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Marco Becker¹

Zombie Companies in the Corona Pandemic

or

the phenomenon of covertly over-indebted companies in Germany

Abstract

The phenomenon of covertly over-indebted companies – also known colloquially as zombie companies – is not new. They occur more frequently in times of crisis, including during the current Corona pandemic. In addition to covertly over-indebtedness, there is now the added factor of latent insolvency. This article will take a closer look at the emergence of zombie companies in Germany during the Corona pandemic.

Zusammenfassung

Das Phänomen verdeckt überschuldeter Unternehmen – umgangssprachlich auch als »Zombie-Unternehmen« bekannt – ist nicht neu. Sie treten vermehrt in Krisenzeiten auf, so auch während der aktuellen Corona-Pandemie. Neben der verdeckten Überschuldung kommt jetzt noch der Faktor der latenten Zahlungsunfähigkeit hinzu. In diesem Artikel soll die Entstehung der »Zombie-Unternehmen« in Deutschland während der Corona-Pandemie näher untersucht werden.

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Initial situation

The Corona pandemic has the world firmly in its grip not only in the medical sense, but the economic consequences of this pandemic are also devastating. However, these are not primarily caused by the pandemic itself, but by the containment measures imposed by the respective governments. For example, the Federal Republic of Germany is in its second lockdown, which has been extended several times since the beginning of November 2020 and is now de facto in effect until further notice. In the course of this lockdown, there have been far-reaching interventions in the economy. In this context, reports about so-called zombie companies have increasingly surfaced in recent months, which will be examined in more detail below.²

Definition of zombie companies

There is no uniform definition for the phenomenon of covertly over-indebted companies, which are also colloquially referred to as zombie companies.³ In financial practice, a whole range of definitions for the state of covert over-indebtedness have become established:⁴

Autor	Definition
European Central Bank (2019) [Variant 1] German Parliament (2020)	Zombie companies are companies whose earnings are less than their current interest costs over a longer period of time. ⁵
European Central Bank (2017) [Variant 2]	A company is classified as a zombie company if <ol style="list-style-type: none"> 1. its return on investment is negative, 2. its net investments are negative 3. its debt servicing capacity (defined as EBITDA over financial debt) is below 5% for at least two consecutive years.⁶
German Central Bank (2020) [Variant 1]	A company is classified as a zombie company if it cannot cover its interest expenses with its operating result for three consecutive years. The interest coverage ratio – i.e. the ratio of operating profit to interest expenses – would be less than one for a zombie company. ⁷
German Central Bank (2020) [Variant 2]	A zombie company is defined as having negative cash flow for three years in a row. ⁸
Caballero et al. (2008)	Corporations are zombies if they receive loans at lower interest rates than would be expected if the debt structure was respectful. ⁹

Definitions of zombie companies¹⁰

² cf. Daube (2021): S. 19.

³ cf. Caballero et al. (2008).

⁴ This compilation does not claim to be complete.

⁵ cf. Deutscher Bundestag (Hrsg.) (2020): S.1 und cf. Andrews/Petroulakis (2019): S. 8.

⁶ cf. Storz et al. (2017): S. 6.

⁷ cf. Deutsche Bundesbank (Hrsg.) (2020): S. 73

⁸ cf. Deutsche Bundesbank (Hrsg.) (2020): S. 73

⁹ cf. Arth et al. (2020): S. 50 and Caballero et al. (2008).

¹⁰ Own representation based on the sources indicated.

By adopting the definition of the European Central Bank (variant 1) by the German Parliament, covertly over-indebted companies or so-called zombie companies are defined uniformly for the Federal Republic of Germany:

Zombie companies are companies whose earnings are less than their current interest costs over a longer period of time.¹¹

The term over-indebtedness is also clearly defined in the Federal Republic of Germany. Pursuant to Section 19 (2) of the German Insolvency Code, a company is deemed to be overindebted at the latest when the debtor's assets no longer cover its existing liabilities, unless the circumstances make it predominantly likely that the company will be able to continue as a going concern over the next twelve months.¹²

Emergence of zombie companies

Due to the insolvency regulations in force in the Federal Republic of Germany, the emergence of zombie companies is in principle virtually impossible. Overindebtedness does not constitute grounds for insolvency only if a positive going concern forecast is provided.¹³ However, making a positive going concern forecast is likely to be difficult for most companies in times of the Corona pandemic – especially during a (permanent) lockdown – so that this insolvency criterion of over-indebtedness will regain importance in the medium and long term. In addition, there is another factor that can be seen as the main reason for the emergence of zombie companies in Germany. Companies that make use of the support instrument of suspending the obligation to file for insolvency, which was used to contain the economic consequences of the Corona pandemic, are often not only factually over-indebted but also latently insolvent.

