Orient Capital Research

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China's Zombie Companies

A Worsening Problem

1. Summary: The Banks Face Greater Defaults

As the centerpiece of China's supply-side structural reform, the elimination of zombie companies has accelerated. Zombie firms, a term originally from Japan, are long-term loss-makers and firms that may have already ceased production but still have unpaid debts or other obligations. According to the National Academy of Development and Strategy (NADS), the proportion of zombie companies in China's industrial sectors reached a peak of ~30% in 2000 and maintained an average of 17.1% between 2002 and 2004. ***Although the percentage of zombie companies among industrial enterprises declined gradually after 2004 to an average of 7.41% between 2005 and 2013, it bounced back quickly after 2012 in terms of both number and proportion.***

Macro Implications – Will the Zombies Swamp China's Banks?

Our data suggest zombie companies are 13% of listed companies in China. We use this as a baseline although the percentage among non-listed firms is likely significantly higher due disclosure requirements for financial listings.

The 13% number is in line with the estimate of corporate non-performing loans of 15.5% calculated by the IMF in its April Financial Stability Report. This is estimated based on corporates whose interest coverage ratio (EBITDA divided by interest expense) is less than one. This would equate to $1.3 trillion of loans potentially at risk. They reduce this number by estimating that 60% of these loans would default, suggesting that, "potential bank losses on these loans could amount to $756 billion (7 percent of GDP). In addition, bank Tier 1 capital totals about $1.7 trillion, or 11.3 percent of system risk-weighted assets, and bank reserves are $356 billion.

If we use the 13% number and apply that to the corporate sector in general, we see a significant problem in bank loans, assets, revenue and profits. We find a similar number, $1.4 trillion in potential defaulting loans, as did the IMF in their estimates using interest coverage. This would have a significant impact on bank stability.

Potential Problems in China's Corporate Sector Using the Figure of 13% of Firms as Zombies

	Rmb Trln	Zombie's as % of industrial sector
Loans to Non-financial Institutions and Government Depts	71,967	9,356
Assets	73.5	10
Revenue	97.8	13
Profits	5.7	1
No of Enterprises	352,365	45,807

What's the End Game?

There are two possible outcomes: Closure, or rescue by the banks. Xi Jinping is stressing closure or capacity reductions through his Supply Side Reform Program. This is meeting opposition among local governments concerned about loss of employment. These governments force the banks to accommodate the corporate's capital requirements and extend the losses. We discuss this example in a company called Longmay.

The result is likely to be:

1) **Bank Problems.** Stress on the banks, mainly the smaller rural or city banks that are more closely connected to local governments.

2) **M&A.** Mergers to create giants that are a) either more efficient; or b) can maneuver their debts on to the balance sheets of the larger, state banks.

3) **Bailouts.** Direct subsidies by the central government to favored zombies that are considered "too big to fail."

Our analysis adds granularity to the IMF calculations. We conclude that:

- **Steel and Property are Most at Risk.** Steel (51.43%), property (44.53%), and building decorations (31.76%), have the largest proportion of zombie firms. Both the reforms under Xi Jinping that will accelerate the closure of steel firms, and the declining property market, will force the banks to accept additional debt. This will come either in rising defaults or fall under the debt-for-equity swap program.

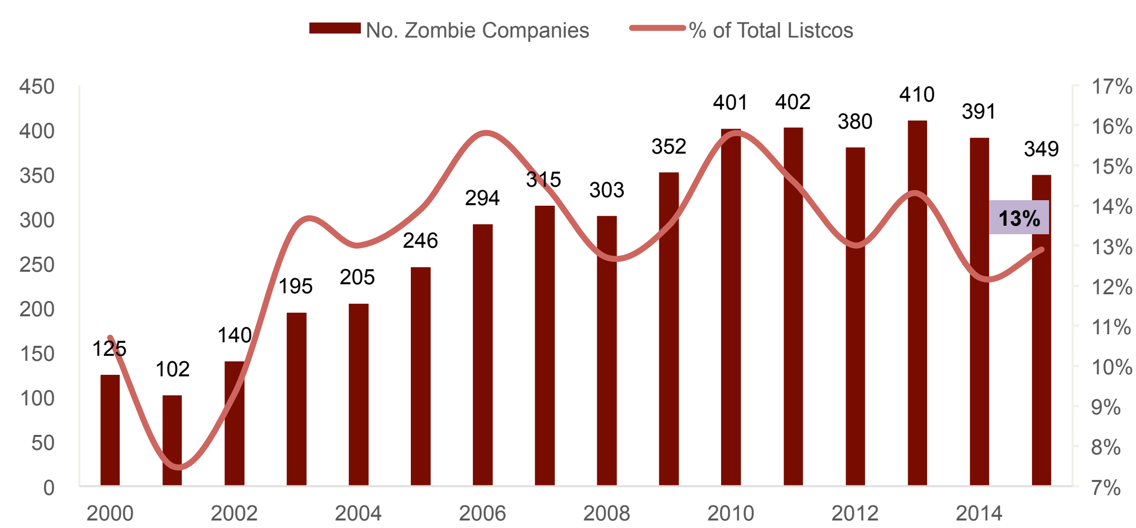
- **Western Regions Will Suffer.** Western China has received additional bank loans and subsidies, leading to the creation of a rising number of zombie firms. We expect that declining availability of bank loans and a flattening of subsidies will cause many of these firms to fail, with the potential for rising unrest in areas with large minority populations.

- **No More Stimulus.** The 2008 stimulus package reduced the number of zombie firms. As this capital flow has eased, the potential is rising for defaults among zombie firms.

- **Too Much Local Control.** Many zombie firms have been encouraged by local governments as a job creation exercise. They are now choosing too reduce capacity rather than outright close zombie firms. This is likely to perpetuate the problem and make Beijing's restructuring efforts more difficult.

