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Capital structure decision-making for business turnarounds based on distress severity and reasonable prospect confluence

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Background: The relationship between financial distress severity and the prospect for rescuing a distressed company significantly impacts capital structure decisions. When a company faces distress, its interactions with funders change, directly affecting rescue prospects.

Aim: This research proposes objective frameworks to assess distress severity and rescue prospects, aligning them with practical capital decisions.

Setting: This study, set in South Africa with its nascent financial distress legislation and industry, proposes new frameworks to assess distress severity and the likelihood of company rescue. These findings align with capital structure theory and have applications beyond South Africa.

Method: Using Q-methodology to understand how the confluence between distress severity and rescue potential is crucial for capital structure decisions in business turnarounds.

Results: The factor array and loadings point to a confluence of distress severity and the prospects to rescue a business and align with the three main capital structure theories of irrelevance, trade-off and pecking order theories.

Conclusion: The findings link theories of the severity of distress, reasonable prospect and capital structure in an alternative way and provide a framework for capital structure decision-making in financially distressed companies. This research aims to stimulate further academic research and to have practical applications.

Contribution: For the first time, this study by using Q-methodology explored different stakeholder perspectives and proposed expanded frameworks for determining the severity of distress and the prospects for rescue. It adapted existing frameworks to be less subjective and more aligned with practical capital structure decisions.

Keywords: severity of distress; reasonable prospect; financial distress; capital structure; going concern.

> But Goethe tells us in his greatest poem that Faust lost the liberty of his soul when he said to the passing moment: 'Stay, thou art so fair.' And our liberty, too, is endangered if we pause for the passing moment, if we rest on our achievements, if we resist the pace of progress. 'For time and the world do not stand still. Change is the law of life. And those who look only to the past or the present are certain to miss the future'. (John F. Kennedy Presidential Library and Museum 1963:1)

Introduction

The understanding of the root causes of financial distress is crucial for businesses. However, simply identifying these causes does not guarantee a successful future for the business. Active engagement within the business environment is necessary to determine the company's prospects. This research aims to propose an alternative framework that can assist stakeholders, such as funders, turnaround managers and business rescue practitioners, in assessing the severity of distress and the prospects for rescuing financially distressed businesses. This study aims to examine the antecedents of the severity of distress resulting from past events and the prospects for decision-making that affect the future. These constructs reflect the tensions between the business and its funders when the business is in distress. The ultimate goal is to convince funders of the prospects for rescuing the business.

The concept of financial distress is defined in the *2008 Companies Act of South Africa* (Republic of South Africa [RSA] 2008). Recent years have seen an increase in research on this concept in the South African context. However, there is limited research on the severity of financial distress. Similarly, while the *2008 Companies Act* refers to the 'reasonable prospect' of rescuing the company, this is not defined. It is essential for decision-makers in a turnaround or business rescue to have a clear understanding of the severity of distress and the prospects for rescuing the company. Despite capital structure being a well-established research area, there is still little exploration of the distress effects that may complicate decision-making. Without this understanding of the severity of distress and reasonable prospect, decisions regarding the company's capital structure and its chances of success will be futile. This article aims to address this gap in literature and to be useful for practitioners.

Research questions

The research questions guiding this study were: (1) *How does the severity of distress impact the capital structure decisions of financially distressed companies?* (2) *How does the reasonable prospect of rescuing a company affect capital structure decisions for financially distressed companies?*

The primary objectives of this research were to enhance existing frameworks for evaluating the severity of distress and to examine the impact of distress on prospects for rescuing a company. Additionally, this study aims to contribute to the limited academic literature on the concept of reasonable prospect and to develop methods for making such calculations more objective.

Contextual background

To provide context, the study first examines the significance of determining the severity of distress and a company's insolvency position in relation to rescuing the company. It then reviews existing frameworks for determining the severity of distress and prospects for rescue as a foundation for the research. Using Q-methodology, the study explores the impact of severity of distress and prospects for rescue on capital structure decision-making by stakeholders. It also adapts existing frameworks to make decisions regarding distress and rescue more objective. Finally, the study proposes a new capital structure decision-making framework which is hoped to be useful in practice and spark further academic discourse.

Severity of distress

The *2008 Companies Act of South Africa* differentiates between financial distress and insolvency for companies. Section 128(1)(f) of the Act defines 'financially distressed' as:

> (f) 'financially distressed', in reference to a particular company at any particular time, means that-
>
> (i) it appears to be reasonably unlikely that the company will be able to pay all of its debts as they become due and payable within the immediately ensuing six months; or
>
> (ii) it appears to be reasonably likely that the company will become insolvent within the immediately ensuing six months.

Whereas section 4(1) determines that:

> For any purpose of this Act, a company satisfies the solvency and liquidity test at a particular time if, considering all reasonably foreseeable financial circumstances of the company at that time-
>
> (a) the assets of the company, as fairly valued, equal or exceed the liabilities of the company, as fairly valued; and
>
> (b) it appears that the company will be able to pay its debts as they become due in the ordinary course of business for a period of-
>
> (i) 12 months after the date on which the test is considered; or
>
> (ii) in the case of a distribution contemplated in paragraph (a) of the definition of 'distribution' in section 1, 12 months following that distribution.

Lemmon, Ma and Tashjian (2009:9) make an important distinction between financial and economic distress. They define financial distress as a situation in which a company is a viable going concern but unable to meet its debt obligations. Economically distressed companies, however, have low or negative operating profitability, and their going-concern status is questionable even without debt. Turetsky and McEwen (2001:338) proposed that the process of distress starts with a decline in operating cash flows, followed by a reduction in dividends, technical loan default and ultimately the restructuring of the financially distressed company's debt.