The funding instrument of the suspension of the obligation to file for insolvency was introduced with effect from March 23, 2020, to mitigate the economic impact of the Corona pandemic and was initially limited in time until September 30, 2020.¹⁴ In the further course of 2020 and 2021, both the time limits and the conditions were changed several times:¹⁵

¹¹ cf. Deutscher Bundestag (Hrsg.) (2020): S.1 and Andrews/Petroulakis (2019): S. 8.

¹² cf. § 19 Abs. 2 InsO.

¹³ cf. § 19 Abs. 2 InsO.

¹⁴ cf. Bundesministerium der Justiz und für Verbraucherschutz (Hrsg.) (2021a).

¹⁵ cf. Bundesministerium der Justiz und für Verbraucherschutz (Hrsg.) (2021a), Bunderegierung (Hrsg.) (2020), Bundesministerium der Justiz und für Verbraucherschutz (Hrsg.) (2020a) und Bundesministerium der Justiz und für Verbraucherschutz (Hrsg.) (2020b),

Phase 1 – March 23, 2020 to September 30, 2020

In a first phase, effective March 23, 2020, the insolvency filing requirement was completely suspended, initially until September 30, 2020, for companies if the insolvency and/or over-indebtedness was due to the consequences of the Corona pandemic.¹⁶ This is a government funding measure with which the federal government pursues the primary goal of protecting companies that have fallen into financial difficulties as a result of the Corona pandemic. In addition, other funding instruments were used to create incentives to inject new liquidity into these affected companies.¹⁷ In addition, it was a specific concern of the German Government that business relations with these companies could continue to be maintained. For this reason, the right of creditors to request the opening of insolvency proceedings for the debtor was suspended for a transitional period of 3 months – i.e. until June 30, 2020.¹⁸

Phase 2 – October 1, 2020 to December 31, 2020

In the second phase, the suspension of the obligation to file for insolvency was extended until December 31, 2020, but the conditions for using this support instrument were tightened: during this period, only those companies that were over-indebted due to the Corona pandemic, without being insolvent at the same time, were able to make use of this exception.¹⁹ To justify the change in the application requirements for this funding instrument, the Federal Ministry of Justice and Consumer Protection clarifies that a distinction must be made between 2 groups of companies:²⁰

- Group 1
In the case of over-indebted companies, there is definitely a real chance of still averting insolvency.
- Group 2
In the case of companies that have already reached a state of insolvency, it is generally no longer possible to avert insolvency. The company in question has not succeeded in stabilizing its economic situation, even with the help of state support instruments. As a result, these companies are no longer able to meet their payment obligations and pose an acute risk to their business partners.

Phase 3 – January 1, 2021 to January 31, 2021

In the third phase, the suspension of the obligation to file for insolvency was extended for companies directly affected by the Corona pandemic. However, the conditions for the use of this support

¹⁶ cf. Bundesministerium der Justiz und für Verbraucherschutz (Hrsg.) (2021a).

¹⁷ cf. Bunderegierung (Hrsg.) (2020).

¹⁸ cf. Bunderegierung (Hrsg.) (2020).

¹⁹ cf. Bundesministerium der Justiz und für Verbraucherschutz (Hrsg.) (2020b).

²⁰ cf. Bundesministerium der Justiz und für Verbraucherschutz (Hrsg.) (2020b).

instrument were further tightened. It is now only possible for companies that are over-indebted and for which the disbursements of the state aid payments scheduled since November 1, 2020 – the so-called November and December aid – are still outstanding.²¹ In addition, the conditions were further specified and the following accompanying measures were established:²²

- During the suspension of the obligation to file for insolvency, managing directors are only liable to a limited extent for payments they make after the company is ready to file for insolvency.
- Companies affected by the Corona pandemic may apply for credits during the suspension of the obligation to file for insolvency. These are not considered to be an immoral contribution to the insolvency delay.
- During the suspension of the obligation to file for insolvency, payments made to contractual partners are only contestable to a limited extent.

Ordinary business operations can thus be continued almost without any restriction.

