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Determinants of Capital Structure and Their Implications for Financial Risk Exposure

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Abstract

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This article examines how firm-level determinants of capital structure shape corporate financial risk exposure, focusing on distress, default and volatility outcomes. The study's role is to integrate two strands of research that are often treated separately, by systematically reviewing peer-reviewed empirical studies published between 2018 and 2022 that analyse both leverage determinants and explicit risk measures. The data synthesis shows that profitability, firm size, asset tangibility, growth opportunities and liquidity remain the dominant drivers of leverage, but their risk implications vary with sectoral and institutional contexts. The article discusses these patterns through a structured mapping of determinants, risk indicators, methods and country settings, highlighting convergences and divergences across firm types and regions. The main findings indicate that leverage generally increases financial risk in a non-linear way, with particularly steep risk gradients for small and medium enterprises, innovative firms and companies operating in weaker legal and regulatory environments.

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1. Introduction

Capital structure decisions are pivotal to corporate survival because they determine how firms balance debt and equity, shape the cost of capital, and condition their exposure to financial distress. In increasingly volatile macroeconomic and regulatory environments, particularly in emerging markets, leverage choices can amplify or mitigate shocks transmitted through interest rate movements, credit tightening, and demand fluctuations (Ramli et al., 2019; Bajaj et al., 2020). When debt levels and maturity structures are misaligned with cash flow capacity, even temporary disruptions can escalate into liquidity crises that threaten firm continuity and wider financial stability (Nguyen & Kien, 2022). Understanding what drives capital structure and how these drivers translate into financial risk exposure therefore becomes a crucial issue for managers, investors, and regulators.

A substantial empirical literature identifies a broad set of determinants of capital structure, including profitability, firm size, asset tangibility, growth opportunities, liquidity, and tax related considerations, along with institutional and country specific factors (Cevheroglu-Acar, 2018; Saif-Alyousfi et al., 2020). Evidence from both developed and emerging markets shows that larger firms with more tangible assets tend to employ higher leverage, whereas more profitable firms often rely more on internal funds, in line with pecking order arguments (Ramli et al., 2019; Yousef, 2019). Studies also reveal that market structure, sectoral characteristics, and the nature of financial systems introduce important heterogeneity in financing patterns and adjustment speeds (Nenu et al., 2018). Parallel research links leverage structures to financial risk outcomes, documenting that higher and shorter term debt

ratios increase the likelihood of distress and bankruptcy, especially where information asymmetries and governance weaknesses are pronounced (Lee & Manual, 2019; Utami et al., 2020; Nguyen & Kien, 2022).

However, existing contributions often examine capital structure determinants and financial risk exposure in separate strands, or they emphasize firm performance rather than explicit risk metrics. Prior reviews mainly focus on theoretical perspectives or general capital structure patterns without systematically integrating how specific determinants feed into concrete measures of distress probability, volatility, or default risk (Bajaj et al., 2020). This fragmentation leaves limited cumulative insight into the mechanisms through which financing choices shape risk profiles across sectors and institutional environments.

This article responds to that gap by conducting a systematic literature review of peer reviewed studies published between 2018 and 2022 that jointly address capital structure determinants and financial risk exposure. Using a transparent, protocol based review approach, the study maps key determinants, measurement strategies, and risk indicators across countries and industries. The article aims to clarify the problem of how financing decisions translate into distress and bankruptcy risk, to synthesize and comment on the main empirical findings, and to highlight their relevance for corporate risk management and regulatory oversight. The expected contribution is to offer an integrated framework that connects capital structure determinants with risk channels, provide evidence based implications for practitioners and policymakers, and outline priorities for future research on financial risk governance.

2. Literature Review

The empirical literature on capital structure is grounded in classic trade off, pecking order, and agency theories, but recent studies from 2018 onward refine how these frameworks apply across different institutional contexts. Research on non-financial firms in both emerging and developed markets consistently identifies profitability, firm size, asset tangibility, growth opportunities, liquidity, and tax related factors as core determinants of leverage (Cevheroglu-Acar, 2018; Ramli et al., 2019; Saif-Alyousfi et al., 2020). Larger firms with more tangible assets typically sustain higher debt ratios, while more profitable firms rely more on internal funding, supporting pecking order predictions (Nenu et al., 2018; Yousef, 2019). At the same time, sectoral and institutional features shape how these determinants operate, with evidence that regulatory regimes, financial development, and Sharia compliance alter financing preferences and adjustment speeds (Ramli et al., 2019; Saif-Alyousfi et al., 2020).