Barondes et al. (2007:232) ask when a company enters the Zone of Insolvency (ZoI). They propose a guideline with three possibilities: when a company is aware of its insolvency and files for bankruptcy; when it does not file for bankruptcy despite being insolvent and when it is nearing insolvency.

The court case of Perreira v. Cogan is quoted as follows by Barondes et al. (2007:235) and succinctly defines a standard for a company's ZoI:

> … it cannot generate and/or obtain enough cash to pay for its projected obligations and fund its business requirements for working capital and capital expenditures with a reasonable cushion to cover the variability of its business needs over time. (p. 235)

Fairhurst and Pretorius (2019:9) introduce the concept of two boundaries. A company crosses into the ZoI when it defaults on obligations. The severity of distress continues to increase until the 'turnaround boundary' is reached. After stakeholders recognise that they are in the ZoI, corrective actions can be taken to move towards a more financially healthy zone.

Financial distress can be defined as when a company must adjust its capital structure as it is not suitable for its balance sheet. The indirect cost of financial distress increases as the level of solvency declines (Chen & Merville 1999:277; Paterson 2015:442; Pindado & Rodrigues 2005:1).

Reasonable prospect

The survival of a company is based on its reasonable prospect going forward. The *South African Companies Act* does not define reasonable prospect or how it is determined. Section 128(1)(f) and section 4(1) of the *2008 Companies Act* determine the hurdle for solvency and financial distress, respectively. It is argued that reasonable prospect is defined as when it can be shown that the company, after restructuring, is not financially distressed and solvent. To determine the reasonable prospect of a company, the practitioner should propose a plan during the turnaround or business rescue proceedings with sufficient information for stakeholders to assess the reasonable prospect using the aforementioned criterion.

Pretorius (2017:63) proposed a useful, reasonable prospect calculation and identified seven resource-affording actions as follows (see Equation 1):

$$RP = \int[aD + bAC + cPM + dLF] \times eFC \times fRC \times g(1\text{-}RE) \quad [Eqn\ 1]$$

where RP is the reasonable prospect to rescue the business, D is the demand for selling the concepts, AC is the appropriation capacity for the concept, PM the profit model, LF the liquidity and financial model, FC the fatal caveats, RC the rectifiable caveats influencing performance and RE the risk error. The respective constants a–g determine the level of judgement.

Pretorius (2017:67) concludes by proposing that this framework can be used by practitioners to convince creditors of the company of the reasonable prospect of rescuing the company.

Stinespring and Kench (2013:63) argue that the shutdown rule determines that when companies operate with a negative contribution margin, they should shut down. Therefore, from a microeconomic perspective, the use of the 'shutdown rule' is considered to determine at what point continued operations do not add further value to stakeholders, given the sunk cost and fixed cost structures of a company in financial distress (Baumol & Blinder 2015:494; Besanko & Braeutigam 2020:369).

Myers (1977:32) makes an essential distinction between assets that are already in place for which a historic return can be calculated and assessed against the required return and what he calls *'future discretionary spend,'* defined as additional investment and variable costs. The retrenchment of non-performing assets can make a substantial contribution to capital structure restructuring. Section 128(1)(b)(iii) of the *2008 Companies Act of South Africa* goes further to provide for the sale of all assets:

> … or, if it is not possible for the company to so continue in existence, results in a better return for the company's creditors or shareholders than would result from the immediate liquidation of the company (RSA 2008:n.p.).

Furthermore, if there is a reasonable prospect for the company to be rescued, it is argued that the 'future discretionary spend' is first the variable costs and then other investments with a fixed cost (FC) nature.

Research methodology and context

The research design, summarised in Table 1 below, outlines the methodological framework employed to investigate the relationship between distress severity and reasonable prospect in turnaround capital structure decisions.

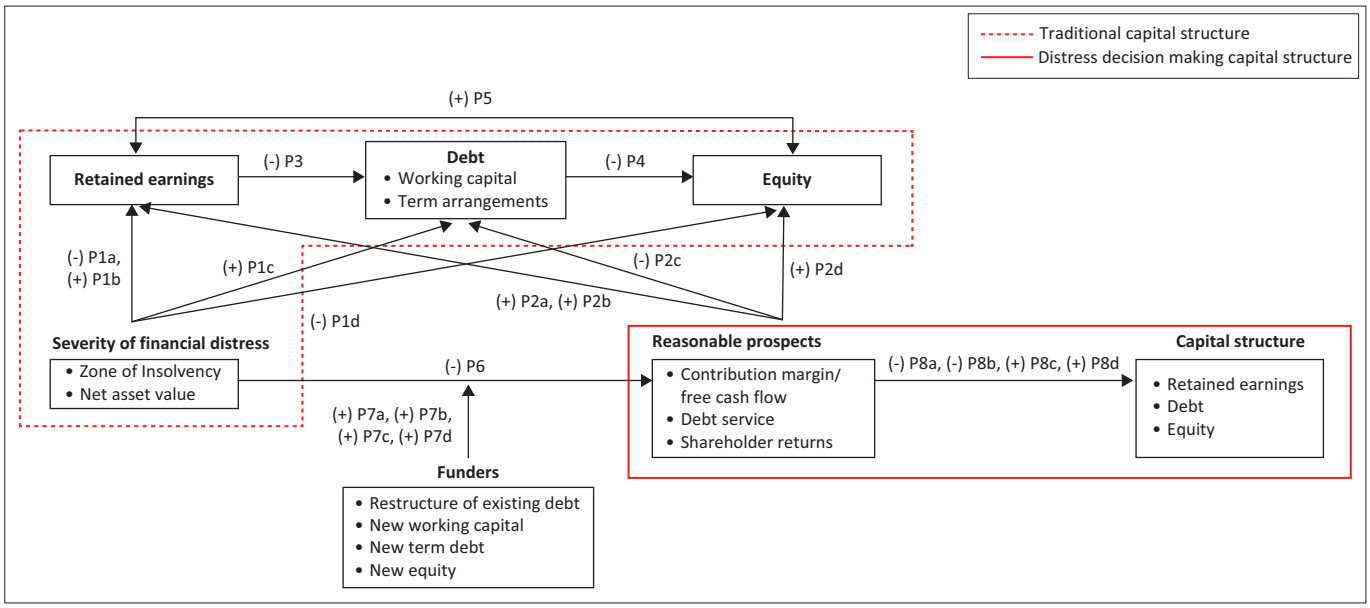
The conceptual framework depicted in Figure 1 guides the methodology used to explore the impact of severity of distress and reasonable prospects on the business capital structure.

