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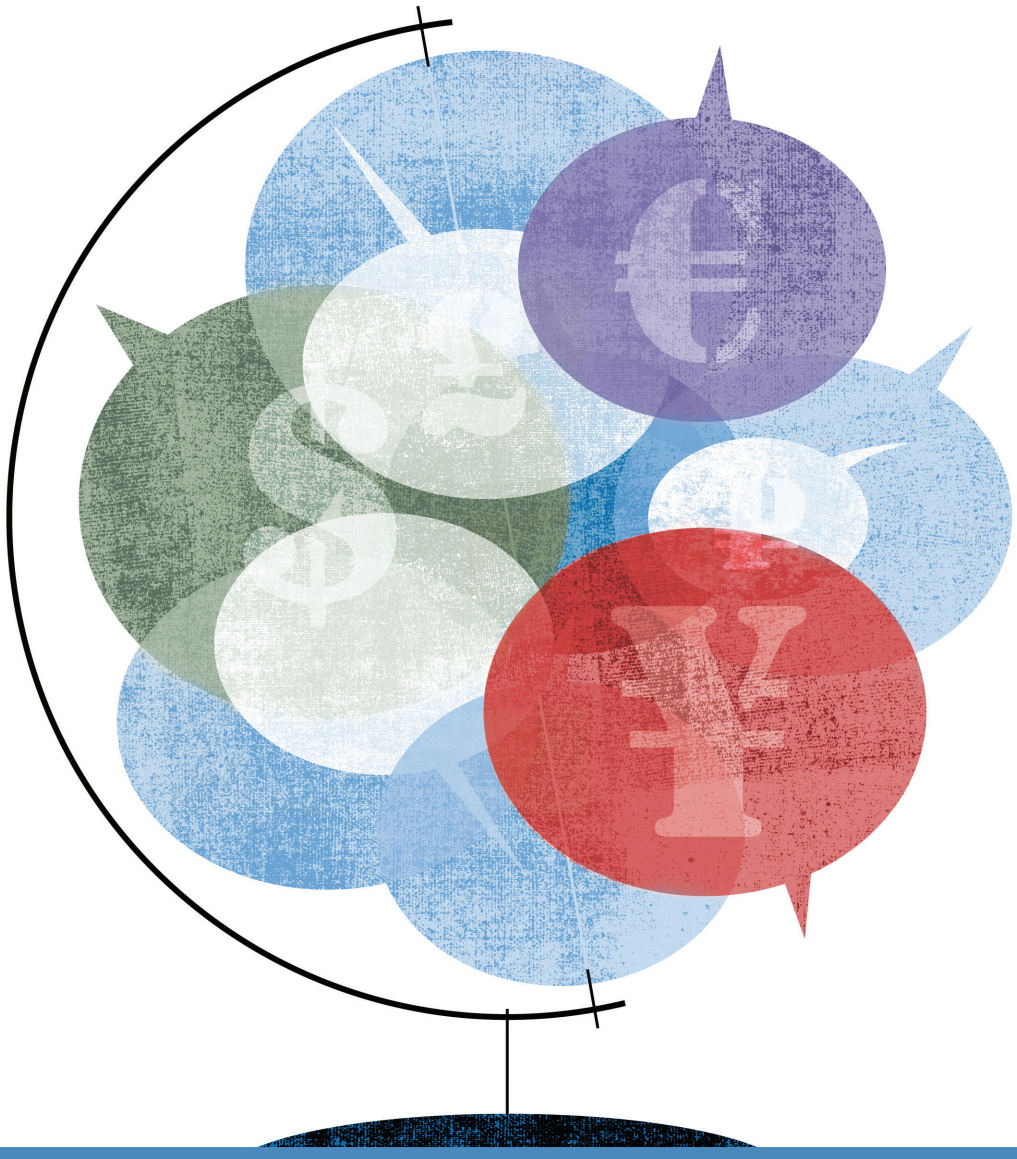

