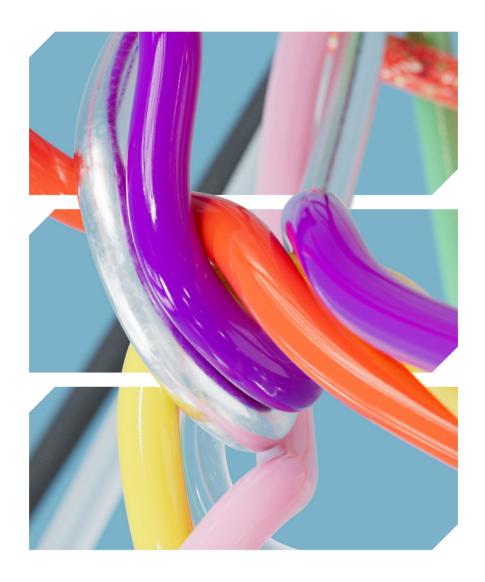
## Zombie buyers beware





# Strategic investors are paying premiums to acquire undead companies, but the value they gain is short-lived.

The zombie invasion continues. The number of corporate undead rose yet again in 2023, contributing to an increase that's averaged 8.8 percent annually since 2010.

The number of zombie companies that don't produce enough profits from operations to meet their debt obligations increased 7.4 percent last year. The undead now account for 5.8 percent of all publicly traded businesses worldwide.

What's more, investors continue to pay substantial premiums for zombies because in the first year after a deal, undead companies generate double-digit total shareholder returns that are comparably higher than those of their non-zombie counterparts. But in short order, the surplus value they create decreases to be more in line with that of other, non-zombie companies.

If that's not scary enough, this might be: the year-over-year zombie swell hasn't phased recent growth of global share prices. From 2019 to 2023, share prices rose 9.9 percent a year, as measured by the MSCI All Country World Index of global equity-market performance. Markets don't seem to care that more zombies are clawing their way into the world's population of publicly traded companies—or that refinancing debt obligations at today's higher interest rates could amplify the invasion.

Zombies now account for 5.8 percent of all publicly traded businesses worldwide.

Financial miscreants' steady infiltration and investor interest in zombie deals in the face of higher global share prices is a key finding of our fourth annual analysis of the worldwide zombie phenomenon. For the report, we once again analyzed global economic tensions, inflation, and other trends that turn companies into zombies. Mergers and acquisitions are a vehicle through which zombies recover, so we also studied why zombies are attractive as potential deal candidates and the returns they produce.

#### Other frightening findings:

- If companies had to refinance their current debt obligations at today's higher interest rates, the effect would be drastic. According to our stress tests on the 45,000 active companies in our database, a two-fold rate increase would turn close to eight of every 100 enterprises into a zombie (see sidebar: Interest rate stress test on page 2).
- Last year, the infiltration was strongest in the Asia Pacific region, where zombie companies increased 10.7 percent, including a 27.2 percent uptick in China and 13.6 percent increase in Australia.
   Zombies also increased in North America (6.0 percent) and Europe (1.3 percent) but declined in South America (down 4.9 percent) and Africa (down 3.2 percent).
- Inflation, rising interest rates, and economic instability affected the financial well-being of companies in the real estate industry more than companies in any other sector. By contrast, the post-pandemic return to normalcy for travel and tourism contributed to a net decline of zombies in the sector, from 14.7 percent to 9.7 percent.
- Zombies have beset companies of all sizes. Last year, midsized companies had the largest increase (12.0 percent). However, the smallest, those with annual revenue of \$500 million or less, continue to be the most affected.

Although investors remain keen on zombies, buyers must beware. Zombie hunters must understand the risks involved in doing deals with the undead and take steps to mitigate them. One of the biggest risks is the relatively short window of opportunity investors have to bring zombies back to life in a way that adds value, increases growth, and allows them to outperform non-zombies before the benefits of a deal drop off. To alleviate risks, investors must ensure deals fit into their overall strategy, look for "deal jewels," and take steps to capitalize on the value that deals generate as quickly as possible.

## Interest rate stress test

Zombies' steady rise could continue if companies have to refinance debt obligations at today's higher interest rates, according to our interest rate stress tests.