TABLE 1: Research design of this study.

Component	Description
Research problem	Principles used to assess funding and investment for companies as a going concern are not appropriate for companies that are in financial distress. This limits the decision-making process in financially distressed companies for all stakeholders.
Research aim	This study aims to contribute further to the limited academic literature that is available on severity of distress and the judgement of reasonable prospect and explores how existing reasonable prospect calculations can be adapted to make them less subjective and align them to make sense of the capital structure that financially distressed companies require.
Research questions	1. How does severity of distress impact the capital structure decision of financially distressed companies? 2. How does the reasonable prospect of rescuing a company affect the capital structure decisions of financially distressed companies?
Context	Informal turnaround situations and formal business rescue proceedings for financially distressed businesses since the legislation became effective in May 2011.
Phenomena investigated	1. Severity of distress as reported by Turetsky and McEwen (2001) 2. Reasonable prospect by Pretorius (2017) 3. Capital structure decision-making by Modigliani and Miller (1958), Robichek and Myers (1965) and Myers (1984)
Unit of observation	Expert decision-makers during financial distress, that is, turnaround managers, business rescue practitioners and funders (both equity and debt).
Method	Q-methodology is ideal for exploring the viewpoints of industry experts for this purpose. Firstly, development of concourse from literature review, pilot expert interviews and personal experience was carried out. Secondly, an abductive approach to select preliminary Q-set statements was used. Thirdly, expert evaluation of Q-set using Qualtrics survey and expert interviews was carried out. Fourthly, pilot Q-set doing Q-sorts exercise with post-sorting exploratory interviews was conducted. Lastly, final Q-set exercises with participants and post-sorting exploratory interviews were performed.
Logic linking the data to the propositions	Q-methodology statistical analysis using PQMethod (Schmolck 2014) for correlations and extraction of factor arrays (viewpoints). A holistic analysis of the 27 participants Q-set of 66 statements covering the propositions.
Criteria for interpreting the findings	Brown (2006:370) expresses the view that the aim of the Q-methodology interpretation phase is to extract differences and similarities that underly the patterns of the Q-sorts. These were merged into a factor array (viewpoint) that represents the ideal-typical Q-sort for the group. Unconventionally, it is the factor score rather than factor loadings of Q-set items that are compared (Brown 2006:370; Stenner and Capdevila 2020:222; Stenner, Cooper and Skevington 2003:2164; Stenner, Dancey and Watts 2000:444; Zabala, Sandbrook and Mukherjee 2018:1189).

Source: Based on Yin, R.K., 2003, *Case study research: design and methods*, 3rd edn., Sage

Note: Please see the full reference list of the article, Van Beek, C.J.S. & Pretorius, M., 2025, 'Capital structure decision-making for business turnarounds based on distress severity and reasonable prospect confluence', *South African Journal of Economic and Management Sciences* 28(1), a5936. https://doi.org/10.4102/sajems.v28i1.5936, for more information.



Source: Adapted from Van Beek, C.J.S., 2022, 'Exploring a capital structure decision-making framework for financially distressed companies', PhD dissertation, University of Pretoria, p. 70, viewed n.d., from http://hdl.handle.net/2263/102556

FIGURE 1: Conceptual framework exploring severity of distress (zone of insolvency), reasonable prospect and capital structure decision-making.

Context of the research

This study adopted an abductive perspective to gain a more holistic understanding of the subject matter (Van Beek 2022). Abductive reasoning, as proposed by Charles S. Peirce, is seen as the only means of extending knowledge and generating explanatory hypotheses, which can then be evaluated (Haig 2018:376). Reichertz (2019:262) concurs, highlighting that abduction is a method of inferring deep insights and knowledge. Reichertz (2019:261) also notes that constructivist grounded theory, one of five observed varieties of grounded theory, utilises abduction to identify patterns and explanations. According to Ponterotto (2005:129–131), constructivist-interpretivists believe in multiple constructed realities and the interaction between the investigator and the object as a key feature that differentiates constructivism from other research paradigms. As such, constructivist-interpretivists explore the socially constructed reality of lived experiences and deeper meaning is discovered through the interaction between the researcher and the participants, as well as the interpretation of findings.

Given the exploratory nature of this study, where consensus was lacking, Q-method was deemed the ideal methodology. This is because, as highlighted by McGuire (1997), Stephenson (1953), and Watts and Stenner (2012:176), when there is no sound test or measure to produce holistic data, research must be exploratory to make sense of its subject matter. The Q-method was well suited for such studies, as it allowed for the exploration of whole themes and relationships between themes (Watts & Stenner 2005:88, 100; 2012:176). Additionally, the participant group in this study was composed of experts in their field, making their viewpoints valuable and objective when exploring the subject matter (Liu & Chen 2013:3; Shinebourne & Adams 2007:211; Watts & Stenner 2012:176).

The research questions were used to guide the Q-methodology process, with the aim of producing first-person holistic viewpoints on key themes, issues or concepts in the literature, based on the factual statements in the Q-set. This approach was in contrast to the majority of academic literature (Watts & Stenner 2012:183).