# A Primer on the Financial Policies of Chinese Firms

## Takeaways from a multi-country comparison

J.P.Morgan

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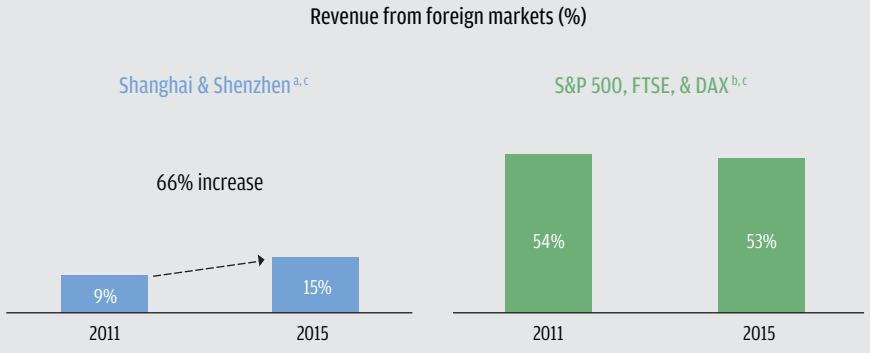
# 1. Introduction

Chinese firms have grown rapidly over the past few decades. **Strikingly, the aggregate market capitalization of public firms in China grew from $0.4 trillion in 2005 to $5.0 trillion today.** In contrast, the corresponding growth in the United States was from $10.8 trillion to $15.6 trillion.[1] Chinese stock markets now represent the second largest market capitalization in the world. More important, the global reach of Chinese firms is also on the rise.

In a recent report, we highlighted the tremendous growth in cross-border M&A activity by Chinese firms in the past two years: from $66 billion to $106 billion.[2] With this surge in outward-bound M&A by Chinese companies, combined with strong organic global growth, it is not surprising that large Chinese firms' revenue from foreign markets increased by 66% in less than five years (Figure 1). As a result, **Chinese firms now increasingly face many of the same issues that firms in other countries have historically confronted.**[1]

**Figure 1**

**Chinese firms are increasingly becoming more global**




Source: J.P. Morgan, Bloomberg, FactSet with year-end data on 12/31/2011 and 12/31/2015
[a] Population includes largest Shanghai/Shenzhen non-financial companies with market capitalization over US$2bn
[b] Population includes all non-financials companies in each index
[c] Median for each index

**Despite their expanding size and global presence, Chinese firms do not have financial policies that are comparable to those of large firms in other major markets.** How different are these financial policies? Does the rapid recent globalization mean that, over time, the financial policies of Chinese firms will evolve to become more comparable with those of large, global firms?

To shed light on these important issues, we compare large Chinese firms to sizable firms in the U.S., the U.K. and Germany. Our findings should help senior executives and board of Chinese firms make more informed financial policy decisions to fuel their global expansion.

[1] In this report, the Chinese firms analyzed are the 962 non-financial A share listed firms on the Shanghai Stock Exchange Composite Index, the 1,670 non-financial A share listed firms on the Shenzhen Stock Exchange Composite Index and 33 state-owned enterprises (SOEs) for which data is available. The global firms analyzed are the 412 non-financial U.S. firms that constitute the S&P 500 index, the 77 non-financial U.K. firms that constitute the FTSE index and the 95 non-financial German firms that constitute the DAX index

[2] For further reading, please see our June 2016 report titled *China's Increasing Outbound M&A: Key drivers behind the trend* found at https://www.jpmorgan.com/country/US/en/insights/chinas-key-drivers

Our takeaways can also help management teams of non-Chinese companies, which increasingly compete with globalizing Chinese firms. **Key insights of this report include:**

- Chinese firms are about one turn of EBITDA—or **over 50% more leveraged**—than their global counterparts
- The leverage differences are **most pronounced for the largest Chinese firms**
- Relative to firms listed in Shanghai, **the leverage of Shenzhen-listed firms increased more, but from a lower level**. Hence the Shenzhen-listed firms' debt ratios are comparable to those of U.S. and U.K. firms
- The higher leverage for Chinese companies is very specific to the **industrial and materials sectors**. Among healthcare, consumer staples, consumer discretionary and utility firms, the leverage of Chinese companies is comparable to their international peers
- Chinese firms' debt is **skewed away from bonds and toward bank and government loans.** These companies have a third or less of their debt in bonds, versus about 75% for large German firms, and almost 90% for large U.S. and U.K. firms
- Chinese firms' debt is short-dated, with **debt maturities of one to two years versus about nine years for large U.S. firms**
- Despite their greater leverage, the **ROEs of Chinese firms are meaningfully lower** than those of firms in the three other major markets we analyzed
- Operational improvements of 10% of EBITDA, and **equity raises of 10%–25% of their market capitalization**, would bring Chinese firms' leverage in line with companies in major markets

These striking differences highlight that Chinese firms, and perhaps their global competitors, could benefit from revisiting their capital structures.

