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Taxes Blown in the Wind? The Siemens Gamesa Bailout

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Abstract

The German government leads the bailout of the distressed wind power company Siemens Gamesa with a guarantee of EUR 7.5 billion. Based on prior conceptual work on the limits of bankruptcy law and bailouts of critical firms, we question the rationale for the bailout. Siemens Gamesa is not a critical firm. Neither efficiency nor geostrategic considerations justify the bailout. We also question its terms and conditions. The main shareholder of Siemens Gamesa is Siemens AG (through Siemens Energy AG), a highly profitable company. Siemens contributes little (if at all) to the bailout. This is not fair to the German taxpayer.

Keywords: Bankruptcy, Bailout, Corporations, Critical Firms, Siemens Gamesa, Siemens Energy, Germany, Spain

JEL Classifications: K2, L5

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The German government leads the bailout of the distressed wind power company Siemens Gamesa with a guarantee of EUR 7.5 billion. Based on prior conceptual work on the limits of bankruptcy law and bailouts of critical firms, we question the rationale for the bailout. Siemens Gamesa is not a critical firm. Neither efficiency nor geostrategic considerations justify the bailout. We also question its terms and conditions. The main shareholder of Siemens Gamesa is Siemens AG (through Siemens Energy AG), a highly profitable company. Siemens contributes little (if at all) to the bailout. This is not fair to the German taxpayer.

I. Introduction

Governments worldwide are encouraging investment in the transition to a net-zero global economy.[1] Onshore and offshore wind energy is a key part of this policy agenda.[2] An important player in the industry is Siemens Gamesa Renewable Energy, S.A.U. ("Siemens Gamesa"). Siemens Gamesa is a global provider of wind power products and service solutions. It is a wholly-owned subsidiary of Siemens Energy AG ("Siemens Energy"). Siemens Energy's main shareholder (25.1%)[3] is Siemens AG ("Siemens").

Siemens Gamesa is in trouble—and so is Siemens Energy. The market for wind turbines is competitive. Manufacturers must guarantee performance for decades, and Siemens Gamesa has struggled with quality problems, particularly with its onshore wind turbines.[4] Banks have been dragging their feet, signalling that, without state support, they might not be willing to extend such guarantees in the future.[5] After protracted negotiations, the German government agreed to rescue Siemens Gamesa. The core element of the German bailout is a guarantee

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[1] See, for instance, in the EU, Green Deal Industrial Plan for the Net-Zero Age, COM(2023) 62 final of 1 February 2023.

[2] See the European Wind Power Action Plan, COM(2023) 669 final of 24 October 2023.

[3] See Siemens Energy's investors relations website at https://www.siemens-energy.com/global/en/home/ investor-relations/share/shareholder-structure-voting-rights-announcements.html (including a direct 14% stake and an indirect 11% stake through Siemens Beteiligungen Inland GmbH).

[4] See *Lex*, Siemens Energy: hurricane warning highlights industry-wide headwinds, Financial Times, 23 June 2023.

[5] *Rachel Millard* and *Sam Jones*, Siemens Energy seeks government guarantees as wind crisis deepens, Financial Times, 26 October 2023; JUVE, Freshfields, Hengeler und viele Inhouse-Berater sichern die Zukunft von Siemens Energy, 22 November 2023.

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("*Bürgschaft*") from the Federal Republic of Germany ("FRG") worth EUR 7.5 billion, backstopping a EUR 11 billion line of performance guarantees from a banking consortium.

In this article we analyse the Siemens Gamesa bailout. Based on prior conceptual work on the limits of bankruptcy law[6] and bailouts of critical firms,[7] we question the rationale for the bailout. Siemens Gamesa is not a critical firm. Neither efficiency nor geostrategic considerations justify the bailout. We also question its terms and conditions. Siemens Gamesa's main shareholder, Siemens (through Siemens Energy), is a highly profitable company.[8] Siemens contributes little (if at all) to the bailout. This is not fair to the German taxpayer.

The remainder of the article is structured as follows: In Section II, we provide details of the Siemens Gamesa bailout. In Section III, we lay out a conceptual framework to answer the question of "bankruptcy vs. bailout." Central to this framework are externalities of the bankruptcy process and the concept of a critical firm. Against this background, the reasons for the Siemens Gamesa bailout are discussed in Section IV and its terms and conditions in Section V. Section VI concludes.

II. The Siemens Gamesa Bailout

Siemens Gamesa is, together with Denmark's Vestas, one of the top-2 wind turbine manufacturers globally in terms of total production capacity, well ahead of other EU manufacturers such as Nordex or Enercon.[9] Furthermore, Siemens Gamesa is also a leading wind farm company in terms of sales.[10] Within its group, it currently accounts for around 30% of Siemens Energy's sales.[11]

Siemens Gamesa is the result of the integration, starting in 2017, of Siemens Energy's wind operations and Spanish blue-chip firm Gamesa. The headquarters are in Spain, where the company currently has 9 factories for (onshore) wind turbine production and employs around 5,000 of its approximately 25,000 employees. For the offshore business, the company has additional headquarters in Germany (Hamburg) and Denmark (Veijle).

Before its integration into Siemens Energy, Gamesa was a member of the IBEX-35 index. When it was delisted in February 2023, it had a market capitalization of more than EUR 12

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[6] *Eidenmüller*, EBOR 24 (2023), 231-249.