The Q-methodology was employed as a robust framework to systematically explore and quantify subjective viewpoints. The research design commenced with the development of a comprehensive Q-set, comprising 66 statements derived from both secondary sources mainly academic literature and primary data collected through empirical investigation. The 27 participants, purposefully selected to reflect a diverse demographic profile, were guided through the Q-sort procedure, wherein they ranked statements according to their personal perspectives. Brown and Stephenson (1980:192) opine that when one has enough participants to establish the existence of a factor (viewpoint), one has enough participants for a Q study. However, as a constructivist-interpretivist, a broader perspective was required for this study. Stenner, Watts and Worrell (2017:7) express the view that there is a limited number of independent viewpoints on any theme. The Q-set of 66 statements (sample) and 27 participants (variables) were therefore sufficient to obtain viewpoints that were representative of the phenomenon that was explored as the required number of factors were extracted.

Ethical considerations were rigorously upheld throughout, ensuring informed consent, confidentiality and the psychological safety of all participants. The collected Q-sorts were subjected to statistical analysis beginning with normal centroid factor analysis and principal component analysis to extract eigenvalues, followed by Varimax rotation to enhance factor interpretability. The resulting three-factor solution was examined through a series of

matrices, including the correlation matrix, unrotated and rotated factor matrices and cumulative commonalities. Normalised factor scores and comparative rankings of individual items were calculated, enabling the identification of distinguishing and consensus statements across factors. These analytical steps culminated in the construction of factor arrays that encapsulate the shared and divergent viewpoints within the participant group. The methodological rigour and ethical integrity of the study underscore the validity of its findings, offering nuanced insights into the subjective dimensions of the research topic.

The participant composition in this Q-methodology study reflects a deliberate and contextually grounded selection process, aimed at capturing the nuanced perspectives of experts engaged in the domain of financially distressed companies. The initial phase, conducted via a Qualtrics questionnaire, attracted 114 respondents, including industry professionals and anonymous postgraduate finance students; however, only 43 completed the survey, falling slightly short of the 50–60 response target. The core Q-sort phase, however, focused on a purposefully selected P-set of 27 expert participants, drawn from a broader pool of over 60 identified professionals. These individuals were engaged in the field either as practitioners actively taking appointments, those involved but not taking appointments, or as funders. They each represent a critical stakeholder group in the restructuring and recovery of distressed firms. The COVID-19 pandemic and associated lockdowns in South Africa posed logistical challenges, delaying some engagements. Yet, the final participant count was sufficient to achieve factor saturation, as evidenced by the clarity and stability of the extracted factor arrays. Demographically, the participant group skewed older, with the majority (37.04%) in the 50–59 age bracket, reflecting the experience required in this specialised field. Gender representation was heavily male-dominated (88.89%), mirroring broader industry imbalances. Participants were drawn from institutions of varying sizes – small (40.74%), medium (18.52%) and large (40.74%) – and were geographically concentrated in South Africa's primary economic hubs, particularly Gauteng (77.78%). The Q-methodology's inversion of traditional variable-subject relationships, where participants are treated as variables and statements as the sample, underscored the importance of expert selection to ensure the validity of the viewpoints captured.

As Brown and Stephenson (1980) and Stenner et al. (2017) suggest, the sufficiency of participants is determined not by quantity but by the ability to reveal distinct, interpretable factors. With 66 Q-set statements and 27 expert participants, the study successfully elicited a rich tapestry of perspectives, affirming the methodological and epistemological soundness of the research design.

The administration of the Q-sort procedure in this study was conducted in person to maximise participant engagement, ensure methodological clarity and allow for real-time observation and interaction. This approach enabled the researcher to explain the sorting process directly, respond to participant queries and capture nuanced reactions during the exercise. Each of the 66 Q-set statements was printed uniformly on business card-sized slips, and participants sorted them onto a large distribution grid shaped in a quasi-normal distribution from –5 (most disagree) to +5 (most agree), following the model proposed by Watts and Stenner (2012). Ethical protocols were rigorously followed, including informed consent and the recording of sessions for reflective analysis. Participants first categorised statements into agree, disagree and neutral piles, and then ranked them within the forced distribution, with the freedom to revise placements until satisfied. Post-sort interviews were conducted selectively to probe ambiguous or neutral placements, particularly around themes such as zones of indifference (ZoI) and information asymmetry. These interviews, while not influencing the original sort, enriched the interpretive depth of the study.

The completed Q-sorts were analysed using PQMethod software, beginning with intercorrelation of the 27 Q-sorts and proceeding through centroid factor analysis – a method favoured for its interpretive flexibility and alignment with abductive reasoning. Factor extraction followed multiple criteria, including eigenvalues above 1.00, significant factor loadings (threshold set at 0.32 and later refined to 0.41), Humphrey's rule, and scree plot analysis. Although seven factors initially met the eigenvalue criterion, only three were retained after varimax and manual rotations, as others failed to meet significance or were confounded. The final three-factor solution, refined through Horst 5.5 centroid analysis and a four-degree manual rotation of factors 2 and 3, accounted for 37% of the total variance, within the acceptable range for Q studies. Of the 27 Q-sorts, 24 loaded significantly on one of the three factors, with only one confounded and two non-significant, affirming the robustness of the factor structure.

Subsequent analyses included the construction of correlation matrices, unrotated and rotated factor matrices, and cumulative commonalities to assess shared variance. Normalised factor scores (Z-scores) were calculated to determine the salience of each statement within each factor, enabling comparative rankings and the identification of distinguishing and consensus statements. These outputs provided a comprehensive map of the subjective viewpoints held by experts in the field of financially distressed companies. The methodological rigour, from participant engagement to statistical validation, ensured that the extracted factors were not only statistically sound but also interpretively rich, offering a credible representation of the diverse perspectives within this specialised domain.