To understand what the future could hold, we analyzed net average interest expenses for the companies in our dataset and how higher interest rates could affect them. We designed the stress tests to represent 50 percent and 100 percent interest rate increases respectively, and applied the increases to individual companies' existing interest payments. For example, if a company made annual interest payments at 3.03 percent in 2023, a 50 percent increase would raise the rate to 4.55 percent. A two-fold rate hike would increase the rate to 6.06 percent.

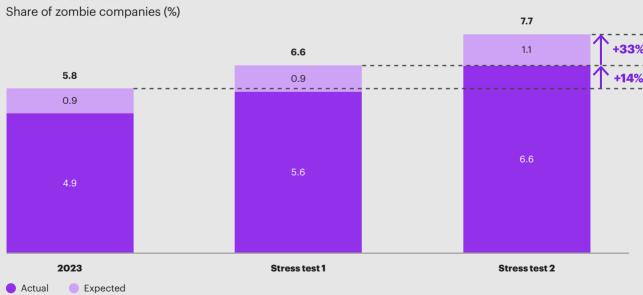
Our analysis found that, assuming no other changes to company performance, a 50 percent rate hike would lead to a 14 percent increase in the number of zombies worldwide, turning close to seven out of every 100 companies in our dataset into zombies. The effects of a two-fold increase would be even more devastating, transforming 7.7 percent of companies into zombies, or close to eight out of every 100 (see figure).

The results foretell what could be in store for companies that secured mid- to long-term financing at low interest rates before and during the pandemic and now are approaching a "maturity wall" when those fixed-rate loans and fixed-coupon bonds are coming due.

Although the stress test results are hypothetical, they're in line with past net interest rate increases, which rose from an average 1.5 percent between 2015 and 2022 to 2.21 percent in 2023. As of this writing, key interest rates set by the European Central Bank and US Federal Reserve range from 4.25 percent to 5.25 percent. The rates are worrisome for companies on shaky financial ground, including current zombies. In addition to paying higher rates, they'll also likely pay a higher, risk-adjusted surplus on market rates than healthy companies. Zombies' obstacles to refinancing are further complicated by the fact that they typically have less free collateral to offer against credit lines.

Figure
Higher rates for companies' existing interest payments could bump up the zombie population by more than
50 percent





Note: percentages may not resolve due to rounding. Sources: Capital IQ; Kearney analysis

## Zombies among us: more are taking over

The number of zombies worldwide reached 2,370 in 2023, compared to 2,206 in 2022. Last year's total includes 234 companies that had not filed annual reports by our May 25 research cutoff but that we expect to meet the Organization for Economic Cooperation and Development (OECD) definition of a zombie based on the proportion of zombies among companies that filed late annual reports in 2022 (see Methodology section on page 11).

The undead now make up 5.8 percent of the 45,000 active businesses in our dataset, up from 5.0 percent in 2022. The uptick contributed to a worldwide population of zombies that has risen by an average of 8.8 percent a year since 2010 (see figure 1).

Last year, 827 companies turned into zombies, including the 234 anticipated zombies that had not filed annual reports by our research cutoff. New zombies outweighed the 534 companies that were "resurrected" by an improved financial picture. In addition, 127 zombies disappeared because they were delisted, meaning they went out of business, went private on their own or after an acquisition, or were acquired and their operations were absorbed. Another two zombies were resurrected through an acquisition and remained listed.

The influx of new zombies is indicative of the underlying economic and transformation issues affecting companies worldwide, including inflationary pressures, shortages of critical supplies and other supply chain disruptions, and a push to transform to stay competitive.

As the MSCI index makes clear, global equities markets continue to soar even as zombies' ranks multiply. The disconnect between corporate profitability and share price isn't unusual. Historically, markets and share prices are influenced by factors other than company performance, including R&D breakthroughs, new products, and improvements in other corporate fundamentals.

Figure 1

The number of zombie companies worldwide increased at an annual growth rate of 9% between 2010 and 2023



### Zombies as investments: speculating on the undead

Investors are hunting zombies. But despite investors' willingness to pay premiums to close deals, zombies don't appear to create sustainable long-term value for their buyers.

To understand zombies' appeal and the outcome of investing in them, we studied 7,710 mergers and acquisitions that involved 5,636 companies in our dataset. Of the M&A activity we analyzed:

- Zombies accounted for less than 5 percent of all M&A deals involving publicly traded companies.
- There were 294 zombies involved in 388 deals, meaning some zombies were fully or partially acquired more than once.
- Of all zombie M&As, 19 percent involved zombies that were traded more than once.

