Goodwill capital and corporate decoupling:

An empirical study of the Russian invasion of Ukraine[*]

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ABSTRACT

Numerous companies have voluntarily decoupled from Russia since Russia invaded Ukraine in 2022. The decoupling was triggered partially by stakeholder pressure on firms with business ties in Russia. This paper examines the stock market reaction to 432 decoupling announcements. We find that the average five-day cumulative abnormal stock return around decoupling announcements is –1.32%, implying the mean loss in stock value of US$0.91 billion. The loss is smaller for high ESG firms than for low ESG firms. As ESG rating is a proxy for goodwill capital, our results indicate that companies decoupled from Russia to preserve reputation capital.

Keywords: Russia-Ukraine war; Corporate decoupling; Goodwill capital; Russian-specific capital

JEL Classifications : F23, F51, G14, L10, M14

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1. Introduction

Whether environmental, social, and governance (ESG) policies enhance shareholder value has been the subject of debate for several decades, leading to competing views on ESG policies. In this paper, we focus on two interpretations: the "goodwill capital" view and the "consumption of private benefit" view.

The goodwill capital view argues that ESG activities enhance shareholder value because they are productive investments in "reputation" or "goodwill" capital. This view is consistent with the enlightened self-interest story of stakeholder model or strategic corporate social responsibility (CSR) in that ESG activities are good for both shareholders and stakeholders (Vishwanathan et al., 2020; Karpoff 2021). We argue that ESG activities can reduce transaction costs by fostering stakeholder engagement and thus help develop long-term, reliable, and self-enforcing relationships (Coase, 1937). Because stakeholder relationships are implicit, goodwill capital is required to enforce performance because its value is vulnerable to depreciation, should firms engage in opportunistic behaviors. Goodwill capital is a market-based concept and identical to a forfeitable collateral bond put up voluntarily by the firm to assure performance in stakeholder relationships (Klein et al., 1978; Klein and Leffler, 1981; Klein, 1996; Karpoff et al., 2005). Consistent with this view, firms with a higher ESG rating are found to perform better.[1]

The consumption of private benefit view espoused by Tirole (2001) and Bénabou and Tirole (2010), among others, argues that ESG activities destroy shareholder value because they are the result of agency problems and serve the private interests of corporate executives.

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[1] For example, Dowell et al. (2000), Edmans (2011), Flammer (2013), Servaes and Tamayo (2013), Krüger (2015), Lins et al. (2017), and Ding et al. (2021).

Managers can be opportunistic and implement ESG initiatives to advance their personal agenda (e.g., prestige, visibility, or personal ties with stakeholders) or obtain higher compensation.[2]

To disentangle these competing theories, this paper uses the Russian invasion of Ukraine on February 24, 2022 as an event to examine the effect of a firm's ESG rating—our proxy for goodwill capital—on the cost of corporate decoupling. Throughout the paper, corporate decoupling refers to a firm's actions to curtail current and/or future operations in Russia and is identified using the Yale CELI List of Companies Leaving and Staying in Russia (see Section 2.1 for more details), and the cost of corporate decoupling is measured by the firm's stock market reaction around decoupling announcements.

Under the goodwill capital view, firms with high ESG rating ("high-ESG firms") have accumulated more goodwill capital than firms with low ESG rating ("low-ESG firms").[3] Given that the invasion has been widely condemned, high-ESG firms are vulnerable to greater losses in goodwill capital than low-ESG firms, should they continue to operate in Russia. Thus, high-ESG firms are expected to experience a smaller negative stock market reaction around decoupling announcements than low-ESG firms. Under the consumption of private benefit view, managers invest in ESG initiatives for self-serving motives, implying that the agency problem is more severe in high-ESG firms than in low-ESG firms. The decision to decouple, an ESG activity, reflects a manifestation of agency issues because doing so can promote managers' personal image and enhance their job security and personal ties with stakeholders. Therefore, high-ESG firms are expected to suffer more in terms of stock price reaction than low-ESG firms upon decoupling announcements.

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[2] For example, Masulis and Reza (2015), Cheng et al. (2016), Cronqvist and Yu (2017), and Bebchuk and Tallarita (2020) offer empirical evidence that is consistent with this view.

[3] In many papers, goodwill capital and moral capital are used interchangeably, e.g., Godfrey et al. (2009) and Jo and Na (2012). However, in this paper, goodwill capital refers to a firm's conscious investment in ESG activities to build firm-stakeholder self-enforcing relationships to enhance shareholder value, whereas moral capital refers to a firm's conscious decisions to behave "ethically" according to prevailing social norms to avoid social punishments.

The Russian invasion event allows us to investigate the role of goodwill capital (proxied by ESG rating) on corporate decoupling for four reasons. First, this event is material and has substantial consequences on shareholder value—especially for firms with major business relationships in Russia—because investment in such relationships is Russia-specific and non-salvageable once firms decouple from Russia.[4] The cost of corporate decoupling is high because companies are required to pay employees as much as six months' wages and severance packages when they curtail operations in Russia, not to mention losing access to the Russian market.[5] Second, current studies indicate that managers would yield to pressure from stakeholders to decouple from Russia. This indicates that corporate decoupling is a value-destroying action because managers placed social responsibility over profits (Pajuste and Toniolo, 2022; Balyuk and Fedyk, 2022).

Third, our sample size is sufficiently large because the invasion is a major geopolitical event affecting thousands of companies around the globe: more than 1,000 international companies had curtailed operations in Russia within four months of the invasion (Sonnenfeld et al., 2022). Fourth, because the invasion was unprovoked and caused the death of thousands of innocent civilians, condemnation from the western world has been nearly unanimous, thus creating strong social or moral pressure on companies to withdraw their operations from Russia.[6] Firms might decouple from Russia for fear of social sanctions, such as shareholders dumping their shares, customers refusing to purchase goods, suppliers terminating business relationships, and employees jumping ship (Hart et al., 2022).

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[4] To illustrate, British Petroleum divested its assets from Russia and reported a quarterly loss of $20.4 billion in the first quarter of 2022—the highest quarterly loss in its history. Additional details are available in "BP's bumper earnings stoke new calls for windfall tax," *Financial Times*, May 3, 2022.

[5] On March 8, 2022, McDonald's suspended its operations in Russia, and is expected to incur an expense of $50 million per month in wages and lease payments for its 62,000 employees and 847 restaurants in Russia as a result. Additional details are available in "More than 200,000 workers in Russia still on western payrolls," *Financial Times*, April 20, 2022.

[6] On March 2, 2022, 141 countries (or 78% of those that participated) voted to condemn the invasion in a UN General Assembly resolution. The voting record can be found at https://digitallibrary.un.org/record/3959039.

This study examines the stock market reaction to 432 decoupling announcements and yields several important findings. First, the cost of corporate decoupling is meaningfully large but significantly smaller for firms with higher ESG scores. We find that the average five-day cumulative abnormal stock return around decoupling announcements is –1.32%, or an average decline in market value of US$0.91 billion. The aggregate decline in market value of 432 sample firms around decoupling announcements is US$393.1 billion. Nevertheless, the corresponding drop in market value for high-ESG firms (those with a one standard deviation increase in ESG score) is only 0.66%, relative to a decline of 1.32% for the sample average. While firms with a major business relationship in Russia incur a larger cost of corporate decoupling, those with higher ESG scores still suffer less. Moreover, the negative impact of corporate decoupling is smaller for high-ESG firms than for low-ESG firms prior to decoupling announcements.