Researcher qualities

The researchers explored the impact of severity of distress, the business position in the ZoI and the prospects to rescue the business that may inform capital structure decision-

making for distressed companies from an ontologically subjective constructivist-interpretive paradigm, believing that knowledge comes from facts associated with real-life cases and their context. The reality for a financially distressed company is not the norms that govern the company as a going concern in finance, accounting, investment and economic disciplines. The researcher's epistemological position acknowledges that as a constructive interpretivist, the researcher is inclined to a more qualitative research methodology to explore and understand the phenomenon of severity of distress and reasonable prospect to rescue financially distressed companies on their capital structure.

Tracy (2010:842) proposes certain requirements to ensure that research complies with the standards for rich rigour. Q-method was used where the Q-set statements were derived from literature, interviews, questionnaires and sorting exercises. This covered the main concepts and themes identified, namely, severity of distress, ZoI and reasonable prospect. The use of industry experts as the P-set (decision-makers) and analysis using PQMethod and interpretation ensured the requisite rich rigour. The mixed-method nature of Q-methodology, which first qualitatively investigates the subjective views of participants (Killam, Timmermans & Raymond 2013:29) and then quantitatively analyses through correlation and factor analysis (Simons 2013:3), provides further rich rigour.

Data collection procedures

The data produced, specifically the factor arrays (viewpoints) were used to compare the relevant key themes in the literature. This reflects the agreements and differences between the viewpoints in the factor arrays but also in the literature relating to the severity of distress, reasonable prospect and capital structure. The generality of the viewpoints allows for the exploration of the key themes that contradict accepted understandings. This course of action also gives exposure to the wide range of viewpoints that were dealt with in this study through the unfamiliar use of Q-methodology in business management, specifically the capital structure decisions of financially distressed companies.

Being cognisant of the holistic exploratory nature of Q-methodology, the investigation of different factor arrays does not only focus on viewpoints with the largest consensus or differences but also on the whole Q-set of statements to make better sense of the holistic viewpoint (Watts & Stenner 2012:183).

Results

In this section, the confirmed relationships of the various propositions were provided, and findings made on the severity of distress, reasonable prospect and capital structure determinants were discussed.

Propositions

The first research question examines the relationship between the severity of distress and the capital structure decisions of financially distressed companies. Using the framework adapted from Turetsky and McEwen (2001), the views of the expert participants on the statements in the Q-set that relate to the more granular propositions in Table 2 were analysed.

The second research question in this work was, 'How does the reasonable prospect of rescuing a company affect the capital structure decisions for financially distressed companies?' This question arises from the finding that the severity of financial distress does have an impact on the ultimate capital structure decision, but the immediate impact was on the determination of the reasonable prospect to rescue the company.

Discussion

The confirmed relationships, summarised in Table 2, for the propositions reveal a gap in the literature and differing views expressed by decision-makers.

Severity of financial distress

Barondes et al. (2007:235) argue that a company is in the ZoI when it does not have enough cash to pay its obligations, as well as to fund working capital and capital expenditure with sufficient slack to cover variability. Turetsky and McEwen (2001:338) proposed that the process of distress begins to show a decrease in operating cash flows, followed by a reduction in dividends, technical loan default and ultimately the restructuring of the financially distressed company's debt. This study took a more detailed approach by adapting and expanding the Turetsky and McEwen (2001) proposal in Figure 2, proposing the relationships between the level of financial distress and the reasonable prospect.

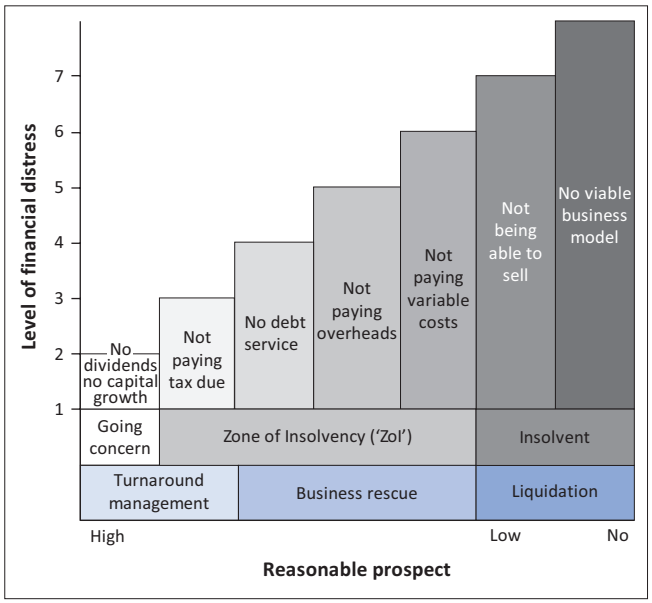
Participants found consensus among their viewpoints that shareholder expectations around growth and dividend payment do not have any impact on the severity of distress as there was no legal obligation. Additionally, there was agreement that the inability to service debts, specifically short-term debt (including tax payments), was an indication that the business was in the ZoI. However, there were differing views on whether the non-payment of long-term debt was an indication of the severity of distress. Negative cash flow was shown to be a strong indicator that the business was in the ZoI, although this was not a consensus view.

There was disagreement over whether profitability and free cash flow respectively were indicators of the severity of distress. Furthermore, there was no agreement on views around negative contribution margin, or the ability to pay overheads, although the ranking scales confirmed the framework in Figure 2 adapted from Turetsky and McEwen (2001). Some participants were less sensitive to the inability to pay overheads, but the strong view by others that the company's ability to generate a positive contribution margin indicates a possible concern, taking a longer investor view about the viability of the company that supports the shutdown rule (Stinespring & Kench 2013:63).

