



# Operational Red Flags in U.S. Corporations (2020–2025): Financial Distress Indicators and Strategic Responses

Shaurya Shounik

MS in Finance, Brandeis University  
Independent Researcher, USA

## OPEN ACCESS

SUBMITTED 30 January 2025

ACCEPTED 24 February 2025

PUBLISHED 29 March 2025

VOLUME Vol.07 Issue03 2025

## CITATION

## COPYRIGHT

© 2025 Original content from this work may be used under the terms of the creative commons attributes 4.0 License.

- Abstract:** Following the COVID-19 pandemic, U.S. corporations encountered unprecedented financial and operational challenges. This research examines the early warning signals of financial distress for firms from a period of 2020 to 2025 and their strategic responses to such challenges. We employed a mixed-method approach, analyzing company success indicators while incorporating qualitative insights from academic literature and industry sources. Critical findings indicate that in the post-COVID economy, particular operational red flags such as declining revenues, insufficient liquidity, escalating debt burdens, and operational inefficiencies frequently led to significant financial difficulties for enterprises. The research evaluates the effectiveness of the strategic measures employed by firms, including significant cost reductions, restructuring, adaptive pivots, and stakeholder support initiatives. In conclusion, the research indicates that a company's resilience in the post-pandemic years (2020–2025) was contingent upon the early identification of warning indicators and timely strategic actions. Scholars, professionals, and politicians may utilize this information to enhance preparedness for future economic disruptions and establish early warning systems.

**Keywords:** Corporate Strategy, Financial Distress, Crisis Management, Business Resilience, Cost Retrenchment, Debt Restructuring.

## 2. Introduction

### 2.1 Research Background

In 2020, the COVID-19 pandemic greatly affected the global economy, creating difficulties for U.S. companies. Many companies faced immediate liquidity problems and ongoing signs of trouble that were often missed. Spotting and fixing these early warning signs became very important for leaders and stakeholders (Jacobson, 2024). The period from 2020 to 2025 gives us a chance to study how companies noticed and handled these problems (Kscope, 2020).

### 2.2 Literature Review

Business and academic scholars have always endeavored to develop methodologies for forecasting and preventing corporate failures. Older methods, like Altman's Z-score, showed that financial numbers—like profits, debt, and cash—could help predict if a company was going to go bankrupt (McClure & James, 2024). Over time, these methods got better as researchers used new math and, more recently, artificial intelligence to spot problems even sooner (Elhoseny et al., 2022). However, current research shows that dependance on financial metrics solely can lead to a narrow view (Shetty & Vincent, 2021). Scholars increasingly contend that a singular focus on financial data may obscure critical early warning signs initially manifested in a company's operational activities or shifts in leadership (Jacobson, 2024). Research shows that major changes in management, company strategy, or a change in it's quality of products or services could suggest liquidity problems. In other words, operational issues often surface before financial statements show any sign of distress (Corporate Finance Institute, 2025). Current research examines how companies act during a tough situation (Mallinguh & Zéman, 2020). Standard interventions include immediate cost-cutting measures coupled with substantial strategic reorientations to facilitate corporate recovery. During the pandemic, studies showed different reactions, like using more technology, making small operational changes, fixing finances, or changing how the company is run. A few actions taken as a response were changing their debt structure, selling off parts of the company (Balioukas et al., 2022), improvisation of operational strategy, raising external capital, or merging with or buying other companies (Kang et al., 2020). Companies that acted fast, used digital tools, or made their finances more stable were usually seen as doing well by investors

(Ashraf et al., 2019).

### 2.3 Problem Statement

Despite the progress made in identifying distress and guiding corporate strategy, the pandemic revealed some clear gaps. Many companies either didn't see the early warning signs or focused too much on immediate liquidity fixes. They didn't act until things were already serious (Jacobson, 2024). This research focuses on how different types of warning signs appear and which strategies truly make a difference—especially in a period as turbulent as 2020–2025.

### 2.4 Research Objective

This study aims to:

- Find and list the most common operational and financial warning signs that precede corporate financial distress in U.S. corporations between 2020 and 2025.
- Examine how these signs changed as the economy and industries changed.
- Analyze the impact of strategic responses and distinguishing between short-term fixes and sustainable strategies.

This research aims to show that companies can overcome challenges by early identifying of internal problems and quick action.