EXECUTIVE TAKEAWAY

The current financial policies of Chinese firms are very different from those of large global peers in the U.S. the U.K. and Germany. Chinese firms have materially more leverage, a much higher reliance on loans vs. bonds, and maturities that are almost 80% shorter than those of typical U.S. firms. To bring their balance sheets in line with global peers, Chinese firms might need to raise over 5 trillion yuan (about 17% of their market capitalization) in equity to de-leverage, and issue over 5 trillion yuan of bonds, to reduce their reliance on loans, as well as to extend debt maturities. Modifying financial and operational policies in such a major way could be challenging for all stakeholders, and cause some potential dislocation in the short run. It is, however, a path that can ensure that Chinese companies create the most value in the long run.

## 2. More leverage, especially for the larger Chinese firms

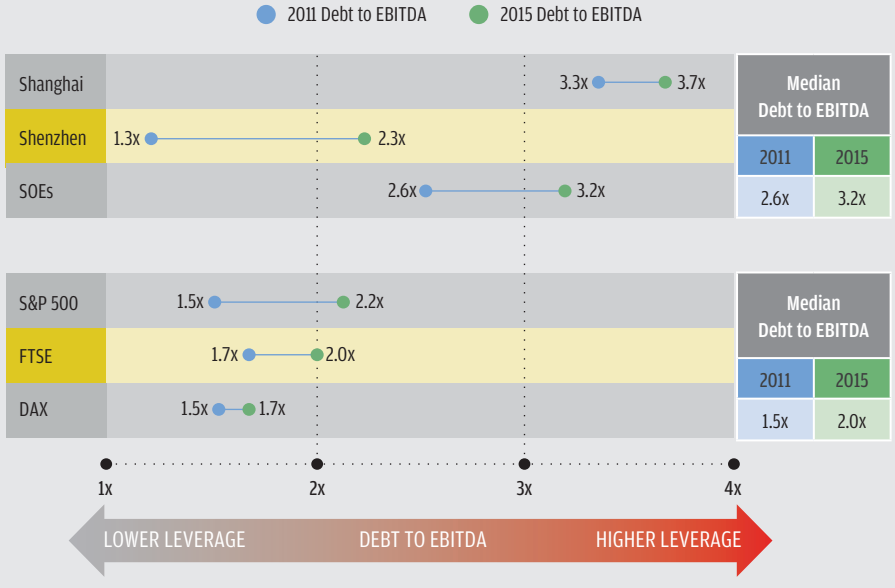
The capital structures of Chinese firms differ meaningfully from those of large global firms in other nations. With debt to EBITDA leverage of 2.6x, Chinese firms were about one turn of EBITDA more leveraged in 2011 than large firms in the U.S., the U.K. and Germany (Figure 2). Since 2011, firms have generally ramped up their leverage levels across these three global markets.

Perhaps motivated by similar availability to inexpensive funding, leverage increases were comparable, by about a half turn of EBITDA, in China and most of the other markets. As a result, at the end of 2015, **Chinese firms remain one turn more leveraged than large firms in the other markets**. These patterns applied not only to those Chinese firms listed in Shanghai and Shenzhen, but also the state-owned enterprises (SOEs) for which data is available.

As an interesting reference point, the median debt to EBITDA ratio for firms listed in Shanghai was 3.7x as of 2015. Only 14% of firms in the S&P 500, 12% of firms in the FTSE and 3% of firms in the DAX had higher leverage ratios at that time.

