

"Why Do 'Zombie Companies' Remain 'Undead'?"

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Abstract: "Zombie companies" have long been a significant problem troubling the economic development and social progress of our country. Based on this issue, this project aims to explore the social impact factors of "zombie companies" and support enterprises to "de-zombify" to facilitate the rational and effective allocation of market resources. The discussion unfolds from theoretical, practical, mechanism, and policy levels consecutively. By exploring the intrinsic logical relationship between "zombie companies" and the market, we analyze reasonable mechanisms that can enable the effective exit of zombie companies, which aligns with the orderly operation of the market under modern economic conditions. This is conducive to the theoretical logic of facilitating the domestic circulation and achieving a virtuous cycle of industrial capital and financial capital. At the same time, it reveals potential internal issues within enterprises, such as lack of initiative, irrational allocation of resources, repayment of financial debts, etc., and proposes relevant policy recommendations for these issues, laying a solid foundation for the long-term development of enterprises and the market.

Keywords: Zombie Companies, Identification, Basic Characteristics, Exit Paths, Influencing Factors.

1. Introduction

"Zombie companies" refer to businesses that have been in debt for a long time and should have exited the market under market mechanisms, but continue to survive due to relief from creditors such as governments. Even though they may be in a quasi-independent state, their inherent imbalance still affects the overall economic condition. To address the specific problems caused by the existence of "zombie companies," governments have implemented a series of policy measures to alleviate the situation. Starting in 2016, the government gradually proposed goals to "reduce overcapacity, destock, deleverage, reduce costs, and make up for shortfalls" through supply-side structural reforms and macro-control measures. This approach aims to rectify and eliminate enterprises, curb the continuous "drain" of incompetent businesses, and retract support and subsidies for "zombie companies," thereby enhancing the government's investment efficiency.

"Zombie companies" occupy a significant amount of social resources and remain idle for extended periods, leading to wasteful market conditions. When a company becomes a "zombie," the ensuing chain reactions of borrowing can cause substantial losses to other involved businesses and financial institutions, further leading to financial instability. These companies, which fail to upgrade over time, continue to survive under excessive government protection and bank loan support. Due to inadequate exit strategies and social security mechanisms, they are unable to exit the market effectively through conventional means. Therefore, to address these issues, we delve deeply into "zombie companies" to explore the underlying reasons for their "undying" nature and the selection of exit paths.

2. Literature Review

As early as 2008, foreign researchers such as Caballero introduced the CHK standard to identify "zombie companies," also known as the credit subsidy method. This method has been effective in identifying the presence of "zombie companies" to a great extent and has been widely

used and recognized by many scholars. However, it has its limitations. The CHK method does not specifically analyze and summarize the formation reasons, characteristics, and strategic development of "zombie companies," leading to inaccuracies in identification, which could result in misjudgment or omission of businesses.

Addressing the shortcomings of the CHK method, Fukuda & Nakamura (2011) revised and supplemented it, introducing two new criteria. The first is the "profitability criterion," which judges whether a company is in a deficit by observing its profitability. The second is the "continuous credit criterion": if a company's actual profit is less than zero, and the total external debt from the previous year exceeds 50% of the total assets, and the borrowing for the current year is greater than the previous year, then the company is identified as a "zombie company." This improved method effectively resolves identification errors and omissions caused by low-interest rates.

Regarding why "zombie companies" continue to exist, Caballero (2008) and others believe that banks, in order to reduce bad debt losses and maintain good credit, continue to lend to businesses in financial crisis, creating a false impression of normal operation, allowing them to return to the "normal" company lineup. Hoshi and Kim (2012) argue that "zombie companies" provide a large number of job opportunities, effectively reducing the unemployment rate. Kawai and Morgen (2013) believe that the government, to maintain social stability, decides to adopt lenient regulatory policies, condoning banks' support for "zombie companies."

In response to issues of increasing productivity and tackling difficulties, Zhang Zhuoyuan (2016), the chairman, proposed measures for the re-acquisition and reorganization of "zombie companies." By innovating, integrating, and clearing simultaneously, the market will automatically clear. In recent years, to more effectively clean up "zombie companies," the State Council (2019) established a "zombie company" disposal supervision group to start from the source, provide solutions for businesses in operational difficulties, facilitate reasonable communication and supervision, and ensure implementation at every level.