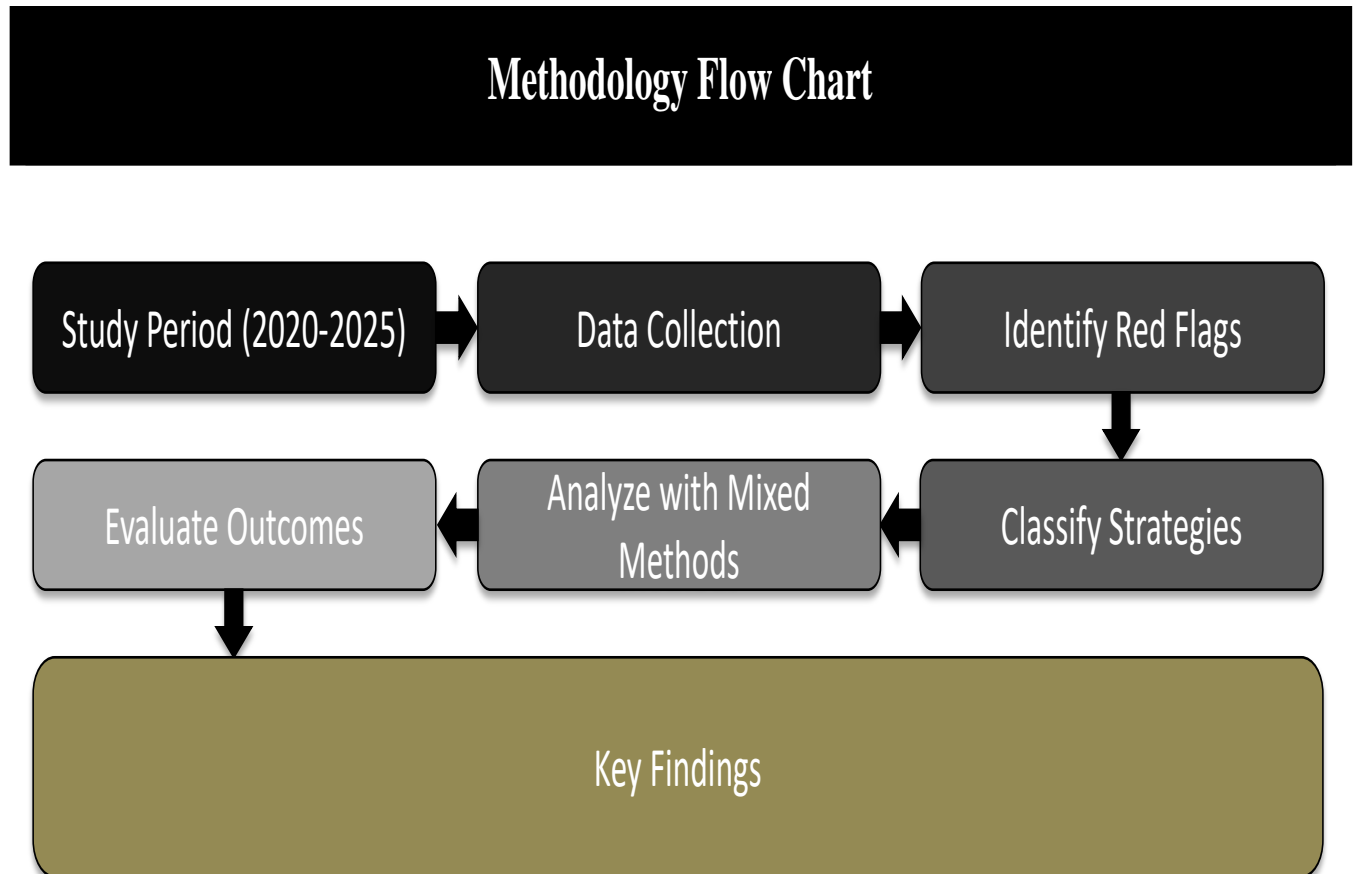
## 3. Methodology

A mixed-methods approach was used to understand how often early warning signs (Tanaka et al., 2025) and strategic actions happened in U.S. companies from 2020 to 2025. We examined various financial reports, industry data, and information on bankruptcies and major changes in companies. Publicly available information, like annual reports and press releases, was analyzed to find operational signals such as warnings about the company's future, breaches of agreements, and emergency cost cuts. General business health, including default rates (Tron et al., 2022) and how different industries were performing (Cornerstone Research, 2024), were verified using industry research. A review of case reports and news stories was done to find trends in strategic behavior (Younas & Durante, 2023). Information from news and company reports was used to sort strategic actions, like managing liquidity, changing debt structure on the balance sheet, fixing operations, and changing the company's market

position. Results were analyzed by whether companies successfully turned things around—avoiding bankruptcy and making a profit again—or failed, such as by going bankrupt or being bought when in trouble. All results were presented together, with sources cited in APA style. The study looked back at what happened, helping to see which early warning signs and strategic actions

