INSOLVENCY RISK AND FINANCIAL RATIOS ANALYSIS IN PRIVATE EQUITY-OWNED COMPANIES: EVIDENCE FROM JOANN COMPANY.

Olimjonova Munisa Nuriddin qizi
Tashkent State University of Economics
Accounting faculty student

Abstract: This research paper examines the complex relationship between private equity (PE) investments and insolvency risk, particularly in the context of highly leveraged firms. With PE deal-making reaching approximately $2 trillion globally in 2024, an increase of 14% from the previous year, the economic impact of PE-backed firms is undeniable. However, these firms are also prone to insolvency risks due to their leveraged capital structures and rising bankruptcy filings, especially following the COVID-19 pandemic, highlight the insolvency risks associated with high debt levels inherent in PE acquisitions. The financial structure and metrics of PE-backed firms are investigated, focusing on the case of JOANN Company. While PE can offer substantial returns, it does have a need for monitoring of operations.

Key words: Private equity, insolvency, bankruptcy, leverage ratios, LBO, JOANN Inc., investment returns, margins, Altman Z-score, Piotroski F-score, financial metrics, cash flow.

Introduction

Previously being named as leveraged buyouts (LBOs), private equity investments have become a significant force in corporate finance, that often result in highly leveraged firms. While PE ownership can provide managerial expertise and operational improvements, it also increases insolvency risks due to high debt levels. Nowadays, the contribution of private equity and PE funded firms is significant for the economy, they can be faced in almost every corner of society and the economy. As statistics suggest, PE deal making, globally, accounted for around $2 trillion in 2024, which is 14% higher compared to the value and size for 2023. However, the number of bankruptcy filings, also, has been increasing, particularly during the period of COVID-19 and afterwards. Despite the risks faced by these firms, there are huge number of investors who decide to fund their operation. Thus, it is crucial to explore the market of PE, evaluating the risks and giving financial suggestions with regard to insolvent firms.

The paper investigates the financial structure of PE-backed firms and its relation to insolvency risk, as well as the main causes leading to insolvency, studying the case study of JOANN Company, which was acquired by private equity and how this taken debt influenced the financial operations of the company. Additionally, it is also important to consider the strategies employed by PE firms to mitigate insolvency risk with the empirical evidence from high-profile insolvency cases.

Literature review

ISSN 2277-3630 (online), Published by International journal of Social Sciences & Interdisciplinary Research., under Volume: 14 Issue: 04 in April-2025
https://www.gejournal.net/index.php/IJSSIR

The unique financial structure of private equity (PE) and its ability to strategically reshape portfolio companies have long drawn attention. Whether PE ownership actually generates long-term value or redistributes income among stakeholders through different mechanisms has been discussed by academics, as well as its capacity to improve performance and the increased bankruptcy risks it may cause.

Scholars argue that debt levels in buyout companies can have negative effects, as PE investors may transfer value from stakeholders rather than create it. Tykvová, T., and Borell, M. (2012) suggested that higher debt levels boost tax shields, increasing PE returns and reducing waste of free cash-flow. However, they may also increase the risk of financial distress and bankruptcy. These risks are especially evident when earnings decline or external conditions worsen, as seen in several historical buyout cases.

According to Cressy (2009), higher leverage in PEFs increases financial risk and ROE, leading to higher failure rates. Thus, private equity-backed firms (PEFs) are expected to show higher failure rates than public companies because their debt loads are heavier. However, at similar levels, PEFs may have lower failure rates due to better financial management. Failure rates tend to converge during economic recessions. This suggests that while PE structures introduce risk through leverage, their governance practices may offer a buffer during normal conditions.

According to a study by Harford and Kolasinski (2014) on wealth transfer and the short-termism of buyouts, public businesses gain from purchasing PE portfolio companies because of the positive anomalous returns that occur both during and after the transaction. Additionally, they discovered that cash and liquidity lower the likelihood of failure. While leverage generally raises insolvency risk, PE-backed firms show a weaker link between leverage and failure compared to other types of management buy-ins. This result indicates that private equity may manage leverage more effectively, reducing its negative impact on companies' activities.

The research of Wright, M., and Wilson, N. (2013) reveals liquidity and cash reduce failure probability, while leverage increases insolvency risk for all companies. However, PE insolvencies are not differentially associated with leverage, and the increase in insolvency risk for the PE sub-sample is relatively low compared to other MBIs. This highlights the relatively stronger financial structuring and oversight within PE-owned firms.