**Figure 2**

**Chinese firms are about one turn more leveraged than global peers**




Source: J.P. Morgan, Bloomberg, FactSet, Standard & Poor's Global Ratings with year-end data on 12/31/2011 and 12/31/2015
12/31/2014 was the latest data for a number of Chinese SOEs in the Standard & Poor's Global Ratings financial database
Note: Population includes all non-financial companies in each index; debt to EBITDA data is median value for each index

## The most leveraged firms are potentially the most affected

Median leverage ratios have grown for all categories of Chinese firms in the post-crisis period (Figure 3). The leverage of the SOEs increased by 0.6x from 2.6x to 3.2x. The rise in leverage of firms traded in Shanghai was comparable, while the uptick was a full turn of EBITDA for firms listed in Shenzhen. Despite these large increases, the leverage of Shenzhen firms remains generally in line with the leverage of U.S. and U.K. firms, since they started from a lower initial level of 1.3x.

For the top decile debt holders on the Shanghai and Shenzhen markets, leverage ratios not only started at higher levels, but also grew more rapidly (roughly twice as fast as the median firm increase during this time period). **The increase in leverage has therefore been particularly noteworthy for those firms with the greatest amount of outstanding debt.**

**Figure 3**

**Leverage increased across the board, but noticeably more for the most indebted firms**

Debt to EBITDA

| | | 2011 | 2015 | |
|---|---|---|---|---|
| SHANGHAI | Median | 3.3x | 3.7x | |
| | Top decile debt holders | 6.5x | 8.5x | +2.0X |
| SHENZHEN | Median | 1.3x | 2.3x | |
| | Top decile debt holders | 5.8x | 8.4x | +2.6X |
| SOEs | Median | 2.6x | 3.2x | |
| | Top decile debt holders | 1.6x | 1.9x | +0.3X |

Source: J.P. Morgan, Bloomberg, FactSet, Standard & Poor's Global Ratings with year-end data on 12/31/2011 and 12/31/2015
12/31/2014 was the latest data for a number of Chinese SOEs in the Standard & Poor's Global Ratings financial and database
Note: Population includes all non-financial companies in each index

Chinese firms with the greatest debt outstanding and highest leverage levels are likely to be among the largest firms. While size and scale are the primary drivers of ratings quality and debt capacity around the world, the incremental debt capacity they create is likely higher in China because of the implicit government support, which has allowed the largest Chinese firms to traditionally operate with leverage ratios that are well above the typical levels of global peers. **This leverage differential has, however, widened**

**in recent years, and to potentially unsustainable levels**. That the largest Chinese firms also tend to have the greatest leverage means that the required capital raise of Chinese firms—to bring their leverage levels to global norms—is also high.

EXECUTIVE TAKEAWAY

The rise in leverage among Chinese firms has been comparable to the rise at firms in other global markets. But because Chinese firms generally started from higher leverage levels, many could find themselves in untenable positions, particularly those firms listed in Shanghai. We also note that the increase in leverage has been most pronounced among the largest firms. This trend has likely been driven by implicit government support. In an evolving economy, however, governmental backstopping may weaken. The impact of rising leverage, combined with the risk of potentially reduced government backing, accentuates the benefits of balance sheet de-leveraging for the largest firms in China.

## 3. The industrial and materials sectors drive the high leverage levels

Because China is primarily a manufacturing-oriented economy, the Shanghai and Shenzhen indices include a disproportionately high number of firms in the industrial and materials sectors in comparison to global peers. Indeed, firms in these two sectors collectively account for half of the listed firms in China. It is therefore **particularly interesting that the industrial and materials sectors, along with energy, are the most leveraged** (Figure 4). The leverage differential between Chinese and global firms is particularly pronounced here. At 5.8x, the median debt to EBITDA of Chinese firms in these three sectors is over twice that of their global sector peers.

Not all sectors of the Chinese economy have displayed such a dramatic increase in leverage. In several sectors, such as **healthcare, technology and Utilities, median leverage ratios actually declined for Chinese firms,** even as they rose in the U.S., the U.K. and Germany. For these sectors, as well as for telecommunication services, leverage ratios of Chinese companies are similar to, or even at the lower end of, those of their global peers. However, a word of caution is in order for these relatively "lean sectors": Even with relatively healthy balance sheets, these businesses could find credit hard to come by should key sectors of the economy become credit constrained.