Second, we find that the cost of corporate decoupling is smaller for firms with higher ESG scores, regardless of the motivation behind the ESG actions. In other words, the cost of corporate decoupling is smaller for high-ESG firms even if the high ESG rating is achieved due to agency problems, i.e., ESG actions are undertaken for consumption of private benefit purpose. This result remains robust for high-ESG firms that have a major business relationship. Our results indicate that corporate decoupling is a value-enhancing action, irrespective of whether firms have severe agency concerns. Overall, our results are more consistent with the goodwill capital view than the consumption of private benefit view.[7] In particular, our stock market reaction results are consistent with the claim that ESG investments are market-based

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[7] Note that the goodwill capital view and the consumption of private benefit view are not mutually exclusive theories because agency problem is an inevitable consequence due to prohibitive transactions costs in the real world (Demsetz, 1969). In other words, our tests are unable to completely reject the consumption of private benefit view and our inferences are drawn based on which view is likely to dominate the other view.

reputation capital or insurance premiums to protect firms in difficult times or crisis periods (Godfrey et al., 2009; Lins et al., 2017).

Third, to further support our results regarding the mechanism of decoupling decision and market reaction, we examine the importance of social pressure or social norms on corporate decoupling. Because of the almost unanimous international condemnation and the widespread public outcry over the invasion, firms that continue to operate in Russia could be perceived as immoral and be more vulnerable to social sanctions, especially in countries where the general public either strongly opposes the Russian invasion or has high-level awareness of environmental and social (E&S) issues. Empirically, we find that firms with a major Russian relationship located in these countries experience less negative stock market reaction upon decoupling announcements. The country-level results using social norms corroborate our firm-level results using goodwill capital regarding the mechanism of the decoupling decision and the market's reaction.

Given that the Russian invasion event is material and will reshape global ESG practices, this paper is among a growing body of research that investigates the impact of war on stock returns, sanctions, and other corporate policies (e.g., Balyuk and Fedyk, 2022; Basnet et al., 2022; Deng et al., 2022; Hart et al., 2022; Huang et al., 2022; Pajuste and Toniolo, 2022; Sun et al., 2022; Tosun and Eshraghi 2022; Yousaf et al., 2022). Our paper is closely related to Basnet et al. (2022) and Huang et al. (2022), but with three important differences. First, our main focus is to use the Russian invasion as an event to disentangle the two competing views of ESG. Second, we identify a firm's motivation behind its ESG actions because high-ESG firms can include firms that built up ESG scores to preserve reputation and firms that built up ESG scores to fulfill the CEO's consumption-of-private-benefit aim. Third, we also consider a firm's material Russian-specific capital in the analysis because current studies indicate that firms with material stakes in Russia are either reluctant or slow to withdraw from Russia

because decoupling is a very costly decision for those firms (Pajuste and Toniolo, 2022). Therefore, the stock market reaction is expected to be meaningfully large for such firms, allowing us to draw inferences on whether high ESG rating can alleviate the impact of negative cash flow news of such firms when they decouple.

Our paper adds to the literature on ESG and corporate social responsibility (CSR) by examining the role of goodwill capital and Russian-specific capital on corporate actions in a large-scale conflict that has the most wide-ranging consequences since the Second World War. Given that ESG policies have only recently begun to be debated extensively, the role of goodwill capital and Russian-specific capital in the context of a major war is underexplored in the literature (Hart and Zingales, 2022). To the best of our knowledge, we are among the first to offer a complete analysis of the role of both goodwill capital and Russian-specific capital in a war context. Besides, our paper sheds light on the relevance of the country-level social norms, which is less readily examined in the literature.[8] Prior studies have provided ample evidence of the importance of a firm's goodwill capital (proxied by firm-level ESG rating) to shareholder value, especially in difficult times.[9] However, studies covering times of great uncertainty offer no obvious consensus on what constitutes moral or socially acceptable behavior, because they often look at whether prior ESG investments act as insurance policy in difficult times instead of studying the firm's actual response to specific events. In contrast, the Russian invasion triggered nearly unanimous condemnation from the western world, leading to strong social or moral pressure on companies to decouple from Russia as a result of prevailing social norms. This event offers a unique opportunity to investigate the effect of social norms (at country level) on the likelihood and cost of corporate decoupling.

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[8] For example, Cai et al. (2016) and Liang and Renneboog (2017) use country-level characteristics, such as social trust, legal origin, and culture, to explain a firm's ESG investments or initiatives.

[9] See, for example, studies about environmental violations in Karpoff et al. (2005); financial reporting fraud in Karpoff et al. (2008) and Amiram et al. (2018); the COVID-19 pandemic in Ding et al. (2021); and the global financial crisis in Lins et al. (2017).

2. Data

2.1 Sample and data

Our data come from several sources: the Yale CELI List of Companies Leaving and Staying in Russia ("Yale list"), Refinitiv, FactSet Revere Supply Chain Relationships, and Compustat. Our sample begins with all firms that appear in the Yale list (April 19 version). Next, we merge this sample with firms with available ESG scores from Refinitiv (formerly known as Asset4) in 2021, or 2020 if data for 2021 are unavailable. Excluding observations with missing data, our final sample comprises 516 companies from 34 economies.[10]

We obtain data on corporate decoupling from the Yale list, which records actions taken by international firms in response to the Russian invasion of Ukraine on February 24, 2022.[11] This list includes actions from five categories according to a letter-grade scale: withdrawal (Grade A) refers to halting all Russian engagements or completely exiting Russia; suspension (Grade B) involves temporarily curtailing most operations, while keeping open the option to return; scaling back (Grade C) means shrinking some significant business operations but continuing some others; buying time (Grade D) entails postponing future planned investment, development, or marketing while continuing substantive business activities; and digging in (Grade F) refers to continuing business as usual in Russia. These letter grades reflect the degree of corporate decoupling. Withdrawal is the most severe form of decoupling, whereas buying time is the least severe, because the former refers to termination of all current and future business ties in Russia whereas the latter implies termination of partial future business ties (while keeping current ties intact) in Russia. The cost is expected to be higher for more severe forms of corporate decoupling. In our main analysis, corporate decoupling includes firms that

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[10] Note that the final sample includes companies in the energy sector which their decisions to decouple from Russia might be involuntary due to political pressure (Wan and Wong, 2009). To investigate the robustness of our results, we remove those companies from the sample, i.e., firms with standard industry classification codes of 1311 or 2911. In untabulated results, our robustness tests offer qualitatively and quantitively similar results.

[11] See https://www.yalerussianbusinessretreat.com and https://som.yale.edu/story/2022/over-750-companies-have-curtailed-operations-russia-some-remain.

receive a letter grade from A to D in the Yale list; our main results reported are qualitatively similar if we consider firms receiving a letter grade A or B as decoupling firms.