A. Ljungqvist and M. Richardson (2003) analyze the performance of private equity (PE) funds over two decades. They find that PE funds generate annual excess returns of approximately 5% to 8% relative to the public equity market . These findings are consistent across various risk measures and methodologies, suggesting that PE investments offer significant outperformance compared to public equities.

Methodology

This study is based on a case-based financial analysis to examine the link between private equity ownership, investment performance, and insolvency risk. As a recent real example, JOANN Inc., a PE-backed firm that recently filed for bankruptcy, serves as the core case. The paper applies methods such as:

ISSN 2277-3630 (online), Published by International journal of Social Sciences & Interdisciplinary Research., under Volume: 14 Issue: 04 in April-2025
https://www.gejournal.net/index.php/IJSSIR

- Horizontal and vertical analysis of JOANN's financial statements to identify structural shifts and proportional relationships in revenue, costs, and capital structure, and other financial elements over time.
- Ratio analysis, including profitability, efficiency, leverage, and solvency indicators (e.g., ROE, ROA, EBITDA margin, Altman Z-score, Piotroski F-score), to assess financial health and risk of insolvency.
- Comparative analysis across countries and industries (Russell 2500 and US PE medians) to evaluate relative performance and capital efficiency in PE firms.

Information was gathered from validated financial platforms and publicly available financial statements. This combined strategy promotes a systematic, transparent understanding of how private equity may affect returns and insolvency risk.

Results and discussion

Results from the research suggest that PE-funded companies are sensitive to even a small change in leverage, as they primarily rely on the funds raised by other investors. They often operate with high debt levels, making them vulnerable to economic downturns. This high leverage exacerbates insolvency risk when cash flows decline.

a) Leverage in PE-funded companies

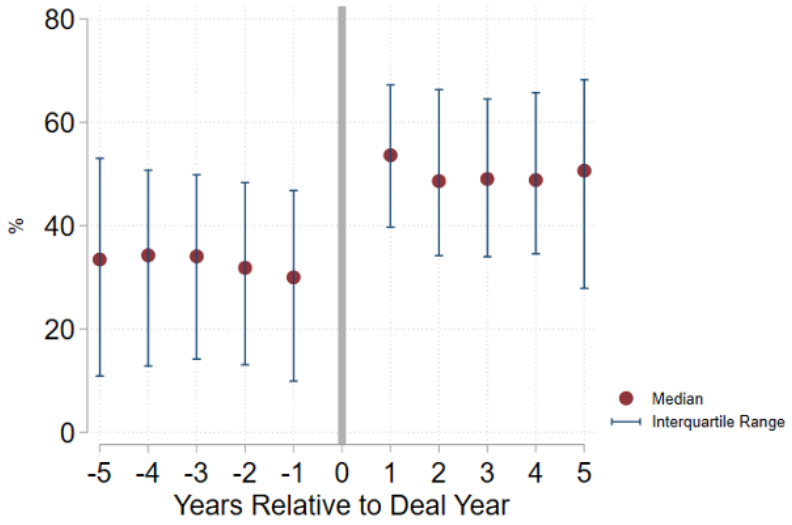

Figure 1. Leverage Ratio in PE-owned Companies

In *Figure 1*, the x-axis displays years in relation to the deal year, while the graph displays leverage (Net Debt/Assets) in PE-backed companies prior to and following the buyout.[1] The blue bands show the interquartile range (IQR), emphasizing the variance between firms, and the red dots show the median leverage ratio. According to the trend, PE sponsorship is linked to a significant increase in leverage, which is indicative of the use of debt financing in LBOs. As *Figure 1* shows, the leverage ratio in PE-owned companies rises significantly from around 30%

[1] Haque, S. (2023). Does private equity over-lever portfolio companies?.

ISSN 2277-3630 (online), Published by International journal of Social Sciences & Interdisciplinary Research., under Volume: 14 Issue: 04 in April-2025
https://www.gejournal.net/index.php/IJSSIR

before PE investment to over 50% following a PE-sponsored leveraged buyout (LBO). This suggests that PE-backed firms take on higher leverage post-buyout, which can lead to financial distress and increase systemic risk in the financial system if not maintained.

b) Financial metrics: Case study of JOANN Inc.

