



## Aktuelle ökonomische Herausforderungen in der Sanierung

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Zusammenfassung und Beiträge der kumulativen Dissertation im Rahmen der  
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Lehrstuhl für ABWL und Unternehmensrechnung

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## Überblick

Die vorliegende kumulative Dissertation untersucht aktuelle ökonomische Herausforderungen in der Sanierung von Unternehmen. Als zentrale Themen bzw. Herausforderungen werden einerseits das Phänomen „Zombie-Unternehmen“ im Kontext der Sanierung behandelt, andererseits die Effekte der Corporate Social Performance (CSP) auf das Insolvenzrisiko von Unternehmen unter Berücksichtigung von Konjunkturzyklen. Die Dissertation besteht aus den folgenden vier Beiträgen:

**Beitrag 1:** Fischer, F. B. (2021). Zombie firms, corporate restructuring and relationship banking: Credit guidance as a key to tackle zombie lending? *Accounting, Economics, and Law: A Convivium*. <https://doi.org/10.1515/ael-2020-0065> [VHB-JQ3: B/C]

**Beitrag 2:** Fischer, F. B. (2020). Corona-Staatshilfen, Zombie-Unternehmen und Sanierung: Implikationen für Sanierungspraktiker. *Die Wirtschaftsprüfung*, 73(17), 1049-1055. [VHB-JQ3: C]

**Beitrag 3:** Habermann, F. & Fischer, F. B. (2021). Corporate social performance and the likelihood of bankruptcy: Evidence from a period of economic upswing. *Journal of Business Ethics*. <https://doi.org/10.1007/s10551-021-04956-4> [VHB-JQ3: B, FT 50]

**Beitrag 4:** Fischer, F. B., Habermann, F. & Burger, A. A. (2021). Corporate Social Performance und Insolvenzwahrscheinlichkeit: Implikationen für die Unternehmenssteuerung und -überwachung. *Zeitschrift für Corporate Governance*, 16(6), 255-258. <https://doi.org/10.37307/j.1868-7792.2021.06.06> [VHB-JQ3: D]

Beitrag 1 untersucht das makroökonomische Phänomen „Zombie-Unternehmen“ aus der Sanierungsperspektive und fokussiert sich auf die Kreditentscheidungen der involvierten Banken. In Beitrag 2 werden Implikationen aus der Gefahr einer erhöhten Zahl an Zombie-Unternehmen für die deutsche Sanierungspraxis im Kontext der COVID-19-Pandemie erarbeitet. In Sanierungssituationen spielen nicht nur finanzielle, sondern auch nicht-finanzielle Aspekte im Sinne der CSP eine Rolle. Während in der bisherigen Forschung der Zusammenhang zwischen CSP und dem Insolvenzrisiko ausschließlich in Zeiträumen mit wirtschaftlichen Krisen untersucht wurden, wird in Beitrag 3 ein Zeitraum des Aufschwungs betrachtet. Die Implikationen aus dieser Untersuchung für die Unternehmenssteuerung und -überwachung werden in Beitrag 4 erarbeitet.

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## 1. Problem- und Zielstellung

Bei der Verwendung von Schlagworten wie „Digitaler Wandel“, „Disruptive Technologien“ oder „Digitale Innovation“ wird oftmals an aufstrebende Start-ups und erfolgreiche Unternehmen mit innovativen Geschäftsmodellen gedacht. Daneben besteht jedoch eine große Zahl etablierter Unternehmen mit konventionellen Geschäftsmodellen, für die innovativer Wettbewerb im Sinne der schöpferischen Zerstörung (Schumpeter, 1942/2008) eine Gefahr darstellen kann. Gemäß Schumpeter verdrängen neue Strukturen die bestehenden, was so verstanden werden kann, dass etablierte Unternehmen von innovativen verdrängt werden und letztlich liquidiert werden müssen (Gouveia & Osterhold, 2018). Schöpferische Zerstörung kann jedoch auch bedeuten, dass Strukturen innerhalb bestehender Unternehmen zerstört und durch neue ersetzt werden; etablierte Unternehmen innovieren und können fortbestehen. Diese Anpassung innerhalb eines Krisenunternehmens hin zu nachhaltig wettbewerbsfähigen Strukturen kann als Sanierung (lat. sanare: heilen) bezeichnet werden (vgl. z. B. Institut der Wirtschaftsprüfer in Deutschland, 2018).

Die Unternehmenssanierung stellt eine wichtige Funktion in Volkswirtschaften dar – werden Krisenunternehmen saniert und dadurch ihre Innovationsfähigkeit gesteigert, steigt die gesamtwirtschaftliche Produktivität ceteris paribus an.<sup>1</sup> Werden solche Unternehmen jedoch nicht durchgreifend saniert, können sog. Zombie-Unternehmen entstehen. Das sind Unternehmen, die wegen ihrer anhaltend niedrigen Produktivität bzw. Profitabilität nur durch fortgesetzte Kreditaufnahme bzw. -verlängerung „überleben“, andernfalls also insolvent wären (Andrews & Petroulakis, 2019; Caballero et al., 2008). Diese Unternehmen hemmen daher die volkswirtschaftliche Produktivität, auch weil sie Ressourcen binden, die andernfalls produktiveren Unternehmen zur Verfügung stünden (Gouveia & Osterhold, 2018). McGowan et al. (2017) haben einen Anstieg solcher Zombie-Unternehmen in OECD-Ländern seit Mitte der 2000er-Jahre identifiziert, Banerjee und Hofmann (2018) sogar seit den späten 1980er-Jahren in 14 Industrieländern. Sowohl aus volkswirtschaftlicher als auch aus der betriebswirtschaftlichen

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<sup>1</sup> Shin (2017) zeigt zudem anhand von Daten zu 33 entwickelten Ökonomien aus dem Zeitraum 1992-2012, dass eine Phase vermehrter Sanierung in einer Volkswirtschaft zwar kurzfristig zu negativen Effekten (u. a. auf dem/über den Arbeitsmarkt) führen kann, mittelfristig jedoch die positiven Effekte, nämlich die eines erhöhten Wirtschaftswachstums, überwiegen.

Sanierungsperspektive stellt sich die Frage, woran dieser Anstieg liegt und wie die Zahl der Zombie-Unternehmen gesenkt werden kann.

Neben dieser Herausforderung besteht aus betriebswirtschaftlicher Perspektive eine weitere: Bei der Sanierung eines Krisenunternehmens müssen die Interessen vieler Stakeholder wie die der Eigentümer, Gläubiger, Mitarbeiter und Lieferanten berücksichtigt werden (James, 2016). Insbesondere in einer Krisensituation ist es wichtig, dass die relevanten Stakeholder gemeinsam auf eine Lösung hinarbeiten und die Sanierung nicht behindern. Insofern ist aus Sanierungsperspektive wichtig, nicht nur die finanziellen, sondern auch nicht-finanziellen Interessen der Stakeholder frühzeitig zu erkennen und zu berücksichtigen.

Gerade im Zuge der Debatten zum Klimawandel können die nicht-finanziellen Interessen vermehrt die Nachhaltigkeitsleistung des in der Krise befindlichen Unternehmens betreffen. In diesem Kontext besteht empirische Evidenz, dass eine erhöhte CSP zumindest in Rezessionsphasen<sup>2</sup> das Insolvenzrisiko von Unternehmen reduziert (Boubaker et al., 2020); es scheint daher einen Zusammenhang zwischen nachhaltigem Verhalten und der Unternehmenssanierung im Sinne der Überlebenschancen von Krisenunternehmen zu geben. Demnach stellt sich die Frage, wie sich welche Nachhaltigkeitsmaßnahmen von Unternehmen auf die relevanten Stakeholder und in der Folge auf die Krisenwahrscheinlichkeit sowie den Sanierungserfolg auswirken. Des Weiteren sollte der Zusammenhang zwischen CSP und Insolvenzrisiko nicht nur in Rezessionsphasen, sondern im Rahmen eines ganzen Konjunkturzyklus untersucht werden.

Die vorliegende Dissertation nimmt sich den o. g. aktuellen Herausforderungen der Sanierung an, nämlich dem Anstieg der Zahl von Zombie-Unternehmen und der Berücksichtigung von Nachhaltigkeitsmaßnahmen vor und in Krisen. Weil das Forschungsobjekt Sanierung Schnittmengen zu mehreren wirtschaftswissenschaftlichen Gebieten (u. a. Makroökonomik, Finance, Management, Accounting) sowie angrenzenden Disziplinen (Soziologie, Rechtswissenschaft) aufweist (Schweizer & Nienhaus, 2017), werden die Herausforderungen in dieser Dissertation mithilfe einer

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<sup>2</sup> Präziser formuliert wurde in der zitierten Studie der Zusammenhang zwischen CSP und Insolvenzrisiko in einem Zeitraum untersucht, der Rezessionsphasen enthält.

übergreifenden Perspektive untersucht. Beim „Zombie-Phänomen“ wird neben einer betriebswirtschaftlichen Perspektive eine volks-/bankwirtschaftliche sowie juristische angelegt; bei der Untersuchung von Nachhaltigkeitsmaßnahmen wird neben einer Management- und Accounting-Perspektive vor allem ein Finance-Ansatz verwendet.

## 2. Zusammenfassung der kumulativen Dissertation

Die Dissertation besteht aus vier Beiträgen; die zwei ersten behandeln Zombie-Unternehmen im Kontext der Sanierung, die zwei letzten Beiträge CSP und Insolvenzwahrscheinlichkeit. Beide Themengebiete werden jeweils in einem Beitrag empirisch untersucht, während im jeweils anderen Beitrag Implikationen für die (deutsche) Wirtschaftspraxis abgeleitet werden. Damit soll diese Dissertation dem Anspruch des Autors gerecht werden, dass betriebswirtschaftliche Forschung Praxisbezug aufweisen bzw. in die Praxis transferiert werden sollte. Abbildung 1 stellt die vier Beiträge im Kontext der Dissertation zusammenfassend dar.

Aktuelle ökonomische Herausforderungen in der Sanierung			
	Zombie-Unternehmen	CSP und Insolvenzrisiko	
empirisch	<b>Beitrag 1</b> Titel: <i>Zombie Firms, Corporate Restructuring and Relationship Banking: Credit Guidance as a Key to Tackle Zombie Lending?</i> Forschungsmethode: <i>Case Study Research</i> Veröffentlichungsstand: <i>Veröffentlicht (VHB-JQ3: B/C)</i>	<b>Beitrag 3</b> Titel: <i>Corporate Social Performance and the Likelihood of Bankruptcy: Evidence from a Period of Economic Upswing</i> Forschungsmethode: <i>Paneldatenregression, IV-Schätzung</i> Veröffentlichungsstand: <i>Veröffentlicht (VHB-JQ3: B)</i>	
konzeptionell & praxisnah	<b>Beitrag 2</b> Titel: <i>Corona-Staatshilfen, Zombie-Unternehmen und Sanierung: Implikationen für Sanierungspraktiker</i> Forschungsmethode: <i>Konzeptionell</i> Veröffentlichungsstand: <i>Veröffentlicht (VHB-JQ3: C)</i>	<b>Beitrag 4</b> Titel: <i>Corporate Social Performance und Insolvenzwahrscheinlichkeit: Implikationen für die Unternehmenssteuerung und -überwachung</i> Forschungsmethode: <i>Konzeptionell auf Basis von Beitrag 3</i> Veröffentlichungsstand: <i>Veröffentlicht (VHB-JQ3: D)</i>	

Abbildung 1: Zusammenfassende Darstellung der Beiträge zur kumulativen Dissertation.

**Beitrag 1** geht der Forschungsfrage nach, wie und warum Zombie-Unternehmen in der Unternehmenssanierung in bestehenden Bankbeziehungen (engl. „Relationship Banking“) entstehen. Es soll beantwortet werden, wann und warum Sanierungsversuche vermehrt scheitern und sich daraus Zombie-Unternehmen entwickeln. In der bestehenden Forschungsliteratur werden verschiedene mögliche (teils rivalisierende) Gründe<sup>3</sup> für den Anstieg der Zahl an Zombie-Unternehmen genannt. Alle Gründe weisen jedoch einen Bezug zu den finanzierenden Gläubigern – vor allem Banken – auf. Daher untersucht Beitrag 1 die Entscheidungssituation der Finanzgläubiger, die einer Sanierung zustimmen und sie finanzieren oder sie ablehnen können. In der bisherigen Literatur vernachlässigt wurde der Einfluss der Höhe und Qualität der bestehenden Kreditsicherheiten auf diese Entscheidung, sodass sich der vorliegende Beitrag sowohl auf Sicherheiten als auch auf die zugehörigen Implikationen für die Bankenregulierung fokussiert.

Die Forschungsfrage wird einerseits theoretisch-konzeptionell auf Basis der Signaling-Theorie und Analyse der Entscheidungssituation der finanzierenden Banken behandelt; andererseits werden sechs (bzw. im endgültigen Sample fünf) deutsche Sanierungsfälle im Rahmen einer multiplen Case Study untersucht. Der qualitative Forschungsansatz bietet den Vorteil, dass die verschiedenen potenziellen Gründe für das sog. „Zombie Lending“ (dt. Zombie-Finanzierung) anhand detaillierter Daten aus Praxisfällen evaluiert und ergänzt werden können. Im Gegensatz zu quantitativen Ansätzen auf Basis weniger Variablen können viele verschiedene Aspekte (u. a. Informationsasymmetrie zwischen Bank und Entrepreneur, Sicherheitenstruktur, Bankbeziehungen und Regulatorik) berücksichtigt werden. Insofern ergänzt der gewählte Ansatz die bestehende, zumeist quantitative oder modelltheoretische Forschung, indem das zu untersuchende Phänomen in seiner Vielschichtigkeit betrachtet wird und die bisherigen Hypothesen und Erkenntnisse kontextualisiert und bewertet werden. Dabei werden neue Propositionen und Gründe für Zombie-Finanzierung erarbeitet.

Folgende wesentliche Erkenntnisse werden aus dem theoretischen und empirischen Ansatz abgeleitet: (1) Banken müssen bei der Sanierungskreditvergabe bzw.

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<sup>3</sup> Unter anderem (1) kapitalschwache Banken, die Wertberichtigungen von Krediten bzw. Kreditausfälle vermeiden wollen, (2) ineffiziente Insolvenzgesetze, die die Anreize der Banken, eine Sanierung oder Liquidation in der Insolvenz anzustoßen, vermindern, (3) das Niedrigzinsniveau, das Banken zu expansivem Kreditvergabeverhalten bewegt. Für Details vgl. Abschnitt 2.1 von Beitrag 1.

Kreditverlängerung unter *unvollständiger Information* entscheiden, weil sowohl das Krisenunternehmen als auch der Entrepreneur/Investor Anreize zum Beschönigen der Situation haben. Daneben bestehen jedoch auch *Anreize* auf Bankenseite, Kredite unabhängig von der Sanierungswahrscheinlichkeit zu vergeben, wenn sie dadurch zusätzliche Sicherheiten und/oder Zins- und Tilgungsleistungen im Vergleich zur sofortigen Kreditkündigung erhalten. (2) Daher haben – anstatt wie in der Literatur teilweise angenommen – nicht nur kapitalschwache, sondern auch gesunde Banken unter bestimmten Voraussetzungen Anreize zur Finanzierung inadäquater Sanierungsstrategien, was zur „Zombifizierung“ von Krisenunternehmen führen kann. Mithilfe dieser Erkenntnis können die bestehenden Erklärungsansätze zu Zombie-Unternehmen ergänzt bzw. erweitert werden (vgl. Tabelle 5, Beitrag 1). (3) Weil sich die Anreize und Informationsasymmetrie in einer *bestehenden* Unternehmenskrise nicht reduzieren lassen, sollte der Informationsfluss zwischen Entrepreneur, Unternehmen und Banken bereits *im Vorfeld* durch eine proaktive und unterstützende Kunden-Bankbeziehung erhöht werden. Dadurch sinkt die Informationsasymmetrie und steigt die Wahrscheinlichkeit, dass die Finanzierer eine Krise in einem Frühstadium entdecken und gemeinsam mit dem Unternehmen lösen können. Aus diesem Grund sollte sich Bankenregulierung nicht ausschließlich auf Kapitalanforderungen, sondern vermehrt auf die Überwachung und Steuerung von Banken hinsichtlich deren Kreditportfolios (engl. „Credit Guidance“) fokussieren. Ziel sollte sein, Banken zu einer effektiveren Nutzung der Informationen aus deren Kundenbeziehungen zu bewegen.

Neben diesen inhaltlichen Erkenntnissen (bzw. Propositionen) zum Phänomen Zombie-Unternehmen können auch Erkenntnisse für die betriebswirtschaftliche Forschung zur Signaling-Theorie abgeleitet werden. Während in der bestehenden Forschung betont wird, dass (nicht intendierte) negative Signale die Reputation des Senders (bzw. Betrachtungsobjekts) reduzieren (Taj, 2016), zeigt Beitrag 1, dass das Senden positiver und negativer Signale für alle Beteiligte (d. h. Sender, Empfänger und Betrachtungsobjekt) vorteilhaft sein kann. Im konkreten Fall erhöht der Informationsfluss die Wahrscheinlichkeit, eine Unternehmenskrise frühzeitig zu erkennen und zu beheben, sodass sowohl das Unternehmen (Betrachtungsobjekt) und der Entrepreneur (Sender), als auch die Banken (Empfänger) niedrigere oder keine Verluste davontragen. Allerdings können negative Signale tatsächlich der Reputation schaden, sodass die positiven Effekte

erst in bestehenden Beziehungen ab einer gewissen Vertrauensstufe überwiegen; zukünftige Forschung könnte sich u. a. auf die Voraussetzungen dafür fokussieren.

**Beitrag 2** behandelt das Thema „Zombie-Unternehmen“ im Kontext der COVID-19-Pandemie und der deutschen Sanierungspraxis. Dabei geht der Beitrag (aus der Perspektive Mitte 2020) der Frage nach, welche Auswirkungen die Corona-Staatshilfen auf die „Zombifizierung“ der deutschen Wirtschaft haben könnten und welche Implikationen für die deutsche Sanierungspraxis aus der bestehenden Forschungsliteratur abgeleitet werden können.

Nach einer kurzen Einführung in die Thematik wird zunächst erarbeitet, wie Zombie-Unternehmen in der Praxis erkannt werden können. Dabei werden ein Zinsdeckungsgrad  $< 1$  sowie eine hohe Verschuldungsdauer (z. B.  $> 7$ ) über einen länger anhaltenden Zeitraum (z. B.  $\geq 3$  Jahre) als praxistaugliche Kennzahlen zur Identifikation vorgeschlagen. Anschließend wird anhand der bestehenden Literatur und Überlegungen aufgezeigt, dass auf Banken Anreize<sup>4</sup> oder auch politischer oder gesellschaftlicher Druck zur nachsichtigen Überprüfung von Sanierungsstrategien wirken können. In einer Krisensituation ist daher möglich, dass die Verantwortlichen sowohl auf Unternehmens- als auch auf Bankenseite den beauftragten Sanierungsberater zu einer Bestätigung der Sanierungsfähigkeit des Krisenunternehmens drängen. Werden in der Folge ungenügende Sanierungspläne finanziert, können Zombie-Unternehmen entstehen. Aus diesem Grund haben Sanierungsberater eine wichtige Funktion inne: Im Idealfall können sie die Verantwortlichen von einer durchgreifenden Sanierungsstrategie überzeugen und in der Folge die Entstehung eines Zombie-Unternehmens verhindern. Zuletzt wird in diesem Kontext auf die zweigeteilte Rolle im Sinne gutachterlicher vs. beratender Tätigkeiten von Sanierungsberatern in Deutschland eingegangen: Die Zweiteilung setzt prinzipiell Anreize, dass Sanierungsberater die Begutachtung bzw. Bestätigung ungenügender Sanierungspläne ablehnen, da sich Fehlentscheidungen langfristig nachteilig sowohl auf die Akquise von Beratungs- und Gutachterprojekte auswirken können.

In **Beitrag 3** wird das zweite Hauptthema der Dissertation, nämlich der Zusammenhang zwischen CSP und Insolvenzwahrscheinlichkeit, untersucht. Weil die bisherige

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<sup>4</sup> Vgl. Gründe in Fußnote 3.

Forschung (v. a. Boubaker et al., 2020; Cooper & Uzun, 2019; Lin & Dong, 2018) diesen Zusammenhang ausschließlich für Zeiträume untersucht hat, die Wirtschaftskrisen beinhalten, fokussiert der vorliegende Beitrag auf Zeiten des ökonomischen Aufschwungs. Es soll die Frage beantwortet werden, ob CSP (Niveau und Veränderung des Niveaus) das Insolvenzrisiko auch in Zeiten des Aufschwungs risikomindernd beeinflusst. Daneben werden die Ergebnisse der o. g. Studien für Zeiten des Abschwungs mit dem verwendeten Datensatz überprüft.

Die Hypothesenentwicklung beruht auf der Stakeholder-Theorie: Es wird angenommen, dass ein hohes CSP-Niveau bzw. Investitionen in CSP das Insolvenzrisiko mindern, weil relevante Stakeholder gebunden (z. B. Kunden, Lieferanten) und motiviert (z. B. Mitarbeiter) werden. Jedoch wird die Hypothese aufgestellt, dass sich diese Effekte in Zeiten des Aufschwungs nicht materialisieren, da die Unternehmen in günstigen konjunkturellen Lagen nicht bzw. weniger auf enge Stakeholder-Beziehungen angewiesen sind. Dementsprechend wird davon ausgegangen, dass das CSP-Niveau in Aufschwungsphasen keinen Einfluss auf das Insolvenzrisiko aufweist und die Erhöhung des CSP-Niveaus lediglich zusätzliche Kosten verursacht und damit das Insolvenzrisiko erhöht. Die Hypothesen werden mithilfe statischer Paneldatenregressionen und der Schätzung mit Instrumentenvariablen („Two-Stage Least Squares Estimation“) von 1.215 börsennotierten US-Unternehmen in der Aufschwungsphase 2010-19 getestet. Das letztgenannte Schätzverfahren dient als Robustheitstest, um die Regressionsmodelle hinsichtlich Endogenität bei den erklärenden Variablen sowie die Kausalität der Ergebnisse zu überprüfen. Zudem werden mithilfe der Daten zum Zeitraum 2007-09 die aus der Literatur entnommenen Zusammenhänge in Krisenphasen überprüft und bestätigt.

Die Regressionsergebnisse bestätigen die Hypothesen: (1) In Zeiten des Aufschwungs hat das CSP-Niveau insgesamt keinen signifikanten Einfluss auf die Insolvenzwahrscheinlichkeit. (2) Die Erhöhung des CSP-Niveaus senkt die Überlebenschancen im Aufschwung. Allerdings wirkt sich ein hohes CSP-Niveau in Rezessionsphasen risikomindernd auf das Insolvenzrisiko aus. Dabei geht der Haupteffekt innerhalb der ESG-Dimensionen Ökologie (E), Gesellschaft (S wie „Social“) und Governance (G) von der *gesellschaftlichen* Säule aus. Die risikomindernden Effekte der *ökologischen* Säule im Abschwung sind zwar weniger deutlich ausgeprägt, jedoch

treten bei zusätzlichen ökologischen Maßnahmen im Aufschwung keine negativen Effekte auf – die Zusatzkosten können scheinbar an die Kunden weitergegeben werden. Die Effekte der *Governance*-Säule unterscheiden sich wiederum vom Gesamtergebnis; im Aufschwung führt ein hohes Niveau an Governance zur Erhöhung des Insolvenzrisikos und im Abschwung ergibt sich kein risikomindernder Effekt. Dies kann mitunter daran liegen, dass große, börsennotierte Unternehmen untersucht werden, die aufgrund der Berichtspflichten „überbordende“ Governance-Strukturen aufweisen können. Solche redundanten und komplexen Strukturen verursachen Kosten und können vom operativen Betrieb ablenken.

Zur Forschung trägt der Beitrag wie folgt bei: (1) Der Forschungsstand zum Zusammenhang zwischen CSP und finanzieller Performance, in diesem Fall dem Insolvenzrisiko, wird erweitert, indem die Auswirkungen in einer wirtschaftlichen Aufschwungsphase untersucht werden. (2) Mithilfe der Stakeholder-Theorie wird ein schlüssiger theoretischer Rahmen vorgeschlagen, der das Fehlen von risikomindernden Effekten von CSP während des Aufschwungs im Kontext der bestehenden Literatur bzw. Forschung erklären kann. (3) Im Vergleich zu den bisherigen Forschungsarbeiten zu CSP und Insolvenzrisiko (s. o.) werden ein großes, robustes Sample auf Basis des Altman Z-Score und Refinitiv ESG-Scores sowie anerkannte und erprobte Schätzverfahren angewandt. (4) Der erarbeitete theoretische Rahmen, die im Beitrag diskutierten alternativen Theorien zur Erklärung des Phänomens und die detaillierten Ergebnisse zu den einzelnen ESG-Säulen bieten Anknüpfungspunkte für weitere Forschung.

**Beitrag 4** greift die Ergebnisse aus Beitrag 3 auf und leitet folgende Implikationen für die Unternehmenssteuerung und -überwachung ab.<sup>5</sup> Der Zusammenhang zwischen CSP und Insolvenzrisiko weist im Kontext von Konjunkturzyklen einen versicherungssähnlichen Effekt (ähnlich wie bei Unternehmensrisiken allgemein, vgl. Bouslah et al., 2018) auf: Investitionen in CSP in Aufschwungsphasen reduzieren das Insolvenzrisiko in späteren Rezessionsphasen. Entscheidend scheint dabei der Bezug dieser Investitionen zu relevanten Stakeholder-Gruppen zu sein.

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<sup>5</sup> Auf eine erneute Erläuterung der methodischen Vorgehensweise und Erkenntnisse wird verzichtet und stattdessen auf (die Zusammenfassung von) Beitrag 3 verwiesen.

Investitionen in die *gesellschaftliche* Performance vor allem zugunsten von Mitarbeitern und Kunden haben die deutlichsten Effekte auf die Überlebenschancen von Unternehmen. Allerdings können diese Investitionen aufgrund ihrer Kosten kurzfristig das Insolvenzrisiko insbesondere von kleineren Unternehmen erhöhen; daher sollte auf Kosteneffizienz und Effektivität geachtet werden. Zwar führen zusätzliche *ökologische* Maßnahmen zu weniger deutlichen Effekten hinsichtlich Insolvenzrisiko, allerdings können sie in Aufschwungsphasen kostenneutral durchgeführt werden. Offenbar werden solche Maßnahmen vom Kunden honoriert, weil Letztere Preisaufschläge für ökologischere Produkte akzeptieren. Dementsprechend sollten die Maßnahmen so konzipiert werden, dass sie für Kunden sichtbar sind. Die Ergebnisse zur *Governance*-Säule zeigen, dass ein zu hohes Niveau an Führungs- und Reporting-Strukturen die Überlebenschancen von Unternehmen verringern können. Daher sollte einerseits auf schlanke, effiziente Strukturen geachtet bzw. Redundanzen vermieden werden; andererseits sollte in Aufschwungsphasen überprüft werden, ob diese Strukturen geeignet für spätere Krisenphasen sind.

### 3. Details zu den Veröffentlichungen

**Beitrag 1:** Zombie Firms, Corporate Restructuring and Relationship Banking: Credit Guidance as a Key to Tackle Zombie Lending?

- Autorenschaft: Felix B. Fischer (Alleinautor).
- Veröffentlichungsstand: Der Beitrag wurde am 25. August 2021 online im Journal *Accounting, Economics, and Law: A Convivium* (VHB-JQ3: B/C), doi: 10.1515/ael-2020-0065 veröffentlicht.

**Beitrag 2:** Corona-Staatshilfen, Zombie-Unternehmen und Sanierung: Implikationen für Sanierungspraktiker

- Autorenschaft: Felix B. Fischer (Alleinautor).
- Veröffentlichungsstand: Der Beitrag wurde in der Fachzeitschrift *Die Wirtschaftsprüfung (WPg)* (VHB-JQ3: C) 17/2020, S. 1049-1055 veröffentlicht.