[7] *Eidenmüller/Paz Valbuena*, South Carolina Law Review 73 (2021), 501-536.

[8] Siemens AG released its Q4 results for the financial year ending 30 September 2023 on 16 November 2023. The press release was captioned "Powerful finish to record fiscal year" and highlighted that "net income nearly doubled to historic high of €8.5 billion". See https://assets.new.siemens.com/siemens/assets/api/uuid:93c22 da4-ae74-40eb-8d85-d1c24955807b/2023-q4-p-press-release-en.pdf.

[9] See the BizVibe piece at https://blog.bizvibe.com/blog/energy-and-fuels/top-10-wind-turbine-manufacturers-world#google_vignette, using data from the Global Wind Energy Council (https://gwec.net/).

[10] Id.

[11] See figures for the financial year 2023 reported by Siemens Energy with its Q4'23 results on 15 November 2023 (Earnings Release Q4 FY 2023, available at https://p3.aprimocdn.net/siemensenergy/e0872591-2bff-46a9-833f-b0ba015a476c/2023-11-15-Earnings-Release-Q4-FY23-EN-pdf_Original%20file.pdf).

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billion.[12] In August 2023, Siemens Energy, by then already the sole shareholder of the new Siemens Gamesa, reported significant losses that were almost exclusively attributed to Siemens Gamesa's onshore business.[13]

Siemens Gamesa and Siemens Energy are not the only energy companies to have run into trouble recently. The market for wind turbines is global and competitive. European companies, including Siemens Gamesa and others such as Vestas and Nordex, are benefiting from a heavily subsidized renewable energy market designed to facilitate the transition to net-zero emissions.[14] However, they have recently had difficulty competing with Chinese companies due to high inflation and rising raw material costs. Chinese companies, producing with high quality at lower costs, have significantly expanded their presence in the global market, forcing European companies to take extraordinary measures to remain competitive.[15]

The EU is aware of these strong competitive and macroeconomic headwinds. The President of the European Commission, Ms Ursula von der Leyen, used her "State of the EU" speech in September to highlight these and two other major challenges facing the EU wind energy sector: access to adequate financial guarantees and difficulties in obtaining development and operating permits for wind farms.[16]

Despite the difficulties in the industry, there is clearly something unique about Siemens Gamesa and its problems. As the company struggles to maintain its position in a highly competitive market, its flagship products, particularly the 5.X model, suffer from significant quality issues.[17] These problems and their internal causes have been acknowledged by the management of Siemens Energy and Siemens Gamesa. The CEO of Siemens Gamesa, Mr Jochen Eickholt, was quoted in the press as saying that "[w]e sold turbines too quickly [that] had not been sufficiently tested".[18]

Siemens Gamesa's problems started in June, when Siemens Energy issued a warning that it may have to spend in excess of EUR 1 billion to fix certain quality issues affecting Siemens

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[12] See *Cristina Cándido*, Siemens Gamesa se despide del parqué con una capitalización de 12.295 millones, elEconomista.es, 7 February 2003. *Lex* notes that, one year ago, Siemens Gamesa's implied value was around EUR 15 billion: see *Lex*, Siemens Energy: turbine trouble pops the renewables bubble, Financial Times, 26 October 2023.

[13] *Laura Pitel* and *Rachel Millard*, Siemens Energy warns of €4.5bn loss from ailing wind turbine division, Financial Times, 7 August 2023.

[14] See, for instance, Green Deal Industrial Plan for the Net-Zero Age (fn. 1).

[15] See, for instance, Wind Power Action Plan (fn. 2), 3-4.

[16] "State of the Union" Address by European Commission President Ursula von der Leyen, of 23 September 2023. See also European Wind Power Action Plan (fn. 2), 8, 15. For a more context on how this affects Siemens Gamesa, see *Millard/Jones* (fn. 5).

[17] See *Rachel Millard* and *Laura Pitel*, Siemens Energy turbine travails deal latest setback to wind sector, Financial Times, 27 July 2023; *Pitel/Millard* (fn. 13); *Sam Jones*, Siemens Energy to restructure wind turbine business after steep losses, Financial Times, 15 November 2023.

[18] See *Pitel/Millard* (fn. 13). See also *Millard/Pitel* (fn. 17).

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Gamesa's (onshore) turbines.[19] The situation then escalated with the release of Siemens Energy's Q3 results for the 2023 fiscal year (ending 30 September 2023) on 7 August 2023. Siemens Energy warned of a loss for the fiscal year of EUR 4.6 billion—of which EUR 4.4 billion were attributed to Siemens Gamesa.[20] At that point, shares of Siemens Energy had fallen 30% since June.[21]

Afterwards, the company began to have difficulty obtaining the financial guarantees it needs to offer to its wind turbine customers.[22] Given the high price of the turbines and the long amortisation period, customers require quality and maintenance undertakings from the manufacturer. Due to their remarkable long-term nature (usually 20-30 years), these must be secured by financial guarantees from reputable third parties. Facing competitive pressure, Siemens Gamesa had agreed to increasingly better terms for its customers, especially regarding guarantees and maintenance.[23] Decreasing quality and extended warranties naturally led to significant contingent liabilities. Therefore, as private lenders became concerned about the financial situation of Siemens Energy and Siemens Gamesa, it became increasingly difficult to obtain these financial guarantees, slowing down Siemens Gamesa's operations.[24]

Siemens Energy then turned to the German government with a request to facilitate the granting of financial guarantees amounting to EUR 15 billion. They were needed to backstop a portfolio of long-term contracts with the group's customers worth around EUR 110 billion.[25] Without them, Siemens Gamesa could not actually fulfil the contracts. When this became public, shares in Siemens Energy fell by another 29%.[26]

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[19] *Rachel Millard*, Siemens Energy shares plunge after wind turbine problems deepen, Financial Times, 23 June 2023.