TABLE 2: Propositions to explore the relationships between severity of distress, reasonable prospect and capital structure decisions.

Number	Proposition	Investigated relationship	Confirmed relationship
Proposition 1_A	A negative correlation exists between the severity of financial distress and retained earnings when the business is in the zone of insolvency.	-	✓
Proposition 1_B	A positive correlation exists between the net asset value of the firm and the retained earnings when the business is in the zone of insolvency.	+	✗
Proposition 1_C	A positive correlation exists between the severity of financial distress and the level of debt when the business is in the zone of insolvency.	+	✓
Proposition 1_D	A negative correlation exists between the severity of financial distress and the value of equity when the business is in the zone of insolvency.	-	✓
Proposition 2_A	A positive correlation exists between the contribution margin and the retained earnings of the firm when there is a reasonable prospect to rescue the firm.	+	✗
Proposition 2_B	A positive correlation exists between the free cash flow and the retained earnings of the firm when there is a reasonable prospect to rescue the firm.	+	✓
Proposition 2_C	A negative correlation exists between the debt service cover ratio and the debt of the firm when there is a reasonable prospect to rescue the firm.	-	✓
Proposition 2_D	A positive correlation exists between the shareholder returns and the equity value of the firm when there is a reasonable prospect to rescue the firm.	+	✓
Proposition 3	A negative correlation exists between retained earnings and the level of debt of the firm when a firm is financially distressed.	-	✗
Proposition 4	A negative correlation exists between the level of debt of the firm and the value of equity of the firm when a firm is financially distressed.	-	✗
Proposition 5	A positive correlation exists between the retained earnings of the firm and the value of equity of the firm when a firm is financially distressed.	+	✓
Proposition 6	A negative correlation exists between the zone of insolvency and the reasonable prospect to rescue the firm when a firm is financially distressed.	-	✓
Proposition 7_A	Restructuring of existing debt by funders moderates the negative correlation that exists between the zone of insolvency and the reasonable prospect to rescue the firm when a firm is financially distressed.	+	✓
Proposition 7_B	Access to working capital from funders moderates the negative correlation that exists between the zone of insolvency and the reasonable prospect to rescue the firm when a firm is financially distressed.	+	✓
Proposition 7_C	Access to term funding moderates the negative correlation that exists between the zone of insolvency and the reasonable prospect to rescue the firm when a firm is financially distressed.	+	✓
Proposition 7_D	Access to new equity funding moderates the negative correlation that exists between the zone of insolvency and the reasonable prospect to rescue the firm when a firm is financially distressed.	+	✓
Proposition 8_A	A negative correlation exists between the contribution margin and the working capital required if there is a reasonable prospect to rescue the firm.	-	✗
Proposition 8_B	A negative correlation exists between the free cash flow and the need to compromise with creditors if there is a reasonable prospect to rescue the firm.	-	✓
Proposition 8_C	A positive correlation exists between the debt service cover ratio and the ability to raise additional debt for the firm if there is a reasonable prospect to rescue the firm.	+	✗
Proposition 8_D	A positive correlation exists between the expected shareholder returns and the ability to raise additional equity if there is a reasonable prospect to rescue the firm.	+	✓

Source: Van Beek, C.J.S., 2022, 'Exploring a capital structure decision-making framework for financially distressed companies', PhD dissertation, University of Pretoria, pp. 163-180, viewed n.d., from http://hdl.handle.net/2263/102556



Source: Adapted and enhanced from Turetsky, H.F. & McEwen, R.A., 2001, 'An empirical investigation of firm longevity: A model of the ex ante predictors of financial distress', *Review of Quantitative Finance and Accounting* 16(4), 323–343. https://doi.org/10.1023/A:1011291425075

FIGURE 2: Levels of financial distress and the relationship with the prospects of rescuing the company.

Interestingly, consensus views that sales (revenue) are not important in determining whether a business was in the ZoI contradict the importance of sales revenue as proposed in the adapted Turetsky and McEwen (2001) framework. There was strong consensus when the importance of liquidity over solvency was considered in determining distress. There were strongly divergent views on whether insolvency determines that the business is in the ZoI, which relates to decision-makers' investment horizon. Additionally, there was consensus disagreement that financial distress results in insolvency. Notably, the view that prospects going forward are more important than the existing severity of distress was supported by decision-makers' viewpoints.

Reasonable prospect

The reasonable prospect calculation proposed by Pretorius (2017), which focuses on demand rather than the calculation used in this study, was confirmed through post-sorting interviews. It was found that this was mainly because of deliberate retrenchment of product lines, divisions or subsidiaries during turnaround or business rescue proceedings, resulting in a decline in sales.

Contrary to the views of Stinespring and Kench (2013:63), who argue that companies with a negative contribution margin should shut down, the study found that contribution margin was not considered important by decision-makers when funding or viability is considered. However, the majority of views supported the statement that there was a reasonable prospect to rescue a financially distressed company with a positive contribution margin.

There was a strong consensus view that there was a reasonable prospect to rescue a financially distressed company if it generated surplus cash. Payment ability, rather than profitability figures, appears more important to funders. The study found that the fact that a company can pay its variable costs was not indicative of a reasonable prospect to rescue the company. There was disagreement about whether servicing debt obligations and the viability of the company over the long term were important factors.

There were different opinions about whether there was a reasonable prospect to rescue a company if it paid its overheads. The indifference might be because of the importance of free cash flow that some funders rely on to fund the business. Furthermore, there was consensus that operating cash flow was more important than contribution margin when determining the reasonable prospect of rescuing a company. This supports the ranking and components of the reasonable prospect calculation. There was also consensus that the fact that a company could pay tax was not indicative that there was a reasonable prospect to rescue the company.