We use a firm's overall ESG score (*ESG*) obtained from Refinitiv to measure its goodwill capital (under the "goodwill capital view") or its agency issues (under the "consumption of private benefit" view).[12] We use whether a company has a major business relationship in Russia (*RussiaRelationship*) as a proxy for Russian-specific capital; it equals 1 if the firm has a customer, supplier, or partner relationship in Russia, and 0 otherwise.[13] Data on business relationships in Russia are obtained from FactSet Revere, which contains unique firm-level relationship data from various publicly disclosed documents.[14] Material supply-chain relationships are used to measure a firm's exposure in Russia or Russian-specific capital for two reasons. First, they are comprehensive and capture a broad range of exposure in Russia including assets, suppliers and employees. An alternative proxy is geographic revenue exposure which captures exposure to customers only (Pajuste and Toniolo, 2022).[15] Second, they are particularly relevant to the cost of decoupling because the Russian authorities

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[12] The overall ESG score is computed based on the weighted sum of scores related to environmental, social, and governance components. Specifically, the environmental score (*Env*) is the weighted sum of the firm's scores related to emissions, innovation, and resource use; the social score (*Soc*) is the weighted sum of the firm's scores related to human rights, product responsibility, workforce, and community; and the governance score (*Gov*) is the weighted sum of the firm's scores related to management, shareholders, and CSR strategy. Our results are qualitatively similar if we use the individual E, S, or G scores that form the overall ESG score, or the first principal component. In Section 3.3, we further explore whether firms have high ESG scores due to goodwill motives or simply because of agency issues.

[13] A firm can have minor business relationships in Russia even if *RussiaRelationship* takes the value of zero because only major business relationships, especially those that are sufficiently material to be disclosed in financial statements, are considered essential relationships in FactSet Revere.

[14] Our measure of Russian-specific capital is subject to measurement errors due to cross-country differences in financial reporting requirements on material business relationships. This problem biases our regression estimates towards zero, i.e., in favor of finding a statistically insignificant result.

[15] Additionally, a firm's exposure in Russia can differ widely between the two proxies. For example, Nokian Tyres produced 80% of passenger car tires in Russia and bought approximately 50% of raw materials for tires produced in Russia. In contrast, only 20% of the company's net sales in 2021 was derived from the Russian market. Source: https://www.nokiantyres.com/company/news-article/nokian-tyres-plc-information-on-eu-s-newly-imposed-sanctions-2/.

threatened to prosecute employees who worked for companies that intended to decouple from Russia.[16]

Data on daily stock returns are calculated from Compustat Security File. We adjust for stock splits, dividends, and other distributions. We take a US investor perspective and express daily returns in US dollars using exchange rate information from Compustat Global. The local market returns are calculated as the value-weighted average return in US dollars, and only main securities and common stocks are used in the calculation. If a stock is cross-listed in multiple exchanges, we choose the exchange with the highest dollar volume in 2021.

We use cumulative abnormal return (*CAR*) around decoupling announcements to measure a firm's cost of decoupling from Russia. We manually verify each announcement date by checking the links in the Yale list against companies' press releases, financial reports, and any other news sources available via the internet. This validation procedure yields a sample of 432 firms in 30 countries that have decoupled from Russia since February 24, 2022. We calculate the *CAR* as follows. We estimate a market model using daily returns for each security and local market returns in 2021 and calculate the abnormal return for each security on an event day, with day 0 defined as the first trading day when the firm announces its decision to decouple from Russia.[17] We then calculate the five-day cumulative abnormal return for the security as the sum of the abnormal returns from day −2 to day +2.[18] Table A in the Appendix contains detailed descriptions of all variables used in this study.

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[16] Fazer's employees were threatened to face a 15-year prison sentence when the company announced its decision to leave Russia (see "Fazer joutui Venäjällä viranomaisten silmätikuksi," *Helsingin Sanomat*, March 26, 2022). Similarly, Continental AG reversed its decision to decouple from Russia and resumed the production in April 2022 to protect its local employees from criminal charges (see "Continental restarts tyre making at Russian plant to protect workers," *Reuters*, April 19, 2022).

[17] For companies with multiple announcements on corporate decoupling, we use the first announcement based on the action taken by the firm in the April 19 version of the Yale list.

[18] Results are qualitatively similar if we use the Fama-French three-factor model (Fama and French, 1993) or the q-factor model consisting of the market factor, a size factor, an investment factor, and a profitability factor of Hou et al. (2015).

2.2 Descriptive statistics

Table 1 shows the letter grade distribution on corporate decoupling for our sample. Out of the 516 sample firms in the Yale list, 83.7% decoupled from Russia, 63.4% took strong positions on decoupling by withdrawing or suspending operations in Russia, while 20.3% took weak positions on decoupling by scaling back or postponing operations in Russia.

[Insert Table 1 here.]

To demonstrate the sample selection problem for firms in the Yale list, Table 2 provides descriptive statistics of our sample comprising firms in the Yale list and a benchmark sample comprising firms from the 2021 Compustat universe that have data on ESG scores from Refinitiv. We also include a set of firm characteristics, namely a firm's size (*log Sales*), performance (*Return on assets*), leverage (*Debt to assets ratio*), and liquidity (*Cash to assets ratio*) for comparison. All financial ratios are winsorized at the top and bottom 1 percentiles. Data on firm characteristics are obtained from the Compustat databases.

As expected, firms in the Yale list are very large corporations as the list was compiled to impose private sanctions on Russia by putting public pressure on companies with substantial business stakes in Russia to leave Russia. The average sales/revenue of our sample firms is US$17.62 billion, compared to only US$1.81 billion for firms in the Compustat universe sample. Similarly, firms in the Yale list have major business relationships in Russia. About 33% of our sample firms had a major business relationship in Russia, compared to just 5% for firms in the Compustat universe sample.

To understand the timing of decoupling actions, Figure 1 shows the distribution of the 432 decoupling announcements in our sample since the war broke out on February 24, 2022. This figure shows that there are two types of firms: "early leavers" which made decoupling announcements within the first two weeks and "late leavers" which made decoupling

announcements as late as seven weeks after the war broke out. Table 3 shows the summary statistics for *CAR* around decoupling announcements. The average five-day *CAR* of the 432 firms in our sample is around –1.32%. As expected, the cost of corporate decoupling from Russia is larger for more drastic forms of separation. The average five-day *CAR* is –1.36% for firms that withdrew operations from Russia, compared to –0.53% for firms that postponed future engagements in Russia (i.e., buying time).

[Insert Tables 2 and 3 and Figure 1 here.]

3. Main analysis

3.1 Stock market reaction around decoupling announcements

To examine the stock market reaction around decoupling announcements, we estimate the following baseline model by OLS:

$$CAR_i = \alpha + \gamma_1 zESG_i + \gamma_2 RussiaRelationship_i + \theta_j + \theta_c + \varepsilon_i \tag{1}$$

where the subscript *i* denotes firm *i*, *j* denotes industry *j* based on the Fama-French 48-industry classification, and *c* denotes economy *c* based on the location of the firm's headquarters. CAR_i is the five-day cumulative abnormal return of security *i* around decoupling announcements (day –2 to day +2). Because decoupling announcements are unscheduled and can be leaked prematurely, our event window covers five days to account for event-day uncertainty.[19] $zESG_i$ is the firm's standardized ESG score computed using all firms that appear in Compustat North America and Compustat Global with non-missing data of ESG scores;[20] $RussiaRelationship_i$ is

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[19] Our results are qualitatively similar if the event window is shortened or lengthened. In unreported tables, our results are stronger in a longer event window (e.g., a seven-day window) but weaker in a shorter event window (e.g., a three-day window). These differences are due to the negative pre-announcement drift (to be discussed in Section 3.3).