Phase 4 – February 1, 2021 to April 30, 2021

The suspension of the obligation to file for insolvency has been extended again and will initially apply until April 30, 2021. The conditions for making use of this exemption have been revised once again, so that the companies concerned must now meet the following requirements in order to be eligible for this support instrument:²³

- The financial crisis must be caused by the current Corona pandemic.
- There must be a claim for government aid from the Corona aid programs that have been set up, the disbursement of which is still pending.
- The state aid must have been applied for by February 28, 2021.²⁴
- The approval and disbursement of the requested state aid is probable.
- The requested state aid must be suitable for the elimination of formal insolvency maturity.

This is therefore only a partial suspension of the obligation to file for insolvency, which benefits only those companies that have already applied for financial aid from the current Corona aid program and

²¹ cf. Bundesministerium der Justiz und für Verbraucherschutz (Hrsg.) (2020a).

²² cf. Bundesministerium der Justiz und für Verbraucherschutz (Hrsg.) (2020a).

²³ cf. Bundesministerium der Justiz und für Verbraucherschutz (Hrsg.) (2021b).

²⁴ If it was not possible to apply for assistance by February 28, 2021 for legal or factual reasons, the eligibility to apply could be taken into account in these exceptional cases. The actual filing of the application was therefore not the decisive factor in this exceptional case.

whose payment is still outstanding.²⁵ This extension of the suspension of the obligation to file for insolvency has become necessary because the payment of state aid (in particular November aid and December aid) has not only been further delayed, but has also been temporarily suspended altogether as of March 9, 2021. The Federal Ministry for Economic Affairs and Energy has temporarily halted the advance payments due to increased suspicions of fraud in connection with the so-called November and December aid.²⁶

On March 12, 2021, this payment freeze was lifted and at least progress payments will again be made for the following funding instruments:²⁷

- November aid
- December aid
- Bridging aid I
- Bridging aid II
- Bridging aid II

As a result, these funding instruments are fully active again. Companies that have taken advantage of the support instrument of suspension of the obligation to file for insolvency must therefore have at least overcome the state of formal insolvency maturity by the time the requested support funds have been paid out in full at the latest. If you have not succeeded in doing so despite the state aid payments, these companies must file for insolvency immediately. All other companies that are currently insolvent but do not meet the defined criteria must also immediately file for insolvency.²⁸

At the latest with the last adjustment or amendment to the suspension of the insolvency application requirement, the German Government has initiated the gradual phase-out on this funding instrument. Obviously, a normal state of affairs is to be achieved again in the next few months and the insolvency regulations are to be fully reinstated.

Mode of operation of the suspension of the obligation to file an insolvency petition

The support instrument of suspension of the obligation to file for insolvency has a suspensive effect for the companies concerned with regard to the time for the necessity of filing for insolvency. The original objective of this support instrument was to provide companies with a grace period during which a fundamental reorganization (more precisely: a turnaround management) can be

²⁵ cf. Bundesministerium der Justiz und für Verbraucherschutz (Hrsg.) (2021b).

²⁶ cf. Tagesschau (Hrsg.) (2021).