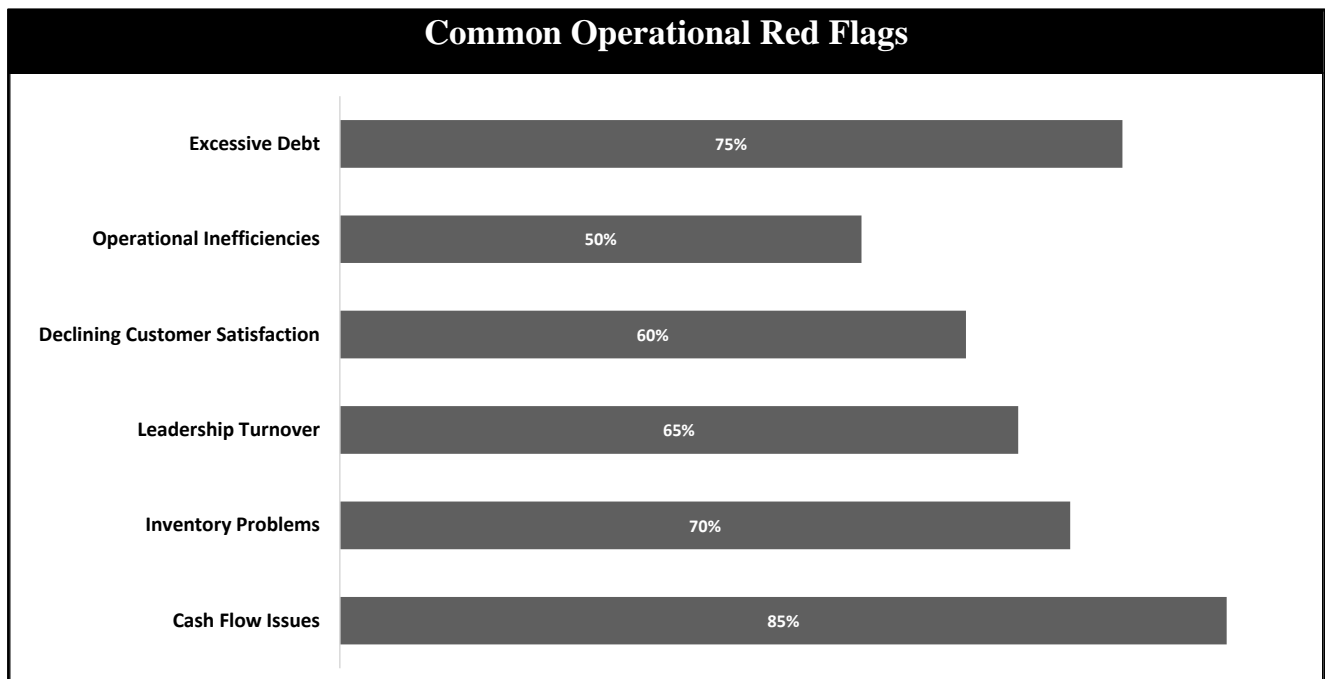
were most linked to good or bad results (Supangkat & Widiana, 2022). While using public data might miss some internal problems and not having a controlled experiment limits proving cause and effect, the wide range of data from different industries was a strength, giving strong, comparative insights.

Figure 1. Flow chart representing research methodology



#### 4. Operational Red Flags (2020–2025)

Figure 2. The graph representing the common operation flags (Sandor, J., 2024)



#### 4.1 Financial Warning Signs

From 2020 to mid-2025, U.S. companies were showing signs that their problems went beyond just temporary dips in demand. From 2020 to mid-2025, many U.S. companies showed signs that their troubles were more than just short-term drops in revenue. One key trend was that some companies made enough money to pay interest but constantly raised new capital from existing investors to stay continue operations (Almeida, 2021). When interest rates rose again in 2022–2023, these companies had trouble paying existing interest obligation, which implied they were not financially stable. To avoid bankruptcy, many struggling companies used methods like debt swaps and extending payment deadlines (Sagita & Nugraha, 2022). By 2024, these actions were the main reason for defaults, showing a move towards using financial engineering as a survival tactic. However, this facade of strength eventually cracked. Corporate bankruptcy filings soared to levels not seen in a decade, with nearly 700 companies filing in 2024 alone, proving that these maneuvers couldn't sustain deeply indebted operations (CSC Global, 2025).

#### 4.2 Operational and Managerial Red Flags

Beyond the company financials, problems could be seen in how a company was running. If a company wasn't putting money back into itself or keeping things in good shape, that was a bad sign because it showed they were just trying to survive day to day. Things like factories not

being used, workers being idle, orders not being filled, or too much inventory meant that either people weren't buying enough or the company wasn't planning well (Saleheen & Habib, 2022). These issues caused liquidity problems (Liu, 2024), in turn affecting the product and operations quality which made customers unhappy. Another sign was when many employees were leaving (Anusha & Rajesh, 2024), especially important people like the head of finances or the boss (Bae & Joo, 2021). Often, when leaders left, the reason given wasn't the real one; it was hiding bigger problems. Also, if the quality of products or services went down, that was a red flag because companies under pressure sometimes tried to save money by cutting corners (Owusu & Goh, 2020). This led to customers complaining more, returning products, or the government getting involved.

#### 4.3 Sector-Specific Trends and Timing

Certain industries, such as oil, gas, and retail, faced a considerable number of bankruptcies in 2020 as a result of the pandemic, precipitated by events like the plummeting of oil prices and extensive retail shutdowns (Hamzah & Marimuthu, 2020). But for manufacturing and services, problems took longer to appear, with many failing in 2023 as government help stopped and costs went up (Menezes & Lawless, 2023). The timing and type of red flags, such as not meeting loan terms or big drops in income, depended on the specific issues and recovery paths of each industry.