**Figure 4**

**The industrial and materials sectors are the most leveraged in China**

| 2011 | | | | | | 2015 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SHANGHAI | SHENZHEN | S&P 500 | FTSE | DAX | INDEX | SHANGHAI | SHENZHEN | S&P 500 | FTSE | DAX |
| 2.1x | 1.4x | 1.5x | 1.7x | 2.0x | Consumer Discretionary | 2.4x | 2.2x | 2.0x | 1.2x | 1.8x |
| 1.4x | 1.3x | 1.7x | 1.9x | 1.8x | Consumer Staples | 1.1x | 2.1x | 2.3x | 2.3x | 1.7x |
| 1.6x | 1.2x | 1.0x | 0.7x | N/A | Energy | 6.3x | 2.7x | 3.4x | 2.5x | N/A |
| 1.9x | 0.5x | 1.4x | 0.6x | 2.2x | Healthcare | 1.6x | 0.9x | 2.5x | 1.4x | 2.2x |
| 4.2x | 1.4x | 1.7x | 2.6x | 1.8x | Industrials | 4.7x | 2.8x | 2.2x | 2.0x | 1.9x |
| 3.4x | 0.7x | 0.7x | 0.2x | 0.6x | Information Technology | 2.8x | 1.5x | 1.5x | 0.9x | 1.3x |
| 4.3x | 2.2x | 2.0x | 1.1x | 1.3x | Materials | 5.8x | 3.6x | 2.5x | 2.3x | 1.8x |
| 1.9x | 0.0x | 3.6x | 2.2x | 2.2x | Telecom Services | 1.0x | 0.0x | 3.0x | 2.9x | 1.8x |
| 6.0x | 6.5x | 4.2x | 4.6x | 3.7x | Utilities | 3.9x | 4.3x | 4.3x | 4.9x | 2.7x |
| 3.3x | 1.3x | 1.5x | 1.7x | 1.5x | INDEX MEDIAN | 3.7x | 2.3x | 2.2x | 2.0x | 1.7x |

Source: J.P. Morgan, Bloomberg, FactSet with year-end data on 12/31/2011 and 12/31/2015
Note: Population includes all non-financial companies in each index

**EXECUTIVE TAKEAWAY**

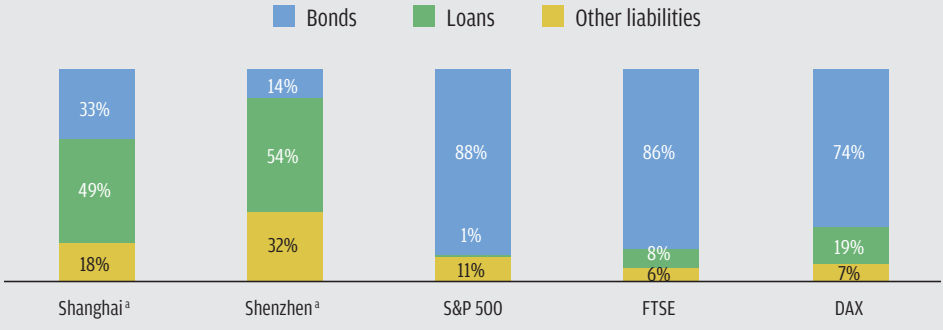
The leverage differential between Chinese and global firms has widened in recent years. This increase in leverage has been led by two critical sectors for the Chinese economy: industrials and materials. Firms in these areas are two to three times more leveraged than their global peers. While other parts of the Chinese economy, such as consumer and healthcare, have more moderate levels of leverage, they should be wary of contagion if credit dries up for industrial and materials companies, which together represent about half of the firms listed on the Shanghai and Shenzhen exchanges.

## 4. Fewer bonds, more loans, much shorter maturities

The leverage of Chinese firms is remarkable not just because of its high levels and high concentration in a few sectors: **Chinese firms also have very different debt structures. They tend to rely more on loans, as opposed to other global firms, which rely more on public bonds.** Figure 5 indicates that roughly half of the debt of Chinese firms is in the form of loans. (While this analysis is based on the limited debt-structure data available for Chinese firms, anecdotal evidence corroborates this theme.) The picture is vastly different for firms in the other global markets measured, which have 80% to 90% of their debt in the form of bonds. A greater dependency on loans is not necessarily a negative, because loans are often associated with lower interest rates. But loans may be restrictive in terms of market capacity, tenor, and covenants.