Through the use of important value drivers like lower entry multiples, better leverage, rapid revenue growth, and improved margins, private equity has beaten public markets by a large margin. Database taken from the Cambridge Associates provide that, an examination of over 1,700 completed U.S. buyout and growth equity transactions between 2000 and 2020 yields a gross internal rate of return (IRR) of 18.3% (18.6% overall) compared to 9.2% for the Russell 2500™ Index[2], as illustrated in *Figure 4*.

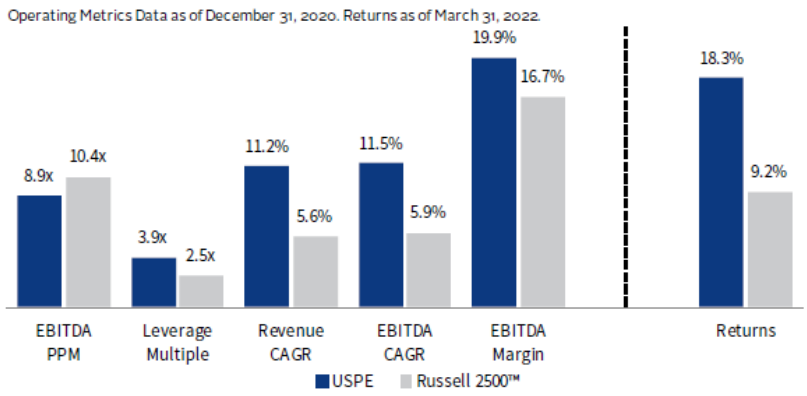

Figure 2. US Private Equity vs Russel 2500™: median operating metrics and returns

About JOANN Inc: JOANN (Jo-Ann) is a prominent fabric and crafts retailer and has been operating for around 80 years. However, the company filed for Chapter 11 bankruptcy protection twice within a year. In 2011, the private equity firm Leonard Green & Partners bought Jo-Ann Stores for $1.6 billion and in order to finance this purchase, they used a method leveraged buyout (LBO), which involved borrowing a significant amount of money[3]. Although the PE had kept the company for almost 10 years, this strategy placed a large debt burden on Jo-Ann Stores and led it into insolvency. Eventually in 2021, Leonard Green & Partners took Jo-Ann public through an Initial Public Offering (IPO). However, it still carried $800 million in debt from the earlier buyout.

Joann entered bankruptcy with $615.7 million in debt, represented in initial bankruptcy filings, which had the reason of just eliminating previous $505 million in debt. Now, it is closing all of its 800 stores in 49 states and laying off 19,000 employees.

The primary reasons for not being able to cover its debts or mitigate potential failure were:

[2] https://www.cambridgeassociates.com/insight/us-private-equity-looking-back-looking-forward-ten-years-of-ca-operating-metrics/
[3] https://www.fastcompany.com/91287686/joann-fabrics-closing-private-equity-kill-reason-market-forces

ISSN 2277-3630 (online), Published by International journal of Social Sciences & Interdisciplinary Research., under Volume: 14 Issue: 04 in April-2025
https://www.gejournal.net/index.php/IJSSIR

- *High inflation* – increased competition;
- *Declining Consumer Demand:* Post-pandemic, there was a significant reduction in consumer spending;
- *Inventory Challenges:* The company faced inventory shortages, with disruptions in production and delivery of essential products, which had an impact on its ability to meet customer demand;
- *Financial Strain:* Joann's reports showed substantial debt, reporting $615 million in liabilities, which became unsustainable amid declining revenues;
- *Supply chain disruptions:* this further strained the company's financial health.

Why Joann is insolvent?

The bankruptcy of a company can be seen and measured through financial reports. Financial statements issued by the company are one source of information about the company's financial position, performance and changes in financial position of the company, which is very useful to support proper decision-making, data finance should be converted into information that is useful in economic decision-making.[4] *Table 2* and *Table 3* show the balance sheet and income statement of Joann respectively, for the middle of 2024. According to the figures, the **Balance Sheet *(Table 2)*** reveals several *critical financial red flags* that strongly explain its insolvency and recent bankruptcy, with **$2.02 billion in total debt** and only **$28.30 million in cash**, JOANN is significantly overleveraged. Additionally, Net cash of **–$1.99 billion** is a major warning sign, suggesting the company has no buffer to meet debt obligations, raising default risk. Shareholders received nothing in liquidation. In simple terms, **the company owes more than it owns.**

- *Negative equity* and *unsustainable debt* levels are the main drivers of bankruptcy.
- *Cash flow cannot support* interest expenses or long-term liabilities.
- Despite decent short-term liquidity (working capital), the company is *financially underwater*.