**Beitrag 3:** Corporate Social Performance and the Likelihood of Bankruptcy: Evidence from a Period of Economic Upswing

- Autorenschaft: Florian Habermann und Felix B. Fischer; für die jeweiligen Bearbeitungsanteile vgl. Tabelle 1.

	<b>F. Habermann</b>	<b>F. B. Fischer</b>
Literaturübersicht	50 %	50 %
Theorieentwicklung	50 %	50 %
Forschungsdesign	50 %	50 %
Datenerhebung	70 %	30 %
Datenanalyse	70 %	30 %
Interpretation der Ergebnisse	30 %	70 %
Schreibprozess	30 %	70 %
<b>Insgesamt</b>	<b>50 %</b>	<b>50 %</b>

Tabelle 1: Bearbeitungsanteile der Autoren von Beitrag 3.

- Veröffentlichungsstand: Der Beitrag wurde am 4. Oktober 2021 online im *Journal of Business Ethics* (VHB-JQ3: B; FT 50 Journal), doi: 10.1007/s10551-021-04956-4 veröffentlicht.

#### **Beitrag 4:** Corporate Social Performance und Insolvenzwahrscheinlichkeit: Implikationen für die Unternehmenssteuerung und -überwachung

- Autorenschaft: Felix B. Fischer, Florian Habermann und Anton A. Burger; für die jeweiligen Bearbeitungsanteile vgl. Tabelle 2.

	<b>F. Habermann</b>	<b>F. B. Fischer</b>	<b>A. A. Burger</b>
Literaturübersicht	40 %	40 %	20 %
Konzepterstellung	40 %	40 %	20 %
Interpretation der Ergebnisse	40 %	40 %	20 %
Schreibprozess	40 %	40 %	20 %
<b>Insgesamt</b>	<b>40 %</b>	<b>40 %</b>	<b>20 %</b>

Tabelle 2: Bearbeitungsanteile der Autoren von Beitrag 4.

- Veröffentlichungsstand: Der Beitrag wurde in der *Zeitschrift für Corporate Governance* (VHB-JQ3: D) 6/2021, S. 255-258 veröffentlicht.

#### 4. Zusammenfassung

Die vorliegende kumulative Dissertation behandelt zwei aktuelle ökonomische Herausforderungen in der Sanierung, nämlich das Phänomen „Zombie-Unternehmen“ als Ergebnis unzureichender Sanierung und die Auswirkungen der CSP auf die Überlebenschancen von Unternehmen. Die vier Beiträge der Dissertation tragen mithilfe verschiedener methodischer Ansätze (Case Study Research, Paneldatenregression, konzeptionelle Analyse) zur aktuellen Forschung und Wirtschaftspraxis bei.

In Beitrag 1 wird die Entscheidungssituation von Banken hinsichtlich der Finanzierung von Sanierungsstrategien von Krisenunternehmen theoretisch und in einer multiplen Case Study untersucht. Der Beitrag zeigt auf, dass Banken neben unvollständiger Information unter bestimmten Voraussetzungen Anreize zur Finanzierung unzureichender Sanierungsstrategien haben und dadurch Zombie-Unternehmen entstehen können. Als Lösungsansatz schlägt der Beitrag proaktive Kunden-Bankbeziehungen zur Reduktion der Informationsasymmetrie vor, um aufkeimende Unternehmenskrisen frühzeitig bzw. *vor Eintritt* einer Sanierungssituation zu beheben. Aus regulatorischer Perspektive kann dies durch verbesserte Überwachung und Steuerung von Banken mithilfe der sog. „Credit Guidance“ gefördert werden. Beitrag 2 greift das Phänomen „Zombie-Unternehmen“ auf und erarbeitet Implikationen für die deutsche Sanierungspraxis im Kontext der COVID-19-Pandemie. Neben praxistauglicher Kennzahlen zur Identifikation von Zombie-Unternehmen wird die Rolle deutscher Sanierungsberater untersucht.

Beitrag 3 analysiert den Zusammenhang zwischen CSP und dem Insolvenzrisiko unter Berücksichtigung von Konjunkturzyklen. Es kann gezeigt werden, dass während wirtschaftlicher Aufschwungsphasen keine risikomindernden Effekte von CSP auftreten; vielmehr wird das Insolvenzrisiko aufgrund der zusätzlichen Kosten kurzfristig erhöht. Jedoch reduziert ein hohes CSP-Niveau das Insolvenzrisiko in nachfolgenden Rezessionsphasen, sodass von einer Art Versicherungseffekt gesprochen werden kann. Dies wird dadurch erklärt, dass die positiven Effekte einer hohen CSP im Sinne eines loyalen Stakeholder-Netzwerks erst in Krisenzeiten an Relevanz gewinnen. In Beitrag 4 werden aus den Studienergebnissen Implikationen für die Unternehmenssteuerung und -überwachung abgeleitet.

Abschließend sollen die wichtigsten Beiträge zur Forschung hervorgehoben werden: Hinsichtlich des Phänomens „Zombie-Unternehmen“ konnten die bestehenden Erklärungsansätze evaluiert und aufgezeigt werden, unter welchen Bedingungen Anreize für „Zombie-Finanzierungen“ bestehen. Daneben wurden Anregungen zur weiteren Beforschung negativer Signale im Kontext der Signaling-Theorie gegeben, indem aufgezeigt wurde, dass negative Signale in Geschäftsbeziehungen positive Auswirkungen haben können. Zur Forschung zum Zusammenhang von CSP und Insolvenzrisiko wurde beigetragen, indem die bisherigen empirischen Ergebnisse um solche aus Zeiten des Aufschwungs ergänzt wurden. Zudem wurde ein theoretischer Rahmen erarbeitet, der die Ergebnisse von Beitrag 3 sinnvoll in den Kontext der bestehenden Literatur setzt. Insgesamt trägt die Dissertation zur Forschung sowie Praxis der Unternehmenssanierung bei, indem die beiden o. g. Herausforderungen untersucht und Implikationen für die Sanierungspraxis erarbeitet wurden.

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## Zombie Firms, Corporate Restructuring and Relationship Banking: Credit Guidance as a Key to tackle Zombie Lending?

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**Abstract:** Economists have examined the rise of so-called zombie firms in recent years. Such firms remain in financial distress for a prolonged period while financial creditors keep them alive through continued lending. Based on signaling theory, we investigate zombie firms in the context of corporate restructuring and relationship banking. Combining a theoretical approach with a multiple case study on German medium-sized firms facing private workouts, we derive the following main propositions: (i) Banks face information asymmetry and may have incentives for loan extension (i.e., rescheduled installments and additional collateral) when deciding about restructuring financing. In the case of financing unviable restructuring strategies, this can lead to the emergence of zombie firms. (ii) For this reason and in contrast to recent research, not only weakly capitalized but also healthy banks may face such incentives and might end up in financing zombie firms. (iii) Relationship banking reduces bank information asymmetry. Thus, it may enable banks to detect clients' distress situations in the early stages and to support resolving them. Hence, guiding and inspecting banks (i.e., credit guidance) to carry out supportive relationship banking might be a key to preventing the emergence of zombie firms. The propositions bear several implications relevant to academic research, bank management and banking regulation.

**Keywords:** corporate restructuring; banking regulation; relationship banking; zombie firms; collateral

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## 1. Introduction

In a recent strand of research, economists of international institutions such as the OECD, ECB and BIS address the rising number of so-called *zombie firms*. Such firms remain in financial distress for a prolonged period while financial creditors (often banks) keep them alive through continued lending. McGowan, Andrews, and Millot (2017) show a rising prevalence of zombies since the mid-2000s. Banerjee and Hofmann (2018) even observed an increase in zombie firms in 14 advanced economies since the late 1980s. Their research focuses on the consequences of this rise: Zombies are less productive than non-zombies are and, therefore, drag aggregate productivity down. Moreover, as they bind an increasing share of resources, they lower aggregate investment and employment (Andrews & Petroulakis, 2019; Gouveia & Osterhold, 2018; McGowan et al., 2017).

Economists address various potential reasons for this rise of the zombies (see Section 2.1): (i) weakly capitalized banks (so-called *weak banks*) extending loans to prevent credit losses; (ii) inefficient insolvency regimes obstructing restructuring or liquidation; (iii) low nominal interest rates reducing the pressure on creditors to clean up their balance sheets; and (iv) costly regulatory bank capital pushing banks to economize on capital losses. In this study, we consider information asymmetry and the understudied role of collateralization as an incentive to maintain lending to economically weak firms. What all these potential reasons have in common is that banks play a crucial role in the rise of the zombies: Banks have to decide whether to prolong a loan to a distressed firm based on its restructuring strategy, or to terminate that loan despite the high probability of nudging the firm's insolvency. Consequently, the business research on creditor-involved<sup>1</sup> corporate restructuring connects to the macroeconomic research on zombie firms.

Researchers have analyzed corporate restructuring from various perspectives and with various methods. The recent finance-related research focuses on whether a firm is being restructured out of court or in bankruptcy proceedings (Blazy, Martel, & Nigam, 2014; Chu, Diep-Nguyen, Wang, Wang, & Wang, 2019; Demiroglu & James, 2015), or on the trading of debt claims in in-court restructurings (Ivashina, Iverson, & Smith, 2016).

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<sup>1</sup> In this paper, we use the expression “creditor-involved restructuring” to emphasize the crucial role of creditors as evaluators and financers of restructuring strategies in those processes. That does not necessarily mean that creditors initiate the restructuring.

Another research focus is on the effects of insolvency reforms on the efficiency of restructurings. There seems to be an evolution from creditor-friendly to more debtor-friendly insolvency regimes in several countries (Nigam & Boughanmi, 2017; Rodano, Serrano-Velarde, & Tarantino, 2016). In contrast to this mostly empirical work, theoretical models concentrate on specific decisions creditors or debtors have to take throughout a restructuring process (e.g., Frantz & Instefjord, 2019; Frieden & Wielenberg, 2017; White, 1994; Wielenberg, 2001). From our perspective, what is missing in the context of the rise of the zombies is a holistic perspective combining research on corporate restructuring with the macroeconomic research on zombie firms. This study aims to address this gap.

Relationship banking is defined as multiple interactions between a bank and a firm that increases the customer-specific information the bank gathers (Boot, 2000). Financing zombie firms (i.e., *zombie lending*) consists of *continued* lending to distressed firms, in order to avoid or defer loan default (Acharya, Eisert, Eufinger, & Hirsch, 2019). Since continued lending implies multiple interactions over time, it connects to relationship banking. In the theoretical paper by Hu and Varas (2021), zombie lending is put in the context of relationship banking. However, the authors fail to consider aspects of corporate restructuring such as information asymmetry between corporate investors and involved banks. Hence, we investigate the phenomenon of zombie lending within the context of relationship banking from the perspective of corporate restructuring. Our goal is to gain insights on how and why restructuring attempts fail, their failures triggering the emergence of zombie firms. A special attention is paid to the effects of collateral on bank decisions in corporate restructuring and their implications on the existing banking regulation.

On the one hand, we analyze zombie lending theoretically using signaling theory. On the other hand, we conduct a multiple case study in which we examine the restructuring processes of six German medium-sized firms that underwent a creditor-involved out-of-court workout. They all developed their restructuring plan under the standard for restructuring opinions/reports<sup>2</sup> by the German Institute of Public Auditors (IDW Standard

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<sup>2</sup> In German, these reports are called “Sanierungskonzepte.” They contain financial information as well as an expert opinion on the restructuring feasibility of a firm and therefore are translated as reports or opinions. In the following, we will mainly refer to them as restructuring reports, but they all include an expert opinion.

6), which sets requirements for the restructuring strategy and its accompanying documentation. These restructuring reports bear detailed information about the debtor's situation, the crisis, the turnaround measures and the restructuring plan (Institut der Wirtschaftsprüfer in Deutschland, 2018). Therefore, they provide a comparable and detailed empirical basis for the study.

We contribute to the existing research on zombie lending and corporate restructuring in various ways. First, we develop a theoretical approach based on signaling theory. This approach explains zombie lending as a phenomenon stemming from information asymmetry and incentives for loan extension (i.e., rescheduled installments and additional collateral). Furthermore, we identify supportive relationship banking as a way of resolving financial distress at an early stage, i.e., to reduce the emergence of zombies. To encourage banks to support their borrowers in that way, we propose improved credit guidance. Second, our study considers signaling in business relationships. We show that negative signaling may be helpful for the receiver (i.e., bank), the object concerned (i.e., firm) and the signaler (i.e., corporate investor) in certain situations. This opens up space for further research. Third, we gather empirical insights from out-of-court restructuring cases of German medium-sized firms that helped to build the theoretical approach. Due to the limited number of cases, the out-of-sample validity and generality may be limited. However, the cases offer granular details on how zombies can emerge in corporate restructuring. This enables the development of propositions by inferring them from a detailed, practice-grounded setting. By considering many aspects of zombie lending (i.e., information asymmetry in corporate restructuring, collateral, banking relationships and regulation), our study adds to and refines the existing research designs (see Table 5). As these contributions are based on theory and individual cases, future researchers may test the propositions by using larger samples.

## **2. Related Literature and Research Focus**

### **2.1. Zombie Firms**

Prior to defining zombie firms for this study, we provide an overview of the existing literature. The term “zombie firm” first appeared in the research literature about Japan’s *Lost Decade* in the 1990s. From the early 90s on, particularly weakly capitalized banks in Japan increasingly engaged in continued lending to otherwise insolvent borrowers to

avoid write-offs. Weak Japanese banking supervision and insufficient regulation enabled this so-called *ever-greening* (Peek & Rosengren, 2005). Banks were able to minimize their required regulatory capital (under Basel I) by extending loans as restructuring loans since the latter required lower prudential reserves compared to ordinary lending (Caballero, Hoshi, & Kashyap, 2008). Hence, banks faced incentives to approve insufficient restructuring strategies that often failed to turn around the firms in distress. From 2002 to 2005, the number of problematic loans decreased, *inter alia*, due to special bank inspections, i.e., improved banking supervision. As a result, the Japanese government declared the zombie problem solved in 2005 (Inoue, Kato, & Bremer, 2008). In this context, Inoue et al. (2008) emphasize Japanese banks' (implicit) function as monitors of corporate restructuring: These banks tend to exhibit long-term relationships with their borrowers. Thus, they may be able (or are expected) to support resolving their clients' distress situations using the information gained through these relationships. In the following sections, we take up this idea and define a framework connecting corporate restructuring, relationship banking and zombie firms.

While research had identified zombies as a specific Japanese problem, the phenomenon now seems to affect several advanced economies. The recent research discusses and investigates various potential reasons: *weak banks*; *inefficient insolvency regimes*; *low interest rates*; and the *regulatory framework*.

Acharya et al. (2019) and Storz, Koetter, Setzer, and Westphal (2017) revived the insights from the Japanese *Lost Decade* as they connected zombie firms to *weak banks* in Europe. Andrews and Petroulakis (2019) examined the link between weak banks and zombie firms in 11 European countries. They argue that the zombie firm problem in Europe stems at least partially from bank forbearance, such as beneficial restructuring, maturity extension or conversion of the payment structure to unviable firms. Furthermore, they investigated the connections between weak banks, insolvency regimes and zombies. As a result, they discovered that inefficient insolvency frameworks disturb corporate restructuring even if the related bank is healthy.

Poorly designed or inefficient *insolvency regimes* are connected to high costs, low recovery rates, bureaucracy and long durations of proceedings (McGowan & Andrews, 2016). They, therefore, seem to constitute barriers for zombie firms as there is less

incentive to commence an in-court restructuring or a liquidation process (Andrews & Petroulakis, 2019; Gouveia & Osterhold, 2018). Instead of regaining competitiveness or exiting, zombies survive but stay distressed. In this context, it is worth mentioning that regardless of the insolvency framework, creditors and debtors may agree upon (out-of-court) private negotiations. Hence, we discuss the connection between out-of-court and in-court restructuring in Section 2.4.

Banerjee and Hofmann (2018) consider the influence of the *drop in the nominal interest rates* since the 1980s. They argue that this drop led to a reduced pressure on creditors to “clean up their balance sheets,” i.e., to initiate restructuring or liquidation of doubtful loans: Low interest rates decrease the return on alternative assets and lower the funding cost of bad loans. Moreover, they may increase the creditors’ risk appetite through the risk-taking channel<sup>3</sup> of monetary policy and, therefore, reduce the pressure creditors exert on their debtors. Based on the work of Borio and Zhu (2008), Gambacorta (2009) defines two ways in which expansive monetary policy (including low interest rates) influences banks’ risk-taking. On the one hand, banks may increase their risk tolerance as they search for higher nominal yield in a low interest phase. On the other hand, low interest rates often boost asset and collateral value and lower its volatility, which reduces the risk perception of banks. Neuenkirch and Nöckel (2018) confirm the existence of a risk-taking channel in the Euro area for the period 2003–2016, as commercial banks reacted to loose monetary policy by decreasing their lending standards to keep their lending margin stable.

Another rather understudied strand of research investigates the *regulatory framework* as a cause for the zombification. Keuschnigg and Kogler (2020) analyzed the problem in a theoretical model and stress the role of regulatory bank capital, which is expected to absorb losses resulting from the liquidation of loans to potential zombie firms. As equity is costly, they conclude that banks face a trade-off between holding a sufficient equity buffer and engaging in zombie lending. In their model, banks reallocate too little credit from weak firms to promising firms. However, as their model contains inadequate assumptions, it may be unsuitable to analyze the problem holistically: The model requires

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<sup>3</sup> In the field of monetary economics, research discusses how, i.e., through which channels, monetary policy affects the economy. One research strand investigates the so-called risk-taking channel, which describes the effects of monetary policy on the perception and pricing of risk by economic agents, such as banks. For further information, see Borio and Zhu (2008).

banks to raise a fixed amount of equity *before* dealing with lending/reallocation decisions. Moreover, it describes banking as collecting deposits before intermediating them to firms. Both assumptions fail to describe bank reality as banks raise capital when lending decisions require them to, and they can create money by granting credit (see Section 2.2).

What all these potential causes have in common is an important role of the creditor-involved corporate restructuring process: Weak banks wishing to avoid losses may lead to forbearance to unviable firms during restructuring. Poorly designed insolvency regimes and limited regulatory bank capital restrict banks' options when deciding about restructuring financing. Low interest rates may reduce the pressure banks exert on their debtors in restructuring processes. However, as the existing research takes a macroeconomic perspective, it does not focus on the corporate restructuring process itself but on aggregate causes and consequences. Furthermore, it neglects the role of collateral. We aim to contribute to existing research by using a corporate restructuring perspective as well as considering the role of collateral to investigate zombie lending.

The previously reviewed research strands focus on single aspects related to zombie lending. In contrast to that, Hu and Varas (2021) analyzed the phenomenon more generally by observing lending decisions within relationship banking in a dynamic game model. They assume that in a banking relationship, the entrepreneur (i.e., investor) and the bank jointly build up private information not available to the financial market. In the model, banks extend loans to unviable relationship firms only to deceive (uninformed) market-based lenders about the loan quality. They do so to pass on “bad debt” to the market subsequently. Therefore, the authors conclude that zombie lending is inherent in those relationships. However, their model is based on the inadequate assumption that (relationship) banking is merely an intermediate pre-market stage to overcome.<sup>4</sup> In addition, it neglects the information asymmetry usually existing between borrower and lender (Leland & Pyle, 1977). This might be particularly relevant in restructuring situations where banks have to evaluate the feasibility of a restructuring strategy (see

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<sup>4</sup> While there are countries with a high share of market-based financing (e.g., the US), countries like Germany and France show a high share of (persistent) bank-based financing; for further information, see e.g., Lee (2012); Levine (2002). As zombie lending is a phenomenon not limited to market-based systems, the assumption of banking as an intermediate lending stage seems to be inadequate. Moreover, even in market-based financial systems, there may be firms that are permanently unable or unwilling to conduct market financing, e.g., as they appreciate the advantages of relationship banking or due to their size/industry.

Section 2.4). For this reason, we investigate zombie lending as a phenomenon within relationship banking but consider information asymmetry between firm/investor and bank.

In the context of the above-mentioned *Lost Decade*, Caballero et al. (2008) defined a firm as a zombie if it is receiving credit at rates below those for the most creditworthy companies. They based their approach on the assumption that banks contribute to the creation and survival of zombie firms by granting mispriced credit.<sup>5</sup> Another definition, *inter alia*, used by McGowan et al. (2017) is that a firm is a zombie if (i) its interest coverage ratio has been less than one for at least three consecutive years and (ii) the firm has existed for at least 10 years. The second condition (ii) aims to distinguish zombie firms from start-ups. For this study, we apply a definition directly related to corporate restructuring: A zombie firm is a financially distressed firm that remains distressed for a prolonged period after a restructuring attempt but stays alive through continued lending by financial creditors including banks (see Figure 2).

## 2.2. Corporate Restructuring and Relationship Banking

To define the role of banks within corporate restructuring, it is necessary to understand banking from a systemic perspective. Contemporary banking theories seem to describe banks merely as financial intermediaries (Werner, 2014). In contrast to that, Biondi (2018) displays the banking system through three layered levels: (i) banking as ledger keeping (protecting holdings and facilitating payments); (ii) banking as treasury management (using currency under custody through fractional reserve management); and (iii) banking as manufacturing of money (generating income to the bank entity by credit creation). Therefore, banks do not merely intermediate existing deposits. Instead, they create money by granting credit leading to new deposits through balance sheet extension. Furthermore, they do so under the risk of repayment losses that have to be absorbed by bank equity. This links credit creation to bank capital requirements (Biondi, 2018). Hence, the expression *weak bank* in zombie literature refers to weakly capitalized banks

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<sup>5</sup> Caballero et al. (2008) observed that Japanese banks used reduced interest rates as a financial measure in restructuring processes (which seems reasonable). For some reason, they therefore linked mispriced credit to zombie firms while neglecting the fact that not every firm receiving financial restructuring measures is a zombie.

unable to absorb losses from existing exposure with equity while facing difficulties to increase it.

In the context of corporate restructuring, the third layer plays a major role: Banks have to decide whether to (re-)finance a firm and its underlying business model considering their own risk-taking strategy. While financing means providing fresh, uncovered money to a firm, refinancing consists of rolling over an existing asset (i.e., collateral) or liability (Biondi, 2018). Hence, financing involves an act of confidence in a business model or idea: banks/banking systems (in contrast to financial intermediaries) create and provide money *before* the economic equivalent/value exists.<sup>6</sup> From the Schumpeterian perspective, bank financing (i.e., business capital creation) provides purchasing power to firms as entities enabling dynamic business activity (Biondi, 2008). Therefore, banks can finance business models and ideas (e.g., restructuring strategies) based on viability instead of refinancing firms based on existing assets/collateral.

To execute this specific function, banks may have an interest in the best possible information about (potential) borrowers and their ideas. One way to achieve proprietary information is *relationship banking*. In such relationships, banks obtain and evaluate customer-specific information through multiple interactions with that customer over time or across products (Boot, 2000). Hence, relationship banking may increase the availability of financing for firms (Petersen & Rajan, 1994) and reduce the collateral that banks require from relationship firms (Butzbach & von Mettenheim, 2015). Therefore, it may contribute to (or enable) the above-described function of the banking system.

### **2.3. Banking Regulation and Collateral**

This study focuses on the collateralization of debt as a potential factor of zombie lending and the implications for banking regulation. For this reason, we define and summarize the relevant regulatory framework for this study in this section.

In general, credit creation (the third layer of the banking system, see Section 2.2) is being regulated by equity capital requirements and credit guidance (Biondi, 2018). The first connects to the *weak banks*-strand of research: Its goal is to increase the equity of banks

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<sup>6</sup> In this context, we point to the model of Disyatat (2011), which depicts the bank lending channel and explicitly considers credit creation to finance and enable the production of goods.

by obliging them to cover every loan they grant with equity appropriate for the asset's weighted risk. This includes loans embedded in marketable securities. Consequently, the capital requirements generally control the banks' lending volume regarding the credit risk and total exposure. As a result of the global financial crisis of 2007-08, higher capital requirements were introduced with Basel III to increase buffers for losses. Therefore, the equity cushions (and shareholders' equity contributions) of European banks (Biondi & Graeff, 2020) increased in the aftermath of the global financial crisis. The same applies to the risk-weighted capital ratios in most advanced and emerging countries (Cohen & Scatigna, 2016).

Instead of increasing equity, banks may reduce the risk position of their assets by demanding collateral from their debtors. Slovik (2012) investigated this phenomenon for the largest systemically important banks in the US, the Euro area, the UK and Switzerland. He shows a decline in the risk-weighted assets to total assets ratio from 66% to 35% from the implementation of Basel I until 2010. However, the leverage ratio – computed as total assets to Tier 1 capital – remained at a similar level for most of this time (see Figure 1). This implies that banks react to capital requirements by optimizing their assets rather than increasing their capital cushion or reducing the *actual* risk level of their exposure. They may do so by demanding collateral or designing innovative asset bundles to bypass regulation. In the context of this study, banks' focus could shift from lending to firms with viable business models to firms with high collateral due to incentives from the incumbent regulatory environment.

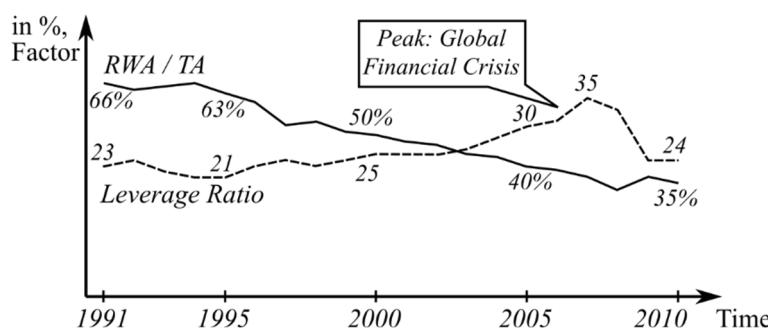


Figure 1: Risk-weighted assets (RWA) to total assets (TA) and leverage ratio of systemically important banks from 1991 to 2010. Source: Author's illustration based on Slovik (2012).

While capital requirements have been increased during the last decades due to the Basel accords, it seems that the focus on credit guidance has faded in most advanced economies

since the 1980s (Bezemer, Ryan-Collins, van Lerven, & Zhang, 2018). Credit guidance may be understood as measures by the government (or central bank) to influence the allocation of credit (Bezemer et al., 2018; Monnet, 2014). In this study, we focus on credit guidance in the sense of governing and surveilling/inspecting banks in ways that prevent zombie lending by monitoring and supporting their borrowers.

#### **2.4. The Creditor-Involved Corporate Restructuring Process**

As mentioned above, the potential causes of the rise of the zombies connect to corporate restructuring and, in particular, the role of banks within this process. To get a coherent perspective on the role of the different stakeholders, we derive a stylized corporate restructuring process based on existing literature (see Figure 2).

At first, a firm enters financial distress because of economic distress (e.g., provoked by a financial crisis, or a pandemic such as COVID-19), a decline in the firm's industry or poor management. Therefore, the corporate management and/or investor<sup>7</sup> has to negotiate with at least one financial creditor to resolve the distress (Wruck, 1990). The goal is to restructure the firm together with the creditor(s). In this context, the development of a holistic restructuring strategy is crucial for the firm for two reasons: (i) to create a suitable and comprehensive plan to address the causes of the distress; and (ii) to convince the creditor(s) – including banks – to grant loan restructuring or additional loans that allow the realization of such a plan.

