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Empirical research on the role and power dynamics of investors
in corporate restructuring: Analyzing the influence which
stakeholders have when driving successful turnaround in the
DACH region

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Abstract: (English)

This thesis examines how different types of external investors are associated with turnaround success in financially distressed firms following a credit event. Focusing on firms in the DACH region, this study investigates whether private equity funds, corporate investors or early-stage investors are associated with higher probabilities of achieving a successful turnaround. Turnaround success is measured using a binary indicator which reflects a company's restoration of operational viability following distress. Building on theories of corporate control, corporate governance and financial restructuring, this analysis also explores different governance interventions, as a possible channel through which investor involvement may be associated with restructuring outcomes, though the evidence on this channel remains exploratory. Using a hand-collected dataset of distressed transactions and applying binary response models, the study tests hypotheses about the relationship among different investor types, governance changes and turnaround success. By empirically distinguishing investor types rather than viewing them as a homogeneous group, this thesis contributes to the literature on financial distress and corporate turnaround. The results offer insights into how investor specific skills and governance actions may be related to post-distress recovery, with implications for managers, creditors and policymakers involved in restructuring.

Abstract: (Deutsch)

Diese Masterarbeit untersucht, wie verschiedene Arten externer Investoren mit dem Sanierungserfolg finanziell angeschlagener Unternehmen nach einem Kreditausfall zusammenhängen. Mit Fokus auf Unternehmen im deutschsprachigen Raum analysiert diese Studie ob Private-Equity-Gesellschaften, strategische Investoren oder Frühphaseninvestoren mit höheren Wahrscheinlichkeiten einer erfolgreichen Sanierung verbunden sind. Der Sanierungserfolg wird anhand eines binären Indikators gemessen, der die Wiederherstellung der operativen Leistungsfähigkeit nach einer finanziellen Krise widerspiegelt. Aufbauend auf theoretischen Ansätzen der Unternehmenskontrolle, der Unternehmensführung sowie der finanziellen Restrukturierung analysiert diese Arbeit die Rolle von Unternehmensführungsmaßnahmen, insbesondere von Gesellschaftsführerwechseln, als möglichen Wirkungsmechanismus der investorentseitigen Einflussnahme, wobei dieses Zusammenspiel unter Vorbehalt zu betrachten ist. Auf Basis eines handverlesenen Datensatzes restrukturierungsbedürftiger Transaktionen und unter Anwendung binärer Klassifikationsmodelle werden Hypothesen zum Zusammenhang von Investorentyp, Veränderung in der Unternehmensführung und dem Sanierungserfolg getestet. Durch die empirische Differenzierung zwischen Investorentypen statt einer homogenen Betrachtung externer Investoren leistet diese Arbeit einen Beitrag zur Literatur zu Unternehmenskrisen und Sanierungsprozessen. Die Ergebnisse liefern Einblick darin, wie Investor-typische Fähigkeiten und Maßnahmen der Unternehmensführung mit der Erholung nach einer finanziellen Notlage einhergehen können und sind relevant für Unternehmensleiter, Gläubiger und wirtschaftspolitische Entscheidungsträger im Restrukturierungskontext.

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1. Introduction

Periods of financial distress are critical junctures at which the resilience of the broader economic system and firms is tested. Researchers, such as *Hotchkiss, John, Thorburn and Mooradian (2008)*, emphasise that such periods in a company's life cycle require adapting organizational and financial structures to ensure survival. Their article "*Bankruptcy and the resolution of financial distress.*" (2008) provides a robust entry point for studying corporate restructuring, the central mechanism that firms facing financial deterioration or distress must employ. Restructuring adapts a firm's financial, operational and governance structures to stop decline and imply a turnaround when it is nearing insolvency or even bankruptcy. Restructuring enables the appropriate parties to collaborate in a financially unstable environment and to ensure long-term recovery by using the financial instruments and tools available to them. Stakeholders, especially investors, will take control of processes to ensure they are realized in line with their goals.

Despite extensive evidence on investor-led restructurings in the United States, empirical research in the DACH region that distinguishes among investor types and examines their association with turnaround outcomes remains limited. This thesis addresses that gap by categorizing external investors into distinct groups, such as Private Equity, Strategic investors and early-stage investors, rather than treating them as a uniform group. It then links different forms of investor participation to observable transaction outcomes and governance actions. Thus, this study advances the broader understanding of financial distress and corporate control within a European institutional context. Companies may find themselves in difficult positions in which only change is a solution. The aim of this paper is to examine external investors who may be associated with supporting that change to ensure its success. Corporate restructuring allows stakeholders to preserve or even restore value by improving the company's competitive landscape, thereby maintaining their utility.

Recent years have seen a significant increase in financial uncertainties not only across Europe but also globally. The DACH region (Germany, Austria, and Switzerland) faces intensified financial pressures due to stagnant economic growth. Factors such as supply-chain shocks, rising interest rates, and energy price volatility contribute to these economic downturns. Looking back to 2020, data also indicates that the COVID-19 pandemic significantly affected corporate solvency. According to *Coutinho, Kappeler, and Turrini (2023)*, the extent of the "insolvency gap", which signals a need for structural reforms, is increasing. They note that a

build-up of financially fragile firms is occurring and that regulations may not be sufficiently strong across the EU to cover for the backlog of transactions, potentially impacting wider economies. In the DACH region, restructuring presents unique challenges shaped by specific local legal frameworks and corporate governance structures. Although data indicates that government interventions during the pandemic have temporarily reduced insolvency filings, these measures merely delayed the onset of financial distress. In this context, the DACH region could soon face rising pressure to accelerate corporate restructuring or facilitate the orderly liquidation of unviable companies. This motivates the question and the attempt to examine the dynamics within a European context.

As an illustrative example, this delayed adjustment is also evident from data in the United States, where restructured transactions increased significantly by 2023, indicating a clear shift towards reorganizing rather than liquidating, as shown in Figure 1 below, sourced from *S&P Market Intelligence Data (2024)*. Internationally, the restructuring market has experienced substantial growth, as creditors and lenders recognise mutual benefits in reaching out-of-court agreements. Reorganisation rather than liquidation increases the relevance of investor-led restructurings. This trend is also consistent across the DACH region, as shown in the dataset used in this thesis.

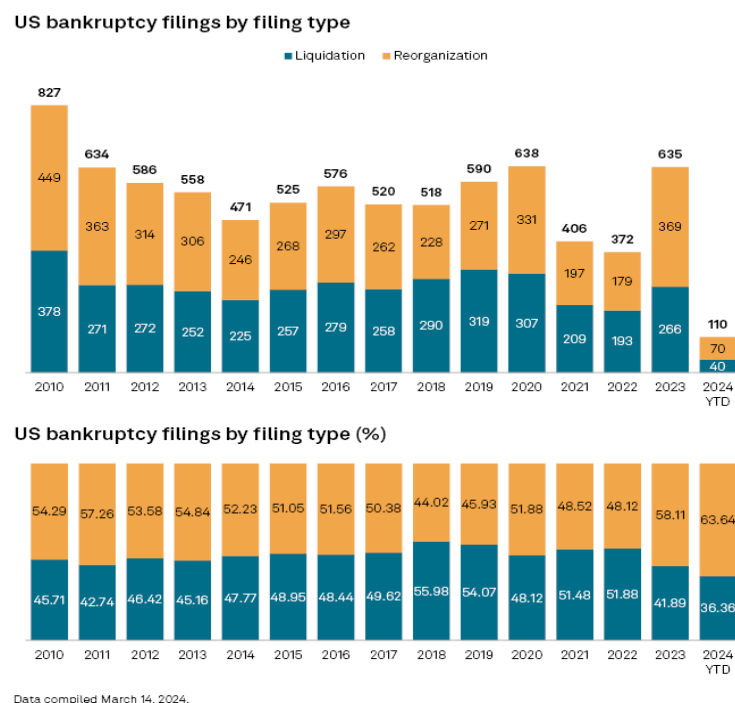


FIGURE 1: “US COMPANIES INCREASINGLY OPT TO REORGANIZE IN BANKRUPTCY, NOT LIQUIDATE” *LEXOVA AND KHAN (2024)* BANKRUPTCIES CATEGORIZED BY INTENTION AT TIME OF BANKRUPTCY FILING.

Therefore, it is important for companies to carefully select partners with whom they will collaborate and those that will provide the necessary financial backing to enable them to achieve potential turnarounds while facing distressed situations. Strategically aligning lenders' interests and shareholders' values is central to this process, particularly when the company's intrinsic value approaches the creditors' share. The different stakeholders, for this thesis, external investors, understand their influence in driving successful turnarounds and will act accordingly: either abandoning a sinking ship by handing over the keys, potentially sell assets through a liquidation or piecemeal procedure to recover what they think is left in value, or alternatively actively support the firm through financial and operational restructuring measures. There are many cases where external investors seek to intervene and create value from distress by leveraging horizontal or vertical synergies alongside their existing investment portfolios. Strategic and financial investors will each have different sets of instruments available and will leverage any significant advantage they can gain when a company faces problems. Further details on their approaches and how their power plays might influence a firm's standing will be provided in sections 2 and 3 of this paper.

As noted initially, restructurings are extraordinary situations that require a different approach and skilled actors with the necessary instruments to enable a successful transaction. *Hotchkiss, Stromberg and Smith (2021)*, for instance, argue that private equity (PE) firms, considered as a type of investor in this paper, can be central actors in restructuring. Their empirical analysis demonstrates that PE-backed firms in the US are more likely to restructure when they possess the necessary power and control. They can resolve distress more quickly and are more often considered going concerns than their non-PE-backed counterparts. Building on these insights, this paper extends the analysis beyond PE to include strategic and early-stage investors, drawing on observations from 2015 to 2023.

In distress, power will be reallocated among stakeholders by shifting control over capital and governance. If the firm's value deteriorates, control increasingly shifts from shareholders to creditors due to contractual arrangements. In fact, creditors' claims become pivotal in determining whether a firm continues as a going concern or is liquidated. Control over capital allocation becomes a central source of power, as investors capable of providing new financing can impose covenants for their investment, demand board representation, and thereby influence strategic decisions during the restructuring phase. *Gertner and Scharfstein (1991)* refer to these power dynamics, noting that inefficiencies among stakeholders and investors could potentially lead to higher costs and lower recoveries from liquidation. They also explain that the value of

a company's equity affects who has the most influence during negotiations outside of bankruptcy, and that if financial arrangements encourage investment from the start, struggling companies can work with stakeholders to reorganize and recover.

In the context examined here, this suggests that current creditors are incentivised to permit external investment *ex ante* and even prefer to change the firm's trajectory through equity injections. On the other hand, asset sales have also become a restructuring instrument, enabling rapid recoveries. They have emerged as a pivotal strategic tool for companies. While divesting is often perceived as a reactive measure signalling managerial failure, empirical evidence suggests otherwise. *Teschner and Paul (2021)* demonstrate that selloffs in the DACH region, despite historical scepticism, significantly enhanced shareholder recovery, especially when strategic investors announced their appetite as buyers. Their research suggests that the success of any such restructuring effort is strongly associated with the identity of the buyer, with strategic acquirers generally offering more favourable market responses than financial investors, such as private equity investors. Their findings challenge the stigma surrounding corporate divestitures and highlight that investor characteristics play nuanced roles in turnaround outcomes.

Having these academic predispositions in mind, at the core of every restructuring procedure, the fundamental question remains: who has the power and resources to finance turnaround? How are different types of external investors associated with the success of corporate restructurings in the DACH region? This framework is motivated by the significant role that investors, including private equity firms, corporate investors, venture capitalists, and other external investors, can play in driving strategic change, particularly in distressed situations.

It is important to note the limits of this analysis. The analysis is using observational data, so investor types are not randomly assigned to troubled companies, and we cannot apply experimental methods. As a result, any connections we find between investor type and turnaround success show correlation and prediction, not definite cause-and-effect. Stronger or better firms may attract different investors, and unmeasured differences in firm quality could influence these results. The thesis openly acknowledges this, framing the findings as showing consistent and reliable associations between investor type and restructuring results in the DACH region. These results add new descriptive insights for an area that has not yet been studied much.

Empirically, we will analyse transaction-level observations of distress-related deals to investigate a potential correlation between successful outcomes and investor type. The data sourced from “*Pitchbook*” (2025), covering the period from 2015 to 2023 across industries and companies with their headquarters in Austria, Germany & Switzerland, is designed to capture restructurings that have external investor enter. It is important to mention that it therefore does not represent the full universe of distressed firms. Transactional-level observations enable mapping of a restructuring timeline, screening for which types of investors entered a deal after a credit event and examining how available instruments were used and are linked to positive or negative restructuring outcomes.

As turnaround success is coded as a binary outcome, this thesis will employ binary response models to analyse the dataset and transactional outcomes: logistic regression (logit) and probit. The coefficients are then translated into economically interpretable effects, and the predictive quality is assessed using standard diagnostics for binary choice models.

The thesis is structured as follows: Section 2 sets the conceptual framework for corporate restructuring and the legal context in the DACH region. Section 3 reviews the relevant literature, drawing on agency theory to contextualise the association of investors in turnaround scenarios. Section 4 then details the data and methodology used to construct the probit and logit models, as well as the empirical strategy. Section 5 presents the empirical findings. The thesis concludes in Section 6 with a synthesis of the results, implications for theory and practice, and suggestions for future research.

2. Conceptual Framework

This chapter establishes a theoretical foundation and defines contexts within corporate restructuring. As restructuring heavily depends on underlying reorganisation laws, this chapter will also offer an overview of the legal environment in the DACH region. The chapter proceeds in 3 steps. First, it clarifies the meaning of financial distress and corporate restructuring. Second, it outlines how stakeholder control and bargaining positions tend to shift once distress becomes apparent. Third, it summarises the restructuring and insolvency frameworks in Austria, Germany and Switzerland.

2.1. Definition and stages of corporate restructuring

Corporate restructuring refers to a set of strategic and operational interventions undertaken to adapt a company's business model, capital structure, or corporate governance in response to financial distress or underperformance. Financial distress occurs when capital structure frictions or liquidity shortfalls burden a viable business model. Economic distress, on the other hand, reflects a deterioration in the firm's underlying market conditions or competitiveness, such that any restructuring adjustments alone would be insufficient to secure a turnaround. This distinction matters because the mechanisms through which external players could create value in restructuring differ depending on these initial conditions, according to *Hotchkiss, John, Thorburn and Mooradian (2008)*.

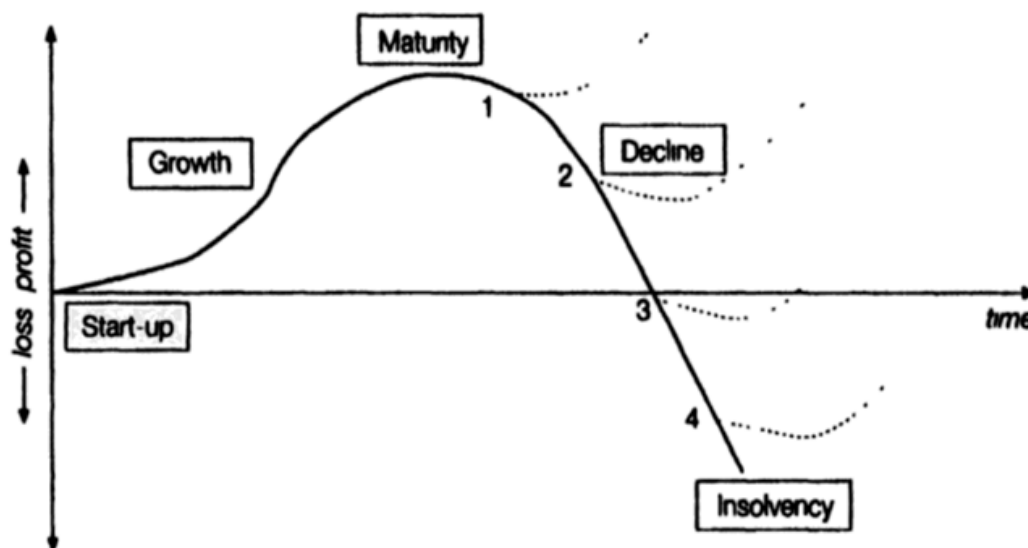


FIGURE 2 : "CORPORATE LIFE CYCLE" SLATTER AND LOVETT (2004)

According to *Slatter and Lovett (2004)*, there is no universally accepted definition of a restructuring situation. However, this paper will follow their approximation to identify the transactions it aims to analyse. A "turnaround situation" refers to companies at risk of failure unless action is taken promptly. This includes firms that are currently experiencing a liquidity crisis. If a stagnant business fails to recover, it will ultimately face a crisis due to management's unwillingness to change or adapt to changing market conditions. In this thesis, such urgency is proxied empirically by the occurrence of observable "credit events" (e.g., defaults, covenant breaches or distressed debt restructurings).

