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## Essays on Current Topics in Corporate Restructuring

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# Abstract

Corporations face periods of boom and decline in their regular life cycles. Only those corporations that successfully manage their decline and are able to turn the performance around can successfully sustain in the markets in the long run. Given the existential importance of corporate turnaround, the field has attracted significant attention from multiple literature streams. In its three essays, this dissertation builds on the existing literature on corporate turnaround by addressing previously identified research gaps while expanding the field to include current trends and new data collection approaches. The first essay focuses on the retrenchment phase of corporate turnaround and investigates the applicability of previous turnaround process literature findings for German mid-cap firms. The core of this first study is the construction of a unique sample comprising German mid-cap firms, both public and private. The results suggest that compared to previous US-based studies, German mid-cap firms appear to suffer from asset retrenchment during turnaround, while results for employee retrenchment do not deviate. The second essay studies the turnaround move of employee reduction in more detail, examining the relationship between corporate downsizing and earnings management. Based on a large multicountry study, the essay concludes that firms do not engage in income-decreasing earnings management before the announcement of major downsizing efforts. The third essay then turns the focus toward the currently intensely debated topic of ESG. Answering the question of how banks integrate ESG criteria into their restructuring decision-making, the study concludes that the impact of ESG on restructuring decisions is currently limited. With its results this dissertation substantially contributes to the corporate turnaround literature by expanding the empirical evidence to include the previously underrepresented contextual factors firm size, ownership and political costs, establishing a novel sample construction method for European turnaround studies, and adding to the nascent academic debate around ESG's implications for corporate restructuring efforts.

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# 1 | Introduction

## 1.1 Motivation & Relevance

From the financial crisis until 2020, the global economy experienced one of the longest boom phases in its history. Western economies experienced record-setting expansions, creating prosperous conditions for corporations involved in serving these markets. Due to these beneficial conditions, corporate insolvencies had been on a steady decline since the aftermath of the financial crisis, reaching their low point in the last 20 years. Even though economists expected the boom to end and started preparing consumers and businesses for an economic downturn, the swiftness with which COVID-19 hit led to global astonishment and disbelief. COVID-19 and subsequent crises, such as the Russian invasion of Ukraine and the increasingly visible consequences of climate change, served as a forceful reminder of just how suddenly economic conditions can change.

Public interest in the understanding, prevention, and successful management of corporate crises has been closely linked to the occurrence of these abovementioned macroeconomic downturns. In this regard, research and practice show a high degree of similarity. On the one hand, experiencing economic distress increases the perceived importance of corporate crises for firms, prompting them to overhaul their resilience and crisis management capabilities. On the other hand, widespread corporate crises produce vast amounts of data that pique the interest of academics, leading to renewed interest in the long-standing research field of corporate decline and corporate turnaround.

However, limiting research on corporate crises to settings featuring the emergence of macroeconomic downturns leads to the neglect of vital drivers of corporate decline. While poor economic conditions can be a critical driver of corporate decline, corporate distress, or even bankruptcy,

they are by no means a prerequisite. Companies can experience a decline at any time in their life cycle and for a multitude of reasons, many of which are internal to the company. As Hofer (1980) stated, "No matter what the state of the economy, no company is immune from internal hard times – stagnation or declining performance" (p.19). Thus, while understanding how companies fall into crisis and what actions they can take to regain competitiveness is continuously important, the emergence of multiple, overlapping global crises makes corporate crisis and turnaround research as relevant as ever.

In addition to macroeconomic crises such as the COVID-19 emergency or the Russian invasion of Ukraine and firm internal antecedents, policy shifts with respect to environmental, social, and governance (ESG) factors have further led to a pronounced practical relevance of corporate turnarounds, especially in the European Union (EU). Emission-heavy industries are increasingly confronted with transformational challenges as regulation and shifts in consumer preferences erode "brown" business models. One industry strongly impacted is the automotive industry and its suppliers. The EU plans to ban sales of petrol cars by 2035, and the resulting shift to battery electric vehicles (BEVs) has plunged automotive suppliers focused on petrol engines into crisis (European Parliament, 2021). Prominent examples of firms undergoing extensive corporate turnaround programs include Mahle, Leoni, and Huf (Müßgens et al., 2022, Dentz and Reifenberger, 2022).

Whether in decline for macroeconomic, firm internal, or regulatory reasons, firms have a range of measures at their disposal to reverse economic decline and turn their performance around. Research formalizing the corporate turnaround process has gained significantly in importance since the seminal contribution by Schendel et al. (1976), who coined the definition of turnaround as a "decline and recovery of performance" (p. 3). Despite this scholarly and practical importance and long-standing history, researchers have highlighted the continued fragmentation of theory and scarcity of empirical evidence in this research field. Integrating the existing theory into a novel framework, Schweizer and Nienhaus (2017) separate the corporate turnaround literature into four categories: (1) content, (2) process, (3) context, and (4) outcome (cf. Figure 1.1). In this framework, content includes measures that the company can take to improve performance and regain competitiveness. Context describes exogenous factors under which the company conducts the turnaround process, which consists of the generic stages of retrenchment and decline. Finally, outcome measures the success of the firm's endeavor.

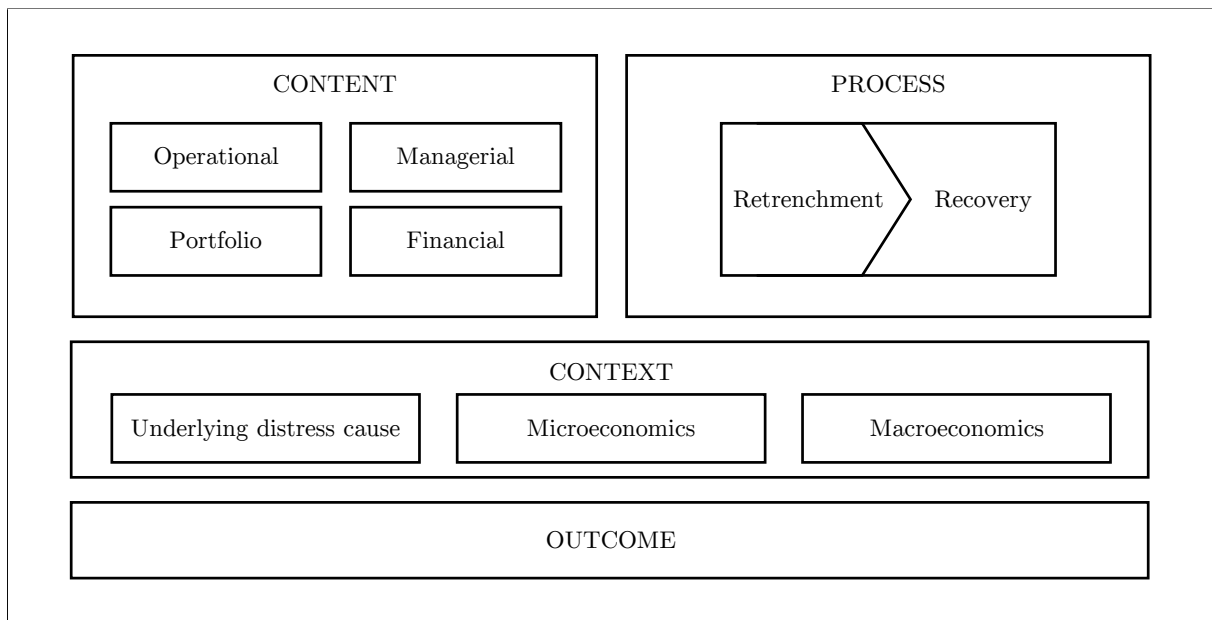


FIGURE 1.1: Turnaround Research Framework, Adapted from Schweizer and Nienhaus (2017)

The broad range covered by corporate turnaround research has elicited further criticism from scholars. While the corporate turnaround field has been extensively researched, empirical evidence is scarce, and few studies integrating multiple dimensions exist. Recent reviews of the literature have highlighted various avenues for advancing corporate turnaround research. Trahms et al. (2013), for example, argue that the theoretical lenses of resource orchestration and stakeholder theory have been underutilized in the literature, proposing more extensive research into the role and objectives of stakeholders, such as creditors, in the turnaround process. Schweizer and Nienhaus (2017) further stress that the samples of empirical studies are frequently biased in their contextual factors since they focus on large, US-based firms, hindering the transfer of findings to other geographies. This sentiment is shared by an earlier study by Bruton et al. (2003), who question the applicability of bold turnaround moves in the context of Asian markets.

Building theory and producing evidence on how firms can successfully turn their businesses around is essential for managing distressed companies and understanding corporate life cycles. In the current challenging economic environment and with risks of future crises looming, solid scientific evidence on corporate turnaround is as crucial as ever. While the turnaround process has been extensively researched, little is known about the applicability of the findings in a European or specifically German context. Even though the importance of contextual factors such as firm size, firm ownership, legislation, and financing structures is highlighted in the

literature, to our knowledge, no empirical studies that take the specific characteristics of the German or other continental European markets into account have been conducted.

The goal of this dissertation is to further advance corporate turnaround research by addressing several of the issues outlined above. Above all, this dissertation seeks to produce empirical evidence for the previously underrepresented European markets within corporate turnaround research, creating actionable insights for both scholars and practitioners. Three separate studies were conducted to achieve this goal, each representing its own academic contribution and addressing one specific issue of corporate turnaround.

The first essay investigates the efficacy of retrenchment actions within corporate turnaround in German mid-cap firms, motivated by two key considerations. First, my previous professional experience in the field of restructuring prompted the question of which actions German firms troubled by COVID-19 should undertake to emerge from the crisis successfully. While practitioner insights into corporate turnaround are plentiful, they are frequently based on gut feeling rather than on sound scientific evidence. Second, from a scholarly perspective, the essay is motivated by the bias of the samples in the extant literature toward large, public, American firms, which thus calls into question the applicability of its findings to a European or German context. Developing a firm identification approach suitable for the German market while establishing the differences in restructuring characteristics between the German and US contexts was a key motivation behind this research project.

While not planned from the onset in the research proposal for this dissertation, the second essay represents an in-depth examination of one measure highlighted as a critical retrenchment action in the first essay, employee downsizing. Inspired by the employee downsizing literature, conference contributions, and research seminars on measurement problems within accounting research, this essay combines the fields of earnings management and corporate turnaround. It can consequently be considered a direct derivation of the discussions around the first essay. The core of the study is to investigate whether executives manage earnings downward to reduce the potential political costs of employee downsizing measures. Addressing the call of Schweizer and Nienhaus (2017) for more international and matched samples, we utilize an international sample, which allows us to isolate potential contextual factors such as differing employee protection legislation.

The final essay of this dissertation concludes by connecting the specifics of German corporate turnarounds with the currently highly discussed topic of ESG. We examine how creditors, as critical stakeholders in corporate turnaround, evaluate ESG and how ESG impacts the restructuring decision of creditors in German prebankruptcy, out-of-court restructurings. Practical relevance is the primary motivator behind this research project. While ESG has been relevant for lenders due to increasing regulation in the loan origination and monitoring stages, much uncertainty exists around the impact of ESG on lenders serving distressed clients. Beyond this mounting uncertainty, claims of practitioners that corporate turnarounds could fail as firms could be denied financing based on ESG concerns drove interest in this topic. From an academic perspective, this study aims to fill the gap around the role of creditors as key stakeholders in the turnaround process, as presented by Trahms et al. (2013). Moreover, it takes into account the specific financing characteristics of financing structures in Germany, where firms exhibit a strong reliance on bank financing. Expanding the extant restructuring literature into the field of ESG, Essay III follows an explorative, qualitative research approach, in contrast to the quantitative methods used in the first two essays.

## 1.2 Background

Research on corporate turnaround, most famously defined as "the decline and recovery of performance" (Schendel et al., 1976), is grounded in the corporate crisis and corporate distress literature. Scholars in this research stream have focused on the strategies that companies can select to successfully emerge from distress and turn themselves around. The following section gives a brief overview of the roots and current state of corporate turnaround research while also defining key terms used throughout this dissertation.

### 1.2.1 Corporate Crisis and Distress

Even though frequently used throughout the literature, countless definitions of the term "crisis" exist, allowing diverse interpretations (Krystek, 1987). In the corporate context, Müller (1985) describes a crisis as "by definition, an unwanted event which always seriously threatens the continued existence of the firm" (p. 39). Such unwanted events threatening firm survival come in vastly different forms. Structuring the theoretical research on corporate crises, researchers

frequently differentiate five building blocks: (1) causes of crises, (2) identification of crisis characteristics, (3) the crisis process and stages, (4) the effects of crises, and (5) potential outcomes of crises (Krystek, 1987, Witte, 1981). However, not all aspects of corporate crisis research are equally relevant to managing crises. The following section focuses on those most relevant to corporate turnaround research, which include crisis causes and the crisis process.

### 1.2.1.1 Causes of Crises

Crisis causes can generally be classified into endogenous and exogenous causes (Bibeault, 1982). While endogenous or internal factors include causes that can be controlled by a firm's management, exogenous or external factors are outside of the management's direct control (Francis and Desai, 2005). Numerous lists of potential causes of crises exist in the literature (Balgobin and Pandit, 2001, Pearce and Robbins, 1993, Hauschildt et al., 2006). Robbins and Pearce (1992) list eight of the most relevant causes, four of which are of internal and the other four of an external nature. The internal factors include lack of operating controls, overexpansion, excessive leverage, and top management. External factors consist of economic problems, competitive change, technological change, and social change. In a typology of causes of crises in German firms, Hauschildt et al. (2006) differentiate twelve causes of crises, finding that management shortcomings are the most frequent cause, followed by issues in sales and strategic problems. Despite attempts to characterize and isolate the root causes of crises, scholars have stressed that the origins of crises are complex and frequently multiple. The existence of multiple overlying and combining causes of crises creates a challenging environment for firms when they are choosing their next steps to rapidly emerge from survival-threatening situations.

### 1.2.1.2 Crisis Process

While Müller (1985) defines a corporate crisis as including an element of threatened survival, this threat does not always materialize. Companies generally go through a sequence of crisis steps before the worst possible outcome, bankruptcy, is reached. This process is generally described in four stages (Müller, 1985, Bickhoff et al., 2004). A healthy firm can first enter a strategic crisis. In this stage, the firm's financials remain unaffected; only a threat to the future potential of the firm exists. If the correct remedies, such as strategic reorientation, are not employed in time, the firm can slip into a performance crisis. In a performance crisis, performance targets

such as profitability or sales goals are missed, increasing the pressure on the company and its management. The firm can potentially enter a liquidity crisis if the performance crisis persists. If the survival-threatening liquidity problems cannot be resolved in time, the company becomes insolvent and is forced into the last crisis stage, bankruptcy. As the pressure on the company to reverse course increases during the crisis process, the required countermeasures also become more severe. While a strategic crisis might be resolved with the reorganization of resources, more drastic steps such as asset sales or employee downsizing must regularly be employed in advanced crisis stages to push the company back on track.

## **1.2.2 Corporate Turnaround**

### **1.2.2.1 Foundational Literature**

The heart of corporate turnaround research is finding a suitable response to guide a company out of the crisis. Starting with works by authors such as Schmalenbach and Bauer (1949) in the first half of the 20th century, corporate turnaround investigations have been an essential niche topic of economic and business research (Schmuck, 2013). The literature stream around corporate distress and subsequent turnarounds gained significant relevance in the late 1970s and 1980s, driven by an increase in bankruptcies and M&A activity in the United States (Schweizer and Nienhaus, 2017). While the early literature focused on case studies and theory building, beginning in the 1990s, more extensive empirical evidence was introduced based on small-sample studies.

Early conceptual contributions were focused mainly on strategic questions, trying to identify generic turnaround strategies and linking them to specific causes of decline. Frequently cited as a key seminal study, Schendel et al. (1976) categorize causes of decline and subsequent turnaround actions dichotomously in either strategic or operational. While strategic causes include increased competition, increased wages, and issues with raw material supply, operating causes consist of depressed price levels, excess plant capacity, and strike and labor problems. Expanding the work of Schendel et al. (1976), Hofer (1980) develops four generic types of turnaround strategies that firms can follow for an operational turnaround. In contrast to isolated turnaround actions, these turnaround strategy types represent holistic patterns of turnaround moves (Hambrick and Schechter, 1983). Next to the development of turnaround types, Hofer (1980) establishes a link between turnaround strategy selection and crisis severity. The view of turnaround strategies as a



function of firm characteristics and crisis severity, described as the contingency view (Hambrick and Schecter, 1983), laid the groundwork for later empirical studies investigating the influence of the severity of the decline on turnaround success.

Building on the initial classification of strategic and operational turnaround moves, scholars have refined the categorization over the years. A classification system developed by Lai and Sudarsanam (1997) that groups turnaround moves into four generic turnaround strategy types is frequently used in current research. Firms can choose turnaround actions in the (1) operational, (2) asset, (3) managerial, and (4) financial areas. An overview of example turnaround moves is demonstrated in Table 1.1.

TABLE 1.1  
**Overview Turnaround Moves**

List of example turnaround moves that firms can select. Table adapted from Lai and Sudarsanam (1997).

Strategy Group	Turnaround Move	Definition
Operational Restructuring	Operational Restructuring	Cost rationalization, layoffs, closures and integration of business units
Asset Restructuring	Asset Sales	Divestment of subsidiaries, management buyouts, spinoffs, sale-and-leaseback, and other asset sales
	Acquisitions	Full and partial acquisitions of businesses
	Capital Expenditure	Internal capital expenditure on fixed assets such as plant and machinery
Managerial Restructuring	Managerial Restructuring	Removal of chair or chief executive officer
Financial Restructuring	Dividend cut or omission	Omission or reduction of dividends from previous year
	Equity Issue	Issue of equity for cash
	Debt Restructuring	Debt refinancing involving extending, converting or forgiving debt and interest

Large parts of the turnaround literature are focused on operational turnaround moves. In an evolution of their turnaround strategy classification, Sudarsanam and Lai (2001) summarize operational turnaround as "cost reduction, revenue generation, and operating asset reduction strategies to improve efficiency and margin by reducing direct costs and slimming overheads in line with volume" (p.185). Even though this definition includes the element of sales generation, empirical studies frequently neglect topline improvements and focus on asset and cost reduction actions.

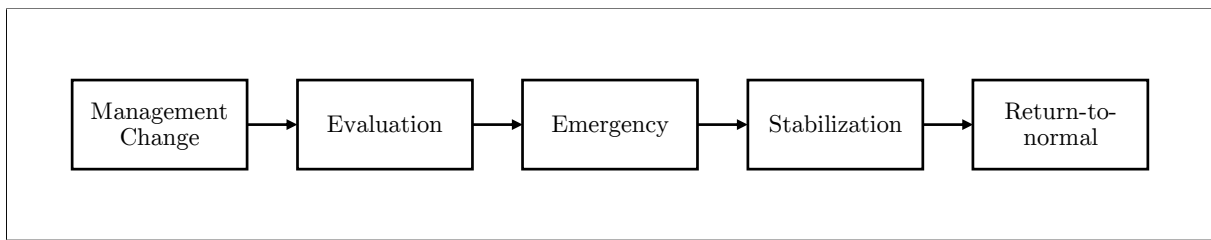


FIGURE 1.2: Generic Turnaround Process Stages, Adapted from Bibeault (1982)

### 1.2.2.2 Turnaround Process

In addition to research on the content of corporate turnarounds, scholars have developed concepts of a generic turnaround process that firms follow after their decline. The groundwork for the deterministic turnaround process was introduced by Schendel et al. (1976), who distinguish the stages of decline and recovery in their definition of corporate turnaround. Connecting turnaround content with the turnaround process, Bibeault (1982) proposes a generic five-stage turnaround process, distinguishing the management stage, evaluation stage, emergency stage, stabilization stage, and, finally, return-to-normal stage (Hambrick and Schechter, 1983).

Robbins and Pearce (1992) identify two main phases of corporate turnarounds by summarizing the previous multistage models of the corporate turnaround process. The first phase, the retrenchment phase, is aimed at stabilizing the firm, avoiding bankruptcy, and achieving positive cashflows (Robbins and Pearce, 1992). Characterized by efforts targeted at "stopping the bleeding" (Hambrick and Schechter, 1983, p. 235), the goal of the retrenchment stage can be achieved through aggressive cost, asset, and headcount reductions. Once a solid basis for further operation has been established and bankruptcy has been avoided, the firm can switch its focus toward regaining market share and firm size in the second phase, the recovery phase. How much the firm wants to grow or whether it wants to remain at the scaled-back but profitable size postretrenchment is subject to the firm's conscious decision (Bibeault, 1982).

Within corporate turnaround research, the retrenchment stage has received considerable attention. Considering the immediate reaction to a firm's decline, scholars have noted the importance of retrenchment in understanding why some firms emerge from crises successfully while others go under (Arogyaswamy et al., 1995, Schweizer and Nienhaus, 2017). Consequently, retrenchment actions have been extensively empirically tested.

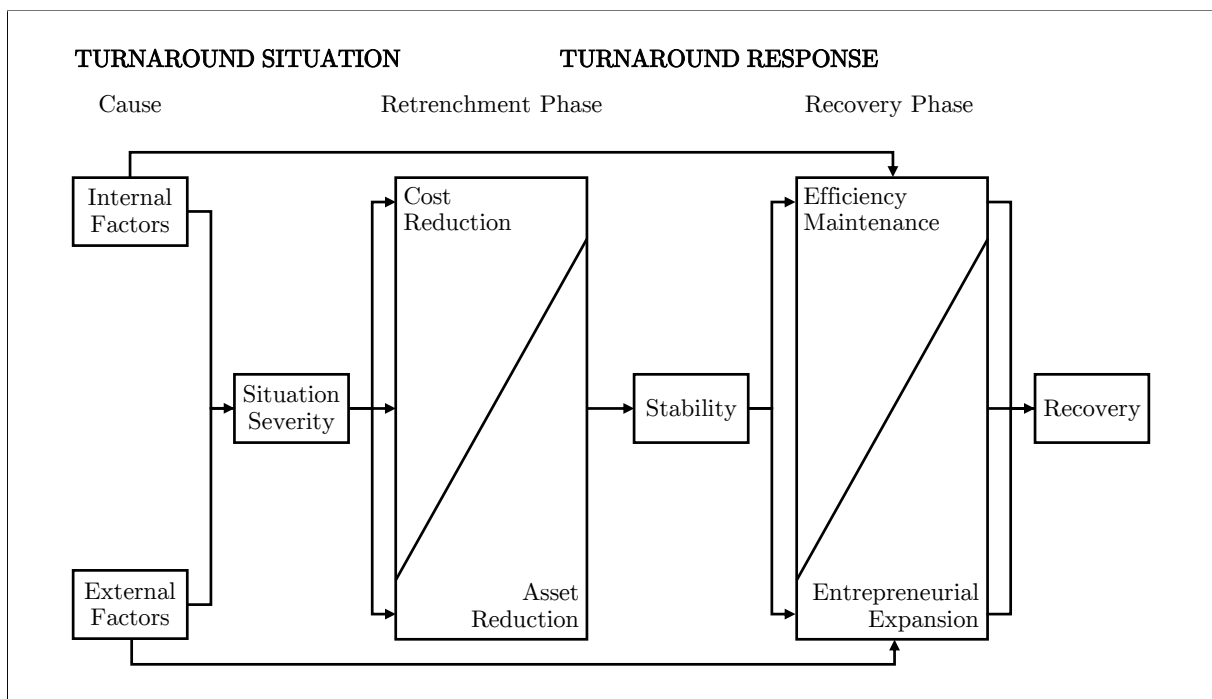


FIGURE 1.3: A Model of the Turnaround Process, Adapted from Robbins and Pearce (1992)

### 1.2.2.3 Retrenchment Stage

The first empirical evidence of retrenchment was produced by Robbins and Pearce (1992). In a small sample study based on data from the US milling industry, the authors deliver the first empirical validation of a retrenchment stage, finding that retrenching firms achieve more substantial ROI increases than nonretrenching firms during the turnaround. Moreover, they find that, similarly to what Hofer (1980) proposes, the severity of the crisis does influence the response–performance relationship. In a replication of the study of Robbins and Pearce (1992), Barker and Mone (1994), however, call the causality of retrenchment and turnaround success into question. Rather than a cause of successful turnaround, retrenchment could be the result of a steep performance decline.

In an attempt to eliminate the weaknesses of the previously simplified concepts, Arogyaswamy et al. (1995) expand the turnaround process model by adding the factors of stakeholder support and internal climate, stating that "maintenance of favourable exchange relationships with external stakeholders that provide the firm with resources becomes critical to firm survival" (p. 499). Similar changes are mentioned by Trahms et al. (2013), who propose adding the response factors

of managerial cognition, strategic leadership, and stakeholder management after an extensive review of the empirical turnaround process literature.

Alongside the overall turnaround process and the characteristics of process stages, individual actions within the separate stages have been extensively researched. Between retrenchment and recovery, however, the empirical work has remained focused on retrenchment actions conducted by firms. Beyond the early theoretical research classification, which categorized moves as either strategic or operational, Tangpong et al. (2015) identify asset, cost, and employee retrenchment as general retrenchment strategies. In line with the extant literature and the research objectives of this dissertation, the following section focuses on asset and employee retrenchment.

Asset retrenchment, or the aggressive reduction of assets, was identified by Hofer (1980) as a drastic turnaround measure that firms close to bankruptcy should immediately follow. Since this seminal contribution, asset retrenchment has been cited as a critical retrenchment move in the literature. Lim et al. (2013) define asset retrenchment as "the net reduction of assets, such as closing plants, divesting equity (sell-offs, spin-offs, and equity carve-outs), and reducing stocks of property, equipment, and inventory" (p. 43), demonstrating the vast array of isolated asset retrenchment moves. Due to its highlighted importance in the literature, with authors such as Sudarsanam and Lai (2001) considering asset reduction imperative for firms operating well below their capacity, asset retrenchment has been subject to many empirical studies. Overall, the empirical evidence shows a tendency toward a positive influence of asset retrenchment on turnaround performance (Robbins and Pearce, 1992, Bruton et al., 2003, Schoenberg et al., 2013). However, these positive results are not unequivocal, with researchers stressing the importance of contextual factors surrounding the firms in turnaround (Trahms et al., 2013, Schweizer and Nienhaus, 2017, Rico et al., 2021).

Employee retrenchment describes a subtype of the more general employee downsizing. Whereas employee layoffs are the subject of several research streams, downsizing focuses on improving the firm's efficiency to increase profitability (Schmitt and Raisch, 2013). In a further specification, we define employee retrenchment as a variation of downsizing aimed at stopping a firm's decline. While there are comprehensive empirical studies investigating the efficacy of employee layoffs and downsizing in particular, evidence on the more specific process of employee retrenchment is rare. John et al. (1992) demonstrate that firms respond to decline with extensive employee retrenchment. Chowdhury and Lang (1996) find a positive influence of employee retrenchment on the likelihood of a successful turnaround. More recently, Tangpong et al. (2015) fail to

register a significant effect of employee retrenchment on turnaround success for early employee retrenchment. From a theoretical perspective, scholars highlight potential short-term gains at the expense of long-term risks.

### 1.2.3 Turnaround in the Context of the German Market

Compared with other international markets, the German economy exhibits unique characteristics that can influence the context of research on corporate turnarounds. With researchers highlighting the importance of contextual factors for evaluating turnaround actions, a thorough understanding of the differences in characteristics between the German and Anglo-American firms frequently utilized in international studies is crucial. Moreover, differences in the regulation and legislation of the turnaround process, such as the bankruptcy code, strongly impact how firms and their stakeholders operate. This section explores the most important characteristics of German firms and their implications for turnaround research.

#### 1.2.3.1 Characteristics of Firms

The German economy is characterized by a strong contribution of small and medium-sized firms, often called the "Mittelstand". Even though the importance of the Mittelstand for the German economy is undisputed in the literature, researchers are at odds over how to define Mittelstand firms (Pahnke and Welter, 2019). While firm size in employees was frequently used as the definition criterion, a more expansive definition that includes family-owned and family-controlled firms has recently been established (Schlömer-Laufen et al., 2014, Pahnke and Welter, 2019). Research on family firms has demonstrated that family firms display significant differences from regular firms. Among others, family firms are more risk averse (Gómez-Mejía et al., 2007), are more long-term oriented, have more altruistic motives (Cater and Schwab, 2008), and exhibit smaller asset stocks (Andersson et al., 2018).

In addition to the frequent involvement of family, the ownership structure, in general, is a crucial characteristic of German firms. Firms are frequently private enterprises, reducing the importance of equity capital markets, especially in comparison to that in the US (Deutsche Bundesbank, 2014). Due to the muted influence of public equity markets, German firms, both public and private, have historically strongly relied on bank financing, frequently in the form of bank loans from multiple banks (Davis, 2003, Davydenko and Franks, 2008). The strong reliance on bank

debt puts particular emphasis on creditors as key stakeholders, especially for companies in crisis and close to bankruptcy.

Beyond microeconomic factors such as ownership and financing structure, macroeconomic factors such as regulation are considered critical contextual factors in turnarounds. Germany exhibits strong investor protection regulations, especially for creditors, increasing their potential influence over the firm (Davydenko and Franks, 2008). Moreover, German employees are well protected, as Germany features high levels of employee protection and dismissal rights (OECD, 2019) while also having strong union laws and rigid employment contracts (Atanassov and Kim, 2009, Botero et al., 2004). Strong employee protection laws drive "firing costs", which Hunt (2000) defines as "costs associated with the termination of contracts of small or large groups of employees" (p. 67). Thus, the level of workforce protection regulation strongly impacts retrenchment actions such as employee retrenchment, as employers face higher costs when downsizing in Germany and other European markets.

### 1.2.3.2 Characteristics of Corporate Turnarounds

Along the crisis process outlined by Müller (1985), the pressure on the firm to regain competitiveness increases. The increased risk of bankruptcy in advancing crisis stages is the primary concern of the firm's management and stakeholders. In severe cases, with insolvency looming, firms face different options that they can exercise depending on local legislation or the bankruptcy code.

While firms in the US can utilize Chapter 11 bankruptcies to reorganize themselves under bankruptcy protection rules and emerge as a going concern, similar bankruptcy rules in Germany are not as frequently employed (AmCham Germany, 2009). A key reason is the unattractiveness of such rules to the firm's management and owners due to the associated substantial degree of external control and high complexity of the process (Handelsblatt, 2005). Even though another intermediate, preinsolvency restructuring option was introduced with the "Act on the Stabilization and Restructuring Framework for Companies" (StaRUG) in 2021, firms in crisis and their stakeholders still frequently try to address the corporate decline in out-of-court restructuring proceedings.

Even though out-of-court restructuring proceedings can be a tool to alleviate pressure and avoid bankruptcy, they exhibit several challenges that firms must overcome. First and foremost, companies undergoing a severe turnaround generally require outside assistance to avoid bankruptcy.

As these contributions represent economic losses to shareholder and stakeholder groups, achieving the requirement agreement with all company creditors can prove problematic since individual creditors can block the proposed restructuring measures. In the context of the loan-reliant financing structures of German firms, this setting puts lenders in a special position in German prebankruptcy turnaround proceedings.

### 1.2.3.3 The Role of Creditors

Banks in Germany are highly regulated regarding handling nonperforming loans, not least due to their significance in turnaround proceedings. Nonperforming loans must be handled separately from the regular business relationship for banks regulated by the Federal Financial Supervisory Authority (BaFin). Credit institutions use different names for the specific departments handling these problematic loans; the term “workout” is frequently utilized.

The workout process and goals of the workout department have been the subject of academic studies in the German turnaround literature (Volk, 2007, David, 2001, Dinibütünoğlu, 2008). A common denominator of various models explaining the workout department’s objectives is the aim of damage limitation. David (2001), for example, distinguishes seven subgoals of damage limitation, ranging from loss limitation to the avoidance of reputational damages.

The literature has established three generic actions taken by lenders faced with a borrower in crisis to achieve these goals. The lender can either actively support the company, employ a waiting strategy, or recall its loans, potentially sending the borrower into bankruptcy (Dinibütünoğlu, 2008). The strong emphasis on lenders and the significance of their restructuring decision thus elevate creditors to critical stakeholders in the German turnaround process.