Sudarsanam and Lai (2001) differentiate between four dimensions of restructuring strategies: financial (e.g., cash generation, adjustments in the capital structure); managerial (e.g., top management change); operational (e.g., cost reduction); and organizational (reorganization of strategic business units, e.g., divestment of assets). The management of the distressed firm has to create a restructuring plan that bundles different measures derived from the dimensions mentioned above. In the case of financial distress of an otherwise viable business (e.g., due to the coronavirus pandemic), the distress may be resolved merely by financial measures. These might be capital injections or cutting liabilities (e.g., pension obligations). In contrast to that, we focus on restructuring

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<sup>7</sup> In this section, we will use the expressions “investor” and “creditor” in the singular, but they include the plural.

processes that require both financial and performance-related measures (i.e., managerial, operational, organizational) to resolve distress. We do so because they imply performance problems that may lead to persistent zombification if not resolved sustainably.

In the stylized process, the corporate management or investor approaches the creditor with the developed restructuring plan. The creditor has to decide whether to accept and financially support the plan (e.g., with loan restructuring measures) or to reject it.<sup>8</sup> In the case of plan rejection, the creditor can either request the debtor to improve and resubmit the plan or give a final denial. In their own interest, the creditor may accept suitable restructuring plans and reject plans insufficient to resolve the distress sustainably. Hence, the creditor implicitly bears a monitoring or quality assurance function for restructuring strategies – in a similar way as Inoue et al. (2008) highlighted for the *Lost Decade* in Japan.

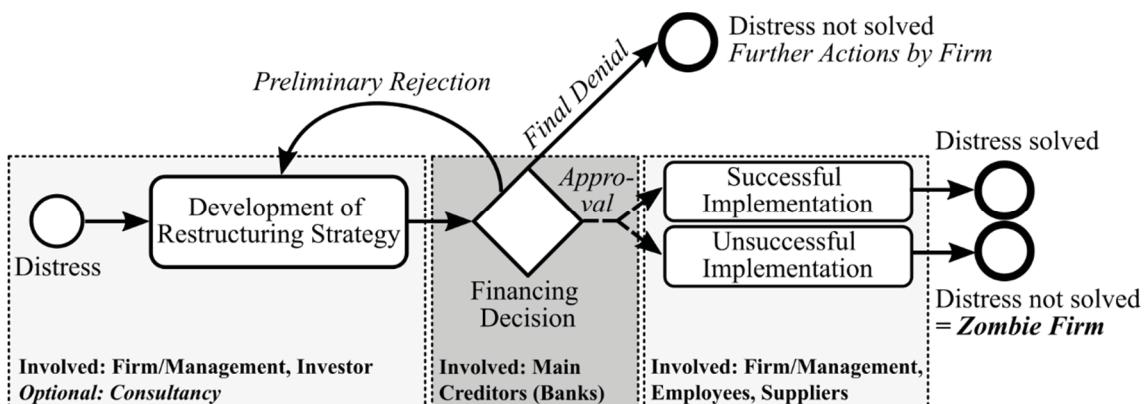


Figure 2: Stylized creditor-involved corporate restructuring process.

After the approval of the restructuring plan, the implementation follows. Meyer (2004) shows with a game-theoretic model that it is crucial to convince a critical mass of stakeholders to implement the restructuring strategy. In contrast to the previous process steps, many employees and possibly suppliers have to contribute jointly to the restructuring process. According to Meyer (2004), management plays an important role in this step. Managers can coordinate stakeholders by communicating transparently about the restructuring strategy and by inspiring employees (setting common knowledge and

<sup>8</sup> In practice, the management and creditors (as well as important suppliers) may develop and negotiate the plan together. However, to clarify the responsibilities of the parties involved (i.e., strategy development, decision and implementation), we separated the tasks in the stylized process.

beliefs). Therefore, managerial change can be a crucial restructuring measure. As explained above, all restructuring measures are being defined within the restructuring plan development. Thus, the case study focuses on *ex ante* strategic decisions rather than on ongoing plan implementation.

As described above, a holistic restructuring strategy requires a bundle of restructuring measures that often include cost reduction and the reorganization of business units. Thus, tough decisions (e.g., layoffs) may have to be taken when developing a restructuring strategy. Since these decisions might be hard to execute on a personal level, corporate management may refuse to submit to such a “draconian” strategy. The creditor can react to this dissent by finally denying restructuring financing. A final denial most likely leads to a bankruptcy process as negotiations to resolve the financial distress fail. In an increasing number of countries, debtor-friendly bankruptcy systems exist (Nigam & Boughanmi, 2017) that allow a subsequent in-court restructuring process. Most of those systems (including the German system) provide creditors with the right to vote on an in-court restructuring plan (McGowan & Andrews, 2016). As a result, the creditors (or a bankruptcy court) can deny insufficient strategies in court, subsequently leading to firm liquidation (see Figure 3).

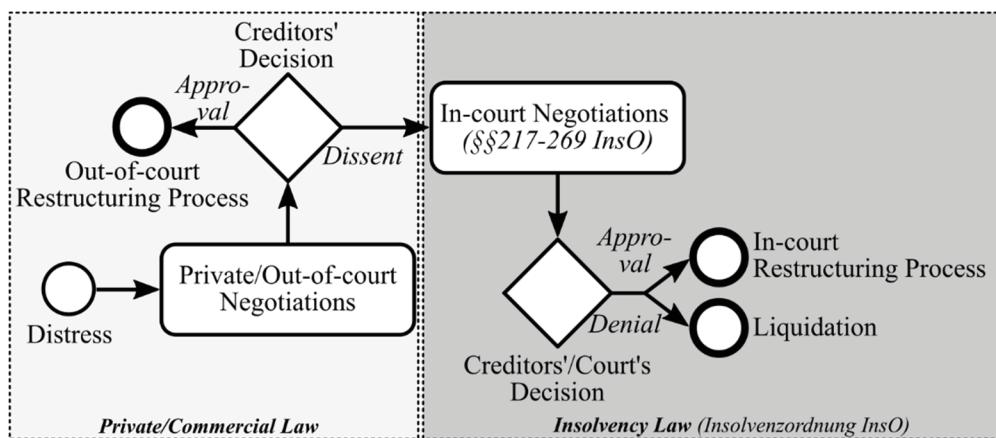


Figure 3: Restructuring options in Germany.<sup>9</sup>

<sup>9</sup> German insolvency law as of 2020 before the introduction of a novel pre-insolvency restructuring law pending for 2021. Debtors are able to file for a self-administrated (§270–285 InsO) insolvency as soon as there is an immanent inability to settle their due debt (§18 InsO) in order to negotiate a restructuring plan (§§217–269 InsO). For further information on in-court proceedings, see, e.g., Bork (2018); for out-of-court restructuring see, e.g., Fischer (2020).

### 3. Theoretical Approach: Information Asymmetry, Signaling and Relationships

#### 3.1. Behavior of Banks in Corporate Restructuring Situations

One way to explain the behavior of firms, corporate investors and banks is signaling theory: In general, banks face information asymmetry when deciding about (initial) lending as the corporate management or investor may exaggerate the quality of the firms' business models. As a result, banks may instead consider signals (or actions) proving that someone with "inside" information – the investor – shows confidence in the respective business model. These signals/actions can involve (additional) contributions to equity (Leland & Pyle, 1977). Hence, banks can verify the quality of a business model by assessing signals from the respective investor.

However, if a firm requires restructuring financing from a bank, its investor is either not able or not willing to (substantially) fund the restructuring process (Wielenberg, 2001). For this reason, the investor is unable to send a signal by contributing additional equity to the firm. This leaves the respective bank unable to verify the quality of the restructuring strategy. Moreover, the investor may aim to let the bank finance major parts of a high-risk restructuring strategy without contributing own funds (Venkataraman, 1996). Thus, if the investor is able to produce a signal in a restructuring situation (e.g., a restructuring plan or minor financial contributions), it might be a false signal only to deceive the bank (Connelly, Certo, Ireland, & Reutzel, 2011).

Consequently, banks have to decide about financing restructuring strategies without knowing their quality, i.e., feasibility or probability of success. As a result, they face a decision under uncertainty between the two options *loan extension* (including additional financing) and *loan termination*. The latter most likely leads to the respective borrower's liquidation. Thus, in the case of loan termination, a bank can expect repayments at least equal to the realizable collateral value. Bank financing generally consists of uncovered money creation (see Section 2.2). Therefore, collateralization is usually below the outstanding exposure (see, e.g., European Banking Authority, 2019 exhibiting collateralization ratios of non-performing loans from around 15% to 70% by country in the EU as of June 2019). For this reason, the expected repayments from loan termination are usually as well distinctly below the outstanding exposure.

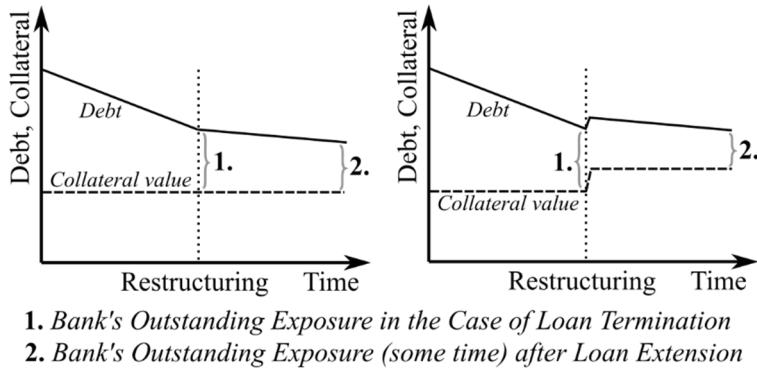


Figure 4: Schematic figure of a bank's outstanding exposure in a restructuring situation.

In contrast to that, a loan extension followed by successful restructuring should eventually lead to full repayment. In the case of an unsuccessful restructuring attempt, the respective borrower's liquidation should follow at some point. Thus, a bank can expect the same repayments as in immediate loan termination plus additional installments (as long as the collateral value is constant; see Figure 4 left side).<sup>10</sup> Moreover, it may improve its relative (or even absolute) position by demanding additional collateral for a loan extension (as long as this at least covers additional restructuring loans; see Figure 4 right side). This means that banks face incentives for granting restructuring financing even if they expect the restructuring attempt to fail.

From theory, we draw the following conclusions to compare them with the case findings and to develop propositions later: (i) As long as the realizable collateralization is below the outstanding exposure, banks face incentives for loan extension, affording the hazard to end up in zombie lending. This is usually the case in modern banking; thus, zombie lending seems to be inherent in the banking system. (ii) These incentives exist regardless of bank capitalization, which is in contrast to the *weak banks*-strand of research. (iii) Collateral plays an important role as it enables banks to grant loan extension or restructuring loans while maintaining or even improving their risk position. (iv) In such situations, banks may decide in favor of restructuring not only when the restructuring probability is unobservable but also when they know that it is low. Hence, reducing the information asymmetry between firm/investor on the one hand and bank on the other is not sufficient to prevent zombie lending completely.

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<sup>10</sup> In this simplified example, we assume that the interest payments cover the opportunity costs resulting from loan extension.

### 3.2. Relationship Banking to Enable Information Flow and Distress Detection

Increasing the information flow between banks and firms/investors cannot prevent lending to insufficient restructuring strategies. However, it may improve restructuring attempts of viable firms: If a bank knows that a restructuring strategy has a high probability of success, it may be willing to finance it regardless of whether additional collateral is available. This enables viable firms without additional collateralizable assets to receive additional funding instead of merely surviving (and becoming a zombie) by receiving a loan extension. Furthermore, banks can use their expertise attained from other distress cases to support the further development of restructuring plans strategically. Consequently, increased information in distress situations (i.e., credible restructuring strategies) is an approach to reduce zombie lending to per se viable firms (Approach 1).

Another approach (Approach 2) to decrease zombie lending is to detect and resolve distress at an early stage. At that stage, the required financing is usually lower and the probability of restructuring success higher than at a later, more severe situation (Whitaker, 1999). Moreover, banks exhibit an information advantage in detecting distresses as they can compare a borrower's development with data of other borrowers (e.g., within an early warning system). As a result, a high degree of information flow between banks and firms/investors during *and* before a (potential) distress situation may increase the probability of resolving it. Therefore, it may reduce the emergence of zombie firms. However, the respective bank has to use this information advantage to support its borrowers in due course (e.g. by jointly developing a suitable restructuring strategy).

Both approaches to improving restructuring outcomes are based on a high degree of confidential information exchange. One way to reduce information asymmetry is relationship banking as mentioned in Section 2.2: Each interaction between a specific bank and firm contains information the bank obtains from the borrower. Furthermore, the bank can assess the information received (e.g., expansion plans) with the corresponding signals from the investor (e.g., equity contributions) and prior interactions' outcomes. As a result, the information asymmetry decreases over time/interactions. This is in compliance with signaling theory showing that sending more signals reduces information asymmetry (Janney & Folta, 2003, 2006) as long as they remain consistent (Fischer & Reuber, 2007; Gao, Darroch, Mather, & MacGregor, 2008) and reliable/honest

(Durcikova & Gray, 2009). In the case of distress, the bank is then able to evaluate a restructuring strategy using the information and signals collected in previous interactions (Approach 1). Moreover, in line with Approach 2, information exchange and signaling before (a potential) distress may increase the probability of detecting and resolving the distress at an early stage. In particular, early negative signals from the investor, e.g., informing the bank about the existing risks of the firm's expansion plans, might facilitate the latter.

However, relationship banking does not necessarily mean that a bank *uses* the information/signals it attained. Figure 5 shows schematically how zombie lending connects to relationship banking: First, a drop in profitability or distress of a firm occurs within a banking relationship. Following this, the respective bank can use the proprietary information and signals received in previous interactions to decide whether and how to support a restructuring attempt (b). Furthermore, if it detects the distress early, it can nudge or even prevent an early restructuring attempt (a). As a precondition, the bank needs to receive not only positive but also negative information/signals about the firm. In the case of supporting an unviable firm or restructuring strategy, a zombie firm emerges and the banking relationship ends up in zombie lending (c). In such a case, the respective bank failed to use the information/signals attained previously, e.g., to resolve the distress at an early stage. Therefore, on the one hand, relationship banking can improve the success of corporate restructuring processes due to increased information and support by banks. On the other hand, it may develop into zombie lending. Consequently, proactive and supportive relationship banking may be a key to tackle zombie lending.

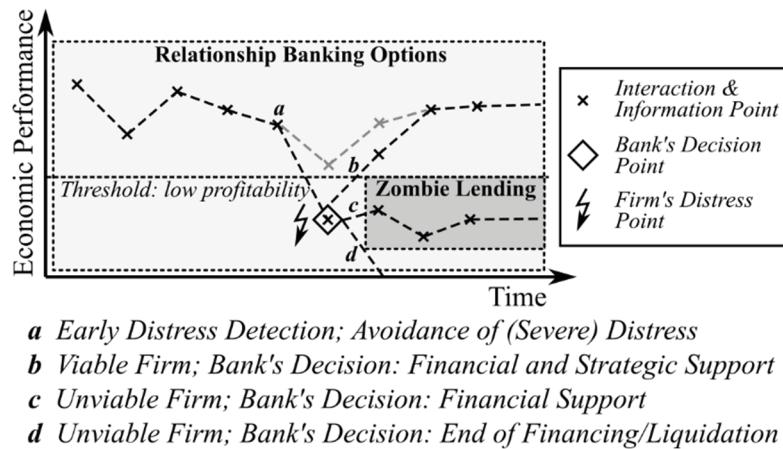


Figure 5: Schematic figure of zombie lending in the context of relationship banking.

## 4. Empirical Approach: Methods

### 4.1. Choice of Methods

The existing empirical research investigating zombie lending focuses on quantitative, hypothesis-testing methods using relatively large samples but few variables (e.g., bank capitalization; see Section 2.1). However, zombie lending constitutes a complex phenomenon connected to various aspects and approaches. As introduced in the previous sections, the following aspects may influence zombie lending but have been neglected by existing research: (i) the agents' incentives and behavior within the context of corporate restructuring; (ii) the role of collateral; (iii) relationship banking as a potential key to solving zombie lending; (iv) the role of (and implications for) banking regulation, especially credit guidance. Therefore, we chose to apply a theory-building research method that allows expanding the existing, mainly macroeconomic driven theory by those aspects using cases. Theory-building from cases means contributing to theory development by formulating new propositions based on instances of the object of study (Dul & Hak, 2008).

To examine why and how zombie lending emerges in the context explained above, we conducted a multiple case study (Yin, 2014). Due to the characteristics of this approach (i.e., a small number of cases), the generalizability of the case findings may be limited. However, it allows the investigation of zombie lending in a rich, real-world context. Using such a high bandwidth of fine-grained data enables the evaluation and refinement of existing research strands as well as the development of novel propositions (Eisenhardt & Graebner, 2007). This complements existing research that focuses on few features due to the choice of methods. As a diverse selection of cases is likely to improve the external validity and robustness of a study (Eisenhardt, 1989), we analyzed successful as well as unsuccessful restructuring cases from different industries.

### 4.2. Case Selection

We chose to examine German medium-sized firms that went through a creditor-involved restructuring process. They did so with the help of an external restructuring consultancy under the German IDW Standard 6. What they all have in common is that their financing relied on a small number of banks and that the banks demanded a restructuring opinion as a condition for continued lending. This research setting carries the following

advantages: The clear bank, debt and collateral structure allowed an in-depth investigation of the creditors' behavior in relation to potential determinants, such as bank health or collateralization. The cases are limited to the 2010s post-financial crisis period and, therefore, show a comparable economic context. Moreover, they all were subject to German law and all faced the same out-of-court restructuring process. Table 1 shows an overview of the cases.

Table 1: Overview of cases

Firm	Industry	Revenue in million EUR (last full year displayed in restructuring report)	Number of employees (according to restructuring report)	Year of restructuring report	Ownership & management structure
AlphaCo	Manufacturing and installation of equipment	21–50	51–200	Mid 2010s	Family-owned & managed
BetaCo	Beverage and food industry	51–100	51–200	Early 2010s	Family-owned & managed
GammaCo	Furniture manufacturing	21–50	201–500	Late 2010s	Family-owned & managed
DeltaCo	Interior construction	101–200	201–500	Mid 2010s	Family-owned & managed
EpsilonCo	Electronics retailer	21–50	51–200	Mid 2010s	Family-owned & managed
ZetaCo <sup>a</sup>	Manufacturing of clothing	21–50	51–200	Late 2010s	Privately held by investment holdings

<sup>a</sup>Excluded from further analysis.

The German context provides a strong economic environment with an efficient insolvency regime (World Bank, 2020). This reduces the importance of insolvency law as a potential reason for zombie lending. Therefore, we were able to focus on the effects of banking relationships and collateral without distortions from other effects, e.g., stemming from insufficient insolvency proceedings. Furthermore, if zombie lending exists in a strong and efficient (i.e., benchmark) context, the findings and implications may also be relevant for other institutional contexts. Moreover, as the principles and incentives of banking regulation are the same in most developed countries (see Section 2.3), the cases might provide insights pertinent for many countries.

The restructuring reports created under the IDW Standard 6 bear detailed information about the respective debtor's situation, the distress situation, the turnaround measures and the restructuring plan (Institut der Wirtschaftsprüfer in Deutschland, 2018). For this reason, they built a comparable and detailed foundation for the cases. All these reports were created or verified by an external restructuring consultancy and, therefore, underwent data consistency and quality checks. As they contain confidential information about the respective firm and its creditors, we collected anonymized data. We aimed to select successful and unsuccessful cases from different industries. To do so without the possibility of investigating the confidential data *ex ante*, we relied on our main contact person at a restructuring consultancy. He prepared a sample that covers "good" cases as well as "problem" cases within a previously defined research setting. This main contact had over seven years of experience in corporate restructuring and, therefore, was able to provide us with cases meeting our expectations.

#### **4.3. Data Collection**

One of the challenges of conducting a case study on a sensitive topic such as distress and restructuring is probably the collection of in-depth, confidential data, especially about private out-of-court workouts. This particularly applies to unsuccessful cases where the debtor, the creditors and the restructuring consultancy carry motives to keep the situation confidential. In this context, we heavily relied on our contact person who provided most of the data and allowed us to use it in anonymized form for research purposes. Before defining and collecting case data, we conducted an explorative interview with that contact person. Consequently, we were able to challenge our assumptions about the corporate restructuring process by comparing them to a practitioner's "theories-in-use" (Dul & Hak, 2008). As a next step, we precisely explained the research focus and approach to the contact person to illustrate the requirements concerning the case selection. Subsequently, the contact person discussed several potential cases with us and we agreed upon six provisional cases, of which he handed us over the anonymized restructuring reports.

The following step consisted of analyzing the cases based on their restructuring reports. These reports contain detailed information, such as financial data, market data, descriptions of the firms' states, restructuring plans, measures and banking ledgers. Thus, they served as the main source for the case study. In addition to the reports, we obtained

anonymized public data, such as press articles, releases and published annual accounts concerning the cases from our contact person. With this external data, we were able to reproduce the development of the cases after the reports' submission and to triangulate external data with the data from the reports. The triangulation helped to verify the validity of the reports (Yin, 2014), e.g., by comparing descriptions of the firms' states or restructuring reports with external press articles.

As the last step, we filled in the gaps of the reports and further triangulated the data with additional information. For this purpose, we consulted the contact person or the expert affiliated with the respective case on the questions that occurred after the first review of the data. Due to their heavy workload and travel activity, this was a recurring process of asking a few questions at one time and getting answers via mail or phone rather than a one-off interview. However, these experts may have been biased, which means that they may have tried to justify suboptimal decisions and miscalculations concerning the cases *ex post*. Therefore, we aimed to ask questions in a careful, non-judging manner and reviewed the statements afterward by cross-checking with internal and external data.

#### 4.4. Data Analysis

First, we examined each case concerning its restructuring success based on public data published after the finalization of the restructuring report. We did so by comparing the restructuring plans with the actual figures of the cases' financial statements. Furthermore, we scanned the external data for unplanned events that showed significant deviations from the defined restructuring measures, e.g., additional branch shutdowns. If a case fulfilled or exceeded its restructuring plan and no unplanned trigger event occurred, we defined it as *successfully restructured*. A distinct plan deviation at the end of the planning period or the occurrence of a trigger event indicated an *unsuccessful restructuring attempt*. Following the definition in Section 2.1, we defined a firm as a *zombie firm* if it survived an unsuccessful restructuring attempt (i.e., the firm is still distressed after completing restructuring). As ZetaCo finalized its restructuring report in 2019 and the restructuring is not completed yet, we were not able to obtain external data to check whether the firm matched its restructuring path. Thus, we decided to exclude the case from further analysis.

For the within-case analyses, we summarized descriptions for each case containing the restructuring strategies and measures in use, the bank, loan and collateral structure and the behavior of the most important stakeholders. To get a more detailed view, we analyzed each restructuring strategy, the banks involved concerning relationship banking and bank health, and assessed each cases' collateral structure in terms of its quality and value. We present the relevant results in Section 5.

After the in-depth within-case analysis, we conducted the cross-case analysis using replication logic. This means that we used each case as an analytical unit (Eisenhardt, 1989). To find patterns, similarities and differences between the cases, we created a table summarizing the categorized and synthesized data of each case. As the comparison contained successful and unsuccessful cases, we were able to draw cross-case conclusions by grouping the data according to variables of potential interests. This process of pattern matching took place with several iterations between theory, within-case and cross-case analysis to increase internal validity and to refine the explanatory framework (Eisenhardt, 1989; Yin, 2014).

## 5. Findings

### 5.1. Single Cases

Table 2 summarizes the fundamentals of the case descriptions created in the within-case analyses (besides ZetaCo). While AlphaCo and BetaCo restructured successfully, GammaCo had been liquidated during its restructuring attempt. In contrast to that, DeltaCo and EpsilonCo survived their unsuccessful restructuring attempts and, therefore, became zombie firms. Each of the five cases exhibits financial as well as operational (i.e., performance-related) measures. Furthermore, the strategies of AlphaCo and DeltaCo include managerial measures and those of BetaCo and EpsilonCo organizational measures. Section 5.2.1 contains more details on and a cross-case analysis of the restructuring measures.

The financial measures of each case can be broken down to a more granular level: Each case contains standstill agreements that enabled negotiations and the finalization of the respective restructuring strategy. In the negotiations, the financers of each case agreed on the prolongation of the credit lines and – if applicable – the maturity extension of loans for the restructuring period. Except for DeltaCo, each case exhibits financial contributions

by the owners; however, DeltaCo contributed additional collateral. In contrast to that, only the financers of DeltaCo provided additional restructuring financing, i.e., fresh money. This is in line with Figure 4 indicating that banks can maintain or even improve their position as long as they only grant additional loans for additional collateral.

As mentioned in Section 4.2, each case shows a debt structure with a high share of bank financing (>80%–100%) and few banks (for a more detailed analysis, see Section 5.2.3). While BetaCo, GammaCo and EpsilonCo seem to have complex collateral structures, the financers of AlphaCo rely only on directly enforceable guarantees. The collateral structure of DeltaCo was not observable at a granular level. In Section 5.2.2, we assess the collateral structures in more detail.

Table 2: Case descriptions

Firm	Post-report situation	Justification/trigger events	Dimensions of restructuring strategies used	Financial measures	Debt structure (bank financing in % of total debt)	Collateral structure
AlphaCo	Successfully restructured	Realization of restructuring plan	Financial, operational, managerial	Standstill, prolongation of credit lines, loan from the owner	2 regional savings banks, <sup>a</sup> 2 private banks & 1 cooperative guarantee bank (100%; operating & guaranteed credit lines/project financing)	Directly enforceable guarantee of the owner
BetaCo	Successfully restructured	Realization of restructuring plan	Financial, operational, (organizational, optional/if necessary)	Standstill, prolongation of seasonal credit lines, extension agreement, contribution of owners	3 regional savings banks, 1 private bank (>90%; operating & guaranteed credit lines, operating & long-term loans), loans from the owners, silent participation	Security pool for short-term financing (incl. land charge, security transfer warehouse, global cession); individual security transfer of assets for long-term financing
GammaCo	Liquidated during restructuring attempt	Unplanned bankruptcy & liquidation	Financial, operational	Standstill, prolongation of credit lines, extension agreements, contribution of owners	3 regional savings banks, 1 public bank, 1 private bank (>80%; operating credit lines & long-term loans), loans from the owners, silent participation, lease-purchase	Individual, varying collateral per loan agreement, inter alia, land charge, security transfers, guarantees, directly enforceable guarantees of owners
DeltaCo	Unsuccessful restructuring attempt/zombie firm	Deviations from restructuring plan & additional post-plan measures (shutdown of in-house manufacturing)	Financial, operational, managerial	Standstill, prolongation of credit lines, restructuring loan, additional silent participation, leasing	2 regional savings banks, 1 private bank & 2 private guarantee banks, 1 cooperative guarantee bank (>90%; mainly operating & guaranteed credit lines), silent participation	Security pool (no further details available)
EpsilonCo	Unsuccessful restructuring attempt/zombie firm	Deviations from restructuring plan & additional post-plan measures (sales preparation of one or more branches or whole firm)	Financial, operational, organizational	Standstill, prolongation of credit lines, extension agreement, contribution of owners	1 regional savings bank (100%; operating credit lines & long-term loans)	Term life insurance owner, security transfer of all warehouses, inventory of one branch

<sup>a</sup>In Germany, two main networks of regional savings banks exist, the “Sparkassen” (public savings banks) and the “Volks- und Raiffeisenbanken” (cooperative banks). We summarize both under the expression “regional savings banks.”

## 5.2. Cross-Case Comparison and Propositions

### 5.2.1. Observability of Restructuring Strategy Quality

Section 2.4 indicates that banks play an important role as they decide whether to finance a restructuring plan. However, Section 3.1 suggests that they are unable to verify the quality of restructuring strategies without using additional signals from the investor. Therefore, we analyzed whether the restructuring strategies/reports of the successful cases can be distinguished from those of the unsuccessful cases.

We first categorized the restructuring strategies' measures in accordance with Sudarsanam and Lai (2001). Our goal was to discover patterns pointing to specific (combinations of) measures as success factors for restructuring. In particular, we presumed that unsuccessful restructuring reports would focus on financial measures rather than on performance-related measures. Furthermore, we suspected that successful reports tend to contain managerial measures as these seem to play a crucial role in successfully implementing a restructuring strategy (see Section 2.4). However, each restructuring report contains financial as well as performance-related measures. Moreover, the cases do not show a clear pattern concerning management change: BetaCo successfully restructured without managerial measures while DeltaCo used management change but did not restructure successfully.