[20] For better interpretation, we use the standardized ESG score (rather than overall ESG score) in our regressions. The standardized ESG score is computed as ESG_i minus the mean of ESG_i, divided by the standard deviation of ESG_i.

a dummy variable equal to 1 if the firm has a major business relationship in Russia; θ_j and θ_c are industry and country fixed effects, respectively; and ε_i is the error term.

In model (1), γ_1 measures whether the cost of corporate decoupling is lower for firms with more goodwill capital (higher ESG score), while γ_2 estimates the cost of corporate decoupling for firms with a major business relationship in Russia. To examine whether the cost of corporate decoupling is lower for firms with higher ESG scores and a major business relationship in Russia, we add an interaction term between $zESG_i$ and $RussiaRelationship_i$ to the baseline model:

$$CAR_i = \alpha + \gamma_1 zESG_i + \gamma_2 RussiaRelationship_i +$$

$$\gamma_3(zESG_i \times RussiaRelationship_i) + \theta_j + \theta_c + \varepsilon_i \qquad (2)$$

where γ_3 is the coefficient of interest and measures whether the cost of corporate decoupling is lower for firms with more goodwill capital (higher ESG score) and also a major business relationship in Russia.

Table 4 reports results using our sample firms in the Yale list. Column (1) shows the unconditional five-day CAR (without any controls and fixed effects). The results indicate that the cost of corporate decoupling is high and economically significant. The average five-day CAR around decoupling announcements is –1.32%, equivalent to a decline in market value of US$0.91 billion.[21,22] The aggregate decline in market value of the 432 sample firms over the five-day interval around decoupling announcements is US$393.1 billion.

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[21] Because stock price could have (partially) reflected the economic damage due to the invasion even before Russian troops crossed into Ukraine and decoupling announcements were made, our *CAR* estimates around decoupling announcements might underestimate the real economic cost of decoupling (Ahmed et al., 2022; Balyuk and Fedyk, 2022). In addition, our regression estimates are biased toward zero due to this event anticipation problem, i.e., in favor of finding a statistically insignificant result.

[22] To eliminate the possibility that our result may be confounded by contemporaneous news around decoupling announcements, we use a propensity score matching methodology to construct a control group comprising digging-in firms from the Yale list that have similar characteristics (including overall ESG score and firm size) as the decoupling firms. We obtain 82 pairs of firms for comparison. Our untabulated results show that the average

[Insert Table 4 here.]

However, firms with higher ESG scores suffer less (or perform relatively better) around decoupling announcements. The results in Column (3) indicate that the average five-day *CAR* around decoupling announcements is only –0.66% for firms with a one standard deviation increase in ESG score above the mean.[23] As expected, the cost of corporate decoupling is even larger for firms with a major business relationship in Russia. The results in Column (4) indicate that the additional average five-day *CAR* around decoupling announcements is –1.75% for firms with a major business relationship in Russia, or a decline in market value of US$1.49 billion. Nevertheless, those with higher ESG scores still suffer less, as indicated in Column (5).

Overall, these results are more consistent with the goodwill capital view rather than the consumption of private benefit view because if the latter view dominates in the data, we should expect firms with higher ESG scores (as an indication of more agency issues) to suffer more.

3.2   Daily abnormal returns around decoupling announcements

To further differentiate the two competing views on ESG, we examine daily abnormal returns around decoupling announcements. Due to the widespread international condemnation of the invasion, the market may have anticipated that some companies would take action or cut ties with Russia. In informationally efficient markets, the stock price will adjust and reflect this anticipation well before the official announcement of corporate decoupling, resulting in a negative pre-announcement price drift.

By comparing the pre-announcement price drifts between high- and low-ESG firms, we can gain additional insights on the competing views on ESG. Under the goodwill capital view,

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five-day *CAR* around decoupling announcements is 0.66% for the control group (digging-in firms), whereas that for the treatment group (decoupling firms) is –1.66%. The difference is –2.31%, which is economically and statistically significant.

[23] One standard deviation increase in the standardized ESG score above the mean translates to a drop of 0.662% (= −1.318 + 0.656) in five-day *CAR* around decoupling announcements.

goodwill or reputation capital is similar to an insurance policy, allowing reputable firms to weather a storm better. Thus, firms with more goodwill capital should be more capable of absorbing negative shocks than firms with less goodwill capital. If investors anticipate a negative cash flow shock from corporate decoupling, high-ESG firms should suffer less in the pre-announcement period than low-ESG firms. Under the consumption of private benefit view, if decoupling is a manifestation of the agency problem, the pre-announcement *CAR* should be more negative for high-ESG firms than for low-ESG firms because decoupling is a self-serving (sub-optimal) corporate decision that benefits managers at the shareholders' expense.

Table 5 reports daily abnormal returns around decoupling announcements for our sample firms in the Yale list. To ensure that the pre-announcement period is after the start of the war, we exclude firms whose announcement dates are within 10 days after February 24, 2022. Our results indicate that the stock market reacts negatively for days prior to decoupling announcements. This finding is expected and can be justified in three ways. First, the decision to decouple from Russia might have been triggered by stakeholder pressure that led to negative pre-announcement abnormal returns.[24] Second, events can be fully or partially anticipated by the market (Grinblatt and Wan, 2020).[25] Third, information can be leaked prematurely because firms are required to satisfy legal or regulatory requirements in Russia or in their home countries.[26] Figure 2(a) plots the *CAR* around decoupling announcements in our sample. It shows that there is a negative pre-announcement drift in abnormal returns.[27]

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[24] For example, Fast Retailing, which owns Uniqlo, made a U-turn decision on March 10 to close its stores in Russia after mounting public pressure against its initial decision to keep operating there (see "Uniqlo bows to public pressure to close stores in Russia," *CBS News*, March 19, 2022).

[25] In Section 4.2, we provide empirical evidence that the stock market anticipated corporate decoupling decisions on February 24, 2022, the day when Russia invaded Ukraine.

[26] For example, Russian authorities had forced Fazer, a Finnish food company, to delay announcing its decision to leave Russia (see "Fazer joutui Venäjällä viranomaisten silmätikuksi," *Helsingin Sanomat*, March 26, 2022).

[27] In unreported analyses, we find that, among firms having a major business relationship in Russia, the pre-announcement decline in share price is smaller for high-ESG firms than for low-ESG firms; among firms without a major business relationship in Russia, the pre-announcement decline in share price is similar for both high- and low-ESG firms. The latter trend seems to suggest that goodwill capital is less relevant in mitigating the negative impact of corporate decoupling for firms without a major business relationship in Russia.

[Insert Table 5 and Figure 2(a) here.]