### 1.2.4 Trends in Corporate Turnaround

The underlying objectives of the corporate turnaround literature have remained the same after decades of academic studies: what distinguishes companies that emerge from crisis successfully from those that do not? At the same time, practitioners have been concerned with how companies can best recover from decline and secure the firm’s survival.

Despite these basic mechanisms behind corporate turnarounds, the field is steadily evolving. While early research was driven by the bankruptcy and merger waves of the 1980s, firms face

different challenges today. A recent practitioner report by the consulting firm Roland Berger summarizes the key causes for corporate crises highlighted by turnaround specialists: (1) disruptive innovation and digitalization, (2) increasing raw material costs, and (3) implications of ESG requirements (Roland Berger, 2021).

Digitalization has been a key driver of corporate turnarounds over the past years. Accelerating digitalization has rapidly changed business models, putting entire industries out of business and applying pressure on incumbents. Beyond the practical implications, corporate turnaround in the context of digitalization is currently being extensively researched (Barker et al., 2022). Barker et al. (2022), for example, summarize the current and forthcoming literature in the field, emphasizing that "compared to previously studied decline and turnaround contexts, [...], the context of digitalization shows some unique features that are likely to substantially change our current understanding of established turnaround wisdom" (p.2).

While the second highlighted current cause of corporate crises, increasing raw material prices, has already been identified as a cause of decline by the early turnaround literature (Hofer, 1980, Schendel et al., 1976), the third topic, ESG, has only recently gained prominence. Despite its recent emergence, ESG as a factor in restructuring is subject to intensive discussions by practitioners, with experts stating that "there will be no turnaround without ESG" (Emmrich, 2022). Recent surveys of practitioners have established regulation as a key source of the impact of ESG on companies (Dressler et al., 2022). Moreover, ESG is expected to strongly impact the future viability of business models and access to finance for firms. Financing restrictions for firms performing poorly across the ESG dimensions are predominantly seen as critical for firms requiring refinancing (Wens et al., 2021). With firms being denied financing based on their ESG performance, this threat appears tangible (Reifenberger, 2021). Notwithstanding practitioner discussions and potentially similar contextual conditions to those in the setting of digitalization, academic literature on ESG in turnarounds is scarce. Whereas the topic has become essential in adjacent fields such as finance, corporate turnaround research has not yet embraced the subject of ESG and the opportunities that it offers to advance the understanding of corporate decline and corporate turnarounds.



### 1.3 Research Objectives & Contribution

This dissertation seeks to advance the corporate turnaround literature by closing gaps in and expanding the extant literature to include current trends. While the identification of current trends drew on recently published practitioner reports and expert interviews, the research gaps were identified from a combination of literature reviews and a structured review of recent corporate turnaround research. Even though the research projects focus on individual topics within the corporate turnaround domain, they are connected by their focus on firms in a European setting. Each research project is summarized in the form of an essay.

The following section provides a summary of the three essays, outlining their motivation, methodologies, main results, and contributions to both scholars and practitioners. Whereas the first two essays primarily focus on closing gaps identified in the literature and utilize quantitative methods, the third essay exploratively examines the potential implications of ESG for corporate turnarounds using a qualitative research approach. A brief overview of the three essays that combine for this dissertation, including their methodology and key results, is presented in Table 1.2.

The first essay's objective is to examine the applicability of the previous findings of the turnaround process literature for German firms. The comprehensive turnaround literature review by Schweizer and Nienhaus (2017) states that the samples in the relevant works are frequently biased toward public, large, and primarily American firms, casting doubt on the applicability of findings to different contexts. Moreover, as researchers frequently point out, contextual factors appear to significantly impact the results of studies investigating factors contributing to successful corporate turnarounds. Trahms et al. (2013), for example, find that organizational characteristics such as firm size could be mitigating factors in turnaround situations, while Lai and Sudarsanam (1997) demonstrate that ownership structures influence strategic choices in the turnaround process. Limited data availability is one key reason for the lack of turnaround research using small, private, and non-American samples. While declining firms can be identified using an accounting indicator-based approach, the required financial data are frequently not readily available for large numbers of smaller, private firms.

As described in the previous section, the retrenchment response has emerged as one of the most important topics within turnaround research. Understanding whether firms retrench as a

consequence of severe decline and how individual retrenchment moves contribute to turnaround success has been a key topic of discussion since the seminal contribution by Robbins and Pearce (1992). At the beginning of the COVID-19 pandemic, retrenchment responses further gained significance in the practitioner turnaround community. As firms faced significant redundancies in the face of the partial lockdowns and impending economic crisis, the question of how many resources should be shed to secure survival without compromising a medium-term recovery arose. As a result, Essay I aims to answer the following research question: How do asset and employee retrenchment actions influence the postretrenchment operating performance of German mid-cap firms?

The methods employed in Essay I are designed to overcome the shortcomings identified in the previous literature. In a first step, we construct a novel dataset of German mid-cap firms undergoing turnaround based on a detailed manual screening of the European Restructuring Monitor database. Subsequently, we compile the required financial data by matching firms with those in the Bureau van Dijk databases. Due to errors and missing data, we complement each firm's datasets through manual reviews using the filings required under German law. We further address the criticism of Trahms et al. (2013) regarding the selection of financial ratios and elect to rely on not only ROA but also EBITDA ratios. The resulting data are then analyzed descriptively and using ordinary least squares (OLS) regression, in line with previous studies.

The empirical results of Essay I suggest that asset and employee retrenchment significantly impact turnaround performance. Sampled firms that significantly reduced assets during retrenchment experienced a lower turnaround performance, lending evidence to the hypothesis that smaller firms are asset constrained and exhibit lower levels of slack assets that can be reduced in retrenchment without compromising recovery performance. On the other hand, the results revealed that firms that shed employees showed increased turnaround operating performance. Compared to the firms in previous US-centric studies, German mid-cap firms appear to suffer from asset retrenchment during turnarounds. On the other hand, the findings for German mid-cap firms do not differ from those for previously surveyed US firms regarding employee retrenchment.

Essay I adds to the discussion on corporate turnaround by examining the context of German mid-cap firms with three main contributions. First, the study demonstrates that alternative methods for identifying turnaround firms can overcome the identified data restrictions. While tedious, this novel approach to sample construction offers the opportunity to conduct more integrative

studies, as demanded by the literature. As a result, future research can resolve the fragmentation of empirical retrenchment research that is frequently criticized in the literature (Trahms et al., 2013). Second, we present empirical insights into retrenchment responses beyond those of the previous, biased samples, strengthening the evidence for employee retrenchment while further underlining the importance of contextual factors for evaluating turnaround performance (Morrow et al., 2004, Pettigrew, 1987). Last, our results carry practical implications by demonstrating support for employee retrenchment as a response to a crisis. In reducing assets, however, firms should closely examine the contribution to a potential recovery before making significant decisions.

Essay II examines the turnaround move of employee reduction in more detail. With this study, we aim to investigate the relationship between earnings management and corporate downsizing. While there is vast literature on downsizing as a response to decline (Datta et al., 2010), investigations of preemptive downsizing or downsizing in earlier crisis stages, such as strategic crises, are rare. As downsizing has been found to impose substantial costs on the firm (Hunt, 2000, Brockner et al., 2004, Travaglione and Cross, 2006), the literature has suggested that firms try to reduce these costs when planning their downsizing effort. In addition to the direct costs, political costs have emerged as a driver behind downsizing costs (Ahmadjian and Robinson, 2001, Flanagan and O'Shaughnessy, 2005, Zyglidopoulos, 2005). Drawing on pay negotiation research, the literature has proposed that the political costs of downsizing can be reduced by misleading employees regarding the true performance of the firm through earnings management efforts. However, two empirical studies, one focused on the US (Hall et al., 2005) and another on France (Verdier and Boutant, 2016), yield contradictory results. As a result, the objective of Essay II is to advance corporate downsizing and earnings management research by reconciling the existing empirical evidence regarding the use of earnings management as a tool to reduce downsizing costs.

To achieve our research goal and reconcile the existing empirical findings, we draw on the pay negotiation literature and integrate methods from the previously highlighted empirical studies on downsizing and earnings management. To overcome the weakness of a lack of regional variables, we choose a multicountry setting for our sample. Moreover, we derive a measure for political costs based on data by Hall et al. (2005), allowing us to control for regulatory and cultural differences between countries. We estimate earnings management through discretionary accruals based on

the methods developed by Jones (1991), Dechow et al. (1995), and Kothari et al. (2005). The resulting data are analyzed through matched sample analysis and panel regression models.

The analyses of Essay II suggest that firms do not engage in income-decreasing earnings management before announcing downsizing efforts. Neither the matched sample nor the panel regression results show a significant increase in discretionary accruals in the year prior to the announcement of downsizing. However, we do find some evidence for increased discretionary accruals in the downsizing year using the Jones model. Overall, we cannot confirm the findings of Verdier and Boutant (2016), who suggest that managers adjust earnings downward to reduce the political costs associated with downsizing.

Based on its results, Essay II advances the literature on downsizing and earnings management and, more broadly, political costs in critical areas. In confirming the findings of Hall et al. (2005) in an integrative research approach, we demonstrate that even in countries with high implied political costs, managers appear to not engage in earnings management to avoid the political costs of downsizing. Our findings help to reduce the importance of regional differences as an explanation for the differences in the scholarly discussion. Furthermore, by introducing a multi-country sample through the use of the European Restructuring Monitor and a proxy for political costs through the use of data provided by Botero et al. (2004), we create a basis for further international research around the topic of political costs. Moreover, not only scholars have concerned themselves with potential political costs. As press research shows, firms announcing workforce reductions while not posting substantial losses are frequently subject to public discussion and outcry. Our results indicate that managers are not engaging in earnings management to avoid these public discussions.

The research goal of Essay III is to examine the impact of ESG on the corporate turnaround process through the lens of a critical stakeholder group, namely, creditors. ESG has developed into a focal topic in management and finance research over the last few years. For example, several studies on the impact of ESG on the financing conditions of firms have been conducted. Cheng et al. (2014) demonstrate that firms with better ESG performance experience fewer capital constraints, and Gillan et al. (2021) summarize the literature regarding the impact of ESG on firm risk and the cost of capital, stating that despite a few exceptions, the evidence indicates that CSR lowers risk and the cost of capital. However, research on the impact of ESG on corporate turnarounds is sparse. On the other hand, practitioners have declared ESG to be one of the most pressing issues in corporate turnarounds (Becker, 2021, Emmrich, 2022,

Reifenberger, 2021). In particular, the impact of regulation on access to finance is highlighted as a concern for firms in crisis, as practitioners suggest that firms have been denied financing due to poor ESG performance.

From a theoretical perspective, stakeholders play a critical role in a firm's turnaround process. The principle of stakeholder theory that management has to consider and align the interests of the firm's stakeholders holds especially true in situations of crisis (Freeman, 1984), not least as the framework of stakeholder management was developed to be "responsive to the concerns of managers who were being buffeted by unprecedented levels of environmental turbulence and change" (Freeman and McVea, 2005, p. 184). As a result, the impact of significant stakeholder groups has been extensively reviewed in the literature. Empirical research suggests that stakeholders and stakeholder management strongly influence firms' survival (Pajunen, 2006, D'Aveni and MacMillan, 1990). Trahms et al. (2013) highlight the role of creditors in the turnaround process, emphasizing that creditors can exert power over the firm in crisis and access to resources through banking can increase survival rates.

Combining the stakeholder perspective with the pressing practical implications of ESG and the academic research gap concerning the impact of ESG on turnaround situations, Essay III aims to shed light on how ESG is currently practiced in banks' workout departments and how ESG risks influence restructuring decision-making for financing institutions. A cross-sectional multi-case study approach based on Eisenhardt (1989) is utilized to answer these questions. Key reasons for selecting a qualitative method are the lack of extant literature, the unavailability of structured data for analysis, and the exploratory and iterative nature of the research project. Cases are identified through theoretical sampling, yielding eight cases with a total of thirteen semistructured expert interviews. The primary source of analysis is interview transcripts, which are coded according to the methods outlined by Gioia et al. (2013) and Corbin and Strauss (1990) and subsequently analyzed based on the approach of Eisenhardt and Graebner (2007).

The results of Essay III confirm the state of widespread discussion around ESG in corporate turnarounds. ESG is seen as an essential issue by financing institutions, especially in the strategy process. Along the credit process, the importance of ESG is pronounced in the new loan origination stages, where detailed ESG assessments are conducted and loan applications are potentially denied based on their outcomes. In workout departments, while awareness of ESG is high, the current impact on daily operations is perceived as muted. Currently, ESG has no direct impact on the restructuring decision of creditors. It is, however, indirectly incorporated into the

decision-making process, as it impacts factors directly relevant to the bank's restructuring decision, such as regulatory pressure, strategic considerations, refinancing ability, and restructuring ability. While we show that ESG assessments can indirectly impact the restructuring decision, ESG risks are frequently overshadowed by economic considerations. The focus on an economic decision is aided by the perception that ESG performance can be improved over time, decreasing its importance in the tradeoff with other bank objectives.

Essay III substantially adds to the academic and practical discussion around the impact of ESG on corporate turnarounds. First, the study adds to the growing discussion about the impact of ESG on turnarounds by showing that while ESG is perceived as an important topic, the consequences for firms in crisis are currently insubstantial. By providing detailed information about how creditors currently evaluate the ESG performance of borrowers in crisis, we further demonstrate current roadblocks inhibiting the implementation of ESG, allowing targeted future research. Second, we complement the literature stream investigating the relationship between firms in decline and their creditors. Even though creditors highly rate the importance of ESG, in the current evaluation of their conflicting objectives (Volk, 2007), economic considerations overshadow those of an environmental, social, or governmental nature. Finally, our research is of practical relevance. For financing institutions, we summarize the current perspective of ESG and its implications for restructuring decisions. For firms undergoing a turnaround, we demonstrate that while ESG is not yet critical for decisions, firms in highly affected industries must tread carefully and be mindful of regulatory changes concerning their creditors. For policymakers, we establish that the effect that ESG can have on existing regulation (for example, problematic financing of transformations or potentially prolonged restructuring durations) must not be overlooked.

In summary, this dissertation contributes to our understanding of corporate turnarounds by examining contextual turnaround factors while addressing previous biases, establishing novel identification processes for the creation of integrative samples, reconciling fragmented and contradictory empirical evidence, and laying the groundwork for further corporate turnaround research in the promising and rapidly evolving setting of ESG.

## 1.4 Structure of the Dissertation

This dissertation consists of five chapters. Enclosed by the introduction and conclusion, the main body consists of three essays, which are the results of individual research projects. Each essay represents an independent academic contribution and can be independently reviewed. While the benefits of this cumulative structure are apparent, the main drawback should also be noted. As all essays are based on the same theoretical foundation, the literature and background sections of the individual studies might overlap.

The remainder of this dissertation is structured as follows. Chapter 2 features the first essay with the title "The Effects of Retrenchment on Post-Restructuring Operating Performance of German Mid-Cap Companies". Focusing on corporate retrenchment, the efficacy of asset and cost retrenchment for German mid-cap companies is reviewed. Chapter 3 subsequently dives deeper into corporate downsizing, consisting of Essay II with the title "Reducing the Political Costs of Layoffs: Do Companies Manage Earnings to Soften the Impact of Downsizing Announcements?" Drawing on the earnings management literature, the study investigates whether companies adjust earnings downward to soften the reputational blow of corporate downsizing efforts. The final essay, Essay III, titled "ESG Incorporation in Restructuring Decisions – A Qualitative Investigation from the Perspective of German Lenders", is provided in Chapter 4. Turning the focus toward current trends in corporate turnaround, the potential influence of ESG restrictions on corporate turnaround efforts in Germany is exploratively examined. The final chapter, Chapter 5, concludes by summarizing the main findings of this dissertation and pointing toward avenues for future research in corporate turnaround.

TABLE 1.2  
Essay Overview

	Essay I	Essay II	Essay III
Title	The Effects of Retrenchment on Post-Restructuring Operating Performance of German Mid-Cap Companies	Reducing the Political Costs of Layoffs: Do Companies Manage Earnings to Soften the Impact of Downsizing Announcements?	ESG Incorporation in Restructuring Decisions – A Qualitative Investigation from the Perspective of German Lenders
Research Questions	How do asset and employee retrenchment actions influence the post-retrenchment operating performance of German mid-cap firms?	Do managers reduce accounting profits before announcing corporate downsizing initiatives to reduce political costs?	How do ESG risks influence the decision-making of banks in restructuring decisions?
Foundational Literature/ Call for Research	Schweizer and Nienhaus (2017)	Hall et al. (2005); Verdier and Boutant (2016)	Trahms et al. (2013)
Methodology	Quantitative research design: OLS regression analysis	Quantitative research design: Panel regression analysis	Qualitative research design: Multiple case study
Sample	Downsizing events in German midcap firms: > 74 unique downsizing events	EUROSTOXX600 firms between 2002 and 2021: > 9550 firm-years of data > 328 identified downsizing events	The largest German banks engaged in the restructuring of non-performing loans
Unit of Analysis	German midcap restructuring events	European large-cap firms announcing downsizing events	Banks engaged in the restructuring of their creditors
Dependent Variable(s)	Restructuring Operating Performance measured as difference in ROA and EBITDA	Discretionary accruals based on the estimation methods of Jones (1991), Dechow et al. (1995), and Kothari et al. (2005)	n.a.
Main Results	> Positive impact of employee retrenchment on post-turnaround operating performance > Negative impact of asset retrenchment on post-turnaround operating performance	> Firms do not exhibit larger discretionary accruals in the year before announcing major downsizing efforts > No significant moderating effect of political costs on discretionary accruals	> Integration of ESG in risk evaluation and decision-making processes is rapidly advancing > Currently, ESG evaluations have only limited impact on restructuring decisions
Contribution	> First empirical retrenchment results for mid-market, unlisted and non-US firms > Novel firm identification approach suitable for European restructuring samples	> Reconciliation of results of previous empirical studies based on a large, multicountry sample > Introduction of a novel variable measuring political cost	> Construction of first theoretical frameworks on ESG in turnaround > Practical implications: refinement of ESG evaluation processes and suggested importance of ESG transformation



## 2 | The Effects of Retrenchment on Post- Restructuring Operating Performance of German Mid-Cap Companies

### **Abstract**

Retrenchment research has relied highly on samples of US-based, large, and publicly listed firms, casting doubts over its applicability in the European context. Drawing on foundational empirical works by Robbins and Pearce (1992) and more recent studies such as those of Tangpong et al. (2015), Barbero et al. (2020), and Rico et al. (2021), we argue that for mid-cap firms undergoing restructuring, asset retrenchment, and employee retrenchment strongly influence turnaround operating performance. Constructing a unique sample for German mid-cap firms, both public and private, using a novel identification approach based on data provided by the European Restructuring Monitor (Eurofund, n.d.), we find that asset retrenchment is negatively related with turnaround operating performance, while employee retrenchment yields increases in performance. We contribute to the broad research on corporate turnaround by providing a novel firm identification approach and constructing a unique dataset for the German mid-cap market. We further validate hypotheses on the effects of retrenchment for non-US, mid-cap firms undergoing voluntary restructuring efforts, allowing for an expansion of the application of findings.

*Author:* Carl Leonard Schwellnus

*Status:* Working Paper

## 2.1 Introduction

Interest in corporate decline and corporate turnaround is primarily crisis-driven. While the long-lasting, current boom cycle has led to a steady decrease of business insolvencies in Germany since the financial crisis (destatis, 2021), turnaround management has recently gained importance due to increasing transformational challenges in specific industries, such as the automotive world and other emission-heavy industries. Furthermore, the emergence of Covid-19 and its related effects on the economy had scholars and practitioners believe that a "wave of insolvencies and corporate crises" was overdue (BMW, 2020, Holtermann, 2021, Zydra, 2021). Especially smaller firms with revenues below EUR 500 million had shown increases in restructuring cases during 2021, according to surveyed distress bank managers, pointing to mounting pressures on the backbone of the German economy, the "Mittelstand" (Jäde, 2021).

Historically, literature on corporate turnaround and distress ranges from the topic of bankruptcy or insolvency, the most severe outcomes of a company's crisis, to strategic turnarounds for firms faced with changing industry conditions or eroding profit bases (Bickhoff et al., 2004). A generalized depiction of the most crucial crisis stages is exhibited in Figure 2.1.

Despite this broad spectrum of corporate turnaround, literature and media frequently focus on bankruptcy and firm survival within this space, neglecting a large number of companies that manage to turn the corporate performance around by conducting internal restructuring efforts, ultimately steering clear of the severest of outcomes. Understanding what actions within the restructuring process influence firm performance and how companies in decline can best utilize them has become as relevant as ever in the face of the expected post-Covid-19 pressures.

Trying to find the optimal strategic response for a declining business was the starting point of seminal turnaround management works by Schendel et al. (1976) and Hofer (1980). Aimed at finding determinants of firm survival and post-decline performance, they classified turnaround strategies in two distinct stages following decline: retrenchment and recovery (Bibeault, 1982, Robbins and Pearce, 1992). The retrenchment stage, describing a company's immediate reaction to decline, has evolved as a primary research field to understand why companies emerge from crises successfully or go under (Schweizer and Nienhaus, 2017). Existing literature postulates that following decline, a company, in a first step, tries to "stop the bleeding," cutting slack and focusing on its core business (Bruton et al., 2003). Core retrenchment actions include reducing

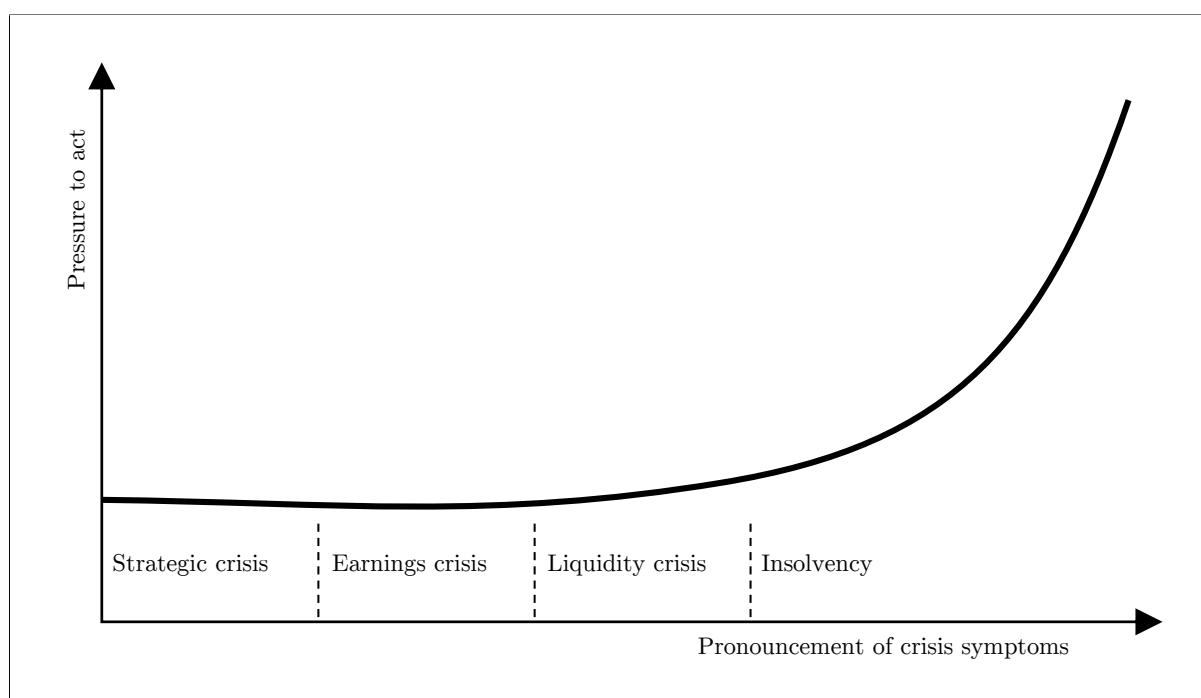


FIGURE 2.1: Crisis Stages, Own Representation Based on Bickhoff et al. (2004)

the offered portfolio, shedding assets that are not essential for business operations, reducing costs, and reducing the workforce (Lim et al., 2013).

First extensively empirically surveyed by Robbins and Pearce (1992), who recommended that "firms should retrench regardless of severity" (Robbins and Pearce, 1992, pg. 304), numerous subsequent studies on the effects of the different retrenchment actions on firm performance have found mixed results. For a critical retrenchment action, asset retrenchment, for example, the results of its efficacy are inconsistent, driven by varying definitions of performance measurements and key terms, such as corporate decline. Similarly, for employee reduction during retrenchment, recent studies by Rico and Puig (2021) or Tangpong et al. (2015) could not confirm the positive effects of employee reduction during retrenchment established by authors of the 1990s, including John et al. (1992) or Chowdhury and Lang (1996). Comprehensive reviews of the literature by Schweizer and Nienhaus (2017) or Trahms et al. (2013) concluded that while frequently researched, empirical results on retrenchment actions have been equivocal and fragmented, resulting in hardly transferable findings.

While theoretical studies have stressed the importance of contextual factors such as size, ownership, and region (Schweizer and Nienhaus, 2017), empirical research on corporate turnaround

has mainly been conducted on those companies whose financials are available via comprehensive databases: US-based, large, public corporations. The few studies conducted in European markets still relied on publicly listed companies as the basis for analysis, for example, UK data (Lai and Sudarsanam, 1997) or US, UK, and German firm data (Eichner, 2010). We thus still know little about the effects of retrenchment actions on smaller, unlisted firms during corporate turnaround. Moreover, the US bias of previous research casts doubts about the generalizability of previous empirical results to regions with differing legislation and financing structures. In this study, we seek to address the presented research gap by verifying the validity of previous results on the effects of retrenchment actions on post-retrenchment firm performance for firms outside the previously frequently researched samples. Focusing on the contextual factors of size and ownership, we analyze retrenchment actions of German mid-sized firms, public and private, undergoing restructuring. We choose the German mid-cap market for three reasons. First, the German economy carries strong relevance for the European Union while offering strong institutions and high levels of worker and investor protection. Second, the structure of the financial markets offers a unique opportunity to study smaller firms. The economy strongly depends on mid-sized companies that are frequently privately held and financed via debt instead of equity capital markets. A large amount of smaller companies available further allows the collection of a larger sample size compared to previous retrenchment studies. Last, while data collection for small firms is tedious, the German market at least offers a well-structured basis, as vast amounts of annual reports of smaller firms are published in a publicly accessible database. In summary, our resulting research goal can be stated in the following research question: *How do asset and employee retrenchment actions influence the post-retrenchment operating performance of German mid-cap firms?*

In addressing the research question, we aim to expand the existing literature mainly in two regards. First, we establish a novel approach for identifying firms in restructuring situations in Europe, overcoming a pronounced barrier toward cross-regional turnaround research, and produce a novel dataset including private firms. Using the European Restructuring Monitor database enables the identification of firms without the availability of extensive longitudinal data. Establishing larger samples, even those focusing on private firms, is feasible without these data requirements. Moreover, while this study focuses on the German market, the approach offers the unique opportunity to conduct analyses across all European Union member states in future research projects. Second, we build on research from non-US firm studies by authors such as Bruton et al. (2003) or Eichner (2010) and studies on smaller, potentially non-public

firms conducted by Barbero et al. (2020) and Rico et al. (2021) by developing hypotheses for smaller firms and introducing empirical results for the previously underrepresented segment of German mid-cap firms. Furthermore, our results are relevant to the field of German mid-cap restructuring, as our data supply information on typical courses of crises and the effects of asset and employee reduction for firms facing similar conditions as those in our study's sample.

Based on an initial literature review of asset and employee retrenchment actions, we develop hypotheses for their effects on firms in the German mid-cap market. Further, we discuss our sample selection process and novel sample identification strategy using the European Restructuring monitor before discussing methodology, analysis, results, and the conclusion and implications of our findings.

## **2.2 Background**

### **2.2.1 Retrenchment in Turnaround Research**

Corporate distress and turnaround literature is rooted in bankruptcy research in the United States of the 1980s, as the topic of decline and turnaround strongly gained importance following an increased number of bankruptcy filings and waves of mergers and acquisitions (Schweizer and Nienhaus, 2017). First works by Schendel et al. (1976) described turnaround as the "decline and recovery from distress" (Schendel et al., 1976), laying the groundwork for the deterministic conceptual frameworks of turnaround, which generally split the turnaround process between a decline and a recovery stage. From a content perspective, seminal turnaround research was focused on identifying responses to crisis and classified sets of responses dichotomously as either operational or strategic moves, trying to define optimal strategies contingent on the current characteristics of a given firm, shaping the so-called contingency view (Hambrick and Schecter, 1983, Hofer, 1980, Schendel et al., 1976). Bibeault (1982) combined these developed strategic choices with a process perspective by introducing a multistage turnaround process consisting of the generic stages of decline, retrenchment, and recovery. Retrenchment was characterized as a phase of stabilizing, efficiency-improving, operational moves aimed at "stopping the bleeding" following corporate performance decline (Bibeault, 1982).

Empirical validation of the turnaround process and retrenchment as an integral part of the turnaround was first introduced by Robbins and Pearce (1992) in the early 1990s based on a

small sample study of 36 firms in the US milling industry. The authors inferred that the severity of the crisis moderates the retrenchment response and performance relationship while focusing on operational responses available to the company (Robbins and Pearce, 1992). However, the causality of the relationship between retrenchment and recovery was called into question by a set of authors such as Barker and Mone (1994). They argued that retrenchment is the result of decline, not the cause for turnaround. In subsequent works, Arogyaswamy et al. (1995) aimed to reconcile the previously identified shortcomings of Robbins and Pearce's two-stage model, developing an integrative turnaround process model that also considers internal climate, decision-making, and stakeholder support (Arogyaswamy et al., 1995). Further developments of the process model can be found in the works of Pandit (2000) and, most recently, by Trahms et al. (2013). The latter study appends the existing model based on a broad literature review of 40 empirical articles, adding the new dimensions of managerial cognition, strategic leadership, and stakeholder management and amending those of firm actions and outcomes. While these developments form a more holistic picture of the organizational decline to the turnaround process, the core elements of decline, retrenchment, and recovery remain the basis of recent turnaround studies. Beyond process research, scholars have empirically tested individual turnaround moves employed along the turnaround process. Building on the dichotomous turnaround move classification of seminal papers, the extensive review by Schweizer and Nienhaus (2017) expanded on this, categorizing turnaround moves in four distinct categories: operational, managerial, portfolio, or financial. Operational moves include product & sales, human capital, CAPEX, and organizational processes. Managerial moves consist of CEO, top management, or Board of directors changes; portfolio moves include divestments or investments, while financial moves concern debt restructuring or liquidity improvement.

Despite these turnaround moves generally being applicable in multiple phases, researchers have highlighted the most relevant turnaround moves for each of the turnaround phases. Concentrating on retrenchment, Tangpong et al. (2015) differentiate three main retrenchment categories: assets, employees, and costs, in each of which the firm can take specific retrenchment actions.

### **2.2.2 Asset Retrenchment**

Asset reduction is one of the generic turnaround strategies identified in the seminal work by Hofer (1980) and has received substantial attention in empirical research since then (Hambrick and Schecter, 1983, Hofer, 1980, Rico et al., 2021, Robbins and Pearce, 1992, Trahms et al.,

2013). Asset reduction can range from the divestment of subsidiaries and the sale of fixed assets to the reduction of short-term assets such as accounts receivable or inventories. Described "as a means to discard poorly performing assets, raise cash, and improve asset productivity" (Rico et al., 2021, pg. 113), asset reduction is seen as a core retrenchment move, with Sudarsanam and Lai (2001) finding it to be vital "for firms operating well below capacity" (Sudarsanam and Lai, 2001, pg. 185). Among all potential types of asset reduction, the primary method employed is the sale of excess equipment and real estate (Bruton et al., 2003).