Each restructuring report comprises a detailed and quantified description of each measure and a restructuring plan that includes the measures' effects. The reason for this consistent and sophisticated elaboration is that the IDW Standard 6 requires a presentation of all measures developed. They need to be suitable to both solve the financial distress *and* attain a healthy company with improved performance (Institut der Wirtschaftsprüfer in Deutschland, 2018). In the explorative interview, our main contact person emphasized that banks particularly ask for reports in full accordance with this standard. They do so as this releases the financing creditors from the liability risk related to delaying the debtor's insolvency. Hence, all reports included detailed financial and performance-related measures as banks demanded to apply the local restructuring standard.

However, only two of five cases exhibit restructuring success. Thus, each restructuring report contains a consistent plan (i.e., a bundle of measures) but seems to show different

levels of quality, i.e., feasibility or success probability. This is in line with the theoretical approach in Section 3.1 and leads to the first proposition:

**Proposition 1:** Banks may be unable to evaluate restructuring strategies without additional signals, as managers may exaggerate the quality of those strategies. As a result, banks may require additional information or signals to verify the restructuring strategies' *actual* quality.

### 5.2.2. Firm Collateralization and Bank Behavior

Table 3 presents the analysis of the cases' collateral structures. We observed the following patterns: (i) Each case either shows a low collateralization ratio (below 30%) or a collateral structure that may be difficult to liquidate quickly and without losses. The latter means that a collateral structure shows distinctly higher nominal than realizable value. (ii) The restructuring loan/suspension of repayments in the zombie cases (DeltaCo and EpsilonCo) have been covered with additional collateral.

Table 3: Analysis of collateral structure

Firm	Collateral structure	Assessment
AlphaCo	Directly enforceable guarantee of the owner	Low collateralization ratio: <30% with guarantee credit lines <sup>a</sup> ; Quality of collateral not observable
BetaCo	Security pool for short-term financing (incl. land charge, security transfer warehouse, global cession); individual security transfer of assets for long-term financing	Complex and historically grown collateral structure, <sup>b</sup> various types of collateral, two different security pools (incl. supplements) and individual contracts <sup>a</sup> ; Quality is likely to differ between the collateral types, collateral-based recovery may be difficult due to complex structure
GammaCo	Individual, varying collateral per loan agreement, inter alia, land charge, security transfers, guarantees, directly enforceable guarantees of owners	Complex collateral structure probably grown historically, various types of collateral; Quality is likely to differ between the collateral types, collateral-based recovery may be difficult due to complex structure
DeltaCo	Security pool (no further details available)	Collateralization ratio is likely to be low as the fixed assets to debt ratio is low (<10% with guarantee credit lines) and the additional restructuring loan shows a collateralization of 10% <sup>a</sup>
EpsilonCo	Term life insurance owner, security transfer of all warehouses, inventory of one branch	Collateralization ratio is likely to be high as the value of the warehouses exceeds the debt volume and the additional loan restructuring measures (suspension of repayments) show a collateralization of 100% <sup>a</sup> ; Collateral-based recovery may be difficult due to the high number and depreciation rates of the consumer goods in the warehouses

<sup>a</sup>Based on the debt- and collateral structure presented in the restructuring report.

<sup>b</sup>According to a statement in the restructuring report.

The first pattern is in compliance with Sections 2.2, 3.1 and empirical results for Germany (Davydenko & Franks, 2008; Grunert & Weber, 2009): Collateral does not usually fully cover the respective loans. Either the exposure distinctly exceeds the (nominal) collateralization, or the high nominal collateralization distinctly exceeds the realizable collateral value. Furthermore, the data shows that in each case, banks demanded collateral in prior interactions. Hence, banks consider collateral in financing decisions (see Section 2.3). Moreover, they may be unable to evaluate the quality of a restructuring strategy (see proposition 1). As a result, they might mainly focus on collateral when deciding about restructuring financing, which is in line with theory in Section 3.1. Therefore, we propose:

**Proposition 2:** Bank credit decisions include a focus on collateral. When financing restructuring strategies, banks may mainly focus on additional collateral available if they face problems evaluating the quality of the restructuring strategies.

Both DeltaCo and EpsilonCo firms had to cover their restructuring loan/suspension of repayments with additional collateral while the nominal collateralization ratios remained the same or increased. Hence, the banks involved may have tried to decrease their uncovered exposure (ratio) due to a lack of confidence in the restructuring strategy. This is in line with Section 3.1 suggesting that banks decide in favor of restructuring even if they expect the restructuring attempt to fail: They may improve their position with additional repayments or collateral when the realizable collateralization is below the outstanding exposure. In the next section, we will take up this finding when developing another proposition.

### 5.2.3. Bank Capitalization and Relationship Banking

To evaluate each restructuring case, we examined the banks involved. Table 4 summarizes the bank structure of each case. As we focused on the creditors that had to approve the respective restructuring plan, we included institutional silent participants. Each case exhibits few financial creditors with a high share of regional cooperative and public savings banks. Both types of banks are organized in nationwide networks supporting each other. As a result, their high external ratings due to strong capitalization (e.g., Fitch A+ for the German public savings banks and AA- for the German cooperative banks) apply to each group as a whole as well as to all member banks (Fitch Ratings Inc., 2019a, 2019b). Furthermore, each cooperative/regional savings bank involved shows a

total capital ratio distinctly<sup>11</sup> above regulatory requirements in the respective year of the restructuring decision. Hence, each case contains banks with strong capitalization.

Table 4: Cases' bank financing structure

Case	Banks involved (share of bank financing <sup>a</sup> according to the restructuring report)	Share of financing through public and cooperative banks over total bank financing <sup>a</sup> (number of banks)	Number of active tranches/instruments per bank at the time of the restructuring report
AlphaCo	Cooperative guarantee bank (31–40%)	>70% (3 of 5 banks)	6
	Public savings bank (11–20%)		4
	Cooperative bank (11–20%)		5
	Private bank (11–20%)		6
	Private bank (1–10%)		1
BetaCo	Public savings bank (41–50%)	>80% (3 of 4 banks)	10
	Cooperative bank (31–40%)		5
	Private bank (11–20%)		3
	Cooperative bank (1–10%)		5
GammaCo	Public savings bank (41–50%)	>80% (4 of 6 banks/financers)	11
	Cooperative bank (218–30%)		3
	Private bank (11–20%)		5
	Public bank (1–10%)		3
	Cooperative bank (1–10%)		3
	Private silent partner (1–10%)		n.a.
DeltaCo	Cooperative bank (21–30%)	>60% (4 of 8 banks/financers)	5
	Public savings bank (21–30%)		10
	Private bank (21–30%)		2
	Cooperative guarantee bank (11–20%)		1
	Private guarantee bank (1–10%)		1
	Private guarantee bank (1–10%)		1
	Public silent partner (1–10%)		n.a.
	Private silent partner (1–10%)		n.a.
EpsilonCo	Public savings bank (100%)	100%	16

<sup>a</sup>Given in ranges due to anonymization; including institutional silent participants; total is 100% by construction.

In Germany, all creditors involved in the process have to approve a restructuring plan unanimously in private workouts (i.e., out-of-court restructurings). This is because there is no formal restructuring code outside of German insolvency law (at the time of the cases). Thus, at least one adequately capitalized bank per zombie case – which applies to both zombie cases – is sufficient to show that not only weak but also healthy banks ended up in zombie lending. In the observed cases, they even constitute the majority or at least

<sup>11</sup> As not all of these regional savings banks published their Tier 1 capital ratios, we applied their total capital ratios to assess their capitalization and compared them with their bank-specific total capital requirements. In cases where a bank did not publish its individual requirements, we estimated them using the average requirements of the other banks in the respective year. According to this analysis, the total capital ratios exceed their requirements by 2.5 to 12.9 percentage points (mean: 7.0 percentage points) and each case contains total capital ratios at least 5 percentage points above requirements.

half of banks involved (when all public banks are included). Together with the findings of Section 5.2.2, this leads to the following proposition:

**Proposition 3:** Both weak and healthy banks may face incentives for loan extension in restructuring processes – affording the hazard of ending up in zombie lending. Banks may face these incentives when the realizable collateral value is lower than the outstanding debt exposure.

Section 3.2 conceptually considers zombie lending within the context of relationship banking. Hence, we aimed to examine whether relationship banking plays a role in the present cases. As the restructuring reports do not contain detailed information on historical banking relationships, we used the information on active banking as of the reporting date: Counting the active loan tranches and banking instruments/products (such as credit lines, accounts, deposits) per bank and case (see Table 4), we treated them as equivalents to interactions. Following the definition given in Section 2.2, each case with at least one bank providing multiple active tranches/products points towards relationship banking. The numbers show that each case most likely contains relationship banking; most cases even exhibit a main bank relationship with substantially more ongoing interactions than the other banks involved.

Consequently, the successful as well as the unsuccessful cases contain relationship banking. This is in line with Section 3.2, which states that zombie lending can occur within relationship banking if banks fail to use the additional information and signals obtained through their relationships. In contrast to that, using this information and signals to evaluate the restructuring strategies or to detect distresses in the early stages might help the respective firms to overcome their distresses. However, none of the banks involved was able to discover the respective distress at an early stage, according to the restructuring reports. Furthermore, the banks of the zombie cases seemingly failed to evaluate their borrowers' restructuring strategies. As a result, we conclude:

**Proposition 4:** Zombie lending may arise within relationship banking if banks fail to obtain and use additional information/signals throughout their interaction with borrowers, in terms of either supporting them at an early distress stage or properly evaluating their restructuring strategies.

## 6. Discussion

Our theoretical approach elaborates two potential reasons for banks' inefficient financing decisions in distress situations: (i) the *actual* quality of restructuring strategies is unobservable without additional information/signals (or due to the risk of false signals); (ii) banks face incentives to improve their position by deciding in favor of restructuring under certain conditions. In the case study, we found patterns pointing to both reasons. Hence, future research may investigate which is the case in certain contexts.

Furthermore, our theoretical approach suggests supportive relationship banking to improve the financing decisions for both cases. In the empirical data, zombie lending occurred within relationship banking, but the banks failed to use the additional information/signals to detect distress situations in the early stages. This is in line with Blatz, Haghani, and Kraus (2006), who show that German banks often recognize distress in severe/late crisis stages. Hence, improving supportive relationship banking may be a key to tackling zombie lending. Existing research on signaling highlights disturbing effects of (unintended) negative signals on reputation (Fischer & Reuber, 2007; Taj, 2016). According to this, signalers should send consistent and honest signals frequently (see Section 3.2) but restrain negative signals. Our study, however, implies that sending negative signals in relationship contexts is important as they enable the receiver (i.e., bank) to support the object concerned (i.e., firm) and its signaler (i.e., investor), e.g., by detecting distress at an early stage.

From a regulatory perspective, the question arises of how to encourage banks to conduct (more) supportive relationships with their borrowers. In this context, micro-prudential regulators might refocus on the currently neglected instruments of credit guidance (see Section 2.3): Governing and inspecting banks to use their relationships' information and influence may increase banks' chances to detect (potential) distress situations in the early stages. Moreover, they may evaluate and help to improve their borrowers' restructuring strategies. As a result, credit guidance may foster banks to support those firms in resolving their distress threats and occurrences.

Furthermore, collateral seems to play an ambiguous role in the emergence of zombie firms. On the one hand, collateral reduces banks' losses from a borrower's liquidation; on the other, it may incentivize banks to finance insufficient restructuring strategies under

certain conditions. As one of these conditions is collateralization below the outstanding exposure, the solution seems to be to increase loan collateralization. However, uncovered lending (i.e., credit creation) and, thus, incentives for zombie lending appear to be inherent in the modern banking system (see Section 2.2 and 3.1). In addition, higher collateral requirements may lead to more complex collateral structures with varying collateral quality (see Section 5.2.2). These imply higher losses and time required in the case of liquidation. Consequently, higher nominal collateralization may be insufficient to prevent the incentives for zombie lending. Additionally, a stronger focus on collateral could (further) reduce banks' focus on business models. Hence, regulators may not tackle the problem by setting incentives for higher collateralization. Instead, they may guide banks to provide financing based on the viability of business models over time and circumstances. Moreover, they might reconsider incentivizing (additional) collateralization with reduced capital requirements due to the mentioned side effects (see Section 2.3).

## 7. Conclusion and Implications

In this study, we investigate zombie firms by applying a strategic business perspective and combining micro- and macro-analysis of the phenomenon under investigation. We analyze potential drivers of zombification within the framework of corporate restructuring and relationship banking using a theoretical as well as an empirical approach. Comparing the theoretical approach and existing hypotheses with in-depth, real-world cases allowed us to refine the existing research strands by building novel propositions.

Based on signaling theory, our theoretical approach explains the emergence of zombie firms with information asymmetry. According to this, banks have to decide about financing restructuring strategies without knowing their quality. Furthermore, future installments and additional collateral may incentivize banks to decide in favor of restructuring even if the respective restructuring strategy is observable but unviable. As these incentives stem from uncovered lending inherent in modern banking, they seem to be immanent in the system. In theory, supportive relationship banking mitigates zombie lending by reducing information asymmetry and enabling distress situations to be resolved in the early stages. As a precondition, firms and their investors need to

communicate positive as well as negative information and signals to enable banks to support them. While our case study is in line with the theoretical approach (Proposition 1/3), it shows that in practice, banks and firms seem to face problems using their banking relationships in the way theory suggests.

From the study, we draw the following conclusions: Zombie lending may arise within relationship banking if banks fail to obtain and use the additional information to support their borrowers (Proposition 4). Hence, supportive relationship banking might be a key for preventing the emergence of zombie firms. It may reduce information asymmetry and facilitate early-stage restructuring. Regulators may tackle zombie lending by enhancing banks' supervision over their existing relationships/exposure, i.e., by improving credit guidance and inspection. Furthermore, not only weakly capitalized but also healthy banks can face incentives for loan extension and might end up in zombie lending. They do so if the realizable collateral value is below the outstanding debt – which is quite normal and occurred in all the cases observed (Proposition 3). Our theoretical approach and the case data indicate that banks focus on collateral when deciding about financing restructuring strategies (Proposition 2). In this context, additional collateral seems to foster incentives for loan extension instead of termination (see Section 3.1 and 6). As a result, regulators may guide banks to provide financing based on the viability of business models instead of collateral. In addition, they might reconsider incentivizing (additional) collateralization with reduced capital requirements due to these side effects.

### **7.1. Implications for Research**

We aim to offer implications for signaling theory on which we based our theoretical approach. While existing research focuses on the disturbing effects of (unintended) negative signals (see Section 6), our study highlights the importance of intentionally sending positive as well as negative signals. We argue that the latter enables the receiver (i.e., bank) to support the object concerned (i.e., firm) and its signaler (i.e., investor). However, disclosing negative information may indeed disturb the firm's reputation or negotiation position. This implies that the positive effects of negative signals only appear in relationships with a certain level of confidence. Therefore, future research might investigate in which situations negative signals lead to positive effects.

Furthermore, the findings lead to implications for the research on zombie lending. First, both weakly capitalized and healthy banks may face incentives for loan extension and might end up in zombie lending. While higher bank capital is important to buffer losses from borrowers' liquidation, it seems to be insufficient to avert those incentives. This means that the *weak banks*-strand of research cannot explain zombie lending entirely. As a result, measures for higher capitalization of banks (e.g., via higher regulatory capital requirements) may not completely prevent zombie lending.

Second, the finding (or rather fact) that loans are usually not fully covered by realizable collateral bears implications for the *insolvency regime*-strand of zombie research: Collateral-based recovery is low even in an efficient insolvency regime as long as the outstanding exposure (distinctly) exceeds the existing collateral. Hence, neither the *weak banks* nor the *insolvency regime*-strand of research provides an approach that tackles the problem of zombie lending entirely. The incentives for zombie lending simply stem from the fact that the modern banking system contains money creation, i.e., uncovered financing. Therefore, zombie lending may be handled by improving micro-prudential regulation (i.e., credit guidance) to facilitate distressed firms to return to being going concerns (see the following section).

Third, relationship banking is not solely an intermediate lending stage leading to opportunistic bank behavior as assumed in the model of Hu and Varas (2021). Moreover, the viability of a firm or project is not constant but can, in principle, be recovered through corporate restructuring. Hence, relationship banking bears the potential to improve restructuring outcomes. Furthermore, the approach of Hu and Varas (2021) to mitigate zombie lending seems to be insufficient: They suggest constraining the repayments that firms with low cash flow can make to banks.<sup>12</sup> This intends to reduce the incentives stemming from additional repayments a bank can expect in the case of loan extension to an unviable firm. However, it neglects the possibility of additional collateralization (see Section 3.1). In addition, their suggestion might be hard to implement as it makes lending to distressed firms more complicated – including lending to viable ones. For this reason,

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<sup>12</sup> More precisely, the authors introduce a constraint whereby the interest rate of an extended loan cannot be higher than a firm's cash flow level. In their model, this means that an entrepreneur has no wealth and is unable to support a firm with additional payments. This reduces the repayments a bank can expect from a firm depending on its cash flow level.

fostering supportive relationship banking might be a more promising way to reduce zombie lending (see Section 6). Table 5 summarizes the existing research on zombie lending introduced in Section 2.1 and compares it to the findings of our study.

Table 5: Research on zombie lending and this study's findings

Research strand	Explanation for zombie lending	Corresponding approach to mitigate zombie lending	Findings of our study
Weak banks	Weakly capitalized banks extend loans to unviable firms to prevent equity losses	Increase bank capitalization by raising capital requirements	Both weak and healthy banks may face incentives for loan extension possibly ending up in zombie lending
Inefficient insolvency regimes	Inefficient insolvency law and proceedings constitute barriers for banks and firms to commence restructuring or liquidation	Increase efficiency of insolvency law and proceedings	An efficient insolvency regime constitutes a necessary condition for efficient restructuring processes (see Section 2.4); collateral-based recovery may be low even in an efficient insolvency regime, leading to incentives for loan extension possibly ending up in zombie lending
Low interest rates	Low interest rates reduce banks' pressure to restructure/liquidate doubtful loans and increase banks' risk appetite	Optimize central bank policy considering the advantages and disadvantages of low interest rates (Banerjee & Hofmann, 2018)	None, as the cases of this study are all situated in a low interest rate context
Regulatory framework	Banks reallocate too little credit from unviable to promising firms as they hold too little of costly equity	Raise capital requirements but reduce risk weights on reallocated loans to promising firms; reduce costs of equity by protecting outside shareholders (Keuschnigg & Kogler, 2020)	Increased credit guidance and bank inspections to encourage supportive relationship banking may lead to improved restructuring outcomes; guiding banks to provide financing based on the viability of business models and considering the side effects of reducing capital requirements with collateralization may improve credit (re-)allocation
Relationship banking	Informed relationship banks extend loans to unviable firms to deceive the uninformed financial market about the loan quality; they do so to pass on these loans to the market subsequently	Constrain the repayments of low cash flow firms to banks so that banks' incentives for loan extension to unviable firms decrease (Hu & Varas, 2021)	Relationship banking is not merely an intermediate lending stage but provides the possibility to support firms in resolving their distress; constraining repayments to banks may be insufficient and hard to implement; instead, increased credit guidance might improve bank behavior and, thus, restructuring outcomes

## 7.2. Implications for Banking Regulation and Banks

As mentioned above, our findings might bear implications for *banking regulation*. First, Section 3.2 suggests that zombie lending often arises within existing banking relationships. Hence, while capital requirements restrict new lending in relation to bank equity (Keuschnigg & Kogler, 2020), micro-prudential regulation may refocus on credit guidance to control existing bank exposure. For instance, Bonfim, Cerqueiro, Degryse, and Ongena (2020) studied the effects of special on-site inspections of bank credit portfolios (i.e., existing exposure) in Portugal; their results indicate that banks structurally change their lending decisions to distressed firms following these inspections. Thus, regulators might guide banks to support distressed borrowers using the customer-specific information gathered through relationship banking to restructure successfully (e.g., by commencing in an early crisis stage).

Second, in Section 6, we discuss that the possibility of demanding additional collateral may incentivize banks to extend loans to unviable firms. However, the current regulatory framework rewards requesting collateral – even though bank lending should be grounded on the quality of business models/ideas and not the collateral available (see Section 2.2). Demanding (additional) collateral decreases bank risk regardless of these regulatory rewards. Therefore, regulators may reconsider further incentivizing collateralization due to the side effects named above.

*Banks* play a crucial role in the restructuring process and, therefore, our findings might bear implications for them. First, banks may ensure that they use the customer-specific information gathered through relationship banking. With this information, they can support their borrowers in corporate banking, e.g., by detecting distress at an early stage. Thus, they might increase the priority given to (manual and automatic) client assessment. Furthermore, advising/interacting with their clients regularly might improve information flow and client support (which seems to be in contrast to the general trend of rationalization in banking). Second, banks may review whether their lending process and employees consider the quality of firms' business models sufficiently. In case of doubt, they might provide training for their staff. Third, some cases exhibited high nominal yet distinctly lower realizable collateral. As a result, banks may assess their collateral received concerning their actual value additionally to the regulatory value.

### 7.3. Implications for Business Practice

As we derived the findings from real-world cases, we are confident that they provide valuable insights for practitioners in firms and restructuring consultancies.

In this article, we argue that supportive banking relationships may prevent zombie lending. Hence, it could be advantageous for firms to engage in relationship banking. If they and their investors provide banks with detailed positive and negative information and signals, the banks might recognize and help to resolve distress in the early stages. Furthermore, this should foster common confidence in the business model/idea (see Section 2.2) and, therefore, might increase the chances to receive additional loan tranches without having to provide (high amounts of) collateral. In a restructuring situation, firms should make sure that the respective restructuring report is formally in compliance with the IDW Standard 6 (or alternative local standard), as banks only accept those. Moreover, the restructuring report should (of course) show a realistic and feasible strategy/plan in the firm's interest.

This applies likewise to *restructuring consultancy firms* that advise businesses on restructuring reports or prepare them on their behalf. If a firm refuses to develop a rigorous yet necessary strategy to resolve distress sustainably, a consultant may try to persuade the firm to improve the strategy. As the creator or assessor of a restructuring plan is required to evaluate its feasibility in Germany (Institut der Wirtschaftsprüfer in Deutschland, 2018), restructuring consultants face a difficult situation. On the one hand, firms in distress assign consultants to develop a restructuring strategy that convinces creditors to finance a restructuring attempt. On the other, these consultants have to evaluate the respective report critically. The case data might imply that their priority was to convince creditors, as they confirmed restructuring plans that, eventually, proved unfeasible. In the long term, it may be advantageous for restructuring consultants to increase their focus on the critical assessment of restructuring strategies. As a result, this should improve their success rates and reputation rather than pleasing some clients in the short term.

## 7.4. Limitations and Future Research

Our main objective has been to review and expand the research of zombie lending in the context of relationship banking using an in-depth corporate restructuring perspective. The qualitative case study approach enabled fine-grained insights on bank behavior concerning (the observability of) the quality of restructuring strategies, bank capitalization, banking relationships and collateralization. As the detail-oriented observation of a phenomenon limits the size of a sample, the external validity that may be inferred is limited. Therefore, we compared the empirical approach to a theoretical one based on signaling theory to strengthen the foundation of our study's findings. Furthermore, as the cases have been conducted in an economically strong environment and efficient insolvency regime (i.e., benchmark context), the findings and propositions may apply to other institutional contexts. Nevertheless, similar analyses should be developed based on other or larger samples and for countries other than Germany.

To increase external validity, we used diverse sampling (see Section 3). As a result, we decided not to focus on specific industries or sectors that may be particularly vulnerable for relationship banking, a certain role of collateral or zombie lending. However, replicating this study in specific industries/countries may provide additional insights. Moreover, we focused on firms and banks as entities. Future research might explore the incentive structures within banks and firms and of their employees/stakeholders in detail. Collecting data exclusively stemming from a time of relatively low interest rates increased comparability, but ruled out the possibility of investigating the influence of interest rates on zombie lending. Hence, examining zombie lending in other interest rate situations could produce additional findings. To test the propositions of this study, further research may be conducted quantitatively with larger samples, e.g., by analyzing time-series data. However, a major challenge may be the acquisition of suitable data, including those concerning banking relationships.

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## Corona-Staatshilfen, Zombie-Unternehmen und Sanierung: Implikationen für Sanierungspraktiker

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**Abstract:** Im Kontext der Corona-Staatshilfen wird vermehrt über die Gefahr der Finanzierung sogenannter Zombie-Unternehmen diskutiert. Dieser Beitrag gibt zunächst einen aktuellen Einblick in die einschlägige Forschung und leitet anschließend folgende Implikationen für die Sanierungspraxis ab: Zombie-Unternehmen können in der Praxis anhand eines andauernden ( $\geq 3$  Jahre) niedrigen Zinsdeckungsgrads ( $< 1$ ) oder einer hohen Verschuldungsdauer (z.B.  $> 7$  Jahre) identifiziert werden. Infolge der Corona-Krise können Anreize für Banken entstehen, Sanierungsstrategien angeschlagener Unternehmen zu nachsichtig zu prüfen und trotz Mängeln zu finanzieren. Sanierungsberater nehmen in diesem Umfeld eine wichtige Rolle ein, wenn sie die Akteure der Sanierungsverfahren von durchgreifenden Sanierungsstrategien überzeugen können und damit im Idealfall die Entstehung von Zombie-Unternehmen verhindern.

**Schlagworte:** Corona-Staathilfen, Zombieunternehmen, Unternehmenssanierung, Sanierungsberatung, Sanierungskonzept

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## 1. Problem- und Zielstellung

Im Kontext der Covid-19-Pandemie wird über die Gefahren der Finanzierung eigentlich kreditunwürdiger Unternehmen durch Staatshilfen diskutiert. Solche Unternehmen werden in der fachlichen Diskussion als Zombie-Unternehmen bezeichnet.<sup>2</sup> Ökonomen verschiedener Institutionen (z.B. EZB, OECD) untersuchen solche Unternehmen bereits seit geraumer Zeit und haben in einigen Ländern einen Anstieg der Zahl von Zombie-Unternehmen festgestellt.<sup>3</sup> Allgemein handelt es sich bei Zombie-Unternehmen um profitabilitätsschwache, nicht nachhaltig bestandsfähige Unternehmen, die durch Kredite am Leben gehalten werden.<sup>4</sup> Dementsprechend binden sie Kapital sowie Humanressourcen, verknappen diese für produktivere Unternehmen und hemmen so die gesamtwirtschaftliche Produktivität.<sup>5</sup>

Die Forschungsliteratur führt unterschiedliche Gründe für die Existenz und den Anstieg der Zahl von Zombie-Unternehmen auf. Neben dem Niedrigzinsniveau<sup>6</sup> werden kapitalschwache Banken, die Verluste durch Abschreibung oder Kündigung von Zombie-Kreditengagements nicht hinnehmen wollen<sup>7</sup>, als Grund genannt. Daneben stehen teure und bürokratische Insolvenzverfahren mancher Länder im Fokus der Forschung, da sie die Erlösquote im Insolvenzfall und damit Anreize zur Kreditkündigung mindern.<sup>8</sup> Zudem spielen regulatorische Rahmenbedingungen eine Rolle, wenn Banken über die Mindestkapitalanforderungen hinaus kaum Kapitalreserven vorhalten und bei Verlusten aus Kreditkündigungen die regulatorischen Anforderungen verletzen würden.<sup>9</sup> In der aktuellen Corona-Krise hingegen wird befürchtet, dass die weitreichende Staatshaftung für

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<sup>2</sup> Vgl. Drost, Warum auch Zombie-Unternehmen mit Hilfe rechnen können, 29.03.2020 ([www.handelsblatt.com](http://www.handelsblatt.com); Abruf: 01.06.2020).