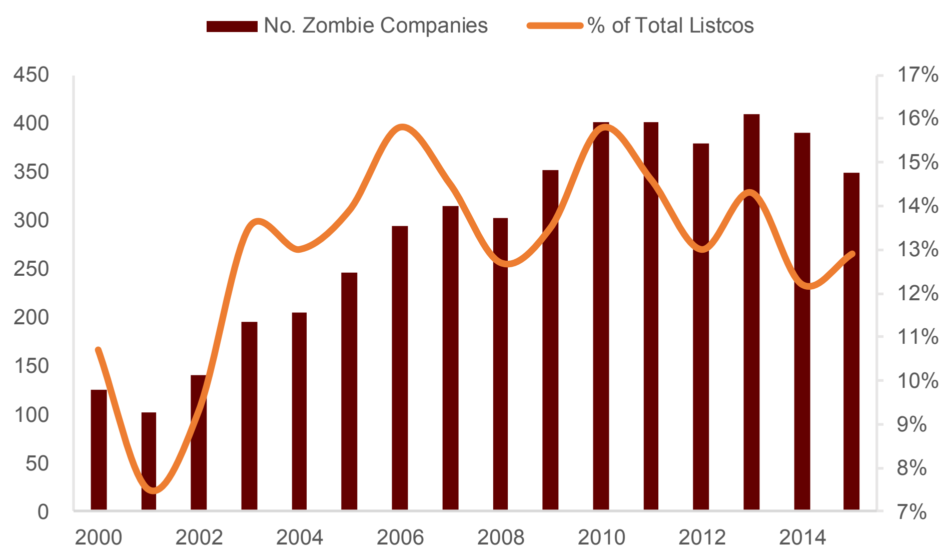
Zombie Firms in China

Figure 1: # of Zombie Companies in the Industrial Sector



Source: NADS, Company data, OCR

Figure 2: # of Listed Zombie Companies



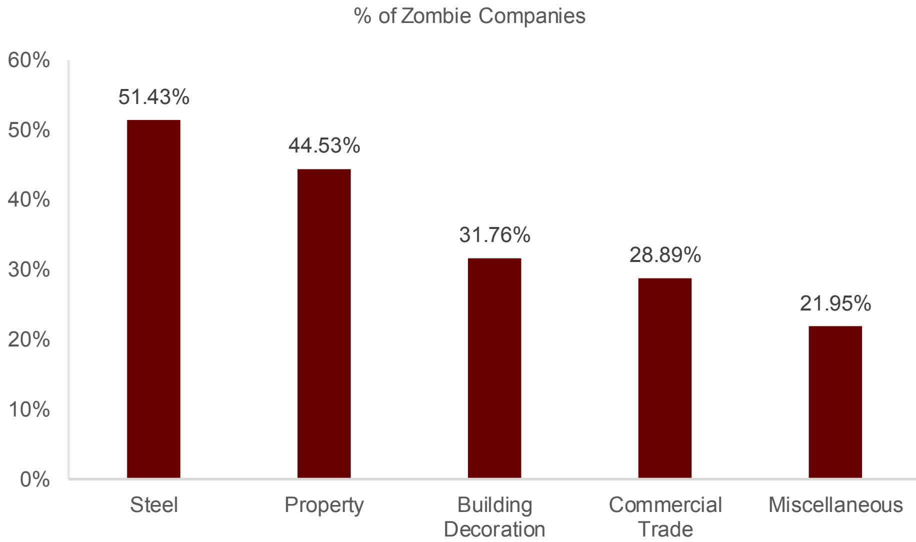
Source: NADS, Company data, OCR

Among listed companies, the number of zombie companies rose sharply from 2001 but stabilized after 2010. It reached peak of 410 in 2013 and then started to shrink. Nevertheless, the proportion of zombie companies among listcos has been quite stable since 2013, fluctuating around 13%.

2. Industry Profile

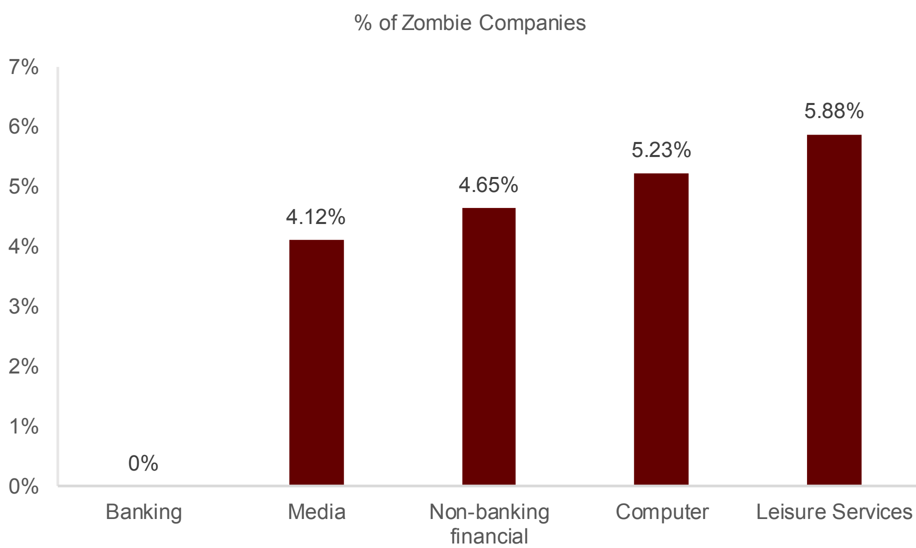
Steel (51.43%), property (44.53%), building decoration (31.76%), commercial trade (28.89%) and miscellaneous (21.95%) are the top five sectors with the greatest proportion of zombie companies. In contrast, banking (0%), media (4.12%), non-banking financial (4.65%), computer (5.23%) and leisure services (5.88%) are the healthiest industries with the least proportion of zombie companies.

