Retail's Living Dead: How Zombie Firms Threaten the U.S. Economy

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Abstract

Since Covid-19, the American retail sector has undergone a dramatic transformation, leading to widespread store closures, shifting consumer spending habits, and exposing lagging retailers at high risks of bankruptcy. Amid these challenges, a growing number of traditional brick-and-mortar retailers have continued to operate owing to government support and access to inexpensive credit. These struggling retail corporations are what economists refer to as “zombie firms”–a term first coined by Kane in 1989–businesses that have failed to cover their debt obligations due to a lack of profit. Once iconic department stores and chain retailers, such as Sears and Bed Bath & Beyond (BBBY), continue to operate despite persistent financial underperformance. This phenomenon stems from a variety of problems from years before, including misallocated capital and delayed market corrections. As the U.S. retail landscape continues to grapple with post-pandemic recovery, understanding the causes and consequences of zombie firms is critical. This paper investigates how financial, structural, and policy factors contribute to zombie retail firms and explores the potential harm to American commerce if these companies continue.

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Background

Potential Causes

For years, economists and financial agencies had warned about the dangers of zombie firms continuing to accumulate debt as interest rates fell during the Covid pandemic. In an attempt to avoid a global economic depression, the federal government lowered interest rates, sparking an unprecedented outcome wherein companies, not just zombie firms, were encouraged to borrow large sums of money to finance their operations. However, what set zombie firms apart from other companies was that the money they borrowed was used to repurchase their own stock, not for expansion or innovation (Finance & Commerce, 2024).

Stock Repurchase

Stock repurchase, also called a stock buyback, is when a company purchases its own shares in the market, decreasing the total number of outstanding shares. Companies buy back their shares to not only increase earnings per share (EPS), but to also better manage capital and encourage confidence in shareholders. In some cases, stock buybacks can have its advantages, increasing demand for the company's shares and its price per share (Mansa, 2024).

Such was not the case for zombie firms; by prioritizing stock buybacks, these companies ignored the need to invest in employee training, product development, or capital expenditures. Investors have long criticized buybacks for their short-term focus of quickly boosting stock prices over long-term investments, such as development or sustainable growth. And zombie firms have used buybacks to manipulate shareholders, inflating EPS to hide growing weaknesses in their business model and performance. Stock buybacks have attracted further criticism for supporting insider enrichment, prioritizing executives who hold large amounts of company stock, instead of focusing on the company's needs (Gratton, 2024).

In October of 2018, Sears–a store that once dominated the U.S. retail landscape–filed for Chapter 11 bankruptcy. At its peak, two-thirds of Americans shopped at Sears, which accounted for 1% of the U.S. economy (Castus, 2021). Despite having laid off 7,301 employees and losing a total of $1.9 billion from the first three quarters of

2018, Sears announced that hundreds of senior-level employees and executives would be awarded bonuses, amounting to a total of $25 million (Calfas, 2018).

By the end of 2020, zombie corporations had racked up an astonishing $2 trillion of debt, a problem attributed to the Federal Reserve's actions to encourage spending during the pandemic. Since the pandemic, almost 200 corporations have joined the list of zombie-firms, bringing a total of $1.36 trillion of debt, completely dwarfing the $378 billion reported before COVID-19 (Contiliana & Lee, 2020).

In April 2023, the once well-known home goods retailer BBBY filed for bankruptcy after spending $11.7 billion on share buybacks, including $7 billion in the last decade. The lack of investment in its operations is evident–BBBY's employee count shrunk from 65,000 in 2017 to 20,000 in 2023; at its height, the retail chain had operated 1,500 stores, but has since closed them all after filing for bankruptcy. Even when the stock sank from $80 to nothing, the pay for three top executives surpassed $140 million (Finance & Commerce, 2024; Gratton, 2024).

Credit Reporting Discrepancy

America's weak credit enforcement system–which has allowed for zombie firms to continue operations–stems from several factors. The credit reporting industry has long been criticized for its high error rates, oftentimes limiting consumer's access to housing and credit. Methods used to calculate credit scores are opaque, limiting public understanding to just a spectrum of numbers.