**Figure 5**

**Chinese firms' debt composition: fewer bonds, more loans**

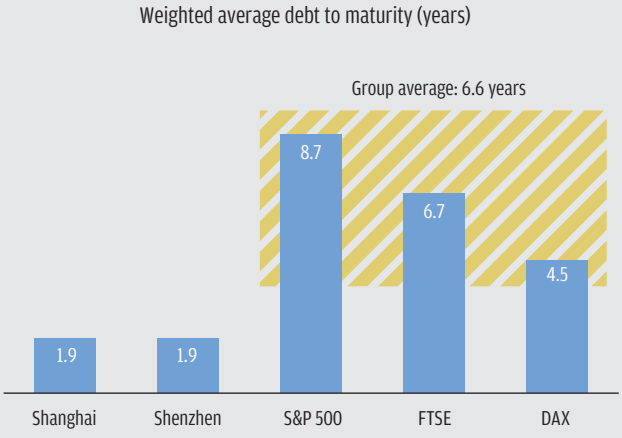



Source: J.P. Morgan, Bloomberg, FactSet with year-end debt data as of 12/31/2015
Note: Population includes all non-financial companies in each index;
[a] Only 38 of 962 Shanghai companies and 11 of 1,670 Shenzhen companies report loan and bond debt composition data

Overall, loans tend to be available only in meaningfully shorter tenors than bonds. The impact of the shorter tenor for loans is very visible in cross-market debt comparisons (Figure 6). **Chinese firms have a lot more short-term debt than global peers**: The weighted average debt maturity is 1.9 years for firms listed in Shanghai and Shenzhen versus 8.7 years, 6.7 years and 4.5 years for firms in the S&P 500, FTSE and DAX, respectively. Nearly 40% of firms listed in Shanghai and over half of firms listed in Shenzhen, as measured by market capitalization, have a weighted average debt maturity of less than two years. This compares to less than 2% of firms in the U.S., U.K. and Germany having such low debt maturity.

**Figure 6**

**Chinese firms have shorter debt maturity profiles**




| Percentage of firms with debt maturing in < 2 years | | | | | |
|---|---|---|---|---|---|
| | Shanghai | Shenzhen | S&P 500 | FTSE | DAX |
| By market capitalization | 38.0% | 52.5% | 1.0% | 2.4% | 1.3% |
| By EBITDA | 30.5% | 49.4% | 0.3% | 1.4% | 0.9% |

Source: J.P. Morgan, Bloomberg, FactSet with year-end data on 12/31/2015
Note: Population includes all non-financial companies in each index with data availability

Short-term funding may benefit Chinese firms today, because it enables them to raise capital relatively inexpensively. However, having more short-term debt requires firms to access the debt markets more frequently. This increases their liquidity risk and likelihood of being exposed to periods of credit rationing. Further, a negative aspect of shorter tenors is that it does not allow firms to lock in historically low rates through longer-dated debt.

EXECUTIVE TAKEAWAY

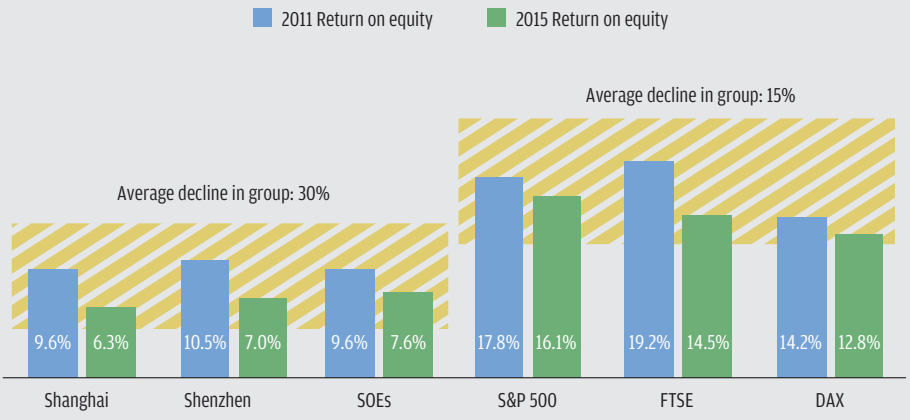
Relative to their U.S., U.K. and German peers, Chinese firms tend to rely meaningfully more on loans and, consequently, short-term debt. This short-tenor debt structure, combined with the higher debt levels, makes Chinese firms more susceptible to refinancing risk. Chinese firms can lower their exposure to liquidity and refinancing risk by terming out their debt and adopting more permanent financing in their capital structures.