Robbins and Pearce (1992) delivered the first empirical results for the effect of asset reduction on turnaround performance, operationalized as the net reduction in long-term and short-term assets, stating a positive relationship between asset retrenchment and turnaround performance for firms in severe decline. In line with these results, Bruton et al. (2003) find that asset retrenchment increases firm performance, while Morrow et al. (2004) report that asset retrenchment increases accounting performance in growing, mature, and declining industries. Similar results are demonstrated by Schoenberg et al. (2013). Studying turnaround in bankrupt Spanish SMEs, Rico et al. (2021) do not register significant results for the effect of asset retrenchment on turnaround success while finding a negative influence on turnaround performance. Further negative evidence is produced by Ndofor et al. (2013) for declining firms in growth industries and Nixon et al. (2004), who study the market performance of downsizing firms, compared to accounting performance as most other studies in this field. Rico et al. (2021) stress that the context of bankruptcy might substantially differ from the usual context in which turnaround is studied, adding to the argument by Trahms et al. (2013) that empirical evidence of the effect of operational actions on turnaround performance has been fragmented and inconsistent. Considering these arguments and focusing on studies based on declining firms and accounting performance, asset reduction shows an overall positive effect on turnaround performance.

### **2.2.3 Employee Retrenchment**

Employee retrenchment is a specific form of the more general field of corporate downsizing. According to Schmitt and Raisch (2013), the objective of improving operational efficiency to increase profitability is the critical distinction between retrenchment activities such as downsizing during turnaround and other size-decreasing actions, such as downscaling or downscoping. While downsizing has been frequently researched from multiple literature streams, including organizational theory and psychology (Schweizer and Nienhaus, 2017), literature on employee downsizing

in turnaround situations, specifically the retrenchment phase, is, however, scarce. From a theoretical perspective, previous studies have relied on a pluralistic theory-building approach to explain employee reduction and its hypothesized effectiveness in improving post-retrenchment performance. Scholars build on multiple literature streams and theories in their hypotheses, including basic accounting considerations, threat-rigidity theory, and survivor syndrome (Barbero et al., 2020). The main arguments positing a positive impact of employee retrenchment are increased operating performance by reducing employee costs in the short- to medium-term, especially for firms operating below current capacity. Scholars arguing for adverse effects of employee retrenchment primarily focus on medium to long-term downsides, stating that downsizing negatively affects morale and commitment while also producing organizational rigidity, limiting creativity, and thus inhibiting the firm from successfully recovering after retrenching (Datta et al., 2010, D'Aveni, 1989, Rico et al., 2021). Empirical studies by John et al. (1992) and Chowdhury and Lang (1996) demonstrate that layoffs are the most substantial contributor to cost savings in operational restructuring. In a recent study, Tangpong et al. (2015) report that while early layoffs are not significantly related to turnaround success, those that occur later in the restructuring are negatively related to the turnaround success of the company.

In summary, the empirical evidence of the impact of employee retrenchment on turnaround performance varies along the temporal dimension. While scholars highlight substantial performance gains driven by cost savings in the short term due to decreased personnel expenditures, potential downside risks of employee retrenchment are associated with the medium- to long-term. The extant literature focusing on employee retrenchment as an immediate retrenchment action thus demonstrates overall positive findings.

#### **2.2.4 Characteristics of the German Mid-cap Market**

Even though the "German Mittelstand" has frequently been named the backbone of the German economy, no clear definition of which firms it encompasses exists. Institutions and scholars often use two avenues to classify companies as "Mittelstand" firms: size in employees, assets or revenues, and (family) ownership (Pahnke and Welter, 2019). In popular discussion, perception and self-definition are added as further dimensions for classification. According to the Institut für Mittelstandsforschung, substantially more companies self-classify as Mittelstand than existing definitions would permit (Welter et al., 2015), stretching the definition to include even large enterprises such as carmaker Porsche or technology giant Bosch. Limited by these ambiguous



definitions, we will focus on German mid-cap companies with revenues of up to one billion EUR, leading to considerable overlap with Mittelstand companies in a narrower sense. We thus exclude large corporations with revenues consistently above one billion EUR, both listed and private, as they are unsuitable for a study of the mid-cap market.

Being, by definition, smaller than large, stock-exchange listed enterprises, German mid-cap companies exhibit unique characteristics. First, predominantly private company ownership is a unique characteristic of German (mid-cap) companies. Out of all enterprises in Germany in 2014, only 0.3% were public companies, with only a fraction of those traded on the major trading venues of Deutsche Börse AG. The resulting coefficient of equity market capitalization to the gross domestic product of 40% is close to three times smaller than the 111% observed in the US (Deutsche Bundesbank, 2014). Given the limited access to public equity markets, German mid-cap companies have historically heavily relied on external bank debt to finance their business (Hommel and Schneider, 2003). According to a study by Davis (2003), published by the European Investment Bank, loans accounted for 37% of all financing sources for German corporations, compared to 10% in the United States or 21% in the United Kingdom, making Germany a bank-centric financial system in which borrowing from multiple banks is not unusual (Davydenko and Franks, 2008). Second, German mid-cap firms exhibit a large share of family ownership (Wittig, 2017). Out of all active German firms, 90% were considered family-owned, with 86% being owner-managed, according to a study by the Leibniz-Zentrum für Europäische Wirtschaftsforschung (ZEW) in 2019. Despite decreasing with firm size, the share of family firms for enterprises with more than 500 employees remains at 31% (ZEW, 2019). The vast literature on family firms has stated that family firms differ from non-family firms in multiple facets: they have fewer total assets than companies of similar size (Andersson et al., 2018), are more risk-averse (Gómez-Mejía et al., 2007), are less likely to downsize (Block, 2010), are long-term oriented, and carry altruistic motives (Cater and Schwab, 2008).

Lastly, in the context of turnaround research, scholars have frequently pointed to differing legislation regarding bankruptcy proceedings and creditor and worker protection when considering countries outside the US (Buchalik, 2004, Schweizer and Nienhaus, 2017). Compared to the United States or the United Kingdom, Germany shows high levels of employee protection and employee dismissal rights (OECD, 2019) while featuring rigid employment contracts, strong union laws, and high levels of investor protection, especially for creditors (Atanassov and Kim, 2009, Davydenko and Franks, 2008).

In summary, German mid-cap firms are smaller, frequently private firms, reliant on bank financing, show influence from family ownership or management, and are subject to high levels of worker, union, and investor protection. Therefore, German mid-cap firms differ vastly from the US-based and public firms that were the basis of previous studies on retrenchment. The impact of these highlighted differences on the hypothesized efficacy of retrenchment actions is outlined in the following section.

## **2.3 Development of Hypotheses**

In light of the specific of the German mid-cap market, we aim to draw on the theoretical foundations and empirical results of existing retrenchment action research and studies, exploring the impact of firm size, firm ownership and financing structure, and German legislation to build our hypotheses.

Asset reduction has traditionally been assessed as the single most relevant measure for the operational turnaround in companies operating below capacity (Schmuck, 2013). Reducing total assets can be achieved using multiple avenues. Firms can sell off subsidiaries or business units to generate cash. They can sell pieces of their property, plant, and equipment to reduce unwanted or unproductive assets. They can utilize working capital optimization measures to minimize accounts receivable or engage in similar forms of asset optimization (Lim et al., 2013, Morrow et al., 2004, Robbins and Pearce, 1992). As stated previously, the overall empirical evidence for the effect of asset retrenchment on post-turnaround operating performance is positive while not unequivocal (see section Asset Retrenchment).

German mid-cap firms are smaller in revenues and average employees compared to the public corporations surveyed in past empirical studies on turnaround. Consequently, their asset base is expected to be smaller and less diversified (Bruton et al., 2003). Thus, while divestment of subsidiaries is one of the most frequently employed turnaround strategies for smaller firms, strategic asset reduction by selling off subsidiaries, business units, or brands is not to be expected (Slatter, 1984). Firm size also impacts the second avenue of asset reduction, the sale of fixed assets. Literature has argued that firms in turnaround situations will be forced to divest lucrative assets to raise cash, resulting in a negative relationship with operating performance (Winn, 1997). As German mid-cap firms are frequently family firms, which show lower levels of assets compared to other companies (Andersson et al., 2018), and smaller companies control less slack resources

than larger companies (Bruton et al., 2003), we expect German mid-cap firms to operate closer to their minimum threshold of resources required for business operations, rendering them unable to sell off substantial amounts of asset unnecessary for post-turnaround operating performance. Furthermore, literature has stated that divestiture performance and bargaining power are higher for firms with higher resource levels (Lee and Madhavan, 2010). Drawing on the downward spiral perspective firms in turnaround have frequently deteriorated resource bases due to continuing decline, leaving them with lower divestiture performance and decreased bargaining power when facing asset sales in the retrenchment phase (Barbero et al., 2020).

From an ownership perspective, the reliance of German private companies on external bank financing proves a significant difference from previously researched US-based public firms. In Germany, loans are frequently backed by collateral in the form of fixed assets (Davydenko and Franks, 2008), making it difficult or at least expensive for companies in decline to sell these assets when required. We expect the critical argument for a positive influence of asset reduction measures, the sale of unproductive and underutilized assets, to not hold for German mid-cap firms due to overall small asset bases, the abundance of large amounts of slack assets, and the difficulty of selling assets used as collateral in bank financing. Therefore, we propose that asset reduction is negatively correlated with turnaround performance, contrary to empirical results for large firm data. Furthermore, firms forced to sell assets in their turnaround efforts are likely to sell lucrative or operation-related assets, reducing their chance of recovery to pre-turnaround operating performance levels. In most severe cases, asset reductions crossing the minimum threshold postulated in the downward spiral perspective should theoretically make the firm's recovery impossible, as no sufficient resources are available for profitable operation. We thus hypothesize:

***Hypothesis 1 (H1):*** *Asset reduction during retrenchment is negatively related to turnaround performance for German mid-cap companies.*

The second main retrenchment action is to downsize the company's workforce. German mid-cap companies face much stricter employee protection legislation and strong unions when deciding to reduce the number of employees. As a large share of German mid-cap firms are family firms, the managers face social pressures from stakeholders and shareholders. The combination of these two phenomena would see mid-cap companies trying to delay workforce reductions as long as possible while minimizing the extent, should reductions become unavoidable. Compared to public firms

in the United States, which are primarily driven by shareholder value with less influence of social pressures and more accessible options to reduce the workforce, we expect German firms to reduce existing inefficiencies in a targeted manner when forced to downsize amidst a decline. Targeted job cuts could increase the firm's productivity, amplifying the short- to medium-term positive effect of employee retrenchment on post-retrenchment performance, as stated in the extant empirical literature. Countering the downsides of over-aggressive employee retrenchment is the strong employee protection found in German labor law. As workforce reduction is difficult and expensive, managers are incentivized to keep employee retrenchment numbers as low as possible, decreasing the risk of overly aggressive job cuts. As this study measures the realized employee reduction, not the planned employee reduction, any potential downsides of too strict employee protection, which hinders required downsizing, are not reflected. As noted, researchers have stated negative medium- to long-term effects of employee retrenchment, driven by rigid organizations and decreased employee morale. Smaller companies are less rigid than their larger peers, implying a reduced negative effect following the threat-rigidity theory. The consequences of reduced workforce morale are expected to remain unchanged by firm size or legislation change. We thus hypothesize:

***Hypothesis 2 (H2):** Employee reduction during retrenchment is positively related to turnaround performance for German mid-cap companies.*

## 2.4 Data & Sample

### 2.4.1 Sample Construction & Data Sources

Our goal is to study the effects of asset and employee retrenchment actions on turnaround performance for German mid-cap firms. Limited by financial data availability constraints for the German mid-cap market, we introduce a novel approach for identifying restructuring firms. Opposed to sample construction methods used by the existing literature, which relied on identifying distressed or declining firms either based on accounting measures (Barbero et al., 2020, Morrow et al., 2004, Robbins and Pearce, 1992, Tangpong et al., 2015) or based on consulting surveys (Schmitt and Raisch, 2013), we utilized the European Restructuring Monitor (ERM) compiled by the Eurofund, an agency of the European Union, to isolate companies undergoing internal restructuring undertakings (Eurofund). This novel approach has three crucial benefits.

First, unlike previous identification approaches based on accounting indicators, no widespread financial data is necessary to classify restructuring firms. The reduced reliance on financials is especially beneficial for the mid-cap sector, as financial databases exhibit poor data quality for time series data. Second, the ERM database is ultimately based on a press-research approach by its member states, which allows for higher granularity in identifying firms in restructuring across an extended duration than an individual keyword-based press-research approach. Third, the ERM database follows a consistent methodology, allowing for the replication of findings in future studies or the extension to other countries covered by the ERM.

After identifying relevant internal restructuring events, we compile required financial accounting data using Bureau van Dijk databases and manual research of the electronic German Federal Gazette to complete and verify financial statements and accounts (Bundesamt für Justiz, n.d.). Manual verification and completion of the data are required to counteract missing or incomplete data due to poor data quality for German mid-cap firms.

#### **2.4.2 Sample Selection process**

The ERM compiles announcements of employee reduction events for companies in each of the 27 European Union member states, limited to a threshold of a minimum reduction of 10% of the workforce, based on local press research in the individual member states. The events are entered into the database along with associated data points such as the reason for employee reduction, announcement date, announcement medium (e.g., newspaper article), country of origin, company specifics, and employee reduction location (Eurofund, n.d.).

In line with the scope of our research, we select those events that show employee reductions linked to internal restructuring undertakings in Germany between 2006 and 2017. We set the lower boundary as widespread availability in the German Federal Gazette database begins with data from 2005. The upper boundary is set as sufficient financial data post-restructuring is required for analyzing post-retrenchment results. After setting these restrictions, 798 observations remain.

In line with existing literature, companies' events from financial services industries and privatized, previously state enterprises are excluded from the analysis (Goesaert et al., 2015). Furthermore, all events related to subsidiaries, companies existing within conglomerates, or events concerning specific business units are also excluded. Subsequently, firms with revenues exceeding one billion EUR were excluded, in line with the scope of this work. Events for companies with

multiple events within a seven-year time period were dropped to isolate retrenchment actions concerning a specific restructuring event, except for "prolonged" restructuring situations consisting of events in subsequent years. For these events, the first year of the announcement was set as the restructuring year.

In a two-stage approach, the remaining events are matched based on their company names and locations to legal entities within the German Federal Gazette. To the extent available, we extract available financial data for the companies from the Bureau von Dijk databases. Subsequently, we complement the data manually by utilizing the electronic Federal Gazette database supplied by the German Government. We collect Revenues, Depreciation & Amortization, EBITDA, Operating Income, Net Income, Total Assets, number of employees at fiscal year-end, average employees during the fiscal year, and fiscal year timeframe to correct for deviating fiscal years.

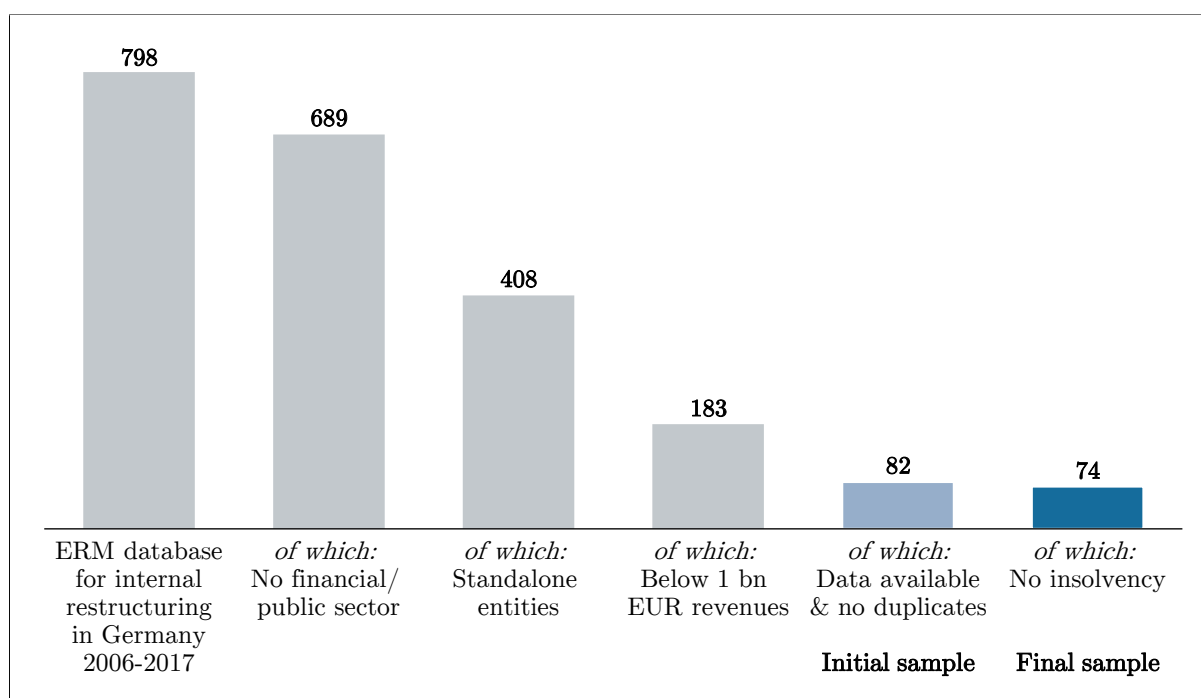
In a final step, events that lacked sufficient financial data series are eliminated from the analysis. The resulting initial sample comprises 82 events for 79 different companies, with three companies appearing for non-overlapping, differing event timeframes. With small sample sizes characteristic of turnaround research, we deem our sample of 82 observations as sufficient and comparable with similar empirical studies in the field (Schmitt and Raisch, 2013). Firms entering insolvency during the observation period are kept in the initial sample for robustness tests. However, in line with existing literature which only includes firms with continuous coverage, they are dropped for the main models (Robbins and Pearce, 1992, Schmuck, 2013).

TABLE 2.1  
Sample Summary Statistics in the Year Prior to Restructuring<sup>1</sup>

Sample Summary in Year Prior to Restructuring (Y=3)	Mean	Min	Max	S.D.
Revenues	473,377	34,332	1,676,342	377,249
Total Assets	442,570	23,093	1,899,200	413,473
Average Employees in fiscal year	2,441	251	13,434	2,676
EBITDA Margin	.03	-.63	.38	.16
EBIT Margin	-.02	-.69	.32	.17
Net Income Margin	-.06	-.79	.24	.17
Return on Assets	-.05	-.39	.18	.12

*n* = 74

<sup>1</sup>As firms were included if below the selected threshold of one billion EUR in revenues in any of the observation years, the maximum revenue at the measurement point of sample statistics can exceed the set threshold

FIGURE 2.2: Sample Selection Process Detailing the Number of Events at Each Stage<sup>2</sup>

### 2.4.3 Sample

Our final sample consists of 74 observations across 72 firms. Due to the sample identification strategy, the industry affiliation of the sample firms is somewhat fragmented. The 72 sample firms belong to 32 different NACE codes on the two-digit level, with a maximum of 12 observations with the NACE code of 28, manufacture of machinery and equipment. The average firm, in Y3, employed 2.441 employees, posted revenues of 473 M EUR with an asset base of 443 M EUR, and reached an EBITDA margin of 3.1% and a Net Income margin of -5.5%, respectively. A sample summary statistic is provided in Table 2.1. We collect data for three years prior to and three years post the restructuring year (Y4), amounting to seven years of firm data.

In the observation period, the median firm's profitability measured by EBITDA drops by 5.7 percentage points between base year Y2 and Y4, rebounding by 4.0 percentage points between Y4 and Y6. The median asset decline amounts to 3.7% between Y2 and Y4, and the median reduction in employees is 5.3%. Overall, the sample firms exhibit high retrenchment levels, validating the sample identification and selection approach of declining and restructuring firms.

<sup>2</sup>ERM database: Eurofund, European Restructuring Monitor, retrieved 18.01.2021, available at <http://www.eurofound.europa.eu/observatories/emcc/erm/factsheets>



FIGURE 2.3: Sample Mean Number of Employees in the Observation Period [#]

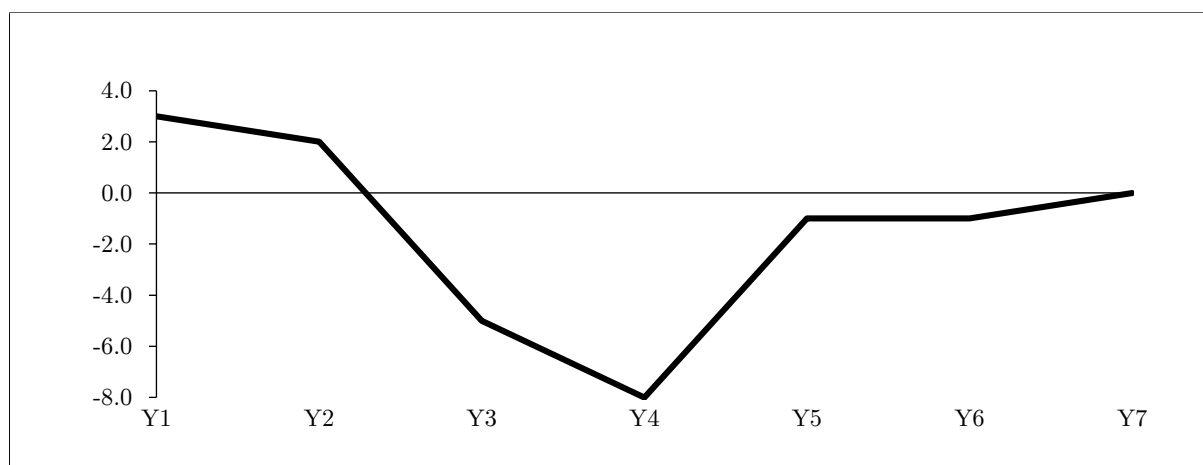


FIGURE 2.4: Sample Mean Total Assets in the Observation Period [m EUR]

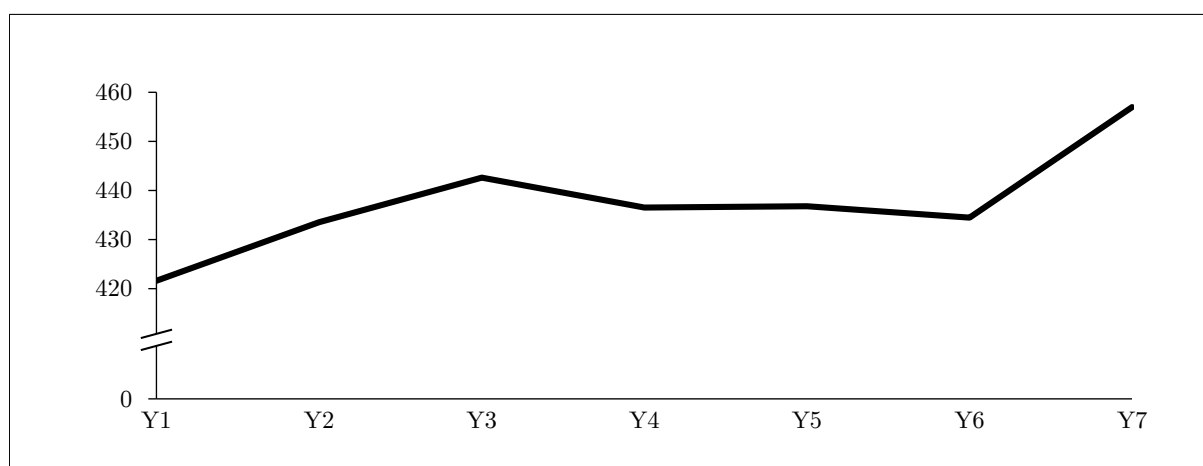


FIGURE 2.5: Sample Mean Return on Assets in the Observation Period [%]



## **2.5 Methodology & Variables**

### **2.5.1 Methodology**

Empirical studies on turnaround generally use Ordinary Least Squares (OLS) regression and logistic regression to analyze the impact of restructuring measures on firm performance and turnaround success (Schmuck, 2013). Turnaround success is primarily measured in binary variables, and studies with success as the primary dependent variable thus frequently utilize logistic regression or similar models for statistical analysis. We employ OLS regression for our study, as we aim to model the influence of retrenchment actions on the performance differential between pre- and post-restructuring operating performance, not the likelihood of turnaround success.

### **2.5.2 Dependent Variable**

In the OLS regression relating retrenchment actions to turnaround performance, we define turnaround performance as the change between pre-restructuring and post-restructuring EBITDA margin. Pre-restructuring is defined as year two before the restructuring event (Y2) and post-restructuring as year three following the event (Y7), or the final year of accounting data available in cases of insolvencies or firms missing data. Similar timeframes have been observed by the authors of previous studies, such as Robbins and Pearce (1992), Tangpong et al. (2015), and Barbero et al. (2020). We choose EBITDA as the performance indicator over EBIT or Net Income as it closely resembles operating performance without including the noise of changes in depreciation, amortization, or other extraordinary effects in the data (Holder-Webb et al., 2005). Furthermore, choosing EBITDA allows for close comparison to previous studies focused on operating performance changes.

### **2.5.3 Independent Variables**

Our independent variables aim to cover the retrenchment response of the restructuring company in both actions: asset retrenchment and employee retrenchment.

We define asset retrenchment as the percentage change in total assets between two years post-restructuring event (Y6) and the year prior to the restructuring event (Y3). For insolvent firms

for which data for the final year is not yet available, we substitute it using data of the year following the restructuring event (Y5). As the restructuring event year (Y4) is defined by the public receiving knowledge about planned employee reduction measures, we argue that asset reduction measures are likely to have been implemented beforehand. Thus, we define the base year as the year prior to the restructuring announcement. For robustness analyses, we furthermore define categories of asset retrenchers and asset non-retrenchers. Compared to previous studies employing cutoff values of a 3% decrease or 5% decrease concerning the observed variable in the retrenchment period (Goesaert et al., 2015, Schmitt and Raisch, 2013), we conservatively set the cutoff value to 10% to counteract the effects of smaller firm size on the relative decrease.

We define employee retrenchment as the percentage change in the fiscal year average number of employees between two years post-restructuring event (Y6) and the year prior to the restructuring event (Y3). We choose the average number of employees as this data is available for all our sample firms. In contrast, the number of employees at year-end is only reported for a fraction of sample companies. Addressing the time lag inherent to employee reduction, we measure the second data point at year two post-restructuring. As our dataset includes the announcement of planned employee reduction programs and not the internal decision to retrench employees, we expect a smaller time lag regarding implementing employee cuts, diverging from previous research. As for the variable asset retrenchment, we define a binary-coded employee retrenchment variable, which divides sample firms into employee retrenchers and non-retrenchers. The cutoff value is set to a 10% decrease, analogous to independent variable 1 - asset retrenchment.

#### **2.5.4 Control Variables**

Turnaround literature has frequently stated the importance of controlling for context factors surrounding the restructuring efforts (Schweizer and Nienhaus, 2017). We control for firm size, ownership, previous performance level, the severity of performance decline, and whether restructuring took place during the financial crisis. Firm size is operationalized as the log-transformation of total assets in the base year, previous performance level as EBITDA margin in the base year, and severity of performance decline as the percentage change in ROA between the restructuring year and the base year. We utilize dummy variables for public/private ownership and restructuring year during the financial crisis. An overview of all variables is presented in Table 2.2.

TABLE 2.2  
Variable Definitions and Sources

Variable	Description	Source
(1) Turnaround Performance	Absolute change in EBITDA margin between the final year of data and year two prior to the restructuring event	Bundesanzeiger/ BvD
(2) Asset Retrenchment	Percentage change in total assets between the final year and year prior to the restructuring event	Bundesanzeiger/ BvD
(3) Employee Retrenchment	Percentage change in the average number of employees between the final year and year prior to the restructuring event	Bundesanzeiger/ BvD
(4) Previous Performance Level	EBITDA margin in year two prior to the restructuring event	Bundesanzeiger/ BvD
(5) Severity of Decline	Absolute change in ROA between restructuring year and two years prior to restructuring event	Bundesanzeiger/ BvD
(6) Firm Size	Log-transformation of total assets in year two prior to the restructuring event	Bundesanzeiger/ BvD
(7) Financial Crisis	Binary coded variable, equals 1 if restructuring year between 2007-2009	ERM
(8) Public Ownership	Binary coded variable, equals 1 if the company was public at the time of restructuring	Bundesanzeiger/ BvD

*ERM: European Restructuring Monitor; BvD: Bureau van Dijk*

## 2.6 Analysis & Results

We run four OLS-regression models for our analysis. The final iteration shows the multivariate setting, including controls and both asset retrenchment and employee retrenchment variables. Towards robust results, we further run several analyses based on model 4, details for which are available in the section robustness analyses.

### 2.6.1 Main Results

Table 2.3 provides information on descriptive statistics, including means, standard deviations, and correlations among the variables. Results for the regression analyses are provided in Table 2.4.

As Table 2.3 shows, our sample consists of firms that experience severe performance declines between two years prior to restructuring (Y2) and the restructuring event year (Y4), as indicated by the variable severity of decline. By contracting their ROA by ten p.p. on average, firms experience a stark drop in profitability, making them ideal candidates for declining firms required

to undergo turnaround efforts. For retrenchment action, we find that sample firms reduce their assets by 5% on average during retrenchment, with the minimum close to the bisection of total assets. For employee retrenchment, results are more substantial, with a mean reduction of 14% in the defined retrenchment timeframe. This result is not surprising, as our sample is biased towards employee reductions by virtue of data collection, as only firms with a planned reduction of more than 5% of their workforce are included. It lends evidence towards the hypotheses that planned employee reductions are eventually realized in restructuring situations, as our collected data is based on actual employee counts reported, not on reported planned workforce reduction. Furthermore, firms undergoing restructuring exhibit worse operating performance after restructuring, compared to their pre-decline operating performance, by approximately 2 percentage points measured in EBITDA margin. Decreased performance three years post-restructuring is consistent with the dominating concept of the restructuring process consisting of decline, retrenchment, and recovery, as empirical results for the duration of the recovery stage remain scarce (Holder-Webb et al., 2005, Schmuck, 2013). Overall, our descriptive statistics confirm the current view on the turnaround process, with a substantial decline, retrenchment in assets and employees, and a quick recovery to operating performance levels below pre-crisis. As for correlations, especially employee retrenchment and previous performance are correlated with the performance differential between pre- and post-retrenchment periods. Furthermore, log-transformed asset base and employee reduction are substantially correlated, pointing to larger firms reducing employees to a relatively stronger degree. Firms that restructured during the financial crisis do not show strong correlations with any other variables. Most importantly, we do not find strong correlations between the independent variables employee retrenchment and asset retrenchment.

We run four specifications of the OLS regression. Model 1 includes only control variables, model 2 includes independent variable asset retrenchment and control variables, model 3 includes independent variable employee retrenchment and control variables, and model 4 shows the full model. The full model includes both independent variables and all control variables. All of the reported models are statistically significant at the 0.1% level, allowing for the interpretation of their results.