Notably, federal and state actors typically struggle to properly enforce the Fair Credit Reporting Act's (FCRA) requirements against credit reporting agencies. The FCRA, enacted in 1971, promotes the fairness, accuracy, and privacy of consumer information in credit reporting. But the law is a complex piece of legislation open to numerous interpretations, making compliance difficult (Chopra, 2022).

To help encourage compliance, states have played a crucial role in regulating consumer reporting. In fact, the FCRA allows state governments to enforce consumer laws, creating inconsistencies in their applications around the country. Many states like California and Connecticut have gone beyond the requirements of the FCRA, such as limiting employer credit checks unless required by law and adding greater privacy rights, yet other states like Georgia and Indiana have been primarily satisfied with adopting the FCRA's recommendations in their statutes. This uneven application of the law can create confusion and uncertainty for both lenders and consumers, hindering the efficiency of the system (Chopra, 2022).

Because of this inefficient system, lenders may be reluctant to liquidate a zombie firm. Hesitation from lenders, however, allows zombies to continue operations and absorb resources that could otherwise be used for successful businesses. Although one zombie firm may not have the ability to drastically impact America's economy, approximately 13% of American companies are considered zombie firms, leading to lower overall productivity (Goldman Sachs, 2022).

Investor Influence

Moreover, the proliferation of zombie firms is also encouraged by investors. As a result of loose monetary policy, investors tend to favor bonds issued by heavily indebted firms and other risky opportunities. Issuing bonds reflects financial stress and causes rising interest rates–all of which shake investor confidence and create fear of a recession. With the fear of economic recession, many economists believe that interest rates may fall into negative territory.

In periods of deflation, such as during the Great Recession from 2007-2009, firms experience an increase in the real value of debt repayments. The "real value" of debt repayments refers to debt that accounts for inflation. Economists will often assess real value debt repayments to understand the true burden of debt over time. When there is inflation, the real value of debt decreases, while deflation can increase it. For example, under deflation, a loan of one million dollars is worth more now than in the future, but the borrower still owes a million dollars. Since companies have to adjust their prices to fit deflation, paying back their loans becomes even more difficult (Stack Exchange Network, 2015).

Identifying Zombie Firms

Today, some of the most well-known companies are sinking with debts in the tens of billions. In 2020, Boeing owed more than $32 billion, whereas Carnival–a fan-favorite cruise line among families–has seen its debt burden balloon to $14.8 billion. Luckily for these firms, with the current financial structure, these zombie corporations may have the runway to survive a few more years (Contiliana & Lee, 2020). Investors can be short-sighted, prioritizing quick profits over long-term potential for growth. Such was the case during COVID as investors purchased millions of American Multi-Cinema (AMC) shares when the stock price soared by 2000% in five months. Three years later, these investors suffered heartache as the value dropped to an all-time low of $11. Had investors carefully analyzed AMC's financial condition and potential for falling into bankruptcy, they may have seen a different story. Economists tend to conduct analyses of

corporations using two indicators to identify zombie firms: interest coverage ratio (ICR) and the Altman Z-score (Erencin et al., 2024).

Interest Coverage Ratios

The ICR measures a company's ability to pay its obligations with its earnings. It is calculated by dividing EBIT by the interest expense, where EBIT is the earnings before interest and taxes. Companies at a higher risk of default may have ICR scores below 1.5, indicating a struggle to meet interest obligations. When ICR scores drop below 1, the company obtains 'zombie' firm status. Since ICR is a good indicator of financial health, investors can look at a company's score over many quarters to assess the risk of lending money (Hayes, 2025).

Figure 1

ICR Equation in Visual Form

$$\text{Interest Coverage Ratio (ICR)} = \frac{\text{EBIT}}{\text{Interest Expense}}$$

Altman's Z-score

On the other hand, Altman's Z-score calculates the likelihood of a company to fall into bankruptcy while accounting for five financial ratios:

1. Working capital divided by total assets, measuring short-term liquidity
2. Retained earnings divided by total assets, measuring reliance on debt financing to fund operations
3. EBIT divided by total assets, measuring profitability in relation to its assets
4. Market value of equity divided by total liabilities, measuring the market's perception of a company's value in relation to its liabilities
5. Sales divided by total assets, measuring efficiency in producing revenue

The equation then multiplies each ratio by a specific constant, and the sum represents a company's z-score (Wall Street Prep, 2022).