Table 1. Outcomes of “zombie companies”

	Field of research	Main findings	Representative literature
Identification	Criteria for identifying “zombie companies”	CHK Law FN-CHK Law	Caballero (2008) Fukuda&Nakamura (2011)
Existence	Bank Credit Social-Employment Government Regulation	Reasons for “zombie companies” still exist	Caballero (2008) Hoshi & Kim (2012) Kawai & Morgen(2013)
Measure	Capacity and Planning	Governance programs and policy plans	Zhuoyuan Zhang (2016) State Council (2019)

3. Current Analysis

3.1. Industry Distribution

Based on the method described above, we categorized and identified domestic enterprises. Through industry analysis, it was found that the chemical fiber manufacturing industry occupies the largest proportion of zombie companies (as shown in Table 1), with zombie companies accounting for 18.10% of the total number of companies in the industry. The black metal smelting and rolling processing industry and the

petroleum processing, coking, and nuclear fuel processing industry account for 15.00% and 14.46%, respectively. This indicates that zombie companies held a significant proportion within the heavy industry sectors at that time. Due to the excessive economic pressure during the development of heavy industries, these sectors faced increased indebtedness, decreased profit margins, and reduced production efficiency, leading to inadequate cash flow. It is worth mentioning that although zombie companies appear across various industries, the majority are concentrated in the “top” five sectors.

Table 2. The ten manufacturing industries with the highest proportion of zombie companies in 2013

Industry name	Number of companies	Number of zombie companies	Zombie company ratio
Chemical fiber manufacturing	1867	338	18.10%
Ferrous metal smelting and rolling processing industry	6633	995	15.00%
Petroleum processing, coking and nuclear fuel processing industry	1978	286	14.46%
Textile industry	79975	2246	11.24%
Nonferrous metal smelting and rolling processing industry	3811	424	11.13%
Oil and gas extraction industry	282	28	9.93%
Reproduction of printing and recording media	4760	448	9.41%
Paper and paper products industry	6669	615	9.22%
Transportation equipment manufacturing industry	16447	1435	8.72%
Coal opening CIA and washing industry	6887	570	8.28%

3.2. Scale Characteristics

The analysis of the number and proportion of zombie companies from 2000 to 2013 shows an increasing trend of zombie companies among small and medium-sized private enterprises (as shown in Table 2). Since 2000, the number of enterprises has doubled, with small and medium-sized private enterprises rising to 20,218. However, compared to normal enterprises, the number of zombie companies within small and medium-sized private enterprises increased by 49%, indicating a growing assimilation of small businesses into zombie status. While many state-owned enterprises have become zombie companies, the issues of other small enterprises behind the scenes cannot be overlooked. Unlike larger, more profitable state-owned enterprises, small and medium-sized private enterprises do not easily receive government subsidies and support. They can only resort to bank loans to cover the debts caused by normal business operations, creating a “snowball” effect through mutual guarantees for loans and other unconventional methods of raising funds to sustain the business. However, these methods do not address the root of the problem, leading to financial crises. Moreover, during economic transformation and industrial upgrading, they cannot fully adapt to the new market environment and technological advancements. The intense competitive landscape and difficult financing

conditions make it hard for these small and medium-sized businesses to maintain operational cash flow, preventing them from exiting the market smoothly and consequently increasing the number of zombie companies.

3.3. Regional Distribution

From a regional perspective, as shown in Figure 1, during the period 2005-2013, the areas with a higher proportion of zombie companies were Ningxia Province (17.06%), Shanxi Province (15.31%), Gansu Province (15.09%), Yunnan Province (14.8%), and Beijing (13.85%). The analysis suggests that in the central and southern regions, a larger proportion of companies are zombie companies. The research found that in these areas at that time, heavy industry developed rapidly with a predominance of traditional manufacturing industries such as chemical and coal industries. As resource-intensive businesses, once they fall into economic difficulties, it becomes challenging for them to transform or exit successfully. Conversely, as shown in Figure 2, in Tibet (3.61%), Henan (4.23%), Shandong (4.29%), Hunan (4.44%), and Fujian (4.68%), the proportion of zombie companies is significantly lower. This indicates that in some cities with relatively slower development, the number of zombie companies is less, and the development pressure is lower than in other places.