<sup>3</sup> Vgl. Banerjee/Hofmann, The rise of zombie firms: causes and consequences, BIS Quarterly Review, September, Basel 2018, S. 67 ([www.bis.org](http://www.bis.org); Abruf: 01.06.2020).

<sup>4</sup> Vgl. Andrews/Petroulakis, Breaking the shackles, ECB Working Paper Series, No. 157, Frankfurt am Main 2019, S. 1 (<https://doi.org/>; Abruf: 01.06.2020).

<sup>5</sup> Vgl. Banerjee/Hofmann, a.a.O. (Fn. 3), S. 68; McGowan/Andrews/Millot, The Walking Dead? Zombie Firms and Productivity Performance in OECD Countries, OECD Economics Department Working Papers, No. 1372, Paris 2017, S. 3 (<https://doi.org/>; Abruf: 01.06.2020).

<sup>6</sup> Vgl. Banerjee/Hofmann, a.a.O. (Fn. 3), S. 68.

<sup>7</sup> Vgl. Storz u.a., Do we want these two to tango? On zombie firms and stressed banks in Europe, ECB Working Paper Series, No. 2104, Frankfurt am Main 2017, S. 1 (<https://doi.org/>; Abruf: 01.06.2020).

<sup>8</sup> Vgl. Gouveia/Osterhold, Fear the walking dead: zombie firms, spillovers and exit barriers, OECD Productivity Working Papers, No. 13, Paris 2018, S. 2 (<https://doi.org/>; Abruf: 01.06.2020).

<sup>9</sup> Vgl. Keuschnigg/Kogler, European Economic Review 2020 (103349), S. 1.

Notfallkredite zu einer erhöhten Kreditvergabe an nicht bestandsfähige Unternehmen führt.<sup>10</sup>

Werden profitabilitätsschwache Unternehmen nicht durchgreifend saniert, jedoch – z.B. von ihren Banken – weiterfinanziert, können Zombie-Unternehmen entstehen bzw. bestehen bleiben. Die bisherigen Forschungsbeiträge zu Zombie-Unternehmen zeigen keine Erkenntnisse für die Unternehmenssanierung auf. Ziel dieses Beitrags ist daher, insoweit vor allem Implikationen für die deutsche Sanierungspraxis zu erarbeiten.

## 2. Identifikation von Zombie-Unternehmen

### 2.1. Definitionen in der Forschung

In der Forschung werden uneinheitliche und für die Praxis teils ungeeignete Definitionen von Zombie-Unternehmen verwendet. Diese Definitionen werden zur automatisierten Auswertung großer Datensätze mit wenigen, verfügbaren Unternehmensmerkmalen eingesetzt. In der Sanierungspraxis hingegen sind zumeist detaillierte Daten zum betroffenen Unternehmen vorhanden, weshalb differenziertere Definitionen möglich sind.

Im Kontext der Stagnation in Japan während der 1990er-Jahre haben Forscher Unternehmen als Zombie-Unternehmen definiert, wenn sie vergünstigte Kredite von Banken erhielten.<sup>11</sup> In der aktuellen Forschung wird unter anderem ein unterdurchschnittliches tobinsches Q als ausschlaggebendes Merkmal verwendet.<sup>12</sup> Beide Definitionen erscheinen für die Verwendung in der Unternehmenssanierung als zu vage. In neueren Beiträgen wird eine konkretere Definition angewandt: Ein Unternehmen wird als Zombie-Unternehmen identifiziert, wenn es mindestens zehn Jahre existiert und drei Jahre in Folge einen Zinsdeckungsgrad (ZDG) von kleiner als eins aufweist. Das erste Merkmal soll bei quantitativen Auswertungen verhindern, dass Startups als Zombie-Unternehmen gekennzeichnet werden.<sup>13</sup>

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<sup>10</sup> Vgl. Joho, Corona-Hilfe – Kredite für Mittelständler mit 100-prozentiger Staatshaftung?, 06.04.2020 ([www.wiwo.de](http://www.wiwo.de); Abruf: 01.06.2020).

<sup>11</sup> Vgl. Caballero/Hoshi/Kashyap, AER 2008, S. 1947.

<sup>12</sup> Vgl. Banerjee/Hofmann, a.a.O. (Fn. 3), S. 69.

<sup>13</sup> Vgl. McGowan/Andrews/Millot, a.a.O. (Fn. 5), S. 15.

Ein Zinsdeckungsgrad von kleiner als eins über mehrere Jahre bedeutet, dass ein Unternehmen seine Zinsaufwendungen nachhaltig nicht aus seinem operativen Ergebnis erwirtschaften kann. Mithilfe der Kennzahl „Zinsdeckungsgrad“ wird die Profitabilität eines Unternehmens (z.B. EBITDA) im Verhältnis zum Zinsaufwand betrachtet. Somit fließen in die Kennzahl indirekt die Höhe des verzinslichen Fremdkapitals (FK) und der durchschnittlichen Verzinsung (i) ein (siehe Formel (1)).

$$ZDG = \frac{EBITDA}{Zinsaufwand} = \frac{EBITDA}{FK * i} \quad (1)$$

## 2.2. Zinsdeckungsgrad und Verschuldungsdauer als praxistaugliche Kennzahlen zur Identifizierung von Zombie-Unternehmen

Der Zinsdeckungsgrad ist ein Anhaltspunkt für die Identifizierung von Zombie-Unternehmen; er hängt jedoch vom Zinsniveau ab (siehe Übersicht 1). Der Zinsdeckungsgrad eines Unternehmens steigt mit sinkender Verzinsung auf über eins, obwohl die Ergebnis- und Fremdkapital-Situation gleichbleibt. Das Unternehmen wird demnach aufgrund des niedrigen Zinsniveaus – trotz niedriger Profitabilität – nicht als Zombie-Unternehmen identifiziert.

Zinsniveau	EBITDA in T€	FK in T€	Zinsaufwand in T€	i in %	ZDG (Faktor)
Niedrig	6	100	-5	5%	1,2
Hoch	6	100	-10	10%	0,6

Übersicht 1: Zinsdeckungsgrad in Abhängigkeit vom Zinsniveau (Beispiel)

In Übersicht 1 ist das verzinsliche Fremdkapital im Verhältnis zum EBITDA sehr hoch. Dementsprechend ist die vollständige Tilgung des Fremdkapitals nur über einen sehr langen Zeitraum möglich, und es besteht eine hohe Abhängigkeit von den finanzierenden Banken. Das Unternehmen weist demnach keine refinanzierungsfähigen Relationen auf und wird nur durch die bestehenden Kredite vor der Insolvenz geschützt. Insofern eignet sich neben dem Zinsdeckungsgrad die Verschuldungsdauer in Jahren<sup>14</sup> (VD) zur Identifizierung von Zombie-Unternehmen (Formel (2)).

$$VD = \frac{FK}{EBITDA} \quad (2)$$

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<sup>14</sup> Annahme: liquide Mittel = 0.

Die Verschuldungsdauer ist vom Zinsniveau unabhängig und ergänzt insoweit den Zinsdeckungsgrad bei der Identifizierung von Zombie-Unternehmen. Dies wird in Übersicht 2 deutlich: Bei niedrigem Zinsniveau ergibt sich ein Zinsdeckungsgrad von größer als eins, die sehr hohe Verschuldungsdauer bleibt jedoch gleich. Es stellt sich die Frage, ab welcher Verschuldungsdauer von einem Zombie-Unternehmen gesprochen werden kann. In der Praxis ist eine Faustformel geläufig, wonach eine Verschuldungsdauer von kleiner als 3,5 Jahre auf refinanzierungsfähige Relationen hinweist. Standard & Poor's ordnet mittelständische Unternehmen ab einer Verschuldungsdauer von größer als fünf Jahren in die schlechteste Verschuldungskategorie ein.<sup>15</sup> Insofern sollte der Grenzwert bei mindestens mehr als fünf Jahren liegen.

Zinsniveau	EBITDA in T€	FK in T€	Zinsaufwand in T€	i in %	ZDG (Faktor)	VD (Jahre)
Niedrig	6	100	-5	5%	1,2	16,7
Hoch	6	100	-10	10%	0,6	16,7

Übersicht 2: Beispiel Zinsdeckungsgrad und Verschuldungsdauer

Analytisch zeigt sich, bis zu welcher Verzinsung bzw. bis zu welchem Zinsniveau die Verschuldungsdauer die strengere Kennzahl zur Identifizierung von Zombie-Unternehmen ist (vgl. auch den Anhang dieses Beitrags). Wird z.B. bei einer Verschuldungsdauer von größer als sieben von einem Zombie-Unternehmen gesprochen, ist diese Kennzahl bis zu einer durchschnittlichen Verzinsung i von rund 14,3% die strengere Kennzahl. Ab einer Verzinsung von rund 14,3% ist ein Zinsdeckungsgrad von größer als eins die strengere Kennzahl bei der Identifizierung von Zombie-Unternehmen.

Für die Sanierungspraxis lässt sich festhalten, dass Zombie-Unternehmen anhand der beiden Kennzahlen Zinsdeckungsgrad (< 1) und Verschuldungsdauer (z.B. > 7 Jahre) identifiziert werden können. Beide Kennzahlen werden – unter anderen Bezeichnungen – auch vom IDW zur Überprüfung der Tragfähigkeit von Sanierungsplanungen gemäß *IDW S 6*<sup>16</sup> empfohlen.<sup>17</sup> Dementsprechend werden die Kennzahlen in der

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<sup>15</sup> Vgl. Standard & Poor's Ratings Services, Einblicke in den deutschen Mittelstand, S. 13 ([www.spratings.com](http://www.spratings.com); Abruf: 01.06.2020).

<sup>16</sup> *IDW Standard: Anforderungen an Sanierungskonzepte (IDW S 6)* (Stand: 16.05.2018).

<sup>17</sup> Vgl. IDW, Fragen und Antworten: Zur Erstellung und Beurteilung von Sanierungskonzepten nach IDW S 6 (F & A zu IDW S 6), IDW Life 2018, S. 847.

Sanierungspraxis bereits verwendet und können zur Identifizierung von Zombie-Unternehmen eingesetzt werden.

### **3. Zusammenhang zwischen Banken, Unternehmenssanierung und Zombie-Unternehmen**

#### **3.1. Unternehmenssanierung und Zombie-Finanzierung**

Alle zuvor genannten Gründe des Anstiegs von Zombie-Unternehmen (vgl. Kap. 1) beziehen sich auf das Verhalten von Banken als Kreditgeber, sofern sie Kredite an nicht nachhaltig bestandsfähige Unternehmen vergeben bzw. verlängern statt sie zu kündigen. Beispielsweise wird in einem EZB-Arbeitspapier<sup>18</sup> für elf EU-Länder (einschließlich Deutschland; Jahre von 2001 bis 2014) gezeigt, dass Zombie-Unternehmen vermehrt Kreditbeziehungen zu kapitalschwachen Banken aufweisen. Argumentiert wird, dass Zombie-Unternehmen entstehen, weil solche Banken Verluste aus Kreditkündigungen vermeiden möchten und deshalb zu nachsichtig gegenüber ihren Kreditnehmern agieren.<sup>19</sup> In der Corona-Krise hingegen können Staatsgarantien für Notfallkredite Anreize für Kreditgeber setzen, nicht bestandsfähige Unternehmen weiter zu finanzieren, wenn sich dadurch etwa die Sicherung des Engagements verbessert. Außerdem könnte – z.B. gesellschaftlicher oder politischer – Druck zur Rettung angeschlagener Unternehmen bestehen. Bezogen auf Unternehmenssanierungen können Anreize für Banken entstehen, Sanierungspläne von Krisenunternehmen nachsichtiger zu überprüfen und in der Folge ungenügende Pläne zu finanzieren.

Übersicht 3 schematisiert, wie sich die verschiedenen Akteure in einer idealtypischen Unternehmenssanierung verhalten sollten: Krisenunternehmen benötigen von Banken Zugeständnisse für die Finanzierung und Sanierung der Krise (z.B. Stand-still, Stundung, Sanierungsfinanzierung).<sup>20</sup> Banken setzen die Erstellung eines Sanierungskonzepts als Entscheidungsgrundlage der Finanzierung voraus<sup>21</sup> und fordern die Einbindung von externen Sanierungsberatern zur Minimierung der bestehenden Informationsasymmetrie. Den Sanierungsberatern kommt eine zweigeteilte Rolle zu: Sie unterstützen einerseits das Krisenunternehmen (Auftraggeber) bei der Erstellung eines durchgreifenden

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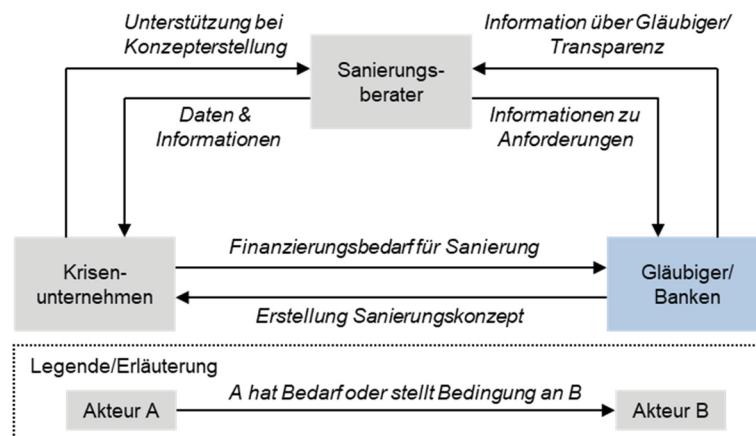
<sup>18</sup> Vgl. Andrews/Petroulakis, a.a.O. (Fn. 4), S. 1 f.

<sup>19</sup> Vgl. Andrews/Petroulakis, a.a.O. (Fn. 4), S. 1 f.

<sup>20</sup> Vgl. Wruck, JFE 1990, S. 421.

<sup>21</sup> Vgl. IDWS 6, Tz. 2.

Sanierungskonzepts und beurteilen es andererseits, um Transparenz und Sicherheit für die Banken herzustellen.<sup>22</sup> Banken stimmen einer Sanierung nur zu, wenn diese auf der Basis eines schlüssigen Sanierungskonzepts überwiegend wahrscheinlich ist.



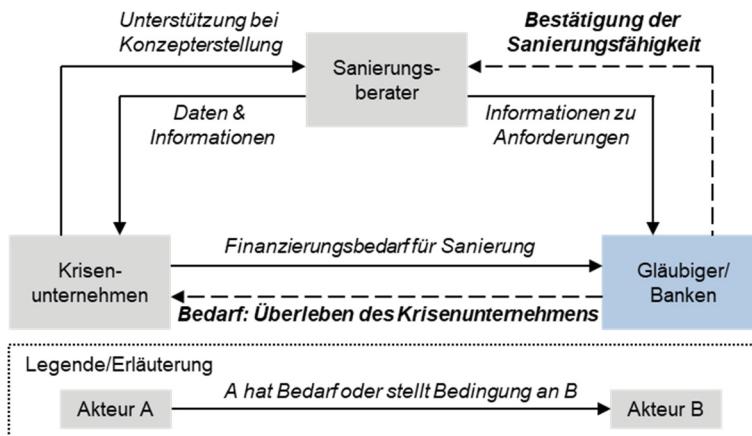
Übersicht 3: Verhalten von Unternehmen, Beratern und Banken in der Sanierung

Bleibt ein Sanierungsversuch erfolglos und überlebt das Krisenunternehmen aufgrund der Sanierungsfinanzierung trotz niedrigbleibender Profitabilität, kann ein Zombie-Unternehmen entstehen (oder bestehen bleiben). Erhöhte Anreize oder gar Druck auf Kreditgeber zur nachsichtigen Überprüfung und Finanzierung einer Sanierung können demnach einen Anstieg der Zahl von Zombie-Unternehmen bewirken. Da Sanierungskonzepte gemäß *IDW S 6* mitunter der rechtlichen Entlastung der Sanierungskreditgeber dienen<sup>23</sup>, könnten Banken solche Konzepte in diesem Kontext eher zur rechtlichen Bestätigung der Sanierungsfähigkeit als zur Erhöhung der Transparenz fordern. Bereits in den 1990er Jahren haben z.B. Banken in Japan Sanierungsverfahren genutzt, um angeschlagene Unternehmen finanziell zu retten, anstatt eine durchgreifende Sanierung zu fordern.<sup>24</sup> Die mögliche Verhaltensänderung von Banken schematisiert Übersicht 4.

<sup>22</sup> Vgl. IDW, Fragen und Antworten: Zur Erstellung und Beurteilung von Sanierungskonzepten nach IDW S 6 (F & A zu IDW S 6), IDW Life 2018, S. 832.

<sup>23</sup> Vgl. *IDW S 6*, Tz. 2.

<sup>24</sup> Vgl. Caballero/Hoshi/Kashyap, AER 2008, S. 1946 f.



Übersicht 4: Mögliche Verhaltensänderung von Banken im Fall von Zombie-Finanzierung

### 3.2. Die Rolle von Sanierungskonzepten und -beratern

In Abschnitt 3.1 wurde dargestellt, dass durch einen geänderten Fokus von Banken hin zur Rettung angeschlagener Unternehmen Zombie-Finanzierungen entstehen können. Im Folgenden soll die Bedeutung von Sanierungskonzepten gemäß *IDW S 6* sowie von Sanierungsberatern bei einer solchen Verhaltensänderung beschrieben werden.

*IDW S 6* stellt unter anderem folgende Anforderungen an Sanierungskonzepte und -planungen: Ein Unternehmen ist nur dann sanierungsfähig, wenn es im Planungszeitraum durchfinanziert ist und die Wettbewerbsfähigkeit nachhaltig wiedererlangt werden kann. Diese muss in der Sanierungsplanung zum Ende des Prognosezeitraums erreicht werden. Die Sanierung muss überwiegend wahrscheinlich sein.<sup>25</sup> Dementsprechend hat der Konzeptersteller – d.h. der Wirtschaftsprüfer bzw. Sanierungsberater<sup>26</sup> – eine Einschätzung zur Sanierungsfähigkeit und zur Plausibilität der zugehörigen Annahmen vorzunehmen.<sup>27</sup> Der Sanierungspfad samt Maßnahmen ist in einer integrierten Sanierungsplanung darzustellen und anhand geeigneter Kennzahlen zu plausibilisieren.<sup>28</sup>

Jedes Konzept enthält demnach eine Planung, die die Genesung des Unternehmens sowie plausible Planprämissen aufzeigt. Ein Sanierungskonzept, das nur einen dieser Bestandteile aufweist, entspricht daher nicht den Anforderungen von *IDW S 6* (vgl.

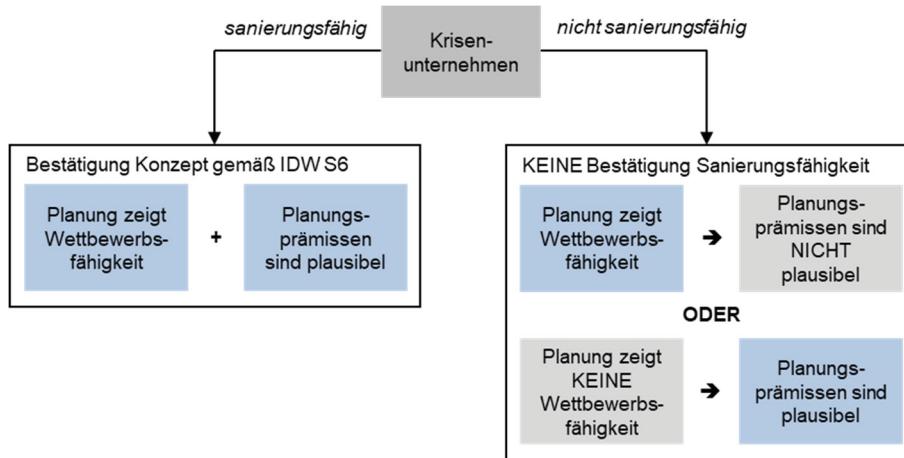
<sup>25</sup> Vgl. *IDW S 6*, Tz. 19 f.

<sup>26</sup> Im Folgenden wird ausschließlich von Sanierungsberatern gesprochen, da nicht nur Wirtschaftsprüfer als solche arbeiten.

<sup>27</sup> Vgl. *IDW S 6*, Tz. 91.

<sup>28</sup> Vgl. *IDW S 6*, Tz. 72 f.

Übersicht 5) und kann nicht zur Bestätigung der Sanierungsfähigkeit verwendet werden. Insofern können Sanierungskonzepte gemäß *IDW S 6* in Deutschland nicht zur Bestätigung und Entlastung von Zombie-Finanzierungen verwendet werden.



Übersicht 5: Kernanforderungen an Sanierungsplanungen

Infolge der Corona-Krise könnten Sanierungssituationen entstehen, in denen sowohl das Krisenunternehmen als auch die finanziierenden Banken vor allem die finanzielle Rettung des Unternehmens anstreben (vgl. Übersicht 4). Falls dabei die Sanierungsstrategien von den Akteuren nachlässig behandelt werden, steigt die Bedeutung von Sanierungsberatern: Im Idealfall können sie die Akteure in Sanierungsverfahren von der Erarbeitung durchgreifender Sanierungsstrategien überzeugen und damit ggf. der Entstehung von Zombie-Unternehmen entgegenwirken.

#### 4. Implikationen für die Sanierungspraxis

##### 4.1. Praxistaugliche Definition zur Identifizierung von Zombie-Unternehmen

Zur Identifizierung von Zombie-Unternehmen reicht in der Praxis – vor allem im Niedrigzinsumfeld – ein anhaltend niedriger Zinsdeckungsgrad (z.B. drei Jahre in Folge) nicht aus. Mithilfe der Verschuldungsdauer kann unabhängig vom Zinsniveau eine zu hohe Abhängigkeit eines Unternehmens von seinen finanziierenden Banken überprüft werden. Der gewählte Grenzwert sollte hier mindestens bei größer fünf Jahren liegen (vgl. Abschnitt 2.2), z.B. bei größer sieben Jahren. Auf der Basis einer exemplarischen Verschuldungsdauer von sieben Jahren lässt sich dann folgende Definition ableiten:

„Bei einem Unternehmen, das drei Jahre in Folge einen Zinsdeckungsgrad von kleiner als eins oder eine Verschuldungsdauer von größer als sieben Jahren aufweist, handelt es sich um ein Zombie-Unternehmen.“

Diese Definition lässt sich nicht nur bei Sanierungsplanungen, sondern auch bei der Darstellung der wirtschaftlichen Ausgangslage oder allgemein bei Unternehmensanalysen anwenden. Je nach Branche und Kontext können dafür die Grenzwerte ggf. angepasst werden. Ziel ist herauszufinden, ob ein Unternehmen bestands- und leistungsfähig ist oder aufgrund einer ungesunden Bankenbeziehung fortbestehen kann.

#### **4.2. Sanierungsberatung im Umfeld von Zombie-Finanzierung**

In Kap. 3 wurde gezeigt, dass es durch eine veränderte Anreizsituation von Banken im Kontext von Corona-Staatshilfen zu vermehrter Zombie-Finanzierung kommen kann. Es besteht die Gefahr, dass die Rettung eines Krisenunternehmens in den Bankenfokus rückt und die Sanierungsstrategie zu nachsichtig geprüft wird. Für die Sanierungspraxis kann dies möglicherweise bedeuten, dass bei einzelnen Aufträgen sowohl die finanzierenden Banken als auch das Krisenunternehmen eine Bestätigung eines unzureichenden Sanierungskonzepts erwarten.

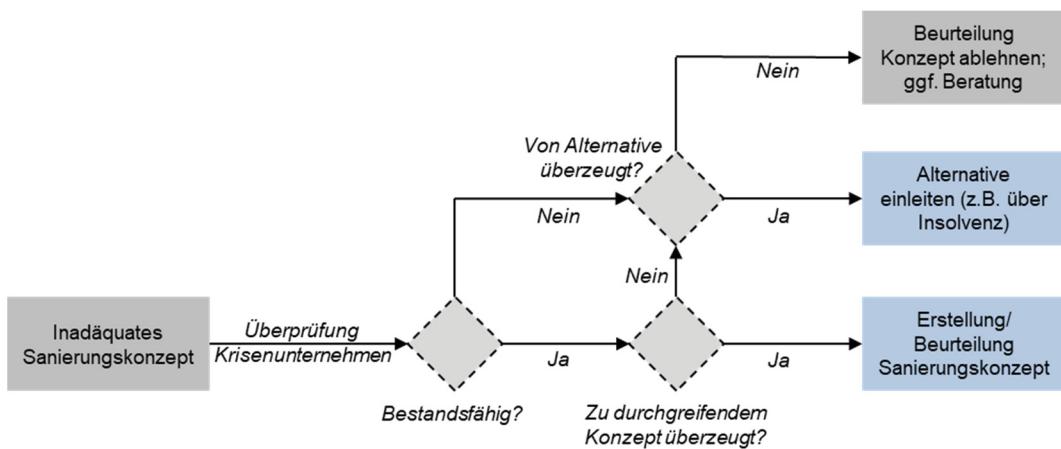
Sanierungsberater können (und sollten) sich in einer solchen Situation auf die Anforderungen des *IDW S 6* berufen und sich der Haftungs- und Anfechtungsrisiken<sup>29</sup> vergegenwärtigen. Dennoch droht in der Folge womöglich das Ende der Kundenbeziehung sowie die Abkühlung der Netzwerkbeziehung zu den involvierten Banken. In diesem Kontext können sich Sanierungspraktiker ihre zweigeteilte Funktion bewusst machen – sie sind nicht nur gutachterlich, sondern auch beratend für das Krisenunternehmen tätig.

Ist ein Krisenunternehmen nicht bestandsfähig, können statt eines Sanierungsgutachtens Alternativen beratend beschrieben und eingeleitet werden (z.B. Fortführung über Insolvenzverfahren). Handelt es sich hingegen um ein bestandsfähiges Unternehmen mit ungenügender Sanierungsstrategie, kann ebenso beratend eingegriffen werden. Wird das

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<sup>29</sup> Vgl. Jacoby, Sanierungsberater zwischen Haftungsrisiko und Honoraranfechtung, 17.02.2017, S. 11 ff. ([www.jura.uni-bielefeld.de](http://www.jura.uni-bielefeld.de); Abruf: 01.06.2020).

Krisenunternehmen von der Erarbeitung eines überwiegend wahrscheinlichen Sanierungskonzepts überzeugt, kann dieses in der Folge begutachtet werden. Andernfalls ist die Erstellung/Beurteilung eines Sanierungskonzepts abzulehnen und auf Alternativen hinzuweisen. Stellt sich erst im Laufe eines Mandats heraus, dass das Unternehmen nicht sanierungsfähig ist, ist darauf in etwaigen Berichten klar hinzuweisen. Darüber hinaus können Alternativen beschrieben und eingeleitet werden. Die Möglichkeiten von Sanierungsberatern schematisiert Übersicht 6.



Übersicht 6: Mögliche Vorgehensweise von Sanierungsberatern bei Gefahr der Zombie-Finanzierung

#### 4.3. Anreize zum langfristigen Reputationserhalt der Sanierungsberater

Die zweigeteilte Rolle der Sanierungspraxis setzt Anreize, dass Sanierungsberater trotz möglicher Nachteile für einzelne Kunden- und Netzwerkbeziehungen (vgl. Abschnitt 4.2) die Annahme zweifelhafter Aufträge ablehnen: Die Bestätigung ungenügender Sanierungskonzepte kann zu einem langfristigen Reputationsverlust sowohl bei gutachterlichen als auch bei beratenden Tätigkeiten bzw. Aufträgen führen. Wird hingegen die Beurteilung ungenügender Konzepte abgelehnt, wirkt sich dies nicht zwangsläufig negativ auf das Auftragsvolumen für beratende Tätigkeiten aus. Im Gegenteil kann das Beratungsvolumen erhöht werden, wenn Alternativen erfolgreich beschrieben und eingeleitet werden. Insofern ist es für Sanierungspraktiker vorteilhaft, eine klare Trennung zwischen beratenden und gutachterlichen Tätigkeiten vorzunehmen und sich bei kritischen Aufträgen auf die Beratung zu fokussieren.