#### 4.4 Severity and Prevalence of Warning Signs

Not all warning signs carried equal weight. Some, like minor revenue declines, were common and not always fatal if addressed quickly. Others, though less frequent, signaled acute risk. For instance, auditors' going-concern warnings were rare but strongly predictive of bankruptcy or major restructuring (John & Liu, 2025). Correspondingly, entities demonstrating consistent negative cash flow or habitual payment delays to vendors faced a heightened risk of impending insolvency unless prompt corrective measures were enacted (Kovach et al., 2022). Figure 2 provides a conceptual overview, highlighting that while widespread issues like declining sales are important, rare but severe indicators demand urgent intervention to prevent collapse (Tanaka et al., 2025).

#### 4.5 Importance of Early Detection

This analysis underscores the need for a balanced early warning system—one that can flag both the common issues that may escalate over time and the rare, severe signals that require immediate attention (Tanaka et al., 2025). By spotting these red flags early, companies and those involved can act to keep things steady, get money, and avoid bigger problems (Tanaka et al., 2025).

### 5. Strategic Responses to Financial Distress

Financial distress can lead to significant value loss for a company and its stakeholders, hence preventing it is crucial to prevent business disruption (Ashraf et al., 2019). Table 1 shows a summary of the main actions taken and their outcome.

#### 5.1 Liquidity Management and Cost Restructuring

The first thing companies did was cut costs quickly—like letting people go, reducing pay, and stopping unnecessary spending—especially in 2020 and 2021 (CSC Global, 2025). This saved money but often made workers unhappy and weakened the company. At the same time, companies tried to get cash by using available credit lines, delaying payments, and managing liquidity. Many talked to lenders to get more money or get more time to pay debts, which helped for a while but didn't work as well when interest rates went up in 2023 (Almeida, 2021). Some companies couldn't fix the debt burden and ended up filing for Chapter 11 bankruptcy.

#### 5.2 Asset Divestment and Strategic Refocusing

To get money and work better, many companies sold things that weren't essential or parts of the company. This helped them concentrate on what they were best at and pay off debt (Harrigan & Wing, 2021). When done well, this improved profits and made the company clearer. But, if they sold important things too quickly, companies became too weak to recover, which made them more likely to fail in the future (Aiyappa, 2025).

#### 5.3 Digital Transformation and Business Model Pivoting

The pandemic fast-tracked digital adoption. Companies expanded e-commerce, revamped distribution channels, and repurposed assets to meet evolving customer needs. These moves often unlocked new revenue streams and boosted resilience. While not all pivots succeeded, early adopters of digital transformation were better positioned by 2022–2023 and often embedded innovation into long-term strategy (Hokmabadi et al., 2024).

#### 5.4 Stakeholder Support and External Capital

In the absence of a convincing viability and turnaround plan, secured lenders frequently initiate measures to mitigate their exposure, such as implementing borrowing-base blocks, instituting reserves, or reducing caps, all of which tend to exacerbate the spiral into a deeper liquidity crisis (Walsh & Sekely, 2019). However, proactive engagement with all stakeholders, including suppliers, employees, and customers, often yielded crucial support, fostering a collaborative environment essential for navigating distress (Walsh & Sekely, 2019).

#### 5.5 Mergers and Acquisitions (M&A) as Exit or Rescue

M&A served as both a recovery tool and an exit strategy. Stronger competitors acquired distressed firms to preserve operations, while some pursued mergers of equals to consolidate resources (García-Nieto et al., 2024). Results varied: well-planned acquisitions often led to turnarounds, but rushed deals between weak entities failed to resolve underlying issues. Still, M&A remained a practical path when standalone recovery was unlikely. This is reflected in the comparative outcomes listed in Table 1.

**Table 1.** Strategic responses to financial distress (2020–2025) and their outcomes

Strategic Response	Description and Typical Outcomes
--------------------	----------------------------------

