30% and 37%, respectively. This is presented in Figure 22. Figure 23 presents the percentage of companies with negative PEGs by index. Since the PEGs are only calculated for companies with positive P/Es it follows that if a company has a negative PEG ratio it has a negative trailing 12-month earnings per share growth.

Figure 22. Distribution of PEG Ratios by Index



Figure 23. Percentage of Companies With Negative PEG Ratios by Index



As described earlier, MarketGrader measures companies' fundamental strength from a GARP perspective, through 24 fundamental indicators. Each one of these offers a unique snapshot into a certain area of each company's

fundamentals. However, what is usually most challenging for investors is putting all of these snapshots together into a cohesive framework that helps them decide, simply, whether to buy a stock or not. Providing that framework and painting a clear picture of a given company's investment prospects, from the perspective of GARP, is what MarketGrader's Score (MG Score™) was designed to do, which is why it is the primary factor determining a company's inclusion to a MarketGrader index. In China this is particularly useful given the prevalence of underperforming SOEs in the equity market. Figure 24 presents a breakdown of China's benchmarks by MG Score™. This figure offers a succinct summary of the quality of each of the indexes based on the financial and economic strength of the companies that constitute each of the indexes.

Figure 24. MarketGrader Ratings Breakdown by Index, April 2020



Conclusion

In just three decades China's equity markets have evolved significantly from their humble origins in the 1990s. However, they still exhibit many of the structural deficiencies germane to emerging markets. Investors often attribute the excessive equity market volatility and inconsistent returns to a lack of understanding by Chinese retail investors as to the merits of long-term investing together with a dearth of broad institutional ownership that is typical in developed equity markets. And while speculation is indeed rampant among Chinese investors, the fact remains that in a market that is now the second largest in the world, too few retail investors own stocks to make much of a difference in stock performance.

MarketGrader's research shows that many of the problems that still plague China's equity markets can be traced to the dual ownership structure promoted by the government in the early days of China's privatization drive. This, coupled with strict capital controls that forced many of China's most promising companies to list outside Mainland China's exchanges, created an investment culture of insiders versus outsiders, where the insiders are the central and local governments who are still majority owners of almost half of all companies listed publicly in China's domestic exchanges (SOEs). It is not a coincidence that these SOEs were the drivers of much of China's industrialization program that made the country a manufacturing powerhouse in less than four decades. They are the resource-heavy, old-line industrial companies in the materials, oil & gas, utilities and manufacturing sectors along with the state-owned banks that continue to fuel their growth with credit that is essentially backed by the state. Consequently, these SOEs grew in size to rival some of the largest companies in the world and as a result came to dominate the market cap-weighted indices that investors have used for years as benchmarks for China's stock market.

There is, however, a newer crop of private companies in China that have grown alongside the SOEs segment of the country's equity market. While not all are exclusively so-called 'new economy' companies, many of them are consumer-facing, service providers or high valued-added manufacturers in areas such as semiconductors, networking equipment and Internet infrastructure. In an era of deglobalization, these Chinese companies stand to benefit the most from the country's continued rise to developed market status on the back of a massive middle class with rising disposable incomes. Identifying and gaining exposure to these companies requires indexes that incorporate a stock selection methodology founded on the concepts of quality fundamentals. It also requires long-term thinking, particularly at a time when investors might be reevaluating their China exposure based on geopolitical tensions. While this political conflict will be with us for years, the benefits from China's ongoing economic growth will continue to accrue to the country's best companies, especially if foreign firms disengage from the country in the next few years. Therefore, it is incumbent upon investors to decide how to best participate in China's domestic growth and benchmark their exposure to Chinese equities. The MarketGrader China Growth Leaders Index, which collects the country's most fundamentally sound companies and largely excludes SOEs as an outcome of selection, might be one such benchmark.

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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