The finding that some zombies trade hands multiple times indicates that investors can't always absorb or turn them around, and when that happens, undead companies wind up back on the market. It highlights the extreme challenge of integrating a company facing significant financial headwinds.

Even so, investors continue to perceive zombies as having higher than average potential to create value compared to more financially stable companies so much so, they're willing to pay more as a result.

The multiples that investors typically consult to gauge a deal's potential, such as enterprise value over EBITDA, are meaningless when vetting zombies because of their financial condition. For that reason, we used revenue multiples and price to book equity as reference. Both show substantially higher values for zombies than for healthy companies.

Of all M&As we studied, those involving zombies have a higher-than-average transaction value to revenue (4.0 vs. 2.5). Zombies' price to book equity is also higher than the market average, 2.9 compared to 2.2.

Strategic investors are the most active zombie hunters, accounting for the vast majority of zombie M&As (81 percent), with financial investors responsible for the remainder. According to our analysis, most acquired zombies are biotech or software companies. For companies getting acquired in this segment, for instance due to a superior R&D pipeline, it is often part of the business model evolution. Therefore, being considered a zombie company is an anticipated phase in their development.

> **Investors** perceive zombies as having more value potential than financially stable companies and are willing to pay more as a result.

Strategic investors commonly pursue underperforming companies that could tie into the acquirer's existing business, or because a zombie controls assets that fit into its strategic objectives. Zombies' "deal jewel" assets could be R&D, new products, or in the case of energy or natural resources companies, newly discovered physical assets. In the pharmaceutical industry, for example, global players commonly acquire biotech zombies for their R&D.

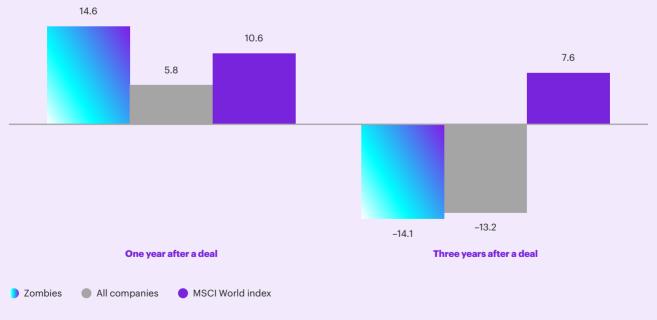
Zombies are worthwhile investments, at least in the short term. In the first year after a deal, the value that zombies create for buyers is more than double the market average, as measured by total shareholder return (TSR), 14.6 percent vs. 5.8 percent (see figure 2). That value even outpaces MSCI global equity market performance. But the good times don't last. In short order, zombie buyers' TSR declines even more than the market average, to a 14.1 percent TSR deficit three years after a deal, compared to a 13.2 percent deficit for all M&As, and an MSCI market performance increase of 7.6 percent.

Zombies' rapid drop in value highlights the need for investors to maximize pre-close planning and pursue a robust integration strategy to maximize the benefits of synergies that spring from a deal.

In the first year after a deal, the value that zombies create for buyers is more than double the market average.

 $\label{prop:contribute} Figure~2 \\ \textbf{Zombies contribute to buyers' total shareholder return in the first year but detract from it after that }$ 

Comparison of post-deal TSR for zombies and all companies against MSCI index (%)



## Zombies by region: diverging fortunes

Last year, the effects of global economic trends played out differently depending on the region. Some continents and countries witnessed a sharp increase in the number of undead companies while others saw their zombie populations shrink (see figure 3).

Zombies by continent. The Asia Pacific region had the most significant upsurge of zombies, including a 10.4 percent increase in Asia and 13.6 percent uptick in Australia. The zombie increase in Australia is in line with the country's wavering economic performance, as indicated by a dip in GDP growth from 4.27 percent in 2022 to 3.02 percent in 2023, according to the World Bank. That could help explain why the Asia Pacific region's zombie population multiplied despite an overall improvement in GDP from 4.5 percent in 2022 to 4.8 percent in 2023.

Zombies also rose in North America (6.0 percent) and Europe (1.3 percent), but fell in South America (4.9 percent) and Africa (3.2 percent).

**Zombies by country.** Continuing hard times in the global real estate industry, which we first documented in our 2021 zombie report, exacerbated the zombie outbreak in Asia. China has been especially hard hit by the real estate sector downturn, which contributed to a 27.2 percent increase in zombies there. Although the increase brought the total portion of zombies among Chinese companies to 3.4 percent, it's still well under the 5.8 percent global average.