## 5. Zusammenfassung

Die wirtschaftlichen Folgen der Corona-Krise können zu einem Anstieg von eigentlich nicht bestandsfähigen Zombie-Unternehmen führen. Eine bedeutende Rolle spielen dabei Banken, die solche Unternehmen durch fortlaufende Krediterhaltung bzw. -verlängerung am Leben erhalten könnten. Für Sanierungspraktiker ergeben sich folgende Implikationen:

- (1) Zombie-Unternehmen lassen sich anhand der Kennzahlen Zinsdeckungsgrad (< 1) und Verschuldungsdauer (z.B. > 7 Jahre) identifizieren. Entscheidend ist dabei nicht eine Stichtagsbetrachtung, sondern eine dauerhafte Verletzung der Grenzwerte (z.B. mindestens drei Jahre in Folge).
- (2) Corona-Staatshilfen und ggf. gesellschaftlicher oder politischer Druck können zu Anreizen für Banken zur finanziellen Rettung angeschlagener Unternehmen und einer nachsichtigen Überprüfung der zugrundeliegenden Sanierungsstrategien führen. Werden in der Folge angeschlagene Unternehmen nicht durchgreifend saniert, können sich daraus Zombie-Unternehmen entwickeln. In solchen Fällen haben Sanierungsberater eine wichtige Rolle, wenn sie beratend auf die Akteure von Sanierungsverfahren einwirken: Im Idealfall können Krisenunternehmen und involvierte Banken von einer durchgreifenden Sanierungsstrategie überzeugt und somit die Entstehung von Zombie-Unternehmen verhindert werden.
- (3) Die Struktur der deutschen Sanierungspraxis setzt Anreize, dass Sanierungsberater trotz möglicher Nachteile für einzelne Kunden- und Netzwerkbeziehungen zweifelhafte Aufträge zugunsten des langfristigen Reputationserhalts ablehnen. Darüber hinaus ermöglicht es die zweigeteilte Rolle von Sanierungsberatern (Gutachter oder Berater), das kurzfristige Entfallen gutachterlicher Aufträge über zusätzliche Beratungsleistungen zu kompensieren.

## Anhang

Aus Formel (1) lässt sich das EBITDA wie folgt ermitteln (Formel (3)):

$$EBITDA = ZDG * Zinsaufwand = ZDG * FK * i \quad (3)$$

Durch Einsetzen von Formel (3) in Formel (2) gilt Formel (4):

$$VD = \frac{FK}{ZDG * Zinsaufwand} = \frac{FK}{ZDG * FK * i} = \frac{1}{ZDG * i} \quad (4)$$

Bei einer gegebenen Untergrenze des Zinsdeckungsgrads ( $ZDG_U = 1$ ) und Umformung nach  $i$  gilt Formel (5):

$$i = \frac{1}{ZDG_U * VD} = \frac{1}{VD} \quad (5)$$

Damit ist z.B. eine Verschuldungsdauer von sieben Jahren ab einer Verzinsung von ca. 14,3% (= 1/7) das strengere Kriterium zur Identifizierung von Zombie-Unternehmen als ein Zinsdeckungsgrad von eins.

Die Verzinsungsgrenzen in Relation zur Verschuldungsdauer (ein bis zwölf Jahre) zeigt Übersicht 7.

Verschuldungsdauer	Zinssatz i
<b>1</b>	100,0%
<b>2</b>	50,0%
<b>3</b>	33,3%
<b>4</b>	25,0%
<b>5</b>	20,0%
<b>6</b>	16,7%
<b>7</b>	14,3%
<b>8</b>	12,5%
<b>9</b>	11,1%
<b>10</b>	10,0%
<b>11</b>	9,1%
<b>12</b>	8,3%

Übersicht 7: Verzinsungsgrenzen relativ zum Grenzwert der Verschuldungsdauer

## Corporate Social Performance and the Likelihood of Bankruptcy: Evidence from a Period of Economic Upswing

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**Abstract:** The paper aims to investigate the effects of corporate social performance (CSP) on bankruptcy likelihood in times of economic upswing. This is important because prior related literature focused on data containing times of economic crises. We measure bankruptcy likelihood with the Altman Z score and CSP with Refinitiv ESG scores. By applying static panel data regressions and instrumental variable regressions on a sample of 6,696 US-firm-year observations from 2010 to 2019 our main findings are: (i) In contrast to existing research, the level of firms' CSP seems to have no (positive) effect on the likelihood of bankruptcy during times of economic upswing. (ii) Increasing a firm's CSP in times of economic upswing leads to a rise in bankruptcy likelihood. We conclude that the positive effects of CSP on stakeholder relationships fail to materialize in flourishing business environments. The costs of increasing CSP, thus, exceed their immediate positive effects and raise bankruptcy likelihood. However, as they reduce financial default risk in subsequent crises, CSP investments can be seen as a balancing measure. Our findings bear implications for scholars, practitioners, and policymakers.

**Keywords:** Corporate social performance; bankruptcy; ESG ratings; Altman Z score; stakeholder theory, corporate financial performance

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## 1. Introduction

For several years, sustainability and the concept of corporate social responsibility has received growing attention in society. As a result, firms face increasing pressure to conduct their business sustainably, i.e., to increase their corporate social performance (CSP) (Baldini et al., 2018). For instance, in 2020, institutional investors publicly accused supervisory boards of failing to address environmental, social, and governance (ESG) issues sufficiently, i.e., to increase CSP (Köhler & Landgraf, 2020). Furthermore, they attested firms to pursue inadequate risk assessment around those issues (Mooney et al., 2020). Thus, these investors assume that low CSP connects to firm risk. If this holds true, firms neglecting ESG topics face a higher financial distress risk and, therefore, a higher bankruptcy likelihood (BL). For this reason, we investigate whether a sustainable way of doing business or – in other words – investment in ESG endeavors (i.e., increasing CSP) connects to the likelihood of bankruptcy.

While numerous studies observed CSP from an angle of financial success (Friede et al., 2015), there has been only scant research on the association between CSP and bankruptcy, i.e., financial failure. In this strand of literature, most studies have focused on the effect of CSP related to negative events. Such an event can be linked to the firm (Godfrey et al., 2009, competitive events and stakeholder-based negative events), social responsibility crises (Blacconiere & Patten, 1994, e.g., Bhopal catastrophe; Lins et al., 2017, e.g., Enron/Worldcom crisis), or other exogenous events affecting the whole economy such as the global financial crisis in 2008 (Kemper & Martin, 2010; Lins et al., 2017). Even fewer studies examined the relationship between CSP and the likelihood of bankruptcy. In a recent study, Cooper and Uzun (2019) applied a potential approach to do so. They compared 78 US firms that filed for Chapter 11<sup>1</sup> with matched counterparts (i.e., similar firms that did not file for Chapter 11) during the period 2007 to 2014. Besides, Boubaker et al. (2020) used a more robust sample of 1,201 US-listed firms and the Altman Z score (Z score) as a proxy for financial distress risk (FDR), during 1991–2012. In this vein, Lin

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<sup>1</sup> Chapter 11 of the US bankruptcy code allows a firm in distress to reorganize and to resolve its distress within a bankruptcy process by temporarily providing protection from its creditors and measures to negotiate with them; see, e.g., Nigam and Boughanmi (2017).

and Dong (2018) applied a logistic regression model incorporating observations between 2000 and 2014. All three studies show positive effects of CSP on BL.

However, while the data of each study includes at least one big economic crisis, the present study examines the effect of CSP on BL during a period of economic upswing. The need to conduct such a study arises since CSP tends to show different effects in different stages of an economic cycle and, consequently, may bias the previously mentioned studies. For instance, Lins et al. (2017) show that high CSP led to higher stock returns, profitability, growth, and sales per employee during the global financial crisis for the years 2008 and 2009. Moreover, Ducassy (2013) has found a positive effect of CSP on corporate financial performance (CFP) at the beginning of the financial crisis in 2007, while the effect disappeared after the first 6 months of the crisis. In this vein, two recent studies highlight the heterogeneous effect of CSP on firm risk during crises and “normal” times (Bouslah et al., 2018; Broadstock et al., 2021). The authors provide evidence that the positive effect of CSP is high in times of crisis but diminishes in importance afterwards. Consequently, since no study so far has examined the effect of CSP on BL in times of economic prosperity, we address this gap in literature by conducting this study.

For this reason, we use a panel dataset from Thomson Reuters (TR) Eikon containing 6,696 observations of large US-listed firms during the period 2010 to 2019. We measure CSP with Refinitiv ESG scores. Since Refinitiv rates firms overall and in the respective ESG pillar, we are able to follow current studies (e.g., Dyck et al., 2019; Ferrell et al., 2016) and investigate the relationship on a more granular basis. The main dependent variable for predicting the likelihood of bankruptcy is the Z score. By applying this metric, we gain two advantages. First, we apply a high-quality measure for future BL (Altman, 1968; Altman et al., 2017). Second, since the Z score is available for many publicly listed firms, we employ a robust sample as conducted in Boubaker et al. (2020). In contrast to that study, we use Refinitiv ESG scores to investigate the relationship between bankruptcy and CSP. We introduce and address the advantages of Refinitiv ESG scores in the further course of the paper.

Our main results of fixed effects panel data regressions are twofold: First, we find evidence that during times of economic growth, the CSP level does not affect the Z score, i.e., the likelihood of bankruptcy (except for a negative effect in the governance pillar).

Second, increasing the CSP level during times of upswing lowers the Z score, i.e., inflates BL. The main driver for this effect can be attributed to the social pillar. This is in line with our hypothesis suggesting that investing in stakeholder relationships may not pay off in a flourishing economic environment as distressed firms do not rely on loyal stakeholders to resolve their distress during such times. To address endogeneity and consequently strengthen the reliability of our findings, we conduct several robustness tests, amongst them an instrumental variable approach. In addition, we test the CSP-BL relationship for times of crisis (i.e., the financial crisis; period from 2007 to 2009) and find that a higher level of overall CSP, environmental, and social performance decreases BL. Consequently, the robustness tests results support the results of the existing studies on times of downturn (in particular, Boubaker et al., 2020; Cooper & Uzun, 2019) and strengthen our findings for times of upswing.

We contribute to the existing literature as follows. First, we provide novel insights on the CSP-CFP relationship by focusing on times of economic upswing and using BL as an indicator for financial failure. Second, in contrast to prior research (Boubaker et al., 2020; Cooper & Uzun, 2019), the present study is the first to show that in times of upswing, increasing CSP does not mitigate BL but rather increases it. However, we are able to fit our results into the context of the existing literature: While in tough economic times, a high CSP level reduces BL due to increased support from stakeholders, these effects diminish in the beneficial environment of an upswing. Hence, the positive effects of CSP cannot compensate the costly CSP investments in “good” times; however, they may mitigate financial default risk in subsequent crises. Third, as prior studies only addressed bankrupt firms (which results in a small sample size, e.g., Cooper & Uzun, 2019) or applied factorial variables for CSP (e.g., Boubaker et al., 2020; Lin & Dong, 2018), we provide novel insights by using a representative and robust sample of 6,696 firm-year observations. Refinitiv ESG scores have been used as a continuous CSP measure in panel data and instrumental variable regressions as conducted in Cheng et al. (2014) as well as Aouadi and Marsat (2018). Finally, this study opens up space for further research in the CSP-bankruptcy literature. We provide novel insights on stakeholder theory in the context of economic conditions but also point *inter alia* to institutionalization theory as an alternative approach to be examined in future research. Furthermore, as we differentiate

between the effects of the individual ESG pillars and consider firm size and FDR, we offer researchers a starting point for investigating particular effects of CSP.

The remainder of this paper is structured as follows. In the “Literature Review, Theory, and Hypothesis Development” section, we provide a literature review of how corporate sustainability can affect BL. Furthermore, we develop our research hypotheses. In the “Data and Methodology” section, we present the data and introduce the applied research methodology. The “Results” section shows the results of the empirical analyses. In the “Robustness Tests” section, we conduct several robustness tests to address endogeneity. We discuss the implications of the results in the “Discussion” section and conclude the paper in the “Conclusion” section.

## **2. Literature Review, Theory, and Hypothesis Development**

### **2.1. Related Literature**

As described in the introduction, numerous studies have observed CSP from an angle of financial success. However, there is only scant literature examining the effect of CSP on financial failure, i.e., the likelihood of bankruptcy. When considering financial success, there are two main rival theories<sup>2</sup> explaining the effects of CSP on CFP: shareholder and stakeholder theory. First, shareholder theory was established in the middle of the twentieth century and culminated in the 1970 article “The Social Responsibility of Business Is to Increase Its Profits” by *Milton Friedman* (Flammer, 2015; Friedman, 1970). According to this theory, ESG investments are considered as additional costs and harmful for shareholders. As a result, CSP lowers CFP. In this context, agency theory offers an explanation why firms nonetheless engage in CSP: Managers (i.e., agents) might promote a firm’s social engagement contrary to shareholders’ (i.e., principals) interests and CFP because of the pressure of non-invested outsiders. Besides, managers may act socially responsible due to their preferences or for personal benefits (Dyck et al., 2019; Ferrell et al., 2016; Jensen & Meckling, 1976). In contrast to that, stakeholder theory argues that the interests of numerous parties, such as customers, suppliers, employees, or creditors, are essential for a firm to prosper (Freeman, 1984).

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<sup>2</sup> Current literature provides additional theories (e.g., signaling theory) for the CSP-CFP relationship. However, a holistic discussion of all these theories is beyond the scope of this paper.

Empirical results support both of these rival theories. While many studies pronounce the value-enhancing effect of CSP (Friede et al., 2015; Margolis & Walsh, 2003), some studies indicate negative (Orlitzky, 2015; Zhao & Murrell, 2016) or neutral effects (Garcia-Castro et al., 2010). Methodological concerns, such as variable selection or model misspecifications, might be responsible for these inconclusive findings (Flammer, 2015; Servaes & Tamayo, 2013). In sum, studies providing evidence for a positive effect of CSP on CFP outweigh the studies reporting neutral or negative effects (Friede et al., 2015). Vishwanathan et al. (2020) provide four value-creating mechanisms of CSP to explain this positive effect: enhancing firm reputation, increasing stakeholder reciprocation, mitigating firm risk, and strengthening innovation capacity.

Turning to financial distress, one strand of literature examines the role of corporate governance and the likelihood of bankruptcy. In particular, the existing research focuses on the effects of board characteristics (Darrat et al., 2016; Fich & Slezak, 2008; Platt & Platt, 2012) and ownership (Parker et al., 2002; Robinson et al., 2012). However, other studies emphasize that the governance pillar plays a different role compared to the other ESG pillars (Fabrizi et al., 2014; Kim et al., 2012; Lin & Dong, 2018), e.g., as many governance measures are being used without the intention to increase CSP. For this reason, the respective authors did not consider the governance pillar in their research. We aim to solve this challenge by investigating and interpreting the results from each pillar separately.

Another strand of literature focuses on the effects of management and leadership (i.e., aspects of the social and governance pillar of ESG) as a measure in ongoing distress situations. Sudarsanam and Lai (2001) as well as Jostarndt and Sautner (2008) suggest that top management change is an essential measure in turnaround situations. This is in line with the findings of Bogan and Sandler (2012); the authors state that management change is the most important success factor in Chapter 11 bankruptcy processes. Furthermore, Meyer (2004) highlights the importance of leadership and communication skills (i.e., stakeholder management) in situations of strategic change. Accordingly, successful management change to resolve distress (i.e., to reduce BL) connects to social factors as managers motivate employees and strengthen the trust of stakeholders.

However, there is little research on how a holistic approach considering all three ESG pillars affects the likelihood of bankruptcy.

As described in the introduction, some studies focus on CSP and the occurrence of negative events, but few studies examine CSP and BL. Three current studies investigated the topic but used data that includes periods of economic crises. First, Lin and Dong (2018) used the Z score to identify financially distressed firms and conduct logistic regressions to examine how CSP affects BL. Second, Cooper and Uzun (2019) studied whether CSR efforts reduce the probability of going bankrupt by applying t-tests and logistic regression on a matched sample of bankrupt and comparable non-bankrupt firms. Both studies show that higher CSP leads to lower BL. Finally, Boubaker et al. (2020) assessed the level of FDR, including CSP measures. The authors applied three different proxies for FDR (Z score, O score, and ZM score; for a detailed description see Boubaker et al., 2020) and show that higher CSP lowers BL, regardless of the proxy they apply. Consequently, CSP seems to have positive effects on BL when observing periods including economic downturn or turmoil.

In this context, it is necessary to define economic upswing and downturn for this study. Economic or business cycle theory is a topic discussed from many perspectives in economics over several decades (see, e.g., Lucas, 1980; McGrattan & Prescott, 2014). For the scope of this paper, we settle for the definition of the National Bureau of Economic Research (NBER). According to the NBER, an economy is normally in the state of expansion (upswing), but faces phases of recession (downturn) measured as times between a peak and lowest point. Economic activity can be tracked with the gross domestic product. In a recession, unemployment is higher, while income and aggregate demand are lower than in expansion times (NBER, 2021).

## 2.2. Hypothesis Development

Bankruptcy occurs when a firm in financial distress is unable to meet its obligations (i.e., to repay its due liabilities) and, as a result, enters a collective proceeding. The proceeding aims to settle the competing claims of the firm's creditors (Baird, 1987). Financial distress is caused by internal failure (i.e., poor management), industry decline, or economic distress (Wruck, 1990), such as the global financial crisis or COVID19-pandemic. In the context of economic conditions or cycles, this means that in times of economic upswing,

fewer firms (i.e., only firms showing internal failure or industry decline) should face problems concerning bankruptcy while in times of economic crisis, many firms face problems due to external causes.

While a firm is unable to influence external causes, its management can reduce the likelihood of bankruptcy by conducting countermeasures at an early stage of distress (Whitaker, 1999). In other words, transparent internal structures (i.e., governance) may enable the management to detect emerging distress at an early stage and resolve it without entering a formal bankruptcy process. Furthermore, in line with the value-creating mechanisms of stakeholder theory, high CSP may increase the feasibility of countermeasures, e.g., due to higher stakeholder reciprocation and innovation capacities. Particularly, the mechanism of improved key stakeholder engagement connects FDR with CSP (Boubaker et al., 2020). CSP might reduce BL through positive effects in each of the three ESG pillars:

(i) Investments in environmental measures (i.e., in more sustainable supply and value chains) should reduce BL as they improve environmental firm performance and, thus, reduce the risk of losing reputation (Liang & Renneboog, 2017). Furthermore, investments in sustainability might increase the resilience of supply chains due to more loyal and reliable stakeholders, especially suppliers (Hofmann et al., 2018; Vishwanathan et al., 2020), fostering stability when dealing with emerging distress. (ii) Consistent investments in social measures increase the motivation and collaboration of employees, management, and other stakeholders (De Roeck et al., 2016; Edmans, 2011; Scheidler et al., 2019). On the one hand, these investments might decrease the firm risk of internal failure due to higher management motivation and social awareness. On the other hand, highly motivated employees and other stakeholders (such as customers and suppliers) should act more loyal and innovative (Flammer & Kacperczyk, 2016; Vishwanathan et al., 2020) when dealing with emerging distress. As a result, a socially responsible firm may exhibit a higher probability to resolve distress without filing for bankruptcy. (iii) Improving internal governance structures tends to increase transparency (i.e., reduce information asymmetry) and enables to detect potential distress situations at an early stage (Cheng et al., 2014). Besides, such structures can decrease the possibility of poor and short-term-oriented management (i.e., firm risk; see, e.g., Vishwanathan et al., 2020)

leading to distress. Moreover, transparent structures (with the meaning of communication and cooperation) may foster mutual trust to/of stakeholders (e.g., banks) and, thus, improve high CSP firms' access to financing (El Ghoul et al., 2017; Lee & Faff, 2009).

However, in times of economic upswing, firms may prevent filing for bankruptcy irrespective of their CSP level: A small number of firms in distress coincides with high aggregate demand and credit supply compared to a downturn. Consequently, we argue that firms in distress do not depend on loyal stakeholders, such as creditors, suppliers, and customers, helping to resolve the distress as there simply are many stakeholders around willing to lend and spend money. Therefore, positive effects of CSP on BL might only appear in times of economic recession in which more firms face distress situations and have to convince stakeholders (possibly facing problems themselves) to support them. This is in line with previous studies providing evidence that CSP reduces firm risk in times of crises but that these effects diminish in importance afterwards (Bouslah et al., 2018; Broadstock et al., 2021). It follows that a high level of CSP may reduce BL in times of economic crisis, but not in times of economic upswing. Therefore, we propose the following hypothesis:

**H1:** In times of economic upswing, the level of a firm's CSP (overall as well as in each respective ESG pillar) does not affect its likelihood of bankruptcy.

We further identify a reason justifying the examination of CSP percentage change as a variable of interest. As investing in CSP evokes costs (Cheng et al., 2014; Servaes & Tamayo, 2013), it reduces firms' available funds and, therefore, initially increases the likelihood of bankruptcy. Only in the case of a subsequent positive effect on stakeholders, the net effect of a CSP increase may be positive (McWilliams & Siegel, 2001). Hence, if such positive effects of CSP are only present in times of crisis, investments in ESG endeavors increase firms' BL in times of economic upswing. For this reason, we want to examine the effect of CSP change and propose the following hypothesis:

**H2:** In times of economic upswing, an increase in a firm's CSP level (overall as well as in each respective ESG pillar) increases its likelihood of bankruptcy.

### 3. Data and Methodology

#### 3.1. Sample Description

This paper improves upon prior CSP-bankruptcy research, which has either a limited number of observations or solely categorical indicators for CSP, by using a robust sample and a continuous measure for CSP overall and in the respective ESG pillars. For the sample selection process, we started with data of the whole TR Eikon US universe, i.e., approx. 2,400 publicly-listed US-firms. Due to missing values, especially for the Z and the ESG scores, the final sample includes a panel of 6,696 firm-year observations (i.e., 1,215 firms) listed in the US from 2010 to 2019; the whole period is classified as a time of economic upswing (NBER, 2021). We collected firm-level data, such as total assets or total debts, from TR Eikon and dropped financial institutions due to their unique capital structure and different treatment of leverage (Brav, 2009; Kim et al., 2014). Further, we removed all observations with missing values and winsorized the variable Z scores at the 1st and 99th percentiles. Moreover, to mitigate the influence of outliers and receive a more symmetric distribution in the data, specific variables such as total assets were transformed with the natural logarithm. In Appendix 1, Table 7 provides an overview of all applied variables.

#### 3.2. Measuring CSP

We measured a firm's CSP with Refinitiv ESG scores retrieved from the TR Eikon database. Refinitiv ESG scores are widely used in literature (see amongst others: Dyck et al., 2019; Garcia et al., 2017; Ioannou & Serafeim, 2012), are less prone to selection bias, and show more relevant results in terms of variability and distribution than comparable ESG ratings (Desender & Epure, 2015; Dorfleitner et al., 2015; Ioannou & Serafeim, 2011). Refinitiv ESG scores cover 80% of global market capitalization and use data from the public domain, e.g., annual reports, NGO websites, and news sources for evaluation. ESG specialists and algorithms analyze over 400 metrics throughout the evaluation process. Refinitiv assesses the environmental pillar performance by the categories: resource use, emissions, and innovation; the social pillar: workforce, human rights, community, and product responsibility; the governance pillar: management, shareholders, and CSR strategy. Each category contains several subcategories with industry-specific weights (for a detailed description, see Table 1 and Refinitiv, 2021). In this study, we

used both the overall ESG score and the three ESG pillar scores. All scores range from 0 to 100, where 0 is the worst possible performance while 100 shows the best possible performance. In sum, we are confident that we received a high-quality CSP measure and high ESG data density within the sample. Figure 1 provides a boxplot showing the average overall ESG and pillar performance by industry, respectively.

Table 3: REFINITIV ESG score categories, measures, and weights

<b>Environmental</b>			
Category	Resource use	Emissions	Innovation
Number of measures	20	22	19
Weights	11 %	12%	11%
<b>Social</b>			
Category	Workforce	Human rights	Community
Number of measures	29	8	14
Weights	16 %	4.5 %	8 %
<b>Governance</b>			
Category	Management	Shareholders	CSR strategy
Number of measures	34	12	8
Weights	19 %	7 %	4.5 %

The table exhibits the three pillars of ESG, namely environment, social, and governance. Further, it shows the determined categories in each pillar, the number of measures in each category, and the overall weight in the REFINITIV ESG score. Source: Author's illustration based on Refinitiv (2021).

Moreover, based on our hypotheses, we were also interested in the annual percentage change in CSP, i.e., overall and in the respective pillar. We downloaded the data from the TR Eikon database and saved them in the respective delta variable, e.g., *ESGDelta* or *EnvDelta*.

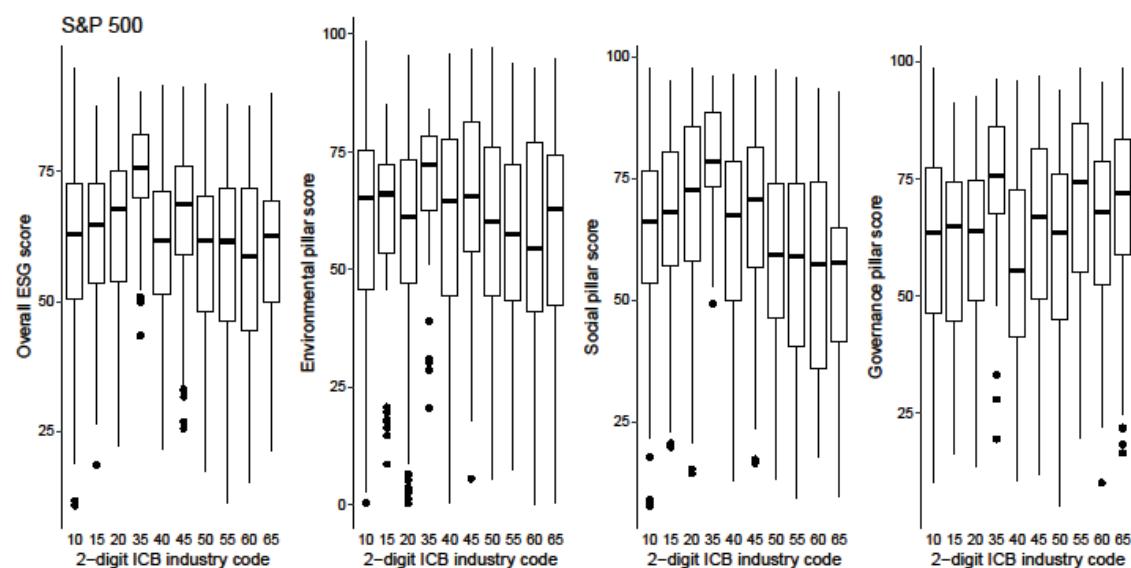


Figure 2: Boxplot of ESG performance by industry

For ICB code description see Appendix 1 and [www.ftse.com/products/downloads/ICB\\_Rules\\_new.pdf](http://www.ftse.com/products/downloads/ICB_Rules_new.pdf)

### 3.3. Measuring the Probability of Bankruptcy

While Cooper and Uzun (2019) measured bankruptcy with the actual default of a firm, we followed Richardson et al. (2015) and Boubaker et al. (2020) by using the Z score as a predictor of BL. Several reasons support this approach: (i) our objective is to investigate how CSP affects BL and not whether it leads to bankruptcy, since there might be firms using strategic bankruptcy at an early distress stage while others wait as long as possible (James, 2016); (ii) the measure is based on a profound theoretical framework (Altman, 1968); (iii) in general, Z score models outperform hazard and market-based models (Boubaker et al., 2020); (iv) the results of a recent longitudinal study strongly support the usefulness of the Z score (Altman et al., 2017). The Z score uses a multivariate formula approach to predict the financial health of a firm. Five business ratios are calculated and weighted through the formula based on the Altman framework (for a more detailed and formalistic description, see Boubaker et al., 2020). The Z score is a continuous measure and indicates a high bankruptcy probability for firms with a score below 1.88. Firms that show a value between 1.88 and 2.99 are questionable, while a value above 2.99 signifies a low default risk.