[20] *Pitel/Millard* (fn. 13).

[21] *Pitel/Millard* (fn. 13).

[22] See *Millard/Jones* (fn. 5). On the relevance of these guarantees for conducting business see Siemens Energy, Shareholder Letter Q4 FY2023, available at https://www.siemens-energy.com/global/en/home/investor-relations/publications-ad-hoc.html#accordion-2fdfa00139-item-3e424a4354 (pages 1, 3); Siemens Energy statement in *Ignacio Fariza*, Alemania rescata a Siemens Energy para cubrir el agujero de Gamesa, El País, 16 November 2023.

[23] *Sam Jones*, Siemens Energy plans €400mn in cuts at struggling wind turbine business, Financial Times, 21 November 2023.

[24] See *Sam Jones*, Siemens Energy's €15bn rescue package underwritten by German government, Financial Times, 14 November 2023; *Millard/Jones* (fn. 5).

[25] According to Reuters, up to 30% of Siemens Energy's order book consists of downpayments. These must be backstopped by guarantees. Around half of this volume (approximately EUR 15 billion) needs to be covered with the bailout. See *Andreas Rinke* and *Christoph Steitz*, Exclusive: Siemens Energy secures provisional deal for guarantees - sources, Reuters, 9 November 2023. Also see *Millard/Jones* (fn. 5).

[26] This, along with other well-known concerns troubling the industry in Europe, resulted in short sellers purchasing a hefty 14% position in Siemens Energy shares in November. See *Rachel Millard* and *Costas Mourselas*, Hedge funds profit from bets against troubled wind energy stocks, Financial Times, 14 November 2023.

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From the outset, the Federal Ministry for Economic Affairs and Climate Action ("BMWK") seemed focused on supporting Siemens Energy, as the company was seen as "critically relevant" for the energy transition.[27] However, the BMWK conditioned its support on appropriate contributions from all stakeholders to secure the company.[28]

The Federal Government/BMWK, together with a group of private banks, have worked to ensure that Siemens Energy has a line of financial guarantees of up to EUR 12 billion. These guarantees are themselves twofold. The first is a guarantee line of up to EUR 11 billion, of which EUR 7.5 billion are backstopped by the FRG with a suretyship ("*Bürgschaft*") (the "First German Line"). The second is a guarantee line of up to EUR 1 billion without state support (the "Second German Line").[29] The bailout was announced by the BMWK on 14 November 2023.[30]

To cover the remaining EUR 3 billion, the Federal Government is relying on the support of other stakeholders. Siemens Gamesa is currently holding similar discussions with the Spanish central government.[31] The Spanish Ministry of Industry, Commerce and Tourism ("MITC") is working (heavily nudged by the regional governments of Navarre and particularly the Basque Country—regions where Siemens Gamesa has the most employees and facilities in Spain) to provide a guarantee line by private lenders.[32] It would be backstopped by the Spanish central government through CESCE (an agency responsible for supporting Spanish exports through trade credit insurance), with some support from European funds (the "Spanish Line").[33]

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[27] See BMWK, Pressemitteilung: Bundesregierung gewährt Siemens Energy Milliarden-Bürgschaft, 14 November 2023, available at https://www.bmwk.de/Redaktion/DE/Pressemitteilungen/2023/11/20231114-bundesregierung-gewaehrt-siemens-energy-milliarden-buergschaft.html. The EU had previously made similar statements in connection with the wind manufacturing industry generally; see, for instance, "State of the Union" Address (fn. 16) and European Wind Power Action Plan (fn. 2), 1, 19-20.

[28] The Financial Times quotes a statement issued by the BMWK on 14 November 2023 highlighting that "[t]he federal government's prerequisite [for state support] was that all stakeholders participate appropriately in securing the company". See *Jones* (fn. 24). See also BMWK (fn. 27). These stakeholders may include not only the group's shareholders, but also other countries in which the group has significant business activities (i.e., Spain and Denmark).

[29] BMWK (fn. 27); *Jones* (fn. 24); JUVE (fn. 5); elEconomista.es, El Gobierno español se suma al rescate de Siemens Gamesa con avales bancarios, 15 November 2023. Note that the Second German Line benefits from some credit enhancement from Siemens and Siemens Energy, as discussed below (see fn. 40).

[30] BMWK (fn. 27).

[31] The main actor appears to be the Ministry of Industry, but the Economic Office of the President also plays an active role, showing that this is of utmost importance for the Spanish government. See *Carlos Drake* and *A. Fernández*, El Gobierno prepara avales para apoyar a Siemens Gamesa, Expansión, 15 November 2023.

[32] *Diario de Navarra*, Editorial: Al rescate de Siemens Gamesa, 20 November 2023; *Diario El Correo*, Editorial: Al rescate de Siemens Gamesa, 20 November 2023.