Figure 2 ("Corporate Life Cycle") depicts the decline phases and highlights that interventions are most likely once a firm has moved beyond early deterioration into real

financial loss. All companies, regardless of size, sector, or investor support, experience a similar life cycle. Access to capital, the timing and the severity of the crisis can vary. To illustrate this corporate life cycle, Figure 2 distinguishes between the “transformation” points at (1) and (2) and the “turnarounds” at (3) and (4). The difference between the two relates to the scope of the change program that needs to be implemented. Business transformation initiatives usually focus on operational improvements and do not include crisis management, capital restructuring, or stakeholder engagement, according to *Slatter and Lovett (2004)*. Therefore, this thesis focuses on restructuring cases which either achieved a turnaround or failed to overcome these situations, resulting in insolvency or liquidation.

Liquidation entails the conversion of a company’s assets into liquid cash. This process usually results in the company's closure (*Slatter and Lovett, 2004*). This binary framing (**turnaround vs failure**) is the basis for the empirical chapters, in which the outcome is coded as a binary indicator.

It is important to note that restructuring is not a single instrument but a bundle of actions that can include refinancing, capital injections, debt rescheduling, asset disposals, and governance interventions (e.g., CEO replacement, board changes, installation of turnaround specialists). The relative emphasis on any of these levers depends on the severity of the crisis, the firm’s structure and the identity and bargaining power of its stakeholders.

2.2. Bargaining in distress

The central proposition of this thesis is that financial distress significantly influences corporate control. When cash flow is insufficient to meet contractual obligations, stakeholders with senior claims gain leverage through default rights or existing covenants. This means that in such situations, bargaining power reallocates away from equity holders toward senior lenders, even when legal ownership has not yet changed.

This framework is relevant insofar as it helps to understand the role of external investors in distressed settings, as they may influence outcomes through at least one of the following three channels: First, they can provide capital when traditional financing is constrained, thereby alleviating liquidity pressure and enabling a going concern. Second, they could possess a deep understanding of restructuring, which, when implemented correctly, could support a firm's operational and governance choices. Third, they can obtain control rights, either through

takeover of board seats or by contractually tying their involvement to financing, thereby allowing them to drive key restructuring decisions (*Hotchkiss, Stromberg and Smith, 2021*).

Agency theory provides a basis for analysing why governance changes and investor intervention can affect turnaround. As decision authority is delegated by principals, mainly shareholders to agents (e.g., executive managers), we achieve the separation of ownership and control. When agents' incentives diverge from the firm's value maximisation, reorganising monitoring instruments or implementing incentive contracting, they can reduce agency costs. (*Jensen and Meckling, 1976*) These frictions can intensify in restructuring procedures as performance shortfalls increase uncertainty and raise the value of timely monitoring and commitment. *Jensen and Meckling (1976)* also argue that, as distress has to bear costs which are not always observable immediately, these frictions become even more inherent during any restructuring endeavours.

Empirical research by *Roberts and Sufi (2009)* on debt contracting also supports the notion that power dynamics are at play well before any formal default is reported. These dynamics have an immediate impact on corporate structure and enable financing partners to renegotiate previously set conditions and tighten contract terms. This shift can already be initiated when the contractual parties assume that the probability of covenants being breached in the near future is increasing, thereby incentivising management to make less risky financing decisions.

This, in turn, means that the next layer of agency conflict can already arise between shareholders and debtholders when firms approach distress, as equity holders may prefer riskier approaches and undertakings because they would benefit disproportionately from upside gains, whereas creditors bear the downside risk. Vice versa, creditors prefer actions that protect collateral value and stabilise the firm's operations and liquidity outlook. These conflicts arise by design in the underlying financial contracts and governance structures, which will reallocate decision-making power over time.

Incomplete contracting theory formalises why these control rights matter, as all future outcomes cannot be specified ex ante, before formalising the restructuring strategy. *Aghion and Bolton (1992)* argue that standard debt, including its contractual characteristics, can serve as an instrument of control, as the firm's capacity to retain control is contingent on meeting its obligations. Restructuring enables all stakeholders to reach an arrangement and leverage their positions to achieve an outcome that is favourable to all, before any insolvency or bankruptcy

proceedings are initiated. Who controls the firm also matters when aiming for higher recovery probabilities in restructuring proceedings.

Generally, the extent to which any stakeholder can exercise control rights depends on the applicable governing law. Restructuring regimes determine who can initiate proceedings, whether the debtor remains in control, and how creditor and shareholder voting rights differ. As the DACH region contains a multitude of distinct restructuring regimes, the institutional setting may affect investor incentives to enter distressed situations and the tools through which they impact outcomes.

2.3. Restructuring laws in the DACH Region:

Germany, Austria, and Switzerland, all part of the DACH region, have unique insolvency and restructuring laws that can affect how companies can approach recovery. These legal systems differ from international standards, such as U.S. bankruptcy rules. In the U.S., there is a clear distinction between Chapter 11, focused on reorganisation and debtor-led negotiations, and Chapter 7, which involves liquidation (*U.S. code, title 11, 2024*). In contrast, the DACH region offers a more varied range of approaches, from formal judicial procedures to more flexible, privately managed out-of-court negotiations. Within Europe, the legal system is aiming to introduce the EU's "Preventive Restructuring" framework, which is intended to reduce cross-country frictions in restructuring efforts. (*Fellner & Henöckl, 2023*).

These regional differences can affect investor strategies and the practical implementation of turnaround interventions, thereby potentially influencing outcomes. Many firms and their stakeholders will choose different legislative frameworks to file restructuring processes, thereby enabling them to use mechanisms that could directly affect their power positions. This is known as "forum-shopping", which arises from the option available to firms in choosing a jurisdiction (*Eidenmüller, 2017*). Furthermore, recent reforms, driven by the EU Directive on Restructuring and Insolvency (*Directive (EU) 2019/1023*), have notably influenced Austria and Germany, encouraging preventive restructuring mechanisms and explicitly aiming at early-stage intervention to prevent insolvency and to make instruments and tools available during distressed situations.

TABLE 1 : COMPARISON OF KEY METRICS IN DIFFERENT RESTRUCTURING LEGAL FRAMEWORKS: A HIGH-LEVEL COMPARISON OF CORE RESTRUCTURING MECHANISMS ACROSS FIVE COMPARABLE JURISDICTIONS: THE UK, THE

Metrics	UK, Scheme of Arrangement	US, Chapter 11	Austria, ReO	Germany, StaRUG	Switzerland, DEBA
Initiation	Debtor or Creditors	Debtor	Debtor only	Debtor only	Debtor only
Court involvement	Moderate (through confirmation)	High	Optional	Optional (modular)	Optional
Voting threshold	75% by value, majority in number per class	2/3 in value, majority in number per class	>50% by number and value	75% by value per class	Flexible
DIP model	Yes	Yes	Yes	Yes	Yes
Cross-class cram-down	Yes	Yes	Yes	Yes	Limited
Cross-border recognition	Broad (EU & common law states)	Broad	Yes (EU Regulation)	Yes (EU Regulation)	Limited
Flexibility of plan	High	Very High	High	High (Modular tools)	Flexible

US, AUSTRIA, GERMANY AND SWITZERLAND, SOURCED FROM THE LEGAL FRAMEWORKS OF THE PARTICULAR COUNTRIES.

The main legal possibilities for the DACH region are detailed on the following pages, but to provide an overview of the different jurisdictions, find above a table (Table 1) summarising the main contrasts between the countries. Differences in creditor rights, voting thresholds, and restructuring tools across jurisdictions have made “forum-shopping” an essential tool for firms and their debtors. The legal frameworks differ in who initiates the procedures, which voting rights apply, whether equity holders can be “forced” into a restructuring, and how widely recognised these schemes currently are.

UK’s Scheme of Arrangement and the US’s Chapter 11 are preferred for their flexibility and international recognition. However, Germany’s “StaRUG” is gaining interest. Its modular structure, pre-insolvency debtor-in-possession (DIP) framework, and ability to enforce agreements with equity holders, coupled with a strong German legal system, make it more appealing for international restructurings than jurisdictions with limited options. “StaRUG” can weaken traditional equity holders and passive creditors, while empowering active investors with experience in complex restructurings.

Eidenmüller (2017), critiqued the EU's preventive restructuring directive, advocating a model that would promote a more evenly competitive environment. By working within EU jurisdictions, lawmakers could encourage competition in insolvency processes, foster innovation, and improve efficiency. Currently, it appears that there is no one-size-fits-all solution, as power dynamics differ from case to case which means that transactions must be analysed individually. The EU directive still allows for flexibility.

The data we analyse will also examine differences between jurisdictions in the DACH region and their influence on successful transactions. But first, find below an overview of the setup of these jurisdictions in DACH:

2.3.1. Austria: Emphasis on preventive restructuring and self-administration

Austrian insolvency procedures have changed following the introduction of the EU-Directive on Restructuring and Insolvency. The directive was integrated into Austrian national legislation through the Restructuring and Insolvency Directive Implementation Act (*Restrukturierungs- und Insolvenz-Richtlinie-Umsetzungsgesetz*) and the Restructuring Act (*Restrukturierungsordnung*), which took effect on July 17, 2021 (*Fellner & Henöckl, 2023*):

A central part of these reforms is the creation of a preventive restructuring process to avoid insolvency in the first place. It helps debtors stay viable in the long run. Austrian restructuring options include three types (*Fellner & Henöckl, 2023*): out-of-court restructuring via restructuring agreements, preventive restructuring proceedings before insolvency happens, and judicial insolvency procedures.

Under preventive restructuring, only the debtor can initiate proceedings by submitting a restructuring plan once a “likelihood of insolvency” is identified. Such “likelihood of insolvency” is typically indicated by equity ratios below 8% and debt repayment periods exceeding 15 years, or by short-term liquidity shortages that hint at the unlikelihood of repayment. The process is based on self-administration, allowing the debtor to maintain complete oversight of daily operations and assets during a temporary enforcement suspension that typically lasts from three to six months. Usually, creditors agree to a standstill during this period to align and ensure no one accelerates their debt. Restructuring plans require approval under a dual-majority system involving said creditors. It may include a broad spectrum of financial and operational measures. Importantly, interim or new financing arrangements established during restructuring are protected against avoidance claims, which greatly enhances security for creditors and investors. Interim financings refer to short-term (bridge) funding to

cover immediate liquidity gaps, while new financings are used to execute the long-term restructuring plan. (*Fellner & Henöckl, 2023*).

This framework enables creditors to assert their senior position once a warning sign of distress appears, providing them with opportunities to influence the process and actively monitor recovery prospects. It also does not diminish incentives for equity holders to support their investments, yet it provides legal grounds for a financially supported restructuring.

2.3.2. Germany: Modular restructuring through the “StaRUG” Framework

Germany has integrated the EU Directive on Restructuring and Insolvency (*Directive (EU) 2019/1023*) into national law with the Corporate Stabilisation and Restructuring Act (*StaRUG*). Introduced under the Act for the Further Development of Restructuring and Insolvency Law (*SanInsFoG*), it establishes a flexible pre-insolvency restructuring framework intended to bridge the gap between informal restructuring methods and formal judicial insolvency proceedings, as defined in the Insolvency Code (*InsO*). Its primary aim is to enable companies to undertake early restructuring and, in doing so, minimise reputational, procedural, and financial difficulties linked to insolvency declarations (*Fellner & Henöckl, 2023*).

Central to “StaRUG” is a restructuring plan that outlines the main operational measures and financial adjustments that must be implemented, primarily without court involvement, to enable the company to manage a turnaround. This process is initiated exclusively by the debtor, based on the existence of imminent liquidity issues and a reasonable prospect of successful reorganisation. Notably, the debtor retains full control over business operations and decision-making. However, in more complex situations, an independent restructuring officer may be appointed. The restructuring plan must receive a 75% majority approval from each impacted class of creditors, divided by seniority. Additionally, the legislation permits new financing under certain conditions (*Fellner & Henöckl, 2023*).

Ruf and Weustenfeld (2025), in their article published in the Global Restructuring Review, indicate that one of the most critical aspects of “StaRUG” is its ability to “cram-down” dissenting equity holders, including minority or retail shareholders who could take a holdout position. Meaning that shareholders who oppose the restructuring plan can be legally bound by it even if they vote against the proposal. This prevents a small group of investors from blocking a potential restructuring supported by the majority. Traditionally, equity in insolvency situations is subordinated and generally extinguished, consequently also eroding existing

shareholders' power in renegotiations. However, "StaRUG" facilitates this outcome at an earlier stage, within a pre-insolvency framework.

In landmark legal cases such as "*Leoni AG (2023)*" and "*Varta AG (2024)*", the majority stakeholders and creditors effectively utilised these legal tools provided by "StaRUG" to enforce a comprehensive restructuring plan (*Meyer-Löwy, Ereira, East & Preuß, 2024*). This plan notably led to the elimination of existing equity holdings. It was accomplished without the necessity of formal shareholder consent. These significant instances clearly demonstrate how "StaRUG" can dramatically alter the power dynamics within corporate restructurings, favouring major creditors and dominant shareholders while simultaneously restricting the holdout tactics often employed by minority stakeholders.

As a result, the impact of "StaRUG" aligns German restructuring practices more closely with the established "absolute priority" principles seen in the United States, highlighting a significant shift in how restructuring processes are approached in Germany.

2.3.3. Switzerland: Flexible Composition proceedings under "DEBA"

In contrast to Austria and Germany, Switzerland currently lacks a formal framework for preventive restructuring. Nevertheless, the Federal Debt Enforcement and Bankruptcy Act (*DEBA*) provides for a judicial instrument that serves a similar function by allowing reorganisation outside of formal bankruptcy. These proceedings are designed to enable distressed but viable companies to reorganise their financial obligations while continuing operations. "DEBA" offers a practical alternative to the EU's Directive 2019/1023 on preventive restructuring frameworks in Switzerland (*Fellner & Henöckl, 2023*).

To initiate proceedings for decomposition, the debtor must apply to the competent court and prove that financial reorganisation is feasible or that a debt settlement with creditors is possible. Once approved, the debtor retains full control and business activities can continue under the existing corporate bodies. This flexibility, along with the lack of strict formal requirements for the restructuring plan, reflects Switzerland's preference for negotiation-driven, court-assisted restructuring. This can create risks for debtors, as they lack operational mechanisms to actively influence recovery processes. The Board of Directors has a statutory duty under the Swiss Code of *Obligations* (*Swiss Code of Obligations, Art. 725, para. 1*) to oversee solvency and act during financial distress. This includes convening shareholder meetings or initiating restructuring measures when necessary. While voluntary restructuring does not require court approval, procuring new financing or implementing capital measures

would need authorisation from the general meeting of shareholders, reinforcing shareholder sovereignty in Swiss corporate governance (*Fellner & Henöckl, 2023*).

Overall, the Swiss framework has not yet found the necessary track due to the lack of judicial instruments to secure claims and allow creditors to influence recovery.

3. Literature Review

This section reviews the academic literature on corporate restructuring, with a focus on the role of external capital providers. We establish the conceptual basis for analysing the impacts of external investors and their operational and financial instruments on turnaround outcomes. Building on agency theory outlined in Chapter 2, the literature suggests that investor identity matters because different investors vary systematically in their ability to supply funding, governance and operational capabilities.