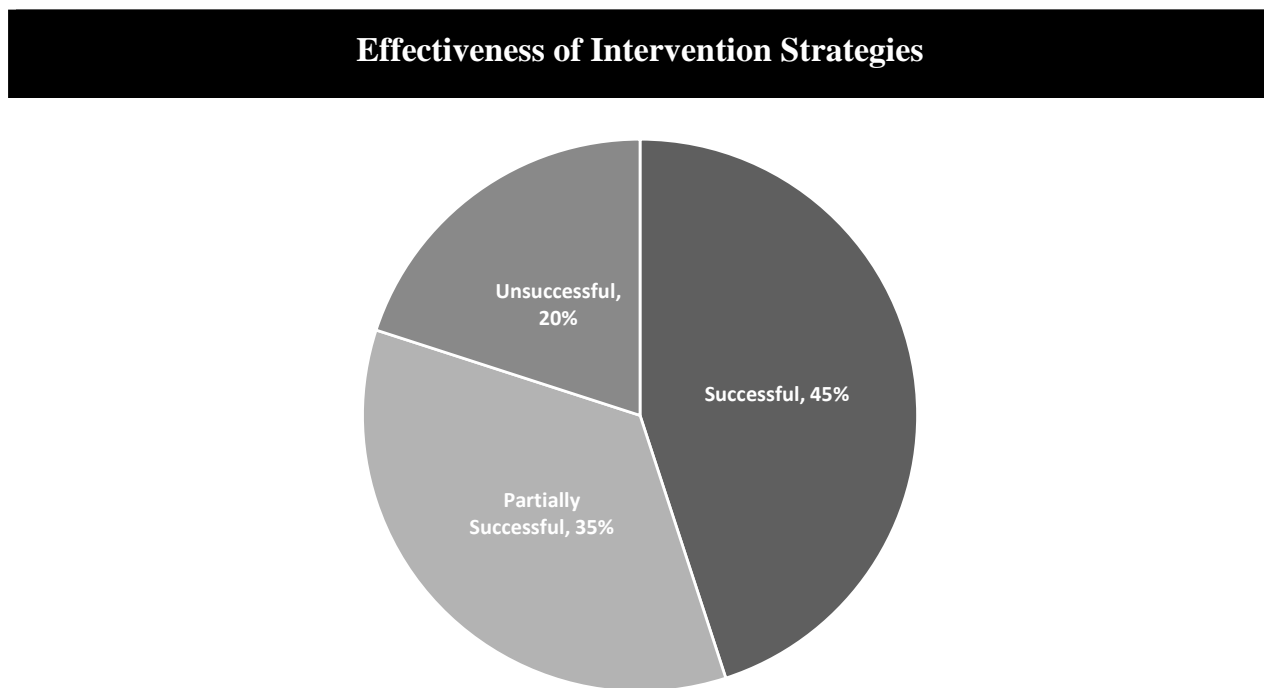
<b>Cost Retrenchment</b> (Expense cuts, layoffs)	Immediate reduction of operating costs to conserve cash. Often successful short-term in stemming losses, but can weaken future growth capacity if overdone. Necessary in early crisis phase, though morale and innovation may suffer.
<b>Debt Restructuring</b> (Renegotiation, refinancing, Chapter 11)	Reorganization of debt obligations to reduce near-term burden. When done out-of-court, can lower interest or extend maturities, gaining runway. In court-supervised restructuring (Chapter 11), debt is shed in exchange for equity. Successful cases emerge leaner with sustainable debt; failures end in liquidation.
<b>Asset Divestiture</b> (Sell-offs of non-core assets)	Sale of business units, real estate, or IP to raise cash and focus on core operations. Provides one-time liquidity and potentially sharper strategic focus. Outcome: positive if core business stabilizes (firm survives smaller but healthier), negative if vital assets are lost or proceeds insufficient to turn the tide.
<b>Business Model Pivot</b> (Digital transformation, product/service innovation)	Adapting or reinventing operations to new market realities (e.g., shifting to e-commerce, remote delivery, or new products relevant to pandemic needs). Companies that successfully pivoted often tapped new revenue and improved efficiency, aiding in recovery. Unsuccessful pivots consumed resources with little payoff. Overall, a proactive pivot signaled resilience and was correlated with better performance post-crisis.
<b>External Capital Infusion</b> (Government aid, new equity/debt capital)	Securing external capital was a key liquidity strategy. Government aid—such as PPP loans in 2020–2021—helped avert immediate collapse for many firms. Equity injections strengthened balance sheets but diluted ownership, while new debt offered short-term relief at the cost of future obligations. Outcomes depended on how capital was deployed: firms that used funds to restructure and adapt often stabilized, whereas those that merely layered on debt frequently encountered renewed distress.
<b>M&amp;A and Consolidation</b> (Being acquired or merging)	Pursuing a sale, acquisition, or merger to capitalize on a stronger partner’s resources. In an acquisition, the distressed firm’s stakeholders often take losses, but the business itself may continue under new ownership (successful “rescue” outcome). Mergers between weak firms aimed to achieve economies of scale or complementary strengths; some merged entities navigated the crisis better together, while others failed if synergies did not materialize.

After the COVID-19 pandemic, companies often used a mix of strategies (Heredia et al., 2022). They cut costs while also trying to get more money (Ashraf et al., 2022). Some changed how they were organized and adapted their business plans to fit the new market. These strategies worked best when started early as part of a well-thought-out plan, instead of waiting until things got really bad (Lorange, 2021). Companies that acted quickly in mid-2020—by increasing their cash, reducing expenses, and investing in digital technology (Browder et al., 2023)—were in a better position by 2022–2023 (Heredia et al., 2022). Because they took action early,

they were able to keep their business stable (Heredia et al., 2022) and in a better position as things improved. But companies that waited, hoping things would go back to normal quickly, often had to take more drastic measures later, like selling off parts of the company or declaring bankruptcy (Kang et al., 2020). The stock market also showed this difference during the pandemic. Investors reacted better to companies that announced forward-looking plans, especially those involving digital innovation and getting more money, than to those using short-term, defensive methods (Klößner et al., 2023). This suggests that people saw

long-term, well-rounded plans as a sign that a company would survive and do well (Klößner et al., 2023).