A parallel body of work explicitly links capital structure to financial risk and distress. Studies on listed firms and sector specific samples show that higher leverage, especially in short term or concentrated forms, increases the probability of financial distress and bankruptcy, even when controlling for profitability and macroeconomic conditions (Lee & Manual, 2019; Utami et al., 2020; Nguyen & Kien, 2022). Nenu et al. (2018) find that leverage raises risk while having a nonlinear relationship with performance, suggesting that firms face a narrow corridor in which additional debt is value enhancing but beyond which distress risk escalates. Evidence from banking and infrastructure related sectors reinforces this pattern, with da Rosa

München (2022) documenting that financial distress feedback effects can constrain capital structure choices in Brazilian banks, while sectoral studies in mining and infrastructure show heterogeneous sensitivities of distress risk to leverage structures (Utami et al., 2020). These findings highlight that the determinants of capital structure and the channels of risk transmission are strongly context dependent.

Several recent reviews attempt to synthesize this growing literature, but most emphasize capital structure theories, determinants, or performance outcomes rather than explicitly integrating financial risk exposure. Bajaj et al. (2020) provide a broad review of capital structure theories and applications, while Kumar et al. (2020) conduct a systematic literature review and bibliometric analysis focused on small and medium enterprises, identifying determinants, governance aspects, and bankruptcy as key research streams. However, these and other surveys rarely map how specific determinants connect to distress and default measures across sectors and institutional environments. This article builds on these foundations by systematically reviewing peer reviewed studies from 2018 to 2022 that jointly examine capital structure determinants and financial risk outcomes, using a structured search and screening protocol to synthesize evidence on mechanisms, measurement choices, and contextual moderators.

3. Methods

The study adopts a systematic literature review design to synthesize evidence on how determinants of capital structure relate to financial risk exposure. A structured search protocol was developed to ensure transparency and replicability,

focusing on peer-reviewed journal articles published between 2018 and 2022. Electronic searches were conducted in major academic databases such as Scopus, Web of Science, and Google Scholar using combinations of keywords related to capital structure, leverage, financial risk, financial distress, and bankruptcy risk. The search was limited to articles written in English and reporting firm-level analysis. Only studies that examined both determinants of capital structure and at least one explicit measure of financial risk exposure, such as distress probability, default risk, or volatility indicators, were retained for further screening.

Titles, abstracts, and full texts were screened to exclude conference proceedings, books, book chapters, theses, working papers, and purely theoretical contributions without empirical risk measures. For each included study, information was extracted on data sources, country and sector coverage, sample period, methodological approach, capital structure determinants, and financial risk indicators. The evidence was then synthesized through descriptive mapping and thematic analysis to identify patterns in determinants, measurement strategies, and risk outcomes across different institutional and sectoral contexts. This methodological approach allows the review to systematically compare findings, highlight convergences and divergences in the literature, and derive implications for corporate risk management and future research.

4. Results and Discussion

The review shows that recent empirical work still finds firm specific characteristics to be the dominant determinants of capital structure, but it

increasingly embeds these determinants within explicit risk considerations. Across different markets, profitability, firm size, asset tangibility, growth opportunities and liquidity remain the most consistent predictors of leverage, with tax related factors and business risk playing an additional role (Cevheroglu-Acar, 2018; Saif-Alyousfi et al., 2020). Studies on emerging and transition economies report that larger firms with more tangible assets tend to maintain higher debt ratios, reflecting trade off arguments, while more profitable firms rely more heavily on retained earnings, consistent with pecking order behaviour (Nenu et al., 2018; Ramli et al., 2019; Yousef, 2019). At the same time, sectoral structure, ownership patterns and institutional quality influence how strongly these determinants operate, so that similar firms may adopt different leverage policies depending on regulatory constraints, financial development and access to relationship-based finance (Bajaj et al., 2020; Kumar et al., 2020).