3.1. Role of External Investors in Restructuring

A central reference in corporate turnaround financing is the pecking order hypothesis, articulated by *Myers and Majluf (1984)*. Their hypothesis suggests that firms will follow a hierarchical preference in financing decisions, driven by information asymmetries between insiders and external capital providers. Firms prefer internal funds to debt and debt to external equity. In a distress situation, this hierarchy may be unsustainable, as liquidity is insufficient and the company cannot expand its debt capacity. They will deviate from the optimal pecking order and accept any financing available. This, in turn, means they would permit increased investor monitoring to reduce information asymmetries. This is where power is shifting to external players, as the firm and its management are unable to fund themselves.

Nevertheless, it allows them to initiate recovery procedures. This is important to acknowledge, as corporate restructurings are atypical for companies. They will face greater external pressures and therefore will not have all the strategic options they would like available, as limited internal funds and constrained debt capacity minimise their ability to act. As already hinted at, external investors will leverage this position and seek to capitalise on assets offered at discounts during distress.

External players are aware of their position of power in turnaround processes. In particular, investors often hold significant financial and strategic interests in the underlying assets. Studies by *Hotchkiss and Mooradian (1997)* show that “vulture investors” entering a distressed firm through the acquisition of debt claims positively impact equity pricing. They suggest that markets interpret the presence of an external investor as a signal that the distressed asset has increased recovery potential. They also argue that signalling influence in governance, such as investors appointing the CEO, can improve operating performance after restructuring relative to before.

Instruments available to external investors are consistent with their strategic approaches. Management turnover, cost and process optimisation, and the implementation of synergies are essential when entering a distressed transaction. Investors play roles ranging from passive capital providers to active restructuring agents. Ex post, the investors' implementation experience and know-how can determine whether a turnaround is successful.

In the following sections, the thesis will outline the instruments and tools available to the different types of investors who could decide to accompany a distressed asset through its turnaround:

3.1.1. Private Equity Investors

One of the better-known and deeply researched investor types to which this thesis alludes is Private equity (PE). PE investors have a broad array of instruments at their disposal, combining capital provision with active governance mechanisms and operational influence.

Leveraged buyouts (LBOs), at the centre of PE activity, play an active role in the framework of value recovery in distress. LBOs are acquisitions in which PE buys control of a company using a large portion of borrowed money secured against the target's assets. In contrast to non-distressed transactions, PE will primarily use LBOs as “balance sheet repair” in distress, leveraging their information-gathering and applying their strength to renegotiate debt contracts. Part of these negotiations can include maturity extensions, debt-for-equity swaps or the injection of new equity to restore solvency (*Andrade and Kaplan, 1998*).

PE will use its market power and leverage its partnerships with debt providers to negotiate for looser covenants and more favourable debt terms. *Haque and Kleymenova (2023)* provide similar arguments, supported by empirical evidence, to support these claims. They argue that PE and banks will reduce agency costs through repeated collaboration on debt, while increasing trade frequency. Even though PE-backed firms do not comply with the debt clauses, debt providers will be reluctant to enforce them, as they want to maintain the standing relationship with these funds. This allows PE to keep the necessary financial instruments in distressed situations without significantly increasing the risk profile of its investment portfolio, as financing is overwhelmingly provided by external capital.

Andrade and Kaplan (1998) also argue that highly leveraged transactions increase the probability of distress. This does not mean that LBOs necessarily imply general economic failure rather, they incentivise a restructuring attempt rather than liquidation, as recoveries may

be higher. *Andrade & Kaplan (1998)* examined the costs that distressed firms incur when they go out of business. Their findings underscored that although distress may be costly for firms, these costs are not attributable to capital structure, the time spent in distress or external shocks. This means that when external investors attempt to enter a transaction and restructure a firm, they will face the same market factors the company would need to overcome on its own. It is the tools, financial and operational, as well as their experience that creates value added from distress and lead to a successful outcome.

Moreover, PE-backed firms in distress typically undergo more intensive governance intervention, including replacing management, imposing tight monitoring, and incentivising managers to align their interests with shareholder value creation. From a technical standpoint, LBOs affect firms through highly concentrated ownership and tightly aligned incentives, which enable rapid decision-making and decisive intervention when firms are in distress. PE sponsors in LBOs offer performance-based management incentives and often replace senior executives to advance their interests. As summarised by *Kaplan and Stromberg (2009)*, PE combines active board control, which can increase the likelihood of successful reorganisation.

Research indicates that private equity has the expertise needed to impact turnaround results. Investing in struggling companies, known as “vulture investing,” involves firm-specific and unpredictable risks, as noted in *Gilson’s (1995)* survey of distressed assets. PE investors who are adapted to handling these risks thanks to their experience and knowledge of bankruptcy laws in different countries, are generally able to secure the best returns in such deals. (*Gilson, S. C., 1995*)

Beyond traditional buyout activities, PE firms also pursue loan-to-own strategies concurrently. *Li and Wang (2016)* empirically demonstrate differences between ‘loan-to-loan’ lenders, typically commercial banks, and ‘loan-to-own’ players, which include activist investors such as PE funds. Their research indicates that loan-to-own players are linked to more significant governance changes, often renegotiated through Debtor-in-possession (DIP) financing. This means that PE funds actively seek out the market to acquire senior debt positions, usually at a discount, thereby positioning themselves higher up the value waterfall. They enter through the capital structure rather than via equity. In doing so, they also position themselves for more strategic manoeuvres and facilitate further debt concentration, in contrast to passive debt holders.

In summary, the academic literature supports the fact that PE is deeply involved in operational restructuring and also hints at expecting different effects for PE-backed transactions, relative to other investor types, because PE combines governance intensity with funding and restructuring expertise.

3.1.2. Strategic Investors

The second type of external investor this thesis will examine is strategic corporate investors, i.e., operating companies that acquire distressed targets or carve-out assets to strengthen an existing business. In contrast to purely financial buyers, strategic investors can evaluate distressed assets through an industrial lens. They are seeking complementarities in technology, customer base, distribution, brands, or production capacity. They may be able to extract value through synergies and redeployment that a stand-alone turnaround cannot realise.

Maksimovic and Phillips (2001) answer the question of “who engages in mergers and asset sales and are there efficiency gains?”, through an analysis of the market for corporate assets. Their view is consistent with the broader literature, which argues that asset sales and acquisitions can improve efficiency when assets are reallocated to owners who can use them productively. Strategic investors, even in distressed contexts, often possess industry insights and superior operational information, enabling them to identify value in distressed firms.

Recent studies also indicate that strategic investors are increasingly important in distressed deals, particularly when credit tightens, and uncertainty rattles markets. Unlike financial investors, strategic buyers view distressed assets from a long-term industrial perspective, focusing on redeployability and potential synergies within the target's existing operations. This difference has grown since the global financial crisis, with industry insiders often better positioned to acquire and efficiently redeploy distressed firms and their assets. Research by *Benmelech and Bergman (2011)* shows that the presence of industry buyers influences asset sales and their collateral values during crises. When strategic buyers are involved, assets are less likely to sell at steep discounts, as industry synergies help preserve value. This is a benefit for both existing lenders and owners, as it can help stabilise the distressed assumptions about underlying assets. Strategic investors can stabilise prices and market outcomes by acting as high-value buyers when financial capital is limited.

From a governance and restructuring standpoint, *Hotchkiss, Smith, and Stromberg (2021)* provide evidence that outcomes in distress depend critically on the acquirer's ability to actively restructure operations post-transaction. While their study includes both financial and

strategic owners, they highlight that strategic investors tend to rely on operational reorganisation. Restructuring can work in two ways: either by improving the top line and performance or by cutting costs. Strategic investors will use process optimisation, workforce restructuring, and realignment of product strategies to improve either of these two positions. This reinforces the view that strategic buyers add value through industrial restructuring mechanisms rather than solely through balance-sheet engineering.

Building on this, *Eckbo and Thorburn (2003)* analyse bankruptcy auctions and demonstrate that sales to industry buyers are associated with higher recovery values and superior post-transaction performance compared to sales to financial buyers in specific settings. Their findings reinforce the notion that strategic acquirers possess informational and operational advantages that enable them to internalise a greater share of the asset's going concern value. Importantly, these advantages are not purely financial but stem from integration capabilities and operational expertise, implemented through strong governance discipline, which enables a screening mechanism. CEO turnover and CEO quality can here serve as instruments for disciplining.

Strategic investors may improve turnaround prospects by successfully implementing complementarities and financial integration. Moreover, the literature indicates that strategic acquisitions also reflect a reallocation logic at the managerial level, as with the replacement of C-suite positions and the restructuring of labour, corporations manage costs by stabilising efficiency through knowledge transfer.

3.1.3. Early-Stage Investors

Other market players included in this analysis and relevant due to their market presence are early-stage investors, namely venture capital funds (VCs) and accelerators. Their involvement in restructuring typically occurs early in a firm's life cycle. Unlike PE or strategic acquirers, early-stage investors usually focus on growth realignment and performance. The academic literature argues that VC investors add value primarily through non-financial channels. Young firms often have inexperienced management that has not yet established the necessary governance structures. Early-stage investors will implement rigorous monitoring, provide strategic guidance, and adapt governance structures accordingly. In addition, they will create entries and access to customer and supplier networks, allowing young companies to reestablish themselves after distress. (*Hellmann and Puri, 2002*)

Recent research shows that these mechanisms can be especially important in the early stages of distress or underperformance, when firms face strategic challenges rather than purely financial crises. *Kaplan and Lerner (2016)* stress that VC-backed firms benefit from active board involvement and milestone-based financing, which can facilitate early corrective action and reduce the likelihood that underperformance escalates into full-scale distress.

Similarly, *Bernstein, Giroud, and Townsend (2016)* show that VC investors' close engagement and information acquisition improve decision quality, suggesting that early-stage investors can mitigate information asymmetries and agency problems. While the study does not address restructuring in a legal context, its evidence suggests that early-stage investors, through operational and strategic interventions, can improve performance well before formal reorganisation mechanisms become relevant. A broader suggestion from them is that proximity to assets significantly increases valuations.

However, the literature also indicates clear limitations to early-stage investors' effectiveness in deep distress. VC funds typically lack the mandate, capital structure tools, and legal expertise required for complex debt restructurings, and their time horizons and fund incentives are geared toward growth and exit rather than creditor negotiations. As a result, when firms transition from early-stage restructuring to acute financial distress, control often shifts away from early-stage investors toward private equity, private credit, or strategic buyers. This suggests that early-stage investors are most influential in shaping restructuring trajectories rather than final turnaround outcomes, an important distinction for empirical analyses that differentiate investor types by timing and intensity of intervention. (*Kaplan and Lerner, 2016*).

Given our investor-type aggregation, the literature supports treating early-stage investors as governance providers but with weaker rescue capacity than PE or strategic investors.

3.1.4. Commercial lenders

Usually, the main financing is done by commercial banks, which are positioned to finance operations. Once firms are in financial distress, lenders become the main influence on restructuring, overriding investors or private equity. Creditors gain control through debt agreements like covenants, securities, and acceleration rights. According to incomplete contracting theory, control rights shift to creditors when the firm's value drops. Banks providing revolving credit, term loans, and relationship-based funding serve as the baseline for comparing other external investors. In corporate finance, banks reduce information and

monitoring frictions through delegated monitoring and repeated interactions, enabling them to lend when creditors face higher agency and screening costs (*Rajan, 1992*).

In systems like Germany's, relationship lending and bank involvement are crucial to corporate control, especially for firms not regularly disciplined by capital markets. In distress, commercial lenders become the dominant stakeholders because their claims are senior, often collateralised, and protected by covenants and contractual rights. Empirical evidence shows covenant violations lead to swift, meaningful changes in corporate policies, such as cutting investments, reducing leverage, and increasing management turnover. This indicates that creditors exercise control outside of default, suggesting that commercial lenders are the primary holders of control rights in distress. We already alluded to this shift in power dynamics as laid out by *Roberts and Sufi (2009)* in debt contracting. Although they do not hold equity, banks can constrain managers and influence the restructuring process.

However, being dominant in control rights does not mean banks can deliver turnaround outcomes on their own. Two main limits exist. First, banks' payoff structure is debt-like: they gain limited upside but face significant downside risk, making them hesitant to provide new capital in distressed situations needing recapitalisation and operational investment (*Myers, 1977*). Second, banks tend to extend maturities, waive covenants, or defer payments rather than forgive principal. In distressed cases, banks rarely forgive principal, and restructuring without broader debt relief, asset sales, or mergers which often leads to bankruptcy of the underlying company (*Asquith, Gertner and Scharfstein, 1991*). These findings suggest commercial lenders are effective discipliners and coordinators but may lack the funding, governance instruments, and operational capabilities to restore viability in severe distress.

For the empirical analysis, this thesis treats commercial lenders as the benchmark stakeholder group. Other external investors (e.g., private equity sponsors, strategic acquirers, early-stage investors) are assessed by whether they add value beyond bank-led restructuring through financial instruments, governance intensification, or operational capabilities and synergies. This framing aligns with the thesis's core contribution: identifying whether investor identity is associated with different turnaround probabilities once the baseline environment of commercial lender dominance in distress is recognised.

3.1.5. Multiple investors, managerial turnover and management characteristics

Some further hypotheses set in this thesis will also require literature that goes beyond investor type and addresses lender syndication, management change and management attributes.

First, having multiple investors can be beneficial when they contribute complementary resources (capital, industry expertise, networks), but it can also introduce coordination and bargaining frictions. Syndication theory emphasises that shared financing can preserve option value and strengthen incentives, but only if contracting and coordination costs remain manageable (*Fluck, Garrison and Myers, 2005*). This logic applies directly to restructurings, where creditor committees, sponsor groups, or investor syndicates must coordinate.

Second, managerial turnover is a common feature of distress resolution and is often framed as a governance mechanism, as the literature on investor type already lays out. External investors may require CEO replacement to credibly change strategy or signal commitment to change. Evidence from corporate control contexts links distress to higher turnover risk, consistent with disciplining by capital providers (*Jostarndt and Sautner, 2008*). In institutional environments with strong disciplining mechanisms, CEO replacement can be particularly pronounced.

Third, CEO attributes, which in our data are proxied by whether a CEO's educational background aligns with the firm's industry, may affect corporate policies and risk choices. *Bertrand and Schoar (2003)* show that individual managers explain a meaningful share of heterogeneity in firm policies and link observable traits, including education, to more aggressive corporate strategies (*Bertrand & Schoar, 2003*). While CEO education is not a direct turnaround instrument, it can serve as a proxy for managerial human capital and decision-making frameworks that matter for executing restructuring plans.

The literature supports modelling not only investor type, but also governance channels such as CEO turnover and multi-investor involvement, as mechanisms through which external investors may affect turnaround outcomes.

3.1.6. Comparative Stakeholder Dynamics in the DACH Region

A key reason to focus on the DACH region is that corporate governance and restructuring outcomes are shaped by institutional features, including creditor rights, enforcement efficiency and the design of insolvency procedures. Compared with the U.S.-

centred literature, the DACH region offers a distinctive environment in which creditor coordination and legal familiarity are crucial. Here, stakeholders' bargaining positions depend not only on contractual seniority but also on information asymmetries, monitoring costs, and the feasibility of rapid operational change. Cross-country evidence shows that time, cost, and the likelihood of preserving going concern value vary with legal procedures and enforcement institutions (*Djankov, La Porta, Lopez-de-Silanes and Shleifer, 2008*), affecting bargaining power and the viability of private restructurings.

In the DACH region, who invests in distressed companies depends strongly on their ability to access information and act quickly. These deals require quick, detailed checks of the assets and an assessment of whether the company can survive through close work with management, lenders, and advisors. Because of this, missing information and the high effort of monitoring are major limitations.

Research, especially *Coval and Moskowitz (2001)*, shows a strong local and home bias: investors who are physically closer to an asset usually know more about it and therefore invest more nearby. Investments are highly local, and distance makes it harder to find and monitor deals unless investors can rely on reliable market information. Local bias and distance can also affect performance because they change how well investors can screen their investments. This will also be important for our model, as we consider DACH investors more interested in assets located in the DACH region.