To examine whether the negative pre-announcement drift is weaker in firms with more goodwill capital, we repeat the above procedures and split the full sample into two new subsamples: high ESG score vs. low ESG score. Figure 2(b) plots the cumulative abnormal returns around decoupling announcements between firms with high ESG score vs. those with low ESG score. It shows that in the pre-announcement period, the magnitude of negative *CAR* is smaller for firms with high ESG scores. Table 6 reports daily abnormal returns around decoupling announcements in the two subsamples. We find that the pre-announcement abnormal returns are more negative for firms with low ESG scores than for firms with high ESG scores. This finding seems to be more consistent with the goodwill capital view than the consumption of private benefit view.

[Insert Table 6 and Figure 2(b) here.]

3.3 Goodwill-motivated vs. agency-motived ESG actions

Throughout the paper, we argue that under the goodwill capital view, decoupling is reputation-preserving. However, under the consumption of private benefits view, decoupling reveals agency problems because ESG actions such as decoupling are motivated by the CEO's private consumption motive. There are two important assumptions implied in our argument. First, the ESG rating is positively correlated with ESG actions, but unrelated to the motive behind the ESG actions. This implies that higher ESG scores can be built up by ESG actions to fulfill the CEO's consumption-of-private-benefit aim. Second, the market correctly identifies the motivation behind the ESG action, including decoupling. However, these assumptions are not necessarily true, implying that high-ESG firms could include firms that built up ESG scores for consumption of private benefits and firms that built up ESG scores to preserve reputation.

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To examine the validity of our assumptions, we identify the motivation behind ESG actions based on the free cash flow hypothesis advocated by Jensen (1986) as follows: High leverage reduces agency problems and constrains managers to implement value-destroying ESG actions to advance their personal agenda, whereas high liquidity provides greater latitude for such value-destroying actions. We follow Krügler (2015) and use *Book leverage* (defined as total liabilities scaled by total assets) and *Liquidity* (defined as cash and short-term investments scaled by total assets) as measures of agency concerns. Specifically, a firm has low (high) agency concern if the firm's *Book leverage* is above (below) the median. Alternatively, a firm has low (high) agency concern if the firm's *Liquidity* is below (above) the median. We create two dummy variables to separate high-ESG firms into two groups based on the motivations underlying their ESG actions, as follows:

- *Goodwill* = 1 if a firm's ESG score is above-median and the firm has low agency concern, and 0 otherwise.
- *Agency* = 1 if a firm's ESG score is above-median and the firm has high agency concern, and 0 otherwise.

We then estimate the following models by OLS:

$$CAR_i = \alpha + t_1 Goodwill_i + t_2\ Agency_i + t_3 RussiaRelationship_i$$

$$+ \theta_j + \theta_c + \varepsilon_i \tag{3}$$

$$CAR_i = \alpha + t_1 Goodwill_i + t_2\ Agency_i$$

$$+ t_3(Goodwill_i \times RussiaRelationship_i)$$

$$+ t_4(Agency_i \times RussiaRelationship_i) + \theta_j + \theta_c + \varepsilon_i \tag{4}$$

where CAR_i is the five-day cumulative abnormal return of security i around decoupling announcements (day –2 to day +2). If the goodwill capital view prevails, we expect the stock

market reaction to be positive for high-ESG firms with goodwill-motivated ESG actions, i.e., $t_1 > 0$ in (3) and $t_3 > 0$ in (4). However, if the consumption of private benefit view prevails, we expect the stock market reaction to be negative for high-ESG firms with agency-motivated ESG actions, i.e., $t_2 < 0$ in (3) and $t_4 < 0$ in (4).

Table 7 reports the regression results for goodwill-motivated vs. agency-motivated ESG actions. Columns (1) and (2) display the results in which *Book Leverage* is used to measure agency concerns, whereas Columns (3) and (4) display those in which *Liquidity* is used to measure such concerns. In Column (1), we find that the coefficients of both *Goodwill* and *Agency* are positive and statistically significant at the conventional level. In Column (2), we find that the coefficients of *RussiaRelationship × Goodwill* and *RussiaRelationship × Agency* are positive; both estimates are significant at the 10% level or better. Our results are qualitatively similar if we use *Liquidity* as the proxy for agency concerns, except that the coefficient of *RussiaRelationship × Agency* is not statistically significant at the 10% level.

Our results indicate that firms with higher ESG scores suffer less (or perform relatively better) around decoupling announcements, regardless of whether their ESG actions are goodwill-motivated or agency-motivated. Our results are consistent with the claim that decoupling is capital-preserving, even for high-ESG firms in which agency problems are more severe. Overall, our results in Table 7 corroborate those in Sections 3.1 and 3.2, and are more consistent with the goodwill capital view.

4. Further tests
4.1 Social norms and corporate decoupling

Because of the nearly unanimous condemnation of the invasion, firms that continue to operate in Russia might be perceived as unethical and become subject to social punishment. In countries with social norms that either strongly oppose the Russian invasion or greatly

emphasize the relevance of E&S initiatives, firms are expected to face strong social pressure to decouple from Russia because of the fear of social sanctions.[28]

We investigate whether social norms affect stock market reaction to decoupling announcements by modifying model (4) as follows:

$$CAR_i = \alpha + j_1 RussiaRelationship_i + j_2(SocialNorm_c \times$$

$$RussiaRelationship_i) + \theta_j + \theta_c + \varepsilon_i \qquad (5)$$

where $SocialNorm_c$ is a country-level measure of social norms. Because our model includes country fixed effects and $SocialNorm_c$ does not vary across time, its effect is fully absorbed by the country fixed effects. Therefore, j_2 is the main coefficient of interest in our model.

We use two measures to proxy for country-level social norms. First, we use the percentage of people having no confidence in the Russian president Vladimir Putin, denoted by *NoConfidenceRussianPresident*.[29] This is based on a survey conducted by the Pew Research Center in 2021, which asked "How much confidence do you have in the Russian President [Vladimir Putin]?"[30] In countries with a higher percentage of people having no confidence in President Putin, the public is more likely to oppose the Russian invasion. The second proxy for social norms is the World Value E&S Index, which is based on data from the World Values Survey (WVS) and widely used to measure social trust or social capital (Knack and Keefer,

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[28] Our results in Table B of the Appendix are consistent with this claim: 90% of all the firms on the Yale list with headquarters in countries that condemned the Russian invasion in the UN General Assembly resolution decoupled from Russia. In contrast, only 16.7% of all firms on the Yale list with headquarters in countries that did not condemn the Russian invasion decoupled from Russia. In addition, our unreported results indicate that goodwill capital matters, because the overall ESG score (our proxy for goodwill capital) is, on average, meaningfully higher in countries that condemned the invasion than in countries that did not.

[29] For consistency and better interpretation, *NoConfidenceRussianPresident* is also standardized based on all the observations in the regression.

[30] The data are available at https://www.pewresearch.org/global/database/indicator/49/. The Pew Research Center survey indicates that the country-level public trust in President Putin was quite low before the invasion. In 2021, in 13 out of the 17 surveyed countries, 70% or more of the people expressed no confidence in the Russian president. The country-level public trust also diverges substantially across countries. Only 14% of people in Sweden and 16% in the United States had confidence in President Putin, compared with 55% in Greece and Singapore.