Figure 2

Altman Z-Score Model

Wall Street Prep

Original Altman Z-Score Model	
$Z\text{-Score} = (1.2 \times X_1) + (1.4 \times X_2) + (3.3 \times X_3) + (0.6 \times X_4) + (1 \times X_5)$	
X_1	= Working Capital ÷ Total Asset
X_2	= Retained Earnings ÷ Total Assets
X_3	= EBIT ÷ Total Assets
X_4	= Market Capitalization ÷ Total Liabilities
X_5	= Sales ÷ Total Assets

When a firm's Z-score drops below 1.8, they are categorized as in 'distress' and are at high risk of bankruptcy. However, a single indicator is not sufficient to make accurate predictions, so professionals typically look at both markers simultaneously to gain the most valuable insights (Erencin et al., 2024).

ICR Case Study

Take Tesla, for example–a company founded in 2003 that faced financial struggles throughout much of its early history. For several years, its ICR remained below 1, meaning it wasn't generating enough operating income to cover its interest expenses; at the time, the ICR indicator alone classified Tesla as a zombie company. However, in 2020, Tesla's ICR consistently rose above 1, and it reported its first full year of net profit, marking a significant financial turnaround (Erencin et al., 2024).

Interestingly, despite its weak ICR, Tesla's Z-score remained consistently positive since 2013, signaling a low risk of bankruptcy. An investor solely focused on ICR might have wrongly concluded that Tesla was destined to fail. But a more comprehensive analysis–considering both ICR and Z-score–would have revealed that Tesla was not a typical zombie company, but rather one with real survival potential despite its financial distress. In hindsight, a $1,000 investment in Tesla in July 2013 would be worth over $36,000 today (Patel, 2023).

Altman Z-score Case Study

As shopping patterns shifted online, American shopping mall department stores have been hit the hardest, with JCPenney as a prime example of a store that was once an anchor of shopping malls nationwide but has since experienced falling market shares in the retail sector. Though the brick-and-mortar retailer had already been struggling prior to 2020, the pandemic forced the executives to finally address its debt load. At the company's peak in the 1970s, it had operated 2,053 stores across America (Gentry

2020). However, with 667 stores left, JCPenney is now simply a shadow of its pre-pandemic self (Bezek, 2023).

JCPenney's financial decline was clearly reflected in its Altman Z-score, which consistently signaled distress well over a decade before the company filed for bankruptcy in May 2020. From 2010 to 2014, its Z-score dropped continuously, eventually falling below the critical threshold of 1.8, placing it firmly in the "distress zone" that indicates a high risk of bankruptcy. Within this period, JCPenney's reasonable debt of $480 million had shot up to $4.1 billion, and its liquid assets had nearly halved from $2.6 billion to $1.3 billion (Investopedia, 2019).

By April of 2020, JCPenney's Z-score was approximately 0.89, showing sustained financial instability and a deteriorating ability to cover debts and generate returns. The persistently low Z-score highlights the company's decade-long struggle until its eventual Chapter 11 filing (Ashworth, 2020).

Potential Effects

Employment

Zombie firms affect people by preserving jobs in the short term, but often under harsh conditions. An Associated Press analysis estimates that 130 million people globally work for companies on the brink of collapse (Finance & Commerce, 2024). These firms rarely create new opportunities, instead absorbing labor that could support growing businesses. Burdened by debt and low profits, they often cut wages, delay promotions, and offer poor working conditions due to limited investment in safety, training, and technology (Albuquerque & Iyer, 2023).

The Kmart-Sears merger illustrates these effects: over 3,500 stores and 250,000 jobs disappeared in 15 years–many workers were laid off with short notice and without severance (Light, n.d.). Remaining employees faced wage cuts and understaffing–one former worker recalled a 17 year-old managing store operations alone (Delventhal, 2024). Still, in struggling regions, zombie firms may provide a temporary safety net, helping people meet basic needs and avoid joblessness, though such jobs often mask deeper economic issues (Garcia-Merino, 2025).

Draining Resources and Hampering Growth

Zombie firms also drain financial resources that could be better used by healthy companies to drive innovation and growth. Instead of funding expansion or development,

loans to zombie companies often go toward servicing debt or propping up stock prices, locking capital into unproductive uses. This misallocation limits the economy's potential by reducing overall productivity and crowding out more dynamic firms that could use the funds to invest, hire, and contribute to economic growth.