- ***Table 1. Balance Sheet***

Cash & Cash Equivalents	28.30M	Very low liquidity—minimal cash buffer
Total debt	2.02B	Excessive leverage. Debt vastly outweighs cash
Net cash	-1.99B	Negative net cash shows heavy reliance on debt.
Net cash per share	-$47.24	Each share carries a massive debt burden
Equity (book value)	-183.00M	Negative equity = liabilities exceed assets
Book Value per share	-4.34	Shareholders' equity is completely wiped out

[4] Purnomo, A. (2018). Influence of the ratio of profit margin, financial leverage ratio, current ratio, quick ratio against the conditions and financial distress. *Indonesian Journal of Business, Accounting and Management*, *1*(1), 9-17.

ISSN 2277-3630 (online), Published by International journal of Social Sciences & Interdisciplinary Research., under Volume: 14 Issue: 04 in April-2025
https://www.gejournal.net/index.php/IJSSIR

Working capital	236.60M	Positive short-term solvency, but long-term insolvency dominates.

- *Table 2. Income Statement*[5]

Revenue	2.16B	Total sales volume
Gross Profit	1.07B	Decent markup
Operating Income	-205.10M	Core operations are unprofitable, costs outweigh revenue
Pretax Income	-301.70M	Losses worsened by interest and charges
Net income	-240.20M	Deeply in the red, showing structural unprofitability
EBITDA	56.80M	Limited earnings before major costs
EBIT	-199.70M	Operations not generating profit
Loss per share	-$5.82	Per-share impact of net losses

-
- Looking at *Table 3*, despite generating over $2B in revenue, **net income** is deeply **negative** (-$240.2M). The company was at a loss across all earnings layers (EBITDA, EBIT, and net), which indicates significant operating inefficiencies and cost overruns. The difference of approximately **$256M** between EBITDA and EBIT means large amounts of **depreciation** and **amortization expenses**, likely from store assets and prior capital investments. Since JOANN was highly leveraged due to the private equity LBO. A negative **pretax income of –$301.70M** suggests **high interest expenses**, typical of PE-backed companies loaded with debt.

- *Table 3. Margins*

Gross Margin	49.29%	Strong — healthy markup
Operating Margin	-9.48%	Negative — operations unprofitable
Pretax Margin	-13.94%	Worsens with interest burden
Profit Margin	-11.10%	Overall loss on every dollar earned
EBITDA Margin	2.62%	Weak — very slim pre-debt profit
EBIT Margin	-9.23%	Negative — poor operating health
Free Cash Flow (FCF) Margin	-4.86%	Bleeding cash — no reinvestment funds

- Moving on to the calculated margins *(Table 4)*, gross margin itself was strong, indicating healthy markup on products sold, whereas negative operative margin reveals that core operations were unprofitable and operating/financial expenses were high. It can be

[5] Data obtained from https://stockanalysis.com/stocks/joanq/

ISSN 2277-3630 (online), Published by International journal of Social Sciences & Interdisciplinary Research., under Volume: 14 Issue: 04 in April-2025
https://www.gejournal.net/index.php/IJSSIR

concluded looking at all **negative margins** that core operations burn cash instead of generating it, moreover, even before taxes, the company was in deep loss territory. EBITDA is typically used in Private Equity to assess operational efficiency before financial structuring, in this case, a **2.62%** margin is **far below typical PE targets (20%+),** making the business unattractive.

- Despite showing positive amount for EBITDA (for 2024), the burden of debt and expenses outweighs the operating gains. With no clear path to profitability and shrinking margins, this financial state of JOANN strongly supported its insolvency and bankruptcy.