[33] *Ignacio Fariza*, El Gobierno español se suma al rescate de Siemens Gamesa con una línea de avales bancarios, El País, 14 November 2023; *César Urrutia*, El Gobierno negocia con la banca el rescate de Gamesa, que pide 3.000 millones para salvar 5.000 empleos, El Mundo, 14 November 2023; elEconomista.es (fn. 29).

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The exact terms and conditions of these guarantee lines/government support lines have not been published.[34] We do not know what interest and fees Siemens Gamesa and/or Siemens Energy pay for them. Since no private institution was willing to provide guarantees without government support, one could expect remuneration and fees above market rates. However, this does not appear to be the case.[35] We also don't know what protections governments have secured, nor do we know whether they will benefit from any upside once Siemens Gamesa hopefully returns to profitability.

Support for the bailout from Siemens Gamesa's direct or indirect shareholders is strictly limited. Apparently only Siemens Energy and Siemens are involved in the transaction. Siemens Energy's other shareholders, who together hold a significant share of the company,[36] do not participate in any form. The (potential) contribution from Siemens/Siemens Energy is as follows.

First, Siemens is injecting EUR 2.1 billion in cash into Siemens Energy[37] by agreeing to acquire an 18% stake in Siemens Ltd ("SL") from Siemens Energy. SL is an Indian joint venture between Siemens and Siemens Energy, listed on the National Stock Exchange of India ("NSE"). The purchase price paid by Siemens (EUR 2.1 billion) reflects a non-trivial discount of 15% on the NSE share price.[38] It is therefore unclear whether this transaction will make a meaningful contribution to improving Siemens Energy's financial position.

Second, Siemens is supporting Siemens Energy by reportedly agreeing to a reduction in the fees it receives annually from Siemens Energy for using the Siemens brand. These are said to amount to hundreds of millions per year.[39]

Third, Siemens secures the position of the banks providing the Second German Line with a EUR 1 billion first loss tranche. This is also covered by a share pledge granted by Siemens Energy over a 5% stake in SL.[40]

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[34] The BMWK press release (fn. 27) mentions that the German Bundestag would be "involved" in the bailout. It appears that this has not happened yet.

[35] See Siemens Energy (fn. 22), 3, noting that "the government will receive a standard market payment". See also *Fariza* (fn. 22), quoting Siemens Energy's CEO Christian Bruch as saying that "the state will be paid as if it were an insurance company".

[36] See fn. 3.

[37] JUVE (fn. 5), notes that the purpose of the transaction is to strengthen Siemens Energy's balance sheet with the cash received from Siemens as purchase price for the stake in SIL.

[38] More precisely, it is a 15% discount on a 5-day volume-weighted average price (VWAP) of the stock. See Siemens Energy, Shareholder Letter Q4 FY2023 (fn. 22), 3. See also *Jones* (fn. 17). This implies a value for 100% of the company of EUR 11.67 billion.

[39] *Jones* (fn. 24).

[40] JUVE (fn. 5). The value of the pledged shares is said to be EUR 750 million. Note that this is consistent with SL's market capitalisation of around INR 1.34 trillion at close of the market on 1 December 2023 (or approximately EUR 14.75 billion on the same date). This is at odds with the valuation for the purpose of the divestment discussed in the previous paragraph, which seems strangely advantageous for Siemens.

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And, fourth, Siemens Energy "commits" to a cost-cutting/restructuring plan to return the company to profitability within the next 3 years. The plan is intended to reduce costs by EUR 400 million.[41] However, there is no clear and transparent schedule for how this could be achieved. Instead, the plan simply calls for limiting the company's international scope,[42] closing certain facilities, outsourcing some engineering tasks, and revising unfavourable contract terms with customers.[43] It is worth noting that the Spanish regional governments of Navarre and the Basque Country, concerned about the impact on the 5,000 jobs in their regions, have unanimously expressed that maintaining jobs (directly and in the industry) is a key objective. The Navarre government even officially declared that no job losses will be allowed.[44] This could have implications for the practical implementation of the EUR 3 billion Spanish leg of the bailout.

In addition to these "contributions", the government guarantees appear to stipulate that Siemens Energy may not pay dividends to its shareholders during the term of these guarantees.[45]

Little is known about the consequences for the management and directors of Siemens Energy and Siemens Gamesa, apart from restricting the payment of bonuses to directors while government guarantees are outstanding.[46]

III. Critical Firms and Bailouts

Assessing the Siemens Gamesa/Siemens Energy bailout requires going back to first principles on dealing with a company's financial distress. In a market economy, the usual response to a firm's financial distress is bankruptcy. If a company is over-indebted, or if it is unable to meet its financial obligations as they fall due, a collective proceeding is necessary to prevent a creditor run. In the proceeding, the firm is either liquidated or—if the business model is viable, i.e. if the firm is not economically distressed—restructured. In the first scenario, the creditors are paid out of the liquidation proceeds. In the second scenario, the firm is recapitalized, and the creditors receive new claims against the restructured entity.[47]

A financially distressed firm will find it difficult to continue operations. Anyone who thinks about doing business with the company will usually only do so if given some form of security. However, a financially distressed firm might find it difficult to provide such security.

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[41] *Jones* (fn. 23); *Ignacio Fariza*, Siemens Energy saca la tijera tras el rescate: recortará costes en Gamesa por 400 millones, El País, 21 November 2023.