The synthesis also confirms that capital structure has measurable implications for financial risk exposure, particularly distress and default risk. Empirical evidence for listed firms in Central and Eastern Europe indicates that higher leverage is associated with greater stock return volatility and a deterioration in risk adjusted performance, suggesting that firms operate within a narrow corridor where additional debt initially enhances value but eventually raises risk disproportionately (Nenu et al., 2018). Sectoral evidence from Indonesian mining and infrastructure companies shows that higher leverage systematically increases the likelihood of financial distress, especially in cyclically sensitive industries where earnings are volatile and refinancing conditions are fragile (Utami et al., 2020). Similar findings

emerge in Southeast Asian markets, where leverage and the maturity structure of debt are linked to higher bankruptcy risk when firms rely heavily on short term financing (Lee & Manual, 2019; Nguyen & Kien, 2022). Evidence from banking and Latin American contexts reinforces this pattern, indicating that financial distress feeds back into capital structure decisions, constraining firms' ability to adjust leverage optimally when macroeconomic conditions deteriorate (da Rosa München, 2022).

More granular international evidence highlights that leverage intensifies credit and default risk in a non-linear and heterogeneous way across firm types. Using a large multi country European sample, Cathcart et al. (2020) show that leverage raises default probability for all firms, but the marginal effect is substantially stronger for small and medium enterprises than for large corporations, because SMEs rely more on shorter maturity and less diversified debt structures. For Italian innovative SMEs, Manelli et al. (2022) find that higher leverage combined with higher credit risk is associated with reduced investment in growth opportunities, implying that risk constrained balance sheets can force firms to forgo valuable projects and thereby propagate financial fragility into future cash flows. In an emerging market context, Fredrick (2018) report that higher leverage significantly increases the probability of corporate financial distress among Nigerian manufacturing firms, underscoring how aggressive capital structures interact with weaker institutional environments and information asymmetries to elevate distress risk. Together, these studies suggest that leverage does not simply shift risk proportionally, but can create steep risk gradients

for vulnerable firm segments such as SMEs, highly innovative firms and companies operating in weaker institutional settings.

Institutional and governance factors further condition both the determinants of capital structure and their risk implications. Work on Malaysian and Indonesian firms shows that Sharia screening, asset backing requirements and restrictions on speculative instruments alter the composition and maturity of debt, with potential trade-offs between limiting speculative risk and increasing rollover and liquidity risk under tightening financial conditions (Ramli et al., 2019; Saif-Alyousfi et al., 2020). Comparative research on banks and firms in financially integrated regions indicates that political risk, regulatory quality and banking sector structure shape the speed at which firms adjust toward target leverage and the extent to which leverage is transmitted into distress probabilities, particularly for multinational and export oriented firms that are exposed to exchange rate and sovereign risk channels (Bajaj et al., 2020; da Rosa München, 2022). Overall, the reviewed evidence supports an integrated view in which traditional determinants of capital structure remain robust, but their effects are mediated by risk metrics and institutional conditions, so that capital structure functions simultaneously as a determinant and a transmitter of financial risk exposure.

5. Conclusion

This review shows that capital structure choices are not merely technical financing decisions, but central mechanisms through which firms manage their exposure to financial risk. Traditional determinants such as profitability, firm size,

asset tangibility, growth opportunities and liquidity remain powerful explanations of leverage patterns across countries and sectors. However, our synthesis makes clear that these determinants operate within specific institutional and sectoral contexts, so that similar firms can face very different risk consequences from comparable leverage levels. The evidence also reinforces the view that debt composition and maturity structure matter as much as overall leverage, particularly where cash flows are volatile and refinancing conditions are fragile.

By systematically integrating studies that examine both capital structure determinants and explicit measures of financial risk, this article helps bridge two strands of research that are often treated separately. The findings suggest that leverage tends to raise the probability of distress, default and value volatility in a non-linear way, with steeper risk gradients for small and medium enterprises, highly innovative firms and companies in weaker legal and regulatory environments. This underscores that capital structure is both a determinant and a transmitter of risk, shaping how shocks are absorbed or amplified at the firm level. It also aligns with earlier theoretical work that treats capital structure as a trade-off between tax and agency benefits of debt on one side and distress costs on the other, but extends that perspective by documenting how these trade-offs manifest under contemporary market conditions.

At the same time, the review highlights important gaps and opportunities for future work. The diversity of risk measures, model specifications and institutional settings across studies makes it difficult to derive fully comparable effect sizes or to trace dynamic feedbacks between leverage and risk over time. Future research would

benefit from more consistent definitions of financial distress and default, greater use of longitudinal designs and attention to how regulatory changes, macroprudential policies, sustainability pressures and financial innovations reshape capital structure decisions and their risk implications. Overall, the evidence suggests that firms and regulators should treat capital structure policy as a core component of financial risk governance, and that more explicit integration of risk metrics into financing decisions is necessary to enhance corporate resilience and safeguard financial stability.

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