Competition Distortion

Even though zombie firms may be unable to serve a wide customer base, they can still distort market competition in several ways. Since these firms do not primarily rely on profits to remain operational, they often cut prices below sustainable levels. When healthy companies see this change, the fear of losing customers drives them to also slash their prices, reducing profit margins. In a volatile industry, many companies will lose their potential to grow and innovate, hampering investment and scaling opportunities. The result of competition with zombie firms is distorted prices that no longer reflect true production costs (eCapital, n.d.).

Zombie firms further distort competition by setting high barriers of entry. When new companies try to enter the market, they often have problems involving equipment and human capital, which has been absorbed by unproductive enterprises. Hence, such high barriers of entry set the stage for big businesses to remain dominant, slowing the pace of innovation and efficiency (Androni, 2025).

Retail Going Forward

Driven by technology and speed, the future of retail may seem grim for retailers who fail to adapt. But for those that invest in technological development and a robust logistics pipeline, they will likely begin to see greater returns and customer engagement.

Mobile Technology

Shopping experiences are continually reshaped by mobile technology, which have become essential tools for comparing prices and products efficiently. Mobile phones streamline the retail experience and boost sales by making customer conversions more time- and cost- effective. Rather than waiting at traditional registers, customers can quickly scan and purchase items through payment systems like Apple Pay, improving satisfaction and decreasing reliance on cash or cards. Businesses, too, can benefit from mobile self-checkout, which requires little to no staffing (LS Retail, 2024).

Beyond checkout efficiency, mobile devices help optimize inventory management and improve customer service. Employees equipped with devices can create a more

responsive shopping experience by checking stock levels and quickly locating products. Additionally, advanced mobile systems have integrated biometric methods like facial recognition to increase security for consumers. Companies that develop such technological features will easily gain a competitive edge (LS Retail, 2024).

Artificial Intelligence

With advances in artificial intelligence (AI), customers have greater expectations for tailored retail experiences. By analyzing not just customer behavior, but also purchase history and location, retailers can deliver personalized product recommendations and targeted promotions. AI chatbots have further enhanced the experience by providing instant support and suggestions based on customer needs. Without investing in personalization, retailers risk losing customer loyalty, engagement, and potential opportunities to increase conversion rates (LS Retail, 2024).

Logistics

Going forward, delivery services will encourage further reliance on digital retail. To fulfill demands for quick deliveries, many retailers have opened local stores and leveraged proximity. Mobile-based delivery platforms also allow customers to choose flexible delivery windows and even real-time communication between customers and couriers. Retailers that integrate fast, mobile-powered delivery into their business models will have the upper hand in expanding and retaining their customer base (LS Retail, 2024).

Reviving Retail Through Reform

With the continual changes in the retail industry, success will be dependent on adopting novel technologies and providing personalized shopping experiences while still understanding consumer needs. The ongoing presence of zombie firms is in conflict with the retail sector's aims to meet consumer demands in a rapidly shifting landscape driven by technological innovation. In the United States alone, corporate bankruptcies have hit a 14-year high–a number economists expect to grow due to an impending recession (Finance and Commerce, 2024). As of the 4th quarter of 2024, the total U.S. corporate debt lies at $11.2 trillion, a 4.6% increase from the previous year. Of the outstanding debt, approximately 74% is non-financial corporate debt, securities, and loans, surpassing numbers from the wake of the global financial crisis in 2008 (Statista, 2024). The growing presence of zombie firms is a serious threat to long-term economic stability. Thus, inexpensive debt afforded by the government should only continue to be offered if stagnant companies actively adopt more advanced technology and demonstrate a

commitment to restructuring; otherwise, these businesses will continue to hinder the growth of future-oriented companies. Going forward, a combination of regulatory reform–such as improved credit reporting requirements–and incentives like tax credits for technological investment is essential to phase out zombie firms and restore a healthy market. Future research should focus on identifying which tax credits and loan policies are most effective at discouraging the formation of zombie firms, allowing trillions of dollars to flow to companies that are truly committed to technological innovation.

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