Because of these institutional features, results from U.S.-based research on bankruptcy and distressed investing may not directly apply to the DACH region. In DACH, an investor's success in distress depends not only on capital and governance, but also on their ability to negotiate with all stakeholders (such as creditors, employees, and local institutions) within the local legal and procedural rules.

Existing research shows strong links between the type of investor and the resolution of distress in large leveraged-loan and bankruptcy cases. However, there is much less deal-level evidence on how investor identity relates to turnaround outcomes in the DACH region across different investor categories. This thesis helps fill that gap by testing whether the investor-type patterns found in the broader literature also appear in DACH-focused data.

4. Methodology

This chapter outlines the empirical strategy that we used to study how external investors relate to restructuring outcomes for financially distressed firms in the DACH region. We established that creditors holding a powerful position in restructuring have to choose with whom to partner to support the turnaround, and how these partners may be linked to impacting corporate restructuring processes in the DACH region. The primary objective is to analyse whether the introduction of certain types of external investors during distressed situations is associated with different likelihoods that a distressed company will achieve a successful recovery rather than face liquidation.

This analysis will be based on transaction-level data from “*Pitchbook*” (2025) and applies binary response models to estimate how investor characteristics may correlate with the probability of success, with “turnaround success” designated as the dependent variable. As transactions are not randomly assigned to investor types and external investors may be driven by unobserved deal quality, we will use a two-stage residual inclusion (2SRI) framework as a robustness test.

Furthermore, the chapter elaborates on the dataset and sample, defines key variables, outlines the econometric model, and discusses potential endogeneity concerns, along with robustness checks.

4.1. Research Design & Hypothesis

This thesis adopts an observational, transaction-level research design to examine whether investor characteristics and governance changes are associated with turnaround success. The empirical setting is cross-sectional at the transaction level and covers completed distressed transactions between 2015 and 2023. Because the data are observational rather than experimental, the baseline analysis is interpreted primarily in terms of conditional associations. A separate endogeneity-robustness exercise is conducted later to assess whether investor selection materially affects the main findings.

The empirical analysis focuses on a binary dependent variable, “turnaround success” which is coded as 1 if the restructuring results in a successful recovery and 0 otherwise. Given the binary nature of the outcome, the appropriate framework is a binary response model. Figure 3 shows the assumed timeline of the transactions, on which the data has been sourced. We then monitored what happens before and after a credit event, and when a new investor steps in.

Before the credit event, the firm is already distressed, but existing investors may still act. The credit event marks the point of maximum trouble and the usual entry point for new outside investors. Afterwards, the firm either fails (e.g., liquidation or closure) or is successfully restructured with support from these new investors. In line with the definition of restructuring in Section 2 and *Slatter and Lovett's (2004)* view of turnarounds, the figure shows firms that have moved beyond normal underperformance and now require decisive action to avoid failure.

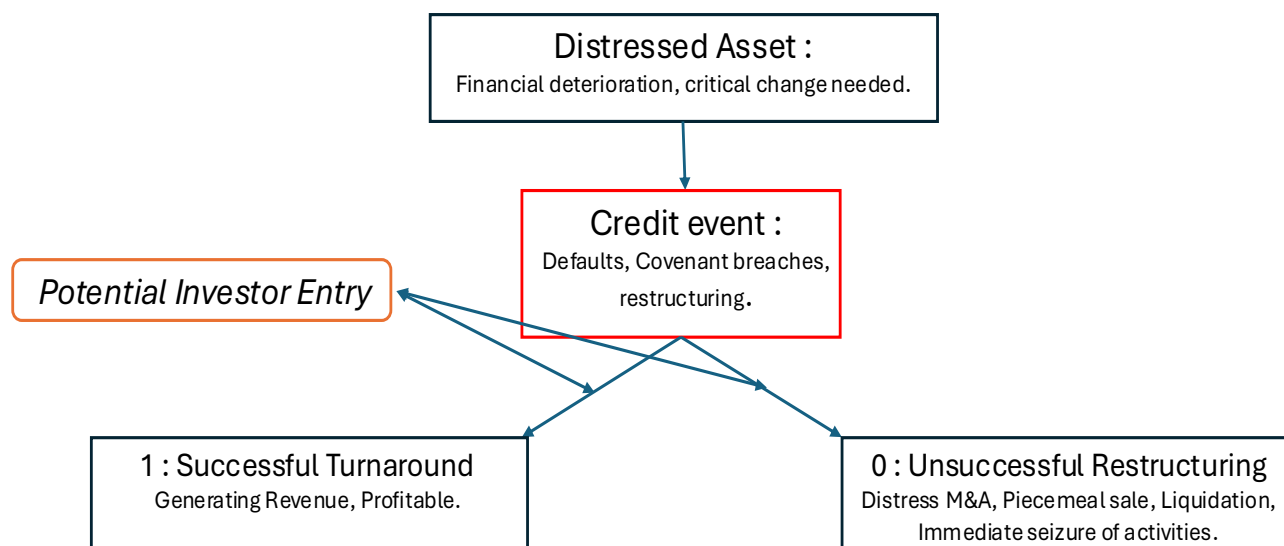


FIGURE 3 : TIMELINE ON CREDIT EVENT AND DEFINING SUCCESSFUL TURNAROUND OBSERVATIONS

Following standard practice, the thesis estimates both probit and logit models and reports average marginal effects (AMEs) to express results in probability terms. This is preferable to interpreting raw coefficients directly, as the marginal effect of a regressor on the probability of success depends on the level of the covariates. The baseline specification relates turnaround success to investor-type indicators, governance characteristics, and standard controls.

More specifically, this thesis's model includes indicators for the type of external investor involved in the transaction, a dummy for whether multiple investors participate, CEO turnover, CEO industry-relevant education, firm age, country fixed effects, industry fixed effects, and year fixed effects. This specification tests whether investor heterogeneity and governance interventions are systematically associated with the probability of successful restructuring, while accounting for observable differences across firms, sectors, jurisdictions, and time.

Pre-credit-event firm controls such as debt, revenues, EBITDA margin, and employee count are also desirable because they proxy for ex ante financial condition. However, these variables are not observed for all transactions in the "Pitchbook"-based sample, largely due to uneven disclosure and coverage across deals. Because this missingness is likely systematic

rather than purely random, adding these controls to the baseline model would substantially reduce the sample size and could introduce additional sample selection issues. Therefore, the baseline specification is estimated on the full, cleaned sample without these variables. Specifications that include pre-event accounting controls will be shown as robustness checks on a smaller subsample for which such information is available.

The analytical framework builds on the literature developed in Chapters 2 and 3, especially the view that investor groups differ in their restructuring capabilities, incentives, and governance tools.

- Private equity investors may contribute financial engineering and restructuring expertise.
- Strategic investors may contribute operational synergies and industry-specific capabilities.
- Early-stage investors may provide monitoring and strategic support but may be less suited for deep distress.

The empirical framework, therefore, does not treat external investors as a homogeneous category but distinguishes among investor types to test whether their roles differ systematically in distress outcomes.

The baseline hypotheses are as follows:

H1: Turnaround success differs by investor type. In particular, private equity and corporate investors are expected to be more strongly associated with successful turnaround outcomes than other investor categories.

H2a: CEO turnover is positively associated with turnaround success, consistent with the idea that management replacement can form part of an effective restructuring response.

H2b: The presence of a CEO with an industry-relevant educational background is associated with turnaround success, as managerial human capital may facilitate strategic and operational adjustment during distress.

H3: Turnaround success is associated with the presence of multiple external investors, reflecting possible benefits from broader expertise and shared monitoring.

A further variable capturing change in investor type is available in the data, but it is not included in the baseline specification because it may partly reflect developments that occur during or after the restructuring process and therefore risks contaminating the main estimates.

Finally, it is important to recognise that investors may not choose firms at random. Stronger firms may attract different types of investors than weaker firms, potentially distorting binary model estimates. Therefore, this thesis adds a careful robustness check using a two-stage residual inclusion method, explained in Section 4.4.4. This check does not prove full causality. It simply shows whether investor selection meaningfully changes the main results.

4.2. Data

The empirical analysis relies on a hand-collected, transaction-level dataset created from *Pitchbook Data, Inc. (2025)*, focusing on distressed transactions involving firms based in Austria, Germany, and Switzerland (DACH region). The unit of analysis is a distressed restructuring transaction. This distinction matters because the dataset does not encompass the entire population of distressed firms in the DACH region but only those documented in *Pitchbook (2025)*. The data are viewed as a structured sample of investor involvement in distressed scenarios.

The initial raw dataset covers DACH transactions between 2015 and 2023 and includes information on transaction date, firm country, industry classification, year founded, financing status, restructuring outcome, and investor characteristics. To align the data with the research questions developed in Chapters 2 and 3, the sample is restricted to cases in which a credit event occurred, and its subsequent outcome can be meaningfully observed. In particular, the analysis focuses on completed transactions with identifiable restructuring outcomes and disclosed investor information, since unresolved, announced, or insufficiently documented cases do not allow a final assessment of turnaround success.

After applying these restrictions, the usable sample consists of 2325 completed distressed transactions. The final sample combines cross-sectional variation across firms, investors, industries, countries, and transaction years.

Table 2 below also documents the sequential application of sample restrictions. The initial Pitchbook extract contained 3908 transaction-level observations. Transactions with unresolved or still-active financing statuses at the time of data extraction, are excluded because their restructuring outcomes cannot yet be definitively observed. Further exclusions apply in cases

where either the restructuring outcome or the investor identity cannot be reliably identified from the available disclosure. After these restrictions, the usable sample consists of **2325 completed distressed transactions**.

Exclusion criterion	Observations removed	Cumulative number of obs.	Source
Initial raw Pitchbook (2025) sample		3908	CSV
Exclude unresolved status, still-active financing status	- 1294	2614	‘Cleaning’
Include transaction years 2015 – 2023	- 289	2325	‘Cleaning’
Final cleaned sample used in analysis		2325	Main Model

TABLE 2 : DATA CLEANING AND EXCLUSION CRITERIA

The cleaned dataset includes the variables necessary for the baseline analysis, such as the binary turnaround outcome, investor-type classifications, an indicator for investor entry, investor location, country and industry identifiers, year founded, CEO turnover, CEO education relevance, and the presence of multiple investors. These variables enable the differentiation of external investor types and facilitate the study of whether governance interventions and investor configurations are systematically linked to restructuring outcomes.

Simultaneously, the transaction-based nature of the data introduces important limitations. Since the sample relies on Pitchbook disclosure and coverage, smaller, less visible restructurings may be underrepresented. Consequently, the dataset is not a random sample of all distressed firms in the DACH region. This limitation is significant when interpreting the empirical findings, which should be regarded as evidence from observed and documented distressed transactions rather than from the entire universe of distressed firms.

Some deals in our data include information on firms before (ex-ante) financial trouble, such as debt, and number of employees. These financial indicators act as proxies for a company’s financial health and size. However, we do not have this information for every deal because disclosure quality varies across cases. Since the missing data is likely not random, we do not include these variables in our main analysis. Instead, we incorporate them only in separate robustness checks on a smaller samples to evaluate whether our main results are affected when we control for firms’ pre-distress characteristics.

Research segment	Variables included	Analytical role
Identification and timing	Company IDs; Deal date; Restructuring duration	Identifies what we observe and shows when each restructuring case happens.
Geographic & sector	Company country; Primary industry Group; Native currency of transaction	Shows differences between institutions and sectors and allows the addition of controls for countries and industries.
Outcome measure	Turnaround success	Defines restructuring success as the outcome, measured as a binary dependent variable.
Investor characteristics	External investor type; Investor country; Investor in DACH; Investor entry; Multitude of investors; Change in investor type	Shows the main ways investors are involved, who the investors are, and how their involvement changes throughout a transaction.
Governance characteristics	CEO change; CEO education relevance	Shows whether managers stepped in and changed leadership structures, recorded as a binary variable.
Organizational characteristics	Year founded; Current financing status; Employees N°	Provides background information on firm age, organizational status, and firm size proxies.
Financial characteristics	EBITDA Margin %; Total Debt (from financials); EBITDA; Gross Profit; Revenue	Provides firm-level accounting measures that can be used as pre-event controls where data availability permits.

TABLE 3 : DATASET STRUCTURE & VARIABLE FUNCTION

4.3. Variable description

This section outlines the variables used in the empirical analysis and distinguishes among the baseline specification, the additional variables employed in the endogeneity robustness check, and the supplementary controls available only for a reduced subsample.

The dependent variable is “turnaround success”, coded as 1 if a distressed transaction results in a successful restructuring and 0 otherwise. A successful outcome means the firm resumes operations or returns to revenue-generating activity after distress, such as completing a debt restructuring and continuing to trade. It also mean the underlying asset is being acquired and operated by a new owner. An unsuccessful outcome is classified as liquidation, insolvency, or business closure without signs of potential recovery. This coding is applied consistently across all transactions in the sample, based on data from PitchBook. There are a few limitations: firms acquired by investors might be marked as successful because operations continue under new ownership, even if the recovery is not independent, as PitchBook’s data on post-restructuring status may be incomplete for smaller or less visible deals, and the binary code does not capture partial or temporary recoveries. These issues are limitations of the data and can affect the accuracy of the outcome measure.

The main explanatory variable captures “investor type”. The central investor variable is constructed from the recorded external investor category and regrouped into five mutually exclusive classes: Private Equity, Corporation, VC, Accelerator, and Other. In the baseline regressions, these categories are entered as a set of investor-type indicators, with “Other” serving as the reference category. This coding reflects the theoretical expectation that different investors bring different restructuring capabilities, incentives, and governance tools to distressed transactions.

To capture the presence of multiple investors, the baseline model includes a binary indicator “multiple investors” equal to 1 when more than one external investor is involved in the transaction and 0 otherwise. This variable is intended to proxy for syndication effects.

Governance intervention is captured by “CEO turnover”, coded as 1 if the CEO changes during the restructuring episode and 0 otherwise, and by “CEO education”, coded as 1 if the CEO has an educational background classified as relevant to the firm’s industry context and 0 otherwise. This should be seen as a limited indicator of managers’ skills, not as a full measure of how good they are.

The baseline model also includes standard control variables. Firm maturity is proxied by “year founded”. In addition, the model includes country fixed effects, industry fixed effects, and transaction-year fixed effects to account for persistent differences across legal environments, sectoral restructuring dynamics, and time-specific conditions in the DACH restructuring market. These controls are included to improve comparability across observed transactions and to reduce the risk that investor coefficients simply reflect country, sector, or period composition effects.

Several additional variables are available in the cleaned dataset, but are not included in the baseline model. Firstly, “change in investor type” indicates whether the dominant investor category shifts between the pre-distress and post-distress phases. Although of substantive interest, this variable may partly reflect developments along the restructuring process and is therefore considered a supplementary or appendix variable rather than a core regressor.

Second, “restructuring duration” measures the observed time of the restructuring process, but since duration is inherently realised after the onset of distress and may itself be influenced by the restructuring outcome, it is also excluded from the baseline models. Both variables are

therefore considered potential leakage variables and are reserved for robustness discussion rather than for the main analysis.

The "investor entry" variable indicates whether a new external investor joins after the credit event and is used in the first-stage selection equation for robustness checks, not as a baseline factor in turnaround success.

The dataset also includes "Investor DACH," which identifies investors from the DACH region which serves as an instrumental variable for investor entry in endogeneity analyses and is discussed further in Section 4.4.4.

The dataset includes pre-credit-event accounting controls, such as debt and employee numbers, for some observations. These variables are valuable because they indicate a firm's financial health and size before an event, but they're not consistently available for all deals due to differences in disclosure and data coverage. As a result, they're excluded from the main baseline analysis and only used in reduced-sample robustness checks, where they help control for pre-distress firm traits.

Overall, this approach shapes the thesis's empirical design: a straightforward baseline emphasizing investor type, investor arrangement, governance intervention, and standard controls.