- *Table 4. Financial Efficiency*

Return on Equity (ROE)	n/a	Company is insolvent; no base for return
Return on Assets (ROA)	-10.80%	Assets are used inefficiently, yielding losses
Return on Invested Capital (ROIC)	-11.15%	Capital investments are not creating value
Return on Capital Employed (ROCE)	n/a	Equity is negative, employed capital not yielding any return
Revenue per Employee	$432,900	Sales per employee is average
Profits per Employee	-$48,040	Each employee represents a net loss
Asset Turnover	0.98	Moderate efficiency generating revenue from assets
Inventory Turnover	1.54	Inventory turnover is weak

- Having analyzed the financial efficiency metrics in *Table 5* using financial reports, it is seen from **ROA (–10.8%)** and **ROIC (–11.15%)** that the company is not generating profit from its assets or capital. **Negative equity** leads to n/a ROE and ROCE, which further confirms insolvency. Furthermore, **Asset Turnover < 1** shows that each dollar of assets isn't even generating a dollar of sales. So, in general, JOANN Inc. is **not generating adequate returns on assets or capital** and is especially damaging under a **private equity model** that emphasizes capital efficiency. This current position of the company gives descriptions like financially **inefficient, insolvent, and unviable.**

Leverage ratios:

As private equity backed companies are highly leveraged, evaluating leverage ratios is, also, necessary. To find JOANN Inc.'s financial leverage, we can calculate key leverage ratios using available financial data. The data is available until 2023, the following 2 years are the period of insolvency and bankruptcy. The ratios for calculation include:

ISSN 2277-3630 (online), Published by International journal of Social Sciences & Interdisciplinary Research., under Volume: 14 Issue: 04 in April-2025
https://www.gejournal.net/index.php/IJSSIR

1. Debt-to-Equity Ratio
2. Debt-to-Asset Ratio
3. Debt-to-Capital Ratio
4. Debt-to-EBITDA Ratio

1. Debt-to-Equity Ratio: This ratio measures the proportion of debt and equity used to finance the company's assets.

$$Debt - to - Equity\ ratio = \frac{Total\ debt}{Total\ equity}$$

- **2021**:
  - Total Debt: $1,691.5 million
  - Total Equity: $149.8 million
  - Debt-to-Equity Ratio: 1,691.5 / 149.8≈11.29
- **2022**
  - Total Debt: $1,868 million
  - Total Equity: $-49.1 million
  - Debt-to-Equity Ratio: 1,868 / −49.1≈−38.04
- **2023**:
  - Total Debt: $2,022.0 million
  - Total Equity: $-183.0 million
  - Debt-to-Equity Ratio: 2,022.0 / −183.0≈−11.05

The negative results, particularly the negative equity values indicate that the company's liabilities exceed its assets, and this is a significant indicator of financial distress.

2. Debt-to-Assets Ratio: This ratio indicates the percentage of total assets financed by debt.

$$Debt - to - Asset\ ratio = \frac{Total\ debt}{Total\ asset}$$

- **2021**:
  - Total Assets: $2,362.2 million
  - Debt-to-Assets Ratio: 1,691.5 / 2,362.2≈0.716 or 71.6%
- **2022**:
  - Total Assets: $2,180.8 million
  - Debt-to-Assets Ratio: 1,868 / 2,180.8≈0.856 or 85.6%
- **2023**:
  - Total Assets: $2,258 million
  - Debt-to-Assets Ratio: 2,022.0 / 2,180.8≈0.927 or 92.7%

An increasing Debt-to-Assets Ratio suggests that a higher proportion of the company's assets are financed through debt, which may indicate rising financial risk.

3. Debt-to-Capital Ratio: This ratio assesses the proportion of debt in the company's total capital structure.

ISSN 2277-3630 (online), Published by International journal of Social Sciences & Interdisciplinary Research., under Volume: 14 Issue: 04 in April-2025
https://www.gejournal.net/index.php/IJSSIR

$$Debt - to - Capital\ ratio = \frac{Total\ debt}{Total\ debt + Total\ equity}$$

- **2021**:
  - Debt-to-Capital Ratio: 1,691.5 / (1,691.5+149.8)≈0.918 or 91.8%
- **2022**:
  - Debt-to-Capital Ratio: 1,868 / (1,868 + (−49.1))≈1.026 or 102.6%
- **2023**:
  - Debt-to-Capital Ratio: 2,022.0 / (2,022.0 + (−183.0))≈1.101 or 110.1%

If the Debt-to-Capital Ratio is over 100%, this means that the company has negative equity, and its debts surpass its equity, a critical sign of financial instability.