Figure 3: Top five industries with the greatest proportion of zombie companies



Source: NADS, Company data, OCR

Figure 4: The five healthiest industries with the least zombie companies



Source: NADS, Company data, OCR

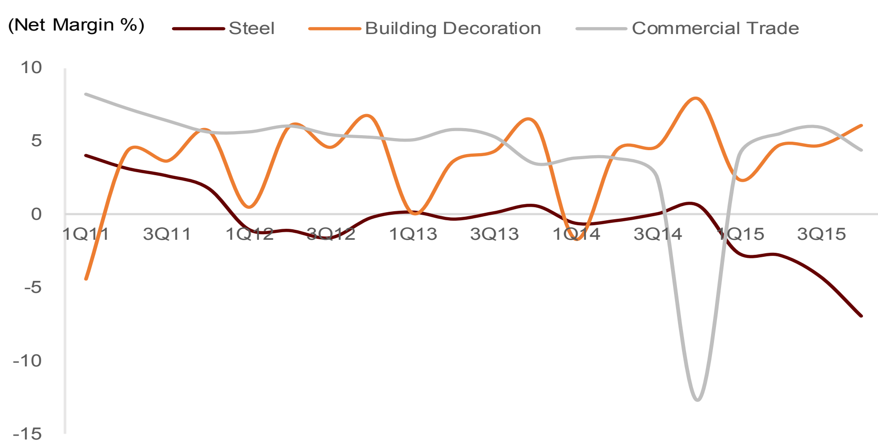
Figure 5: Detailed Industry Breakdown

Industry	# of Company	# of Zombie Company	% of Zombie Company
Banking	16	0	0.0%
Media	97	4	4.1%
Non-banking financial	43	2	4.7%
Computer	153	8	5.2%
Leisure Services	34	2	5.9%
Electronics	158	11	7.0%
Textiles & Garments	78	6	7.7%
Telecom	65	5	7.7%
Agriculture & Farming	85	7	8.2%
Food & Beverage	78	7	9.0%
Household Appliances	60	6	10.0%
Electrical Equipments	160	17	10.6%
Mechanical Equipments	270	29	10.7%
Chemical	259	28	10.8%
Construction Materials	72	8	11.1%
Healthcare	217	26	12.0%
Light Manufacturing	98	12	12.2%
National Defense	34	5	14.7%
Auto	124	19	15.3%
Non-Ferrous Metal	106	18	17.0%
Mining	57	10	17.5%
Transportation	91	16	17.6%
Public Utility	122	25	20.5%
Miscellaneous	41	9	22.0%
Commercial Trade	90	26	28.9%
Building Decoration	85	27	31.8%
Property	137	61	44.5%
Steel	35	18	51.4%
Total	**2,865**	**412**	**14.4%**

Source: NADS, Wind, OCR

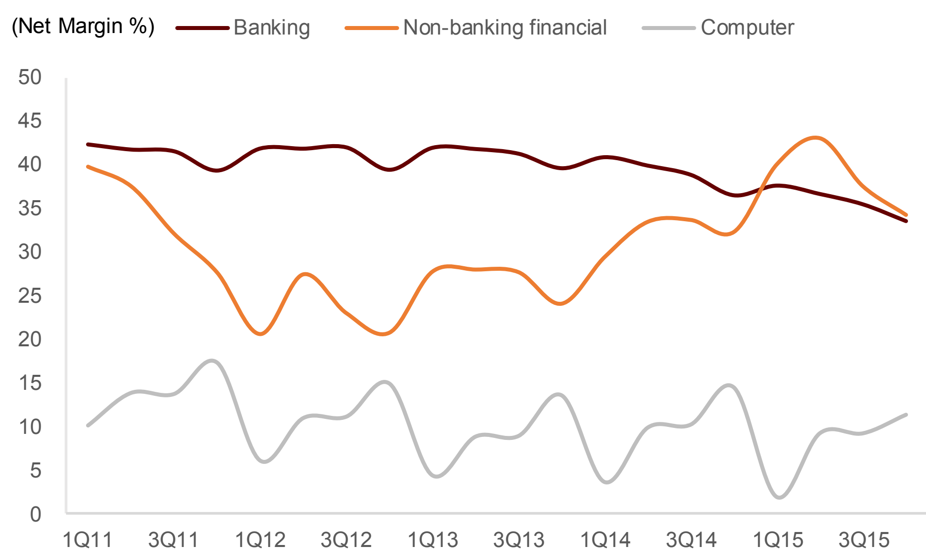
Due to poor profitability, most zombie companies survive on loans provided by local banks that act at the behest of local governments. These policy loans result in lower profit margins. Thus, the more zombie companies there are in an industry, the lower their profit margins and the higher their debt ratios.

Figure 6: Net profit margin of top five industries with the most zombie companies



Source: NADS, Company data, OCR

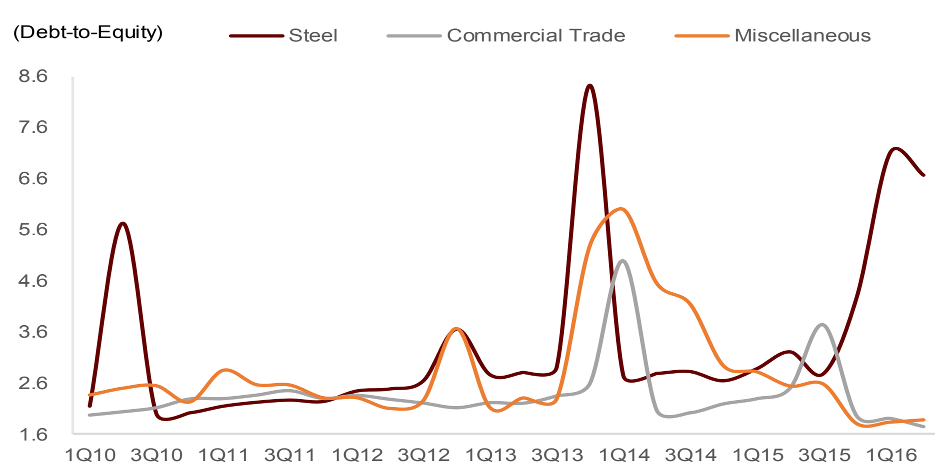
Figure 7: Net profit margin of the five healthiest industries with the least zombie companies