Variable	Role	Variable Type	Coding	Interpretation
turnaround_success (y)	Dependent variable	Binary	1 = successful turnaround; 0 = unsuccessful turnaround	Captures whether the distressed firm returns to viability.
inv_corporate	Main explanatory variable	Binary	1 = corporate investor; 0 otherwise	Identifies restructurings involving strategic/corporate investors
inv_private_eq	Main explanatory variable	Binary	1 = private-equity investor; 0 otherwise	Identifies restructurings involving private-equity investors
inv_vc	Main explanatory variable	Binary	1 = venture-capital investor; 0 otherwise	Identifies restructurings involving venture-capital investors
inv_accelerator	Main explanatory variable	Binary	1 = accelerator/ incubator investor; 0 otherwise	Identifies restructurings involving accelerators/incubators
ceo_change	Governance variable	Binary	1 = CEO turnover observed; 0 otherwise	Proxy governance intervention
ceo_edu_rel	Governance/management variable	Binary	1 = CEO has industry-relevant education; 0 otherwise	Proxies for managerial human capital
multitude_of_investors	Ownership structure variable	Binary	1 = more than one investor involved; 0 otherwise	Captures syndication / shared investor participation
yf_sc	Control variable	Continuous (standardized)	Standardized founding year	Higher values indicate more recently founded firms
company_country	Fixed effect	Categorical	Austria, Germany, Switzerland	Controls for institutional differences across countries
industry_group2	Fixed effect	Categorical	Consumer, Energy, Financials, Healthcare, Industrials, Tech, Other	Controls for sectoral heterogeneity
deal_year	Fixed effect	Categorical	2015 to 2023	Controls for time-specific shocks
entry	2SRI variable	Binary	1 = investor entry observed; 0 otherwise	Used in the selection-correction robustness exercise
investor_dach	Instrument candidate	Binary	1 = investor located in DACH; 0 otherwise	Proxies geographic proximity in investor entry decisions (IV)

TABLE 4 : VARIABLE DEFINITIONS AND OPERATIONALIZATION

4.4. Econometric Strategy

We want to analyse how different types of investors and specific governance features could affect the likelihood that a financially distressed firm in the DACH region will successfully complete a turnaround. The econometric strategy therefore follows the treatment of qualitative dependent variable models in applied microeconometrics, particularly *Wooldridge (2010)*, *Cameron & Trivedi (2005)* and *Greene (2018)*.

Our dependent variable, “Turnaround success,” is binary: it equals 1 if the firm successfully turns around and 0 otherwise. Because this outcome is binary, we use a binary response model rather than a standard linear regression model.

Let, $Y_i = \begin{cases} 1 & \text{if firm } i \text{ achieves a successful turnaround} \\ 0 & \text{otherwise} \end{cases}$ for firm-transaction observation $i = 1, \dots, N$. The conditional probability of success is then $p_i = P(Y_i = 1 | X_i)$, where X_i is a vector of explanatory variables containing investor-type indicators, governance variables, firm-level controls, and fixed effects.

For comparison purposes, a simple benchmark could be the linear probability model where:

$$Y_i = X_i' \beta + \varepsilon_i, \quad E(\varepsilon_i | X_i) = 0.$$

Under this formulation, $P(Y_i = 1 | X_i) = E(Y_i | X_i) = X_i' \beta$.

The linear probability model is useful because its coefficients can easily be interpreted as percentage-point changes in probability. However, it has two important weaknesses in the present setting: First, fitted values may fall below 0 or above 1, which is not meaningful for probabilities. Second, the conditional variance is heteroskedastic by construction:

$$\text{Var}(Y_i | X_i) = p_i (1 - p_i).$$

For this reason, the linear probability model is used only as a benchmark. The prediction error is automatically bigger for some firms than for others, so the model’s constant-variance assumption is violated from the start. The main empirical analysis relies on nonlinear binary response models. (*Wooldridge, 2010; Greene, 2018*)

4.4.1. Probit and logit models

To ensure that predicted probabilities remain between 0 and 1, the thesis estimates probit and logit models. In their general form, the binary response model can be written as:

$$P(Y_i = 1 | X_i) = G(X_i' \beta), \text{ where } G(\cdot) \text{ is a cumulative distribution function.}$$

In the probit model, $P(Y_i = 1 | X_i) = \Phi(X_i' \beta)$, where $\Phi(\cdot)$ is the standard normal cumulative distribution function.

In the logit model, $P(Y_i = 1 | X_i) = \Lambda(X_i' \beta) = \frac{\exp(X_i' \beta)}{1 + \exp(X_i' \beta)}$, where $\Lambda(\cdot)$ is the logistic cumulative distribution function.

Both models are standard for binary outcomes. They are used here because they handle probabilities better than the linear probability model. Showing results from both also provides a consistency check on the robustness of the findings. A useful interpretation is the latent-variable representation.

Suppose there exists an unobserved restructuring index Y_i^* such that $Y_i^* = X_i' \beta + u_i$, and that the observed outcome is generated by the threshold rule :

$$Y_i = \begin{cases} 1 & \text{if } Y_i^* > 0, \\ 0 & \text{otherwise.} \end{cases}$$

Under this interpretation, the binary outcome reflects whether the firm's latent restructuring potential crosses the success threshold.

4.4.2. The main model

The main specification used in this thesis excludes variables that are likely to be determined jointly with the final outcome, such as restructuring duration and changes in investor type. This results in a model that focuses on investor identity and characteristics that are set in advance. The baseline model is represented by the following expression:

$$P(Y_i = 1 | X_i) = G(\alpha + \beta_1 VC_i + \beta_2 CORP_i + \beta_3 PE_i + \beta_4 ACC_i + \gamma_1 CEOCHANGE_i + \gamma_2 CEOEDU_i + \gamma_3 MULTI_i + \delta AGE_i + \mu_c + \lambda_s + \tau_t),$$

where VC_i indicates venture-capital investor involvement, $CORP_i$ indicates corporate investor involvement, PE_i indicates private-equity investor involvement, ACC_i indicates accelerator involvement, $CEOCHANGE_i$ captures CEO turnover, $CEOEDU_i$ indicates industry-relevant CEO education, $MULTI_i$ indicates multiple-investor involvement, AGE_i captures firm age, μ_c are country fixed effects, λ_s are industry fixed effects, and τ_t are year fixed effects.

The omitted investor category is the residual “other investor” group representing any other financiers that are not investor specific (e.g. commercial banks). The investor-type coefficients, therefore, measure differences relative to that baseline.

The probit and logit models are estimated by maximum likelihood. For each observation, the contribution to the likelihood is: $f(Y_i | X_i) = p_i^{Y_i}(1 - p_i)^{1-Y_i}$, where $p_i = G(X_i' \beta)$. The sample likelihood is therefore $L(\beta) = \prod_{i=1}^N p_i^{Y_i}(1 - p_i)^{1-Y_i}$, and the corresponding log-likelihood is $\ell(\beta) = \sum_{i=1}^N [Y_i \ln(p_i) + (1 - Y_i) \ln(1 - p_i)]$.

The coefficient vector $\hat{\beta}$ is obtained by maximising this expression.

Because the coefficients of probit and logit models do not translate directly into percentage-point effects, the thesis interprets the results using average marginal effects (AMEs). For a continuous regressor x_{ij} , $\frac{\partial P(Y_i=1|X_i)}{\partial x_{ij}} = g(X_i' \beta) \beta_j$, where $g(\cdot)$ is the density corresponding to $G(\cdot)$. Since this quantity differs across observations, the average marginal effect is $AME_j = \frac{1}{N} \sum_{i=1}^N g(X_i' \hat{\beta}) \hat{\beta}_j$.

For dummy variables such as investor-type indicators, the more intuitive effect is the discrete change in predicted probability when the variable changes from 0 to 1:

$$\Delta_j = P(Y_i = 1 | x_{ij} = 1, X_{i,-j}) - P(Y_i = 1 | x_{ij} = 0, X_{i,-j}).$$

This is how the investor-type effects are interpreted in the empirical analysis. In simple terms, the coefficients indicate how the probability of a successful turnaround changes when a firm has one type of investor rather than the reference type, while holding all other observed characteristics constant.

4.4.3. Reduced subsample models with accounting controls

In addition to the full clean sample, the thesis also runs robustness checks on smaller subsamples for which pre-credit-event accounting data are available. These checks control for firm-level financial and operating features such as debt, and employment. Since this information is missing for some observations, adding these variables to the main sample would automatically reduce the number of usable observations. For this reason, the accounting specifications are treated as subsample robustness checks rather than as the main model. Formally, for observations in the accounting-information subsample S_A , the model becomes

$$P(Y_i = 1 | X_i, A_i) = G(X_i' \beta + A_i' \theta), \quad i \in S_A.$$

We first estimate the original model with all observations. Then we run exactly the same model on the smaller accounting-data sample. Finally, we add the accounting variables to that

smaller sample. This allows the thesis to assess whether investor-type effects remain stable once observable firm fundamentals are added.

4.4.4. Endogeneity and the control-function strategy

A central concern in this thesis is that investor participation may be endogenous, meaning that firms with stronger unobserved turnaround potential may be more attractive to certain investors. This, in turn, could mean that investor entry is not random, posing reverse causality in the model.

In econometric terms, this means that the investor-entry variable may be correlated with the unobserved component of the success equation: $Y_i^* = X_i'\beta + u_i$, the term u_i captures unobserved influences on turnaround success. Endogeneity arises if the entry variable is correlated with this unobserved component: $\text{Cov}(\text{Entry}_i, u_i) \neq 0$.

To address this issue, we will use investor location in DACH as our instrumental variable candidate. The instrument is denoted Z_i and equals 1 if the investor is located in the DACH region and 0 otherwise. The economic logic for using geographic proximity to investors as an instrument rests on two conditions: relevance and the exclusion restriction.

The relevance condition requires that the investor's location in DACH is correlated with the probability of the investor's entry into a distressed DACH transaction. This condition finds strong empirical support in the first-stage results reported in Section 5.3, where the DACH proximity indicator enters with a large, positive, and highly significant coefficient across all first-stage specifications. The economic mechanism is straightforward: investors located within the DACH region face lower costs of information acquisition, deal sourcing, and ongoing monitoring of distressed assets. Distressed transactions are time-sensitive and require rapid due diligence, close coordination with management and creditors, and often physical presence during restructuring. Geographic proximity reduces the friction associated with all of these activities, making it more likely that a DACH-based investor will enter a given deal. This logic is directly supported by the literature, including *Coval and Moskowitz (2001)* and *Bernstein, Giroud, and Townsend (2016)*, both of which demonstrate that physical proximity materially affects the probability and quality of investor participation.

The exclusion restriction requires that investor proximity affects turnaround success only through its effect on investor entry, and not through any direct or independent channel. This condition is not directly testable but must be defended on economic grounds. The primary

challenge to the exclusion restriction is that DACH-based investors may possess institutional advantages beyond mere entry, such as local legal expertise in “StaRUG”, “ReO”, or “DEBA” proceedings, established relationships with domestic creditor banks, and access to regional advisory networks. If these advantages independently improve restructuring outcomes, proximity would violate the exclusion restriction even after conditioning on entry.

We tackle this concern through two primary approaches. First, our main success equation includes fixed effects for each country, which adjust for steady institutional strengths specific to each jurisdiction. If being familiar with DACH law is merely a general feature of the local investment landscape rather than an advantage tied to individual deals, these fixed effects account for it. Second, we presume that the investor-type indicators in the central model capture systematic distinctions in restructuring expertise across different investor groups. Should DACH-based investors tend to belong to types better equipped to manage distress, this tendency is observable and can be factored in. What remains is the connection between proximity and entry within the same investor type and country, which likely stems from challenges in searching and monitoring rather than disparities in ability.

We recognise that we cannot definitively prove the exclusion restriction with observational data. Instead, we see the instrument as a plausibility argument rather than a strict identification. The 2SRI model is used as a robustness check to see how sensitive the main results are to potential endogenous investor selection, not as the final causal explanation. The main result shows that the coefficients for corporate and private-equity investors stay positive and statistically significant even after adjusting for endogeneity. This indicates the likely direction and size of any selection bias and confirms that the main conclusions hold true even when accounting for selection effects.

In simple terms, proximity is assumed to help explain who enters a deal and not who succeeds in turnaround. Using an instrument variable Z_i , the relevant condition is $\text{Cov}(Z_i, u_i) = 0$, (exclusion condition) while $\text{Cov}(Z_i, \text{Entry}_i) \neq 0$ (relevance condition). Thus, the instrument must be correlated with investor entry but uncorrelated with the error term in the turnaround equation.

Because the dependent variable is binary, the thesis uses a two-stage residual inclusion (2SRI) control-function approach. In the first stage, investor entry is modelled as a binary outcome:

$$P(\text{Entry}_i = 1 \mid Z_i, W_i) = \Phi(\pi_0 + \pi_1 Z_i + \pi_2 W_i),$$

where Z_i is the instrumental variable candidate, and W_i are the exogenous controls. From this model, a generalised residual $\hat{v}_i$ is calculated. In the second stage, this residual is added to the success equation: $P(Y_i = 1 | X_i, \hat{v}_i) = \Phi(X_i' \beta + \rho \hat{v}_i)$.

The coefficient ρ on the residual term is the formal endogeneity test. If $\rho \neq 0$, the investor-entry variable is correlated with the unobserved determinants of turnaround success.

We showcase these results, and that the residual inclusion term is positive and highly significant. This implies that endogenous selection into investor entry is economically relevant. In other words, firms receiving investor participation differ systematically in unobserved ways from firms that do not, and those unobserved differences affect turnaround success.

The 2SRI model is reported as a specification rather than as the main model. The main empirical analysis continues to rely on the clean probit and logit specifications because they provide the most transparent and stable description of the investor-type relationships in the data. The correction is used to test whether the baseline relationships are likely to be contaminated by endogenous investor selection. Thus, the role of the 2SRI model is not to replace the main specification, but to complement it. It strengthens the argument that investor identity matters.

In sum, the econometric strategy proceeds in five steps. First, turnaround success is modelled as a binary outcome, which motivates the use of binary-response models. Second, LPM, probit, and logit specifications are estimated, with probit and logit treated as the main models. Third, coefficients are interpreted through average marginal effects and discrete probability changes. Fourth, reduced-sample models with accounting controls are used as robustness checks where data availability permits. Fifth, endogeneity in investor entry is examined through a control-function 2SRI specification, whose latest results indicate significant selection effects but leave the positive roles of corporate investors and private equity intact.

5. Empirical Analysis

In this chapter, we will present the empirical findings of the thesis based on the estimation strategy developed in Chapter 4. The reported results are based on a sample of DACH restructuring transactions between 2015 and 2023. The main models are the probit and logit specifications, while the linear probability model is retained as a benchmark. Throughout, the interpretation focuses on average marginal effects and on the stability of the investor-type coefficients across models.

5.1. Descriptive patterns and sample overview

The clean sample includes 2325 observations. Of these, 565 are successful turnarounds and 1,760 are unsuccessful, which means the overall success rate is about 24.3%.