4. Debt-to-EBITDA Ratio: This ratio evaluates the company's ability to pay off its debt with its earnings before interest, taxes, depreciation, and amortization (EBITDA).

$$Debt - to - EBITDA\ ratio = \frac{Total\ debt}{EBITDA}$$

- **2021**:
  - EBITDA: $363.6 million
  - Debt-to-EBITDA Ratio: 1,691.5 / 363.6≈4.65
- **2022**:
  - EBITDA: $42.1 million
  - Debt-to-EBITDA Ratio: 1,868 / 42.1≈44.37
- **2023**:
  - EBITDA: $56.8 million
  - Debt-to-EBITDA Ratio: 2,022.0 / 56.8≈35.60

As debt increased and Joann Inc.'s EBITDA dropped between 2021 and 2023, the company's debt-to-EBITDA ratio surged from 4.65 to over 44, indicating severe financial difficulty. The business continued to be excessively leveraged in spite of a slight recovery, which ultimately resulted in its bankruptcy in 2024.

Insolvency Scores:

To evaluate the likelihood of a company failure, there is a commonly used financial model, the **Altman Z-Score**, which predicts the probability of a company facing bankruptcy within two years. For JOANN Inc., as of mid-2024, the Z-score was around 0.55, while the amount was not different for the date March 20, 2025, amounting to **0.56**[6], which means that the company is firmly in the "Distress Zone" (scores below 1.81 indicate high bankruptcy risk). Below are the calculations provided considering the amounts for 2025 (thus, may vary from the tables mentioned above, as they are the reports for 2024):

[6] Altman Z-Score, Joann (Joanq) Inc. https://www.gurufocus.com/term/zscore/JOANQ

ISSN 2277-3630 (online), Published by International journal of Social Sciences & Interdisciplinary Research., under Volume: 14 Issue: 04 in April-2025
https://www.gejournal.net/index.php/IJSSIR

$$\textbf{Altman } Z - \textbf{score} = 1.2 * \left(\frac{WC}{TA}\right) + 1.4 * \left(\frac{RE}{TA}\right) + 3.3 * \left(\frac{EBIT}{TA}\right) + 0.6 * \left(\frac{MVE}{TL}\right) + 1.0 * \left(\frac{S}{TA}\right)$$

- *Working Capital / Total Assets* = $236.6M / $2.26B = 0.1047
- *Retained Earnings / Total Assets* = -388.3M / 2.26B = -0.172
- *EBIT / Total Assets* = -$193M / $2.26B = -0.085
- *Market Value of Equity / Total Liabilities* = Market cap / TL = 3.18M / $2.44B = 0.0013

Sales / Total Assets = $2164.5M / $2257.7M = 0.9587 ~ 0.96

$$Z = 1.2 * (0.1047) + 1.4 * (-0.172) + 3.3 * (-0.085) + 0.6 * (0.0013) + 1.0 * (0.96) = \mathbf{0.56}$$

JOANN has a Altman Z-Score of 0.56, which confirms that it is in Distress Zones.

The alternative metric for evaluating companyperformance is Piotroski F-score, it is a score between 0 and 9 that determine the strength of a company's financial position. A higher number is preferable. While the inputs to Z-Score show a high overlap with F-Score, the latter does not anchor to specific values in the companies' fundamentals. Instead, F-Score considers a) in what directions the fundamentals of a company are trending and b) whether general financial health conditions are met (i.e. "positive RoA: yes/no"; "equity issuance: yes/no"; "positive accruals yes/no" etc.).[7] Nine binary factors make up the F-Score, which can be grouped into three aspects of a company's health: operating efficiency, balance sheet health, and profitability.

Table 5. Piotroski F-score for JOANN

Category	#	*Metric*	*Formula/Test*	*JOANN result*	*Score*
Profitability	1	Positive Net Income	Net Income > 0	No (–$240.2M)	0
	2	Positive ROA	ROA > 0	No (–10.8%)	0
	3	Positive CFO	Operating Cash Flow > 0	No (–$105.1M)	0
	4	CFO > Net Income	CFO > Net Income	Yes (–52.5M > –240.2M)	1
Leverage & Liquidity	5	Lower Long-Term Debt	Δ in LTD < 0	No (debt rose)	0

[7] Mohr, J. H. M. (2012). Utility of Piotroski F-Score for predicting growth-stock returns. *MFIE Capital, 30*.