## 5. Is higher leverage providing a commensurate payoff?

Return on equity (ROE), computed as a firm's net income per unit of book equity, is a frequently used as a measure of profitability. Figure 7 shows how ROEs around the world have fallen in recent years. **The decline is most pronounced in China, where ROEs have fallen by roughly one-third in the past four years**, compared with more modest declines of about 15% in the U.S. and Germany. This decrease in ROEs in China is perhaps driven by the prominence of the materials and industrial sectors among large Chinese firms. These sectors have suffered significant declines during the commodity downturn of the past few years.

**Figure 7**

**ROEs have fallen around the world, but particularly so in China**




Source: J.P. Morgan, Bloomberg, FactSet, Standard & Poor's Global Ratings with year-end data on 12/31/2011 and 12/31/2015
12/31/2014 was the latest data for a number of Chinese SOEs in the Standard & Poor's Global Ratings financial database
Note: Population includes all non-financial companies in each index

When interest rates are lower than the return on assets (ROA), ROE should mathematically increase with the fraction of debt in a firm's capital structure. Yet, despite Chinese firms increasing their leverage at a more rapid pace than global firms, their ROEs declined, and at a faster pace than their global competitors. This result is consistent with Chinese firms slowing down operationally, followed by low ROEs, thereby generating insufficient cash flow to finance their expansion plans. As result, they have primarily relied on "cheap" debt capital to finance funding shortfalls.

EXECUTIVE TAKEAWAY

Despite their greater leverage, the ROEs of Chinese firms significantly lag the ROEs of global peers. This indicates that investors in these Chinese companies are not being rewarded for investing in firms with incremental leverage. Moreover, Chinese firms may not be profitable enough to generate sufficient internal capital to finance their many growth opportunities. As a result, Chinese firms may have relied primarily on loans, rather than external equity capital, which is perceived to be more expensive. In the long run, however, their lower ROEs and higher leverage leave Chinese firms more exposed to both firm-specific and economy-wide stress scenarios.

## 6. Developing sustainable capital structures for Chinese firms

**Key sectors of the Chinese economy may be over-leveraged, but they have reasonable paths toward achieving more sustainable capital structures.** De-leveraging balance sheets from a ~3.0x debt to EBITDA to 2.0x (the median of U.S. and European peers) can be accomplished by increasing EBITDA and/or raising equity capital to pay down debt obligations.

**Shanghai and Shenzhen firms in the aggregate would need to raise 5.4 trillion yuan (roughly 17% of current market capitalization) of equity capital to achieve a debt to EBITDA ratio of 2.0x** (Figure 8). Operational improvements could, however, lower this required capital raise. A 10% increase in EBITDA would reduce the required equity capital to be raised by about 10% to 4.9 trillion yuan. This amount could be further lowered to 3.7 trillion yuan if EBITDA increases 33%, thereby bringing the ROE of an average Chinese firm to 15%, in line with global peers.

Enhancing operational efficiency is challenging, requiring buy-in at all levels of the organization followed by changes in corporate behavior and then strict adherence to this long-term plan. Compared with the discrete nature of an equity raise, however, it will have a more permanent impact on the value of the firm, and in the long term will enhance the health and competiveness of the overall economy. Accordingly, we recommend that Chinese firms **focus on pulling both levers: raising external equity and improving operational efficiency** if they wish to rebalance their long-term capital structures.