[42] It is interesting to note that the company says that it will focus on a smaller core market for onshore wind turbines, specifically serving countries where regulation and financial incentives are greatest. See *Jones* (fn. 23).

[43] *Jones* (fn. 23).

[44] See *Fariza* (fn. 41).

[45] BMWK (fn. 27); *Jones* (fn. 24).

[46] BMWK (fn. 27); *Jones* (fn. 24).

[47] *Horst Eidenmüller*, Unternehmenssanierung zwischen Markt und Gesetz, 1999, 32-46; *White*, J. Econ. Perspect. (1989), 129.

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But even firms that are not currently financially distressed could face a similar problem. If business partners expect significant warranty claims and demand guarantees from a solvent third party, this party will look to the firm's current and future assets to determine whether and at what price it can afford to take the risk. If the outcome of this decision is negative or prohibitively costly to the firm, it will not be able to continue trading. If it cannot trade, it will soon face financial distress.

Bankruptcy is not always the best response to financial distress. Sometimes this is due to the structural limitations of a bankruptcy restructuring.[48] A bankruptcy restructuring rearranges the financial claims against a distressed firm. This is appropriate if the firm has an unsustainable financial structure. But consider the millions of firms worldwide affected by pandemic lockdowns or the energy crisis following the war in Ukraine. These millions of firms suffered temporary revenue losses (pandemic lockdowns) or cost increases (energy crisis). Recapitalization is not necessary. They require a limited cash injection.[49]

Another reason why bankruptcy restructuring is not always the best response to financial distress has to do with the type of firm that is in difficulty.[50] Bankruptcy proceedings concern the interests of a very limited group of parties, namely those who have a financial claim on the firm's assets. Decisions about the future of the company are made with the aim of maximizing the pie available for distribution to these claimants ("microeconomic efficiency").

But sometimes the closure or restructuring of a company has a massive negative or positive impact on third parties or even on the entire economy ("macroeconomic efficiency"). These effects are external to the bankruptcy process in the sense that they are not decisive for the restructuring/liquidation decision in the proceedings. In this sense one can speak of bankruptcy-externalities. Examples would be regional or even national employment effects, geostrategic effects and implications or environmental effects.

If a firm's liquidation or restructuring is likely to result in significant bankruptcy-externalities, the firm may be designated as "critical" to a particular nation state. Non-bankruptcy proceedings may be justified to resolve the financial distress of a critical firm. An ad hoc bailout of the firm by the state is one such process. Current examples include the bailout of Lufthansa[51] in the context of the pandemic or the bailout of Uniper[52] in the context of the energy crisis.

Bankruptcy is a highly regulated process. Ad hoc bailouts are much less regulated. Some hard constraints are in place, reflected, for example, in applicable state aid and antitrust laws. But

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[48] *Eidenmüller* (fn. 6).

[49] *Van Zwieten/Eidenmüller/Sussman*, Virginia Law & Business Review 15 (2021), 199-236.

[50] *Eidenmüller/Paz Valbuena* (fn. 7), 512-519; *Eidenmüller* (fn. 6).

[51] See *Lex*, Lufthansa: thanks for the support, Financial Times, 25 June 2020; *Madeleine Speed* and *Philip Georgiadis*, Germany makes €760mn profit from Lufthansa rescue, Financial Times, 14 September 2022.

[52] See *Lex*, Uniper bailout: Germany pays the price of parting from Putin, Financial Times, 21 December 2022; *Laura Pitel*, Uniper's chief vows to deliver a "good return" for Berlin after state rescue, Financial Times, 1 August 2023.

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the accountability for bailouts is currently primarily political, not legal. This massive discrepancy in regulatory density should be reduced. In prior work,[53] we have developed a set of principles that should govern ad hoc bailouts of critical firms: efficiency, proportionality, equity and transparency. In our view, adherence to these principles is critical to ensuring that a bailout represents a legitimate use of taxpayer money. We will explain these principles when examining the specific circumstances and terms of the Siemens Gamesa bailout in Section V.

IV. The Rationale for the Siemens Gamesa Bailout

In this section we ask whether the Siemens Gamesa bailout can be justified in principle. We will argue that Siemens Gamesa is probably not an economically viable firm. Even if it were, it is not a critical firm in the sense that bankruptcy proceedings would trigger significant negative macroeconomic or geostrategic externalities. Hence, Siemens Gamesa should not have been bailed out.

1. Viability of Siemens Gamesa

When deciding whether Siemens Gamesa should be bailed out, one must first examine whether it is an economically viable company. One difficulty in assessing Siemens Gamesa's economic viability is that the company—like other players in the industry—benefits from significant renewable energy subsidies.[54] Without these subsidies, the sector would likely not be viable under current economic conditions.[55] If we understand sectoral subsidies in renewable energy markets as a form of long-term support that will exist until companies like Siemens Gamesa could be profitable on their own in a free market scenario, we may accept that the relevant "viability baseline" is that of a subsidised industry.

However, even against this baseline Siemens Gamesa's economic viability appears doubtful. The company is not only affected by the overall economic situation of its industry, including significant competition and subsidies. There are also secondary complications that are caused by the company itself, even if we assume that they arise from the competitive pressures under which it operates. The quality issues with the flagship X.5 and X.4 turbines are the company's responsibility. They are said to affect at least 2,900 of the approximately 65,000 turbines of the corresponding models manufactured by the company.[56] These figures suggest that there are systemic/critical problems with the products, operations and potentially even business

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[53] *Eidenmüller/Paz Valbuena* (fn. 7).