Table 3. Number and proportion of zombie companies

Years	Number of companies	Number of zombie companies	Number of small and medium-sized private zombie enterprises	Proportion of small and medium-sized private zombie enterprises
2000	162386	43838	10770	25%
2001	170809	37903	11759	31%
2002	181159	35114	13001	37%
2003	196206	28939	12888	45%
2004	279017	23309	12217	53%
2005	271832	24088	13939	58%
2006	301957	29748	19107	66%
2007	336766	27983	19738	71%
2008	412145	26279	19811	73%
2009	320778	26339	20117	77%
2010	302579	16801	12080	72%
2011	311308	17639	12008	72%
2012	344873	27167	20218	74%
2013	276293	28040	15215	58%

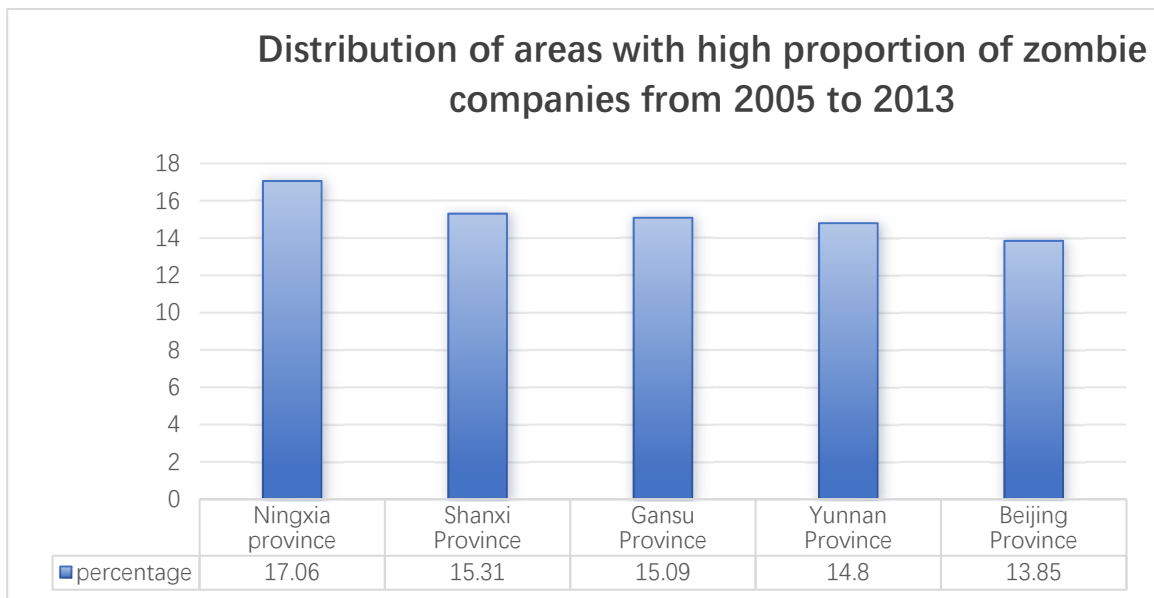


Figure 1. Distribution of regions with high proportion of zombie companies from 2005 to 2013

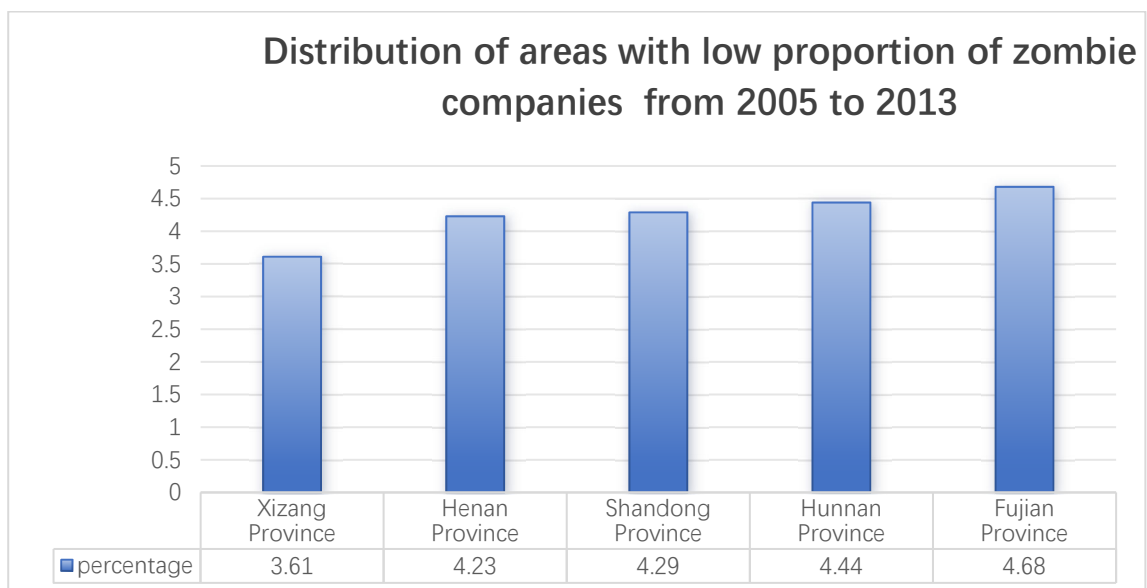


Figure 2. Distribution of regions with lower proportion of zombie companies from 2005 to 2013

4. Main Issues and Causes

The specific reasons why zombie companies do not exit the market involve multiple layers, intertwined in complexity, making it difficult for zombie companies to exit smoothly.