Some continents and countries witnessed a sharp increase in the undead while others saw their zombie populations shrink.

Figure 3

Global economic conditions and other trends led to an influx of zombies in some regions but declines elsewhere

#### Zombies by continent

Share of zombie companies (%)

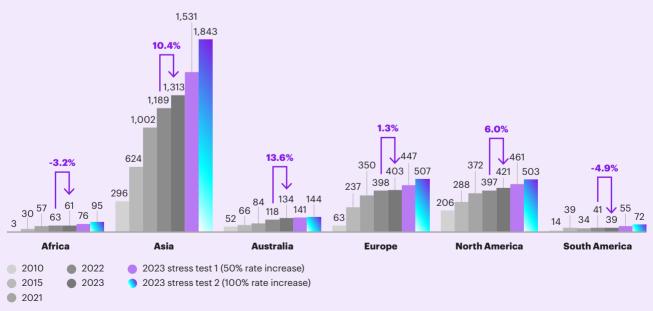
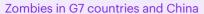
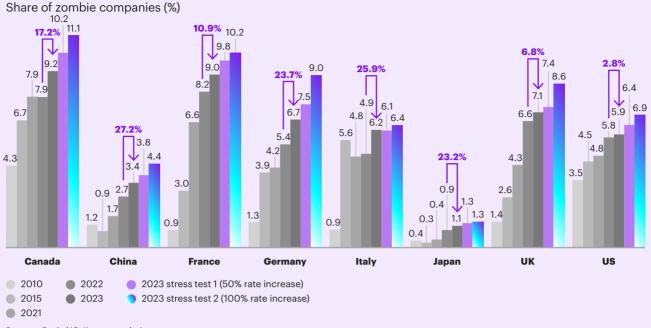


Figure 4 In 2023, the portion of zombie companies increased in all G7 countries and China





Sources: Capital IQ; Kearney analysis

The portion of zombies increased in all G7 countries (see figure 4). Within that group, the countries that experienced the most significant growth in zombies were Italy (25.9 percent), Germany (23.7 percent), and Japan (23.2 percent). Germany has officially entered a recession caused by a slowing economy that's been affected by inflation and declining exports. The related zombie increase led the portion of German zombies in our dataset to reach 6.7 percent.

The United States recorded only a slight increase in the undead (2.8 percent), and total zombies remain just shy of 5.9 percent of all companies based there.

Switzerland experienced the largest proportional drop in zombies of any country we studied (30 percent). Last year, the zombie contingent among Swiss companies dropped to 3.6 percent from 4.6 percent in 2022.

The portion of zombies increased in all G7 countries and China.

## Zombies by industry: travel and tourism rebounds as real estate flounders

Multiple economic and geopolitical factors affected the performance of industries across the globe, leading the zombie population to shrink in some sectors and grow in others (see figure 5). The factors included a post-pandemic bounce that lingered into 2023, inflation that lifted share prices but caused companies in some sectors to pass on higher prices to customers with adverse financial effects, and ongoing semiconductor shortages and geopolitically related supply chain risks.

The travel and tourism industry rebounded from 2022, when airlines were the most affected subsector of any we studied. Travel trends that started shifting in 2022 continued last year. It contributed to a net decline in total zombies in the industry, from 129 that year to 83 in 2023 (14.7 percent to 9.7 percent). In 2023, 70 former travel and tourism zombies returned to financial good health, while only 27 companies turned into zombies, and three were delisted.

The population of undead companies remained relatively unchanged in automotive, consumer goods, energy and utilities, machinery, and telecommunications and media.

The higher interest rates that affected all industries were especially damaging to the real estate sector. The total number of real estate zombies grew from 173 in 2022 to 210 in 2023, increasing the portion of zombies in the industry to 11 percent. The 36 real estate zombies that returned to financial health during the year were outnumbered by 81 companies that became zombies and eight that were delisted.

Higher interest rates could turn even more real estate companies into zombies because of the industry's need for capital and the highly leveraged nature of the business. According to our stress tests, a 50 percent increase would drive up the portion of undead companies in the sector to 13.3 percent. A two-fold increase would lead to 16.2 percent of real estate enterprises becoming zombies, one of the highest rates of any industry we studied.