There was consensus that if a financially distressed company service its debt obligations, there was a higher reasonable prospect of rescuing the company.

There was strong disagreement on whether creditors would provide funding if the financially distressed company was not generating operating cash flow. Views also varied on whether the prospects of rescuing the financially distressed company determine who provides funding. Contradicting views were expressed on whether creditors will provide funding if the financially distressed company has a loss before interest and tax. Some decision-makers strongly agreed that operating cash flow was more important than new funding when a company was financially distressed, supporting the pecking order capital structure theory, although other viewpoints disagreed. Divergent views were also expressed by decision-makers on whether there was a reasonable prospect to rescue a company if it paid a dividend, which is related to the irrelevance capital structure theory, indicating that decision-makers have different capital structure viewpoints. Further research on capital structure decisions of distressed companies will advance the academic debate.

Figure 2 illustrates the different levels of financial distress and their relationships informed the propositions (Table 2) set.

The construct of ZoI in Figure 2 further informed the view on the severity of distress. The non-payment of dividends or lack of share value growth (the first level of financial distress) in Figure 2 will not result in default, as the withholding of dividend payments to shareholders is not a statutory or contractual default, but rather an objective decision made by a company's board of directors. Similarly, the lack of growth in share value was a consequence of the company's performance.

Reasonable prospect

This study proposes an alternative reasonable prospect calculation, similarly framed to that proposed by Pretorius (2017), to incorporate and focus on capital structure decisions for financially distressed companies. The aim was to reduce subjectivity and refocus the framework on capital structure decision-making (Equation 2):

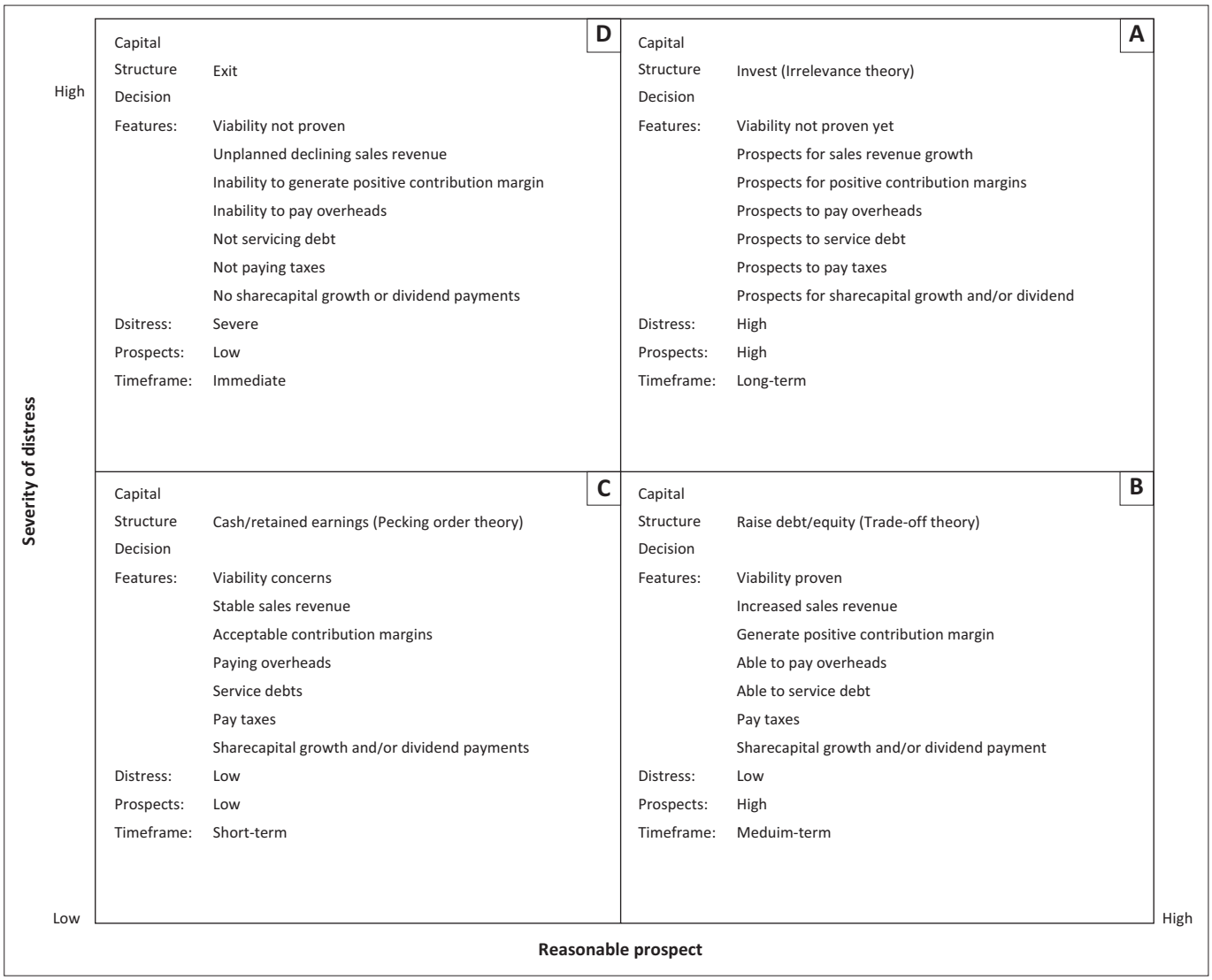
$$RP = \int[aD + bS + cVC + dFC + eDS + fT + gRI] \times hUC \times iRC \times j(1\text{-}RE) \quad \text{[Eqn 2]}$$

The framework was defined by the following variables: RP (reasonable prospect to rescue the business), D (market demand), S (sales projected for the company in distress), VC (projected variable cost), FC (projected fixed cost), DS (projected debt service cost), T (taxes), RI (expected shareholder returns), UC (un-rectifiable caveats) and RE (risk error). Constants a-j determine the level of judgement.