The annual success rate varies substantially over time. It is relatively high in 2015 and 2017, increases sharply in 2020, declines sharply in 2021, and only partly recovers by 2023. This suggests that restructuring outcomes depend not only on firm and investor characteristics, but also on the broader macroeconomic environment. In particular, the COVID-19 period appears to have affected transaction markets and restructuring processes, likely through crisis-related subsidies and government support. At the same time, the time-series pattern broadly

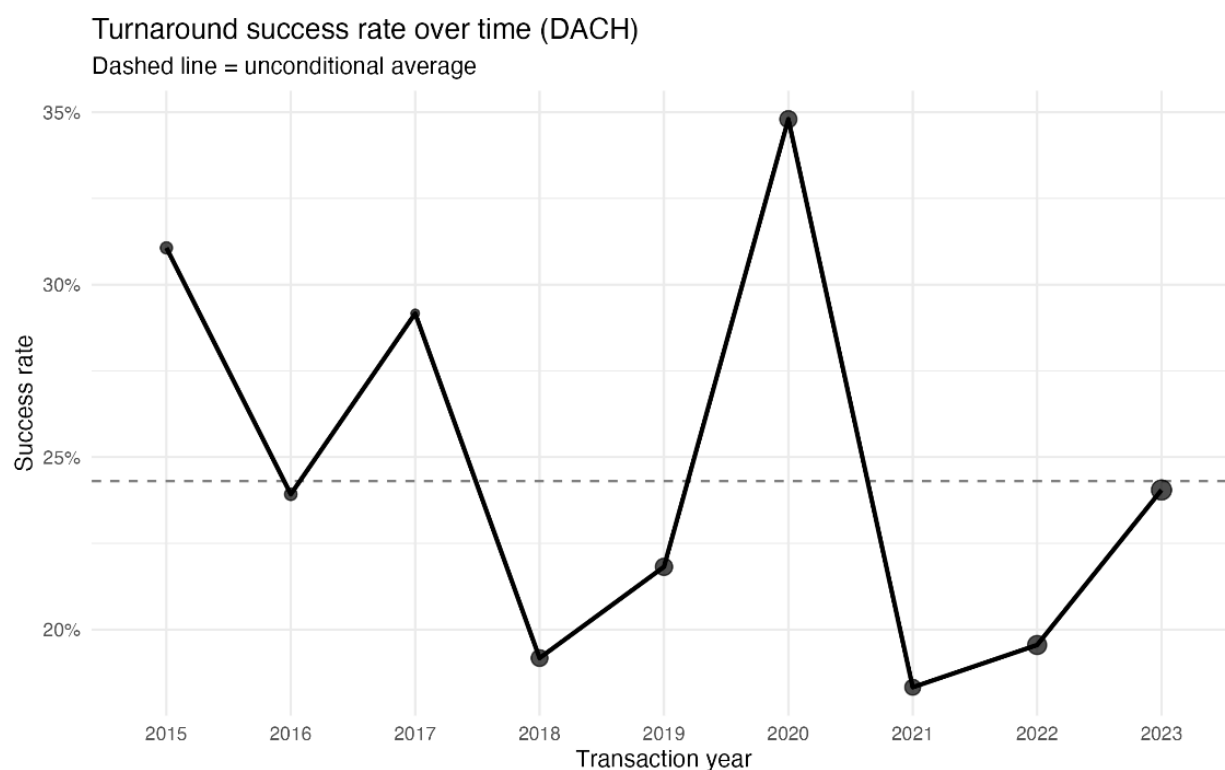


FIGURE 4 : TURNAROUND SUCCESS RATE OVER TIME

reflects shifts in market sentiment and restructuring conditions over the cycle, indicating that the sample follows broader market trends and is reasonably representative of the changing restructuring environment in the DACH region.

Figure 4 here, on turnaround success shows precisely these points. The dashed horizontal line represents the unconditional mean at 24.3%. Several years deviate visibly from this average, but the fluctuations are irregular. This motivates the inclusion of transaction-year fixed effects in the regression models, while also suggesting that year-to-year variation should be treated as contextual rather than as explanatory force in the analysis.

The investor-type composition of the sample also points to meaningful heterogeneity. The clean coding distinguishes between corporate investors, private-equity investors, venture-capital investors, accelerators, and the residual category of other investors. Because the empirical design is built around this classification, the central question is whether these investor types are associated with systematically different turnaround probabilities after conditioning on firm, country, industry, and year characteristics.

Investor type	N	Share (%)	Success (%)	CEO turnover (%)	CEO edu. (%)	Multi-investor (%)	DACH investor (%)	Mean founded	Median founded
Accelerator	718	30.9	0.7	14.8	42.5	37.6	71.4	2014	2015
VC	654	28.1	4.6	18.5	44.3	49.1	80.4	2011	2013
Corporation	496	21.3	75.0	21.4	17.7	20.6	74.2	1976	1993
Private Equity	294	12.6	48.6	32.7	26.2	35.4	66.3	1977	1995
Other	163	7.0	9.2	20.2	49.1	58.9	79.8	2007	2013

TABLE 5 : DESCRIPTIVE STATISTICS BY INVESTOR TYPE

5.2. Main regression results

Table 6 below reports the clean linear probability, probit, and logit results. The most important finding is that investor identity is a consistent and robust correlate of turnaround success across all models.

Corporate investors are associated with the largest positive effect on turnaround success, and private-equity investors are also positively associated with success. By contrast, venture-capital investors and accelerators are associated with lower turnaround probabilities.

	LPM	Probit	Logit
Corporate investor	0.521*** (0.033)	1.659*** (0.168)	2.825*** (0.314)
Private equity investor	0.272*** (0.037)	0.894*** (0.173)	1.510*** (0.320)
Venture-capital investor	-0.048* (0.022)	-0.395* (0.172)	-0.823* (0.339)
Accelerator investor	-0.061** (0.022)	-1.075*** (0.239)	-2.510*** (0.544)
CEO change	0.013 (0.017)	0.105 (0.103)	0.145 (0.185)
CEO relevant education	-0.042*** (0.012)	-0.278** (0.096)	-0.525** (0.178)
Multiple investors	-0.020 (0.013)	-0.113 (0.093)	-0.195 (0.172)
Standardized founding year	-0.079*** (0.011)	-0.232*** (0.062)	-0.439*** (0.107)
N	2325	2325	2325
AIC	825.3	1216.7	1208.0
BIC	974.9	1360.5	1351.8
RMSE	0.29	0.27	0.27
Country FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Robust SE	Yes	Yes	Yes

+ p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001 ; SE in parantheses.

TABLE 6 : MAIN MODEL RESULTS : LOGIT & PROBIT IN COMPARISON TO LPM

The results for different investor types are consistent across the three main models: corporate investors are associated with a higher predicted probability of a successful turnaround, and this effect is large and statistically significant. Private-equity investors are also

associated with a higher, significant likelihood, but their effect is smaller. In contrast, venture-capital investors and accelerators are linked to a lower chance of success.

Variable	AME	Robust SE	95% CI
CEO change	0.015	0.014	[-0.014, 0.043]
CEO relevant education	-0.039**	0.013	[-0.065, -0.013]
Accelerator investor	-0.150***	0.033	[-0.214, -0.086]
Corporate investor	0.232***	0.022	[0.188, 0.276]
Private equity investor	0.125***	0.024	[0.077, 0.172]
Venture-capital investor	-0.055*	0.024	[-0.102, -0.008]
Multiple investors	-0.016	0.013	[-0.041, 0.010]
Standardized founding year	-0.032***	0.008	[-0.049, -0.016]

TABLE 7 : PROBIT MODEL RESULTS : AVERAGE MARGINAL EFFECTS FROM THE PROBIT MODEL.

The average marginal effects from the probit and logit models help clarify the magnitude of these results in economic terms. In the probit model, corporate investors increase the predicted probability of a successful turnaround by about 23%, while private equity investors increase it by about 12.5% when entering a distressed transaction. In contrast, venture capital investors reduce the predicted probability by about 5.5%, and accelerator investors reduce it by about 15%, depending on the model. The marginal effects from the logit model are very similar, which suggests that the main conclusions do not depend on which of these two model types is used. These values are high compared to the roughly 24% success rate in the sample. They should be understood within an observational study, where selection effects might exaggerate the estimated links.

The average marginal effect (AME) indicates by how many percentage points the predicted probability of turnaround success changes when a variable increases by 1 unit or a dummy variable changes from 0 to 1, holding the other variables constant.

The robust standard error (SE) shows how precise that estimate is: smaller SE values indicate more precise estimates.

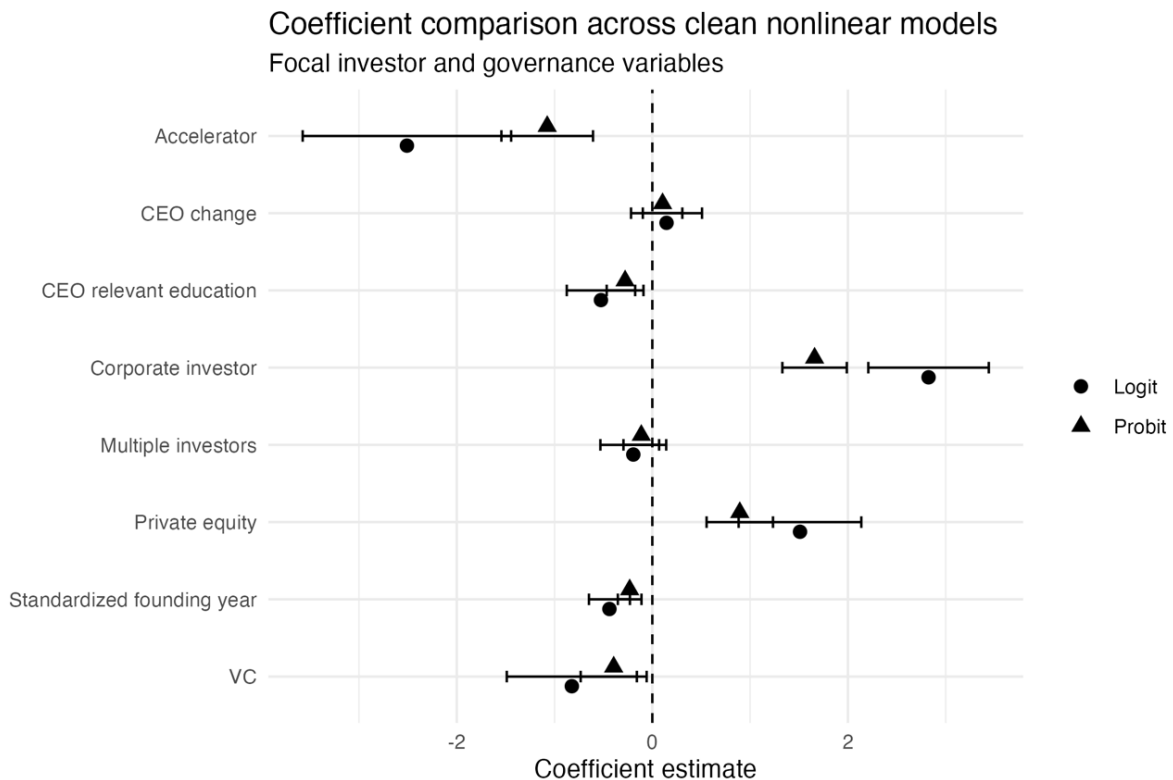


FIGURE 5 : LOGIT & PROBIT ESTIMATES ON 95% CONFIDENCE INTERVAL

The 95% confidence interval (CI) shows the range in which the true effect is likely to lie with 95% confidence. If the confidence interval does not include zero, the effect is usually interpreted as statistically meaningful.

Collectively, these results reinforce the central hypothesis that external investors should not be regarded as a uniform group. Rather, investor identity plays a role in influencing restructuring outcomes. Corporate investors are generally best equipped to facilitate successful turnarounds, leveraging their capacity to generate strategic and operational synergies. Private-equity investors are also linked to higher probabilities of turnaround, aligning with their demonstrated restructuring expertise and governance knowledge. Venture-capital investors and accelerators tend to be less effective in distressed situations, where operational restructuring and creditor coordination are more critical than early-stage growth support.

A key data quality concern is how success in corporate investor turnarounds is measured. Corporate investors show a 75% raw success rate which is significantly higher than average and in comparison, to other investor types. Mainly due to many cases labeled as “Corporate Backed or Acquired.” Success often means continued operations after acquisition, even if it’s just absorption into a larger company. This recording practice may inflate the actual impact of

the corporate investor. Limited transaction-level data restricts analysis, so more detailed post-acquisition information would be needed for accuracy. Thus, while positive links to turnaround success appear consistent, they may reflect both genuine improvements and classification effects that cannot easily be separated.

The control variables provide additional context. The coefficient on the standardised founding-year variable is negative and statistically significant across the main specifications. Because this variable is coded as standardised year founded, a negative coefficient implies that firms founded more recently are less likely to experience turnaround success. Equivalently, older firms are more likely to succeed. This may indicate that older firms are more organizationally mature, have more established stakeholder relationships and are more established market players.

Country effects also matter. Relative to Austria as the reference category, Switzerland is associated with a significantly lower probability of success in the clean regressions, while the coefficient on Germany is smaller and generally less stable across the main specifications. These results suggest that institutional and market differences within the DACH region matter for restructuring outcomes, even after accounting for investor identity and sector composition.

By contrast, the evidence for governance and its investor-influenced variables is weaker. CEO turnover does not emerge as a statistically significant determinant of turnaround success in the main clean models, and the multiple-investor indicator is likewise not significant. This indicates that the primary empirical distinction in the data is not between single-investor and syndicated transactions, nor between transactions with and without CEO replacement, but rather between different types of external investors. Also, CEO relevant education suggests that industry relevant expertise might be negatively associated with turnaround success.

Several explanations fit these findings. CEOs with industry-specific expertise may maintain conservative strategies in crises, while generalist managers might handle restructuring better due to broader skills. The variable could also reflect selection bias, as sectors like life sciences or advanced manufacturing have more industry-specific CEOs and fewer turnarounds. Additionally, measuring CEO education is a rough proxy for managerial skills and does not directly assess restructuring ability, as discussed in Section 4.3.

These explanations fit the data but are not conclusively proven. The result warns against a simple governance interpretation. In times of distress, what matters more may be the CEO's diverse skills and willingness to adapt, rather than just industry-specific education. Future

research with richer CEO data could examine whether traits like restructuring experience, tenure, or network connections better predict governance in distressed situations.

Investor_type	N	CEO turnover (%)	CEO relevant education (%)
Private Equity	294	32.7	26.2
Corporation	496	21.4	17.7
Other	163	20.2	49.1
VC	654	18.5	44.3
Accelerator	718	14.8	42.5

TABLE 8 : CEO TURNOVER AND CEO RELEVANT EDUCATION BY INVESTOR TYPE

To investigate whether the main investor effects may operate through governance intervention, an auxiliary probit model examines the determinants of CEO turnover. The descriptive CEO-turnover rates already suggest meaningful differences across investor types: private-equity transactions show the highest CEO replacement rate, followed by corporate investors, while accelerators exhibit the lowest turnover rate. The regression results mainly support this pattern for private equity. In the CEO-turnover model, having a private-equity investor is clearly linked to a higher probability that the CEO is replaced, while the effects for corporate, venture-capital, and accelerator investors are not statistically significant. This suggests that, in terms of governance, private-equity investors are the most actively involved group.

	Probit	Probit (PE × CEO change)
Corporate investor	1.659*** (0.168)	1.658*** (0.168)
Private equity investor	0.894*** (0.173)	0.972*** (0.182)
Venture-capital investor	-0.395* (0.172)	-0.393* (0.172)
Accelerator investor	-1.075*** (0.239)	-1.074*** (0.239)
CEO change	0.105 (0.103)	0.196 (0.128)

	Probit	Probit (PE × CEO change)
CEO relevant education	-0.278** (0.096)	-0.283** (0.096)
Multiple investors	-0.113 (0.093)	-0.113 (0.093)
Standardized founding year	-0.232*** (0.062)	-0.235*** (0.063)
PE × CEO change		-0.274 (0.215)
N	2325	2325
AIC	1216.7	1216.9
BIC	1360.5	1366.4
RMSE	0.27	0.27
Country FE	Yes	Yes
Industry FE	Yes	Yes
Year FE	Yes	Yes
Robust SE	Yes	Yes

+ p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001 ; Robust standard errors are reported in parentheses.

TABLE 9 : PROBIT MODELS FOR TURNAROUND SUCCESS AND THE PE × CEO TURNOVER INTERACTION CEO

However, this evidence of the mechanism should be interpreted carefully. Although private equity is associated with a greater likelihood of CEO turnover, CEO turnover itself does not significantly predict turnaround success in the main clean success models. The implication is that private-equity investors do appear more willing to change management, but the data does not support the claim that CEO replacement is the main channel through which their positive success effect materialized.

Additionally, the negative and significant coefficient on CEO relevant education is noteworthy because it goes against what H2b suggested. Instead of increasing the chances of a turnaround, having a CEO with an education aligned to the industry actually lowers the probability of success by about 3.9%. Therefore, the data does not support H2b.