ISSN 2277-3630 (online), Published by International journal of Social Sciences & Interdisciplinary Research., under Volume: 14 Issue: 04 in April-2025
https://www.gejournal.net/index.php/IJSSIR

	6	Higher Current Ratio	Δ in Current Ratio > 0	No (decreased)	0
	7	No Equity Dilution	No new shares issued	Yes	1
Operating Efficiency	8	Higher Gross Margin	Δ in GM	No (declined)	0
	9	Higher Asset Turnover	Δ in Asset Turnover	Yes (0.98 > 0.93 est.)	1
		Total Score	**Max 9**		**3/9**

JOANN scored **3 out of 9** ***(Table 6)***, meaning its financial fundamentals are **very weak,** and it indicates limited flexibility, heightened insolvency risk, which aligns with its bankruptcy risk. The company fails most of the profitability and leverage criteria, indicating ongoing losses and worsening balance sheet strength. While it meets a few operational measures, the overall score suggests that JOANN lacks the fundamentals needed for a financial recovery and faces serious distress.

Conclusion

Private equity-backed firms face insolvency risks mostly due to their capital structures, but it is possible to mitigate risks using strategic cash flow management and debt restructuring. Primarily, policymakers and financial institutions should closely monitor leverage levels in PE-backed acquisitions to prevent systemic risks. The analysis reveals that PE can deliver high returns through financial operational enhancements, taking into account that it often does so by significantly increasing financial leverage. However, it should be assessed in detail before investing, as the number of bankruptcy filings, also, have been increasing, as for 2024, S&P Global reported 110 bankruptcy filings by private-equity and VC-backed companies.

In the case of JOANN Inc., despite robust early revenue and gross profit margins, sustained debt obligations and deteriorating operating metrics led to insolvency, which also had the reason of being acquired by private equity and placed by large debt burden. Considering the leverage ratios and both key indicators such as a low Altman Z-score, negative equity, and weak Piotroski F-score collectively, this results signaled distress well before bankruptcy. This highlights a basic risk in the PE model: returns are front-loaded, and if earnings do not scale proportionately with indebtedness, long-term financial viability may be compromised. In conclusion, this study suggests that greater scrutiny of post-buyout capital structures and cash flow sustainability is necessary to ensure balanced investment outcomes in private equity-backed firms.

References:

1. Tykvová, T., & Borell, M. (2012). Do private equity owners increase risk of financial distress and bankruptcy?. *Journal of Corporate Finance*, *18*(1), 138-150.

ISSN 2277-3630 (online), Published by International journal of Social Sciences & Interdisciplinary Research., under Volume: 14 Issue: 04 in April-2025
https://www.gejournal.net/index.php/IJSSIR

2. Wright, M., Cressy, R., Wilson, N., & Farag, H. (2014). Financial restructuring and recovery in private equity buyouts: the UK evidence. *Venture Capital*, *16*(2), 109-129.

3. Harford, J., & Kolasinski, A. (2014). Do private equity returns result from wealth transfers and short-termism? Evidence from a comprehensive sample of large buyouts. *Management Science*, *60*(4), 888-902.

4. Ljungqvist, A., & Richardson, M. P. (2003). The cash flow, return and risk characteristics of private equity.

5. Haque, S. (2023). Does private equity over-lever portfolio companies?.

6. https://www.cambridgeassociates.com/insight/us-private-equity-looking-back-looking-forward-ten-years-of-ca-operating-metrics/

7. https://www.fastcompany.com/91287686/joann-fabrics-closing-private-equity-kill-reason-market-forces

8. Purnomo, A. (2018). Influence of the ratio of profit margin, financial leverage ratio, current ratio, quick ratio against the conditions and financial distress. *Indonesian Journal of Business, Accounting and Management*, *1*(1), 9-17.

9. Data obtained from https://stockanalysis.com/stocks/joanq/

10. Altman Z-Score, Joann (Joanq) Inc. https://www.gurufocus.com/term/zscore/JOANQ

Mohr, J. H. M. (2012). Utility of Piotroski F-Score for predicting growth-stock returns. *MFIE Capital*, *30*.

ISSN 2277-3630 (online), Published by International journal of Social Sciences & Interdisciplinary Research., under Volume: 14 Issue: 04 in April-2025
https://www.gejournal.net/index.php/IJSSIR