[54] See, for instance, the European Wind Power Action Plan (fn. 2), 4-7, 14-15.

[55] See the European Wind Power Action Plan (fn. 2), 6, and the setting up of support schemes for the manufacturing of strategic equipment for the transition towards a net-zero economy (which includes wind turbines) under the amended Temporary Crisis and Transition Framework for State Aid (see Communications from the Commission 2023/C 101/03, of 17 March 2023, and C/2023/1188, of 21 November 2023). See also, among other instruments, the use of the Recovery and Resiliency Facility (https://commission.europa.eu/business-economy-euro/economic-recovery/recovery-and-resilience-facility_en), the Innovation Fund (https://climate.ec.europa.eu/eu-action/eu-funding-climate-action/innovation-fund_en) or the InvestEU program (https://investeu.europa.eu/index_en).

[56] *Jones* (fn. 23).

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plan of Siemens Gamesa, raising serious doubts about the (economic) viability of the company.[57]

After all, once Siemens Energy disclosed the losses caused by Siemens Gamesa and the market became aware of the situation, Siemens Energy ended up being unable to obtain the guarantees that its business required, even though the company appeared to have an adequate financial position.[58] Government intervention seemed to be the only "solution" to the problem. At the same time, the (financial) markets in which the company operates are functioning properly in the sense that they are not currently experiencing exceptional turbulence. If Siemens Gamesa had a sound business model, its shareholder or other private parties could be expected to support its operations with the necessary capital and assurances, lending against its anticipated revenue stream. The fact that no one was willing to do so in this situation suggests that Siemens Gamesa should be liquidated rather than rescued.

2. Bankruptcy-externalities

But let's assume that Siemens Gamesa was an economically viable firm. This would not suffice to justify a government bailout. As discussed, financially distressed firms can also be restructured in a bankruptcy proceeding. Such restructuring creates value for stakeholders with financial claims against the distressed firm, but only for them ("microeconomic efficiency"). In the present case, these types of stakeholders are Siemens Energy, Siemens and their respective creditors.

For the use of tax money to be justified, a certain increase in value for the "general interest" must be achieved, that is a return on the investment that the state would make in the company. Without such a return, taxpayers' money should not be put at risk for the benefit of a group of private stakeholders, especially if they do not contribute (significantly) to the rescue.

In the present case, we must consider two potential bankruptcy-externalities which the German and Spanish governments have cited as justification for their intervention. The first is the number of jobs that would be lost directly at the company and indirectly in its supplier network if Siemens Gamesa were put into a bankruptcy proceeding. The second relates to the importance of Siemens Gamesa to facilitate the EU's and Germany's energy transition and to ensure their energy sovereignty. The German Government has a clear focus on the second consideration. The Spanish Government focuses on preserving employment.

2.1 Preserving employment

As discussed, Siemens Gamesa directly employs approximately 25,000 workers, 5,000 of which are based in Spain, mainly in the northern regions of Navarre and the Basque

[57] To give a sense of these issues, the Financial Times reports a research analyst covering the industry as saying that "their business in wind is in utter disarray", and a "person familiar with the matter" as saying that "the worsening picture at the wind business had concerned lenders". See *Millard/Jones* (fn. 5).
[58] *Pitel/Millard* (fn. 13).

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Country.[59] The Nationalist Basque Party governs in the Basque Country and is a key member of the coalition that re-elected Mr Pedro Sánchez as President of the Spanish government this year. Spokespersons for the central and regional governments made it clear that preserving jobs must be a cornerstone of any rescue package.[60]

We see the appeal in avoiding unnecessary layoffs, particularly on a scale that could create additional problems by straining a dysfunctional labour market or an underfunded social security system that must provide unemployment benefits and continue operating with reduced tax revenues.

However, we do not believe that this is a likely scenario in the case of Siemens Gamesa, even if the company were to be liquidated. Even in this worst-case scenario, it seems plausible that the labour market could redistribute at least many of its employees: they work in an emerging industry. A more likely scenario is that competitors of Siemens Gamesa take over some of the facilities and associated employees. Unless there are other underlying issues that have not yet been publicly disclosed, the opportunity to increase production capacity at a bargain price and with skilled employees should prove interesting enough for at least one of these competitors. The wind turbine manufacturing sector is suffering from a shortage of skilled workers in Europe, and the sector is expected to continue to grow rapidly.[61]

2.2 Strategic policy considerations

The German government has emphasized from the outset that it sees Siemens Energy as a crucial part of its plans for a green energy transition.[62] Bailing out Siemens Gamesa could also be helpful in achieving the energy sovereignty goals set after the start of the war in Ukraine.[63]

Rescuing Siemens Gamesa brings Germany and the EU closer to achieving their ecological transformation and sovereignty goals, which are archetypal public goods—and they are heavily subsidised in recognition of this character.[64] However, since Siemens Energy does not consider the public good aspect of its business, its shareholders may conclude that the best course of action is to walk away from Siemens Gamesa in the absence of governmental

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[59] See *Urrutia* (fn. 33); *Diario de Navarra* (fn. 32); *Manu Álvarez*, Siemens Gamesa reitera a los sindicatos su intención de mantener la actividad en España, Diario El Correo, 24 November 2023.