1997; Guiso et al., 2006). Following Dyck et al. (2019), we use 12 survey questions from the WVS that assess a society's values regarding environmental activism, liberty, gender equality, personal autonomy, and the voice of the people. Countries with higher index values are expected to have stronger values and beliefs favoring E&S initiatives. In the regression, *WorldValueE&SIndex* is a dummy variable equal to 1 if the country is in the highest tercile of the World Value E&S Index among the countries within the sample.

We expect that firms with a major business relationship in Russia and located in countries with stronger social norms (i.e., lower confidence in President Putin or stronger values favoring E&S initiatives) suffer a lesser penalty from social sanctions when they decouple from Russia, that is, $j_2 > 0$. Table 8 reports estimation results using firms with decoupling announcements in the surveyed countries. As expected, $\widehat{j_2}$ is significantly positive.

[Insert Table 8 here.]

These results using social norms corroborate our firm-level results using goodwill capital regarding the mechanism of the decoupling decision and the market's reaction.

4.2   Stock market reaction around the Russian invasion event

To mitigate the concern that the stock market reaction around decoupling announcements could be confounded by contemporaneous news unrelated to decoupling, we perform an event study analysis around the day when Russia invaded Ukraine on February 24, 2022.[31] We split our sample firms in the Yale list into two groups: decoupling firms and digging-in firms.[32] Next, for each group of firms, we perform the same set of regressions as in Table 4.

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[31] Prior studies offer ample evidence that stock prices respond quickly and accurately to new information, including that which is complex and unclear, e.g., Fama (1970), Maloney and Mulherin (2003), Wan and Wong (2009), and Newhard (2014).

[32] We remove Tenneco, a digging-in company, from the analysis because the company has a major confounding news around the Russian invasion event. On February 23, share price of Tenneco rose by 94% because the company announced that it would be acquired by Apollo Global Management Inc., https://www.tenneco.com/news/news-detail/2022/02/23/tenneco-to-be-acquired-by-apollo-funds.

Table 9 reports the results from regressing the five-day *CAR* around the invasion day on ESG score and Russian relationships for decoupling firms in Panel A and for digging-in firms in Panel B. The result in Column (1) of Panel A indicates that for firms that eventually decouple, the average five-day *CAR* around the day of invasion is –2.41%, which is meaningfully large and statistically significant at the 1% level. This implies that the negative cash flow shock for firms that eventually decouple was priced around the day of invasion. The main results in Panel A of Table 9 are qualitatively similar to those in Table 4: the coefficient estimates of ESG remain statistically and economically significant around decoupling announcements, indicating that the effect of goodwill capital was not fully priced around the invasion day. Consistent with the goodwill capital view, the results indicate that (firm-level) goodwill capital matters for decoupling firms around the day of invasion. Our results in Panel A also corroborate those in Table 4 in the sense that the market expected that the economic damage would be larger for firms that eventually decouple if they have a major business relationship in Russia.

[Insert Table 9 here.]

The results in Column (1) of Panel B indicate that digging-in firms suffered a small negative stock market reaction around the day of invasion. The average five-day *CAR* around the day of invasion is –1.31% for these firms, but the estimate is statistically indistinguishable from zero. The results in Panel B show that the coefficient estimates of ESG are negative and statistically significant at the 5% level, indicating that the decision to remain in Russia could be reputation-destroying. In other words, goodwill capital also matters for digging-in firms

because the expected economic damage around the invasion day is larger if they have more goodwill capital, i.e., higher ESG scores.[33]

To our surprise, the expected economic damage is significantly smaller for digging-in firms if they have high ESG scores and a major business relationship in Russia. The coefficient of $zESG_i \times RussiaRelationship_i$ in Column (5) of Panel B is statistically and economically significant at the 5% level. This implies that the market anticipated some offsetting benefits for such firms, e.g., increase in sales due to exit of industry rivals and delay or avoidance of asset impairments or write-down.[34] Overall, our results in Table 9 indicate that the expected economic damage for decoupling firms is larger than that for digging-in firms. This might justify why digging-in firms continue to operate in Russia, because they are subject to very different constraints.[35]

4.3 Stock market reaction to decoupling announcements of U.S. firms

As the Yale list is biased in favor of large U.S. companies that are exposed to intense public scrutiny and stakeholder pressure, the stock market reaction to decoupling announcements should be particularly strong for U.S. firms. To investigate this possibility, we construct a subsample with only U.S. firms ("subsample") and repeat our empirical tests. In our final sample, 41% of them are U.S. firms which are consisted of 197 decoupling firms and

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[33] To further support the goodwill capital view, our unreported results show that the ESG rating is meaningfully higher for decoupling firms than for digging-in firms. Numerically, the median standardized ESG scores for decoupling firms is 0.71, compared to 0.62 for digging-in firms.

[34] To illustrate, Nokian Tyres told stock analysts that the firm would win market share from rivals that were leaving Russia ("Finland's Nokian Tyres Defends Move to Retain Control of Russia Factory," *Reuters*, March 22, 2022) and Renault reported a cost of 2.2 billion euros in asset write-down for withdrawing its business operations from Russia ("Renault sells Russia business and stake in Lada maker for 2 roubles," *Financial Times*, May 16, 2022).

[35] To investigate whether the impact of (country-level) social norms on stock market reaction around the day of invasion differs between decoupling firms and digging-in firms, we perform a separate estimation based on model (5) for each group of firms. Our untabulated results based on proxies for country-level social norms remain qualitatively similar to those based on firm-level ESG scores in Table 9. Our findings imply that social norms matter for decoupling firms only. In other words, decoupling firms experienced a smaller negative stock market reaction on the day of invasion if they were located in countries with stronger social norms. In contrast, digging-in firms experienced a similar negative stock market reaction on the day of invasion regardless of whether countries they were located in had strong or weak social norms.

15 digging-in firms. Overall, our subsample results are qualitatively similar to our main results in our final sample.[36] As expected, our subsample results are quite consistent with the goodwill capital view of ESG. First, our regression estimates of ESG ($zESG$) and its interaction term ($zESG_i \times RussiaRelationship_i$) are economically more significant around decoupling announcements in the subsample than in the full sample. In unreported results, we find that the drop in market value for U.S. firms with high ESG scores in the subsample sample is only 0.44%, relative to a decline of 0.66% for comparable firms in the full sample.

Second, stock return reversal around decoupling announcements is meaningfully larger for U.S. firms with high ESG scores in the subsample sample than for comparable firms in the full sample. For U.S. firms with high ESG scores, the average three-day cumulative abnormal returns are –1.75% prior to decoupling announcements (day –3 to day –1) and +0.83% following the announcements (day +1 to day +3), implying a stock return reversal of 2.55%.[37] For comparable firms in the full sample, the average three-day cumulative abnormal returns are –0.96% prior to decoupling announcements and +0.045% following the announcements, implying a stock return reversal of only 1%. Our subsample findings are consistent with the claim that U.S. firms in the Yale list are vulnerable to intense public scrutiny and stakeholder pressure, especially those with substantial reputation capital at stake. Therefore, reputation capital for those firms was depreciated prior to decoupling announcements due to stakeholder pressure but it was partially restored after these companies announced their decisions to decouple from Russia. Overall, our subsample results are very consistent with the goodwill capital view of ESG.