4.1. Complex Interests

One significant reason zombie companies do not exit is the complex web of interests involved. These companies often have close ties with local governments, financial institutions, suppliers, and employees. For instance, a steel company in a certain region, being a leading local enterprise, contributed significantly to local government revenue and job creation. However, changes in the market environment and business strategies led the company into difficulties, turning it into a zombie company. Despite being insolvent, the local government continued to support the company's operations through financial subsidies and tax incentives to maintain social stability and economic development. Additionally, financial institutions were reluctant to push for bankruptcy due to the risk of bad debts.

A state-owned enterprise group in a certain region, covering multiple industries, had some subsidiaries become zombie companies due to poor management and disarray. These companies relied on the group's financial support to maintain operations despite their lack of profitability, failing to be self-sustaining. The government attempted to push for these companies' reform and restructuring, but the process was slow due to the multitude of interests and complex relationships involved, making it hard for companies to exit the market smoothly.

4.2. Heavy Debt Burden

Zombie companies often carry a heavy debt burden, including bank loans, supplier debts, and employee wages. Due to long-term losses, their debt repayment capacity is severely inadequate, making it difficult to resolve debt issues. For example, a chemical company was ordered by the government to halt production for environmental rectifications, but slow progress due to lack of funds and technical support meant ongoing expenses such as wages and loan interest continued to accumulate. The inability to resolve debt issues prevented the company from exiting the market smoothly.

A large coal company faced immense pressure as the energy structure shifted and environmental regulations tightened. Despite abundant resources, high mining costs and fierce market competition led to decreased profitability and a heavy debt load. The company also faced safety and environmental hazards, increasing operational risks. Although the government introduced supportive policies, the company's fundamental issues remained unresolved, making market exit challenging.

4.3. Legal and Policy Barriers

The exit of zombie companies also encounters legal and policy barriers. Currently, China's bankruptcy legal system is not fully developed, and the bankruptcy process is complex and costly. Some local governments, concerned with their achievements, take a cautious stance on zombie company bankruptcies, even intervening in the process administratively, making it hard for zombie companies to exit orderly through legal channels.

A large chemical company, once a pillar of the local economy for decades, fell into hardship as environmental regulations tightened and market competition intensified. In recent years, continuous losses and insolvency, mainly sustained by government subsidies and bank loans, posed severe legal challenges when attempting to exit the market. Unresolved historical issues, including land use disputes and environmental liabilities, complicated the bankruptcy liquidation or asset disposal process due to legal gaps and judicial uncertainties.

4.4. Employment Challenges

In terms of employee resettlement, zombie companies often involve significant employment issues. Once employees lose their jobs, they face livelihood difficulties and the risk of social instability. Thus, employee resettlement needs careful consideration when pushing zombie companies to exit the market. However, due to the companies' financial shortages and limited local government funds, effective employee resettlement is often unachievable, becoming a crucial reason why zombie companies cannot exit.

For instance, a traditional steel company, once a leader in China's steel industry, fell into difficulties due to market saturation, overcapacity, and tightening environmental policies. Despite attempts at reduction, layoffs, and transformation, the company's continuous losses widened. Given the large scale and numerous employees, the government faced immense pressure in promoting market exit. Additionally, the company had complex debt relationships with multiple banks and suppliers, further complicating the exit process.

In summary, specific reasons why zombie companies do not exit include complex interest relationships, heavy debt burdens, legal and policy obstacles, and employee resettlement issues. Addressing these challenges requires concerted efforts from governments, financial institutions, businesses, and society to improve bankruptcy laws, strengthen policy guidance and support, promote corporate reform and restructuring, and enhance employee training and reemployment arrangements.