[60] See, for instance, *Fariza* (fn. 41); *H. Montero*, Siemens descarta despidos en Gamesa a cambio del "rescate", La Razón, 15 November 2023; *Álvarez* (fn. 59).

[61] See the European Wind Power Action Plan (fn. 2), 4.

[62] See, for instance, JUVE (fn. 5).

[63] See, for instance, references to "the energy crisis following Russia's full scale invasion of Ukraine" and "European open strategic autonomy" in the European Wind Power Action Plan (fn. 2), 1.

[64] See, for instance, European Wind Power Action Plan (fn. 2), 4-7, 14-17; Green Deal Industrial Plan for the Net-Zero Age (fn. 1), 7-14; REPowerEU Plan, COM(2022) 230 final of 18 May 2022, 1, 12-19.

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support.[65] If we want to avoid that, it appears we will need to change incentives or provide additional support.

However, we need to delve deeper into the nature of this public good and consider whether preserving Siemens Gamesa is the only or best way to protect it. And the first question we must answer is to what extent the continuation of Siemens Gamesa is necessary to ensure that (i) the green energy transition goes according to plan and (ii) Germany and the EU secure their energy sovereignty. In this context, we need to consider what is unique or special about Siemens Gamesa (a company that we know has significant quality deficiencies in its flagship product) and whether it can be replicated elsewhere.

First, it should be noted that there is nothing critical about Siemens Gamesa's technology or manufacturing processes.[66] Many other companies make wind turbines used by the same customers. Quite a few of them do so at lower cost and with better quality. If Siemens Gamesa were liquidated, we would expect that some of its competitors would take the opportunity to acquire some or all of Siemens Gamesa's factories (and skilled workers) at a discounted price.

Wind farm developers have other European and non-European manufacturers to choose from. There may be friction when switching providers, but there are important points to keep in mind to justify why an adjustment period with reduced capacity might not be catastrophic: Wind energy capacity in Europe is currently significantly constrained by the speed of approvals.[67] Since October, Siemens Gamesa has suspended accepting orders for some onshore turbines and is becoming more selective in accepting offshore contracts.[68] In other words: Siemens Gamesa is already reducing its order volume. At the same time, wind farm developers may not be able to deploy turbines due to delays caused by late approvals.

Is there a public good or geostrategic advantage in keeping Siemens Gamesa running as a national champion? The benefits for the German economy and security are unclear. In contrast, the negative efficiency effects are significant: a company that is probably not viable continues to operate with government support and distorts market processes and competition.[69] Add to this assessment the increased risk of moral hazard that results from

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[65] As pointed by *Lex* in their column. See *Lex*, Siemens Energy: turbine trouble pops the renewables bubble, Financial Times, 26 October 2023.

[66] See, expressing an opinion along these lines, Clemens Fuest as quoted in the Süddeutsche Zeitung, Ifo-Präsident kritisiert mögliche Staatshilfen für Siemens Energy, 27 October 2023.

[67] See "State of the Union" Address (fn. 16). See also European Wind Power Action Plan (fn. 2), 8-9.

[68] *Millard/Jones* (fn. 5).

[69] However, given the relevance of the wind industry, it is part of the exemptions to state aid limitations as per the Temporary Crisis and Transition Framework for State Aid measures to support the economy following the aggression against Ukraine by Russia (2022/C 426/01) of 9 November 2022, last amended on 21 November 2023 (C/2023/1188). Indeed, both the "State of the Union" Address (fn. 16) and the European Wind Power Action Plan (fn. 2) suggest that companies in the wind industry and Member States make good use of the flexibility afforded by the framework.

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bailing out companies without compelling arguments, and the answer to the question is clearly "no".

What else will the German government do if a similar situation arises and not a wind turbine manufacturer, but a champion of the domestic automotive industry asks for help to be competitive in the global market for electric cars? Car manufacturers could potentially make a similar argument that without them an important part of the green transition would be delayed. Even if that were true, there will always be better alternatives.

V. The Terms of the Siemens Gamesa Bailout

However, let us assume, *arguendo*, that Siemens Gamesa is economically viable and that there are significant "macroeconomic externalities" that, at first glance, make the firm a candidate for a bailout. In this scenario, too, the question remains as to how the bailout should be structured so that such an intervention in the economy with taxpayers' money is appropriate.

What matters is how the bailout is implemented in practice. Its terms must take into account not only the issues related to the distress of the company being rescued, but also a host of other issues related to the use of taxpayer money to finance the bailout. As explained in Section III above, we have developed a principles-based framework to guide the design and practical implementation of bailouts.

Among the issues addressed in such a framework, we will first briefly discuss a very important aspect of this bailout: the lack of material consequences for both the shareholders and the managers (and directors) of Siemens Gamesa and Siemens Energy. This is relevant because it can lead to moral hazard, and the BMWK specifically emphasized that the participation of private stakeholders in the bailout is of utmost importance. We will then briefly discuss the other elements of the framework.