Source: NADS, Company data, OCR

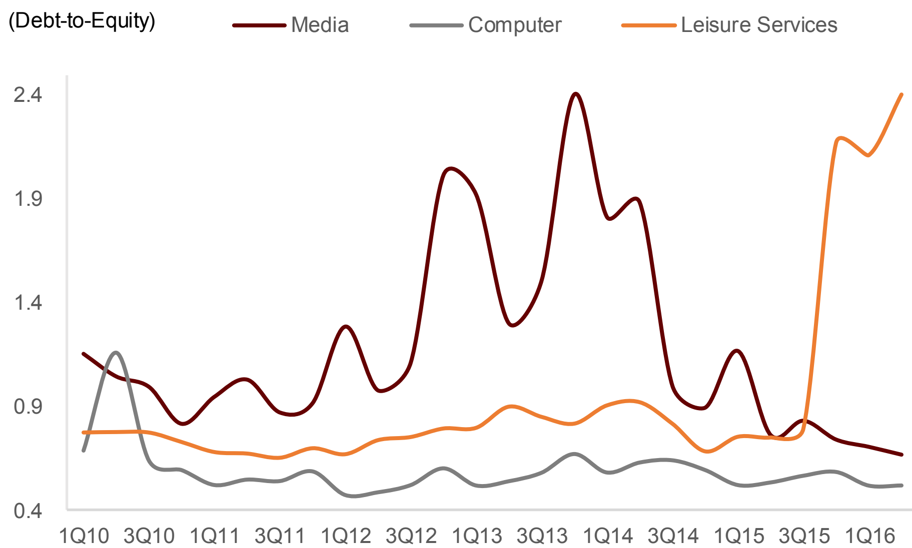
Leaving out industries with exceptional values, the net profit margin of the healthiest industries with the least number of zombie companies fell in the range of 5% to 45%, compared to -10% to 10% of the industries with the most number of zombie companies. The difference is much bigger in terms of debt ratio, namely, 160%~860% vs. 40%~240% during the same period.

Figure 8: Debt ratio of the five healthiest industries with the least zombie companies



Source: NADS, Company data, OCR

Figure 9: Debt ratio of the five healthiest industries with the least zombie companies

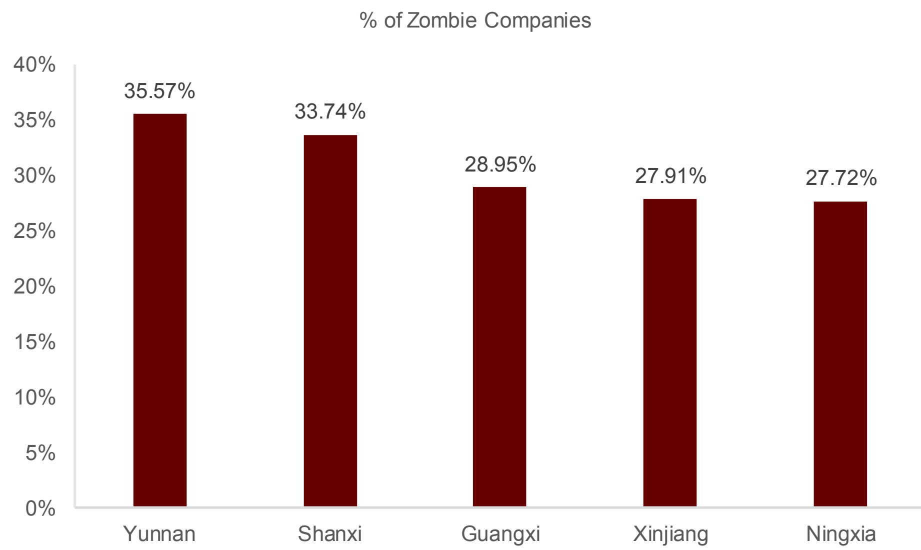


Source: NADS, Company data, OCR

3. Geographical Breakdown

The regional distribution of zombie companies varies in terms of number and proportion of zombie companies. Developed coastal areas such as Shandong, Jiangsu, Zhejiang and Guangdong have more in total number but an overall lower proportion while less developed central and western areas such as Qinghai, Tibet, Gansu and Guangzhou have fewer zombie companies but a higher proportion. ***We think the risks are rising for the central and western part of China where there are fewer global trade links and less reliance on free markets.***