Figure 5 In 2023, more zombies materialized in industries such as real estate

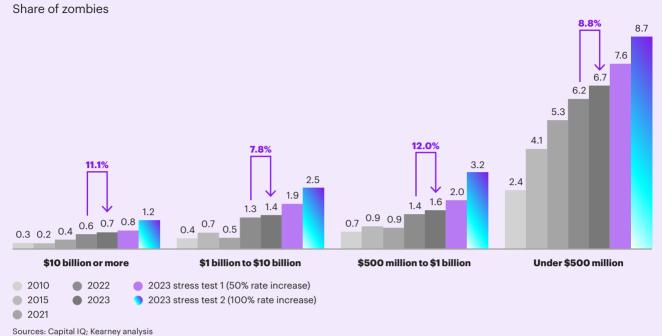
Zombie companies by industry sector

Industry	2010		2015		2021		2022		2023		2023 stress test 1 (50% increase)		2023 stress test 2 (100% increase)	
	Total zombies	[%]	Total zombies	[%]	Total zombies	[%]	Total zombies	[%]	Total zombies	[%]	Total zombies	[%]	Total zombies	[%]
Automotive	12	1.6%	17	1.9%	25	2.5%	30	3.0%	32	3.2%	40	4.0%	50	4.9%
Machinery	17	1.2%	36	2.2%	53	2.7%	69	3.6%	68	3.6%	79	4.2%	97	5.1%
Real estate	58	3.8%	90	5.0%	145	7.3%	173	8.9%	210	11.0%	253	13.3%	309	16.2%
Retail	17	1.2%	46	2.6%	93	5.0%	105	5.9%	122	7.0%	140	8.0%	166	9.5%
Telecommunications and media	29	1.9%	70	3.8%	117	5.2%	140	6.4%	146	6.8%	160	7.4%	180	8.4%
Healthcare	83	3.8%	153	5.2%	235	5.7%	271	6.8%	278	7.1%	288	7.3%	316	8.1%
Travel and tourism	15	2.0%	34	3.9%	53	5.9%	129	14.7%	83	9.7%	112	13.1%	143	16.7%
Consumer goods	37	1.6%	86	3.1%	134	4.4%	130	4.4%	139	4.8%	156	5.4%	194	6.7%
Energy and utilities	37	1.7%	65	2.8%	90	3.8%	84	3.7%	89	3.9%	107	4.7%	145	6.4%
Financial services	36	0.9%	57	1.3%	63	1.3%	75	1.6%	89	2.0%	122	2.7%	142	3.2%
IT	100	2.4%	187	3.6%	297	4.6%	326	5.2%	363	5.8%	385	6.2%	418	6.7%
Materials	78	2.0%	144	3.2%	182	3.7%	195	4.1%	193	4.0%	218	4.5%	252	5.2%
Others	115	1.9%	299	3.3%	412	4.2%	479	5.0%	558	4.9%	650	5.6%	751	6.6%

Figure 6

#### Midsized companies had the biggest zombie increase but smaller enterprises remain the most affected





## Zombies by company size: bigger is better

Although the number of zombies among companies of every size rose again for the third year in a row, smaller companies continue to be more affected than any other group.

In 2023, the number of zombies among companies with annual revenue of \$500 million or less grew close to 9 percent, causing the portion of the undead among that cohort to increase from 6.2 percent in 2022 to 6.7 percent. Smaller companies are more susceptible to becoming zombies because they typically have less access to attractive refinancing options or capital markets. They're also more likely to have weaker processes and governance than larger companies and are more exposed to external shocks (see figure 6).

#### Other findings:

- Midsized companies with annual revenue of \$500 million to \$1 billion had the highest zombie growth rate (12.0 percent). However, the portion of zombies among them is still relatively small, 1.6 percent in 2023 compared to 1.4 percent in 2022.
- Large companies with annual revenue of \$1 billion to \$10 billion had the slowest zombie growth rate of any group, an increase of 7.8 percent. The portion of zombies in this cohort also remains very small, 1.4 percent.
- Last year the zombie growth rate among companies with more than \$10 billion in annual revenue surpassed 11.1 percent. But that cohort remains relatively zombie free, with a rate under 1 percent.

### Considerations for zombie hunters

Zombie hunters are a rare breed. Although zombies make up close to 6 percent of all publicly traded companies worldwide, they account for less than 5 percent of the M&A deals we studied—meaning that interested investors are few and far between.