Model 2 shows the univariate results for the independent variable asset retrenchment. The model is significant, with an  $R^2$  of 0.4222. We find significant results for the relationship between asset retrenchment and turnaround performance, lending evidence to our hypotheses that asset

TABLE 2.3  
Descriptive Statistics and Bivariate Correlations

Variables	Min	Mean	Max	S.D.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) Turnaround Performance	-0.42	-0.02	0.25	0.10	1.00							
(2) Asset Retrenchment	-0.95	0.05	0.81	0.29	-0.10	1.00						
(3) Employee Retrenchment	-0.83	0.14	0.76	0.24	0.31	0.19	1.00					
(4) Previous Performance Level	-0.29	0.09	0.45	0.12	-0.59	-0.20	-0.06	1.00				
(5) Severity of Decline	-0.62	-0.10	0.33	0.16	0.08	-0.35	-0.29	-0.11	1.00			
(6) Firm Size	10.15	12.56	14.43	1.00	-0.20	-0.10	-0.34	0.24	0.35	1.00		
(7) Financial Crisis	0.00	0.23	1.00	0.42	-0.10	0.18	-0.18	-0.01	-0.18	0.19	1.00	
(8) Public Ownership	0.00	0.20	1.00	0.40	-0.25	0.23	-0.09	0.12	-0.10	0.13	0.36	1.00

$n = 74$

TABLE 2.4  
OLS Regression Results on Turnaround Performance

OLS Regression Variables	Model 1: Controls Only		Model 2: Asset Ret.		Model 3: Employee Ret.		Model 4: Full Model	
	Coef <i>St. Err.</i>	P-value <i>t-value</i>	Coef <i>St. Err.</i>	P-value <i>t-value</i>	Coef <i>St. Err.</i>	P-value <i>t-value</i>	Coef <i>St. Err.</i>	P-value <i>t-value</i>
Asset Ret.			-0.078** <i>0.037</i>	0.04 <i>-2.09</i>			-0.094*** <i>0.035</i>	0.009 <i>-2.68</i>
Employee Ret.					0.128*** <i>0.044</i>	0.005 <i>2.9</i>	0.144*** <i>0.043</i>	0.001 <i>3.36</i>
Previous Perf.	-0.486*** <i>0.088</i>	0.00 <i>-5.55</i>	-0.541*** <i>0.089</i>	0.00 <i>-6.05</i>	-0.476*** <i>0.083</i>	0.00 <i>-5.72</i>	-0.541*** <i>0.083</i>	0.00 <i>-6.5</i>
Severity of Decline	0.002 <i>0.069</i>	0.979 <i>0.03</i>	-0.051 <i>0.072</i>	0.478 <i>-0.71</i>	0.048 <i>0.067</i>	0.48 <i>0.71</i>	-0.011 <i>0.068</i>	0.877 <i>-0.16</i>
Firm Size	-0.003 <i>0.012</i>	0.793 <i>-0.26</i>	-0.002 <i>0.011</i>	0.895 <i>-0.13</i>	0.003 <i>0.011</i>	0.775 <i>0.29</i>	0.006 <i>0.011</i>	0.59 <i>0.54</i>
Financial Crisis	-0.012 <i>0.026</i>	0.658 <i>-0.44</i>	-0.011 <i>0.026</i>	0.671 <i>-0.43</i>	0.001 <i>0.026</i>	0.966 <i>0.04</i>	0.004 <i>0.024</i>	0.885 <i>0.14</i>
Public Ownership	-0.04 <i>0.027</i>	0.133 <i>-1.52</i>	-0.028 <i>0.027</i>	0.295 <i>-1.06</i>	-0.039 <i>0.025</i>	0.125 <i>-1.56</i>	-0.024 <i>0.025</i>	0.331 <i>-0.98</i>
Constant	0.072 <i>0.145</i>	0.622 <i>0.5</i>	0.053 <i>0.142</i>	0.711 <i>0.37</i>	-0.025 <i>0.142</i>	0.861 <i>-0.18</i>	-0.06 <i>0.137</i>	0.664 <i>-0.44</i>
Observations	74		74		74		74	
R-squared	0.385		0.422		0.453		0.507	
F	8.497***		8.159***		9.255***		9.685***	

Coefficient levels are indicated at the conventional levels using \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

retrenchment is negatively related to operating performance in turnaround. The results are significant at the 5% level. As for control variables, we can confirm previous research findings that the previous performance level indicates turnaround performance, significant at the 1% level. Model 3 shows the univariate results for the independent variable employee retrenchment. The model is statistically significant, with an  $R^2$  of 0.4532. With a significance level of 1%, the model provides evidence for our second hypothesis, showing a positive relationship between employee retrenchment and turnaround performance. Similar to model 2, the previous performance level is strongly negatively related to turnaround performance, also significant at the 1% level.

Model 4 presents the full model, which is significant with an  $R^2$  of 0.5067. Changes in both independent variables, asset retrenchment and employee retrenchment, are significantly associated with changes in the dependent variable, performance changes between the pre- and post-retrenchment period. Furthermore, the control variable previous performance provides significant explanatory power in our full model. Interpreting the coefficients, increases in asset retrenchment are negatively related to turnaround performance, while increases in employee retrenchment exhibit a positive relationship with turnaround performance. These results confirm hypothesis 1, stating that higher asset reduction correlates with decreased turnaround performance, and hypothesis 2, stating that higher employee reduction correlates with increased turnaround performance. We can thus confirm both of our initial hypotheses.

### 2.6.2 Robustness Tests

We perform further analyses and statistical tests to add robustness to our results. The results of these analyses are reported in Appendix A. In the first step, we run the full model, including insolvent firms in the sample. While firms in insolvency might report nonsensical financial data and thus create outliers distorting the analysis, they add a group of non-surviving firms to our sample while increasing the sample size to  $n=82$ . The model is statistically significant at the 0.1% level and confirms the results of our main model for both asset retrenchment ( $\beta = -0.19$ ,  $p < 0.01$ ) and employee retrenchment ( $\beta = 0.15$ ,  $p < 0.05$ ), albeit at lower significance levels for employee retrenchment. Second, we run the full model with a modified base year, using the delta between Y6-Y2 and Y5-Y3 instead of Y6-Y3. As the duration of the retrenchment phase is a frequently discussed topic in restructuring studies, and no uniform standard has been established in the literature, we aim to verify the results using a varied base-year and varied end of retrenchment. The results hold for both employee ( $\beta = 0.06$ ,  $p < 0.1$ ;  $\beta = 0.19$ ,  $p < 0.001$ ) as well as asset

retrenchment ( $\beta = -0.08$ ,  $p < 0.05$ ;  $\beta = -0.13$ ,  $p < 0.05$ ), confirming our initial findings. However, with less pronounced effects in the coefficients for the delta between Y6-Y2<sup>3</sup>. Third, we modify the measurement of the dependent variable. Deviating from measuring operating performance as described in the section independent variables, we utilize the overall Net Income, frequently employed in turnaround success literature. While the overall model is significant at the 1% level, only results for employee reduction hold. ( $\beta = 0.15$ ,  $p < 0.05$ ) We thus cannot confirm the negative relationship between asset retrenchment and firm performance based on Net Income. Lastly, we run the full model using robust standard errors. The model is highly significant with a p-value of  $< 0.01$  and confirms the results for employee retrenchment ( $\beta = 0.14$ ,  $p < 0.05$ ). However, the model yields no significant results for asset retrenchment, pointing towards the instability of our results of the asset retrenchment and operating performance relationship in the initial model.

Concerned with potential heteroskedasticity and multicollinearity issues, we further run the Breusch-Pagan/Cook-Weisberg test for heteroskedasticity of the dependent variable and calculate the variance inflation factor of the full model. The Breusch-Pagan/Cook-Weisberg test yields a p-value of 0.1620; thus, we can refute the null hypothesis and conclude that our dependent variable does not seem to suffer from heteroskedasticity. With an average variance inflation factor of 1.3, the full model does not exhibit substantial multicollinearity issues. Calculating the condition number, however, we find that our results could suffer from instability, with a condition number exceeding the value of 50. Validating our results without individual control variables, we find that the main driver behind the instability is the control variable logarithmic firm size. For a model specified excluding the size variable, our results remain comparable to those of our full model, including coefficients and significance levels of our two independent variables. Details are provided in the Appendix. We thus conclude that our results are robust and valid for analysis and discussion.

## 2.7 Discussion & Conclusion

This study aims to assess the influence of asset and employee retrenchment activities on the firm's post-restructuring operating performance. Based on our initial hypotheses, we argued that in comparison to larger, public, and primarily US-centric firms, smaller, German firms, both

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<sup>3</sup>As one sample company did not report valid average employee data for Y2 the company was omitted from the analysis, subsequently for this analysis  $n = 73$

public and private, would profit from reducing employee count and thus employee costs during restructuring, at least in the observed short- to medium-term. On the other hand, we expected their turnaround performance to suffer from shedding substantial assets, as these smaller firms frequently do not own subsidiaries or slack assets, which are not required for business operations.

Our analyses based on a unique sample of German firm data of firms with revenues below one billion EUR support our hypotheses. German mid-cap firms which experience decline, undergo retrenchment and subsequently survive exhibit lower turnaround operating performance when reducing total assets during retrenchment while experiencing improved performance when reducing their workforce. We find more robust evidence and a more pronounced effect for our second hypothesis, employee retrenchment.

### **2.7.1 Contribution**

We contribute to the broad body of turnaround research and, more specifically, retrenchment research in three main ways. First, we introduce empirical evidence on retrenchment actions for a previously underrepresented segment of firms: mid-cap firms, and an underrepresented geographical region: Europe. Even though retrenchment actions have been heavily researched in the past, context factors such as firm size, regulation, or financing have been determined to massively influence empirical results (Morrow et al., 2004, Pettigrew, 1987, Schweizer and Nienhaus, 2017). Our study directly responds to the research gap raised by Schweizer and Nienhaus (2017), who stated, "as most samples are heavily biased toward the USA, transferring these findings to other regions is difficult" (p. 34) by producing evidence for international samples, furthermore allowing for comparisons of results.

Second, we propose a novel approach to identifying firms in restructuring situations using data from the European Restructuring Monitor (Eurofund). By including all European Union countries and data beginning in 2002, this vast dataset allows for the construction of broad samples across regions, firm sizes, and industries, as frequently requested by turnaround researchers. While we limited ourselves to internal restructuring cases and firm retrenchment, application in adjacent fields could be feasible. Moreover, by using this data as an identification method only and matching it with financial data from Bureau van Dijk databases, we were able to include privately held companies in our samples, which were frequently excluded in previous studies.



Last, based on the characteristics of German mid-cap firms, we contribute to the literature by further developing hypotheses on mid-cap firms undergoing internal restructuring and linking previous results in these areas to the specifics of firms in the German Mittelstand. Combining literature on non-US-based samples, SME studies, and specifics of the German financial markets, we propose an argumentation for the differences in the effect of asset retrenchment on German mid-cap firms compared to larger firms.

### **2.7.2 Limitations**

The results and findings of our study are not without limitations. Within turnaround research, the first and foremost limitations are sample biases. Constrained to small samples by the difficulty of obtaining large numbers of turnaround firms and the tedious compilation of often unstructured financial data, the analysis could suffer from biased results and only limited inference outside the initial sample. While our approach limits the large company bias inherent in previous studies (Chowdhury and Lang, 1996, Pearce and Robbins, 1993), industry biases could be an issue as we exclude financial industries while overweighting manufacturing firms. Secondly, only firms engaging in downsizing actions amidst an internal restructuring are selected. Thirdly, firms that do not report financial data will not be reflected in our study. This specifically impacts certain types of legal structures, as well as small companies with revenues below 50 Mio. EUR, driven by German disclosure legislation (§325 HGB). Lastly, firms that are sold, discontinue operations, enter insolvency in the early stages of the turnaround, or lack sufficient financial data for other reasons, are eliminated from the analysis.

Next to potential sample bias, our study is limited by methodological issues. Pearce and Robbins (1993), Trahms et al. (2013), and Schweizer and Nienhaus (2017) document that turnaround research suffers from consistent success metrics and potential confounding or endogeneity concerns. While we try to follow previous research as closely as possible in measuring and defining financial metrics, the limited financial data for private firms makes deviations necessary. Furthermore, we cannot rule out potential reverse causality concerns over the retrenchment–turnaround performance relationship or the hypothesized deterministic nature of the retrenchment phase as a consequence of decline, not a reason for improved turnaround performance (Barker and Mone, 1994).

Our contributions, but also our limitations, offer various avenues for further research. Building on the European Restructuring Monitor as a source of restructuring data opens new opportunities for retrenchment and broader turnaround research in Europe, especially for comparing regions or countries. Specifically, the impact of contextual factors such as employee protection regulation on the efficacy of turnaround measures can be examined. Moreover, the vast size of the initial database could see the development of large, more diverse samples, solving issues of sample biases outlined above. As for the practical implications of our findings, a more detailed analysis of which reduction factors drive turnaround performance is essential. The next step for asset retrenchment in German mid-cap firms would be an analysis of specific asset types and their role in retrenchment, specifically a differentiation between working capital and fixed assets. For employee retrenchment, a long-term view of the complete recovery cycle could help increase the robustness of the empirical literature. While some studies have tried to incorporate recovery as a stage, the differentiation between short- and long-term effects of employee retrenchment posited in theory building has not been translated into empirical evidence thus far. Overall, the effects of lockdowns and other economic implications of Covid-19 will offer an excellent opportunity for researchers to study decline and turnaround, addressing remaining pressing questions in improved research designs.

### **2.7.3 Conclusion**

The presented research aimed to examine the effect of retrenchment actions on the turnaround performance of German mid-cap firms. While frequently researched, the previous empirical literature on commonly used retrenchment actions exhibits a strong bias towards large firms in the US, rendering the results hardly transferable to German mid-cap firms. Our study helps bridge this research gap by introducing a unique dataset based on a novel firm identification approach and analyzing the effects of asset and employee retrenchment on turnaround performance for the German mid-cap market. The results of this investigation show that asset retrenchment has a negative effect on turnaround performance for German mid-cap firms. Employee retrenchment, on the other hand, yields a positive effect on turnaround performance. Taken together, these results suggest that retrenchment actions play a substantial role for companies undergoing restructuring efforts, showing significant effects on turnaround performance. Moreover, these findings underline the importance of contextual factors such as firm size and geography for empirical turnaround research.

The recent times of challenging macroeconomic environments have demonstrated that crises can emerge anywhere and anytime, creating ample demand for scientific evidence on how to tackle these crises best. Researching corporate turnaround has rarely been as relevant as today. We hope that this study contributes to the field and inspires future research in the area of restructuring and retrenchment, further advancing the long-standing empirical research on corporate turnaround.

### 3 | Reducing the Political Costs of Layoffs: Do Companies Manage Earnings to Soften the Impact of Downsizing Announcements?

#### **Abstract**

We investigate whether firms manage earnings downwards before major layoff events. Previous literature identified incentives for managers to adjust accounting earnings downwards to avoid political costs. While the focus has been on earnings management in political cost settings such as pay negotiations, literature on earnings management around downsizing events is sparse. Further, previous studies lack the inclusion of a specific political cost measure. This paper addresses this gap by analyzing discretionary accrual patterns around major downsizing events in a multicountry setting using matched samples and panel regression, controlling for political costs by introducing a novel measure based on data by Botero et al. (2004). We find no significant evidence for increased negative accruals prior to the downsizing event announcement. Our findings imply that managers are not incentivized to adjust earnings downwards to avoid political costs induced by downsizing event announcements.

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*Status:* Working Paper

### 3.1 Introduction

For large, publicly listed companies, employee downsizing initiatives have become a regularly used method of the corporate toolset to improve corporate performance and increase shareholder value. Despite the frequency of downsizing initiatives and its highlighted positive effects for cost-saving, managers fear downsizing's adverse impact on the firm's stock price, employees, and reputation. Especially the public reaction can range from an understanding voice to public outcry, depending on the perceived necessity of the downsizing efforts. German medical company Fresenius experienced this firsthand, making the headlines in 2021 for announcing job cuts amidst achieving large operating profits and increasing their dividend, with union representatives accusing the company of maximizing profits at any cost (Ärzteblatt, 2021).

However, while researchers have frequently focused on better understanding the immediate consequences of employee downsizing, the management's options to attenuate these adverse effects have received scarce attention. In one of the select studies dealing with the management's options, Hall et al. (2005), drawing on pay renegotiation and accrual-based earnings management research from the early 1990s, hypothesized that management could be incentivized to utilize earnings management techniques to reduce the political costs of workforce reduction announcements. Healy and Wahlen (1999) summarize that "earnings management occurs when managers use judgment in financial reporting [...] to alter financial reports to either mislead some stakeholders [...], or to influence contractual outcomes" (p. 371). Applying this definition to corporate downsizing, which can be described as labor negotiations in the broader sense, managers could decrease earnings to mislead a stakeholder group, the employees, about the underlying performance of the company, while also trying to influence the labor agreements, which are contractual outcomes. While Hall et al. (2005) confirm the presence of earnings management around workforce reduction events, the empirical results concerning preemptive, decreasing earnings management before major layoff events are inconclusive. Verdier and Boutant (2016) utilize a French firm sample to corroborate the results in a setting with rigid employee protection regimes and indeed conclude that "managers adjust earnings downwards the year before a workforce reduction announcement" (p. 27). One important cause for concern is that both studies utilize either settings with low or high employee protection regimes. The level of employee protection implies the level of political costs a company could incur when it announces

workforce reduction efforts. Therefore, it could strongly impact the incentive to engage in earnings management to alleviate public pressure. Further, both empirical studies offer contrasting results while utilizing differing approaches that exhibit several statistical weaknesses, potentially being biased towards poorly performing firms due to the sample selection process of Hall et al. (2005) or overestimating the result by using pooled OLS instead of panel regression models in the case of Verdier and Boutant (2016).

The purpose of this study is to reconcile the existing evidence produced by previous literature on earning management patterns around downsizing events and further introduce a European multicountry sample to allow for comparisons between varying levels of employee protection regimes and, therefore, varying levels of implied political costs. In doing so, our study aims to answer the research question of whether managers reduce accounting profits before announcing corporate downsizing initiatives to reduce public pressure and political costs. Positive findings would strongly impact how the recipients of financial statements should analyze the earnings figures distributed by the management around downsizing events. If managers are indeed engaging in earnings management to alleviate pressure, employees and their representatives could account for the decreased numbers, reducing information asymmetries and handing them an advantage in labor negotiations. For shareholders and financial markets, knowledge about such management behavior could result in the loss of trust and the reevaluation of the company's performance. For legislators and the public, such management behavior could demonstrate the power of political pressure, seeing that managers are engaging in artificially decreasing company performance to reduce the backlash of downsizing.

Methodologically, we follow a three-step process of analyzing our sample using matched sample univariate analysis, the modified earnings management estimation model produced by Hall et al. (2005), and panel regression models with fixed effects. We define earnings management as the signed value of discretionary accruals of a given firm, estimated via the established Jones model (Jones, 1991), modified Jones model (Dechow et al., 1995), and Kothari model (Kothari et al., 2005). Our empirical analyses utilize a sample of EUROSTOXX600 firms between 2002 and 2021, comprising downsizing and non-downsizing firms. We identify downsizing firms using the European Restructuring Monitor (ERM) database provided by Eurofund, an agency of the European Union (Eurofund, n.d.), with an additional threshold of 1% of a company's workforce affected.

Our results show that managers do not preemptively manage earnings in the year before announcing major employee layoffs. Neither of the three abovementioned statistical tests lends evidence towards the hypothesis that managers pre-manage their earnings to reduce the risk of incurring political costs through downsizing efforts. However, the results do provide robust statistical evidence of increased downwards earnings management in the year of layoff announcements. While our study advances the literature stream around the prominent political cost hypothesis, our findings are in line with arguments of the big bath hypothesis, which posits that managers use years of poor performance to "clear the decks" (Hall et al., 2005, p. 2) and create pockets of reversing accruals for a quick performance turnaround in later periods. We further find stronger employee protection regimes to have significant explanatory power over the level of discretionary accruals, supporting the political cost hypothesis that managers try to reduce earnings to alleviate public and employee pressure.

The contribution of this study is threefold. First, we contribute to the body of literature by reconciling the results of the previous two studies and testing the established hypotheses in a pan-European sample designed to reduce potential biases inherent in existing studies. We further employ different statistical methods proposed by the literature, allowing for a direct comparison of results across studies. Secondly, we introduce a new proxy variable for the risk of political costs, which we approximate via the strength of employee protection regimes. We are, to our knowledge, the first to directly introduce political costs in the context of earnings management literature. In doing so, this study contributes important first empirical evidence to the political cost hypothesis in the context of earnings management. Lastly, we reduce the scarcity of empirical evidence around earnings management and discretionary accrual patterns around downsizing, hoping to inspire future research to better understand accounting choices around this frequently occurring event.

The rest of this study is organized as follows. First, we provide an overview of the relevant literature and build our hypotheses. Next, we summarize our sample selection process and our methodology. Lastly, we present our results before ending with a discussion and our contributions to the literature.

## **3.2 Background**

### **3.2.1 Earnings Management & Corporate Labor Negotiations**

Corporate labor negotiations, such as workforce reduction events, possess the power to initiate a transfer of wealth between stakeholders and shareholders of a firm. With conflicting interests between shareholders and other stakeholders, management is tasked with moderating the process and reaching equilibrium agreements based on the respective relative influence of the groups. Labor influence can generally be described as a function of a country's political and societal factors, such as employee protection and collective bargaining laws (Botero et al., 2004, Roe, 2006). Literature has found that capital enhancing measures are prioritized for firms with greater investor influence, while employee welfare takes priority over capital enhancement in firms with greater labor influence (Atanassov and Kim, 2009, Tirole, 2001). Faced with this varying level of labor influence, company management tries to extract concessions from the stakeholders in labor negotiations, a setting which Mautz and Richardson (1992) describe as a version of J.R. Hicks' model of wage bargaining. In this setting, bargaining power is derived from information about the opposing parties' resources and resolves. Faced with incomplete, asymmetric information and in the absence of alternative sources of information, firm accounting data becomes an important source of information as a proxy for the ability of the firm to make concessions to its employees (Liberty and Zimmerman, 1986, Mautz and Richardson, 1992).

The role of financial statements in labor negotiation has been a critical area of research in accounting literature since the early 1990s. Early studies hypothesized that with financial statements being compiled under the discretion of firm management, manipulation of accounting profits could consequently result in a shift of bargaining power to the benefit of the management. Empirically, researchers have focused on wage negotiations and, more recently, on corporate downsizing events. Relevant empirical studies focusing on earnings management in the context of workforce pay negotiations have been conducted by Atanassov and Kim (2009), Mautz and Richardson (1992), and DeAngelo and DeAngelo (1991), while Hall et al. (2005) and Verdier and Boutant (2016) studied workforce reduction events in the US and France, respectively.

Empirical results on earnings management in the context of pay negotiations are mainly inconclusive. Liberty and Zimmerman (1986) hypothesize that managers engage in earnings management and depress reported earnings during labor union contract negotiations to reduce the company's



wage bill. An empirical analysis of a sample of 105 unionized companies in the US between 1968 and 1981, however, yields no significant evidence for this hypothesis. The authors highlight that sample firms' poor performance could prohibit managers from engaging in earnings management, as they are unable to depress earnings further. A related study by Mautz and Richardson (1992) on 156 US-based firms similarly concludes that its results "do not indicate systematic financial manipulation by employers engaged in bargaining" (p. 50). Only DeAngelo and DeAngelo (1991) produce contrasting evidence by finding abnormal changes in net income for the year before union pay negotiation in a small sample study of seven US-based steel-making firms. As the setting includes only one industry and only restructuring firms focused on gaining worker concessions, the authors posit that in the face of alternative evidence of poor performance, income depression can be conducted under less suspicion.

Empirical results focused on earnings management in the context of workforce downsizing are more conclusive, albeit rare, with studies conducted by Hall et al. (2005) for a US-based sample and Verdier and Boutant (2016) for a France-based sample of downsizing announcing firms. Hall et al. (2005) provide evidence for significant manipulations of earnings in the year of downsizing announcements. They fail, however, to provide evidence towards the hypothesis that managers depress earnings in the year prior to downsizing announcements, lending no evidence to the hypothesis that managers do indeed manage earnings downwards to increase bargaining power for labor considerations. On the contrary, Verdier and Boutant (2016) report evidence of depressed earnings in the year ending before the workforce adjustment announcement for a sample of French firms, using a different methodology. While Hall et al. (2005) introduce a dummy variable for workforce announcement years into the modified Jones model to isolate the effect of downsizing announcement periods, Verdier and Boutant (2016) employ a size- and performance-matched sample approach.

Despite their substantial contributions, the existing literature exhibits major limitations. First, the empirical studies rely on specific samples of mainly US-based firms with a specific industry focus and an often strongly unionized workforce. Furthermore, samples only including downsizing firms run the risk of being biased towards poorly performing firms, which can strongly impact the build-up of discretionary accruals (DeAngelo and DeAngelo, 1991, Dechow et al., 1995, Hall et al., 2005). Second, with seminal works of the related literature focusing on earnings management and workforce pay negotiation, not much is known about accounting choices

around employee downsizing events. Underrepresented in research, it is difficult to draw comparisons between the reported equivocal empirical results, as differences in methodology and type of firms covered are substantial. Third, while researchers acknowledge the importance of employee protection and collective bargaining legislation in their hypothesis development, this information has not been included in the literature around employee downsizing, nor has its impact been statistically tested.

### **3.2.2 Corporate Labor Negotiations**

Managers of publicly traded firms face constant pressures from shareholders to increase the firm's value. External pressures such as macroenvironmental and industrial factors or internal, organization-inherent factors such as strategy changes and current firm performance can mandate necessary firm restructuring efforts (Datta et al., 2010). Workforce adjustment measures frequently accompany these restructuring events.

Literature has found workforce reduction events to cause substantial costs for firms. Next to direct costs, firms can incur organizational and political costs. Direct costs include termination-related expenses, also called firing costs, such as severance payments and costs incurred by employees' notice periods (Hunt, 2000). Organizational costs in the form of negative organizational consequences of downsizing have been extensively researched. Under the so-called survivorship syndrome, employees still employed are found to be less committed after experiencing a corporate downsizing (Brockner et al., 2004), report lower performance and effort, and exhibit increased absenteeism (Travaglione and Cross, 2006). This relationship, however, is found to be moderated by the perception of justice with respect to the decision-making of the workforce reduction event. Adverse effects can be offset for employees who feel that the workforce reduction was necessary or fairly conducted, while the opposite effect holds true for unfairly perceived treatments (Verdier and Boutant, 2016, Shah, 2000). The third cost category, political costs, includes adverse effects imposed by the pressure of social stakeholders, legislators, and the public. Downsizing firms run the risk of workforce conflicts such as strikes, scrutiny, and intervention from legislators or public boycotts (Verdier and Boutant, 2016). In this context, researchers have further found that corporate downsizing efforts produce adverse effects on a firm's reputation (Ahmadjian and Robinson, 2001, Flanagan and O'Shaughnessy, 2005, Zyglidopoulos, 2005).

Overall, faced with the target of increasing firm value by optimizing workforce structures, the management's decision is subject to considerable costs and risks when trying to extract concessions from its employees. Thus, reducing direct, organizational, and political costs immediately impacts the success of workforce adjustment measures.

### **3.2.3 Earnings Management Motives**

Whether managers use their judgment in preparing financial statements to alter accounting earnings towards their wanted levels, the so-called earnings management has been the focus of a large stream of accounting literature (Healy and Wahlen, 1999). Motives to alter accounting profits are plentiful, with Othman and Zeghal (2006) summarizing the motives behind earnings management into six main categories: management compensation plans, debt contracts, regulatory cases, stock price motives, avoiding losses, and meeting forecasts. Over the past decades, several key hypotheses have been developed by research to link the incentives and motives behind earnings management with specific patterns in the execution of judgment and discretion in preparing financial statements by managers.

Researchers have postulated that firms follow opportunistic behavior when engaging in earnings management. According to the smoothing hypothesis, firms generally exercise discretion in earnings to reduce fluctuations and produce steady earnings over time. Key benefits of smoothed earnings can include tax advantages, better relations with employees and creditors, and raised security prices (Koch, 1981). Similarly, the political cost hypothesis postulates that firms try to suppress large earnings to circumvent the regulation, reduce investigation risks and avoid public scrutiny (Liberty and Zimmerman, 1986). The big bath hypothesis states that managers further reduce earnings in years with poor performance to "clean house" while also providing financial pockets for improved performance in the subsequent years as earnings management measures are often self-reversing (Amir and Livnat, 1996, Hall et al., 2005). On the individual level, Healy (1985) forms the bonus plan hypothesis to explain private motives by managers. In situations where managers are awarded bonuses based on accounting profits, managers are found to engage in income-decreasing measures if the upper- or lower bound of their bonus schemes are binding and income-increasing if they are not.

### **3.3 Development of Hypotheses**

In workforce reduction events, management is faced with tough decisions in facilitating the wealth transfer between employees and shareholders. Whether it is to save the firm from financial ruin or improve shareholder returns by keeping the firm competitive and improving operating performance, the stakeholder group primarily suffering from downsizing is the firm's employees. With high risks of direct, organizational, or political costs linked to workforce reduction efforts by a large body of research, the management, therefore, has to be focused on trying to minimize the consequences, or the costs, that workforce reduction events can induce.

While direct firing costs are challenging to reduce, organizational and political costs frequently include risks that management can actively try to mitigate before they materialize. Drawing on the political cost hypothesis, management could thus be incentivized to reduce accounting profits before announcing major downsizing efforts in order to sway the employees' and public opinion about the necessity of the operation, thus avoiding or reducing negative organizational and political consequences. Boosting the necessity would allow for a more justified feeling among workers, attenuating adverse effects of the survivorship syndrome, including decreased loyalty or performance and increased absenteeism. Furthermore, it could allow the firm to actively shape the public discussion, avoiding a direct response from regulatory bodies or the public (Verdier and Boutant, 2016).

That downsizing firms frequently experience poor performance prior to announcing job cuts could furthermore incentivize managers of these firms to utilize the artificially decreased poor performance to engage in "taking a bath," clearing the financial decks using even more income-decreasing accounting choices. Creating large, income-decreasing accruals allows for a quick reversal in the subsequent years. In line with Hall et al. (2005), the reversal effects could further strengthen the necessity arguments made by management, making employees feel more secure and less anxious, given that shortly after the workforce reduction announcement, accounting results start to improve. On the other hand, findings of the study by Liberty and Zimmerman (1986) point towards a floor of downward earnings management for poorly performing firms. If managers are already experiencing poor performance, they might be unable to suppress earnings further without incurring other costs, such as those associated with debt contracts or their own employment and remuneration.

Underlined by the argumentation of the political cost and the big bath hypotheses, and taking into consideration the context of European firms with largely high workforce protection regimes compared to the US-based firms in previous studies, we thus hypothesize management to engage in earnings management before announcing workforce reductions and therefore propose the following hypothesis:

***Hypothesis 1a (H1a):*** *Firms exhibit larger negative discretionary accruals in the year before announcing a workforce reduction effort*

Workforce reduction efforts are subject to local laws and regulations. Stark differences in workforce protection, social laws, and unionization legislation between European countries make employee downsizing more prohibitive in specific regions. Political costs are a result of existing laws and regulations. In countries where workforce protection legislation is limited, it is relatively less costly for firms to reduce their number of employees. Consequently, bargaining with employees is relatively easier as the bargaining power is shifted towards shareholders, diminishing the role of financial statements as an important data source in workforce negotiations. Therefore, managers are less incentivized to alter accounting profits to justify their workforce reduction efforts, leading us to the following hypothesis:

***Hypothesis 1b (H1b):*** *Firms facing stronger employee protection regimes show larger negative discretionary accruals in the year before announcing a workforce reduction effort*

### 3.4 Sample & Methods

The goal of our study is to analyze earnings management patterns before major corporate downsizing events in Europe. Based on the political cost and big bath hypotheses, we anticipate finding income-decreasing earnings management before the announcement of corporate downsizing efforts. For robustness of our results, we employ a pan-European sample including countries with differing employee protection legislation regimes. We further combine the methods used in the studies by Hall et al. (2005) and Verdier and Boutant (2016) to account for changes in the statistical approaches.

### 3.4.1 Sample

We utilize a sample of all EUROSTOXX600 firms between 2002 and 2021. We choose the lower bound of 2002 for data availability reasons related to the identification of downsizing firms in Europe and the upper bound of 2021 to ensure the availability of sufficient financial data post-downsizing. The duration of the sample includes periods of economic prosperity as well as economic crisis, allowing for industry-wide and firm-specific downsizing efforts. Fundamental financial data are extracted from Refinitiv Datastream and Worldscope data sources. After adjustments for lack of complete financial data and aberrant values, the full sample comprises 691 firms or 9,550 firm years.

We identify downsizing firms using data provided by the European Restructuring Monitor database (Eurofund, n.d.). The ERM database collects substantial downsizing events in European Union member states via press research, with a minimum threshold of 5% of the workforce in one location of the company affected. Data has been available since the year 2002. For a firm to be considered a downsizing firm in our sample, the firm must plan to shed at least 1% of the company's entire workforce. To isolate substantial events, we require downsizing events to have been preceded by two years without downsizing activity announced by the respective firm.

Similar to previous studies in the field, we further conduct analyses using a matched sample approach. We match downsizing firm-years within our sample with non-downsizing firm-years, based on industry-firm-years and firm size measured in terms of total assets. The sample for matched sample analyses comprises firm years. Fifty-five firm-years could not be matched within the full sample within our constraints, increasing the quality of matches at the expense of a slightly reduced matched sample size. Full details of the used samples are stated in Table 3.1 and Table 3.2.