Figure 2. Pie chart representing the effectiveness of intervention strategies (Walsh, M., & Sekely, C., 2019)



## 6. Conclusion

The period from 2020 to 2025 provided a critical test for U.S. corporations, demonstrating that early operational warning signs often presaged severe financial distress and that the quality of strategic responses determined ultimate outcomes (Tanaka et al., 2025). This study identified core operational red flags—such as declining revenues, persistent cash flow deficits (Karas & Režňáková, 2020), rising leverage, and operational inefficiencies—as reliable predictors of distress in the post-COVID economy. Firms that promptly recognized and addressed these indicators, by initiating targeted interventions, exhibited a significantly higher likelihood of survival (Tanaka et al., 2025). Conversely, companies that delayed action or minimized these signals frequently entered a downward spiral that proved difficult to reverse.

The study found that how well companies responded to the crisis depended on using several strategies together in a timely way (Heredia et al., 2022). As detailed in Table 1, no single tactic was sufficient on its own; rather, layered and timely interventions proved most effective. Using just one method wasn't enough. Companies that recovered typically combined different approaches (Balioukas et al., 2022). They first stabilized things by cutting costs and changing their finances. Then, they

worked on improving their business by using new technology (Rupeika-Apoga et al., 2022), changing their business plans, or merging with or buying other companies. Government support, like the Paycheck Protection Program, was very important in helping companies stay afloat during the worst part of the crisis. This shows how important it is for the government and businesses to work together. However, when this support decreased in 2023–2024, whether a business could succeed on its own became the most important thing (Cornerstone Research, 2024).

In conclusion, the years 2020–2025 underscored that spotting risks early and managing them head-on is vital for operational and financial health. Companies that combined financial analysis with up-to-the-minute monitoring of things like customer trends, employee morale, and supply chain stability were the ones that could jump in and fix problems fast (Marjerison et al., 2025). The best boards and leaders were those ready to make quick decisions, balancing caution with the ability to change, and working well with lenders, investors, and government officials (Thorgren & Williams, 2020). Companies that were open to new strategies and worked with everyone involved were the ones that not only survived but thrived (Browder et al., 2023). Moving forward, organizations must integrate comprehensive

early warning systems that monitor both financial and non-financial indicators, such as employee morale and supply chain vulnerabilities, to proactively identify nascent signs of distress (Jacobson, 2024).

This paper contributes a novel perspective by integrating operational red flags with strategic response outcomes across multiple industries and over a sustained crisis period. Prior studies often emphasized either predictive financial models or post-failure analysis in isolation. In contrast, this study combines early detection with forward-looking strategic effectiveness, offering a holistic diagnostic framework. Moreover, unlike earlier research limited to historical financial data, this work incorporates real-time managerial signals and sector-specific dynamics that emerged uniquely in the 2020–2025 context. The findings provide not just predictive value but also prescriptive insights that are actionable for both corporate managers and policymakers.

## 6.1 Key Findings

This study examined how U.S. companies responded to distress between 2020 and 2025 and identified several critical insights:

1. **Operational red flags**—like executive turnover, declining product quality, and rising inventory—often appeared before financial metrics signaled distress (Bae & Joo, 2021; Owusu & Goh, 2020).
2. **Mixed-methods analysis** combining financial data with qualitative reports gave a fuller view of risk and response (Younas & Durante, 2023).
3. **Timing and strategy mix** mattered: early, multi-pronged responses led to better outcomes than reactive, single-track measures (Heredia et al., 2022).
4. **Government aid helped temporarily**, but long-term recovery required internal change and adaptive leadership (Jacobson, 2024).

Strategic actions and their outcomes are summarized in **Table 1**, showing how certain approaches were more effective depending on timing and execution.

## 6.2 Future Research

More studies are needed to create early warning systems that use both how a business runs and its finances. It would also be helpful to study specific industries to understand their weaknesses. Finally, future studies could look at how working together

affects how well companies recover from big problems.