Even so, the strategic investors that comprise the vast majority of zombie hunters pay handsomely to acquire them. They see the potential that financially distressed companies represent—potential that others overlook.

Based on our analysis, they're on to something. Buyers' TSR in the first year after acquiring a zombie is more than double the average. But after thatpoof—zombies transmogrify from creating value to destroving it.

Given the circumstances, it behooves investors considering zombie deals to proceed with caution.

Investigate and identify the R&D, new products, or other assets that make a zombie attractive before striking a deal.

Do the math. Determine the maximum price you're willing to pay based on TSR that, if it follows the average, will likely peak at the one-year mark. Be ready to take whatever actions are required to transform an acquired zombie and cash out before the value it delivers starts to crumble.

Find and secure zombies' deal jewels. Investigate and identify the R&D, new products, or other assets that make a zombie attractive before striking a deal. Plan how to capitalize on the surplus valuation that a zombie's deal jewels represent.

Look for bargains. Economic trends have been kinder to some regions and industries than others. The upshot: there are bargains to be had in areas and sectors where zombies are prevalent.

Take size into consideration. Our data shows that zombie hunters' average annual revenue is five times larger than their targets, and their market capitalization is 5.7 times larger. In that regard size matters, because the closer in size a zombie is to an investor, the greater the risk that it could affect its new owner.

#### Make sure a deal fits into your strategy and goals.

Understand the upsides a zombie M&A target represents and how it fits into your long-term corporate objectives and M&A strategy. A pharma company may stand to gain from buying a biotech zombie with a breakthrough drug, or a tech giant may gain from buying a money-losing challenger with more advanced R&D capabilities.

Develop a post-deal plan. Zombies don't add value for long, so come prepared. Have a robust integration strategy plan in place that accelerates capturing the value from a deal. Actively manage the acquired company to capture benefits from the investment as quickly as possible.

### Conclusion

The tide of zombies continues to rise, with the primary increase coming from financially unstable companies in regions such as Australia and Germany that have been hard hit by economic slowdowns, higher interest rates, and global supply chain challenges. The zombie horde is also growing in industries such as real estate that face substantial challenges from being exposed to capital markets. Smaller enterprises remain more at risk of becoming a zombie than larger listed companies. Even so, investors see zombies as opportunities to add value, and are willing to pay more than the market average to acquire them. But without a smart plan that takes into account the relatively short window of time that zombies add value, they might not get their money's worth.

### Methodology

To understand the current state of zombie companies, we analyzed a dataset dating back to 2000 with more than 5.5 million data points on close to 76,000 publicly traded companies across 154 industries and 152 countries, including 45,000 companies active in 2023.

We used the OECD's internationally recognized definition of zombie companies to ensure consistency and comparability. The OECD classifies a company as a zombie if it:

- Has been active in the market and had revenue of greater than zero for 10 consecutive years, demonstrating ongoing activity in its industry and that it is not a start-up.
- Has not been able to meet its interest obligations through operating profits for three consecutive years.

In addition, we define a company as no longer being a zombie if it recovered financially, became insolvent and went out of business, or was acquired.

We used the aforementioned criteria to review each company's performance as outlined in their publicly available annual report. Because some zombie companies did not release year-end reports by our May 25 research cutoff, we used the number of companies that met our definition of zombies in 2022 to calculate the additional percentage of zombies among all companies that hadn't reported year-end results by our cutoff date and added that to our total. In 2022, the number of zombies among companies we studied totaled 2,206, of which approximately 10 percent filed year-end reports after May 25. Based on that, we forecast the total number of zombies for 2023 to be 2,370, including an estimated 234 we expect to file year-end reports late.

When analyzing M&As that involved zombies, we defined strategic investors as all investors other than private equity funds, sovereign wealth funds, pension plans, or similar financial companies.

When analyzing zombies by size, we divide companies into the following categories by annual revenue:

- Small less than \$500 million
- Medium \$500 million to \$1 billion
- Large between \$1 billion and \$10 billion
- Very large more than \$10 billion

By adhering to rigorous data collection methods and accounting for the aforementioned considerations, we believe we provide an accurate, insightful analysis of zombie companies' presence in the global business landscape.

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The authors wish to thank Jonathan Thaysen, Heike Hofmann, and Tobias Schmidtke for their valuable contributions to the data analysis, which was instrumental in compiling this report.

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