### 3.4.2 Methods

This study uses three complementary approaches for analysis. First, we conduct univariate difference-in-mean tests using a matched sample approach. Second, we utilize the expanded version of the accrual estimation model used by Cahan (1992) and Hall et al. (2005), which adds a dummy variable to the estimation model of discretionary accruals. However, instead of

TABLE 3.1  
Sample Overview

Year	Average Total Assets in EUR m	Number of observations	Number of observations Downsizing	Percentage of Downsizing Observations	Average Total Assets - Downsizing in EUR m
2004	10,790	426	15	3.5%	22,100
2005	12,140	447	18	4.0%	25,140
2006	13,030	510	17	3.3%	17,560
2007	13,360	541	13	2.4%	17,270
2008	15,080	559	32	5.7%	50,120
2009	14,630	561	39	7.0%	16,010
2010	15,810	552	16	2.9%	14,630
2011	16,610	557	17	3.1%	27,400
2012	17,190	551	31	5.6%	12,170
2013	17,660	539	14	2.6%	15,650
2014	18,290	546	17	3.1%	31,050
2015	18,760	550	30	5.5%	30,100
2016	19,560	555	19	3.4%	22,680
2017	20,390	556	14	2.5%	33,560
2018	21,400	558	19	3.4%	26,830
2019	23,570	543	21	3.9%	62,210
2020	23,930	535	49	9.2%	30,520
2021	21,090	145	5	3.4%	8,351
Total	17,400	9,231	386	4.2%	27,250

Source of total assets: WRDS ITEM2999

TABLE 3.2  
Matched Sample Overview

Variable	Downsizing Observations				Matched Sample			
	N	Mean	Std. Dev.	Median	N	Mean	Std. Dev.	Median
Total Assets	328	21,012	42,514	5,951	328	18,432	34,258	5,939
Revenue	328	14,650	28,183	5,056	328	12,609	20,991	4,484
ROA	328	4.52%	8.82%	4.63%	328	4.75%	7.97%	4.15%

Note: Total Assets, Revenue in EUR m; Matching based on firm-year, industry, and size (Total Assets)

pooling the data, we utilize fixed effects panel regression models. Lastly, we use panel regression to regress a downsizing dummy variable on estimated discretionary accruals.

### 3.4.2.1 Earnings Management Estimation

We estimate earnings management using established accrual estimation models based on the initial research of Jones (1991). The basis of accrual estimation models is the hypothesis that the total accruals of a firm can be split into two components: normal and abnormal or discretionary accruals. While normal accruals are interpreted as resulting from regular operating activities of the firm, abnormal accruals cannot be derived from the most important business activities and are therefore used as a proxy for the deviation of regular accounting. Jones (1991) developed an estimation equation that explains the normal component of total accruals by the growth dynamics, measured through changes in sales, and the total amount of tangible assets of a firm, measured as property, plant, and equipment of the firms in the industry. Consequently, the unexplained section of accruals is represented by the error term. See Equation 3.1 for details.

$$\left(\frac{TAC_{it}}{A_{it-1}}\right) = \beta_1 \left(\frac{1}{A_{it-1}}\right) + \beta_2 \left(\frac{\Delta S_{it}}{A_{it-1}}\right) + \beta_3 \left(\frac{PPE_{it}}{A_{it-1}}\right) + u_{it} \quad (3.1)$$

The initial Jones model was further modified by Dechow et al. (1995) to account for noncash sales by subtracting changes in accounts receivable, and Kothari et al. (2005) to reflect the operating performance of a firm by including a performance term based on the firm return on assets (ROA). See Equation 3.2 and Equation 3.3 for details. Our analyses each utilize discretionary accruals estimated using the specifications of Jones (1991), Dechow et al. (1995), and Kothari et al. (2005). In estimating discretionary accruals, we utilize the direct method, calculating total accruals as the difference between net income and operating cash flows. We employ the Fama-French 12 industry classifications based on SIC codes for industry grouping. All input terms for the three accrual estimation models are winsorized at the one-percent level. An overview of the model components is presented in Table 3.3.

$$\left(\frac{TAC_{it}}{A_{it-1}}\right) = \beta_1 \left(\frac{1}{A_{it-1}}\right) + \beta_2 \left(\frac{\Delta S_{it} - \Delta REC_{it}}{A_{it-1}}\right) + \beta_3 \left(\frac{PPE_{it}}{A_{it-1}}\right) + u_{it} \quad (3.2)$$



$$\left(\frac{TAC_{it}}{A_{it-1}}\right) = \beta_1 \left(\frac{1}{A_{it-1}}\right) + \beta_2 \left(\frac{\Delta S_{it} - \Delta REC_{it}}{A_{it-1}}\right) + \beta_3 \left(\frac{PPE_{it}}{A_{it-1}}\right) + \beta_4 \left(\frac{NI_{it}}{A_{it-1}}\right) + u_{it} \quad (3.3)$$

TABLE 3.3  
Overview of Jones Model, Modified Jones Model, Kothari Model Components

Component	Description
$TAC_{it}$	Total Accruals for firm $i$ in year $t$
$A_{it} - 1$	Total Assets for firm $i$ in year $t-1$
$\Delta S_{it}$	The change in total sales for firm $i$ between years $t$ and $t-1$
$\Delta REC_{it}$	The change in account receivables for firm $i$ between years $t$ and $t-1$
$PPE_{it}$	Property, Plant and Equipment for firm $i$ in year $t$
$NI_{it}$	Net Income for firm $i$ in year $t$

### 3.4.2.2 Dependent Variable

For our dependent variable in the panel regression models, we use residuals estimated by the Jones (1991), Dechow et al. (1995), and Kothari et al. (2005) models, denoted with  $daj$ ,  $dad$ , and  $dak$ . The discretionary accruals are utilized with their signed values to allow for the direction of earnings management, compared to only the extent of earnings management for studies utilizing absolute discretionary accruals. The integration of return on assets in the model specification by Kothari reduces the overall sample size. For consistency, the smaller sample is applied in all three model specifications. Calculations with differing sample sizes were tested; however, they yielded similar results.

### 3.4.2.3 Explanatory Variables

In line with our hypotheses, we use two main sets of explanatory variables: downsizing years and the extent of workforce protection regimes. Downsizing firm-years are identified using the European Restructuring Monitor database provided by the ECCM and translated into a dummy-coded variable  $eventyear$ , taking the value of one for downsizing firm-years and zero for all others. In line with Hall et al. (2005), we further include the year before the eventyear ( $eventyear\_l$ ) in our analyses. The strength of workforce protection regimes is measured using a time-indifferent variable based on a study by Botero et al. (2004). Botero et al. (2004) generate three indices

for labor legislation on a country level, measuring the strength of collective bargaining laws, social security laws, and employment laws. We utilize the employment and collective bargaining indices as proxy variables to test hypotheses for increased political costs, denoted *emplaw* and *collaw*.

#### 3.4.2.4 Control Variables

In order to control for alternative influences on the size of earnings management detected through our models, we include control variables for relevant firm-specific characteristics in line with previous studies of the earnings management literature. Data for control variables are extracted from Worldscope Financial Fundamental data, accessed via Wharton Research Data Services.

**Firm size:** To account for the influence of enterprise size on discretionary accruals, we measure firm size as the natural logarithm of assets, lagged once and winsorized at the 1% level. **Performance:** We measure operating performance change as the difference in EBITDA between the current and previous year scaled by total assets, winsorized at the 1% level. **Debt level:** We measure the current debt level of a firm as total debt scaled by total assets in the current year, winsorized at the 1% level (Lazzem and Jilani, 2018). **Book-to-market:** We measure the book-to-market ratio of a firm by its book value of equity scaled by its market capitalization in the current year, winsorized at the 1% level. **Growth:** We measure growth as the difference in sales between the current and previous year scaled by total assets, winsorized at the 1% level. In applying a model similar to the one developed by Hall et al. (2005), we further include a dummy-variable *loss* to control for loss-years, as proposed by the author. An overview of all variables is presented in Table 3.4.

TABLE 3.4  
Variable Overview

Variable	Description	Source
(1) Discretionary Accruals Jones (da <sub>j</sub> )	Signed discretionary accruals are calculated using the Jones model developed by Jones (1991)	Calculation based on Refinitiv/Worldscope data
(2) Discretionary Accruals Dechow (dad)	Signed discretionary accruals are calculated using the modified Jones model developed by Dechow et al. (1995)	Calculation based on Refinitiv/Worldscope data
(3) Discretionary Accruals Kothari (dak)	Signed discretionary accruals are calculated using the model developed by Kothari et al. (2005)	Calculation based on Refinitiv/Worldscope data
(4) Downsizing firm-year (eventyear)	Binary coded variable equals 1 if the firm announced a major layoff in this fiscal year	European Restructuring Monitor
(5) Year before Downsizing firm year (eventyear_1)	Binary coded variable, equals 1 if the firm announced a major layoff in the following fiscal year	European Restructuring Monitor
(6) Employment law index (emplaw)	Employment law index for the countries' headquarters from data provided by Botero et al. (2004)	Botero et al. (2004)
(7) Firm Size (size)	Log-transformation of total assets, lagged once and winsorized at the 1%-level	Refinitiv/Worldscope data
(8) Performance Level (perf)	Change in EBITDA between current and previous year, scaled by total assets, winsorized at the 1%-level	Refinitiv/Worldscope data
(9) Book-to-Market Ratio (btm)	Book value of equity scaled by total market capitalization, lagged once and winsorized at the 1%-level	Refinitiv/Worldscope data
(10) Debt level (debtlevel)	Total debt scaled by total assets, lagged once and winsorized at the 1%-level	Refinitiv/Worldscope data
(11) Firm growth (growth)	Change in Revenue between current and previous year, scaled by total assets, winsorized at the 1%-level	Refinitiv/Worldscope data

TABLE 3.5  
Discretionary Accruals based on Jones, Modified Jones, and Kothari Models

Industry Name	Calculation Method	N	Mean	S.D.	Median	Min	Max
Business Equipment	Jones	1001	-0.0013	0.1737	0.0100	-1.1366	0.6537
	Mod. Jones	1001	-0.0003	0.1834	0.0113	-1.2773	0.6150
	Kothari	1001	0.0003	0.1781	0.0140	-1.2348	0.5444
Chemicals	Jones	421	0.0013	0.0828	-0.0033	-0.5854	0.4149
	Mod. Jones	421	0.0013	0.0834	-0.0037	-0.6393	0.4166
	Kothari	421	0.0011	0.0810	-0.0056	-0.6055	0.4223
Communication	Jones	628	-0.0018	0.0725	0.0025	-0.4101	0.2863
	Mod. Jones	628	-0.0018	0.0729	0.0012	-0.4087	0.3036
	Kothari	628	-0.0017	0.0711	0.0034	-0.4178	0.2841
Consumer Durable	Jones	212	0.0012	0.0504	0.0012	-0.2075	0.1579
	Mod. Jones	212	0.0012	0.0500	0.0013	-0.2166	0.1737
	Kothari	212	0.0004	0.0447	-0.0029	-0.2037	0.1752
Consumer Nondurable	Jones	735	0.0003	0.0667	0.0065	-0.3714	0.3196
	Mod. Jones	735	-0.0001	0.0668	0.0054	-0.3724	0.3180
	Kothari	735	0.0003	0.0632	0.0043	-0.3377	0.3157
Energy	Jones	479	-0.0046	0.1474	0.0097	-0.9696	0.5708
	Mod. Jones	479	-0.0049	0.1435	0.0092	-0.8500	0.6032
	Kothari	479	-0.0040	0.1373	0.0049	-0.8410	0.6003
Healthcare	Jones	579	0.0023	0.0787	0.0020	-0.6790	0.3094
	Mod. Jones	579	0.0011	0.0727	0.0026	-0.5407	0.2385
	Kothari	579	0.0010	0.0699	0.0022	-0.3911	0.2465
Manufacturing	Jones	1438	-0.0019	0.0818	-0.0002	-0.9762	0.3201
	Mod. Jones	1438	-0.0022	0.0812	-0.0008	-0.9638	0.3209
	Kothari	1438	-0.0021	0.0792	-0.0024	-0.8789	0.3361
Utilities	Jones	531	0.0002	0.0369	-0.0002	-0.2249	0.2164
	Mod. Jones	531	0.0003	0.0363	-0.0005	-0.2173	0.2139
	Kothari	531	0.0002	0.0334	-0.0003	-0.2110	0.2083
Wholesale	Jones	1239	0.0013	0.0598	0.0024	-0.4004	0.3086
	Mod. Jones	1239	0.0006	0.0578	0.0022	-0.4021	0.3102
	Kothari	1239	0.0006	0.0567	0.0029	-0.3267	0.3292
Other	Jones	2287	0.0008	0.1507	0.0082	-1.4362	0.7217
	Mod. Jones	2287	0.0007	0.1517	0.0082	-1.4488	0.7442
	Kothari	2287	0.0009	0.1510	0.0090	-1.4491	0.7401
Total	Jones	9550	-0.0002	0.1125	0.0035	-1.4362	0.7217
	Mod. Jones	9550	-0.0003	0.1137	0.0033	-1.4488	0.7442
	Kothari	9550	-0.0002	0.1114	0.0033	-1.4491	0.7401

## 3.5 Tests & Results

To analyze whether firms reduce accounting profits in anticipation of substantial workforce downsizing announcements, we utilize a matched-sample approach for univariate analysis, run the discretionary accrual estimation model specified by Hall et al. (2005), and further run a panel regression model with multiple iterations of country, firm, industry and year fixed effects.

All our analyses use the same set of sample firms, irrespective of model specification. While this reduces the overall sample size for less data-intensive applications, it allows for consistency across our findings. An overview of the discretionary accruals, estimated using the Jones model, the modified Jones model, and the Kothari model, is presented in Table 3.5. On average, firms in our sample exhibit negative discretionary accruals between -0.033% and -0.016% of their assets across all observations. In years in which they downsize, observations in our sample exhibit negative discretionary accruals of between -1.138% and -0.917% of total assets. For nondownsizing years, firms, on average, show positive discretionary accruals between 0.004% and 0.031% of their total assets.

### 3.5.1 Matched Sample Analysis

The results of our matched sample analyses are presented in Table 3.6. We match observations based on firm-year, industry, and firm size. Firm size is measured in terms of total assets. The results show that discretionary accruals in the year before downsizing are not smaller as hypothesized. The mean discretionary accruals for observations in the year before downsizing amount to between 0.09% and 0.21% of total assets, compared to -0.43% and -0.31% of total assets for the industry-matched sample. The resulting t-test and Wilcoxon matched-pairs signed-rank test statistics consequently yield no significant results towards the hypothesis that downsizing firms reduce their earnings through earnings management before downsizing for all three model specifications. For the year of downsizing, the results reverse. The mean discretionary accruals for observations in the year of the downsizing announcement range from -1.37% to -1.10% of total assets, compared to between 0.01% and 0.12% of total assets for the industry-matched sample. The results of the t-tests yield statistical significance for our findings in the Jones and Kothari model specifications, significant at the 5%-level and 10%-level respectively. Further conducted Wilcoxon-tests yield strongly significant results across three estimation models.

Overall, the results of our matched sample analysis exhibit no support for the hypothesis that managers reduce accounting profits in the year before announcing major downsizing efforts to reduce political costs and thus contradict the findings of Verdier and Boutant (2016). Our findings do, however, support the results of Hall et al. (2005), whose authors report decreased discretionary accruals in the year of the layoffs.

TABLE 3.6  
Matched Sample Analysis Results

Method	Year	Downsizing Observations			Matched Sample			Comparison	
		Mean	Std. Error	S.D.	Mean	Std. Error	S.D.	t-statistic	Wilcoxon
Jones	t-1	0.0013	0.0044	0.0790	-0.0031	0.0061	0.1108	0.5848	0.3120
Mod. Jones	t-1	0.0021	0.0044	0.0788	-0.0031	0.0059	0.1062	0.6999	0.2620
Kothari	t-1	0.0009	0.0044	0.0797	-0.0043	0.0058	0.1043	0.7202	0.3890
Jones	t	-0.0137	0.0051	0.0949	0.0012	0.0048	0.0901	-2.0702**	-2.8840***
Mod. Jones	t	-0.0112	0.0050	0.0934	0.0001	0.0047	0.0874	-1.6000	-2.2460**
Kothari	t	-0.0110	0.0050	0.0921	0.0007	0.0047	0.0876	-1.6582*	-2.4570**

*N* = 328 in year *t-1* (Pre-Announcement), *N* = 346 in year *t* (Announcement); \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

### 3.5.2 Integration of Downsizing Variable in Earnings Estimation Models

To corroborate the results of the univariate analysis, we run a model similar to the adaption of the basic accrual estimation model produced by Hall et al. (2005). Binary variables to indicate the year of downsizing announcement and the year prior to downsizing announcement are added to Equations 3.1, 3.2, and 3.3 to "test the effect of announcements of large workforce reductions on discretionary accruals" (Hall et al., 2005, p. 27). Further, a binary variable indicating loss-years is added to control for the bias of extreme negative performance. We run fixed effects models with industry clustered standard errors. An overview of the results is presented in Table 3.7.

For each model, a basic estimation model and a full model including the downsizing year indicator variables and the control variable *loss* is presented - all models in Table 3.7 exhibit F-statistics with significance levels above the 0.1% level. The full models show an overall good fit, yielding  $R^2$  for the full models ranging between 34.0% and 34.8%. The results for individual variables are

consistent among the three model specifications, namely the Jones model, the modified Jones model, and the Kothari model.

As expected, sales growth, fixed assets, and the performance level measured in terms of return on assets possess significant explanatory power for the total accruals of a firm. The introduced control variable loss is further highly significant at the 0.1% level, substantially reducing the total accruals of a firm in the case of a loss-year. The results of the binary variable regarding the year before a downsizing announcement, however, do not report significant results toward the hypothesis that firms decrease their accounting profits in anticipation of the announcement of major layoffs. This result holds true across all three model specifications. Similar to the results of the matched sample analysis, the results exhibit a significant decrease in total accruals for downsizing announcement years. With a coefficient ranging from -0.0111 to -0.0112, significant at the 10% level in the modified Jones model and at 5% in the other two specifications, the data suggests that firms engage in income-decreasing measures, decreasing their income by 1.1% to 1.2% in downsizing announcement years, on average.

Overall, the results of the adapted accrual estimation models provide no support for our primary hypothesis that managers engage in earnings management to decrease accounting profits in the year before announcing major layoffs. We do find, however, that firms show significant income-decreasing accruals in the years of downsizing announcements. Our results are in line with those of Hall et al. (2005), whose authors provide similar results for the binary downsizing year and loss variables.

### 3.5.3 Panel Regression Models on Discretionary Accruals

To confirm our previous results and to test hypothesis 1b, we run further panel regression models regressing downsizing indicator variables and variables for the approximation of political costs on the level of discretionary accruals. The models and their results are presented in Table 3.8, grouped into a fixed effects model, and models using only industry-, country- and firm-year fixed effects to avoid issues of collinearity with the time-invariant variables measuring the rigidity of employee contracts. All models use industry clustered standard errors and are replicated for each of the three discretionary accrual estimation models utilized in this study.

All reported models are statistically significant at the 0.01% level. The fixed effects model 1 confirms our previous results. The indicator variable taking the value of one for the years before

TABLE 3.7  
Results of Expanded Accrual Estimation Model

This table reports the results from the estimation of fixed effects panel regression models based on the accrual for observations between 2004 and 2021 based on the accrual estimation models outlined in Equations 1-3. As an example, the full specification for the Kothari model is displayed:

$$\left(\frac{TAC_{it}}{A_{it-1}}\right) = \beta_1 \left(\frac{1}{A_{it-1}}\right) + \beta_2 \left(\frac{\Delta S_{it} - \Delta REC_{it}}{A_{it-1}}\right) + \beta_3 \left(\frac{PPE_{it}}{A_{it-1}}\right) + \beta_4 \left(\frac{NI_{it}}{A_{it-1}}\right) + \beta_5 eventyear_{it} + \beta_6 eventyear\_l_{it} + \beta_7 loss_{it} + \sum year + u_{it} \quad (3.4)$$

The dependent variable is the total accruals scaled by lagged total assets. The independent variables include those specified in Equations 1-3, dummy variables for the year of downsizing announcement, the year before downsizing announcement, and a loss variable, which indicates loss-years, introduced by Hall (2005). The model uses country-clustered standard errors.

Panel Regression Variables	Model 1: Controls Only (Jones)		Model 2: Jones		Model 3: Mod. Jones		Model 4: Kothari	
	Coef <i>St. Err.</i>	P-value <i>t-value</i>	Coef <i>St. Err.</i>	P-value <i>t-value</i>	Coef <i>St. Err.</i>	P-value <i>t-value</i>	Coef <i>St. Err.</i>	P-value <i>t-value</i>
Total Assets	305,263 <i>1,292,544</i>	0.8150 <i>0.2400</i>	851,333 <i>1,262,118</i>	0.5060 <i>0.6700</i>	804,322 <i>1,303,909</i>	0.5430 <i>0.6200</i>	938,372 <i>1,332,517</i>	0.4880 <i>0.7000</i>
Delta Sales	-0.0337* <i>0.0176</i>	0.0670 <i>-1.9200</i>	-0.0518*** <i>0.0146</i>	0.0020 <i>-3.5500</i>	-0.0667*** <i>0.0154</i>	0.0000 <i>-4.3400</i>	-0.0671*** <i>0.0153</i>	0.0000 <i>-4.3900</i>
Fixed Assets	-0.1395*** <i>0.0235</i>	0.0000 <i>-5.9200</i>	-0.1380*** <i>0.0232</i>	0.0000 <i>-5.9500</i>	-0.1383*** <i>0.0225</i>	0.0000 <i>-6.1500</i>	-0.1384*** <i>0.0224</i>	0.0000 <i>-6.1700</i>
Return on Assets							0.0215 <i>0.0224</i>	0.3460 <i>0.9600</i>
Eventyear			-0.0112** <i>0.0054</i>	0.0490 <i>-2.0700</i>	-0.0111* <i>0.0054</i>	0.0500 <i>-2.0600</i>	-0.0112** <i>0.0054</i>	0.0490 <i>-2.0700</i>
Eventyear_l			-0.0038 <i>0.0039</i>	0.3470 <i>-0.9600</i>	-0.0039 <i>0.0039</i>	0.3290 <i>-1.0000</i>	-0.0040 <i>0.0038</i>	0.3100 <i>-1.0400</i>
Loss			-0.0752*** <i>0.0130</i>	0.0000 <i>-5.7700</i>	-0.0757*** <i>0.0129</i>	0.0000 <i>-5.8500</i>	-0.0746*** <i>0.0128</i>	0.0000 <i>-5.8300</i>
Constant	-0.0090 <i>0.0175</i>	0.6130 <i>-0.5100</i>	0.0006 <i>0.0156</i>	0.9690 <i>0.0400</i>	0.0016 <i>0.0158</i>	0.9180 <i>0.1000</i>	0.0006 <i>0.0158</i>	0.9720 <i>0.0400</i>
N	9,550		9,550		9,550		9,550	
R <sup>2</sup>	0.3241		0.3480		0.3425		0.3398	
F	54.44		5887.94		5813.32		7679.57	

Coefficient levels are indicated at the conventional levels using \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$



the announcement of major layoffs has no significant explanatory power over the discretionary accruals estimated in our models. The results do, however, exhibit significant results for the year of downsizing announcements. The downsizing year has a significant negative influence on the level of discretionary accruals, significant at the 5% level for the model specifications 1 and 3. In analyzing the control variables, we find that the performance level and growth significantly influence the level of discretionary accruals, significant at least at the 10% level. Book-to-market ratio, debt level, and firm size, however, do not yield significant results.

Models 3-4 further include the variable *emplaw*, which indicates the rigidity of employee contracts in a specific country (Botero et al., 2004). For the variable *eventyear\_l*, no significant results are reported. For the year of the downsizing itself, the significance level is increased to 1% in the modified Jones model specification on this set of regression results, supporting previous evidence. Further, as shown in models 3-4, the rigidity of employment contracts does not have a significant negative effect on discretionary accruals. Firms operating in regions in which employees are better protected under legislation do not report larger negative discretionary accruals. Furthermore, as shown in model 4, the interaction term between *eventyear* and *emplaw* is not significant ( $p=0.49$ ). Thus, we cannot confirm our moderating hypothesis that firms engage in higher levels of income-decreasing earnings management when faced with strong employee protection and thus implied political cost. This result is consistent with the results of our initial hypothesis.

Overall, the results of our presented panel regressions are consistent with the results of both the univariate analyses and the adapted accrual estimation models adapted from Hall et al. (2005). We find no evidence of preemptive earnings management before major layoff announcements for European firms. Firms do, however, exhibit larger values of negative discretionary accruals in the year of downsizing announcements. Our results do not indicate that firms operate differently in environments of higher employee protection, and we find no support for a moderating effect of the level of employee protection on discretionary accruals.

To add robustness to our results, we ran the models with alternative matched samples, an alternative measure for earnings, an alternative measure for political costs, different industry classifications, more restrictive samples, more restrictive outlier reduction, and different model specifications, including random effects models and clustered instead of robust standard errors. These analyses, overall, show results similar to those presented and therefore provide evidence for the robustness of our findings.

TABLE 3.8  
Results of Panel Regression Models on Discretionary Accruals

The table reports the results from the estimation of panel regression models using the dependent variable of signed discretionary accruals calculated based on the Modified Jones Model. Results using the Jones or Kothari Model are presented in the Appendix. Model 1 is computed using fixed effects and year dummy variables. Models 2-4 are computed using year dummy variables. All models use country-clustered standard errors.

Panel Regression Variables	Model 1: Fixed Effects Mod. Jones		Model 2: Controls Mod. Jones		Model 3: Full Model Mod. Jones		Model 4: Interaction Mod. Jones	
	Coef <i>St. Err.</i>	P-value <i>t-value</i>	Coef <i>St. Err.</i>	P-value <i>t-value</i>	Coef <i>St. Err.</i>	P-value <i>t-value</i>	Coef <i>St. Err.</i>	P-value <i>t-value</i>
eventyear	-0.0092** <i>0.0037</i>	0.0190 <i>-2.5200</i>			-0.0092** <i>0.0036</i>	0.0100 <i>-2.5800</i>	-0.0165 <i>0.0136</i>	0.2250 <i>-1.2100</i>
eventyear_1	-0.0029 <i>0.0040</i>	0.4740 <i>-0.7300</i>			-0.0033 <i>0.0040</i>	0.4130 <i>-0.8200</i>	-0.0033 <i>0.0041</i>	0.4160 <i>-0.8100</i>
emplaw					-0.0188 <i>0.0120</i>	0.1180 <i>-1.5600</i>	-0.0193 <i>0.0119</i>	0.1060 <i>-1.6200</i>
eventyear X emplaw							0.0133 <i>0.0195</i>	0.4930 <i>0.6900</i>
size	-0.0116*** <i>0.0039</i>	0.0070 <i>-2.9300</i>	-0.0021 <i>0.0020</i>	0.3120 <i>-1.0100</i>	-0.0017 <i>0.0020</i>	0.3950 <i>-0.8500</i>	-0.0017 <i>0.0020</i>	0.3970 <i>-0.8500</i>
perf	0.1550*** <i>0.0409</i>	0.0010 <i>3.7900</i>	0.1515*** <i>0.0440</i>	0.0010 <i>3.4400</i>	0.1508*** <i>0.0441</i>	0.0010 <i>3.4200</i>	0.1509*** <i>0.0441</i>	0.0010 <i>3.4200</i>
btm	-0.0062 <i>0.0085</i>	0.4760 <i>-0.7200</i>	-0.0079 <i>0.0076</i>	0.2950 <i>-1.0500</i>	-0.0079 <i>0.0076</i>	0.2960 <i>-1.0400</i>	-0.0079 <i>0.0076</i>	0.2960 <i>-1.0500</i>
debtlevel	-0.0269 <i>0.0178</i>	0.1440 <i>-1.5100</i>	-0.0251 <i>0.0163</i>	0.1230 <i>-1.5400</i>	-0.0249 <i>0.0164</i>	0.1280 <i>-1.5200</i>	-0.0249 <i>0.0164</i>	0.1290 <i>-1.5200</i>
growth	0.0252*** <i>0.0087</i>	0.0080 <i>2.9100</i>	0.0182* <i>0.0108</i>	0.0920 <i>1.6900</i>	0.0180* <i>0.0108</i>	0.0950 <i>1.6700</i>	0.0181* <i>0.0108</i>	0.0940 <i>1.6700</i>
Constant	0.2526*** <i>0.0812</i>	0.0050 <i>3.1100</i>	0.0483 <i>0.0400</i>	0.2270 <i>1.2100</i>	0.0505 <i>0.0428</i>	0.2380 <i>1.1800</i>	0.0507 <i>0.0429</i>	0.2370 <i>1.1800</i>
N	9,550		9,550		9,550		9,550	
R <sup>2</sup>	0.0591		0.0558		0.0562		0.0562	
F/Chi-square	10888.38		2970.64		n/a		n/a	

Coefficient levels are indicated at the conventional levels using \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

### 3.6 Discussion & Conclusion

The goal of this study is to increase the understanding of earnings management patterns around major downsizing events, answering the question of whether firms are engaging in income-decreasing accounting choices in the year before announcing corporate downsizing programs. Previous research found mixed results towards the hypothesis that looming political costs could push management towards earnings management measures, with the goal of reducing accounting profits and therefore increasing the perceived necessity of job reductions. While the study of Hall et al. (2005) did not yield significant evidence of preemptive earnings management before layoff events in a US-based setting with low employment protection levels<sup>4</sup>, Verdier and Boutant (2016) found significant evidence for a French-based setting with high employment protection levels<sup>5</sup>. In this study, we can confirm the findings of Hall et al. (2005), as we fail to find evidence that firms show larger income-decreasing accruals in the year before announcing major downsizing events. Furthermore, we provide evidence that the hypothesized looming political costs incurred by downsizing events do not significantly moderate the level of discretionary accruals in the year before major downsizing events. We do find, however, that in downsizing years, firms appear to engage in income-decreasing accounting choices.

This study contributes to the literature in three main ways. First, we reconcile the mixed results of previous studies by addressing potential biases inherent in the previous studies. Using a novel firm identification approach, we contribute to the empirical literature by introducing a practical method to generate multicountry downsizing firm samples based on the database compiled by Eurofund (Eurofund, n.d.). Further, by employing the statistical methods used in the studies of Hall et al. (2005) and Verdier and Boutant (2016), we allow for a direct comparison of the methods used in previous studies. Second, we expand the discussion around the impact of political costs on accounting choices by explicitly testing the political cost hypothesis in a multicountry setting, allowing for differences in the implied political costs. We do so by applying the measure employment laws index, developed by Botero et al. (2004) and used in the context of restructuring by Atanassov and Kim (2009), to the setting of earnings management and corporate downsizing. Our results indicate that the level of political costs implied by the rigidity of employment law contracts does not moderate the level of earnings management a firm is engaged in prior to or in the year of employee downsizing, and thus specifically contrast an essential

<sup>4</sup>Botero et al. (2004) determine an employment laws index of 0.2176 for the United States

<sup>5</sup>Botero et al. (2004) determine an employment laws index of 0.7443 for the France

theoretical building block of previously hypothesized earnings management patterns. While our results contrast the political cost hypothesis, they indicate support for an alternative hypothesis concerning earnings management in the year of downsizing announcement. Lastly, our findings contribute to the scarce literature concerned with earnings management patterns and motivations around downsizing events, a phenomenon that is frequent in the practical business world. Our study picks up the empirical evidence first produced by the pay renegotiation literature of the early 1990s, transferring hypotheses and empirical approaches into a topic specifically relevant in periods of crisis. We therefore expand the understanding of how firms influence accounting information that has a direct impact on the recipients of this information, namely financial markets and the firm's stakeholders, such as employees.