**Figure 8**

**EBITDA improvement and required equity to de-leverage balance sheets**

| Equity needed to reach: | Required equity to be raised by Shanghai- and Shenzhen-listed firms | | |
|---|---|---|---|
| | No change in EBITDA | 10% increase in EBITDA | 33% increase in EBITDA [b] |
| Leverage of 3.0x | 2.9tn RMB | 2.1tn RMB | 0.4tn RMB |
| Leverage of 2.0x [a] | 5.4tn RMB | 4.9tn RMB | 3.7tn RMB |
| % of total market capitalization | 17% | 15% | 12% |

Source: J.P. Morgan, Bloomberg, FactSet with year-end data on 12/31/2015
Note: Population includes all non-financial companies in each index
[a] 2.0x is the 2015 median debt/EBITDA leverage multiple for S&P 500, FTSE and DAX
[b] 33% increase in EBITDA would equate to a 15% ROE which is 2015 median ROE of S&P 500, FTSE and DAX

**EXECUTIVE TAKEAWAY**

Chinese firms can implement various strategies to de-risk their capital structures and be more aligned with their global peers. A realistic and longer lasting approach to recapitalization would include sizable equity raises coupled with operational improvements. Raising equity capital equal to about 10% of their market capitalization, along with a 10% EBITDA improvement, would help firms listed in Shanghai and Shenzhen achieve leverage ratios comparable to global peers.

# 7. Action plan for Chinese firms

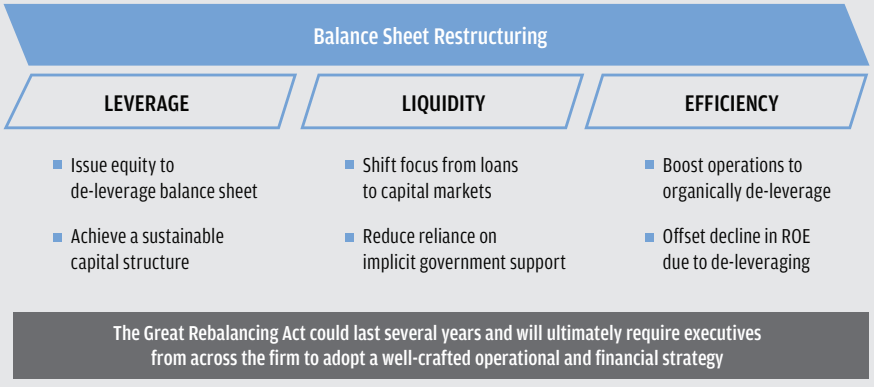
Chinese firms, particularly in the industrial and materials sectors, have increasingly relied on debt to fuel growth over the past few years. Their EBITDA is now low relative to their debt levels, leading to leverage ratios that are about twice that of global peers. Many firms in these sectors are, therefore, financially exposed to downside risks in the economy. Further, the reliance on shorter-tenor bank debt also means that these same firms are more exposed to stresses in bank liquidity and other factors in the financial sector.

To reduce their susceptibility to market dislocations, Chinese firms should consider reducing risk in their balance sheets. We propose a three-phased action plan (The Great Rebalancing Act) for Chinese firms and SOEs to modify their capital structures to be more comparable with their large global peers. **The action plan addresses each of the three major issues facing Chinese firms: high leverage, debt composition and operational efficiency** (Figure 9).

- **Leverage:** Actively raise equity in the capital markets to pay down debt obligations and de-leverage balance sheets to a more long-term sustainable standard
- **Liquidity:** With less leveraged balance sheets, shift the focus away from short-dated bank loans, and from reliance on the implicit government support, to extend maturities in the public bond market
- **Efficiency:** Enhance operational efficiency not only to achieve lower leverage, but also to generate sufficient cash flow so that more long-term growth can be financed through internal equity

**Figure 9**

**The Great Rebalancing Act: A three-phase corporate action plan**



The Great Rebalancing Act could last several years and ultimately encompass executives across the firm. **Decision-makers and boards should be dedicated enough to stick to the plan, yet nimble enough to refine their growth strategies to adjust capital allocations and modify risk management, as warranted by macro conditions.** U.S. and European peers adapt to changing global market dynamics. Chinese firms should also aim to do so, and, if not, be able to justify their rationale.

EXECUTIVE TAKEAWAY

As large global firms, Chinese companies should regularly review and refine their financial and operating strategies. They need to consider how, and justify why, they may be different from their global peers. Current financial metrics suggest many Chinese firms need to transition from their reliance on bank loans to bonds, recapitalize their balance sheets, and optimize business processes to continue to create shareholder value.

# Notes

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