### 3.4. Empirical Strategy

The empirical strategy of this study includes fixed effects regressions as they show less restriction than random effects models. We performed within-group transformation to eliminate the time-invariant effects ( $\alpha_i$ ) to conduct firm-level analyses cross-sectionally and over time. Nevertheless, we also performed the *Hausman* test to verify that a fixed effects model is more appropriate than a random effects model (Harrison & Berman, 2016). Moreover, we argue that ESG scores do not show much variation for a specific firm over time, while the scores vary widely cross-sectional. Consequently, to avoid the risk of ruling out the effect of ESG pillar scores on firm-level, we used industry fixed effects rather than firm fixed effects (Arouri & Pijourlet, 2017; Servaes & Tamayo, 2013).

In terms of heteroskedasticity, we conducted the *Breusch-Pagan* test. Accordingly, robust and clustered standard errors were employed. To alleviate endogeneity concerns, i.e., reverse causality concerns, the explanatory variables and control variables in our models are lagged one period (Fernando et al., 2017; Flammer, 2015). The base model (1) can be illustrated as follows:

$$ZScore_{i,t} = \beta_0 + \beta_1 CSP_{i,t-1} + \beta_2 controls_{i,t-1} + \eta_j + \theta_t + \varepsilon_{i,j,t} \quad (1)$$

$ZScore_{i,t}$  represents the dependent variable indicating the probability of bankruptcy within 2 years. To test our hypotheses, the coefficient of interest is  $\beta_1$ . Furthermore, established control variables for leverage, size, profitability, and liquidity were stored in the vector  $controls_{i,t}$  (Cooper & Uzun, 2019; for a detailed variable description see Table 7 in Appendix 1). In Eq. (1),  $i$  denotes the firm dimension,  $t$  is the time-series dimension,  $\eta_j$  are two-digit ICB industry fixed effects,  $\theta_t$  are year fixed effects, and  $\varepsilon_{i,j,t}$  denotes the error term. However, we are aware that by doing so we cannot ensure causality in our findings. For this reason, we address the remaining endogeneity concerns in the “Robustness Tests” section by inter alia running instrumental variable regressions as conducted in Cheng et al. (2014) and Aouadi and Marsat (2018).

## 4. Results

### 4.1. Descriptive Statistics and Correlations

Table 2 summarizes the descriptive statistics, including the number of observations (N), means (Mean), standard deviations (SD), minimums (Min), 25th percentiles (p25), medians (Median), 75th percentiles (p75), and maximums (Max). The dependent variable  $ZScore$  shows a high SD compared to the mean. This might be the result of outliers at both ends of the data (Min = -24.7041 and Max = 71.0269). However, the 25th and 75th percentile are close to the median. Regarding ESG ratings, on average firms perform best in the governance pillar (Mean = 49.8680), while the average performance is lowest in the environmental pillar (Mean = 32.0142). In each pillar, the scores vary widely. For instance, in the environmental pillar, the lowest score is 0.00, and the highest is 98.529. On average, firms improved their performance in the environmental pillar most (see Mean  $EnvDelta = 39.3177$ ) over the period 2010–2019. In sum, we did not observe issues that might lead to computational problems.

Table 4: Descriptive statistics

	N	Mean	SD	Min	p25	Median	p75	Max
ZScore	6696	6.7709	8.2212	-24.7041	2.4315	4.6444	8.0527	71.0269
ESGScore	6696	43.5267	20.1191	.7999	27.1125	40.8701	59.3362	95.0733
ESGDelta	6694	9.6892	64.3975	-98.6292	-4.3220	2.7959	14.6634	2909.8002
EnvPillar	6696	32.0142	29.1218	0	2.1702	26.5150	57.5544	98.5481
EnvDelta	5176	39.3177	409.0271	-100	-3.7423	1.8783	14.1844	19356.6680
SocPillar	6696	45.8473	21.3415	.8210	29.0851	42.9813	61.4571	97.7517
SocDelta	6694	10.4155	88.3525	-98.3954	-4.4444	1.1944	11.5659	4600.5330
GovPillar	6696	49.8680	23.0950	.2516	30.9318	50.2577	68.6550	98.7234
GovDelta	6694	16.3470	122.9686	-96.9819	-11.0491	2.3920	23.1449	6217.5344
Leverage	6696	.2911	.2307	0	.1464	.2705	.3921	3.8920
Size	6696	22.4351	1.5077	15.7646	21.4637	22.3811	23.4450	27.0362
Profitability	6696	6.0968	11.7510	-139.6500	3.4500	6.4900	10.4000	169.9200
Liquidity	6696	.3935	.2219	.0088	.2091	.3818	.5479	.9982

The descriptive statistics for the variables used in the panel data models are reported. Additionally, we present the median since it is a more robust measure for central tendency than the mean. The standard deviation (SD) is presented to show the dispersion of a variable relative to its mean. Furthermore, the minimum (Min), the value for the 25<sup>th</sup> percentile (p25), the 75<sup>th</sup> percentile (p75), and the maximum (Max) are presented.

Furthermore, to detect potential computational problems due to multicollinearity, Pearson correlation coefficients were calculated. Table 3 presents the pairwise correlation matrix. No correlation exceeds the value 0.622 (between *Size* and *EnvPillar*; except for the correlations between the ESG measures), which benefited our further regression analyses. The correlations concerning *Size* imply that larger firms try to achieve higher ratings, particularly in the environmental pillar. These firms might do so as they receive greater attention and are able to allocate more resources to ESG endeavors. As can be seen, the ESG measures show a high correlation with each other. However, since we did not use them in the same model, no computational problems were expected. Apart from that, the variables for CSP level (e.g., *EnvPillar*) and CSP delta (e.g., *EnvDelta*) do not show critical correlations.

Table 5: Pearson pairwise correlation matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) ZScoreNonFac	1.0000												
(2) ESGScore	-0.121*	1.0000											
(3) ESGDelta	0.0140	-0.170*	1.0000										
(4) EnvPillar	-0.142*	0.878*	-0.107*	1.0000									
(5) EnvDelta	-0.0010	-0.109*	0.281*	-0.129*	1.0000								
(6) SocPillar	-0.066*	0.877*	-0.146*	0.730*	-0.086*	1.0000							
(7) SocDelta	0.0090	-0.121*	0.764*	-0.073*	0.184*	-0.145*	1.0000						
(8) GovPillar	-0.114*	0.723*	-0.171*	0.486*	-0.055*	0.413*	-0.078*	1.0000					
(9) GovDelta	0.0110	-0.159*	0.725*	-0.083*	0.053*	-0.103*	0.434*	-0.226*	1.0000				
(10) Leverage	-0.384*	0.0120	-0.0180	0.0190	-0.0020	0.0100	-0.0160	0.0090	-0.0160	1.0000			
(11) Size	-0.299*	0.586*	-0.072*	0.622*	-0.050*	0.484*	-0.057*	0.382*	-0.064*	0.123*	1.0000		
(12) Profitability	0.194*	0.161*	-0.0020	0.162*	-0.0120	0.103*	0.0000	0.135*	-0.0150	0.0170	0.221*	1.0000	
(13) Liquidity	0.384*	-0.142*	0.030*	-0.185*	0.0060	-0.056*	0.0200	-0.164*	0.031*	-0.318*	-0.440*	-0.124*	1.0000

The Pearson correlation coefficients are presented. \* denotes statistical significance at the 5 % level.

## 4.2. Regression Results

We examined the relationship between CSP and BL with model (1), as described in the “Empirical Strategy” section. Table 4 presents the results for our fixed effects regression using the Z score as dependent variable. All control variables show an economic meaningful and significant effect on bankruptcy probability (at the 1 percent significance level). Regarding the overall ESG score models (see Columns 1 and 2), the results show that the 1-year lagged level of CSP (Column 1, *ESGScore*) does not affect the likelihood of bankruptcy. This is in line with **H1** arguing that a high CSP level has no advantage when facing distress in times of upswing. Furthermore, increasing CSP in  $t - 1$  (Column 2, *ESGDelta*) lowers the Z score in the following year (at the 5 percent significance level), i.e., increases BL for US-listed firms. This finding supports our hypothesis **H2** considering the costs of ESG investments in a beneficial economic environment, where no positive effects of CSP appear.

For the environmental pillar (Columns 3 and 4), no significant negative effects can be observed. We argue that the increasing importance of environmental performance and the increased sensitivity to climate change in society (Dyck et al., 2019) might be the reason for that. Environmental engagement seems to almost pay off in times of upswing, e.g., because stakeholders such as customers accept price markups or reward environmentally sustainable firms through their purchasing behavior. Apart from that, a current study provides evidence that banks value the environmental performance of their borrowers (Chen et al., 2020).

In the social pillar (see Columns 5 and 6), the results are consistent with those of the overall ESG score models, while the governance pillar’s results differ from the overall findings (see Column 7 and 8). Consequently, the social pillar seems to be the main driver for the effects in the overall models. We argue that higher costs through the increase in the categories workforce, human rights, community, and product responsibility (subcategories of the social pillar score) do not pay off immediately and, consequently, increase bankruptcy probability.

For the governance pillar, the level of CSP seems to be more important (*GovPillar*; see Column 7). We observe a negative and highly significant (at the 1 percent level) coefficient, while a change in governance performance (*GovDelta*; see Column 8) shows

no significant effect. We argue that firms' average level of governance may be too high for times of economic upswing and leads to management distraction from their core business. It seems that in times of upswing, the costs of maintaining control and reporting structures, outweigh their advantages.

Table 6: CSP and the probability of bankruptcy in times of upswing

	(1) ESG	(2) ESGDelta	(3) Env	(4) EnvDelta	(5) Soc	(6) SocDelta	(7) Gov	(8) GovDelta
ESGScore	-.0087 (.007)							
ESGDelta		-.0016** (.0007)						
EnvPillar			.0026 (.0066)					
EnvDelta				-.0001 (.0001)				
SocPillar					.0027 (.0086)			
SocDelta						-.0011*** (.0003)		
GovPillar							-.015*** (.0042)	
GovDelta								-.0006 (.0005)
Leverage	-10.5817*** (3.1548)	-10.5527*** (3.1506)	-10.5354*** (3.1454)	-10.1295*** (2.922)	-10.5396*** (3.1528)	-10.5528*** (3.1489)	-10.6201*** (3.1197)	-10.5507*** (3.1519)
Size	-1.0633*** (.2765)	-1.1462*** (.2491)	-1.1744*** (.2427)	-1.8617*** (.1752)	-1.1644*** (.3091)	-1.1454*** (.2506)	-1.0525*** (.2407)	-1.1438*** (.2496)
Rentability	.2309*** (.057)	.2303*** (.0565)	.2301*** (.0562)	.4864*** (.0713)	.2302*** (.0563)	.2326*** (.0565)	.2301*** (.057)	.2301*** (.0564)
Liquidity	8.0757*** (2.0071)	7.9606*** (1.9917)	7.9274*** (2.0085)	4.0632*** (1.1225)	7.9264*** (1.9548)	7.9594*** (1.9925)	8.0264*** (1.9779)	7.9624*** (1.9902)
Observations	6696	6694	6696	5167	6696	6694	6696	6694
R-squared	.2934	.2932	.2931	.3964	.2931	.2932	.2946	.2931
Adj R <sup>2</sup>	.2919	.2917	.2916	.3948	.2916	.2917	.2931	.2916
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

The table presents industry fixed effects regression of Altman Z score on the respective explanatory variable as defined in hypothesis H1 for the period 2010 to 2019. In parenthesis, the clustered and heteroskedasticity-robust standard errors are shown. The \*\*\*, \*\*, and \* denote statistical significance at the 1, 5, and 10 % levels, respectively.

## 5. Robustness Tests

So far, the results from the previous section indicate that the level of CSP (in the governance pillar) and increasing CSP (overall and in the social pillar) raises the likelihood of bankruptcy during times of economic upswing. However, this relation contains endogenous potential. Such a potential can occur when unobservable and non-time-invariant factors affect both CSP and CFP, i.e., BL. For this reason, in the vein of Kim et al. (2014), we included additional control variables which influence both CSP and CFP in model (1): selling, general, and administrative expenses and research and development expenses (we also included dummy variables that indicate whether the respective values are missing or not). The results (not reported) support our findings.

Furthermore, based on the approach of Aouadi and Marsat (2018), we controlled the sensitivity of our results by observing sample splits (see Table 5). By doing so, we created the following additional insights. First, the level of social performance is insignificant for both FDR ( $Z$  score  $< 1.88$ ) and non-FDR ( $Z$  score  $> 2.99$ ) firms (see Columns 1 and 3). Second, the split between FDR and non-FDR firms shows that the negative effect of *SocDelta* is mainly driven by non-FDR firms investing in social issues (see Column 4). In contrast to that, the coefficient for FDR firms indicates a positive relation (see Column 2). In the next step, we used the median of the variable *Size* (22.3811) to split the sample in smaller and bigger firms. As can be seen in Columns 5 and 6, the coefficient of *SocDelta* is solely significant for smaller firms. We argue that resources are scarcer in smaller firms and therefore additional costs for CSP – which are not being compensated by additional benefits in times of upturn – increase bankruptcy probability. Overall, the results support our previous findings.

Table 7: Sample splits and 2SLS regression - CSP and the probability of bankruptcy

	(1) FDR firms	(2) SocDelta	(3) Non-FDR firms Soc	(4) Bigger firms SocDelta	(5) Smaller firms SocDelta	(6) First stage SocDelta	(7) Second stage ESG	(8) Second stage
SocPillar	-.0083 (.006)	.0027* (.0013)	.0002 (.0085)	-.0018** (.0006)	-.001 (.0016)	-.0014** (.0003)	.199 (.226)	-.555* (.317)
SocDelta								-.024*
indMeanESGYear								
Pred. ESGScore								
ESGDelta								
Leverage	-1.7925** (.7714)	-1.7976** (.7522)	-11.6886*** (3.5823)	-11.7013*** (3.5847)	-6.173*** (1.6103)	-11.4806*** (3.792)	-4.12** (1.667)	-12.80*** (.013)
Size	.2523** (.0989)	.1864** (.0684)	-1.3194*** (.3791)	-1.3251*** (.3274)	-.1867 (.2139)	-2.6979*** (.2887)	(1.425)	(1.425)
Profitability	.0545*** (.0209)	.055*** (.0212)	.1519 (.0907)	.1521 (.091)	.3991*** (.1207)	.2551*** (.0452)	3.684 (.41)	3.684 (.276)
Liquidity	.2.9355 (1.9242)	.3.1119 (1.8909)	9.3283*** (2.7421)	9.3291*** (2.7725)	3.3168*** (1.0578)	8.9988*** (2.3528)	14.62*** (2.689)	14.62*** (3.878)
Observations	1285	1285	4583	3343	3343	3343	6694	6694
Adj R <sup>2</sup>	.1279	.2378	.2514	.3753	.3753	.287	.382	.382
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Weak instruments test								
Wu-Hausman test								
Wald test								

The table presents results of two-stage least squares (2SLS) with instrumental variable (IV) regressions for the period 2010 to 2019. In parenthesis, robust standard errors are shown. The \*\*\* , \*\* , and \* denote statistical significance at the 1, 5, and 10 % levels, respectively. Furthermore, the table provides the specification tests: test for weak instruments, Wu-Hausman test, test of overidentifying restrictions, and Wald statistic for the robust test on the 2SLS coefficient on the Z score.

Nevertheless, in terms of causation, the interpretation of our results ought to be done with care since the previous approaches cannot rule out endogeneity concerns completely. That being so, we additionally applied an instrumental variable approach to mitigate those remaining concerns. To test the robustness of our overall results, we aimed to find an exogenous link in the CSP-bankruptcy relationship. By following prior studies (Aouadi & Marsat, 2018; Cheng et al., 2014; El Ghoul et al., 2017), the mean year-industry CSP served as an instrument for CSP. While excluding the focal firm, the first-stage regression predicts the value of the overall ESG score. Those fitted values, i.e.,  $\hat{y}$ , from the first-stage regression replace the original CSP scores (*ESGScore*) in the second-stage regression. Accordingly, since this approach has often been used in prior studies, we are confident that this is a suitable exogenous proxy for CSP. Table 5 presents the results of the two-stage least squares (2SLS) regression in Columns 7 and 8. As can be seen, the results strongly support our previous findings since they indicate that increasing CSP (i.e., *ESGDelta*) in  $t-1$  causes higher BL in  $t$ .

Based on the previously mentioned studies, we built our hypotheses on the assumption that in times of crisis CSP affects BL positively, i.e., CSP lowers BL. To test whether there is an identical effect in our sample, we run the same regressions as in base model (1) on a sample containing the period of the financial crisis from 2007 to 2009. As can be seen in Table 6, the level of CSP becomes more important in times of crisis (the results are qualitatively the same for the period 2006 to 2009; not reported). More precisely, a higher overall CSP significantly (at the five percent level) increases the Z score, i.e., lowers BL (see Column 1). Apart from that, the identical effect appears in the environmental (see Column 3) and social pillar (see Column 5). We attribute these positive effects to improved relationships, e.g., with customers, employees, and suppliers, which is in line with stakeholder theory. As in the results regarding 2010 to 2019, the governance pillar affects BL differently. No significant positive effect can be observed for the governance level (see Column 7), while increasing governance performance in times of crisis increases BL (see Column 8). We argue that investing in governance performance in times of crisis comes too late or stakeholders perceive environmental and social issues as more important.

Table 8: CSP and the probability of bankruptcy in times of downturn

	(1) ESG	(2) ESGDelta	(3) Env	(4) EnvDelta	(5) Soc	(6) SocDelta	(7) Gov	(8) GovDelta
ESGScore	.0229** (.0087)							
ESGDelta		-.0011 (.0013)						
EnvPillar			.0159** (.0068)					
EnvDelta				.0004 (.0005)				
SocPillar					.0223*** (.0064)			
SocDelta						.0004 (.0012)		
GovPillar							.0056 (.007)	
GovDelta								-.0031** (.0013)
Leverage	-6.4144*** (1.2389)	-6.6547*** (1.265)	-6.5495*** (1.2144)	-6.617*** (1.2615)	-6.4678*** (1.2574)	-6.6441*** (1.2585)	-6.5844*** (1.2252)	-6.7338*** (1.2227)
Size	-1.0504*** (.2327)	-.8333*** (.2385)	-1.0469*** (.223)	-.8944*** (.233)	-1.0354*** (.2251)	-.8351*** (.2363)	-.8671*** (.2389)	-.8218*** (.24)
Rentability	.3632*** (.0837)	.3706*** (.0887)	.3652*** (.0841)	.3704*** (.0885)	.3606*** (.0819)	.3708*** (.0885)	.3695*** (.0882)	.3683*** (.0896)
Liquidity	6.7097*** (1.7696)	6.7924*** (1.8004)	6.7816*** (1.7607)	6.8111*** (1.7788)	6.6457*** (1.7788)	6.8105*** (1.7788)	6.8004*** (1.7958)	6.8135*** (1.7955)
Observations	891	891	891	891	891	891	891	891
Adj R <sup>2</sup>	.4379	.4337	.4378	.4343	.4392	.4336	.434	.4355
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

The table presents industry fixed effects regression of Altman Z score on the respective explanatory variable as defined in model (1) for the period 2007 to 2009. In parenthesis, the clustered and heteroskedasticity-robust standard errors are shown. The \*\*\*, \*\*, and \* denote statistical significance at the 1, 5, and 10 % levels, respectively.

## 6. Discussion

While previous research observed the relationship between CSP and bankruptcy, using samples containing times of recessions, we examined the relationship for a time of economic upswing, i.e., between 2010 and 2019 (NBER, 2021). In contrast to the existing studies, our results show that the CSP level (except for the governance pillar) does not affect BL and more interestingly, that investing in CSP increases it. This is in line with our hypotheses, arguing that high CSP leads to loyal stakeholders but that in times of expansion, there is no need to have those, as the general environment is sufficient to resolve distress (H1). For this reason, increasing CSP in times of upswing mainly causes costs, which raise BL (H2).

The results concerning economic upswing might also be interpreted from the agency theory perspective introduced in the “Related Literature” section: Investing in CSP increases BL as it only causes additional costs that decrease profitability and, thus, firm health. However, the existing research and our results from times of downturn (see “Robustness Tests” section) indicate that there are positive effects of CSP. For this reason, we discard agency theory to explain the CSP-BL relationship when considering whole business cycles. Nevertheless, agency theory may be a helpful perspective when, e.g., investigating the efficiency of CSP investment strategies, particularly in times of upswing. An interesting research question might be whether agents (i.e., managers) focus on the same CSP investments that principles (i.e., shareholders/owners) would.

An alternative approach to interpret our results may be the dynamic character of CSP. Institutionalization theory delivers an explanation for the diminishing positive effects of CSP through diffusion, adoption, and increased isomorphism (Brower & Dacin, 2020). The authors show for the relation between CSP and positive CFP that early compared to late adopters exhibited higher positive effects on profitability and firm value between 1991 and 2008. However, the positive effect of CSP on both measures became an increasingly weaker factor over time. This might lead to the assumption that our results show no positive effect on BL because CSP is already institutionalized as of 2010 and additional CSP investments did not pay off subsequently. As a result, high CSP firms should show a constant level while the other firms conduct catch-up investments to meet market expectations (Brower & Dacin, 2020). We refrain from this approach as not only

the *ESGScore* mean (2010: 59.92, 2019: 62.47) but also the mean of the top 5.0% firms (2010: 81.12, 2019: 82.64) increased during the observation period. This suggests that CSP investments in the observed period were not mainly conducted to catch up but to further increase the CSP level.

Another approach to explain our results might be that low CSP firms invest in CSP merely to harvest short-term benefits but that stakeholders can see through this deception, which leads to negative effects on BL. Current studies indicate that internal as well as external stakeholders can cause such negative effects. For instance, a recent study shows that hypocritical behavior increases the emotional exhaustion of employees and their intention to quit (Scheidler et al., 2019). By providing several examples regarding the effect on external stakeholders (e.g., incidents at *McDonald's* and *Verizon*), Carlos and Lewis (2018, p. 134) argue that: “[...] inconsistencies between claims and actions can stoke external stakeholders' perceptions of hypocrisy” and entail negative consequences. However, this approach cannot explain why the negative effects of CSP on BL only exist in times of upswing. For this reason, we suggest our initial hypothesis based on stakeholder theory to explain our findings.

Our findings show that a high CSP level has no positive effect and additional CSP investments increase BL in times of upswing. However, the studies of Lin and Dong (2018), Cooper and Uzun (2019), as well as Boubaker et al. (2020), and our robustness test show that high CSP reduces BL in times of crises. Thus, investing in CSP is costly in the short term but mitigates financial default risk in subsequent crises. Consequently, investing in CSP seems to be an instrument to smooth and balance the likelihood of bankruptcy over economic cycles (see Fig. 2). This connects to prior literature providing evidence that in times of crisis, CSP mitigates BL while this effect diminishes in importance after the crisis (e.g., Bouslah et al., 2018; Broadstock et al., 2021). In this vein, Ducassy (2013) shows that the positive connection between CSP and CFP exists, but after the turmoil, the significant link between both variables disappears. In sum, our findings confirm the stakeholder-based insurance-like effect of CSP on BL that Bouslah et al. (2018) pronounce for the CSP-firm risk relationship.

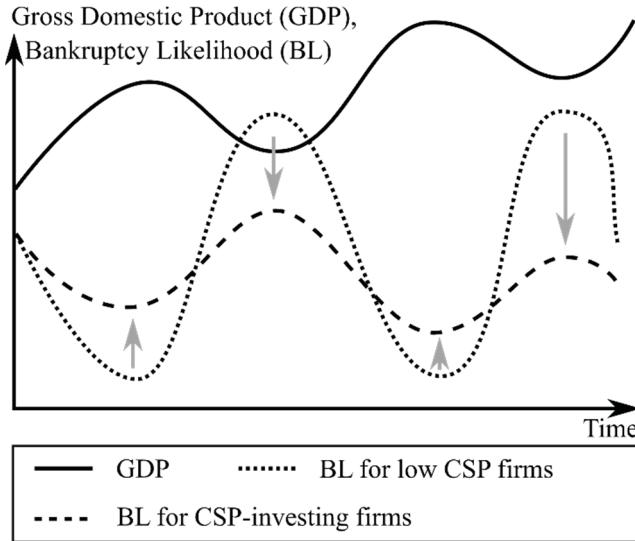


Figure 3: Stylized effects of CSP on bankruptcy likelihood (BL).

Besides the overall effects (which are mainly driven by the social pillar), our results provide insights regarding CSP on a more granular basis. First, a high level of governance increases BL in times of upswing. We explain this with the additional effort and distractions from the core business that governance tasks cause for the management. This is in line with existing literature distinguishing the governance pillar from the other pillars (Fabrizi et al., 2014; Kim et al., 2012; Lin & Dong, 2018). Second, investing in the environmental pillar tends to almost pay off even in times of upswing as stakeholders seem to remunerate those investments. Third, investing in the social pillar could be a suitable turnaround measure as it indicates a decreasing BL for FDR firms. Improved internal (e.g., employee motivation) and external stakeholder relations (e.g., firm reputation) seem to be the underlying mechanisms. Finally, bigger firms face advantages compared to smaller firms when investing in CSP as they can bear the negative effects more easily.

Based on the results of this study, we derive the following implications for policymakers, practitioners, and scholars. For the latter, we open up space for future research. Scholars may incorporate the understanding that CSP exhibits a different impact on financial performance when considered in different economic contexts. While we use stakeholder theory to explain these effects, future research might also focus on institutionalization theory. They might also apply theories that include information asymmetry to explain why governance seems to play a distinct role in this context. According to our findings,

CSP is a measure to mitigate the effects of economic crises rather than to increase firm performance. Therefore, scholars should focus on examining the CSP-bankruptcy relationship more extensively instead of merely investigating the CSP-CFP relationship (i.e., increased accounting or market-based performance). Furthermore, future research could address the longitudinal effect of ESG investments within a whole business cycle with more advanced methods.

Practitioners should be aware that a high level of CSP may not help in times of economic upswing, but it may improve firms' chances to survive distress in subsequent external crises. Moreover, when investing in CSP in "good" times, firms may focus on the environmental pillar if they want to minimize the short-term negative effects. In the case of necessary CSP divestment, we argue that firms (already having a high CSP level) should reduce their governance level as this pillar shows negative effects on BL. Furthermore, if a firm faces financial distress in times of upswing, social investments might help to resolve it. In general, policymakers should incentivize firms to invest in CSP in solid economic times as a preventive measure although the immediate effects on CFP are negative (see Fig. 2). As these effects hit small firms harder than bigger ones, policymakers might support small and medium enterprises in improving their CSP.

## 7. Conclusion

In this article, we investigate whether and how CSP, overall and in each ESG pillar, affects the likelihood of bankruptcy (i.e., financial failure) in times of economic upswing. Our empirical strategy involves applying fixed effects regressions on a sample of 6,696 firm-year observations of U.S.-listed companies to test our hypotheses cross-sectionally and over time. By employing fixed effects, unobservable and time-invariant factors that influence the Z score have been eliminated and did not bias our results. To further address endogeneity concerns, we conducted an instrumental variable approach. In contrast to prior studies (Boubaker et al., 2020; Cooper & Uzun, 2019; Lin & Dong, 2018), we provide evidence that during times of economic prosperity, increasing CSP lowers the Z score in the following year, i.e., expands BL. Furthermore, when focusing on the individual ESG pillars, we show that the social pillar is the main driver for this effect, while a high level of governance increases BL and investments in the environmental pillar seem to have no effect on BL.