In addition to our empirical and theoretical contribution, our findings carry relevance for participants in major downsizing events. Previous literature made the argument that economically well-versed participants would detect earnings management measures and adjust the presented accounting numbers accordingly. Our results indicate that practitioners should specifically pay close attention to accounting choices made in the year of downsizing announcements to be able to correct for income-decreasing discretionary accruals. Firms and their management should further be aware of tendencies of increased discretionary accruals in downsizing announcement years, questioning the conscious or unconscious distortion of accounting profits. Despite its contributions, this study is limited mainly across four dimensions. First, as with previous studies, the results could be biased due to the non-detection of downsizing firms, as we rely on the reporting of the announcement in major news outlets. Furthermore, while we control for the performance of firms, Dechow et al. (1995) have shown that poorly performing firms exhibit significantly different discretionary accruals patterns. With a considerable expected overlap between downsizing and poorly performing firms, this could introduce bias to our results. Secondly, our proxy for political costs, the employment laws index developed by Botero et al. (2004), could not sufficiently capture the level of pressure exerted on the company. While used in previous accounting and finance literature, the addition of other sources of pressure on the management could prove prudent in further research. Third, we focus on preemptive accounting choices made in the year before the announcement of a downsizing event and only briefly discuss accounting choices made in the year of downsizing. Lastly, as with previous studies, we too rely on the accrual estimation models developed by Jones (1991) and its modifications by Dechow et al. (1995) and Kothari et al. (2005) to measure earnings management. Even though the power of these models to estimate discretionary accruals has been well documented, cross-examining

the results through alternative measures of earnings management in future research could add robustness to the results of this literature stream.

This study suggests multiple areas for further research. While political cost hypotheses have been extensively tested in the context of earnings management, more theory-building literature on the interaction between looming political costs and earnings management motives are needed. Furthermore, a thorough investigation of the reasons and motivations for increased discretionary accruals in the year of downsizing could expand our understanding of managers' incentives to engage in earnings management around downsizing events and their announcements. Lastly, the impact of distorted accounting profits in the year of downsizing announcement warrants consideration in research on the impact of downsizing announcement on market returns, as the impact of earnings management on announcement returns has mainly been ignored.

# 4 | ESG Incorporation in Restructuring Decisions – A Qualitative Investigation from the Perspective of German Lenders

## **Abstract**

ESG has been hypothesized to restrict access to finance for firms with poor ESG performance. For companies in crisis that depend on restructuring support from their lenders, further restrictions on access to capital could decide the fate of the firm. We investigate how lenders incorporate ESG into their evaluation processes and how ESG impacts lenders' ultimate restructuring decision. Our results show that ESG is a "hot topic" rapidly being incorporated into credit decision and monitoring processes. However, the impact of ESG on the restructuring decision is currently negligible. With increasing regulation and a stronger emphasis on ESG, experts expect a more pronounced effect in the future, stressing that the implementation of ESG is only in its nascence.

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*Status:* Working Paper

## 4.1 Introduction

Driven by regulation and rising public pressure, environmental, social, and governance (ESG) criteria have become one of the most relevant items on the agenda of CEOs. From supply chain risks induced by climate events and rising production costs to damages to corporate brands and reputation or human capital risks, ESG-related issues have proven to possess the power to impact corporations and capital markets drastically. The materialization of ESG risks was recently demonstrated by a flood in the German Ahr valley region, which caused at least 37 billion EUR in damages (tagesschau, 2022). Recent research has tried to quantify the threat that ESG-related risks pose for companies and their investors. In stress testing a portfolio of EUROSTOXX600 firms for transitory climate risks, Friedl et al. (2021), for example, conclude that an increased carbon tax yields asset devaluations and increased probabilities of default for the most affected industry sectors, substantially increasing capital requirements for the financing banks. Similarly, Hübel and Scholz (2020) investigate a sample of European stock portfolios and find that very pronounced ESG exposure is related to higher portfolio risk. Consequently, these material ESG risks have practitioners, researchers, and regulators concerned with how ESG risks can be evaluated and subsequently integrated into investment and financing decisions.

For financing institutions such as banks, regulation is one of the key drivers behind the inclusion of ESG criteria into risk assessment. In the European Union, the EU Action Plan for Financing Sustainable Growth (European Central Bank, 2018) constitutes the most important source of regulation faced by banks and financing institutions. Even though progress on this frontier is being made rapidly, large parts of the regulation are not yet in effect and are expected to arrive only after 2024. Banks are thus just starting to implement the first waves of ESG-related guidelines introduced by regulating institutions, such as the European Central Bank (ECB), while preparing for the next steps under the anticipated changes. One fundamental guideline already in effect is the Guide on climate-related and environmental risks published by the ECB in November 2020 (European Central Bank, 2020), which includes the regulator's expectation that environmental risks must be considered in the credit-granting process. Even though banks have started integrating ESG risks into their decision-making processes and risk management systems, the bulk of regulatory changes are still to come. These anticipated regulatory demands will further impact how banks evaluate the ESG risks associated with restructuring decisions in the future.

Even though these ESG restrictions can exclude regular firms from bank financing, they can be far more critical for firms whose financing is currently under review while they experience a period of economic distress. Such firms can include, for example, firms urgently requiring refinancing or firms undergoing restructuring. While financeable when using the historically applied dimensions, these firms might not receive funding under the evaluation of ESG risks, especially recently arising climate risks, creating a direct threat to their company's survival. According to a recent interview with restructuring practitioners, some firms have indeed been denied financing due to ESG concerns, making the impact tangible and the threat imminent (Reifenberger, 2021).

With large parts of the German economy based on so-called *Mittelstand* firms, which are primarily financed by bank loans, banks and other financing institutes play a substantial role in the financial stability of the ecosystem. In addition to frequently being governed by the ECB, these banks have often signed the UN's principles for responsible investment, which state in principle 1: "We will incorporate ESG issues into investment analysis and decision-making processes" (PRI, 2022). Despite the ECB Guide on Climate-Related and Environmental Risks and the UN PRI 1, when and how ESG criteria are integrated into the financing decisions of these organizations remains unclear, according to recent practitioner statements and bank reports. Furthermore, while the implementation of regulation has been focused on restrictions and criteria for newly granted credit, special situations in the corporate lifecycle, such as restructuring periods, have not yet been the focus of discussions. With restructuring and refinancing deciding the survival or liquidation of a company, the relevance of the topic at hand cannot be understated. Despite extensive discussions on ESG in the loan origination process, we still know little about how financing institutions incorporate ESG in regard to firms in crisis in their portfolio, especially in restructuring situations. With this paper, we aim to close this gap by taking stock of how ESG is currently practiced in banks regarding restructuring and refinancing efforts and investigating how ESG risks influence restructuring decision-making for financing institutions.

This study follows a qualitative, interview-based research approach due to the limited available research, theory, and public information. We conducted thirteen expert interviews with bank personnel overseeing creditors in crisis, specifically restructuring or refinancing situations, and an additional four background interviews with various experts in the field.

This study contributes to the field in three distinct ways. First, we present an in-depth look at the current implementation stage of ESG regulation in German banks, allowing financing



institutions to adopt best practices and companies in crisis to better understand how banks evaluate their ESG performance. Understanding what mechanisms exist for the incorporation of ESG in restructuring situations and how they are applied can help firms in crisis comply with these criteria and secure financing and help banks and other financiers develop mechanisms to achieve efficient risk mitigation. Second, we contribute to the restructuring and bankruptcy literature by demonstrating how ESG-related risks are incorporated into decision-making by one of the most critical players in corporate restructuring and bankruptcy. Last, our study contributes to the intense regulatory discussions around ESG risks in risk evaluation. The remainder of this paper is structured as follows. In the next section, we discuss the research method and its implementation before moving on to the results of our study. After reflecting on our results with respect to recent literature, we conclude with a summary and avenues for further research.

## 4.2 Background

### 4.2.1 Bankruptcy and Out-Of-Court Restructuring

Companies regularly experience phases of business upswings and downturns. When the downturn solidifies, however, firms can enter various stages of crisis before they go under and cease to exist. The classic model by Müller (1985) differentiates four distinct stages of a crisis. Firms first enter a strategic crisis, followed by a performance crisis in which financial targets are missed, followed by a liquidity crisis, threatening the firm with insolvency. If the liquidity issues cannot be resolved, the firm enters bankruptcy.

In most cases, however, the financing institutions of the company under distress are alerted to the company's crisis in one of two ways before the company is technically insolvent: first, the company may breach one of the covenants stipulated in the loan agreement, or second, the company's loans may mature while the company is unable to meet the financial obligations without refinancing. The restructuring efforts described in this paper focus on companies experiencing performance and liquidity crises, in which the firm under distress faces a threat of quickly vanishing profits or is operating close to insolvency. To avoid filing for bankruptcy and alleviate the financial pressure in out-of-court prebankruptcy proceedings, the firm is forced to undergo

rapid changes, which can include but are not limited to operational, strategic, and financial restructuring measures.

Compared to their counterparts in international financial markets, especially the United States markets, the abovementioned out-of-court restructurings carry substantial importance in Germany. This pronounced importance can be attributed mainly to differences in the German insolvency code and the culture around corporate bankruptcy in comparison to that in the US, which is considered dominant in the academic literature. While companies in the United States utilize Chapter 11 bankruptcies to reorganize themselves and to emerge from bankruptcy as going concerns, similar legal constructs under German bankruptcy law were historically not as frequently used (AmCham Germany, 2009). One key reason for this is that they were perceived as not attractive to firms' management and owners, primarily due to the associated substantial degree of external control and high complexity (Handelsblatt, 2005). While Chapter 11 bankruptcies accounted for 23% of all business filings in the United States in 2013, German filings under the "Insolvenzplan" amounted to only 2% of insolvency filings in the same year (RWS Verlag, 2014, United States Courts, 2014).

Despite their prevalence in the German market, out-of-court restructurings exhibit significant weaknesses. To successfully undergo a turnaround, the company in crisis needs financial and nonfinancial support from its stakeholders, which can include fresh money or the delivery of goods (Schluck-Amend and Swierczok, 2019). These contributions frequently require the approval of key stakeholders of the company, including the approval of all creditors, putting power over the future of the company in the hand of its creditors. This setting can lead to a creditor holdout problem, which results in deadlock and obstruction of an economical solution (Easterbrook, 1990). As German companies strongly rely on bank debt for financing, the company's creditors frequently consist of local corporate lenders (Krings, 2014), lending them special significance in German restructuring proceedings.

#### **4.2.2 Lending Institutions and Borrowers in Crisis**

Banks in Germany are strongly regulated regarding the financing of companies in crisis to safeguard the unbiased evaluation of nonperforming loans. Banks regulated by the German Federal Financial Supervisory Authority (BaFin) are mandated to establish guidelines for handling nonperforming loans. These guidelines must include when loans are placed into an "intensive care

unit" and when nonperforming loans are handed over to specialized personnel tasked with restructuring or recovering the loan (BaFin, 2009). Thus, the handling of loan origination and the regular coverage of loans are strictly separated from the coverage of distressed and nonperforming loans. While designations for these specialized departments vary between credit institutions, this study uses the term "workout".

The literature has frequently summarized the objective of the workout department. In its simplest terms, David (2001) summarizes the overall goal as limiting damages, supported by seven subgoals, ranging from loss limitation to the avoidance of reputational damages. In an evolution of the concept, Volk (2007) presents a more intuitive system of four conflicting priorities, namely, (1) risk minimization, (2) societal responsibility/reputation, (3) long-term profitability, and (4) customer satisfaction<sup>6</sup> (cf. Figure 4.1). Balancing these conflicting goals determines the bank's course of action concerning the borrower in crisis. In principle, banks can choose from three

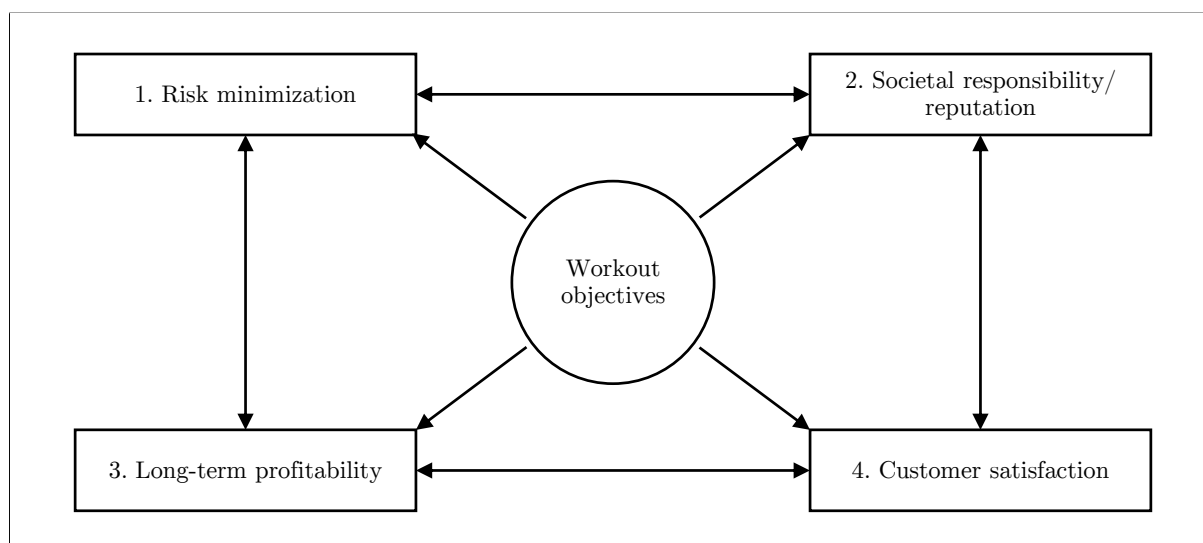


FIGURE 4.1: Workout Department Objectives, Own Representation Based on Pielken (2017) and Volk (2007)

courses of action when confronted with the corporate crisis of a borrower. First, the bank can support the borrower in crisis, either financially or using nonfinancial aid. Second, the bank can keep the existing loans in place and simply keep quiet and wait. Third, the bank can back out of the engagement by either recalling the loan and thus sending the borrower into bankruptcy or by selling the loan to a third party (Dinibütünoğlu, 2008). An overview of the options is presented in Figure 4.2. The stark consequences of the chosen course of action demonstrate the conflicting nature of the workout department's objectives. While backing out of a loan could minimize

<sup>6</sup>For details regarding the four conflicting priorities, see Pielken (2017)

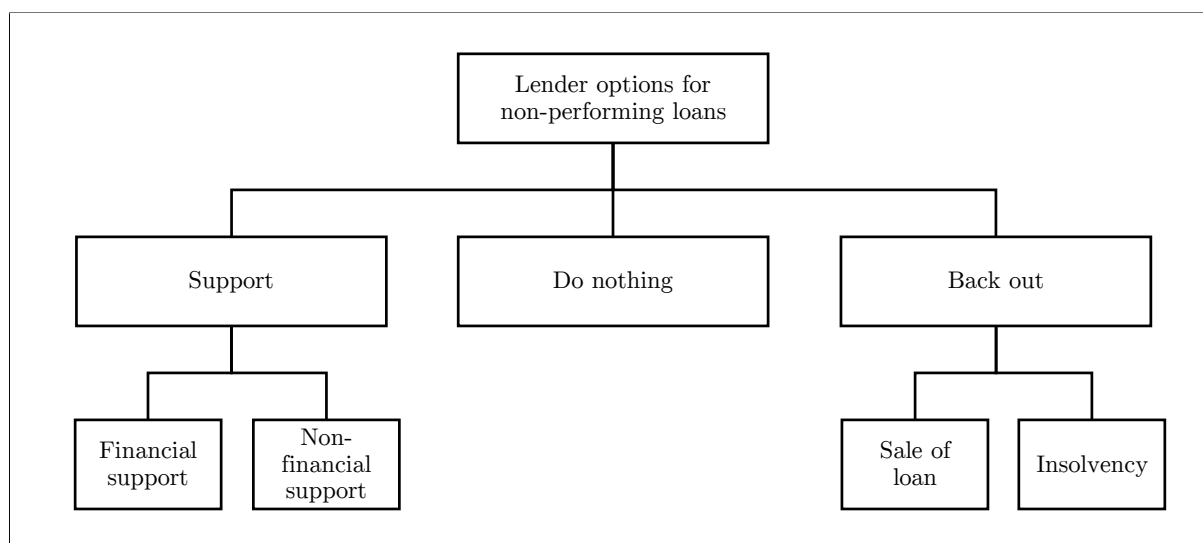


FIGURE 4.2: Lender Options with Respect to Nonperforming Loans, Own Representation Based on Dinibütünoğlu (2008)

the bank's risk, the borrowers' subsequent insolvency could lead to reputational damages, decreased customer satisfaction, and potentially decreased long-term profitability. Supporting the borrower in crisis financially, however, could yield the opposite result with respect to the conflicting priorities. How this multidimensional decision-making framework is affected by the rapidly expanding trend of ESG has not yet been examined in the literature.

### 4.2.3 ESG and the Corporate Turnaround Process in the Academic Literature

While practitioners stress the potentially restricting role of ESG criteria and regulation in restructuring or refinancing situations (Emmrich, 2022, Reifenberger, 2021), academic literature on the effects of ESG on the corporate turnaround process, including refinancing, restructuring, or bankruptcy, is scarce. The impact of ESG on a company's performance, its access-to-finance conditions and its risk profile, on the other hand, is well documented, enabling the derivation of potential implications of a company's ESG profile on its turnaround process. Furthermore, research on the intersection of stakeholder theory and corporate turnaround can provide a theoretical lens for the inclusion of ESG in the restructuring decision-making of creditors, which pose one of the most decisive stakeholder groups in turnaround processes globally.

The literature stream relating ESG or corporate social responsibility (CSR)<sup>7</sup> to a firm's corporate performance or financial characteristics has rapidly gained prominence over the last two decades. On the impact of ESG on corporate performance, the literature tends to demonstrate a positive influence of ESG (Friede et al., 2015). While the results for the impact on financial performance are not unequivocal, recent evidence from meta-studies suggests a positive relationship between ESG performance and financial performance on a firm level (Atz et al., 2022). Providing evidence for the financial performance of listed German firms, Velte (2017) demonstrates that ESG performance positively impacts a firm's ROA. Awaysheh et al. (2020) paint a similar picture of the impact of CSR on a firm's operating performance, showing that firms with a best-in-class CSR performance exhibit stronger operating performance than their industry peers. Another example of ESG's positive impact on a firm's operating performance can be found in a study by Gillan et al. (2010), who find that firms with better ESG rankings exhibit stronger operating performance. In addition to the empirical evidence, scholars have argued on a theoretical level that ESG can increase corporate performance, for example through increased customer reputation or increased workforce productivity (Gillan et al., 2021). On aggregate, the extant research points towards increased financial and operating performance for firms performing well in ESG dimensions.

Next to the influence of ESG on a firm's performance, ESG's impact on various variables within the field of corporate finance has been extensively reviewed by the literature. Studies on the relationship between ESG and a firm's capital cost or financing access generally find a positive relationship. Cheng et al. (2014), for example, find that firms with better CSR performance experience lower capital constraints, arguing that the key channels for this effect are superior stakeholder engagement and higher levels of transparency for firms with superior CSR performance. Relating CSR to various types of firm risk and the firm's cost of capital, Gillan et al. (2021) summarize the literature and find that despite a few exceptions, the evidence indicates that CSR lowers risk and the cost of capital. One specific example of CSR lowering a firm's systematic risk can be found in the study by Albuquerque et al. (2019), who demonstrate that the level of systematic risk is lower for firms with higher CSR scores. Ilhan et al. (2022) further demonstrate that firms with larger carbon intensity in their business models have higher tail risks. Examining the cost of capital argument in the context of green bonds, Flammer (2021) finds no pricing differential between green and nongreen bonds of the same issuer. Focusing on the environmental dimension, Chava (2014) reports a negative impact on the cost of capital

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<sup>7</sup>The terms are often used interchangeably in the literature. This paper uses the term ESG.

for firms with environmental concerns. Firms with environmental concerns further experience lower bank participation in their loan syndication and lower institutional ownership. Similarly, firms with poor environmental profiles exhibit lower credit ratings, especially when located in areas with vigorous regulatory enforcement, as demonstrated by Seltzer et al. (2022). Besides implications for a firm's credit risk, recent evidence suggests that a firm's default risk could also be mitigated by higher ESG rankings (Do, 2022, Li et al., 2022). Taken together, research on the effects of ESG suggests an impact of ESG on a firm's risk and, consequently, its cost of capital and access to financing. This, in turn, provides evidence for the importance of including ESG in the risk assessment of firms, especially in the context of nearing corporate bankruptcy.

Beyond the impact of ESG on corporate performance or firm risk, researchers have recently focused on avenues for shareholders and stakeholders to impact the ESG performance of a firm. Especially the influence of the ownership structure and shareholder engagements along ESG dimensions have been critically reviewed. Hoepner et al. (2022), for example, argue that ESG engagement by shareholders can improve the ESG practices of the firm while also acting as a mitigant against risk-inducing events and provide evidence that shareholder engagement on ESG dimensions lowers the downside risk of a firm. Dimson et al. (2015) moreover find that ESG engagements, if successful, result in positive abnormal returns while not reporting significant market reactions for unsuccessful engagements. Edmans et al. (2022), on the other hand, focus on change through divestment instead of shareholder engagement, proposing that investors should tilt their investments from firms performing poorly on ESG dimensions while also continuing to hold stocks in firms that are willing to take corrective action. In one of the few studies focusing on change driven by corporate stakeholder engagement, Houston and Shan (2022) examine banking relationships as a transmission mechanism for propagating a firm's ESG policies. Delivering first empirical evidence, the authors show that banks have a profound influence on the ESG policies of their borrowers, as banks are more likely to lend to borrowers with similar ESG ratings, while borrowers who borrow from banks with better ESG profiles are more likely to improve their ESG profiles themselves over time.

For the context of corporate restructuring decisions, the described findings of the existing body of research on ESG carry two main implications. First, the ESG profile of a company can impact its risk profile and corporate performance. Stakeholders evaluating restructuring options consequently should incorporate a company's ESG performance in their risk assessments, as the company's ESG performance could translate into a higher cost of capital, higher credit

risk, or lower operating performance in the future. Second, shareholders and stakeholders can influence a company's ESG performance through engagement or divestment. While the field of stakeholder engagement has previously received scant attention, recent research has shown that banks can exert influence over the ESG performance of their borrowers, especially when the borrower is bank-dependent (Houston and Shan, 2022). In situations of corporate turnaround, where creditors "wield considerable power over the decision-making of firms in distress" (Trahms et al., 2013, p. 1294) this dependency presents itself in its ultimate form, further amplifying the effect described by Houston and Shan (2022).

In summary, out-of-court restructurings are prevalent in Germany and lend special significance to the creditors of a company, including banks. As companies and their management depend on contributions from and approval of their creditors for successful restructuring, the decision of corporate lenders on whether to support restructuring can be a life-or-death one for the company. Corporate lenders' dealings with companies undergoing restructuring are highly regulated, which carries substantial implications for their assessment of nonperforming companies and evaluation of newly emerging risk types, such as ESG risks in the decision-making process. The academic literature has demonstrated that ESG impacts multiple aspects of a firm's financial and risk profile. Most notably, ESG can increase financial and operating performance, lower the cost of capital, and reduce overall firm risk, especially for long-tail risks. Moreover, shareholders have the opportunity to successfully improve a company's ESG profile through shareholder engagement or divestment. Literature on the options for other stakeholders, such as creditors, has not been in the focus of research. First empirical evidence on stakeholder engagement, however, shows that banks can influence the ESG performance of borrowers, especially when those depend on the banking relationship.

### 4.3 Methods

Our study was designed to shed light on how ESG risks influence the decision-making of financing institutions in restructuring and refinancing decisions. While ESG and its impact on corporate risk and performance have been a significant area of interest within the academic literature, research on the intersection of ESG and corporate turnaround is scarce, which can be attributed to the recent emergence of the topic and the rapid speed at which it is developing. On the other hand, practitioner insights are available through statements, interviews, and white papers

published by lawyers, accountants, and consultancies. These, however, lack the academic footing, rely on anecdotal evidence, and are frequently limited to highlighting the future importance of ESG or potential changes that might occur in the future (Becker, 2021, Emmrich, 2022, Rickert, 2022). Thus, to investigate this newly emerging phenomenon in a first exploratory study, we selected a qualitative research approach utilizing expert interviews, in line with recent research in adjacent fields (Zaccone and Pedrini, 2020).

### 4.3.1 Method Selection

Among the heterogeneous qualitative research approaches available (Gehman et al., 2018), we deem an adaptation of the multiple–case study theory-building approach developed by Eisenhardt (Eisenhardt, 1989, 2021, Eisenhardt and Graebner, 2007) best suited based on our research objectives, as our setting is consistent with conditions or opportunities for inductive multi–case study research outlined by Eisenhardt and Graebner (2007), Flick (2009), and Yin (2009). First, as mentioned above, the extant literature and theory lack a plausible answer to our research question. Second, our research question is phenomenon driven and rather broad in scope, lacking directly testable theory or hypotheses. Furthermore, the complexity of the decision-making processes and the subjective influence of bank personnel do not allow the collection of quantitative data (Eisenhardt and Graebner, 2007). Third, the stated research questions aim to answer "how" or "why" questions, a necessary condition put forth by Yin (2009). Furthermore, "how" and "why" questions are considered to work exceptionally well in unexplored research areas (Eisenhardt and Graebner, 2007). Last, the iterative and reflexive nature of the multiple–case study approach allows the adaptation of the analysis as hypotheses and theories emerge, allowing us to extract the most from our collected data (Bluhm et al., 2011, Flick, 2009).

Within the multiple–case study approach, we primarily utilize expert interviews and archival data in our data collection process. Expert interviews focus on the interviewees as representatives of specific modes of doing things, views, or knowledge systems of institutions (Flick, 2009). In these types of interviews, the subjective view of the interviewee is suppressed, as the interest is in the subject matter and not the person conveying the information. As we are interested in descriptions of how banks operate concerning the implementation of ESG, we consider this interview type, which focuses on the subject matter and perceives the interview partner only as a representative, the best possible fit. Furthermore, in line with a postpositivist view, our interviews aim for primarily objective information describing a singular reality. While certain



subjective elements exist as the information is reflected by the interview partner and analyzed by us, we perceive the information to be fundamentally objective. We consider the role of the researcher in this case and the potential for distortion of the reality described by the interview partner through the conduct of research and analysis of the researcher to be limited, warranting no further detailed reflection<sup>8</sup>.

### 4.3.2 Sample Selection

To collect the richest and most relevant insights for our research, we follow the principles of the theoretical sampling approach developed by Glaser and Strauss (1967) and further described by Eisenhardt (1989) and Flick (2009) for the selection of our cases. We sample at the level of individual firms, conducting interviews with more than one interview partner per case if sensible and feasible. Based on the created theoretical sample, we utilize a convenience approach using insiders for the initial interview acquisition combined with the snowballing method to acquire further interview partners for specific cases.

Given our research questions, we first limit our sampling population to banks that provide financing to firms experiencing restructuring or refinancing situations. In a second step, we focus on a singular geography, given that restructuring and refinancing decisions have to be closely aligned with local laws and regulations, the differences in which are not the subject of our study. We select the German market for three distinct reasons. First, as the largest economy within the European Union, the actions of German banks carry significance for the European financial system. Second, German firms rely heavily on bank financing to finance their operations, leading to a large number of bank loans and subsequently a larger sample population of loans subject to restructuring and refinancing. Last, the internal processes of banks are sensitive topics. Focusing on a market where we can utilize our own academic and practitioner network allows the best possible acquisition of interview partners, which would not be possible if we obtained contacts via cold calls or other distant means of contact. In a third step, we filter the remaining banks by the size of their credit portfolios to ensure that our sample covers banks with substantial impact in the German market. Last, we identify each bank's ownership structure, regional focus, industry focus, and ESG involvement (e.g., UN PRI signatory status) to avoid biases in the interview acquisition stage. The result is our final sampling population from which the interview partners were sourced. Of paramount importance is covering a broad spectrum of German banks, allowing

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<sup>8</sup>See Eisenhardt (2021) for a more detailed discussion about the role of the researcher in grounded theory research.

us to collect data on cases demonstrating the current implementation stage of ESG measures in the field concerning restructuring and refinancing efforts and the influence of ESG on decisions made in these situations.

### 4.3.3 Data Collection

Potential interview partners were identified and contacted using a convenience approach based on the constructed sample population. We chose the convenience approach using insiders to access participants for two reasons. First, as the roles with knowledge of decision-making in restructuring and refinancing processes are rather specific, the total number of possible interview partners in Germany is limited. Therefore, personal, direct contacts leading to a high conversion rate for accepted interview requests are crucial. Second, using insiders allows direct contact and the creation of trust with the interview partner (King et al., 2018). Information about financing decisions and details about the implementation stage of ESG measures are frequently not publicly available. Thus, interview partners' trust in anonymity and confidentiality are critical factors in obtaining meaningful data in this environment. Following this participant acquisition approach, interview partners at the sampled banks were identified and initially contacted using insiders in our professional and academic network. In total, 18 potential interview partners at ten banks, nine of which are part of the ten largest corporate lenders in Germany (Werner and Sauerwein, 2019), were sequentially contacted. Of these 18 potential interview partners, 14 agreed to an interview, and 13 total interviews were conducted, resulting in a success rate of approximately 72%. In contacting potential interview partners, we took care to avoid introducing bias into the case selection with respect to the specific criteria outlined in the previous section.

All interviews were conducted between May and July 2022. Although we also offered the option of conducting physical interviews at a location of their choice to foster trust, all of the interview partners opted for a virtual setting using videoconferencing software. The interviews lasted between 30 and 55 minutes and were conducted using a semistructured interview guide, which, in line with the reflexive nature of qualitative research methods, was adjusted twice throughout the interview process. To ensure a focus on expert knowledge and not on the subjective views of the interviewee, the interview guide was highly relevant for the success of our interviews. Consequently, we structured the guide according to the principles described by Kruse (2015) and Misoch (2019) into an information stage, warm-up stage, main stage, and concluding stage. Beyond the key questions, numerous subquestions were prepared to guide the discussion and

avoid or break through any mental blocks, as mental blocks of the interview partner are described as one fundamental weakness of expert interviews in the literature Flick (2009). The final interview guide consisted of five main and two supplemental sections. The structure of the interview guide is presented in the appendix. Focusing on confidentiality, we produced a direct transcript of the interview that was immediately stripped of identifying information before coding and further data analysis.

#### 4.3.4 Coding & Analysis

Data analysis was conducted based on the grounded theory approach outlined by Eisenhardt (1989, 2021). With grounded theory described as "a big tent – that is, building a theory from data" (Gehman et al., 2018, p. 288), we chose the individual steps to fit our individual research approach and goal best. In the first step, we coded the anonymized, verbatim interview transcripts based on the method outlined in Gioia et al. (2013). First-order codes were coded openly in line with Corbin and Strauss (1990) and close to the source data. The first-order codes were then summarized into second-order themes, representing the identified theories. Finally, those second-order themes were aggregated into dimensions, our final coding level. On a technical level, the coding was done with MAXQDA software, allowing rigorous and systematic coding. Moving into the analysis, we started with the within-case analysis of the individual cases, isolating emerging patterns and gaining familiarity with the case in preparation for further analysis steps (Eisenhardt, 1989). For cases in which multiple interviews were conducted, the within-case analysis focused on relating the various accounts and summarizing them into a "big picture". The next step of the analysis was cross-case analysis. The goal of the cross-case analysis was to identify patterns or themes between cases that could further solidify the interpretations and hypotheses of the within-case analysis. In the cross-case analysis, we utilized case groupings based on our sampling criteria as a measure to counteract information processing biases, as highlighted by Eisenhardt (1989). It is important to note that while the data collection, coding, and analysis are presented in separate sections in this paper, they should be seen as interconnected and part of an iterative process. We present the results of our analysis in the next section, before moving on to the final step of the analysis process, relating the results to the existing literature.

## 4.4 Results

The following section presents our findings from a cross-case analysis of the collected data and consists of three main parts. In the first step, the general view on ESG, trends within ESG, and sources of ESG pressure are discussed. We then turn to how banks currently assess ESG risks, especially in the context of restructuring situations. Finally, we close by analyzing the role of ESG in restructuring decisions and outlining its potential consequences in the restructuring context.