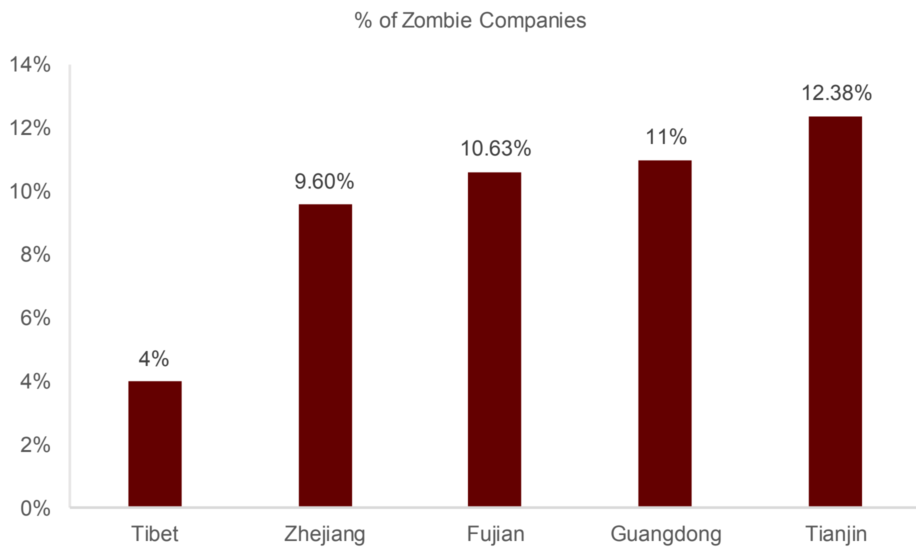
Figure 10: Provinces with the Highest Numbers of Zombie Companies 2000~2004



Source: NADS, Company data, OCR

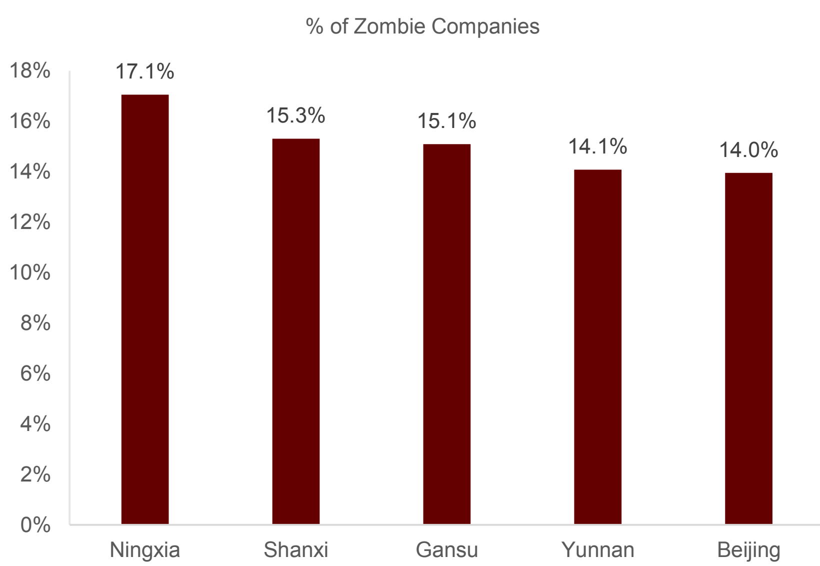
"Although East and South China seem to have more troubles given a large number of zombie companies to eliminate, those regions' larger economic base can drive local economic development. However, for areas with low levels of economic development and a weak economic foundation, the real problems are slower GDP growth and single-industry structure. In fact, ***most local governments rely on these companies to feed the majority of people and contribute to GDP***," according to a retired government official in Qinghai.

Figure 11: Provinces with the Fewest Zombie Companies 2000~2004



Source: NADS, Company data, OCR

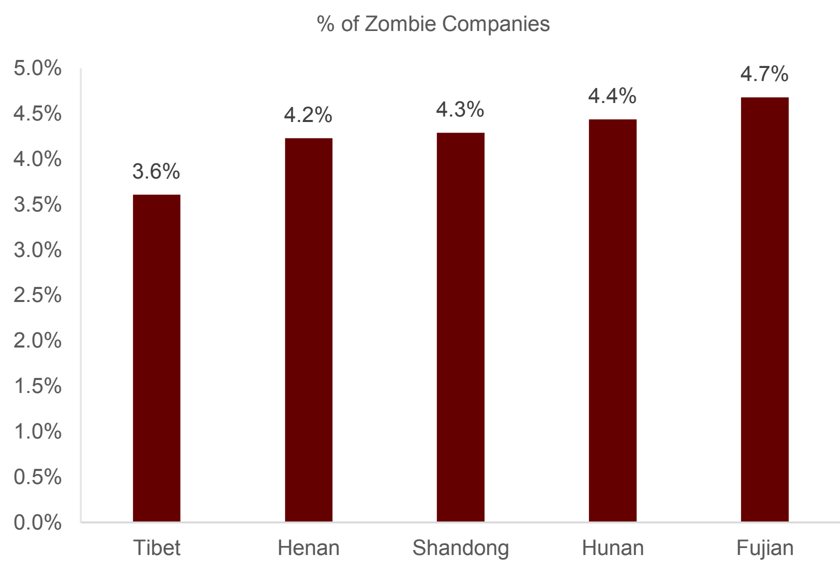
Figure 12: Provinces with the Most Zombie Companies 2005~2013