5. Orderly Exit or Revitalization Mechanisms

Combining the challenges of zombie companies exiting the market, practices in typical regions, international experience, and the context of supply-side reform and new quality productivity, here are some specific policy suggestions:

5.1. Establish a Comprehensive Enterprise Evaluation System for Both Entry and Exit

To ensure the entire process of state-owned enterprise management is under control, it's essential to consider risk analysis combined with the type of production, business operation, scale, management capability, and supervision records. Focusing on key exit issues and critical links, an entry and exit dual-focused enterprise evaluation system should be established. Once a company starts showing signs of becoming a "zombie," timely exit procedures should be initiated. One approach is to construct a risk early warning mechanism for state-owned enterprises' market exit. By using macro, meso, and micro economic management indicators to

fully quantify state-owned "zombie companies," a risk response procedure can be initiated once the indicators reach a critical threshold, ensuring the best intervention timing and isolating the risks between exiting state-owned "zombie companies" and those operating normally.

Some regions have already achieved success in exiting zombie companies, for example, by developing specific policies and measures to promote the classification, disposal, and merger and reorganization of zombie companies. Additionally, strengthening coordination with financial institutions to provide funding support and debt solutions for zombie companies exiting the market can serve as a reference for other regions.

5.2. Improve Corporate Bankruptcy Legal System and Innovate Management Models

First, the corporate bankruptcy legal system should be enhanced by establishing specialized collegiate benches for zombie company bankruptcy cases to standardize and professionalize bankruptcy case reviews. Currently, China has yet to establish a comprehensive enterprise bankruptcy exit mechanism. With courts reluctant to accept zombie company bankruptcy liquidation cases due to complex procedures, long durations, and high costs, there's a need for an information-sharing platform for zombie company bankruptcy cases to keep all parties well-informed and explore innovative management models. A "court-led, government-coordinated, financial institution-involved, and executor-implemented" working model should be established, actively introducing qualified institutions and individual investors for mergers and acquisitions, aiding financially troubled companies with core technologies and good development prospects in resuming production and operation. Additionally, setting up a fund pool can help address the initial funding issues for zombie company bankruptcy cases.

International experience in zombie company management, such as the United States' optimization of resource allocation and promotion of mergers, acquisitions, and asset restructuring, and Japan's establishment of specialized agencies to promote the cleanup and restructuring of zombie companies and improve the bankruptcy system to reduce the cost of corporate market exit, can provide valuable insights for China.

5.3. Use Batch Allocation Methods to Promptly Settle Debts

The bankruptcy liquidation case of Qingdao Zhongtie Qingjian New Materials Co., Ltd. is a typical example that considers the interests of all parties. The company organized a liquidation group in February 2020 and, after asset verification, found that all bank accounts were frozen, and assets were insufficient to settle all debts, leading to the initiation of bankruptcy liquidation procedures. Given the company's property liquidation characteristics, the court-guided manager conducted multiple analyses and precise categorizations of receivables, adopting a fine-tuned pricing approach for different categories. By employing batch allocation methods, creditors' urgent needs were promptly addressed, achieving 100% settlement of employee debts, social security debts, and medical insurance debts in the first distribution, with a general creditor settlement rate of 26% and 49.15% in the second distribution. Currently, 54 employees have been resettled, resolving over 100 million yuan in debt and 67 execution cases.

5.4. Focus on Supply-Side Reform to Unlock Productive Elements

In the context of supply-side reform and new quality productivity, more emphasis should be placed on the quality and efficiency of zombie companies' exit. By promoting industrial structure adjustment and upgrading, zombie companies can be guided to transition towards high value-added and high-tech fields. Additionally, nurturing and supporting new quality productivity is crucial for driving high-quality economic development.

Industries like steel and coal, which were among the first to be included in supply-side reforms, have seen initial success in capacity reduction. According to the State-owned Assets Supervision and Administration Commission (Table 4), central enterprises have resolved 4.83 million tons of excess steel capacity, achieving a completion rate of 67.2% and resettling 25,000 employees, reaching a completion rate of 91%; 26.42 million tons of excess coal capacity have been resolved, with a completion rate of 83%, and 26,000 employees have been resettled, achieving a completion rate of 69.9%.

Table 4. Results of overcapacity reduction in the steel and coal industries

	Eliminate excess production capacity (10,000 tons)	Completion rate (%)	Diversion and resettlement of employees (people)	Completion rate (%)
Steel industry	483	67.2	25000	91
Coal industry	2642	83	26000	69.9

To sum up, in response to the problem of zombie companies exiting the market, it is necessary for the government, market and society to work together to formulate and improve relevant policies and measures, strengthen supervision and law enforcement, and promote the orderly exit of zombie companies and the healthy development of the market.

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