### 4.4.1 Perception of ESG — Current Role, Trends, and Sources of Pressure

#### 4.4.1.1 Current Role of ESG in Restructuring in Germany

ESG is generally perceived as a “hot topic” for financing banks in Germany, not only with respect to new loan origination processes but also in the context of corporate restructuring. With growing pressures and the subsequent reflection of various ESG aspects in banks’ strategy, the topic is thought to have made its way into the daily business of practitioners. In the words of an expert:

*“In recent months, I have not experienced a board event where the topic of sustainability, its special nature, its significance or its importance has not been emphasized.”*

*(Bank 1)*

While the term ESG is familiar and its significance is on the agenda of banks’ top executives, the integration of ESG into processes is just getting started. Banks are currently at the beginning of a change process, identifying the significant consequences that ESG could have for dealing with companies in crisis and outlining how to confront these risks best. Several factors contribute to the complex and thus slow implementation of ESG in restructuring. First, due to its broad coverage of topics, the ESG framework is hard to grasp, making the derivation of its tangible impact and development of corresponding countermeasures difficult. Second, ESG has simply not been a priority for companies in crisis. As put by one expert:

*“You have to deal with other issues first so that you can get the company back on track. A green coating is the last issue you tackle.” (Bank 3)*

Last, while the relevance of the topics within ESG is acknowledged, the novelty of the topics that the ESG framework covers is frequently called into question. Topics now summarized under the term ESG were often previously considered in daily operations, ranging from child labor detection in supply chains to reputational damages due to environmental disasters. For some experts, the ESG framework is consequently “*old wine in new bottles*” (Bank 1) or a relabeling of a range of initiatives. Others, however, see a valuable contribution in the framework’s concentrating nature, which leads to increased awareness of their institutions’ previously somewhat uncoordinated efforts on the separate components of ESG. As put by one expert:

*“While these were certainly all topics that we had already taken into account before, it is now the case that the whole thing is a bit more concentrated, a bit more concerted, and as a result, we are of course much more sensitized to these topics.”* (Bank 2)

Separating the regular coverage of borrowers from restructuring situations and the intensive care units of the lending institutions, the experts highlight a currently decreasing importance of ESG along the borrower journey. Recently implemented ESG guidelines for new loan origination mandate comprehensive ESG checks and, in some cases, further define no-go industries to which financing must no longer be supplied. These practices lead to companies being denied financing based on their ESG performance or industry affiliation, giving vital importance to ESG at this stage of the process. Once the company encounters a corporate crisis, however, the importance of ESG is overshadowed by the goal of the lender to recover the loan utilizing the most suitable option. We discuss details of the restructuring decision in the section ESG Impact on Restructuring Decisions.

#### 4.4.1.2 Trends in ESG

With ESG currently in a stage of evolution and rapid development, we identify three main trends within and around ESG. First, ESG topics can quickly be pushed aside by other crises perceived as more severe and immediate. The long-term and often nonfinancial impact of ESG can lead to a perception of ESG as a “luxury” rather than a necessity like securing raw materials or reducing costs in the wake of collapsing supply chains and rising input factor costs. As summarized by one expert:

*“The importance of ESG has suffered due to the looming effects of COVID on the one hand and the Ukraine crisis and disrupted supply chains on the other hand. Therefore, it was pushed into the background and is not getting the attention it deserves at the moment.” (Bank 2)*

Second, the importance of ESG is expected to increase in the future. Experts expect upcoming regulations to be more restrictive, further penalizing or prohibiting lenders from financing ESG-noncompliant companies. Currently focused on new loan origination, new regulations targeting the portfolio can potentially increase pressure on the regular coverage and restructuring units. Third, within ESG, while the environment dimension is currently firmly in focus, social and governance topics are expected to increase in importance. Reasons for the current focus on the environment are the pronounced familiarity with sustainability topics, the current societal and political environment, and the easier quantifiability and measurability of outcomes on this dimension in comparison with those of governance and social issues.

*“I must admit that our focus is primarily on the ‘E’ at the moment. The ‘S’ and the ‘G’ dimensions are not yet fully developed. We are starting with the measurable values, numbers, data, facts.” (Bank 1)*

#### 4.4.1.3 Sources of Pressure

With the rise of the topic of ESG, banks face pressure from inside and outside the institution to further implement ESG in their organization and processes. Pressure from the inside consists of the demands of internal stakeholders such as employees, the overall strategy, and risk considerations, while outside pressure primarily emanates from regulators and the capital markets. For the internal pressure sources, strategy and risk considerations are to be highlighted. Lending institutions strongly advertise the inclusion of ESG aspects in their strategies. In addition to the implementation of internal measures, such as reducing CO<sub>2</sub> emissions, banks are focusing on ESG as a business and marketing opportunity. Green financing instruments such as green bonds or ESG-linked loans are in demand, and the transition of business models requires large amounts of financing, which the banks plan to supply. In addition to strategy, risk evaluation of their corporate customers is a crucial driver behind the implementation of ESG criteria in the lending process. As ESG risks can turn into material business risks for companies, for example, through certifications in supplier evaluations, shifts in consumer preferences, or political changes

such as the shift from internal combustion engines to battery electric vehicles, it is in the best interest of banks to understand these ESG risks and to properly evaluate them. As one expert put it:

*“Of course [ESG] is also important for the bank, in the regular business, and the restructuring business. After all, if a borrower does not concern himself with ESG, he is naturally taking risks that could backfire on a bank, and that is why it is of course also of particular importance for us.” (Bank 2)*

In addition to the internal pressure sources, regulation and capital markets are critical drivers of ESG incorporation. While capital markets generally demand positive ESG certifications, regulators impact the bank’s entire operations. Current ESG regulation focuses on new loan origination and the establishment of processes to evaluate ESG risks in credit decisions (European Central Bank, 2020, European Banking Authority, 2020). No concrete ESG guidelines have been established for distressed loans or restructuring cases. Moreover, while banks are currently evaluating their credit portfolios regarding ESG risks, there is no perception of immediate pressure for active portfolio management, which could affect customer relationships. One key factor behind the lack of pressure is that portfolios are frequently evaluated at an aggregated level, making it possible to compensate for firms performing poorly on ESG dimensions. Experts agree, however, that regulatory development is only in its nascence in Europe and Germany in particular, with upcoming legislation expected to be far more restrictive than the current iteration. As ESG regulation is rapidly advancing from multiple angles, including ECB guidelines, the EU taxonomy regulation (European Parliament and the Council, 2020), and the German Act on Corporate Due Diligence Obligations in Supply Chains (European Parliament and the Council, 2020), experts have criticized the lack of transparency regarding upcoming regulations. Furthermore, experts fear a competitive disadvantage for German and European markets due to excessive regulation relative to the global level. Finally, multiple experts state that banks are being used as a transmission device for pushing ESG regulation in the markets, as increased ESG regulation will lead to higher financing costs for firms, penalizing poor ESG performance in the long run. As one expert summarized:

*“Politics has learned that the only way to advance the issue [ESG] ultimately is via the financiers or the finances. It has to hurt [economically].” (Bank 3)*

## 4.4.2 ESG Assessments in the Lending Process

### 4.4.2.1 Differences Between Regular Coverage and Intensive Care

In the examination of how banks assess their borrowers' ESG performance and ESG risks, the different stages in the lending process have to be separated. Driven by the integration of regulation, the focus of ESG assessments lies at the new loan origination stage. While some institutions subsequently conduct regular ESG assessments for their credit portfolio in their regular coverage processes, further special ESG assessments are not required by internal bank guidelines and thus are rarely conducted for borrowers entering the workout stages. Only one expert stated that a special, albeit superficial, ESG assessment is incorporated into the initial evaluation of the distressed firm. On the other hand, multiple experts stressed that comprehensive ESG assessment falls under the scope of the initial credit decision or, if the borrower has been with the bank longer than structured ESG assessments have existed, is the responsibility of the regular coverage unit, not the workout department.

Consequently, workout departments, as a first step, heavily rely on the documentation provided by the regular coverage unit in assessing the ESG performance of the distressed firms. The critical reason for this is the specific goal of the workout department.

*“When the case comes to us, we first take stock of the borrower’s situation. We discuss the situation with colleagues in the unit sending the case, and there is usually a statement from regular coverage where ESG has already been assessed. We then proceed based on this and further analyze the other relevant points in these crises.”*  
(Bank 4)

Next to the ESG assessments provided, some of the surveyed banks have built special units for ESG and ESG risk evaluations, which the workout departments can contact to help identify potential ESG risks most relevant to the firm in restructuring. Furthermore, workout personnel can utilize external service providers such as auditing firms or consultancies to include an ESG assessment in their restructuring opinion. This method, however, is available only for more extensive restructurings, in which the distressed firm consults outside advisors. As put by one expert:



*“The advantage with larger restructurings is that you always have a consultant on board. For medium-sized companies, I think, ESG assessment will be a huge problem.”*  
(Bank 8)

Overall, workout departments do not regularly conduct special ESG assessments to analyze the current ESG risks of the borrower. Information is drawn from other parts of the institution; if relevant, potential risks are evaluated by a neutral third party in the case of larger restructurings. Thus, ESG assessments conducted in the regular coverage or new loan origination processes are seen as essential for evaluating the firm planning restructuring.

#### 4.4.2.2 Scope of ESG Assessments Conducted

The scope of the ESG assessments conducted in the loan origination or regular coverage processes varies between the different institutions, as the applicable regulation is not specific in mandating the exact contents of the evaluation. Despite the low standardization, the implemented processes described by the experts in this study exhibit strong similarities. A theme developing across the different systems is that the experts find the current iteration of the ESG assessments to be relatively high level while further stressing that banks are currently only at the beginning of designing and implementing their ESG evaluation systems. This section summarizes the most critical steps in the assessment process.

1. The data source: Two main types of methods for gathering the information required for ESG evaluation are generally utilized. First, banks frequently send out self-evaluation questionnaires for the companies to fill in based on their data and opinions about their firm. In an alternative approach, an analyst from the lending institution acquires information from data provided by the company and public sources to fill out the assessment herself.
2. The questionnaire: The focus in both data-gathering methods is currently on a qualitative assessment. Only in individual cases are quantitative dimensions directly included in the questionnaire. The lack of standardized and comparable data is the key reason for the focus on qualitative dimensions. As one expert states:

*“For us, the questionnaire is only qualitative because we do not have any standards yet on how to do this quantitatively.”* (Bank 5)

The experts stress, however, that even if quantitative dimensions are included, data are rarely provided for quantitative dimensions, especially in cases of mid-sized firms. Regarding the balance of environmental, social, and governance topics in the questionnaire, the evaluations are frequently biased toward environmental issues, emphasizing climate and sustainability dimensions, in line with the currently perceived focus on the “E” in ESG as outlined above.

3. The evaluation: Once the information has been provided through the questionnaire, a bank analyst evaluates the data. The result of this evaluation is a company ESG score, frequently expressed in terms of a color coding system to indicate low, medium, and high risk. With the rapid increase in the sophistication of ESG evaluation systems, however, the experts expect the result of the ESG assessment to be much more detailed in the future. Currently, in addition to the rather broad ESG score, classifications based on performance relative to that of an industry-peer group are used. The company is categorized either as an overachiever, follower, or not at all concerned with ESG. While risk scores generally influence the overall credit rating of the borrower, ESG risk scores currently do not influence the rating systems of the surveyed banks. In one case only, preparatory steps for including parts of the ESG score in the overall credit rating have been taken. Consequently, currently derived ESG scores do not automatically influence borrowing conditions.

In summary, banks are currently building their capabilities in assessing borrower ESG risks and ESG performance. In its current iteration, the risk evaluation is severely limited by a lack of standardized, comparable data on the borrower side, leading to superficial or general risk scores. The quality of the risk scores, in turn, limits their materiality for the ultimate credit or pricing decision.

#### **4.4.2.3 The Role of ESG Certificates**

ESG certifications by third-party providers have become increasingly common, especially for firms not listed on equity capital markets. The experts generally agree that self-instructed ESG certifications could help the borrower via multiple avenues. First, certifications signal familiarity with and sensitivity to ESG, underlining positive ESG performance. Second, certificates can be used to complement ESG data, especially when no standardized or comparable data are available. Third, certificates enable peer comparisons by the lending institution, allowing identification of trends. Despite potentially helping the borrower, ESG certificates are currently used only as an

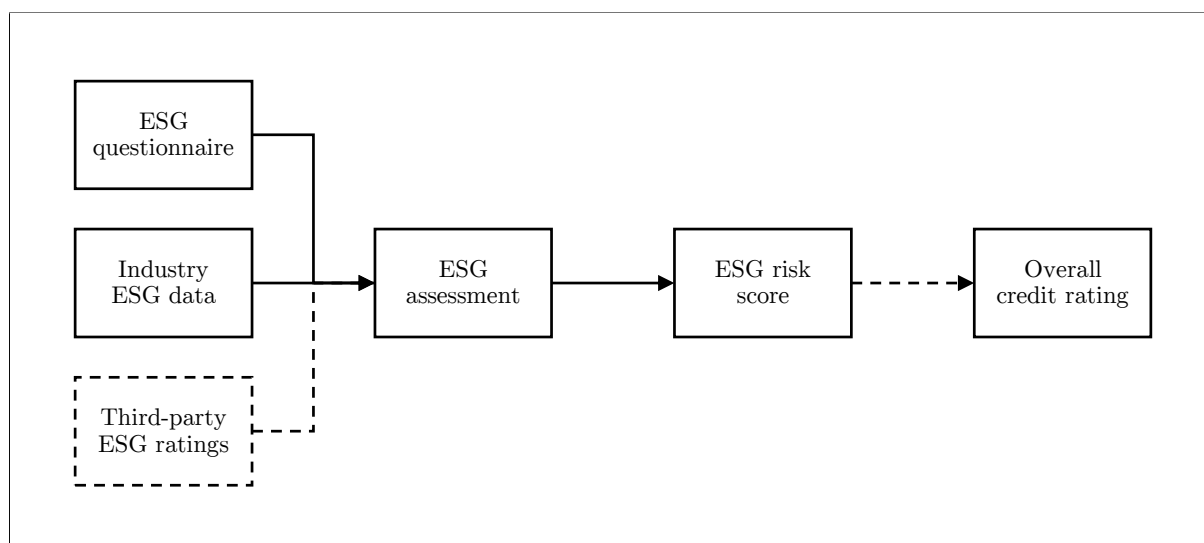


FIGURE 4.3: Simplified ESG Assessment Process, Own Representation

additional data point in the ESG analysis, as they have been criticized for several weaknesses. The experts especially stress a lack of credibility, as the independence of the rating agency is questioned because the borrower pays for the ratings. Furthermore, the vast number of different ratings leads to a lack of standardization, making them difficult to compare for banks and thus challenging to use in the ESG assessment of the bank. Last, the ratings are frequently not material for the business of the borrower. Overall, the ratings can help signal ESG efficacy and support ESG data, especially when data are scarce. However, their use in the ESG assessment process of the lender should not be overestimated until standardized and independent ESG ratings are available.

*“[The certificate] gives you a better feeling for the company, in the sense that you can assess it better. We keep them on file, we even consider them [in the assessment], but because there are no standards for such topics, everyone can write that they are the best [...] – it does not really help. It is not critical for credit decisions.” (Bank 7)*

#### 4.4.3 ESG Impact on Restructuring Decisions

The workout department’s objective determines how decisions are made regarding supporting borrowers in crisis, keeping quiet, or “pulling the plug” and backing out of the engagement.

This section analyzes whether ESG influences the objectives of the workout department and, subsequently, how ESG considerations impact restructuring decisions based on these objectives.

#### 4.4.3.1 Workout Objectives

The overarching goal of the workout department is described as reducing risk for the bank or minimizing financial losses. While the experts stress the economic foundation of the decision, several conflicting interests of the bank are highlighted that must be included in the decision. First, banks perceive responsibility toward the company's stakeholders and society. Securing jobs and minimizing the negative externalities of their decision is a crucial goal, which is even more pronounced for regional and state banks. Second, a similar responsibility exists toward the borrower, with whom the bank desires a profitable, trusting, long-term relationship. Purely economic decisions could taint the relationship while creating spillover effects to other borrower relationships and future business opportunities. Last, avoiding potential reputational damages, ranging from damage to public opinion to damage to specific stakeholder relationships, is a key consideration.

From a temporal perspective, several experts highlight the priority shift among goals in the workout process. As a first step, the company must be stabilized so that a decision about the further process can be made. Should the bank decide to either support the company or remain quiet, strategic considerations regarding the borrower's future and the relationship with the bank can be evaluated and implemented. As put by one expert:

*“What options do I now have as a financier for a company that is in trouble? I must first try to restore the value of the capital to create a basis for decision-making so that I can say, can I get out of here now, or how do I continue here?” (Bank 3)*

Whereas in the risk assessment outlined in the previous section, ESG is added as an additional factor, it does not appear to be an additional goal of the overall objective of workout teams. Instead, ESG risks are implicitly subsumed under the existing goals, such as the bank's reputation or classic risk and loss considerations. Depending on the objective affected by ESG, its relevance over the restructuring process can vary.

#### 4.4.3.2 ESG Impact on the Restructuring Decision

In consideration of the described workout objectives, banks have to ultimately decide to either back the company during the restructuring or back out of the engagement. While practitioner reports have fueled concerns that companies might not be feasible to restructure due to ESG concerns, experts currently do not deem ESG considerations a knockout criterion. Acknowledging that ESG can impact the ultimate restructuring decision, it is stressed that a holistic analysis of the borrower's situation has to be the basis for this decision, without one factor such as ESG deciding the fate of the borrower.

*“From my point of view, as of today, the decision whether to restructure the company or to back out directly cannot be reflected solely on the ESG factor.” (Bank 2)*

The experts further state that significant ESG risks that could warrant a drastic change in the borrower's evaluation are unlikely to be discovered in the restructuring process, as ESG assessments are conducted at loan origination or in the regular coverage process. Moreover, as ESG risks are known and not considered an issue in servicing the client in regular coverage, a sudden change in the evaluation of the importance of ESG risks for the lending institution is seen as at least inconsistent. As one expert states:

*“I would say ESG has no primary influence, because where is the point in me saying [to a borrower] you are high ESG risk, I am pulling the plug. Now the restructuring financing might fail, and I have a huge default and insolvency there. Whom does it benefit? Nobody. Absolutely nobody.” (Bank 3)*

Despite ESG not being considered a knockout criterion, several factors within the evaluation of the company in crisis are influenced by ESG risks. Thus, while currently perceived as not directly influencing the restructuring decision, ESG indirectly influences previously existing evaluation criteria. These factors affected by ESG can be separated into regulatory pressure, strategic considerations, refinancing ability, and restructuring ability.

1. Regulatory pressure. As described previously, no specific guidelines on incorporating or evaluating ESG risks in restructuring processes are currently in place. Frequently, banks have not yet developed internal guidelines, with some banks excluding their workout departments from adherence to the ESG guidelines applicable in regular coverage. Nevertheless, existing regulations

and changes in the restructuring process induced by ESG can have an even stricter economic impact. One example is a potentially prolonged restructuring duration for companies with poor ESG performance. On the one hand, the experts highlight a general pressure on keeping the restructuring duration as short as possible to keep the capital requirements for nonperforming loans mandated by EBA guidelines at a minimum. On the other hand, several experts expect longer restructuring durations for companies needing an ESG-induced transformation. In summary, while banks are not currently restricted by ESG-specific regulation, changed circumstances due to ESG requirements can increase the regulatory pressure on banks.

2. *Strategic considerations.* The ESG impact on strategic considerations of the lender includes reputational risks, fit with the bank's strategy, and portfolio pressure. While ESG is currently not seen as a knockout criterion, experts show a strong awareness of potential reputational damages should the borrower engage in behavior harmful on any of the environmental, social, or governance dimensions. For strategic fit, banks generally report that while actively looking to exit industries not in line with their ESG strategy, these strategy adjustments have a long-term character and rarely influence the restructuring decision. For example, one bank in the sample reported having sold loans at a discount after supporting the borrower through the restructuring to adjust their portfolio and send a signal to the market. While ESG pressure on the banks' credit portfolio is currently seen as not binding, experts expect portfolio pressure to become a more prominent factor in the future. Overall, strategic considerations are generally perceived as mid-term decisions, and the emergence of ESG issues does not change that time horizon. Thus, the current impact of strategic ESG considerations on the restructuring decision is to be characterized as low. Banks are willing to first support the borrower through crisis and only after that back out of the engagement through a phaseout.

3. *Refinancing ability.* While companies with high ESG risks or poor ESG performance might not encounter issues finding support for their restructuring with their banks today, the rapidly increasing ESG regulation and shifts in the banks' strategies could have substantial implications for firms trying to refinance their debt upon expiration of the restructuring financing. Several experts stress that for particularly ESG-critical cases, for example, in the coal or coal-fired power generation industries, the fact that future refinancing will be more difficult to obtain directly impacts the bank's decision on how to proceed with the borrower today. Thus, while currently limited to specific industries under regulatory pressure, ESG-driven concerns about future refinancing have the potential to influence today's restructuring decisions.

4. Restructuring ability. The borrower's ability to restructure the business and return to competitiveness in the market is regularly impacted by ESG and constitutes the key criterion highlighted by experts. In this context, the experts primarily describe ESG risks in the current operations and the future viability of the business models. ESG risks in the current operations include supply chain risks due to a failure to comply with supplier standards, poor manufacturing conditions and treatment of employees, and inflated operating costs due to energy costs or required CO2 certificates. ESG's impact on the future readiness of business models is focused mainly on changes in market environments, such as decreasing demand or unprofitable and outdated production methods. A key example is the upcoming switch from internal combustion to electric vehicles. The anticipated shift in demand disrupts business models with a strong reliance on petrol engines and forces suppliers to either phase out entire product portfolios or build capabilities to manufacture parts required in electric vehicles. As one expert states:

*“ESG has an impact on a company's business models and its future viability. A company that does not deal with ESG today will not be around in the future. The market will demand it.” (Bank 2)*

If material ESG risks have been identified, this does not automatically spell the company's end. As with other weaknesses of the current business, the borrower frequently has the opportunity to present a strategy to mitigate these risks in a business transformation. The experts stress, however, that certain conditions have to be met. First, the company must have management willing to transform the company. Second, the implementation of the transformation plan must be feasible. Third, the plan must address material ESG risks. Last, the transformation plan must be financially feasible. In practice, financial feasibility can be an issue. As financing institutions are reluctant to inject new money in restructuring situations, assembling funding for large-scale transformations can prove challenging. Thus, while transformations can be used to successfully mitigate ESG risks, they are not a panacea for firms threatened by poor ESG performance or business models threatened by ESG risks. The experts stressed, however, that if successful, such a transformation could be a unique opportunity for the borrower to restructure the firm, rapidly creating a future-proof business model. As one expert states:

*“Ultimately, ESG is not just something that restricts me, or limits me, but is also an opportunity to work on things. Be it to strengthen my sales market [...] or to become*

*even more energy efficient [...] in order to position myself better on the cost side.”*

*(Bank 4)*

Overall, while not a knockout criterion, ESG has the ability to impact the restructuring decision made by the lender through its effects on regulation, strategic considerations, the ability to refinance, and the ability to restructure. As of today, however, only in specific and severe cases is the impact of these ESG risks pronounced enough to move the needle concerning the restructuring decision. With increasing awareness of ESG and increasing regulatory restrictions, however, a more significant impact is expected in the future.

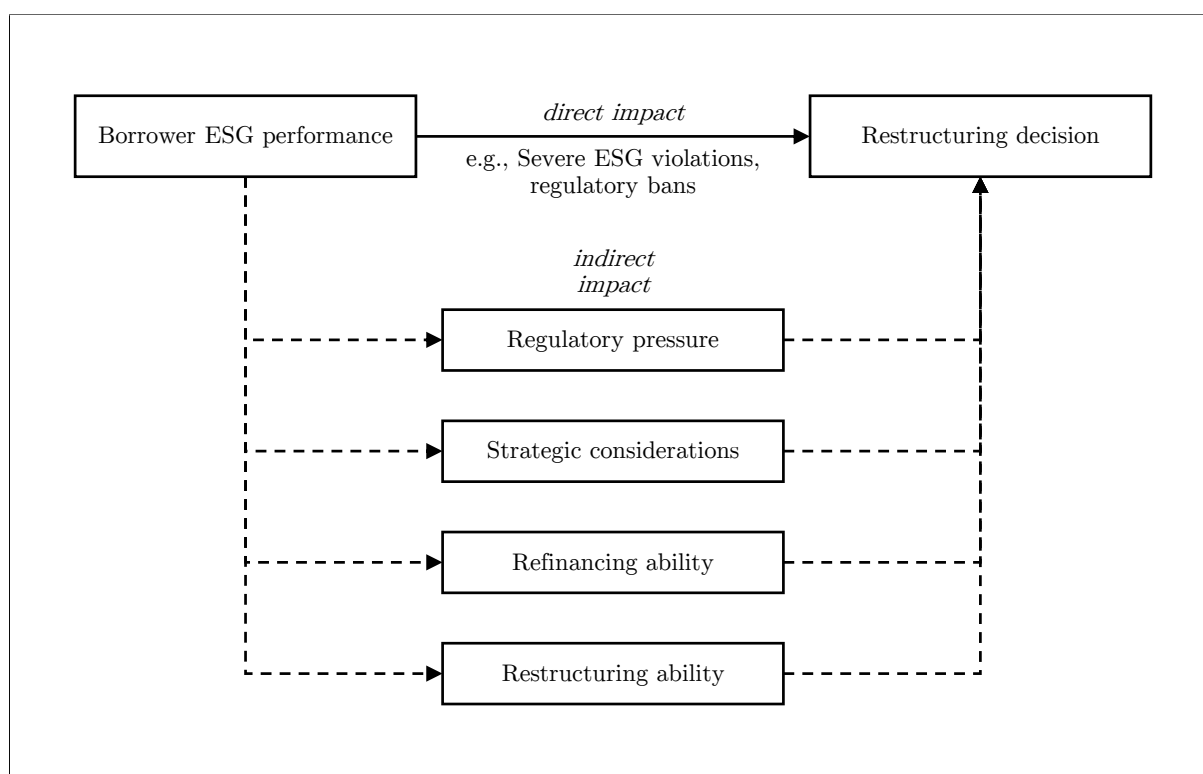


FIGURE 4.4: ESG Impact on Restructuring Decision, Own Representation

#### 4.4.3.3 Consequences of ESG Impact

As discussed in the previous section, as of today, the impact of ESG is only in specific constellations strong enough to materially change the decision of the bank to back out of the engagement and potentially send the company into bankruptcy. There are, however, other consequences for decisions that banks might take after initially supporting the borrower through restructuring. Three of the most relevant consequences are outlined in the following.



First, as a consequence of poor ESG performance or strategic misalignment with the bank's ESG goals, lenders not participating in refinancing and phasing out financing of firms assessed to be high risk is a tool that is already frequently employed today. The threat of a strategic phaseout can also be used to encourage change in the borrower's ESG strategy. Second, the sale of entire firms or only high-ESG risk parts of firms to ESG-insensitive buyers can be used to transform the borrower. The experts stress that valuations would be discounted due to poor ESG performance, making the option comparable to selling the loan at a discount. Third, banks have shown interest in introducing ESG-specific conditions into loan agreements. While increasing interest rates is rarely possible for nonperforming loans, introducing success fees for providing financing required for the transformation could be an opportunity for banks to participate in the success of their borrowers' transformation. Furthermore, if measurable ESG data exist, covenants could be tied to ESG goals to safeguard the required transformation.

Overall, while other options exist for banks to mitigate ESG risks or exit engagements, they are conditional on having a borrower on a stable economic footing and, therefore, take effect only after the restructuring decision.

## 4.5 Reflection & Discussion

This section aims to compare and contrast the results of the multiple case-study approach with related academic literature and recent practitioner reports. As the scientific literature on ESG in restructuring or the broader bankruptcy environment is scarce, we aim to draw parallels between the results of our research and the pre-ESG restructuring literature. We further utilize literature from adjacent fields such as ESG in equity capital markets to reflect on our findings with reference to concepts established in those research streams.

In contrast to recent practitioner reports stating that firms in crisis have been denied financing due to ESG concerns (Reifenberger, 2021), the results of our case study approach show that lenders do not perceive ESG to be a knockout criterion when making restructuring decisions. Moreover, except for especially severe cases, the impact of ESG on the restructuring decision is currently immaterial. Stronger emphasis is placed on strategic considerations to either drop or transform the borrower once the firm completes its restructuring. In line with the opinion of practitioners, however, our results suggest that an overall advance in the topic of ESG and tighter regulation are expected to lead to a more pronounced impact of ESG on the restructuring

decision in the future. With respect to the research on pre-ESG restructuring objectives and restructuring options, the inclusion of ESG in these steps of the credit restructuring process is associated with only small differences. As highlighted in several interviews, the primary objective is to limit losses and reduce the risk for the bank. Thus, the objectives of the workout department, as described by Volk (2007), remain unchanged at the top level. While ESG influences individual goals, its current importance does not warrant adding a fifth factor in the Volk (2007) model. Rather than constituting a new factor, ESG considerations can be subsumed within the existing categories that they affect. Although not formalized in the literature, similar arguments can be made for the inclusion of ESG in already existing factors of the restructuring decision.

The results described in the previous section further suggest that firms performing poorly concerning ESG dimensions can potentially secure restructuring support from their lenders by presenting a convincing transformation strategy that mitigates existing or future ESG risks. Thus, these firms would not be excluded from the lender's portfolio but instead receive an opportunity to better themselves. A similar concept has recently been proposed by Edmans et al. (2022) for public equity capital markets. The authors propose that instead of a blanket exclusion of "brown" stocks, responsible investors should pursue a so-called tilting strategy. Under this strategy, the investor would generally divest stocks in the brown industry but keep "best-in-class" firms that take corrective action. Following this strategy would reward firms that engage in corrective actions, which blanket exclusion fails to do. While this tilting strategy is not directly transferable to brown firms in restructuring, the concept of promoting firms to take corrective action instead of excluding them from the market can be applicable. While banks today already implicitly operate under a similar strategy for different reasons, supporting firms willing to transform their business could be an explicit opportunity in the future. Based on the interview results, two key issues could hinder banks from engaging in this behavior. First, additional financing for a comprehensive transition is difficult to obtain in restructuring situations. In these cases, additional funding opportunities such as government subsidies or funding might be necessary. Second, stricter regulation could force banks to engage in active portfolio management, promoting blanket exclusion of brown firms.

## 4.6 Conclusion

In summary, this paper evaluates the incorporation of ESG risk evaluation in German out-of-court restructuring undertakings from the perspective of lending institutions. Due to the limited academic literature regarding ESG and restructuring, or in a broader bankruptcy setting, we follow a qualitative research approach primarily based on expert interviews. The goal of the analysis is twofold. First, we create a foundation by summarizing how ESG is currently incorporated into the restructuring process, and second, we investigate how ESG influences the restructuring decisions made by lenders, which can determine the fate of a company in crisis.

Our results show that ESG is seen as a “hot topic” for banks engaged in corporate restructuring. Executives are aware of the impact that ESG can have on firm risk in both regular and special situations such as restructurings. However, it is acknowledged that concerning ESG, banks are currently still organizing themselves and developing strategies to best incorporate it into their processes and credit decisions. Despite rapid progress, especially for new loan origination and the ESG assessment of credit portfolios at an aggregate level, ESG evaluation is perceived to be in its early stages, with the bulk of changes still to come. One key reason for this perception is regulation. While the first pieces of regulation are in place, additional, more specific regulation is expected to arrive in the coming years, such as the EBA Guideline on ESG Risks. No specific ESG regulation for the specialized stage of restructuring exists. Furthermore, except for best-in-class examples, banks frequently do not have ESG-specific internal guidelines or processes on how to incorporate ESG into the restructuring evaluation or decision.