Source: NADS, Company data, OCR

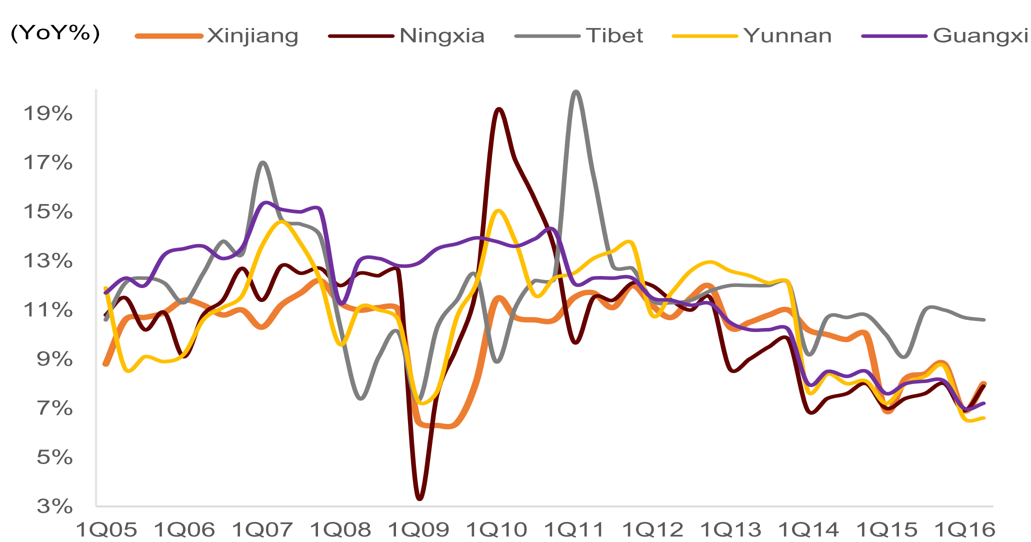
Also, the distribution of proportion of zombie companies changed through time. For instance, after rising sharply between 2000 and 2004, the proportion of zombie companies in central and southwest China fell during the period from 2005 to 2013. In contrast, the proportion of zombie companies in West China rose. This is an area struggling with trade links outside of China and also where companies have been supported with state subsidies.

Figure 13: Provinces with the Fewest Zombie Companies 2005~2013



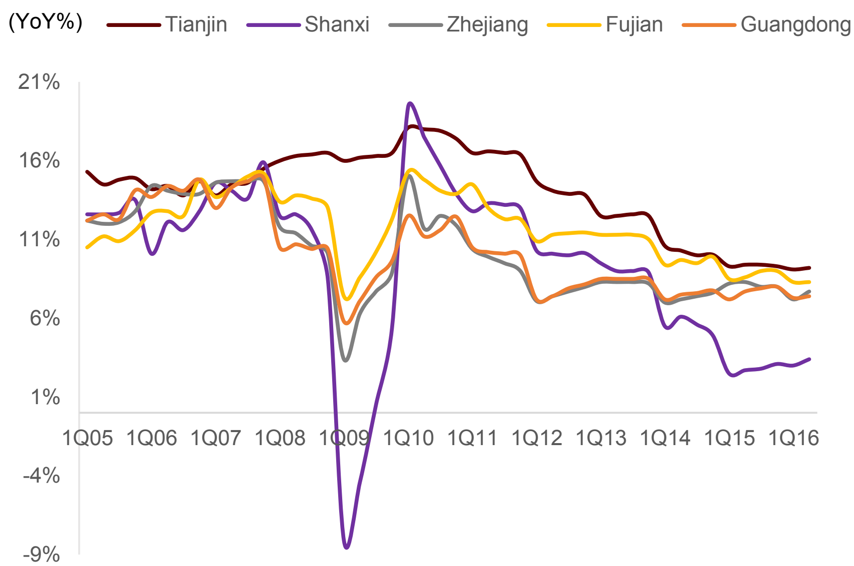
Source: NADS, Company data, OCR

Figure 14: GDP YTD YoY growth of the top five areas with the most zombie companies



Source: NADS, CEIC, OCR

Figure 15: GDP YTD YoY growth of the top five areas with the least zombie companies

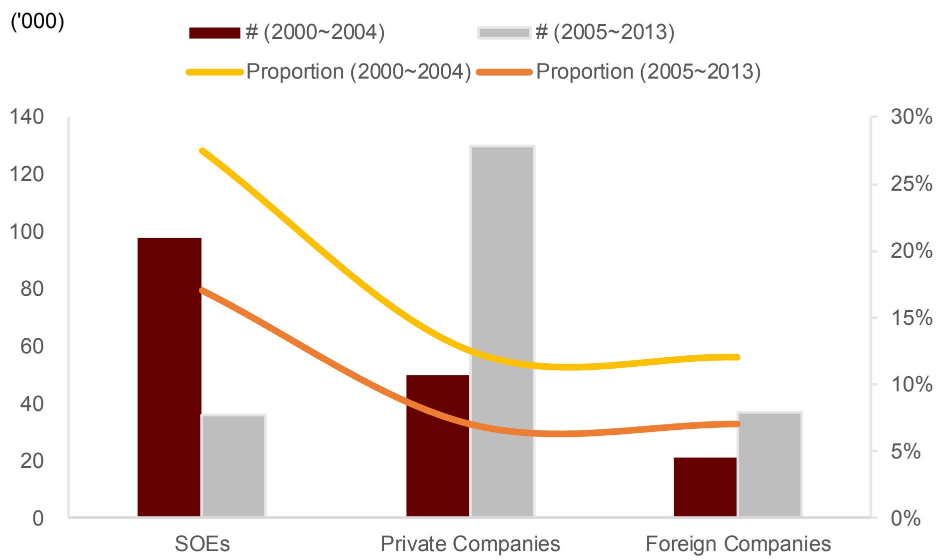


Source: NADS, CEIC, OCR

4. Type of companies

In terms of ownership, the proportion of zombie companies in private and foreign enterprises are similar in Hong Kong, Macau and Taiwan. But there are far more zombie firms among state and collective enterprises. We note, however, that the overall number of zombie firms declined over the past decade from the peak in 2000 because of: a) The 2008 stimulus package, which flooded China with bank loans; and b) SOEs enjoyed priority access to bank loans, preventing many from defaulting. ***We expect the rate of growth of firms entering zombie status to accelerate as China's GDP continues to slow and banks restrain liquidity growth.***