## References

1. Aiyappa, P. (2025). WeWork: The \$47 Billion Illusion That Burned Through Capital and Credibility [Blog post]. Startup Stash. <https://blog.startupstash.com/wework-the-47-billion-illusion-that-burned-through-capital-and-credibility-6c5768815496>
2. Almeida, H. (2021). Liquidity management during the COVID-19 pandemic. *Asia-Pacific Journal of Financial Studies*, 50 (1), 7–22. <https://doi.org/10.1111/ajfs.12322>
3. Anusha, K., & Rajesh, M. K. (2024). Impact of employee turnover on organization performance with reference to Optum Global Solutions Pvt. Ltd, Hyderabad. *International Journal of Research Publication and Reviews*, 5 (7), 2362–2370. <https://doi.org/10.55248/gengpi.5.0724.1810>
4. Ashraf, D., Khawaja, M., & Bhatti, M. I. (2022). Raising capital amid economic policy uncertainty: An empirical investigation. *Financial Innovation*, 8, Article 1. <https://doi.org/10.1186/s40854-022-00379-w>
5. Ashraf, S., Félix, E. G. S., & Serrasqueiro, Z. (2019). Do traditional financial distress prediction models predict the early warning signs of financial distress? *Journal of Risk and Financial Management*, 12(2), 55. <https://doi.org/10.3390/jrfm12020055>
6. Bae, J., & Joo, J. H. (2021). CEO turnover, leadership vacuum, and stock market reactions. *Applied Economics*, 53(58), 6752–6768. <https://doi.org/10.1080/00036846.2021.1927969>
7. Balioukas, P., Llopis, J., Gascó, J., & Gonzalez, M. (2022). Implementing turnaround strategies as an entrepreneurial process. *International Entrepreneurship and Management Journal*, 19(4), 2037–2065. <https://doi.org/10.1007/s11365-022-00810-9>
8. Browder, R. E., Dwyer, S. M., & Koch, H. (2023). Upgrading adaptation: How digital transformation promotes organizational resilience. *Strategic Entrepreneurship Journal*, 18(1), 128–150. <https://doi.org/10.1002/sej.1483>
9. Kscope. Companies on the road to bankruptcy in 2020? (2020). [Blog post].

- <https://kscope.io/companies-on-the-road-to-bankruptcy-in-2020/>
10. Corporate Finance Institute. (2025). Corporate finance explained: Why companies go bankrupt [Blog post]. <https://corporatefinanceinstitute.com/resources/finpod/corporate-finance-explained-why-companies-go-bankrupt/>
  11. Elhoseny, M., Metawa, N., Sztanó, G., & El-Hasnony, I. M. (2022). Deep learning-based model for financial distress prediction. *Annals of Operations Research*. <https://doi.org/10.1007/s10479-022-04766-5>
  12. García-Nieto, M., Bueno-Rodríguez, V., Ramón-Jerónimo, J. M., & Flórez-López, R. (2024). Trends and risks in mergers and acquisitions: A review. *Risks*, 12(9), 143. <https://doi.org/10.3390/risks12090143>
  13. Hamzah, H. H., & Marimuthu, M. (2020). An overview: Oil and gas capital structure. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 9(4), 10–20. <https://doi.org/10.6007/ijarafms/v9-i4/6985>
  14. Harrigan, K. R., & Wing, B. M. (2021). Corporate renewal and turnaround of troubled businesses: The private-equity advantage. *Strategic Management Review*, 2(2), 363–390. <https://doi.org/10.1561/111.00000032>
  15. Heredia, J., Rubiños, C., Salas, W. G. V., Heredia, W., & Flores, A. (2022). New strategies to explain organizational resilience in firms: A cross-country configurations approach. *Sustainability*, 14(3), 1612. <https://doi.org/10.3390/su14031612>
  16. Hokmabadi, H., Rezvani, S. M. H. S., & Matos, C. A. de. (2024). Business resilience for small and medium enterprises and startups by digital transformation and the role of marketing capabilities—A systematic review. *Systems*, 12(6), 220. <https://doi.org/10.3390/systems12060220>
  17. Jacobson, S. (2024). Early identification of operational distress is key [Blog post]. Plante Moran. <https://www.plantemoran.com/get-to-know/news/2024/03/early-identification-of-operational-distress-is-key>
  18. John, K., & Liu, M. (2025). Auditor expertise and bank failure: Do going concern opinions predict bank closure? *Journal of Risk and Financial Management*, 18(5), 262. <https://doi.org/10.3390/jrfm18050262>
  19. Kang, T. H., James, S. D., & Fabian, F. (2020). Real options and strategic bankruptcy. *Journal of Business Research*, 117, 152–162. <https://doi.org/10.1016/j.jbusres.2020.05.057>
  20. Karas, M., & Režňáková, M. (2020). Cash flows indicators in the prediction of financial distress. *Engineering Economics*, 31(5), 525–534. <https://doi.org/10.5755/j01.ee.31.5.25202>
  21. Klöckner, M., Schmidt, C. G., Wagner, S. M., & Swink, M. (2023). Firms' responses to the COVID-19 pandemic. *Journal of Business Research*, 158, 113664. <https://doi.org/10.1016/j.jbusres.2023.113664>
  22. Kovach, J. J., Swink, M., & Rodríguez, M. (2022). Delaying supplier payments to increase buyer profits. *Journal of Supply Chain Management*, 59(1), 26–39. <https://doi.org/10.1111/jscm.12293>
  23. Liu, Z. (2024). On supply chain risk in retail industry: Taking Costco as an example. *Advances in Economics, Management and Political Sciences*, 92(1), 209–215. <https://doi.org/10.54254/2754-1169/92/20231300>
  24. Lorange, P. (2021). How innovations in strategy have picked up with COVID-19. *Journal of Strategy and Management*, 14(3), 352–365. <https://doi.org/10.1108/jsma-04-2021-0086>
  25. Mallinguh, E., & Zéman, Z. (2020). Financial distress, prediction, and strategies by firms: A systematic review of literature. *Periodica Polytechnica Social and Management Sciences*, 28(2), 162–172. <https://doi.org/10.3311/ppso.13204>
  26. Marjerison, R. K., Jun, J. Y., & Kim, J. M. (2025). The moderating effects of operations and supply chain issues on digital readiness, value creation, and firm satisfaction. *Systems*, 13(5), 369. <https://doi.org/10.3390/systems13050369>
  27. McClure, B., & James, M. (2024). Financial ratios to spot companies in financial distress. Investopedia. <https://www.investopedia.com/articles/financial-theory/10/spotting-companies-in-financial-distress.asp>
  28. Menezes, A., & Lawless, H. T. (2023). A cross-country policy-maker perspective on corporate restructuring laws under stress. *European Business*