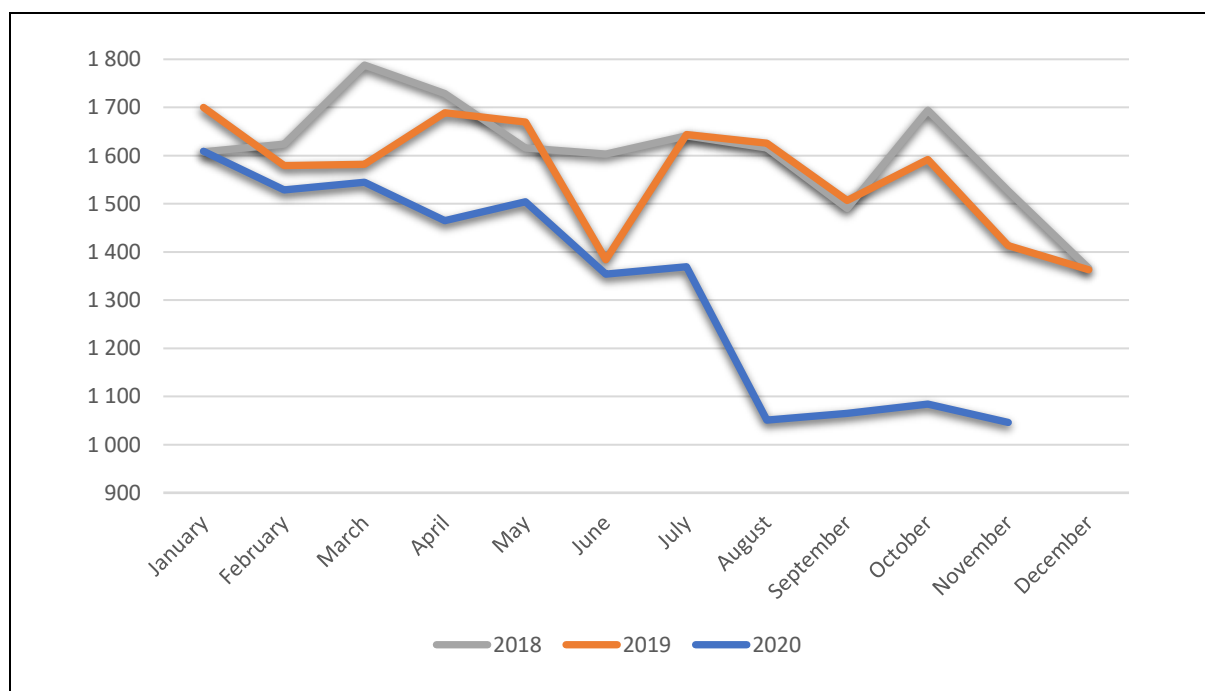
²⁷ cf. Bundesministerium für Wirtschaft und Energie (Hrsg.) (2021).

²⁸ cf. Bundesministerium der Justiz und für Verbraucherschutz (Hrsg.) (2021b).

implemented. In practice, however, this objective was superseded by the fact that the November and December aid promised by the government to bridge the lockdown was not paid out promptly. The regular disbursement of November aid was launched by the German Federal Ministry for Economic Affairs and Energy on January 12, 2021. Prior to this, only advance payments were made, which by no means all applicants received.²⁹

The grace period could thus not be used by the majority of the affected companies to tackle the necessary turnaround. During the lockdown, they had no revenues or, ideally, significantly lower revenues than in the comparable period before the Corona pandemic due to the business closure. In addition, the state's promised compensation payment was not disbursed until months later. This created an additional financing gap that the already financially strapped companies had to bridge on their own.

The suspension of the insolvency filing requirement has been a very successful funding tool, despite the multiple changes and confusion it has caused in practice. Compared to 2018 and 2019, the increase in insolvency filings expected due to the Corona pandemic failed to materialize. On the contrary, the insolvencies per month per 100,000 companies have decreased significantly in comparison:³⁰



Overview of corporate insolvencies in Germany³¹

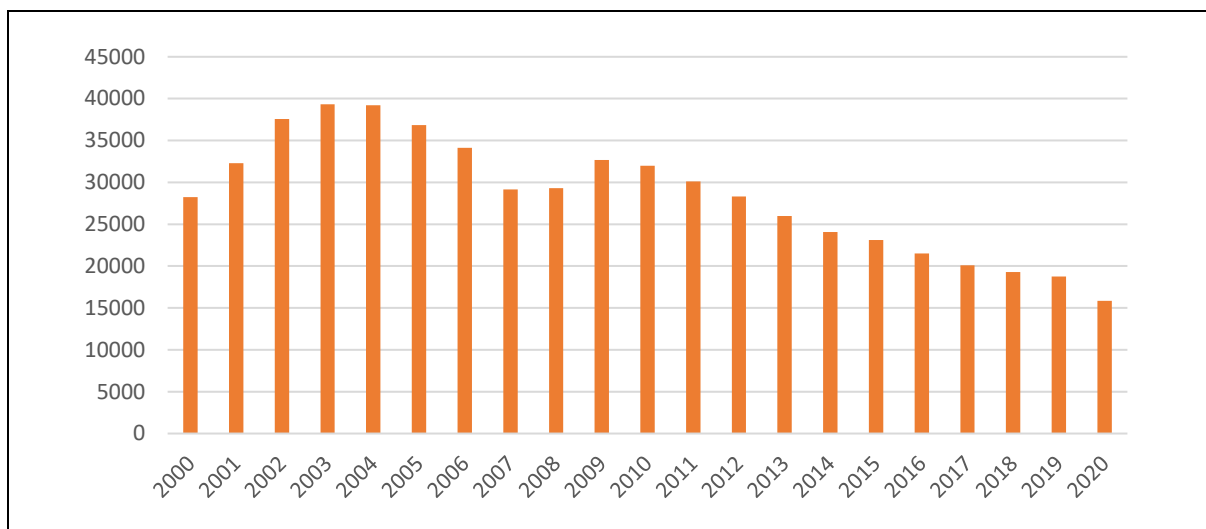
Thus, the downward trend in corporate insolvencies in Germany that has been evident since 2009 will continue in 2020 – despite the Corona pandemic:³²