1. Stakeholder participation

It is striking and particularly revealing what Siemens Energy shareholders (including Siemens) are not doing. They do not provide Siemens Gamesa with any additional capital,[70] although they knew the situation in the company well in advance in order to plan and carry out a capital increase. They are also not looking for M&A alternatives or the sale of some parts of the business. They failed to secure support from private banks, despite Siemens Energy having an investment grade credit rating and relatively healthy financial position.[71] Furthermore, no director or senior manager appears to have been dismissed or suffered any other negative consequences, apart from restrictions on the payment of bonuses while state

[70] See *Pitel/Millard* (fn. 13).
[71] See *Pitel/Millard* (fn. 13); *Millard/Jones* (fn. 5).

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guarantees are outstanding.[72] This is remarkable given Siemens Gamesa's idiosyncratic quality issues.[73]

All of this suggests that Siemens Energy is unable or unwilling to raise the capital it needs to continue operations, whether from its current shareholders and lenders or from new ones. Against this background, the government must ensure that its support is sufficiently and adequately remunerated. To achieve this, the state must be adequately protected when the guarantees it provides are enforced and also share in the (potential) future profits of a company that could not continue to operate without its support.

It is worrying that Siemens Energy's shareholders have little involvement in the rescue operation, but benefit significantly from the use of government resources to protect their company. It is also very worrying that a lack of responsibility has been shown by the managers and directors whose decisions and (lack of) oversight led to the material manufacturing and quality problems that have brought Siemens Gamesa to its current predicament.

It is even more concerning that Siemens Energy shareholders may view government support as a "cheap" resource that can be used in place of their own funds, or even in situations where they would be unwilling to use their own funds—and all of this at no significant cost to them. This potentially creates problematic incentives for investors, directors and managers in other companies and industries. Moral hazard, after all, is one of the main complications of any form of government intervention, including bailouts.

2. Efficiency, proportionality, equity and transparency

The participation of private stakeholders in a bailout is a key point in ensuring its legitimacy. More generally, the following principles should guide the specific design of the bailout terms: efficiency, proportionality, equity and transparency. In this final section we discuss in summary the application of each of these principles in the Siemens Gamesa case.

We dealt with efficiency in Sections III and IV above. Siemens Gamesa likely is not an economically viable firm. Even if it were, it is not a critical firm in the sense that there were significant bankruptcy-externalities that would justify the use of public money for a bailout.

Proportionality was maintained—to a certain extent. Since the bailout is designed as a backstop guarantee, the funds may never be needed. However, these are real commitments for which appropriate resources must be allocated and earmarked over a very long period of time. The terms of the guarantees, in particular their remuneration, enforcement and security, will be crucial to understand whether the bailout is proportionate. Proportionality also requires that

[72] On the restriction of bonuses to directors while the backstop by the FRG is still operative, see *Jones* (fn. 24).
[73] At the end of July, the CEO of Siemens Energy even admitted that Siemens Gamesa's business model needed to be revised, while at the same time expressing criticism of Siemens Gamesa's governance. At the beginning of August, the CEO of Siemens Gamesa admitted that "we sold turbines too quickly [that] had not been sufficiently tested." See *Millard/Pitel* (fn. 17); *Pitel/Millard* (fn. 13).

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the state only contribute if private stakeholders have made an appropriate contribution to the rescue. This is not the case here.

Equity requires that the use of taxpayers' money be directed toward achieving a general benefit by capturing a positive externality that would be "lost" without the bailout. It also requires that other parties be not unduly disadvantaged unless this is necessary and they can be adequately compensated. In the case of Siemens Gamesa, as discussed, there is no convincing justification for the bailout. Compared to its other EU competitors, there is nothing unique about Siemens Gamesa that would justify the need for special treatment. If its competitors complain that they have been prejudiced because they compete in the same market, under the same pressures, but without the support of their governments, the solution cannot simply be to write additional checks until we run out of resources.

Finally, transparency is a key requirement to ensure that the intervention is legitimate. Taxpayers must be informed about the use of funds to rescue a particular company and the relevant conditions. It is well known in the market that Siemens Energy is benefiting from the rescue and is not providing fresh money. It is also well known that the bailout is carried out through guarantees that do not involve any immediate costs. But what are the terms of these guarantees, how will the government benefit from them and how has it protected its position? These are key elements that we have not been able to identify. Even if all elements of the rescue package had followed our suggestions, this use of public resources would not be legitimate if the implementation of the package (and its subsequent political and/or judicial control) was not easily understandable to the general public.

VI. Conclusion

Overall, we come to a sobering conclusion: Siemens Gamesa should not have been bailed out, and certainly not on the specific terms of this rescue. Siemens Gamesa likely is not an economically viable firm. Even if it were, it is not a critical firm in the sense that a bankruptcy process would trigger significant negative macroeconomic or geostrategic externalities. And even if an ad hoc bailout were justified (which it is not), it should not occur without a major contribution from Siemens and the other shareholders of Siemens Energy.

How could that happen? Siemens and the banks, well advised by many experienced lawyers from first-class law firms, faced a negotiating partner who apparently wanted to implement an ambitious political agenda to green the German economy at all costs: the Federal Ministry for Economic Affairs and Climate Action. Its expertise and experience in negotiating high-stakes business restructurings is limited. The ministry was easy prey. Taxpayers' money is being blown away in the wind.

This does not bode well for a possible future scenario in which one of Germany's leading automobile manufacturers experiences a significant downturn or even financial difficulties because its electric vehicles are of lower quality or more expensive than those of its American or Chinese competitors. The subsidies in the Siemens Gamesa case are small change compared to what might be necessary to save the German automotive industry.

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