- Organization Law Review, 24(2), 373–390. <https://doi.org/10.1007/s40804-023-00277-3>
29. Owusu, P. K., & Goh, M. A. (2020). Assessment of cost of quality and its effects on manufacturing performance: A case study of Special Ice Company Limited, Ghana. *Asian Journal of Basic Science & Research*, 2(3), 1–10. <https://doi.org/10.38177/ajbsr.2020.2301>
30. Rupeika-Apoga, R., Petrovska, K., & Bule, L. (2022). The effect of digital orientation and digital capability on digital transformation of SMEs during the COVID-19 pandemic. *Journal of Theoretical and Applied Electronic Commerce Research*, 17(2), 669–684. <https://doi.org/10.3390/jtaer17020035>
31. Sagita, B. H., & Nugraha, N. (2022). Does liquidity or profitability influence firm financial distress most? Empirical study on manufacturing companies listed in Indonesia Stock Exchange (2015–2019). *Advances in Economics, Business and Management Research*, 204, 67–72. <https://doi.org/10.2991/aebmr.k.220701.013>
32. Saleheen, F., & Habib, M. M. (2022). Global supply chain disruption management post COVID-19. *American Journal of Industrial and Business Management*, 12(3), 376–389. <https://doi.org/10.4236/ajibm.2022.123021>
33. Shetty, S. H., & Vincent, T. N. (2021). The role of board independence and ownership structure in improving the efficacy of corporate financial distress prediction model: Evidence from India. *Journal of Risk and Financial Management*, 14(7), 333. <https://doi.org/10.3390/jrfm14070333>
34. Supangkat, H. K., & Widiana, R. (2022). Strategic management and firm survival. *Journal of Emerging Business Management and Entrepreneurship Studies*, 2(1), 33–40. <https://doi.org/10.34149/jebmes.v2i1.75>
35. Tanaka, K., Higashide, T., Kinkyō, T., & Hamori, S. (2025). A multi-stage financial distress early warning system: Analyzing corporate insolvency with random forest. *Journal of Risk and Financial Management*, 18(4), 195. <https://doi.org/10.3390/jrfm18040195>
36. CSC Global. The surge in large corporate bankruptcy filings: What's driving the 2024–2025 wave? (2025). [Blog post]. [https://blog.cscglobal.com/the-surge-](https://blog.cscglobal.com/the-surge-in-large-corporate-bankruptcy-filings-whats-driving-the-2024-2025-wave/)
37. Thorgren, S., & Williams, T. A. (2020). Staying alive during an unfolding crisis: How SMEs ward off impending disaster. *Journal of Business Venturing Insights*, 14, e00187. <https://doi.org/10.1016/j.jbv.2020.e00187>
38. Cornerstone Research. Trends in large corporate bankruptcy and financial distress. (2024). <https://www.cornerstone.com/insights/reports/trends-in-large-corporate-bankruptcy-and-financial-distress/>
39. Tron, A., Dallochio, M., Ferri, S., & Colantoni, F. (2022). Corporate governance and financial distress: Lessons learned from an unconventional approach. *Journal of Management & Governance*, 27(2), 425–450. <https://doi.org/10.1007/s10997-022-09643-8>
40. Walsh, M., & Sekely, C. (2019). How to deal with the 5 stages of business distress. CFO.com. <https://www.cfo.com/news/how-to-deal-with-the-5-stages-of-business-distress/658230/>
41. Younas, A., & Durante, Á. (2023). The logics of and strategies to enhance generalization of mixed methods research findings. *Methodology*, 19(2), 170–185. <https://doi.org/10.5964/meth.10863>