²⁹ cf. Bundesministerium für Wirtschaft und Energie (Hrsg.) (2021).

³⁰ cf. Statistischen Bundesamtes (Hrsg.) (2021).

³¹ Own illustration based on Statistischen Bundesamtes (Hrsg.) (2021).

³² cf. Statistischen Bundesamtes (Hrsg.) (2021).



Corporate insolvencies in Germany from 2000 to 2019³³

Parallels to the global financial and economic crisis of 2008/2009

The instrument of suspending the obligation to file for insolvency is not new. It was already used to cope with the global financial and economic crisis of 2008/2009.³⁴

In the following, both the similarities and the differences between the financial and economic crisis of 2008/2009 under current Corona Pandemic will be elaborated:

³³ Own illustration based on Statistischen Bundesamtes (Hrsg.) (2021).

³⁴ On October 17, 2008, the German Parliament amended the definition of over-indebtedness in Section 19 (2) of the German Insolvency Code (InsO) in Article 5 of the Financial Market Stabilization Act. As a result of this amendment, over-indebtedness no longer exists if a positive going concern forecast can be given. Thus, an insolvency petition or an over-indebtedness status based on liquidation values only has to be prepared in the event of a negative going concern forecast. (cf. Artikel 5 „Änderung der Insolvenzordnung“ FMStG)
On November 09, 2012, the German Parliament resolved that the regulation on over-indebtedness under insolvency law, which was originally limited until December 31, 2013, should now apply indefinitely. Thus, to date, there is no over-indebtedness under insolvency law, provided that the continuation of the company is predominantly probable under the circumstances. (cf. § 19 Abs. 2 InsO)
Due to the fact that, with sufficient imagination and creativity, a positive going concern forecast can almost always be made, the insolvency ground of over-indebtedness has been largely invalidated. The current Corona pandemic is likely to be an exception in this context, giving the insolvency ground of over-indebtedness greater significance again.

Primary affected companies	Financial and economic crisis 2008/2009	Corona Pandemic
Branch	Financial sector	cross-sector
Company size	<ul style="list-style-type: none"> • Large enterprises • Corporations 	<ul style="list-style-type: none"> • Solo self-employed • Sole proprietors • Small companies • Medium enterprises • Large enterprises • Groups of companies
Temporal reference of the cause of the crisis	Time-oriented event: → After the abrupt collapse of the financial market the reorganization could be started directly could be started	Period-oriented event: → Coping with the acute crisis now lasts longer than a year → Reorganization can only take place after successful overcoming of the begin after the cause of the crisis has been successfully overcome
Causal link to the crisis	Endogenous	Exogenous
Turn Around Strategy	<ul style="list-style-type: none"> • State participation (temporary) • Accompanying measure on the capital market • Staff reduction 	<ul style="list-style-type: none"> • Government transfer payments (compensation for loss of revenue) • Liquidity injection by old and new shareholders

Financial and Economic Crisis of 2008/2009 vs. Corona Pandemic ³⁵

It is clear that the financial and economic crisis of 2008/2009 and the current Corona pandemic have both similarities and serious differences. In particular, the fact that the current Corona pandemic – from the point of view of the affected companies – has an exogenous origin and that the necessary government intervention in the market in the form of a lockdown has lasted for months suggests that the state of covertly over-indebtedness cannot be remedied overnight, as it is continuously worsening (with reduced or even no revenues).

Conclusion

The suspension of the obligation to file for insolvency proved to be an effective instrument during the financial and economic crisis of 2008/2009, among other things to give the affected companies more time to carry out a fundamental restructuring. In addition, the fact of over-indebtedness was defacto permanently removed from the Insolvency Code.