Next, as an additional robustness check, we re-estimate the main probit model using a smaller sample that includes accounting data prior to the credit event. This step is not meant to replace the main, clean model. Instead, it checks whether the key findings about investor types

still hold when we restrict attention to firms for which accounting information is observed. To distinguish the effect of the smaller sample from the effect of adding accounting controls, we compare three versions of the model: first, we estimate the clean model on the full sample; second, we estimate the same clean model again, but only on the smaller accounting subsample; and third, on that same smaller subsample, we add the pre-credit-event accounting variables as additional controls.

	Full probit model	Core model on accounting subsample	Extended accounting-core model
Corporate investor	1.659*** (0.168)	1.878*** (0.493)	1.836*** (0.499)
Private equity investor	0.894*** (0.173)	0.819 (0.512)	0.783 (0.530)
Venture-capital investor	-0.395* (0.172)	-0.796 (0.547)	-0.797 (0.549)
Accelerator investor	-1.075*** (0.239)	-10.620*** (1.437)	-9.540*** (1.644)
Standardized founding year	-0.232*** (0.062)	-0.477* (0.215)	-0.471* (0.216)
Multiple investors	-0.113 (0.093)	-0.766* (0.340)	-0.781* (0.343)
CEO change	0.105 (0.103)	0.363 (0.410)	0.346 (0.410)
CEO relevant education	-0.278** (0.096)	-0.335 (0.381)	-0.335 (0.384)
Current employees (std.)			0.212 (0.849)
Total debt (std.)			0.100+ (0.054)

	Full probit model	Core model on accounting subsample	Extended accounting-core model
Num.Obs.	2325	282	282
AIC	1216.7	173.4	176.6
BIC	1360.5	264.4	275.0
Log.Lik.	-583.338	-61.676	-61.310
RMSE	0.27	0.26	0.26

+ p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001

TABLE 10 : ACCOUNTING SUBSAMPLE ROBUSTNESS: CORE ACCOUNTING CONTROLS

The results indicate that the main finding on corporate-investor relations is robust. In the full clean sample, the coefficient on the corporate-investor dummy is positive and highly significant. Re-estimating the clean model on the reduced accounting subsample leaves this result intact and even slightly stronger. After accounting for the controls, the coefficient remains positive and highly significant at 1.836 with $p < 0.001$. This pattern suggests that the positive association between corporate investors and turnaround success is not merely driven by the omission of limited accounting information in part of the sample.

The accelerator coefficient in the accounting subsample (-10.620) should be interpreted carefully. The very low success rate among accelerator-backed firms in this small sample likely causes issues in the model, making the coefficient appear larger than its true effect.

By contrast, the private-equity and venture-capital coefficients become less stable once the sample is restricted. Private equity remains positive in the reduced subsample without accounting controls, but is no longer statistically significant, and the coefficient declines further once accounting controls are added. Venture capital remains negative in both reduced-sample specifications, yet these estimates also lose statistical significance. Taken together, these changes suggest that the evidence for private-equity and venture-capital effects is more sensitive than the evidence for the corporate-investor result.

The control variables point in a similar direction. In the reduced accounting subsample, the coefficient on multiple investors becomes negative and statistically significant, both without and with accounting controls (-0.766 and -0.781, respectively), whereas governance relevant variables are not robustly significant in these restricted estimations. Among the accounting variables, firm size, proxied by the number of current employees, as well as the debt measure is statistically insignificant in relation to turnaround success.

The accounting-control model is estimated on only 282 observations, compared with 2,325 observations in the baseline sample. This substantial loss of coverage is important for interpretation: the accounting subsample is informative as a robustness exercise, but its limited size means that the estimates should not be treated as the primary source of inference.

Overall, the accounting-subsample exercise strengthens the most robust substantive conclusion of the chapter: the positive association between corporate investors and turnaround success persists even after imposing a much stricter sample restriction and adding available pre-credit-event accounting information. At the same time, the reduced sample weakens the precision of the remaining investor-type estimates. For this reason, the full-sample clean specification remains the main reference model, while the accounting-subsample results are interpreted as supportive but necessarily more tentative robustness evidence.

5.3. Endogeneity and robustness-check

A further concern is that investor entry may be endogenous. More promising firms may attract certain investors more easily, while weaker firms may either fail to attract them or attract different investor types altogether. In that case, a simple binary-response model may confound the effect of investor characteristics with non-random selection into the transaction. To address this issue, the analysis implements a two-stage residual inclusion (2SRI) procedure. In the first stage, entry is modelled as a function of exogenous covariates and a proximity-based instrument. The instrument is a binary indicator that equals one when the investor entering the transaction is in the DACH region. The intuition is that geographic proximity can affect the likelihood of participation in a distressed transaction through information, monitoring, and search frictions, while the second-stage model conditions on the same observable controls as the baseline success equation.

	First-stage probit (minimal)	First-stage probit (rich)	First-stage LPM
Investor-entry in DACH (IV)	12.494*** (0.573)	12.094*** (0.568)	0.720*** (0.017)
Standardized founding year	-0.575*** (0.095)	-0.548*** (0.091)	-0.099*** (0.010)
Multiple investors	-0.204* (0.092)	-0.180+ (0.094)	-0.031** (0.011)

	First-stage probit (minimal)	First-stage probit (rich)	First-stage LPM
CEO change		0.347** (0.105)	0.047** (0.016)
CEO relevant education		-0.331** (0.104)	-0.053*** (0.012)
Num.Obs.	2325	2325	2325
R2			0.642
R2 Adj.			0.639
AIC	1030.6	1013.4	440.6
BIC	1145.6	1139.9	572.9
Log.Lik.	-495.305	-484.690	-197.307
RMSE	0.25	0.25	0.26
Std.Errors	Custom	Custom	Custom

+ p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001

TABLE 11 : FIRST-STAGE IV ESTIMATION

The first-stage estimates confirm that the proximity indicator is a strong predictor of investor entry, though the source of this predictive power warrants transparency. As defined in this dataset, the variable “investor-entry in DACH” equals 1 when a DACH-based investor enters the transaction and 0 otherwise. A consequence of this construction is that the instrument equals one only in observations where Entry also equals one, meaning that: $P(\text{Entry} = 1 \mid \text{Instrument} = 1) = 1$ by definition.

This creates a form of quasi-complete separation in the first-stage probit, which inflates the estimated coefficient to 12.494 and accounts for its unusual magnitude. In substantive terms, the first stage is identifying that DACH investors who enter always generate an entry observation, while the identifying variation for investor selection comes from the contrast between Entry = 1 observations with a DACH investor (IV = 1) and Entry = 1 observations without one (IV= 0), relative to the full set of Entry = 0 observations.

This construction limits the formal IV interpretation, because the instrument cannot be treated as fully exogenous to the entry decision when it is partly defined by whether entry occurred. A cleaner instrument design would assign proximity at the investor-market level prior to the entry decision, rather than conditioning on the identity of the investor who entered.

The 2SRI exercise serves as a robustness check, not a formal causal tool, testing if selection into investor participation alters main results on investor types. Its findings show that investor entry isn't random, and the ranking of investor types namely corporate investors positive, accelerators negative, private equity positive, remains stable after corrections. This consistency with both clean probit and 2SRI models increases confidence that results aren't due to selection effects. The noted endogeneity issue suggests future research should use exogenous measures for stronger identification.

	Clean probit success	2SRI success
Control-function residual		1.778*** (0.299)
Corporate investor	1.659*** (0.168)	1.273*** (0.182)
Private equity investor	0.894*** (0.173)	0.618** (0.197)
Venture-capital investor	-0.395* (0.172)	-0.403* (0.200)
Accelerator investor	-1.075*** (0.239)	-1.264*** (0.290)
Standardized founding year	-0.232*** (0.062)	-0.426*** (0.087)
Multiple investors	-0.113 (0.093)	-0.237* (0.109)
CEO change	0.105 (0.103)	0.073 (0.125)
CEO relevant education	-0.278** (0.096)	-0.493*** (0.128)
Num.Obs.	2325	2325
AIC	1216.7	807.4
BIC	1360.5	956.9
Log.Lik.	-583.338	-377.698
RMSE	0.27	0.21
Std.Errors	Custom	Custom

+ p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001

TABLE 12 : SECOND-STAGE 2SRI ESTIMATION

The second-stage 2SRI estimates provide evidence consistent with non-random investor selection. The control-function residual is positive and highly significant (1.778, $p < 0.001$), which indicates that unobserved factors associated with investor entry are also related to turnaround success. In substantive terms, this supports the concern that a standard one-stage binary-response model may understate the role of selection in investor participation.

Importantly, however, the core investor-type results remain broadly intact after the endogeneity correction. The coefficient on corporate investors declines from 1.659 to 1.273 but remains positive and highly significant, while the private-equity coefficient falls from 0.894 to 0.618 and stays statistically significant at conventional levels. Venture capital remains negative and statistically significant in both the clean and the 2SRI specifications -0.395 and -0.403 , and the accelerator coefficient remains strongly negative, with the magnitude increasing in absolute terms from -1.075 to -1.264 . These patterns imply that the main baseline findings are not eliminated once the model accounts for endogenous entry.

Several control variables also shift in informative ways. The standardized founding-year variable remains negative and statistically significant and becomes larger in absolute value in the 2SRI model, implying that younger firms are less likely to achieve a successful turnaround. The coefficient on multiple investors becomes negative and statistically significant only after the endogeneity correction, whereas CEO change remains statistically insignificant. CEO relevant education is negative in both specifications and becomes stronger in the 2SRI model. These shifts suggest that part of the baseline variation in the success equation is indeed related to non-random entry dynamics rather than to purely exogenous investor assignment.

It is important to approach the endogeneity exercise with due diligence. The instrument is constructed based on the entering investor, inherently linking it to the entry process. Consequently, the 2SRI estimates should be regarded as robust evidence supporting the results, rather than as absolute confirmation of causality. In the context of this thesis, the most defensible conclusion is therefore twofold: first, investor entry is unlikely to be random; second, even after accounting for this selection mechanism, the positive association for corporate investors and the negative association for accelerators remain robust, while the private-equity effect becomes somewhat smaller but remains positive. The 2SRI tables complement this discussion by reporting the first-stage AMEs between the entry and the proximity instrument, thereby making the strength of the first stage fully transparent.

The control-function specification provides additional insight into potential endogeneity in investor entry. In the 2SRI probit, the generalized residual from the first-stage entry equation is positive and highly significant. Under the control-function interpretation, this implies that investor entry is correlated with unobserved determinants of turnaround success and that endogenous matching between investors and firms is likely to matter empirically.

Overall, the empirical analysis shows that investor identity is a key correlate of restructuring success in the DACH region. Corporate investors exhibit the strongest positive association with turnaround outcomes, followed by private-equity investors. Venture-capital investors and accelerators are negatively associated with success in the clean models, though these weaker investor categories become less stable once the endogeneity correction is introduced. The evidence on governance channels is more limited: private equity is associated with higher CEO-turnover rates, but CEO turnover itself is not a robust predictor of success. Taken together, the results support the view that different external investors bring different restructuring capabilities, and that these differences are economically meaningful in distressed corporate turnarounds.

6. Conclusion and Implications

This chapter concludes the thesis by summarizing the main empirical findings. It relates back to the research question and hypotheses, discussing the study's limitations, and outlining implications for practice and future research.

The central research question asked how different types of external investors are associated with the success of corporate restructurings in the DACH region. The empirical evidence suggests that external investors should not be treated as a homogeneous stakeholder group. Instead, their relationship with turnaround success differs systematically across investor types.

Table 13 below provides a structured overview of the four hypotheses tested in this thesis, mapping each to its empirical verdict and the key result that supports it.

Hyp.	Prediction	Verdict	Key Findings
H1	Turnaround success differs by investor type; PE and corporate investors are more strongly associated with success than other categories.	Supported	Corporate investors: AME +23.2%; PE: AME +12.5%. Both significant across all specifications.
H2a	CEO turnover is positively associated with turnaround success.	Not supported	CEO turnover coefficient is positive but statistically insignificant across all main specifications
H2b	Industry-relevant CEO education is positively associated with turnaround success.	Rejected	Significant negative effect AME = -3.9%.
H3	Multiple external investors are positively associated with turnaround success.	Not supported	Coefficient is negative and insignificant in main model, becomes significant and negative only after endogeneity correction.

TABLE 13 : HYPOTHESES VERDICT

We examined how different external investor types are associated with turnaround success in distressed restructurings in the DACH region. Using a clean binary-response specification, the empirical analysis showed that investor identity matters materially for restructuring outcomes. In the main probit and logit models, corporate and private-equity investors are positively associated with successful recovery. By contrast, venture-capital and accelerator investors are associated with lower turnaround probabilities in the clean main specification. This pattern is consistent with the interpretation that investors differ in restructuring capabilities, governance intensity, and suitability for late-stage distress. Investors with stronger operational, financial, and strategic restructuring capacity appear better positioned to support

successful turnaround processes than investor types whose capabilities are more closely aligned with early-stage growth financing.

The governance results are more limited. CEO turnover does not emerge as a robust predictor of turnaround success in the main success equation, and the multiple-investor indicator is not statistically robust either. At the same time, the exploratory governance analysis indicates that private-equity involvement is more strongly associated with CEO turnover than involvement by other investor categories. This is consistent with the view that private equity may be a more active participant in the governance of distressed transactions. However, since CEO turnover itself is not a robust predictor of turnaround success in the main model, this pattern should be treated as exploratory rather than as evidence of a confirmed governance mechanism.

The results point in particular to a distinction between investor categories that bring restructuring-specific capabilities and those that are more naturally positioned in earlier-stage financing environments. Corporate investors appear to be especially important, which is consistent with the view that strategic buyers may contribute sector knowledge and stronger industrial incentives to preserve going concern value. Private-equity investors also appear relevant, which is consistent with arguments in the literature that emphasise concentrated control, restructuring experience, and active governance.

In this sense, the thesis contributes to the restructuring literature by differentiating investor categories within one common empirical framework and by focusing on the DACH region, where legal, institutional, and stakeholder settings differ from the better-studied U.S. restructuring environment. The findings have implications for distressed firms, creditors, restructuring advisors, and policymakers. For firms and incumbent stakeholders, the results suggest that the choice of external investor matters not only for financing capacity but also for the probability of a successful turnaround. The identity of the incoming investor appears to be linked to different governance styles and restructuring strategy.

For creditors and advisors, the results underline that investors who can combine financial support with operational or strategic intervention may be more valuable in distressed contexts. In practical terms, investor screening in restructuring situations should therefore focus not only on available capital but also on the investor's restructuring track record, strategic fit, and ability to coordinate governance change.

An important point about the private-equity finding needs to be highlighted. While the positive link between private-equity investors and successful turnarounds is strong in the full set of 2,325 cases, this link becomes somewhat weaker when looking only at the smaller group of 282 companies with pre-distress financial data. In that smaller group, the private-equity factor is no longer statistically significant, whether or not accounting controls are used. Meanwhile, the corporate-investor factor remains positive and highly significant throughout. This difference has two main meanings. First, it shows that the corporate-investor result is the most reliable, as it stays consistent across the full sample, the smaller financial data set, and different statistical methods. Second, it suggests that the private-equity result should be viewed with caution: it might partly reflect unmeasured company traits linked to both private-equity entry and success, but not captured by the available controls in the full set. Readers and practitioners should therefore see the private-equity link as a suggestive pattern, not a proven fact, until it is confirmed by studies with more detailed pre-distress financial data.

The thesis has several limitations. First, the data are based on observed transactions recorded in Pitchbook rather than on the full population of distressed firms. The sample, therefore, reflects recorded restructuring and investor transactions rather than all firms that experienced financial distress. This should be kept in mind when interpreting external validity.

Second, the main empirical results are best interpreted as conditional associations rather than definitive causal estimates. Although the two-stage residual inclusion model indicates that endogenous investor selection is relevant, the identification strategy remains more limited than in an ideal quasi-experimental setting. Accordingly, the thesis is transparent that the main clean probit and logit specifications form the core evidence, while the endogeneity correction is treated as complementary robustness analysis.