Figure 16: Breakdown of zombie companies by ownership

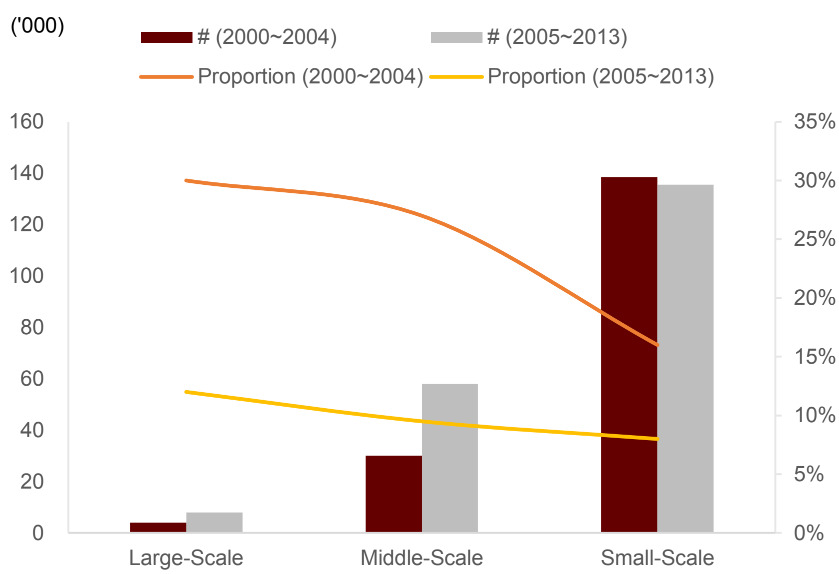


Source: NADS, Company data, OCR

5. Age of companies

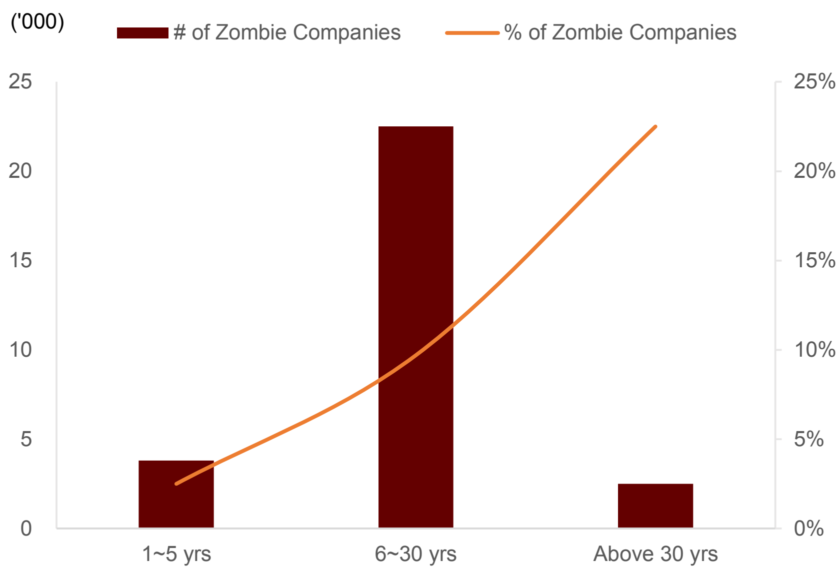
In general, larger, and older, enterprises are more likely to be zombie companies. For example, only 3% of newly established companies between 1~5 years are zombie companies. In comparison, the number for companies established for more than 30 years is 23%.

Figure 17: Breakdown of zombie companies by size



Source: NADS, Company data, OCR

Figure 18: Breakdown of zombie companies by age



Source: NADS, Company data, OCR

6. Underlying causes of massive-scale of zombie companies in China

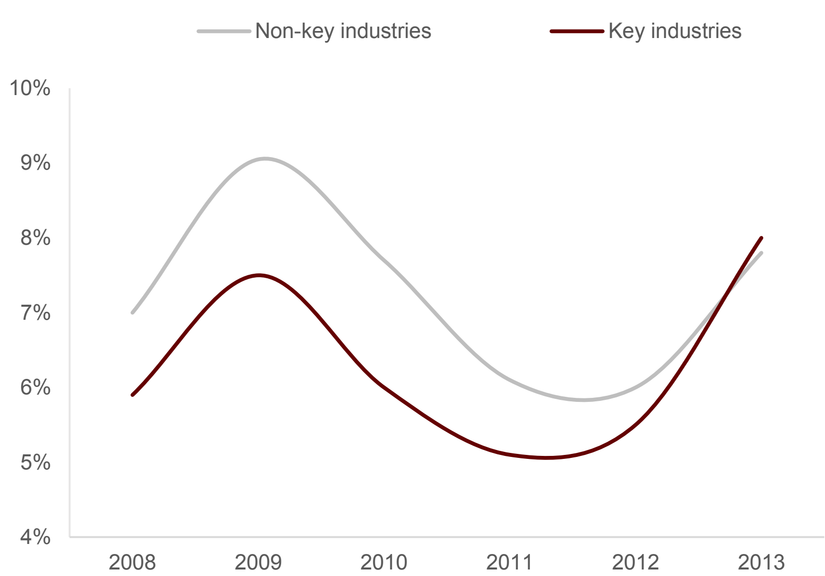
1) **Conspiracy between local government and enterprises:** According to a university professor who specializes in the study of local governments in China: "In order to build their record of achievements while maintaining stability, local governments provide financial support to zombie companies that are on the verge of bankruptcy. Meanwhile, governments keep raising the employment target and the expansion of production capacity of those non-zombie companies to generate more revenue by feeding them subsidies and bank loans." These policies not only stop the elimination of existing zombie companies but also foster a new group of smaller zombie firms. "If a company is an SOE with an excess labor force and recurring income from government subsidies, it has a relatively high chance of becoming a zombie company," said the professor. A good example is LDK Solar in Xin Yu, Jiangxi Province, which declared bankruptcy.