However, the current Corona pandemic differs fundamentally from the financial and economic crisis of 2008/2009, also with regard to the actions of the German Government. During the Corona

³⁵ Own illustration.

pandemic, the instrument of suspending the obligation to file for insolvency at least partially served its purpose and delayed the de facto insolvency of many companies.³⁶

The German Government has already begun to phase out this funding instrument by changing the hurdles to eligibility several times and raising them higher with each change. In practice, this has inevitably led to considerable confusion among the companies concerned. As a result, so-called zombie companies have emerged – as a quasi-undesirable side effect – as many of the affected companies have apparently failed to file for insolvency immediately, which has now become necessary after all due to the various changes. Against this backdrop, the definition of covertly over-indebted companies or so-called zombie companies in the Corona pandemic would currently have to be redefined:

The so-called zombie companies that emerged in the Federal Republic of Germany during the management of the Corona pandemic are companies that are either covertly over-indebted and/or latently insolvent.

These so-called zombie companies can only be cleaned up by means of a fundamental restructuring or by actually filing for insolvency. For this reorganization process, the companies in question need further financial resources, which could come either from state subsidies³⁷ or additional liquidity from investors.

For most companies, however, it will be impossible during the lockdown to acquire the fresh financial resources required for a turnaround and to successfully implement the measures associated with the turnaround. It must therefore be assumed that the number of corporate insolvencies will rise significantly in 2021.

It is to be hoped that this support instrument will remain in place long enough beyond the end of the second lockdown to give the companies concerned sufficient time not only to plan and implement the necessary turnaround measures but also to raise the necessary financial resources. However, it must also be borne in mind that the longer and the more these so-called zombie companies exist, the more the immanent risk for the business partners of these companies increases. The sooner this part of the economic impact of the Corona pandemic is dealt with, the better.

³⁶ The instrument of suspension of the obligation to file for insolvency basically has only a suspensive effect. It thus postpones the point in time at which a company is obliged to file for insolvency at the latest to a later point in time - defined by the conditions and the period of validity of this instrument. It is intended to provide the company concerned with a grace period to enable it to carry out a fundamental restructuring in order to achieve the turnaround.

³⁷ However, sales subsidies alone will not be sufficient here. Sustainable restructuring is unlikely to be feasible without an inflow into the equity of the companies concerned.

Literature

Arth, L./Gründler, K./Potrafke, N./Ruthardt, F./Sielmann, J. (2020)

Unerwünschte Nebenwirkung der Corona-Maßnahmen: Zombies?, ifo Schnelldienst, ifo Institut – Leibniz-Institut für Wirtschaftsforschung an der Universität München, München, Vol 11, 73. Jg., S. 50-52.

Bundesministerium der Justiz und für Verbraucherschutz (Hrsg.) (2021a)

Aussetzung der Insolvenzantragspflicht im Januar 2021 für Unternehmen, bei denen die Auszahlung der seit dem 1. November 2020 vorgesehenen staatlichen Hilfeleistungen noch aussteht, online-Quelle: https://www.bmjuv.de/DE/Themen/FokusThemen/Corona/Insolvenzantrag/Corona_Insolvenzantrag_node.html, letzter Abruf am: 19. April 2021.

Bundesministerium der Justiz und für Verbraucherschutz (Hrsg.) (2021b)

Pressemitteilung vom 20. Januar 2021: weitere Aussetzung der Insolvenzantragspflicht bis zur Auszahlung finanzieller Hilfen, Online-Quelle: https://www.bmjuv.de/SharedDocs/Pressemitteilungen/DE/2021/0120_Insolvenz.html, letzter Abruf am 19. April 2021.

Bundesministerium der Justiz und für Verbraucherschutz (Hrsg.) (2020a)

Aussetzung der Insolvenzantragspflicht im Januar 2021 für Unternehmen, bei denen die Auszahlung der seit dem 1. November 2020 vorgesehenen staatlichen Hilfeleistungen noch aussteht, Online-Quelle: https://www.bmjuv.de/DE/Themen/FokusThemen/Corona/Insolvenzantrag/Corona_Insolvenzantrag_node.html, letzter Abruf am: 19. April 2021.

Bundesministerium der Justiz und für Verbraucherschutz (Hrsg.) (2020b)

Pressemitteilung vom 2. September 2020: Mehr Zeit für Sanierungsmaßnahmen – Bundesregierung beschließt beschränkte Verlängerung der Aussetzung der Insolvenzantragspflicht, Online-Quelle: https://www.bmjuv.de/SharedDocs/Pressemitteilungen/DE/2020/090220_Insolvenz.html?nn=13831714, letzter Abruf am: 19. April 2021.