Third, some firm-level accounting controls are only available for smaller subsamples. This means that certain robustness checks with pre-credit-event financial variables must be estimated on reduced samples and cannot fully replace the main specification. Fourth, governance mechanisms are difficult to observe comprehensively in transaction-level data. CEO turnover is only one visible correlate of investor involvement, and other important channels, such as board changes, covenant control, creditor coordination, or operational intervention, are only partially captured.

Future research could extend this study in several directions. One promising avenue would be to construct richer panel data that track firms before, during, and after distress, thereby

allowing stronger identification of timing, treatment, and post-restructuring performance. Future work could also explore how investor effects vary across legal regimes, industries, and distress severity. In particular, the interaction between investor type and legal restructuring tools in Austria, Germany, and Switzerland may offer a fruitful path for more institutionally detailed analysis. Finally, broader international comparisons could clarify whether the strong role of corporate investors observed here is a specifically DACH phenomenon or reflects a more general restructuring pattern.

Overall, the thesis shows that investor identity is an economically meaningful dimension of distressed restructuring outcomes in the DACH region. At the same time, the results caution against treating governance proxies such as CEO turnover as standalone explanations for restructuring success. The broader implication is that corporate restructuring outcomes depend not only on whether new capital enters the firm, but also on what type of investor enters, with which capabilities, incentives, and governance approach. By combining a DACH-focused restructuring setting with a differentiated investor perspective, this thesis contributes to a more nuanced understanding of how external stakeholders are associated with prospects of distressed-firm recovery.

Taken together, our findings are consistent with the central argument of the thesis: in distressed restructurings, the composition of external investors is associated with outcomes in ways that are economically, institutionally, and strategically relevant for successful turnaround outcomes.

7. References

- Aghion, P., & Bolton, P. (1992). An Incomplete Contracts Approach to Financial Contracting. *The Review of Economic Studies*. 59, 473–494. <https://doi.org/10.2307/2297860>
- Andrade, G. and Kaplan, S. N. (1998). How Costly is Financial (Not Economic) Distress? Evidence from Highly Leveraged Transactions that Became Distressed. *The Journal of Finance*. 53: 1443–1493. <https://doi.org/10.1111/0022-1082.00062>
- Asquith, P., Gertner, R. H., and Scharfstein, D. S. (1991). Anatomy of Financial Distress: An Examination of Junk-Bond Issuers. NBER Working Paper No. 3942. National Bureau of Economic Research. <https://ssrn.com/abstract=227358>
- Benmelech, E., & Bergman, N. K. (2011). Bankruptcy and the Collateral Channel. *The Journal of Finance*. 66: 337–378. <https://doi.org/10.1111/j.1540-6261.2010.01636.x>
- Bernstein, S., Giroud, X. and Townsend, R. R. (2016). The impact of Venture Capital Monitoring. *The Journal of Finance*. 71: 1591–1622. <https://doi.org/10.1111/jofi.12370>
- Bertrand, M., & Schoar, A. (2003). Managing with Style: The Effect of Managers on Firm Policies. *The Quarterly Journal of Economics*. 118: 1169–1208. <https://doi.org/10.1162/003355303322552775>
- Bundesrepublik Deutschland. (2024). Insolvenzordnung (InsO). Bundesgesetzblatt I 1994, 2866, as amended. <https://www.gesetze-im-internet.de/insol/>
- Bundesrepublik Deutschland. (2020). Gesetz zur Fortentwicklung des Sanierungs- und Insolvenzrechts (Sanierungs- und Insolvenzrechtsfortentwicklungsgesetz - SanInsFoG). Bundesgesetzblatt I 2020, Nr. 65, 3256–3314. https://www.bgbl.de/xaver/bgbl/start.xav?startbk=Bundesanzeiger_BGBI&jumpTo=bgbl120s3256.pdf
- Bundesrepublik Deutschland. (2021). Gesetz über den Stabilisierungs- und Restrukturierungsrahmen für Unternehmen (Unternehmensstabilisierungs- und -restrukturierungsgesetz – StaRUG). Bundesgesetzblatt I 2020, Nr. 65, 3256–3314. <https://www.gesetze-im-internet.de/starug/>
- Cameron, A. C. and Trivedi, P. K. (2005). *Microeconometrics: Methods and Applications*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511811241>
- Coval, J. D. and Moskowitz, T. J. (2001). The Geography of Investment: Informed Trading and Asset Prices. *Journal of Political Economy*. 109: 811–841. <https://doi.org/10.1086/322088>
- Djankov, S., La Porta, R., Lopez-de-Silanes, F. and Shleifer, A. (2008). The law and economics of self-dealing. *Journal of Financial Economics*. 88: 430–465. <https://doi.org/10.1016/j.jfineco.2007.02.007>
- Eckbo, B. E., and Thorburn, K. S. (2003). Control benefits and CEO discipline in automatic bankruptcy auctions. *Journal of Financial Economics*. 69: 227–258. [https://doi.org/10.1016/S0304-405X\(03\)00126-0](https://doi.org/10.1016/S0304-405X(03)00126-0)
- Eidenmüller, H. G. M. (2017). Contracting for a European Insolvency Regime (2017) European Corporate Governance Institute (ECGI) Law Working Paper No. 341/2017. Oxford Legal Studies Research Paper No. 28/2017. <https://ssrn.com/abstract=2896340>

European Commission: Directorate-General for Economic and Financial Affairs. (2023) Insolvency frameworks across the EU: Challenges after COVID-19. Publications Office of the European Union. <https://data.europa.eu/doi/10.2765/524729>

European Parliament and Council of the European Union. (2019). Directive (EU) 2019/1023 of the European Parliament and of the Council of 20 June 2019 on preventive restructuring frameworks, on discharge of debt and disqualifications, and on measures to increase the efficiency of procedures concerning restructuring, insolvency and discharge of debt, and amending Directive (EU) 2017/1132 (Directive on restructuring and insolvency). Official Journal of the European Union, L 172, 18–55. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019L1023>

European Union. (2012). Convention on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters (Lugano Convention). Official Journal of the European Union, L 339, 3–41. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32012R1215&qid=1766266772732>

Fagetan, A. M. (2025). Corporate Insolvency Laws in Selected Jurisdictions: US, England, France, and Germany—A Comparative Perspective. *Laws*, 14(2), 21. <https://doi.org/10.3390/laws14020021>

Fellner, M., & Henöckl, F. (2023). Restructuring Booklet. (ISBN 978-3-214-25384-4). MANZ'sche Verlags- und Universitätsbuchhandlung GmbH.

Fluck, Z., Garrison, K. and Myers, S. C. (2005). Venture Capital Contracting and Syndication: An Experiment in Computational Corporate Finance. NBER Working Paper 11624. National Bureau of Economic Research. <https://doi.org/10.3386/w11624>

Gertner, R. H. and Scharfstein, D. S. (1991). A Theory of Workouts and the Effects of Reorganization Law. NBER Working Paper No. t0103. <https://ssrn.com/abstract=573103>

Gilson, S. C. (1995). Investing in Distressed Situations: A market Survey. *Financial Analysts Journal*, 5: 8–27. <https://doi.org/10.2469/faj.v51.n6.1946>

Greene, W. (2019). *Econometric Analysis* (8th ed.). Pearson International. <https://elibrary.pearson.de/book/99.150005/9781292231150>

Hart, O. and Moore, J. (1998). Default and Renegotiation: A Dynamic Model of Debt. *The Quarterly Journal of Economics*, 113: 1–41. <https://doi-org.uaccess.univie.ac.at/10.1162/003355398555496>

Haque, S. and Kleymenova, A. V., (2023). Private Equity and Debt Contract Enforcement: Evidence from Covenant Violations. <https://ssrn.com/abstract=4361582>

Hellmann, T. and Puri, M. (2002). Venture Capital and the Professionalization of Start-up Firms: Empirical Evidence. *The Journal of Finance*, 57: 169–197. <https://doi.org/10.1111/1540-6261.00419>

Hotchkiss, E. S. and Mooradian, R. M., (1997) Vulture Investors and the Market for Control of Distressed Firms. *Journal of Financial Economics*. Volume 43, Issue 3, Pages 401-432, ISSN 0304-405X, [https://doi.org/10.1016/S0304-405X\(96\)00900-2](https://doi.org/10.1016/S0304-405X(96)00900-2).

Hotchkiss, E. S. and John, K. and Thorburn, K. S. and Mooradian, R. M. (2008), Bankruptcy and the Resolution of Financial Distress. SSRN Scholarly Paper. <https://dx.doi.org/10.2139/ssrn.1086942>

Hotchkiss, E. S. and Stromberg, P. and Smith, D. C., (2021). Private Equity and the Resolution of Financial Distress. AFA 2012 Chicago Meetings Paper, ECGI - Finance Working Paper No. 331/2012, <http://dx.doi.org/10.2139/ssrn.1787446>

Jensen, M. C. and Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3: 305–360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)

Jostarndt, P. and Sautner, Z. (2008). Financial distress, corporate control, and management turnover. *Journal of Banking & Finance*, 32: 2188–2204. <https://doi.org/10.1016/j.jbankfin.2007.12.040>

Kaplan, S. N. and Lerner, J. (2016). Venture Capital Data: Opportunities and Challenges, NBER Working Paper No. 22500, National Bureau of Economic Research. <https://www.nber.org/papers/w22500>

Kaplan, S. N. and Stromberg, P. (2009). Leveraged Buyouts and Private Equity. *Journal of Economic Perspectives*, 23: 121–46. <https://doi.org/10.1257/jep.23.1.121>

Khandwalla, P. N. (2001). Creative Restructuring. *Vikalpa: The Journal for Decision Makers*, 26: 3-18. <https://doi.org/10.1177/0256090920010102>

Lexova, I. and Khan, U. (2024). US companies increasingly opt to reorganize in bankruptcy, not liquidate. S&P Global Market Intelligence. <https://www.spglobal.com/market-intelligence/en/news-insights/articles/2024/3/us-companies-increasingly-opt-to-reorganize-in-bankruptcy-not-liquidate-80941865>

Li, K. and Wang, W. (2016). Debtor-in-possession financing, loan-to-loan, and loan-to-own. *Journal of Corporate Finance*, 39: 121–138. <https://doi.org/10.1016/j.jcorpfin.2016.06.004>

Maksimovic, V. and Phillips, G. (2001), The Market for Corporate Assets: Who Engages in Mergers and Asset Sales and Are There Efficiency Gains?. *The Journal of Finance*, 56: 2019-2065. <https://doi.org/10.1111/0022-1082.00398>

Meyer-Löwy, B., Ereira, D., East, R. and Preuß, J. (2024). The recent controversial restructuring of Leoni AG and the filing of Varta AG raise important issues for the German restructuring regime StaRUG and highlight important differences with the English Part 26A Restructuring Plan. Quinn Emanuel Urquhart & Sullivan, LLP. <https://www.quinnemanuel.com/media/fd4fhm3w/the-recent-controversial-restructuring-of-leoni-ag-and-the-filing-of-varta-ag-raise-important-issues-for-the-german-restructuring-regime-starug-and-hi.pdf>

Myers, S. C. (1977). Determinants of Corporate Borrowing. *Journal of Financial Economics*, 5: 147-175. <http://hdl.handle.net/1721.1/1915>

Myers, S. C. and Majluf, N. S. (1984). Corporate Financing and Investment Decisions when Firms have Information that Investors do not have. *Journal of Financial Economics*, 13: 187–221. [https://doi.org/10.1016/0304-405X\(84\)90023-0](https://doi.org/10.1016/0304-405X(84)90023-0)

Pearce, J. A. and Robbins, D. K. (2008). Strategic Transformation as the Essential last Step in the Process of Business Turnaround. *Business Horizons*, 51: 121-130, ISSN 0007-6813. <https://doi.org/10.1016/j.bushor.2007.11.003>.

Pitchbook. (2025). Data set. Pitchbook Data, Inc. (Accessed 12/2025), from <https://Pitchbook.com/>

Rajan, R. G. (1992). Insiders and Outsiders: The Choice between Informed and Arm's-Length Debt. *The Journal of Finance*, 47: 1367–1400. <https://doi.org/10.1111/j.1540-6261.1992.tb04662.x>

Republik Österreich. (2021). Restrukturierungs- und Insolvenz-Richtlinie-Umsetzungsgesetz (RIRUG). Bundesgesetzblatt I Nr. 147/2021. https://www.ris.bka.gv.at/Dokumente/BgblAuth/BGBLA_2021_I_147/BGBLA_2021_I_147.html

Republik Österreich. (2021). Restrukturierungsordnung (ReO). Bundesgesetzblatt I Nr. 147/2021. https://www.parlament.gv.at/dokument/XXVII/I/950/fnameorig_983177.html

Rivers, D. and Vuong, Q. H. (1988). Limited Information Estimators and Exogeneity Tests for Simultaneous Probit Models. *Journal of Econometrics*, 39: 347-366. [https://doi.org/10.1016/0304-4076\(88\)90063-2](https://doi.org/10.1016/0304-4076(88)90063-2)

Roberts, M. R. and Sufi, A. (2009). Control Rights and Capital Structure: An Empirical Investigation. *The Journal of Finance*, 64: 1657-1695. <https://doi.org/10.1111/j.1540-6261.2009.01476.x>

Ruf, M. and Weustenfeld, F. (2025). Germany: Shareholders under StaRUG and recent high-profile cases. Europe, Middle East and Africa Restructuring Review. *Global Restructuring Review*. <https://globalrestructuringreview.com/review/europe-middle-east-and-africa-restructuring-review/2025/article/germany-shareholders-under-starug-and-recent-high-profile-cases>

Schweizerische Eidgenossenschaft. (1889/2024). Bundesgesetz über Schuldbetreibung und Konkurs (SchKG; Debt Enforcement and Bankruptcy Act, DEBA). Systematische Rechtssammlung (SR 281.1) https://www.fedlex.admin.ch/eli/cc/11/529_488_529/de

Slatter, S. and Lovett, D. (2004). *Corporate Turnaround: Managing Companies in Distress*. First published by the Penguin Group then by Beard Books. ISBN: 1-58798-242-0

Solnet, D. J., Paulsen, N. and Cooper, C. (2010). Decline and Turnaround: A Literature Review and Proposed Research Agenda for the Hotel Sector. *Current Issues in Tourism*, 13: 139-159. <https://doi.org/10.1080/13683500802638219>

Swiss Confederation. (2025). Swiss Code of Obligations of 30 March 1911 (Status as of 1 January 2023). https://www.fedlex.admin.ch/eli/cc/27/317_321_377/en?print=true

Teschner, N., & Paul, H. (2021). “The impact of divestitures on shareholder wealth – The DACH case.” *European Journal of Management and Business Economics*, Vol. 30(1), 55–71. <https://doi.org/10.1108/EJMBE-08-2019-0133>

United States Code, Title 11, Chapter 7 - Liquidation. (2024). 11 U.S.C. §§ 701–784 (2024). <https://uscode.house.gov/view.xhtml?path=/prelim@title11/chapter7&edition=prelim>

United States Code, Title 11, Chapter 11 - Reorganization. (2024). 11 U.S.C. §§ 1101–1174 (2024). <https://uscode.house.gov/view.xhtml?path=/prelim@title11/chapter11&edition=prelim>

von Neumann, J., Morgenstern, O. and Rubinstein, A. (1944). *Theory of Games and Economic Behavior*: 60th Anniversary Commemorative Edition. Princeton University Press. <http://www.jstor.org/stable/j.ctt1r2gkx>

Wooldridge, J. M. (2010). *Econometric Analysis of Cross Section and Panel Data*. The MIT Press. <https://www.jstor.org/stable/j.ctt5hhcfr>

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The AI tools mentioned were used only to support the research, in line with the University of Vienna's guidelines. They helped with language and technical aspects, but the author independently selected sources, analysed data, developed arguments, and wrote the thesis. All content, translations, and findings are the author's own. The use of AI assisted the process but did not replace academic responsibility.