2) **Cut-throat competition between local governments:** Each time an industry is defined by the central government as a key sector for development, local governments rush into it and thus create in construction activity and excess capacity. This results in a large number of zombie

companies. Later on, favorable policies and subsidies are transfused to these zombie companies to swamp their competitors in other regions. For instance, many local governments have issued policies to encourage industry consolidation, favoring large enterprises to acquire small ones. Some even target large businesses as the only sector to receive subsidies, which results in the prisoner's dilemma of racing to be big.

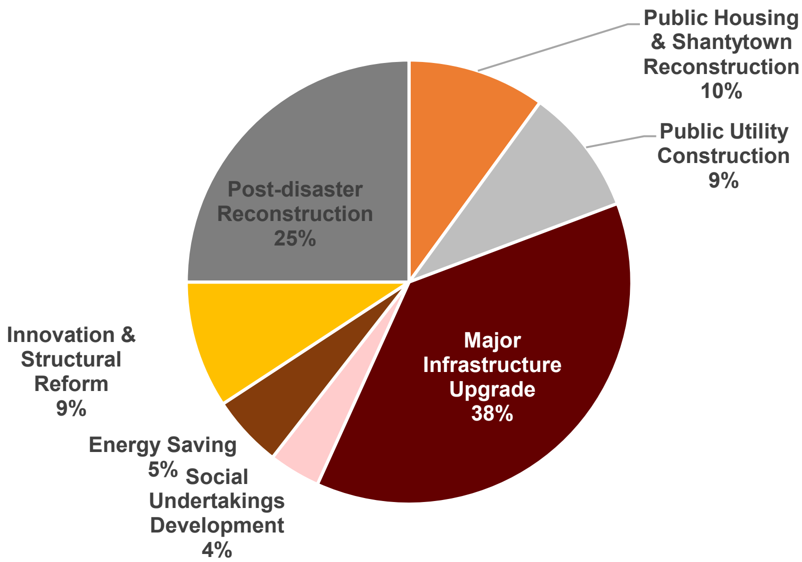
3) **After-effects of massive stimulus:** In 2008, China launched an Rmb400bn economic stimulus package to boost the economy during the global recession, which caused over-investment and blind expansion in several key industries such as coal mining, ferrous metals smelting and pressing, and manufacturing of general equipment. We compared the percentage of zombie companies in both key and non-key industries such as food & furniture & plastic product manufacturing during this period. ***We found the zombie crisis five years later was actually triggered by the massive stimulus package.*** From 2008 to 2011, the non-key industries maintained a higher percentage of zombie companies than that of the key industries. The gap started shrinking after 2011 as the effects of the stimulus package were felt. The key industries experienced a sharp increase of zombie companies in 2013 and finally exceeding the non-key industries in terms of percentage of zombie companies.

Figure 19: Comparison of % of zombie companies in Key & Non-key industries



Source: NADS, OCR

Figure 20: Breakdown of stimulus package



Source: NDRC, OCR

7. Formalistic clear-up of zombie companies

Most local governments have responded to the central government's call to clear up zombie companies by setting bold targets to eliminate inefficient production capacity rather than completely shutting them down. In general, local leading enterprises usually are the largest zombie companies on the list and are the top priority to be restructured or closed. Nonetheless, many are too big to be closed as the local governments are unable to bear the costs of losing half of their GDP while the unemployment rate soars above 30%. Therefore, significantly reducing capacity of these large-scale zombie companies is the only way to satisfy the central government's policies and public opinion. "However, this is only going to worsen the problem," said a senior government official in Heilongjiang Province. One typical example is Heilongjiang Longmay Mining Holding Group (Longmay).

The Story of Longmay – A Coal Zombie in China

As the largest coal company in the Northeast China, Longmay has incurred sharp increase in losses since 2012 with a total debt of Rmb50bn, according to a senior official we spoke to at the economic forecasting department of the State

Information Center. After a series of credit-ratings downgrade, Longmay can barely survive on local government subsidies. "We held a few meetings in July and August to discuss about how to deal with Longmay, the top zombie company on the watch list of the central government," said the senior official from the Heilongjiang Provincial government. "The best way we found was to close down 18.14mn tons of production capacity, accounting for 70% of closed capacity in Heilongjiang Province over the next three to five years."

What is unusual is that while it was closing capacity the Heilongjiang government issued a series of supportive policies. "We received 'orders' from the local government to save Longmay by:

1) Issuing M&A loans;

2) Extending the length of maturity;

3) Allowing the company to pledge its valueless mining rights and;

4) Encouraging coal companies that are in trouble to use their remaining prime assets as the collateral for each other's loans," said a loan officer at one of the big four banks in Heilongjiang.

According to an interview with the China Securities Regulatory Commission (CSRC), which regulates listed companies, they have received a petition from the Heilongjiang government to allow Longmay to go public and raise additional capital. In addition, the local government has halted approval of new capacity for profitable coal mines that compete with Longmay, in order to reduce competitive pressure on Longmay. The government also has increased annual subsidies and granted free land.

"We provided Longmay a total aid of Rmb3bn in 2014, which was tantamount to drinking poison to quench thirst. We can't suffer the consequences if Longmay is no longer able to obtain capital. The annual salary paid to Longmay's employees, mostly local people, amounted to Rmb10bn, one-third of the fiscal revenue of Heilongjiang government," said the Heliongjiang government official. "If it went bankrupt, there would be another 250,000 unemployed people, approximately the total population of a small city. Even the provincial government, with limited financial resources, cannot save it."

8. Conclusion

There are a number of large SOEs like Longmay in old industrial regions such as the northeastern provinces, which live on local government subsidies and loans, waiting for capacity cuts so they are no longer labeled "zombie companies." Despite a significant reduction in capacity, we believe the current supply-side reform instigated by Xi Jinping will result in more zombie companies. A spokesman for the State Council Information Office stressed that zombie companies are not allowed to participate in the debt-to-equity swap program. However, the crux of the issue is whether local governments stop supporting them.

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