Banks currently use three main sources of information to evaluate the borrower’s ESG performance in the case of restructuring. First, workout departments rely on ESG assessments conducted in the loan origination or regular coverage stages. They further utilize internal bank resources such as specialized ESG risk teams to evaluate the borrower’s current situation and identify ESG risks that could impact the borrower. Second, in select cases, ESG assessments are conducted by the workout department, irrespective of already existing assessments. Third, in larger restructuring cases, banks utilize third-party opinions such as those of auditors or consultants to conduct ESG assessments to identify potential risks. Key challenges in these analyses are the lack of availability of structured ESG data, the lack of standardized methods for quantitative analyses, and the difficulty of evaluating data when trying to judge the materiality of potential ESG risks. While the results of these ESG evaluations can have an impact on the

decision of whether to support a borrower through the restructuring, ESG is not designated as a knockout criterion by lenders today. Even though ESG risks can be critical for the borrower, banks currently perceive ESG as a medium- to long-term factor that the borrower can influence if correct countermeasures are taken. Thus, banks generally include potential ESG risks only indirectly in their normal decision-making process for restructuring decisions. The areas with the most substantial ESG impact can be categorized into four groups: regulatory pressure, strategic considerations, refinancing ability, and restructuring ability. While unrelated to the restructuring decision, ESG further impacts how banks view the future relationship with the borrower, which can lead to consequences after the restructuring is supported. These can include ESG-adjusted credit conditions or a phaseout or sale of the engagement.

Overall, the role of ESG in restructuring is currently in an evolutionary phase. While awareness is high and initiatives to incorporate ESG are plentiful, ESG assessments are currently perceived as not reliable or substantive enough to be the basis for clear-cut arguments or decisions. While we show that ESG assessments can impact the restructuring decision, identified ESG risks are frequently overshadowed by other factors, such as economic considerations. The focus on an economic decision is aided by the perception that ESG performance can be improved over time, decreasing its importance in the tradeoff with other bank objectives.

Our study carries three main contributions. First, by closing the gap in the literature and investigating the incorporation of ESG factors in restructuring processes and their importance for restructuring decisions, we create a foundation for further research. Second, for companies undergoing restructuring, we show how lenders currently perceive and evaluate ESG risks in the restructuring process, allowing consideration of these results. Last, we contribute to the growing regulatory discussion by showing that regulation is perceived as a critical source of pressure for ESG adoption and ESG importance in the decision-making process. Policymakers, furthermore, must not overlook the effect that ESG can have on existing regulation, for example, through problematic financing of transformations or potentially prolonged restructuring durations.

Despite our contributions, this paper is limited across three main dimensions. First, while interviews are suitable in exploratory studies such as this one, they are biased toward the cases explored and experts interviewed and thus do not deliver representative results. Furthermore, as our sample includes only leading German banks, these results cannot be extrapolated to other financing institutions or banks outside the German market. Second, due to the extensive nature of ESG, we cannot differentiate between individual components of the ESG framework

in our analysis. Third, ESG is a topic in development, and the results presented here should be considered in view of the current regulation and economic environment.

Our study implies the need for further research. As we present a broad, explorative basis for incorporating ESG into the restructuring evaluation and decision, more narrow, detailed research in critical areas could be fruitful. These areas could include changes to workout objectives through ESG, the concrete economic consequences of ESG, and the role of reputation in the restructuring decision. Furthermore, our research indicates that ESG transformations could play a significant role in the future. Future research is necessary to better understand the conditions for successful transitions, especially highlighting how financing for noneconomic ESG risks can be secured. In the words of one expert:

*“A whole lot is happening. ESG is already very important, and we are just beginning to set up all these initiatives. We are just starting to learn ESG.” (Bank 2)*

# 5 | Conclusion

## 5.1 Summary of Research Findings

The two years between 2020-2022 have seen a period of economic turmoil, the consequences of which have plunged entire industries into crisis. Even though corporate crises and their worst potential outcome, bankruptcy, are currently being discussed daily, attention to these topics is generally reserved for times of economic downturn. According to a German proverb, health is appreciated only when it is lost. The same appears to hold for the health of businesses and corporations and the academic research surrounding the topics of corporate crises and turnaround. Previous research has shown that the literature on corporate crises and corporate turnaround is indeed crisis-driven (Schweizer and Nienhaus, 2017). For a literature stream that is historically constrained to small samples, the recent crises, from the COVID-19 emergency to the consequences of climate change, offer a unique opportunity to advance corporate turnaround research in a fashion similar to how new literature emerged in the 1990s based on the M&A and bankruptcy waves of the 1980s and, more recently, on the financial crisis beginning in 2007. However, next to the vast amounts of data that they produced, these crises have highlighted that the conditions under which corporations operate and the drivers behind economic crises have changed. New factors such as digitalization, the ever-increasing complexity of supply chains, and a focus on ESG now drastically impact how firms can recover while having previously been investigated only rarely in connection with crises and corporate turnaround. This dissertation aims to make use of this fertile environment by closing gaps in the literature on corporate turnaround while opening new frontiers for future research. My overarching goal with this dissertation is to expand empirical turnaround research to the specifics of the European market while establishing new sampling strategies to lay the groundwork for future research conducted on the basis of the wealth of data created between 2020 and 2022. While not directly building on each other, each

of the three individual essays contributes to a better understanding of restructuring and corporate turnaround in its own right. The first essay targets the previous lack of consideration of region and firm size as contextual factors in empirical retrenchment research. The study examines the influence of asset and employee retrenchment activities on postrestructuring operating performance for German mid-cap firms. I construct a unique sample of previously underrepresented mid-cap firms, both public and private, and my results demonstrate that employee retrenchment is linked with higher postturnaround operating performance. In comparison, asset retrenchment for these firms is linked with lower postturnaround operating performance. These results make essential contributions to turnaround and, more specifically, retrenchment research. First, the study establishes a novel approach to identifying firms undergoing restructuring, which has been a key inhibitor for empirical research on settings outside of the United States. Utilizing a database provided by the European restructuring allows deviation from the frequently used method of identifying firm decline by means of accounting data, which is generally not readily available for a large number of firms. This new approach will prove useful in expanding our understanding of differences across contextual factors such as geography, ownership, and firm size, frequently highlighted in the extant literature. Second, this study has provided the first insights into turnaround under the specifics of the context of mid-cap firms, responding to the call for research from Schweizer and Nienhaus (2017). The results further show that contextual factors can potentially explain differences between previous empirical studies presented in the literature stream. Despite these contributions, the results are not without limitations. While in line with previous studies in the field, the presented sample size is small. Further robustness analyses were conducted to ensure the validity of the results. A potential relaxation of data requirements could increase the sample size, albeit at the expense of the robustness of results. In addition to the sample size, the sample could suffer from potential sample biases. To mitigate these potential biases, special care was taken to not overweight manufacturing firms in the sample while also running robustness tests that included firms that did not post financial results due to entering insolvency proceedings. Last, as the research methodology closely resembles that in previous empirical studies to be able to draw comparisons on contextual factors, potential reverse causality concerns over the retrenchment-turnaround performance relationship cannot be ruled out entirely. Essay II focuses on employee retrenchment, complementing and reconciling previous empirical evidence on the relationship between downsizing announcements and earnings management. By drawing on and expanding the sample construction approach developed in Essay I, the study features a multicountry sample, allowing comparison of contextual

factors such as the rigidity of employment protection laws. The results provide evidence that firms do not exhibit larger income-decreasing accruals in the year before they announce major downsizing events. Furthermore, the hypothesized political costs created by downsizing events do not appear to moderate the level of discretionary accruals in the year prior to firm downsizing announcements. The study contributes to the body of literature by confirming previous empirical results and advancing the methodology around political cost measurement. First, the study addresses potential biases inherent in previous work by utilizing a large multicountry sample, lending robustness to the presented results. In applying a three-stage analysis, the study can further closely confirm the findings presented by Hall et al. (2005). Second, this work contributes to our understanding of earnings management by testing the political cost hypothesis through a variable capturing the rigidity of employment laws in a specific country, based on work by Botero et al. (2004). The insights gained from this study further may be of assistance to relevant parties in major downsizing events. Practitioners should pay particular attention to accruals in downsizing announcement years to detect potential accruals management that would distort the basis for workforce negotiations. Essay II's findings face several limitations, three of which are to be highlighted. First, the sample construction method could bias the results due to nondetection of firms. To mitigate this issue, manual keyword searches were conducted to corroborate the sample selection. Second, previous research has stated that poorly performing firms show different discretionary accrual patterns (Dechow et al., 1995). A control variable was introduced to reduce the potential impact of accrual differences due to poor performance, as a large overlap between downsizing and poor firm performance is expected. Last, while the measurement of earnings management through discretionary accruals estimation has long been established, the approach itself is not without limitations. The third essay, presented in Chapter 4, turns the focus from research gaps in the previous literature toward future restructuring and turnaround research topics. Inspired by practitioner discussions and the scarcity of literature, the essay examines the evaluation of ESG risks and their incorporation into restructuring decisions from the perspective of German lenders. In contrast to Essay I and Essay II, which are based on quantitative research methods, Essay III relies on a qualitative multi-case study approach. Key data are generated through semistructured expert interviews with high-level bank employees engaged in the coverage of loans and debt instruments of companies in crisis. The results indicate that while seen as a "hot topic", ESG evaluations currently have a limited impact on a bank's decision to support or withdraw financing from a company undergoing out-of-court restructuring. However, the consensus among the investigated cases is that the future importance of ESG risks cannot



be understated, that banks are only starting to implement ESG processes, and that enormous regulatory changes are still to come. This study contributes in several ways to our understanding of ESG in the turnaround context. First, to our knowledge, this is the first study to investigate the role of ESG in corporate turnaround. Given the rapidly advancing restrictions put on lenders through ESG regulation and the pronounced role of lenders in the turnaround process (Trahms et al., 2013), the theoretical frameworks presented in this study create a foundation for future research in this newly emerging field. Second, this study has major practical implications. For firms undergoing restructuring, understanding the processes and impact of ESG risks can prove vital for restructuring success. For banks and other financing bodies, the overview of current practices offers an opportunity to improve and adapt their own processes. Last, for policymakers, the presented concepts of how ESG impacts the restructuring decision can assist in the development of guidelines that drive ESG adoption while allowing lenders enough time to help their nonperforming borrowers transform. As with those of the first two essays, the presented findings are not without limitations. First, the methodology based on expert interviews does not deliver representative results. While rigorous sample selection processes were followed to ensure a comprehensive view through the selected case studies, further research is necessary to test and corroborate the presented concepts. Second, due to the breadth of the ESG concept, nuances of individual components could not be captured in the expert interviews. The findings are thus limited to the definition of ESG overall and do not allow differentiation between ESG components.

## 5.2 Directions for Future Research

The findings of this dissertation demonstrate the need and opportunity for further research on the topic of corporate turnaround. On an aggregate level, three factors strongly contribute to the future of turnaround research. First, crisis and turnaround research has frequently suffered from a lack of data, which constrained sample sizes and the breadth of variables covered in empirical studies. Recent macroeconomic crises, which hit the global economies roughly at the same time, will create a wealth of data that can be used to conduct large sample international event studies, directly addressing one of the most pressing criticisms of past empirical work. Second, the nature of corporate crises and the root causes of corporate decline are changing. New causes of corporate decline, such as ESG performance, advancing digitalization, and increasing pressures on the supply chain, have led firms to adapt their turnaround measures rapidly. Given

the highlighted importance of crisis causes for turnaround actions and their ultimate success, research methods and models should be adjusted accordingly to derive meaningful results in corporate turnaround. Third, while individual empirical studies in the various research streams within corporate turnaround have yielded promising results, these findings have frequently not been integrated into overarching theories or concepts. With strong interdependencies between the individual stages, context factors, causes of the crisis, and turnaround measures, a holistic view of the field is required. While each of the three essays in this dissertation demonstrates meaningful contributions to the respective literature stream, the promising results also show that further research in the field is necessary. Due to the structure of this dissertation, each essay provides distinct suggestions for future research projects.

In reconciling previous empirical studies on retrenchment actions and expanding the work to mid-cap firms, Essay I suggests multiple avenues for future research. The natural progression after this study would be to further detail the specific measures currently bundled under asset retrenchment to shed light on which actions strongly impact the resource levels of the firm and how these subsequently drive retrenchment results. On a methodological level, using the European Restructuring Monitor database's full potential could help build large, cross-country samples on turnarounds in Europe, allowing for more robust isolation of causal relationships with turnaround success. Moreover, longitudinal studies that fully cover the recovery stage would be a fruitful area for further work. The data on corporate crises and turnaround generated in the last two years further offers the opportunity to directly contrast turnaround actions between companies, as the nature of the crisis and its timing is homogeneous across firms.

The findings of Essay II provide important insight into future research on corporate downsizing and earnings management patterns. While the study shows that firms do not manage their annual results in anticipation of downsizing measures, it demonstrates that discretionary accruals appear to change in the year of the downsizing announcement. Future research should be carried out to investigate these discretionary accrual patterns around downsizing announcement events. Focusing on individual accrual categories could furthermore produce exciting findings with respect to how firms manage earnings around downsizing events. These results would be essential to establish causality between earnings management patterns and downsizing announcements. On the topic of political cost avoidance, further work on the development of political cost variables with more recent data and a direct comparison between the United States and European countries is an essential next step in confirming the findings.

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Essay III advances turnaround research into the direction of ESG. The intersection of ESG and corporate turnaround has not received much attention until now. One key reason for this is that ESG has not directly impacted companies' financials in the past and was thus seen as irrelevant, especially in times of crisis and survival. The results of Essay III demonstrate that while the impact of ESG on corporate restructurings is currently negligible, it is expected to increase drastically in the upcoming years as regulation is implemented. Multiple avenues of future research can be derived from these findings. First, further research is required to solidify the results of the qualitative study presented in this dissertation in a representative manner, for example, through surveys. Moreover, experiments could yield meaningful results on the reflection of ESG in the decision-making process in times of crisis. Beyond the direct implications of this study, the role of corporate turnaround in the environmental transformation of firms should be closely examined. The relaxation of legal constraints in out-of-court bankruptcy proceedings and the shifted power distribution of share- and stakeholders could offer a unique environment for the rapid transformation of firms.

Overall, corporate turnaround research offers ample opportunity for researchers to advance the field's current state. Beyond the natural progression of existing research streams, changes in the nature of crises and the newly created troves of data also allow for the emergence of new research areas. I hope that this dissertation and its three essays on current topics in corporate restructuring inspire future research in this tremendously important and rapidly developing field.

# Appendix

## Appendix to Essay I

Tables A.1 and A.2 provide the results of further robustness analyses conducted. In total, five modifications of the models presented in Essay I are shown. In Model 1, insolvent firms previously excluded are included in the sample. In Model 2, the retrenchment duration is modified, using the delta between Y6-Y2 instead of Y6-Y3. In Model 3, performance is measured in terms of Net Income changes. In Model 4, robust standard errors are utilized. Finally, in Model 5, binary variables are used for asset and employee retrenchment.

TABLE A.1  
**OLS Regression on Turnaround Performance - Robustness (1/2)**

OLS Regression	Model 1: Including Insolvencies		Model 2: Modified Retr. Duration		Model 3: Modified Performance	
	Coef <i>St. Err.</i>	P-value <i>t-value</i>	Coef <i>St. Err.</i>	P-value <i>t-value</i>	Coef <i>St. Err.</i>	P-value <i>t-value</i>
Asset Ret.	-0.188*** <i>0.056</i>	0.001 <i>-3.34</i>	-0.077** <i>0.037</i>	0.04 <i>-2.09</i>	0.001 <i>0.053</i>	0.992 <i>0.01</i>
Employee Ret.	0.147** <i>0.073</i>	0.047 <i>2.02</i>	0.062* <i>0.035</i>	0.082 <i>1.77</i>	0.149** <i>0.064</i>	0.022 <i>2.34</i>
Prev. Performance	-0.628*** <i>0.142</i>	0.000 <i>-4.44</i>	-0.572*** <i>0.081</i>	0.000 <i>-7.08</i>	-0.121 <i>0.124</i>	0.336 <i>-0.97</i>
Sev. Decline	0.017 <i>0.1</i>	0.863 <i>0.17</i>	-0.006 <i>0.067</i>	0.928 <i>-0.09</i>	0.357*** <i>0.101</i>	0.001 <i>3.53</i>
Firm Size	-0.003 <i>0.017</i>	0.84 <i>-0.2</i>	-0.005 <i>0.011</i>	0.637 <i>-0.47</i>	-0.023 <i>0.016</i>	0.168 <i>-1.39</i>
Financial Crisis	-0.032 <i>0.037</i>	0.389 <i>-0.87</i>	0.021 <i>0.024</i>	0.393 <i>0.86</i>	0.045 <i>0.037</i>	0.227 <i>1.22</i>
Ownership	-0.072* <i>0.04</i>	0.077 <i>-1.8</i>	-0.035 <i>0.025</i>	0.159 <i>-1.42</i>	-0.04 <i>0.037</i>	0.286 <i>-1.08</i>
Constant	0.074 <i>0.216</i>	0.732 <i>0.34</i>	0.095 <i>0.133</i>	0.477 <i>0.71</i>	0.302 <i>0.204</i>	0.144 <i>1.48</i>
Observations	82		73		74	
R-squared	0.463		0.529		0.265	
F	9.126		10.442		3.394	

*Coefficient levels are indicated at the conventional levels using \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$*

TABLE A.2  
**OLS Regression on Turnaround Performance - Robustness (2/2)**

OLS Regression Variables	Model 4: Robust Standard Errors		Model 5: Binary Retr. Variables	
	Coef <i>St. Err.</i>	P-value <i>t-value</i>	Coef <i>St. Err.</i>	P-value <i>t-value</i>
Asset Ret.	-0.094 <i>0.067</i>	0.164 <i>-1.41</i>	-0.048** <i>0.022</i>	0.029 <i>-2.23</i>
Employee Ret.	0.144** <i>0.064</i>	0.028 <i>2.25</i>	0.082* <i>0.045</i>	0.072 <i>1.83</i>
Prev. Performance	-0.541*** <i>0.116</i>	0.000 <i>-4.66</i>	-0.509*** <i>0.084</i>	0.000 <i>-6.07</i>
Sev. Decline	-0.011 <i>0.095</i>	0.912 <i>-0.11</i>	-0.038 <i>0.067</i>	0.572 <i>-0.57</i>
Firm Size	0.006 <i>0.013</i>	0.665 <i>0.44</i>	-0.007 <i>0.011</i>	0.527 <i>-0.64</i>
Financial Crisis	0.004 <i>0.021</i>	0.865 <i>0.17</i>	0.009 <i>0.026</i>	0.723 <i>0.36</i>
Ownership	-0.024 <i>0.022</i>	0.274 <i>-1.1</i>	-0.027 <i>0.026</i>	0.29 <i>-1.07</i>
Constant	-0.06 <i>0.171</i>	0.728 <i>-0.35</i>	0.068 <i>0.143</i>	0.635 <i>0.48</i>
Observations	74		74	
R-squared	0.507		0.456	
F	9.621		7.908	

*Coefficient levels are indicated at the conventional levels using \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$*

## Appendix to Essay II

Table A.3 provides summary statistics for an alternative matched sample specification for Essay II. In this specification, performance-based matching using ROA instead of size-based matching using total assets was employed.

TABLE A.3  
Performance-matched Matched Sample Analysis

Method	Year	Downsizing Observations			Matched Sample			Comparison	
		Mean	Std. Error	S.D.	Mean	Std. Error	S.D.	t-statistic	Wilcoxon
Jones	t-1	0.0020	0.0041	0.0742	0.0005	0.0050	0.0899	0.0103	0.2226
Mod. Jones	t-1	0.0026	0.0041	0.0741	-0.0007	0.0048	0.0865	0.0087	0.5506
Kothari	t-1	0.0019	0.0041	0.0753	-0.0022	0.0046	0.0828	0.0067	0.6781
Jones	t	-0.0109	0.0051	0.0948	-0.0044	0.0059	0.1103	-0.9030	-1.5900
Mod. Jones	t	-0.0088	0.0051	0.0939	-0.0050	0.0060	0.1109	-0.5246	-1.4660
Kothari	t	-0.0084	0.0050	0.0926	-0.0071	0.0059	0.1093	-0.1878	-1.1270

*N* = 330 in year *t-1* (Pre-Announcement), *N* = 345 in year *t* (Announcement); \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Table A.4 provides further robustness analyses conducted in connection with the expanded accrual estimation model presented in Essay II. All of the presented analyses use the modified Jones specification.

TABLE A.4  
Robustness Analyses

Model 1: Downsizing events were limited to those with at least 2% of workforce reduction

Model 2: ITEM1551 (net income before extraordinary items) was used as the alternative earnings measure

Model 3: Industry group 12, capturing "Others", was excluded from analysis, resulting in a smaller sample size

Model 4: Random effects were chosen instead of fixed effects in previous iterations

Panel Regression	Model 1: Stricter Sample Mod. Jones		Model 2: Earnings Measure Mod. Jones		Model 3: Industry Restriction Mod. Jones		Model 4: Random Effects Mod. Jones	
	Coef <i>St. Err.</i>	P-value <i>t-value</i>	Coef <i>St. Err.</i>	P-value <i>t-value</i>	Coef <i>St. Err.</i>	P-value <i>t-value</i>	Coef <i>St. Err.</i>	P-value <i>t-value</i>
Total Assets	817,860 <i>1,304,583</i>	0.5370 <i>0.6300</i>	-438,795 <i>1,439,947</i>	0.7630 <i>-0.3000</i>	1,750,544 <i>1,729,039</i>	0.3230 <i>1.0100</i>	-511,727 <i>1,091,418</i>	0.6390 <i>-0.4700</i>
Delta Sales	-0.0667*** <i>0.0154</i>	0.0000 <i>-4.3400</i>	-0.0221*** <i>0.0071</i>	0.0050 <i>-3.1100</i>	-0.0446** <i>0.0178</i>	0.0210 <i>-2.5000</i>	-0.0734*** <i>0.0165</i>	0.0000 <i>-4.4600</i>
Fixed Assets	-0.1384*** <i>0.0225</i>	0.0000 <i>-6.1500</i>	-0.1136*** <i>0.0127</i>	0.0000 <i>-8.9400</i>	-0.1393*** <i>0.0322</i>	0.0000 <i>-4.3300</i>	-0.1464*** <i>0.0207</i>	0.0000 <i>-7.0900</i>
Eventyear	-0.0125 <i>0.0073</i>	0.1020 <i>-1.7000</i>	-0.0046 <i>0.0040</i>	0.2600 <i>-1.1500</i>	-0.0100** <i>0.0035</i>	0.0100 <i>-2.8400</i>	-0.0105** <i>0.0052</i>	0.0430 <i>-2.0200</i>
Eventyear_1	0.0001 <i>0.0049</i>	0.9860 <i>0.0200</i>	0.0003 <i>0.0026</i>	0.9250 <i>0.0900</i>	-0.0034 <i>0.0034</i>	0.3240 <i>-1.0100</i>	-0.0031 <i>0.0037</i>	0.3970 <i>-0.8500</i>
Loss	-0.0758*** <i>0.0128</i>	0.0000 <i>-5.9100</i>	-0.0837*** <i>0.0083</i>	0.0000 <i>-10.1000</i>	-0.0772*** <i>0.0099</i>	0.0000 <i>-7.7800</i>	-0.0752*** <i>0.0131</i>	0.0000 <i>-5.7500</i>
Constant	0.0014 <i>0.0156</i>	0.9300 <i>0.0900</i>	-0.0082 <i>0.0123</i>	0.5100 <i>-0.6700</i>	-0.0024 <i>0.0172</i>	0.8900 <i>-0.1400</i>	0.0061 <i>0.0082</i>	0.4570 <i>0.7400</i>
N	9,550		9,550		7,263		9,550	
R <sup>2</sup>	0.3427		0.3303		0.3515		0.3479	
F/Chi <sup>2</sup>	21,568		2,831		n/a		108,017	

Coefficient levels are indicated at the conventional levels using \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$



Tables A.5 and A.6 provide the results of panel regression models on discretionary accruals using the Jones and Kothari specifications. Results in the main section of Essay II utilize the modified Jones specification. In both tables, Model 1 is computed using fixed effects and year dummy variables, Models 2-4 are computed using year dummy variables, and all models use country-clustered standard errors.

TABLE A.5  
Panel Regression Results for the Jones Model

Panel Regression	Model 1: Fixed Effects Jones		Model 2: Random Effects Jones		Model 3: Random Effects Jones		Model 4: Random Effects Jones	
	Coef <i>St. Err.</i>	P-value <i>t-value</i>	Coef <i>St. Err.</i>	P-value <i>t-value</i>	Coef <i>St. Err.</i>	P-value <i>t-value</i>	Coef <i>St. Err.</i>	P-value <i>t-value</i>
eventyear	-0.0103** <i>0.0039</i>	0.0130 <i>-2.6800</i>			-0.0104*** <i>0.0038</i>	0.0070 <i>-2.7000</i>	-0.0151 <i>0.0128</i>	0.2380 <i>-1.1800</i>
eventyear_1	-0.0042 <i>0.0040</i>	0.3030 <i>-1.0500</i>			-0.0046 <i>0.0041</i>	0.2560 <i>-1.1400</i>	-0.0046 <i>0.0041</i>	0.2580 <i>-1.1300</i>
emplaw					-0.0193 <i>0.0128</i>	0.1300 <i>-1.5200</i>	-0.0197 <i>0.0127</i>	0.1220 <i>-1.5400</i>
eventyear X emplaw							0.0087 <i>0.0195</i>	0.6550 <i>0.4500</i>
size	-0.0115*** <i>0.0037</i>	0.0040 <i>-3.1400</i>	-0.0015 <i>0.0019</i>	0.4120 <i>-0.8200</i>	-0.0011 <i>0.0018</i>	0.5330 <i>-0.6200</i>	-0.0011 <i>0.0018</i>	0.5340 <i>-0.6200</i>
perf	0.1632*** <i>0.0391</i>	0.0000 <i>4.1800</i>	0.1602*** <i>0.0426</i>	0.0000 <i>3.7600</i>	0.1594*** <i>0.0426</i>	0.0000 <i>3.7400</i>	0.1594*** <i>0.0426</i>	0.0000 <i>3.7400</i>
btm	-0.0083 <i>0.0078</i>	0.3000 <i>-1.0600</i>	-0.0102 <i>0.0070</i>	0.1450 <i>-1.4600</i>	-0.0102 <i>0.0070</i>	0.1460 <i>-1.4500</i>	-0.0102 <i>0.0070</i>	0.1460 <i>-1.4600</i>
debtlevel	-0.0270* <i>0.0143</i>	0.0720 <i>-1.8800</i>	-0.0266* <i>0.0137</i>	0.0520 <i>-1.9400</i>	-0.0264* <i>0.0138</i>	0.0560 <i>-1.9100</i>	-0.0264* <i>0.0138</i>	0.0570 <i>-1.9100</i>
growth	0.0494*** <i>0.0090</i>	0.0000 <i>5.4700</i>	0.0422*** <i>0.0113</i>	0.0000 <i>3.7300</i>	0.0420*** <i>0.0114</i>	0.0000 <i>3.6900</i>	0.0420*** <i>0.0114</i>	0.0000 <i>3.7000</i>
Constant	0.2500*** <i>0.0748</i>	0.0030 <i>3.3400</i>	0.0365 <i>0.0372</i>	0.3270 <i>0.9800</i>	0.0383 <i>0.0395</i>	0.3320 <i>0.9700</i>	0.0385 <i>0.0395</i>	0.3310 <i>0.9700</i>
N	9,550		9,550		9,550		9,550	
R <sup>2</sup>	0.0839		0.0804		0.0809		0.0809	
F/Chi <sup>2</sup>	405		1,365		n/a		n/a	

Coefficient levels are indicated at the conventional levels using \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

TABLE A.6  
Panel Regression Results for the Kothari Model

Panel Regression Variables	Model 1: Fixed Effects Kothari		Model 2: Random Effects Kothari		Model 3: Random Effects Kothari		Model 4: Random Effects Kothari	
	Coef <i>St. Err.</i>	P-value <i>t-value</i>	Coef <i>St. Err.</i>	P-value <i>t-value</i>	Coef <i>St. Err.</i>	P-value <i>t-value</i>	Coef <i>St. Err.</i>	P-value <i>t-value</i>
eventyear	-0.0099* <i>0.0045</i>	0.0370 <i>-2.2100</i>			-0.0098** <i>0.0044</i>	0.0240 <i>-2.2600</i>	-0.0198 <i>0.0164</i>	0.2270 <i>-1.2100</i>
eventyear_l	-0.0042 <i>0.0044</i>	0.3510 <i>-0.9500</i>			-0.0045 <i>0.0044</i>	0.3040 <i>-1.0300</i>	-0.0045 <i>0.0044</i>	0.3070 <i>-1.0200</i>
emplaw					-0.0214 <i>0.0126</i>	0.0880 <i>-1.7000</i>	-0.0221* <i>0.0124</i>	0.0730 <i>-1.7900</i>
eventyear X emplaw							0.0183 <i>0.0232</i>	0.4300 <i>0.7900</i>
size	-0.0108* <i>0.0041</i>	0.0140 <i>-2.6500</i>	-0.0018 <i>0.0022</i>	0.4170 <i>-0.8100</i>	-0.0014 <i>0.0022</i>	0.5250 <i>-0.6400</i>	-0.0014 <i>0.0022</i>	0.5290 <i>-0.6300</i>
perf	0.1456*** <i>0.0414</i>	0.0020 <i>3.5200</i>	0.1424*** <i>0.0447</i>	0.0010 <i>3.1900</i>	0.1417*** <i>0.0447</i>	0.0020 <i>3.1700</i>	0.1418*** <i>0.0447</i>	0.0020 <i>3.1700</i>
btm	-0.0051 <i>0.0079</i>	0.5280 <i>-0.6400</i>	-0.0069 <i>0.0071</i>	0.3280 <i>-0.9800</i>	-0.0069 <i>0.0071</i>	0.3310 <i>-0.9700</i>	-0.0069 <i>0.0071</i>	0.3290 <i>-0.9800</i>
debtlevel	-0.0255 <i>0.0151</i>	0.105 <i>-1.6900</i>	-0.0226 <i>0.0138</i>	0.1020 <i>-1.6400</i>	-0.0225 <i>0.0140</i>	0.1080 <i>-1.6100</i>	-0.0224 <i>0.0140</i>	0.1090 <i>-1.6000</i>
growth	0.0259*** <i>0.0085</i>	0.0060 <i>3.0300</i>	0.0187* <i>0.0104</i>	0.0740 <i>1.7900</i>	0.0185* <i>0.0104</i>	0.0770 <i>1.7700</i>	0.0185* <i>0.0104</i>	0.0760 <i>1.7800</i>
Constant	0.2361** <i>0.0838</i>	0.0100 <i>2.8200</i>	0.0424 <i>0.0446</i>	0.3420 <i>0.9500</i>	0.0449 <i>0.0468</i>	0.3370 <i>0.9600</i>	0.0451 <i>0.0468</i>	0.3350 <i>0.9600</i>
N	9,550		9,550		9,550		9,550	
R <sup>2</sup>	0.0539		0.0508		0.0512		0.0512	
F/Chi <sup>2</sup>	893		1,005		n/a		n/a	

Coefficient levels are indicated at the conventional levels using \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

## Appendix to Essay III

Table A.7 lists the interview partners of the expert interviews conducted in the data collection phase of Essay III. All interviews were conducted in the year 2022 via video calls. Interview partners were given the choice of setting. Table A.8 provides information on the structure of the interviews. After warm-up, the interviews comprised of three main sections, before closing with situational supplemental and closing questions.

TABLE A.7  
Overview of Conducted Expert Interviews

Case	Expert #	Type of Interview	Duration in minutes
Bank 1	Expert 02	Video call	50
	Expert 08	Video call	55
Bank 2	Expert 03	Video call	55
	Expert 07	Video call	55
	Expert 13	Video call	45
Bank 3	Expert 04	Video call	50
	Expert 12	Video call	45
Bank 4	Expert 06	Video call	50
	Expert 10	Phone call	35
Bank 5	Expert 01	Video call	70
Bank 6	Expert 05	Video call	55
Bank 7	Expert 09	Video call	55
Bank 8	Expert 11	Video call	60

TABLE A.8  
Structure of the Interview Guideline

Section	Content	Stage
0.	Setup and introduction	Information
1.	Professional experience	Information
2.	Experience with ESG	Warm-up
3.	Impact of ESG on the workout department and monitored companies	Main Stage
4.	ESG and restructuring decisions	Main Stage
5.	Consequences of ESG incorporation and potential funding gaps	Main Stage
6.	Supplemental content questions (trends, green finance)	Conclusion
7.	Closing questions (snowballing, missed topics)	Conclusion

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