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[36] Not surprisingly, our subsample results are statistically weaker than those of the full sample due to the large increase in standard errors of regression estimates arising from the large reduction in sample size. However, our subsample results are quantitatively and economically stronger than those of the full sample except for the regression results in Table 7.

[37] The stock return reversal of 2.55% is computed as follows: +0.83% − (−1.75%) based on the average three-day *CAR* prior to and following decoupling announcements.

5.   Conclusion

This paper evaluates the impact of market-based goodwill or reputation capital on the firm's cost of decoupling from Russia, to disentangle two dominant views on ESG—namely, the goodwill capital view and the consumption of private benefit view. We do so by examining the role of ESG scores (as measures of goodwill capital under the former view and agency issues under the latter view) and Russian-specific capital on the stock market reaction when the firm announces its decision to decouple from Russia. We find that the cost of corporate decoupling is high, especially for firms with major business relationships in Russia. However, the cost of corporate decoupling is smaller for firms with higher ESG scores. If the ESG rating reflects a firm's aggregate investments in ESG activities or goodwill capital (commitments to develop reliable intangible firm-stakeholder relationships), our results point to the same conclusion that ESG investments are value-enhancing. In other words, our results are more consistent with the goodwill capital view of ESG and agree with the enlightened self-interest story of stakeholder model or strategic corporate social responsibility (CSR) in that ESG activities are good for both shareholders and stakeholders.

Note that there are other competing (but not mutually exclusive) views on ESG in the literature. One alternative view argues that ESG initiatives are investments in public relations to satisfy the growing demand from various stakeholder groups for doing good in society (Bebchuk and Tallarita, 2020). This view postulates that ESG investments are for window-dressing purposes and have no material effects on corporate actions or objectives. Our results are less consistent with the public relations view because it predicts that ESG rating should have no material impact on corporate decoupling, whereas our findings indicate that ESG rating does affect the likelihood and cost of corporate decoupling.

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Table 1: Distribution of letter grade on corporate decoupling

This table shows the distribution of letter grade on corporate decoupling of the full sample.

Action	Letter grade	With Russian relationship	Without Russian relationship	Total
Withdrawal	A	29	98	127
Suspension	B	67	133	200
Scaling back	C	26	20	46
Buying time	D	26	33	59
Digging in	F	21	63	84
Total		169	347	516

Table 2: Summary statistics

This table presents the summary statistics of the major variables used in our study. *RussiaRelationship* is a dummy variable that equals 1 if the firm has a major business relationship in Russia. *ESG* is the overall ESG score. Table A in the Appendix contains descriptions of the other variables shown in this table. All financial ratios are winsorized at the top and bottom 1 percentiles. Panel A shows the summary statistics for the firms on Yale list (as of April 19, 2022). Panel B shows the summary statistics for other firms in the Compustat database. Panel C shows the results of t-tests of the differences in the means of the variables between the firms on Yale list and the other firms in the Compustat database. Statistical significance is marked at the 1% (***), 5% (**), and 10% (*) levels.

Panel A: Firms on Yale list

	Observations	Mean	S.D.	1st quartile	Median	3rd quartile
RussiaRelationship	516	0.33	0.47	0.00	0.00	1.00
ESG	516	0.66	0.18	0.56	0.69	0.79
log Sales	516	9.73	2.16	8.24	9.52	10.81
Cash to assets ratio	516	0.17	0.13	0.08	0.13	0.22
Return on assets	516	0.06	0.09	0.02	0.06	0.10
Debt to assets ratio	516	0.26	0.17	0.15	0.24	0.33

Panel B: Other Compustat firms

	Observations	Mean	S.D.	1st quartile	Median	3rd quartile
RussiaRelationship	7,654	0.05	0.22	0.00	0.00	0.00
ESG	7,654	0.39	0.21	0.22	0.37	0.56
log Sales	7,654	7.50	2.95	5.69	7.26	9.06
Cash to assets ratio	7,654	0.20	0.20	0.06	0.13	0.26
Return on assets	7,654	0.01	0.18	0.00	0.04	0.08
Debt to assets ratio	7,654	0.22	0.20	0.04	0.17	0.34

Panel C: t-test of difference in means between firms on Yale list and other Compustat firms

	Mean (Firms on Yale list)	Mean (Other Compustat firms)	Difference
RussiaRelationship	0.33	0.05	0.28***
ESG	0.66	0.39	0.27***
log Sales	9.73	7.50	2.23***
Cash to assets ratio	0.17	0.20	-0.03***
Return on assets	0.06	0.01	0.05***
Debt to assets ratio	0.26	0.22	0.04***

Table 3: Summary statistics for average five-day cumulative abnormal returns

This table reports the summary statistics of the average five-day cumulative abnormal returns (in percentage points) between day –2 and day +2, or CAR[–2, +2]. The actions are based on the Yale list (as of April 19, 2022). Statistical significance is marked at the 1% (***), 5% (**), and 10% (*) levels.

Action	Letter grade	Mean	SD	Observations
Withdrawal	A	–1.36**	7.51	127
Suspension	B	–1.59***	6.29	200
Scaling back	C	–1.04	9.56	46
Buying time	D	–0.53	5.14	59
Total		–1.32***	6.93	432

Table 4: Stock market reaction around decoupling announcements

This table presents the stock market reaction around decoupling announcements. The dependent variable is the five-day cumulative abnormal return between day –2 and day +2. *RussiaRelationship* is a dummy variable that equals 1 if the firm has a major business relationship in Russia. *zESG* is the standardized ESG score. Standard errors, clustered by industry and country, are reported in parentheses. Statistical significance is marked at the 1% (***), 5% (**), and 10% (*) levels.

	(1)	(2)	(3)	(4)	(5)
Constant	-1.318**	-0.877***	-1.318***	-0.719***	-0.791***
	(0.488)	(0.153)	(0.007)	(0.181)	(0.140)
RussiaRelationship		-1.287**		-1.749***	-2.152***
		(0.530)		(0.600)	(0.638)
zESG			0.656***	0.863***	0.551***
			(0.122)	(0.137)	(0.168)
RussiaRelationship $\times$ *zESG*					1.487**
					(0.678)
Industry fixed effects	No	Yes	Yes	Yes	Yes
Country fixed effects	No	Yes	Yes	Yes	Yes
Observations	432	432	432	432	432
R-squared	0.000	0.260	0.261	0.269	0.275

Table 5: Average daily abnormal return around decoupling announcements

This table presents the average daily abnormal return around decoupling announcements. The daily abnormal return of a firm is the constant term in the following model: $AR_i[t] = \alpha + \varepsilon_i$, where $AR_i[t]$ is the abnormal return on day t for firm i. The average daily abnormal return is the mean of daily abnormal returns for all available firms in the sample. The sample excludes firms with (a) event dates on February 24, 2022 and February 25, 2022, and (b) pre-event abnormal returns in which the event dates are within 10 days of February 24, 2022. Statistical significance is marked at the 1% (***), 5% (**), and 10% (*) levels.