The proposed framework aims to provide an objective measure of the reasonable prospect of a company in distress, in addition to the minimum information required for creditors to make an informed decision, as per the requirements outlined in section 150(2)(c)(iv) of the 2008 Companies Act of South Africa, which are as follows:

> (iv) a projected-
>
> (aa) balance sheet for the company; and
>
> (bb) statement of income and expenses for the ensuing three years,
>
> prepared on the assumption that the proposed business plan is adopted.

The severity of distress, the position of the business within its zone of insolvency and the prospects for rescuing the business have a significant impact on business funding or capital structure decision-making. This study examined the various stakeholder perspectives that influence their decision-making. These differing perspectives often lead to conflicts among stakeholders, particularly when a business is experiencing distress. The level of distress confirms the current position, which was the outcome of past decisions. The prospects and likelihood of rescuing a company are forward-looking, requiring an alternative strategy and new funding model. The findings confirmed that the capital structure of the business plays a crucial role in guiding decision-making.



Source: Van Beek, C.J.S., 2022, 'Exploring a capital structure decision-making framework for financially distressed companies', PhD dissertation, University of Pretoria, p. 192, viewed n.d. from http://hdl.handle.net/2263/102556

FIGURE 3: The capital structure decision-making framework for decision-makers of financially distressed companies.

In Figure 3, a capital structure decision-making framework is presented schematically that can be utilised by decision-makers of financially distressed companies.

When assessing a company, if funders determine that the severity of distress is relatively high but the prospects for success are favourable, the company falls into Quadrant A of Figure 3. This is typically where the viability of the venture was unproven, for example, a new company or a company experiencing financial distress for various reasons. Investors in this quadrant are typically equity investors with a higher risk appetite and a long-term investment horizon. This quadrant aligns closely with the irrelevance capital structure theory (Modigliani & Miller 1958:267).

Once the viability of the company is proven, the severity of distress decreases and the company moves into Quadrant B of Figure 3. General improvements in revenue, contribution margins and positive cash flow are typically evident. The company can raise debt funding, making information asymmetry, tax benefits and bankruptcy costs important considerations. Investment timeframes are typically shorter, attracting funders with a lower risk appetite but still seeking companies with good prospects for investment. Debt funders and shareholders will receive good returns on their investments. This quadrant aligns closely with the trade-off capital structure theory (Robichek & Myers 1965:456).

When the company matures and is still in a low-risk environment but the prospects are also lower, the company moves to Quadrant C in Figure 3. The company remains viable but is on a lower and more stable growth trajectory. Debt levels are decreasing, and shareholders are receiving acceptable returns. The company generates surplus cash, but new investment opportunities are not available at acceptable returns. This quadrant aligns closely with the pecking order capital structure theory (Myers 1984:135).

When the severity of distress is high and the prospects for the company are low, it moves into Quadrant D in Figure 3. This company is financially distressed, and if the practitioner cannot reposition the company to another quadrant, the company within its zone of insolvency will have to be exited, either by closing or liquidation.

Conclusion

When businesses encounter financial distress, the context in which they operate changes. Decision-makers must comprehend this new context before executing a new future strategy based on the prospects of the business. To make sense of the context, it was essential to understand the current position and level of severity of distress. Only from this perspective can the prospects of rescuing the company be considered. The capital structure decision forms the foundation of any strategy to rescue the company. This study reviewed the limited literature on the severity of distress and reasonable prospects, and examined different viewpoints of decision-makers.

The findings of this research support those of various authors, including Turetsky and McEwen (2001), who proposed that the process of distress starts with a decrease in operating cash flows, followed by dividend reduction, technical loan default and ultimately the restructuring of the financially distressed company's debt. Pretorius (2017) proposed a useful, reasonable prospect calculation and identified seven resource-affording actions. Additionally, the study found alignment with the capital structure theories of irrelevance (Modigliani & Miller 1958), trade-off (Robichek & Myers 1965) and pecking order (Myers 1984).

This exploratory qualitative research raises additional questions that require further research. However, the use of Q-methodology to extract the different viewpoints of expert participants enabled the study to align the severity of distress and the prospects to rescue a business with three distinct capital structure theories during a business's life cycle.

Implications for the rescue industry

The change in context of businesses in distress requires a change in their capital structure. A more granular framework to determine the severity of distress and a less subjective framework to calculate reasonable prospect were proposed, which improve decision-making. The proposed capital structure decision-making framework can be widely used by practitioners in their strategic planning.

Limitations and further research

The exploratory nature of this study was a limitation, as the emphasis on qualitative analysis over quantitative leaves substantial opportunity for further empirical research. The proposed frameworks for assessing the severity of distress, reasonable prospect and capital structure decision-making open new avenues for further debate and academic research. Additionally, the results presented in this research using Q-methodology were based on participants' subjective views. Future research should aim to enhance and confirm these findings by using a sample of business cases. Furthermore, the research revealed a high correlation between the three-factor arrays (viewpoints) identified through the Q-method process and the three main capital structure theories, namely, pecking order theory, trade-off theory and irrelevance theory, but this was not the focus of this article and will be dealt with in a separate article.

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Competing interests

The authors declare that they have no financial or personal relationship(s) that may have inappropriately influenced them in writing this article.

Authors' contributions

C.J.S.v.B. contributed to the methodology of formal analysis, investigation, writing original draft and data curation. M.P. contributed to the conceptualisation, validation, review and editing, supervision and funding acquisition.

Ethical considerations

An application for full ethical approval was made to the Research Ethical Committee of Faculty of Economic and Management Sciences, University of Pretoria, and ethics consent was received on 26 October 2020.

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Data availability

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