Consequently, we make several contributions to the existing literature (Boubaker et al., 2020; Cheng et al., 2014; Cooper & Uzun, 2019; Lee & Faff, 2009): (i) To the best of our knowledge, this study is the first that examined the CSP-CFP relationship in times of economic upswing by using bankruptcy as an indicator for financial failure. (ii) In contrast to previous studies (Boubaker et al., 2020; Cooper & Uzun, 2019), our results indicate that increasing CSP increases BL in times of upswing. However, we are able to fit our results into the existing literature and a consistent theoretical framework considering changing economic conditions. (iii) We used a representative and robust sample of 6,696 firm-year observations and applied Refinitiv ESG scores as a continuous CSP measure. Furthermore, we differentiated between the three ESG pillars and offer an explanation for each pillar's results. (iv) We open up space for further research in the CSP-bankruptcy literature. That is because we provide novel insights that stakeholder theory may be a valid theoretical frame for CSP even if no effects are visible immediately. In addition, we point to institutionalization theory as an alternative approach to be investigated in future research. Moreover, we pronounce the different effects of each ESG pillar for further examination. Besides, firm size and FDR also play a role when investigating effects of CSP on financial failure.

Nevertheless, in this study, we recognize a number of limitations. First, instead of using actual financial failure, i.e., filing for Chapter 11, we employed the formalistic Z score, a multivariate proxy that predicts the likelihood of bankruptcy within 2 years. However, since prior studies also applied the Z score to collect more robust samples (e.g., Boubaker et al., 2020), we are confident that the Z score is a reliable and accurate measure of financial distress. Additionally, in a recent study, the Z score is still shown to be the most appropriate estimator for BL (Altman et al., 2017). Second, in this paper, the focus lies on large US-listed firms. Consequently, the results provided might not be generalizable to smaller or privately held firms. Moreover, implications based on our results for firms operating in different geographic regions, e.g., Europe or regions with different levels of economic development, i.e., emerging markets, have to be derived with care. Finally, we measured the multidimensional concept of CSP with Refinitiv ESG scores. Even though the rating process involves algorithmic and human evaluation over three pillars and 400 ESG metrics, doubts cannot be fully dispelled that these scores can precisely reflect the CSP of firms. However, since such an approach is common and widely used in research

(e.g., Dyck et al., 2019; Liang & Renneboog, 2017), we are confident that our results are robust. Overall, the limitations of the present study may encourage researchers to test and expand our findings in other contexts and with other data.

## Appendix 1

Table 9: Variable description

<i>Independent Variables</i>	
Altman Z score (ZScore)	Z score is calculated using data in its model for the fiscal period. The Z score is a multivariate formula that measures the financial health of a company and predicts the probability of bankruptcy within two years. The Z score combines five common business ratios using a weighting system calculated by Altman to determine the likelihood of bankruptcy. Typically, a score below 1.88 indicates that a company is likely heading for or is under the weight of bankruptcy. Conversely, companies that score above 2.99 are less likely to experience bankruptcy. Score between 2.99-1.88 is questionable.
<i>Explanatory Variable</i>	
ESG combined score (ESGScore)	REFINITIV ESG combined score is an overall company score based on the reported information in the environmental, social and corporate governance pillars (ESG score) with an ESG controversies overlay.
Environmental Pillar Score (EnvPillar)	The environmental pillar measures a company's impact on living and non-living natural systems, including the air, land and water, as well as complete ecosystems. It reflects how well a company uses best management practices to avoid environmental risks and capitalize on environmental opportunities in order to generate long-term shareholder value.
Social Pillar Score (SocPillar)	The social pillar measures a company's capacity to generate trust and loyalty with its workforce, customers and society, through its use of best management practices. It reflects the company's reputation and the health of its license to operate, which are key factors in determining its ability to generate long-term shareholder value.
Governance Pillar Score (GovPillar)	The corporate governance pillar measures a company's systems and processes, which ensure that its board members and executives act in the best interests of its long-term shareholders. It reflects a company's capacity, through its use of best management practices, to direct and control its rights and responsibilities through the creation of incentives, as well as checks and balances in order to generate long-term shareholder value.
ESGDelta	Annual percentage change in the ESG score, i.e. $(\text{ESG score}_t / \text{ESG score}_{t-1}) - 1$
EnvDelta	Annual percentage change in the environmental pillar score, i.e. $(\text{environmental pillar score}_t / \text{environmental pillar score}_{t-1}) - 1$
SocDelta	Annual percentage change in the social pillar score, i.e. $(\text{social pillar score}_t / \text{social pillar score}_{t-1}) - 1$
GovDelta	Annual percentage change in the governance pillar score, i.e. $(\text{governance pillar score}_t / \text{governance pillar score}_{t-1}) - 1$
<i>Control Variables</i>	
Leverage	Total debt divided by total assets.
Size	Natural logarithm of total assets.
Profitability	This value is calculated as the income after taxes for the fiscal period divided by the average total assets and is expressed as percentage.
Liquidity	Cash and short-term assets scaled by total assets.
<i>2-digit ICB Industry Codes</i>	
10	Technology
15	Telecommunications
20	Health Care
35	Real Estate
40	Consumer Discretionary
45	Consumer Staples
50	Industrials
55	Basic Materials
60	Energy
65	Utilities

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**Corporate Social Performance und Insolvenzwahrscheinlichkeit: Implikationen  
für die Unternehmenssteuerung und -überwachung**

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**Abstract:** Dieser Beitrag leitet aus einer kürzlich durchgeführten Studie zu Corporate Social Performance und Insolvenzwahrscheinlichkeit Implikationen für Leitungs- und Kontrollorgane deutscher Unternehmen ab. Es wird erarbeitet, welche ökologischen, gesellschaftlichen und führungsbezogenen Nachhaltigkeitsmaßnahmen in welcher Konjunkturphase gefördert und welche mit Bedacht eingesetzt oder auf Effizienz hin überprüft werden sollten.

**Schlagworte:** Corporate Social Performance, Insolvenzwahrscheinlichkeit, Konjunktur, Nachhaltigkeitsmaßnahmen, Governance

## 1. Einführung

In der betriebswirtschaftlichen Forschung werden seit vielen Jahren die Auswirkungen von nachhaltigem unternehmerischen Verhalten auf den finanziellen Erfolg untersucht. Ziel ist dabei, zu beantworten, inwieweit ökologische, gesellschaftliche und führungsbezogene (d. h. Governance) Maßnahmen nicht nur aus Stakeholder-, sondern auch aus Unternehmenssicht Vorteile bieten. Weniger im Fokus stehen jedoch die möglichen Effekte nachhaltigen Wirtschaftens auf Situationen finanzieller Schwierigkeiten, also in Krisen und bei drohenden Insolvenzen. Eine von *Anton Burger* betreute Studie der Autoren *Florian Habermann* und *Felix Fischer* fokussiert daher auf die Effekte von nachhaltigen Maßnahmen auf die Insolvenzwahrscheinlichkeit von Unternehmen. In der Studie wird untersucht, inwiefern solche Maßnahmen das Insolvenzrisiko reduzieren können und sie berücksichtigt dabei die Besonderheiten der verschiedenen Konjunkturphasen.

Die Studie wird zurzeit im *Journal of Business Ethics* veröffentlicht.<sup>1</sup> Weil ihre Ergebnisse auch für deutsche Unternehmen relevant sind, sollen hier in diesem Beitrag Schlussfolgerungen für Unternehmensleitung und Kontrollorgane abgeleitet werden. Weitergehende Erkenntnisse für die Sanierungspraxis sollen dann in der Zeitschrift *Krisen-, Sanierungs- und Insolvenzberatung* (KSI) publiziert werden.

Im Folgenden wird zunächst eine kurze Einführung in die Forschung zu Nachhaltigkeitsbemühungen von Unternehmen, nämlich zur Corporate Social Performance (CSP), gegeben und es werden mögliche Zusammenhänge zwischen CSP und Insolvenzwahrscheinlichkeit erläutert. Es folgen eine Skizzierung der Forschungsmethodik in der zugrundeliegenden Studie und die Vorstellung wichtiger Untersuchungsergebnisse. In Kapitel 4 werden die Implikationen für Unternehmensleitung und -überwachung gezogen und erläutert, bevor die zentralen Erkenntnisse im abschließenden Kapitel 5 zusammengefasst werden.

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<sup>1</sup> Vgl. Habermann/Fischer, Corporate Social Performance and the Likelihood of Bankruptcy, SSRN 2021 (ID: 3860719).

## 2. Corporate Social Performance und Insolvenzwahrscheinlichkeit

Seit einigen Jahren werden in der Forschung die Effekte der CSP auf den finanziellen Erfolg von Unternehmen (z. B. auf kapitalmarktorientierte oder bilanzielle Kennzahlen) untersucht. Unter CSP können Handlungen und Maßnahmen verstanden werden, die sich auf ökologische (E), gesellschaftliche (S) oder führungsbezogene (G) Tätigkeiten eines Unternehmens im Sinne des ESG-Konzepts beziehen. Während manche Studien auf negative oder keine Effekte einer (erhöhten) CSP auf den Unternehmenserfolg hinweisen, konnten in der Mehrzahl der Studien positive Effekte nachgewiesen werden.<sup>2</sup> Begründet werden kann ein positiver Zusammenhang mit der Stakeholder-Theorie. Diese besagt, dass ein Unternehmen langfristig nur dann erfolgreich sein kann, wenn es die Anforderungen aller relevanten Stakeholder-Gruppen, also – über Eigentümer hinaus – besonders jene von Mitarbeitern, Kunden und Zulieferern berücksichtigt. Ein solches Verhalten kann die eigene Reputation verbessern, die Stakeholder-Leistung und -Loyalität erhöhen, Unternehmensrisiken (z. B. von Image-Schäden) reduzieren und Innovation (z. B. aufgrund höherer Mitarbeitermotivation) fördern.<sup>3</sup>

Während die Beziehung zwischen CSP und finanziellem Erfolg in einer Vielzahl von Studien untersucht wurde, existieren wenige Studien zum Zusammenhang zwischen CSP und finanziellen Schwierigkeiten im Sinne des Insolvenzrisikos. Erkenntnisse über diese Zusammenhänge sind jedoch relevant für Unternehmensleitung und -überwachung: Einerseits können Maßnahmen zur Verbesserung der CSP den Unternehmenserfolg erhöhen und dadurch die Insolvenzwahrscheinlichkeit reduzieren. Andererseits besteht jedoch die Gefahr, dass im falschen Zeitpunkt oder in die falschen CSP-Maßnahmen investiert wird, was zu erhöhten Kosten und – bei ausbleibenden positiven Effekten – damit zu einer höheren Insolvenzwahrscheinlichkeit führt. Drei aktuelle Studien<sup>4</sup> untersuchen zwar einen Zusammenhang zwischen CSP und Insolvenzwahrscheinlichkeit, vernachlässigen jedoch die äußeren Umstände bzw. den Zeitpunkt von CSP-Investitionen im Sinne der konjunkturellen Lage. Derweil existieren Studien, die auf variierende

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<sup>2</sup> Vgl. Friede/Busch/Bassen, ESG and financial performance, J. Sustain. Finance Invest. 5/2015, S. 210.

<sup>3</sup> Vgl. Vishwanathan/van Oosterhout/Heugens/Duran/Essen, Strategic CSR, J. Manag. Stud. 2/2020, S. 314.

<sup>4</sup> Vgl. Boubaker/Cellier/Manita/Saeed, Does corporate social responsibility reduce financial distress risk?, Econ. Model 2020, S. 835–851; Cooper/Uzun Corporate social responsibility and bankruptcy, Stud. Econ. Finance 2/2019, S. 130–153; Lin/Dong, Corporate social responsibility engagement of financially distressed firms and their bankruptcy likelihood, Adv. Account. 2018, S. 32–45.

Effekte von CSP im Verlauf von Konjunkturzyklen, also Auf- und Abschwungphasen hindeuten.

Beispielsweise weisen *Bouslah et al.* darauf hin, dass CSP insbesondere in ökonomischen Krisenphasen risikosenkende Effekte aufweist und schlagen vor, CSP als eine Art Risikomanagementinstrument zu verwenden.<sup>5</sup> Unsere eingangs erwähnte Studie greift den Ansatz auf, indem die Beziehung zwischen CSP und Insolvenzwahrscheinlichkeit im Kontext von Konjunkturzyklen differenziert untersucht wird. Es wird überprüft, wie sich das CSP-Niveau sowie Maßnahmen zur Erhöhung des CSP-Niveaus auf die Insolvenzwahrscheinlichkeit von Unternehmen auswirken; dabei werden Zeiten des wirtschaftlichen Aufschwungs und des Abschwungs getrennt untersucht. Weil die CSP-Maßnahmen zudem differenziert nach den o. g. ESG-Dimensionen betrachtet werden, können konkrete Handlungsempfehlungen für Unternehmensleitung und -überwachung abgeleitet werden.

### **3. Empirische Untersuchung**

#### **3.1. Methodik**

In der zugrundeliegenden Studie werden mithilfe von Paneldatenregressionen rd. 1.200 große US-amerikanische, börsennotierte Unternehmen im Zeitraum von 2007-2019 untersucht. Die Phase der globalen Finanzkrise 2007-09 wird dabei getrennt von der nachfolgenden Aufschwungphase 2010-19 betrachtet. Grundsätzlich wird ermittelt, ob die CSP, gemessen mithilfe von anerkannten ESG-Scores, Einfluss auf die Insolvenzwahrscheinlichkeit eines Unternehmens (geschätzt mit dem sog. *Altman Z-Score*) hat. Dabei werden sowohl die Auswirkungen des CSP-Niveaus als auch von zusätzlichen CSP-Maßnahmen (d. h. einer Erhöhung des CSP-Niveaus) auf den Z-Score betrachtet. Die Effekte von ökologischen, gesellschaftlichen und führungsbezogenen Maßnahmen werden im Interesse konkreter Implikationen differenziert untersucht. Darüber hinaus werden die kleinen und größeren Unternehmen der Stichprobe separat betrachtet, um weitere Schlüsse ableiten zu können. Für Details zum Modell, zu den Kontrollvariablen und den verschiedenen Robustheitstests wird auf die Studie verwiesen.

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<sup>5</sup> Vgl. Bouslah/Kryzanowski/M'Zali, Social Performance and Firm Risk, J. Bus. Ethics 2018, S. 643.

### 3.2. Untersuchungsergebnisse

Die Ergebnisse zeigen, dass die Effekte von CSP auf die Insolvenzwahrscheinlichkeit im Laufe eines Konjunkturzyklus unterschiedlich ausfallen. In einer wirtschaftlichen Aufschwungphase hat das CSP-Niveau keinen signifikanten Einfluss auf das Insolvenzrisiko, während zusätzliche CSP-Maßnahmen dieses Risiko sogar erhöhen. Dahingegen wirkt sich in einer Abschwungphase das CSP-Niveau „positiv“ auf das Insolvenzrisiko aus, also in dem Sinn: je höher die CSP, desto niedriger die Insolvenzwahrscheinlichkeit. Zusätzliche CSP-Maßnahmen in der wirtschaftlichen Krisenphase können das Insolvenzrisiko jedoch nicht weiter reduzieren. Einen Erklärungsansatz für diese Ergebnisse bietet die Stakeholder-Theorie:

In Krisenzeiten können sich Unternehmen mit einem hohen CSP-Niveau auf die Loyalität ihrer Stakeholder wie Eigentümer, Mitarbeiter, Kunden und Zulieferer verlassen, sodass das Insolvenzrisiko niedriger ist als bei einem Unternehmen mit niedriger CSP und niedrigerer Stakeholder-Bindung. Da jedoch in Aufschwungphasen ohnehin unternehmensfreundliche Verhältnisse (z. B. hohe Nachfrage) vorherrschen, sind Unternehmen in solchen Phasen nicht auf loyale Stakeholder angewiesen. Demnach führen zusätzliche CSP-Maßnahmen in Aufschwungphasen zunächst zu höheren Kosten, die sich negativ bei der Insolvenzwahrscheinlichkeit auswirken. Erst in einer nachfolgenden Krisenphase machen sich die positiven Stakeholder-Effekte bemerkbar. Werden die CSP-Maßnahmen aber erst während einer Krise ergriffen, so ist dies zu spät für einen erfolgreichen Auf- und Ausbau von Stakeholder-Beziehungen.

Bei differenzierter Betrachtung der verschiedenen ESG-Dimension wird ersichtlich, dass die o. g. Effekte zu einem großen Teil auf *gesellschaftliche* CSP-Maßnahmen zurückzuführen sind. Dabei handelt es sich um Maßnahmen zur Verbesserung der Arbeitsbedingungen, zur Einhaltung der Menschenrechte sowie zur Erhöhung des Beitrags zur Gesellschaft und der Produktverantwortung. Letztlich scheinen demnach die Zufriedenheit und Loyalität von Mitarbeitern und Kunden ausschlaggebend zur Reduktion des Insolvenzrisikos in Rezessionsphasen zu sein.

Ein hohes Niveau an *ökologischer* Performance wirkt sich in ökonomischen Krisenphasen (wenn auch mit schwächerer Wirkung) ebenfalls positiv auf die Überlebenschancen von Unternehmen aus. Im Gegensatz zu den gesellschaftlichen

Maßnahmen bestehen jedoch in wirtschaftlichen Hochphasen keine negativen Effekte durch die Investition in zusätzliche ökologische Maßnahmen. Dies kann damit begründet werden, dass sich in der Gesellschaft mittlerweile ein Bewusstsein hin zu ökologisch nachhaltigem Verhalten entwickelt hat. Dementsprechend honorieren Kunden Maßnahmen z. B. zur Verbesserung der Ökobilanz von Produkten, indem sie höhere Preise akzeptieren. Die zusätzlichen Kosten werden demnach an die Kunden durchgereicht, sodass das Insolvenzrisiko nicht ansteigt.

*Führungsbezogene* Maßnahmen im Sinne der Governance weisen wiederum andere Effekte auf das Insolvenzrisiko auf: In Aufschwungphasen wirkt sich ein hohes Niveau an Governance negativ auf die Überlebenschancen von Unternehmen aus; in Abschwungphasen erhöhen zusätzliche führungsbezogene Maßnahmen das Insolvenzrisiko. Ersteres deutet darauf hin, dass in ökonomischen Wachstumsphasen übermäßige bzw. aufwändige Governance-Strukturen den Management-Fokus weg vom operativen Kerngeschäft hin zu Rechenschaftstätigkeiten lenken, was sich negativ auf die Überlebenschancen auswirken kann. Letzteres kann dahingehend interpretiert werden, dass der Aufbau zusätzlicher Governance-Strukturen in einer Krisenphase zu spät greift und daher lediglich Zusatzkosten verursacht. Jedoch muss an dieser Stelle berücksichtigt werden, dass die Ergebnisse auf einer Stichprobe großer, börsennotierter US-Unternehmen beruhen – das Governance-Niveau dieser Unternehmen ist dementsprechend sehr hoch, beispielsweise im Vergleich zu deutschen KMU.

Um zwischen den kleineren und größeren Unternehmen der Stichprobe zu differenzieren, werden diese für die Zeit des Aufschwungs (2010-19) getrennt betrachtet. Dabei wird ersichtlich, dass die negativen Auswirkungen zusätzlicher gesellschaftlicher Maßnahmen ausschließlich bei den kleineren Unternehmen auftreten. Größere Unternehmen scheinen Investitionen in solche Maßnahmen problemlos stemmen zu können, während sich die zusätzlichen Kosten bei kleineren Unternehmen zunächst negativ auf die Überlebenschancen auswirken.

#### **4. Implikationen für Unternehmensleitung und -überwachung**

Insgesamt zeigt sich für die Beziehung zwischen CSP und Insolvenzwahrscheinlichkeit eine Art „Versicherungseffekt“, der bereits in der o. g. Studie von *Bouslah et al.* im Kontext von CSP und Unternehmensrisiken hervorgehoben wird: Zusätzliche

Maßnahmen zur Erhöhung der CSP in wirtschaftlichen Wachstumsphasen verursachen zunächst Kosten, reduzieren jedoch in späteren Rezessionsphasen das Insolvenzrisiko. Insofern stellen Investitionen in CSP-Maßnahmen wirksame Instrumente zur langfristigen Bestandssicherung von Unternehmen dar. Allerdings müssen solche Investitionen *vor* einer Krisenphase durchgeführt werden, damit sie ihre positive Wirkung entfalten können. Daher sollten Unternehmensleitung und Kontrollorgane sicherstellen, dass solche Maßnahmen trotz kurzfristig negativer Effekte in einer Aufschwungphase durchgeführt werden. Dabei gilt es abzuwägen, in welche Maßnahmen in welchem Ausmaß investiert werden soll, um langfristig ein optimales Kosten-Nutzen-Verhältnis zu erzielen.

Die deutlichsten bestandssichernden Effekte können durch Investitionen in *gesellschaftliche* Maßnahmen bewirkt werden. Der Auf- und Ausbau loyaler Kunden- und Mitarbeiterbeziehungen sowie von resilienteren Lieferketten führen zu einer Art Sicherheitsnetz, das Unternehmen in wirtschaftlich schwierigen Zeiten unterstützt. Es liegt nahe, dass insbesondere solche Maßnahmen zielführend sind, die diese Stakeholder – im Sinne von Wahrnehmung – möglichst direkt betreffen. Dazu zählen Maßnahmen zur Verbesserung der Arbeitsbedingungen, also der Mitarbeiterzufriedenheit, sowie zur Erhöhung der Produktverantwortung im Sinne der Kundenbindung.

Allerdings führen gesellschaftliche Maßnahmen zunächst zu zusätzlichen Kosten, die bei kleineren Unternehmen das Insolvenzrisiko erhöhen. Insbesondere für den deutschen Mittelstand bedeutet dies, dass die vorhandenen Ressourcen überlegt, d. h. effektiv und effizient, eingesetzt werden müssen. Denkbar im Bereich der Maßnahmen für Mitarbeiter sind beispielsweise kulante Telearbeitsregelungen, eine transparente und motivierende Kommunikations- und Feedback-Kultur sowie klare Entwicklungspfade. Bei kostenintensiveren Maßnahmen wie einem Kinderbetreuungsangebot muss zwischen Kosten (bzw. Insolvenzrisiko) und Nutzen abgewogen werden; ggf. sind solche Maßnahmen erst ab einer gewissen Unternehmensgröße sinnvoll. Im Bereich der Kunden- bzw. Produktmaßnahmen können eine erhöhte Produkttransparenz (z. B. Rückverfolgbarkeit) sowie informative und responsive Kommunikationskanäle (z. B. via Social Media) eine erhöhte Kundenbindung erzeugen. Aufwändigeren Maßnahmen

müssen ebenfalls den Kosten und dem Nutzen sowie der Unternehmensgröße entsprechend abgewogen werden.

*Ökologische* Maßnahmen erzeugen zwar kleinere Auswirkungen auf das Insolvenzrisiko, weisen jedoch keine kurzfristig negativen Effekte im Sinne nicht kompensierter Kosten auf. Aus diesem Grund sind solche Maßnahmen aus Unternehmenssicht lohnenswert – zusätzliche Investitionen in Nachhaltigkeit werden vom Kunden honoriert. Kontrollorgane haben demnach die Aufgabe, auf einen ausreichenden unternehmerischen Fokus hin zu Nachhaltigkeit zu achten. Wie bei den gesellschaftlichen Maßnahmen sollte auf den direkten Kundenbezug fokussiert werden; die ökologischen Verbesserungen sollten also direkt vom Kunden wahrgenommen werden. Dies kann u. a. durch Zertifizierungen und Produktinnovationen erreicht werden.

Die Ergebnisse zu den *Governance*-Maßnahmen führen aus Leitungs- und Überwachungssicht zur Frage, wie schlanke, aber effiziente Governance-Strukturen ausgestaltet sein sollten. Zwar bezieht sich das Studienergebnis eines zu hohen Niveaus an Governance (z. B. redundante Reporting- und übermäßige Kontrollstrukturen) auf US-amerikanische Großunternehmen, dennoch kann es zum Anlass für deutsche Unternehmen genommen werden, die eigenen Strukturen zu hinterfragen. Insbesondere über einen längeren Zeitraum gewachsene oder durch Akquisitionen verschmolzene Strukturen können Ineffizienzen aufweisen, die sich negativ auf das Insolvenzrisiko auswirken. Aus diesem Grund sollten solche Strukturen hinsichtlich Effizienz und Redundanzen überprüft werden. Zudem ist darauf zu achten, dass Governance-Strukturen zum frühen Erkennen von sowie zum Steuern durch Krisenphasen geeignet sind – Anpassungen in der Krisenphase wirken entsprechend der empirischen Ergebnisse zu spät und erhöhen daher die Insolvenzwahrscheinlichkeit. Demnach sollten Kontrollstrukturen flexibel genug sein, um auf veränderte Situationen zu reagieren.

## 5. Zusammenfassung

Die Ergebnisse der Studie zeigen, dass CSP eine Art Versicherungseffekt aufweist: Investitionen in CSP führen zwar kurzfristig zu zusätzlichen Kosten und ggf. zu einem höheren Insolvenzrisiko, erhöhen dafür aber in nachfolgenden Krisenphasen die Überlebenschancen von Unternehmen. Grund dafür ist, dass CSP-Maßnahmen den Auf- und Ausbau eines loyalen Stakeholder-Netzwerks vornehmlich aus Mitarbeitern, Kunden

und Lieferanten ermöglichen, die das Unternehmen in Rezessionsphasen unterstützen. Unternehmensleiter und Kontrollorgane sollten daher sicherstellen, dass ausreichend in eine solche Loyalität investiert wird. Weil die positiven Effekte eines solchen Netzwerks nicht ad-hoc auftreten, müssen sie frühzeitig, d. h. vor einer Krisensituation, aufgebaut werden. Darüber hinaus konnten die folgenden differenzierten Erkenntnisse erarbeitet werden:

- (1) Hinsichtlich des o. g. Versicherungseffekts weisen gesellschaftliche Maßnahmen den deutlichsten Effekt auf. Diese sollten direkt auf die relevanten Stakeholder, im Wesentlichen Mitarbeiter und Kunden, ausgerichtet sein, um eine möglichst hohe Wirkung zu entfalten. Da diese Maßnahmen jedoch kurzfristig Kosten und (bei kleineren Unternehmen) negative Effekte auf die Überlebenschancen auslösen, sollten Unternehmensleitung und Kontrollorgane auf ein ausgewogenes Kosten-Nutzenverhältnis im Sinne von Effektivität und Effizienz achten. Kostenschonende Maßnahmen können z. B. kulante Telearbeitsregelungen, eine transparente Mitarbeiter- und Kundenkommunikation und Produkttransparenz sein.
- (2) Zusätzliche ökologische Maßnahmen werden vom Kunden honoriert, weshalb keine kurzfristigen negativen Effekte auftreten (müssen). Trotz der weniger deutlichen Effekte auf die Insolvenzwahrscheinlichkeit sollte aus der Perspektive der Unternehmensleitung und -überwachung daher auf ein ausreichendes Niveau an ökologischen Maßnahmen geachtet werden. Damit Kunden die Bemühungen erkennen und Preisaufschläge akzeptieren, sollten die Maßnahmen möglichst direkt (z. B. mithilfe von Zertifizierungen) kommuniziert werden bzw. am Produkt sichtbar sein.
- (3) Die Ergebnisse zu Governance-Maßnahmen zeigen, dass Unternehmen ein zu hohes Niveau an (ineffizienten/redundanten) Governance-Strukturen aufweisen können, die die Überlebenschancen vermindern. In einer Krisenphase wirken sich zusätzliche Governance-Maßnahmen negativ auf die Überlebenschancen aus. Aus diesem Grund sollten Unternehmensleitung und -überwachung bereits in (bzw. trotz) Aufschwungphasen auf effiziente Governance-Strukturen achten. Außerdem sollten diese Strukturen so ausgestaltet sein, dass sie für spätere Krisenphasen geeignet sind.