Bundesministerium für Wirtschaft und Energie (Hrsg.) (2021)

Pressemitteilung vom 12. März 2021: Erklärung zu Corona-Hilfen – Abschlagszahlungen starten heute wieder, Online-Quelle: <https://www.bmwi.de/Redaktion/DE/Pressemitteilungen/2021/03/20210312-erklaerung-zu-corona-hilfen-abschlagszahlungen-starten-heute-wieder.html>, letzter Abruf am: 19. April 2021.

Bunderegierung (Hrsg.) (2020)

Regierungspressekonferenz vom 23. März 2020, Online-Quelle: <https://www.bundesregierung.de/breg-de/suche/regierungspressekonferenz-vom-23-maerz-2020-1733998>, letzter Abruf am: 19. April 2021.

Caballero, R. J., T. Hoshi und A. K. Kashyap (2008)

Zombie Lending and Depressed Restructuring in Japan, American Economic Review 8(5), 1943–1977.

Daube, C. H. (2021):

Dritte Welle Covid-19 – Auswirkungen der Pandemie auf Finanzmärkte und ausgewählte Bereiche der Wirtschaft, in Institut für Unternehmensrechnung, Controlling und Finanzmanagement (IUCF), Working Paper 1/2021, Online-Quelle: <https://www.econstor.eu/bitstream/10419/232979/1/Dritte-Welle-Covid-19-Auswirkung-auf-Finanzmärkte-und-Wirtschaft.pdf>, letzter Abruf am: 19. April 2021.

Deutsche Bundesbank (Hrsg.) (2020)

Ertragslage und Finanzierungsverhältnisse deutscher Unternehmen im Jahr 2019 – Monatsbericht Dezember 2020, Online-Quelle: <https://www.bundesbank.de/resource/blob/853868/c26c96895f4bbc468a00c6ec5e99579f/mL/2020-12-ertragslage-data.pdf>, letzter Abruf am: 19. April 2021.

Deutscher Bundestag (Hrsg.) (2020)

Drucksache 19/18364 – Antwort der Bundesregierung auf die Kleine Anfrage der Abgeordneten Frank Schäffler, Christian Dürr, Dr. Florian Toncar, weiterer Abgeordneter und der Fraktion der FDP – Drucksache 19/17696, Online-Quelle: <https://dip21.bundestag.de/dip21/btd/19/183/1918364.pdf>, letzter Abruf am 19. April 2021.

Andrews, D./Petroulakis, F. (2019):

Breaking the shackles: Zombie firms, weak banks and depressed restructuring in Europe, in: Europäische Zentralbank (Hrsg.) Working Paper Serie – No 2240, Online-Quelle: <https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2240~61e2d9dfec.en.pdf>, letzter Abruf am: 19. April 2021.

Gesetz zur Umsetzung eines Maßnahmenpakets zur Stabilisierung des Finanzmarktes (Finanzmarktstabilisierungsgesetz – FMStG)

vom 17. Oktober 2008, (BGBl. I S. 1982).

Insolvenzordnung

vom 5. Oktober 1994 (BGBl. I S. 2866), die zuletzt durch Artikel 6 des Gesetzes vom 22. Dezember 2020 (BGBl. I S. 3328) geändert worden ist.

Statistischen Bundesamtes (Hrsg.) (2021)

Unternehmen und Arbeitsstätten: Insolvenzen – Fachserie 2 Reihe 4.1, Online-Quelle: https://www.destatis.de/DE/Service/Bibliothek/_publikationen-fachserienliste-2.html, letzter Abruf am: 19. April 2021.

Storz, M./Koetter, M./Setzer, R./Westphal, A. (2017)

Do we want these two to tango? On zombie firms and stressed banks in Europe, in: Europäische Zentralbank (Hrsg.) Working Paper Serie – No. 2104, Online-Quelle: <https://www.econstor.eu/bitstream/10419/175728/1/ecb-wp2104.en.pdf>, letzter Abruf am 19. April 2021.

Tagesschau (Hrsg.) (2021):

Abschlagszahlungen gestoppt – Betrugsverdacht bei Corona-Hilfen, Online-Quelle:

<https://www.tagesschau.de/wirtschaft/corona-hilfen-betrugsverdacht-103.html>, letzter Abruf am:
19. April 2021.