Event day	Average abnormal return	Standard error
-10	-0.110	(0.176)
-9	-0.443***	(0.075)
-8	-0.489**	(0.215)
-7	-0.137	(0.110)
-6	-0.044	(0.201)
-5	-0.173	(0.126)
-4	-0.414***	(0.072)
-3	-0.522***	(0.153)
-2	-0.459***	(0.145)
-1	0.033	(0.181)
0	-0.317**	(0.129)
1	-0.193	(0.169)
2	-0.044	(0.166)
3	-0.142	(0.101)
4	-0.018	(0.083)
5	-0.107	(0.106)
6	0.137	(0.065)
7	0.120	(0.091)
8	-0.019	(0.091)
9	0.135	(0.091)
10	-0.083	(0.116)

Table 6: Average daily abnormal return around decoupling announcements by goodwill capital

This table presents the average daily abnormal return around decoupling announcements based on whether the firm's overall ESG score is above the sample median ("High ESG") in Column (1) or below the sample median ("Low ESG") in Column (2). The daily abnormal return of a firm is the constant term in the following model: $AR_i[t] = \alpha + \varepsilon_i$, where $AR_i[t]$ is the abnormal return on day t for firm i. The average daily abnormal return is the mean of daily abnormal returns for all available firms in the sample. The sample excludes firms with (a) event dates on February 24, 2022 and February 25, 2022, and (b) pre-event abnormal returns in which the event dates are within 10 days of February 24, 2022. Statistical significance is marked at the 1% (***), 5% (**), and 10% (*) levels.

| | (1) | | (2) | |
| | High ESG | | Low ESG | |
Event day	Average abnormal return	Standard error	Average abnormal return	Standard error
-10	-0.146	(0.147)	-0.074	(0.291)
-9	-0.224	(0.144)	-0.662*	(0.336)
-8	-0.307	(0.233)	-0.670**	(0.264)
-7	-0.129	(0.151)	-0.145	(0.156)
-6	0.005	(0.219)	-0.092	(0.238)
-5	-0.148	(0.175)	-0.198	(0.164)
-4	-0.262	(0.202)	-0.566***	(0.049)
-3	-0.607**	(0.265)	-0.438**	(0.200)
-2	-0.463**	(0.211)	-0.455**	(0.194)
-1	0.108	(0.273)	-0.043	(0.221)
0	-0.104	(0.234)	-0.530***	(0.181)
1	-0.176	(0.209)	-0.209	(0.195)
2	0.146	(0.293)	-0.234	(0.142)
3	0.075	(0.101)	-0.358**	(0.156)
4	-0.004	(0.105)	-0.031	(0.150)
5	-0.138	(0.142)	-0.076	(0.145)
6	0.020	(0.096)	0.253*	(0.128)
7	-0.042	(0.156)	0.280***	(0.100)
8	-0.087	(0.126)	0.049	(0.124)
9	-0.021	(0.077)	0.290	(0.232)
10	-0.311***	(0.107)	0.144	(0.198)

Table 7: Stock market reaction around decoupling announcements: Motivations behind ESG actions

This table presents the impact of the motivation behind high ESG rating on the stock market reaction around decoupling announcements. The dependent variable is the five-day cumulative abnormal return between day –2 and day +2. In Columns (1) and (2), *Goodwill* is a dummy variable that equals 1 if the firm's ESG score is above median and its *Book leverage* is above median; *Agency* is a dummy variable that equals 1 if the firm's ESG score is above median and its *Book leverage* is below median. In Columns (3) and (4), *Goodwill* is a dummy variable that equals 1 if the firm's ESG score is above median and its *Liquidity* is below median; *Agency* is a dummy variable that equals 1 if the firm's ESG score is above median and its *Liquidity* is above median. *RussiaRelationship* is a dummy variable equal to 1 if the firm has a major business relationship in Russia. Standard errors, clustered by industry and country, are reported in parentheses. Statistical significance is marked at the 1% (***), 5% (**), and 10% (*) levels.

Dependent Variable: Five-day CAR cumulative abnormal return

	(1)	(2)	(3)	(4)
	Book Leverage	*Book Leverage*	*Liquidity*	*Liquidity*
Constant	-1.731***	-1.368***	-1.726***	-1.377***
	(0.061)	(0.192)	(0.052)	(0.172)
RussiaRelationship	-1.612**	-3.230***	-1.699***	-3.291***
	(0.594)	(1.001)	(0.615)	(1.083)
Goodwill	2.391***	1.530**	1.431**	0.355
	(0.835)	(0.622)	(0.652)	(0.640)
Agency	1.416**	0.459	2.592***	1.918***
	(0.625)	(0.383)	(0.833)	(0.659)
RussiaRelationship × Goodwill		2.679*		3.198***
		(1.472)		(0.958)
RussiaRelationship × Agency		2.893***		2.258
		(0.849)		(1.947)
Industry fixed effects	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes
Observations	432	432	432	432
R-squared	0.276	0.282	0.277	0.284

Table 8: Social norms and stock market reaction around decoupling announcements

This table presents the impact of social norms on the stock market reaction around decoupling announcements. The dependent variable is the five-day cumulative abnormal return between day –2 and day +2. *NoConfidenceRussiaPresident* is the standardized country-level mean of people expressing no confidence in the Russian president. *WorldValueE&SIndex* is a dummy variable that equals 1 if the country is in the highest tercile of the World Value E&S Index (Dyck et al., 2019). *RussiaRelationship* is a dummy variable that equals 1 if the firm has a major business relationship in Russia. Standard errors, clustered by industry and country, are reported in parentheses. Statistical significance is marked at the 1% (***), 5% (**), and 10% (*) levels.

	(1)	(2)
Constant	-1.067***	-0.959***
	(0.115)	(0.193)
RussiaRelationship	-1.259***	-1.658***
	(0.414)	(0.488)
RussiaRelationship × NoConfidenceRussianPresident	1.518**	
	(0.700)	
RussiaRelationship × WorldValueE&SIndex		3.101***
		(0.987)
Industry fixed effects	Yes	Yes
Country fixed effects	Yes	Yes
Observations	377	431
R-squared	0.275	0.259

Table 9: Stock market reaction around day of the Russian invasion

This table presents the stock market reaction around the day of the Russian invasion (February 24, 2022) for decoupling firms in Panel A and for digging-in firms in Panel B. The dependent variable is the five-day cumulative abnormal return between day –2 and day +2. *RussiaRelationship* is a dummy variable equal to 1 if the firm has a major business relationship in Russia. *zESG* is the standardized ESG score. Standard errors, clustered by industry and country, are reported in parentheses. Statistical significance is marked at the 1% (***), 5% (**), and 10% (*) levels.

Panel A: Decoupling firms

	(1)	(2)	(3)	(4)	(5)
Constant	-2.407***	-2.137***	-2.407***	-2.001***	-2.045***
	(0.474)	(0.134)	(0.040)	(0.207)	(0.211)
RussiaRelationship		-0.789		-1.185*	-1.426**
		(0.525)		(0.635)	(0.598)
zESG			0.601**	0.741**	0.554
			(0.285)	(0.325)	(0.333)
RussiaRelationship × *zESG*					0.890
					(0.571)
Industry fixed effects	No	Yes	Yes	Yes	Yes
Country fixed effects	No	Yes	Yes	Yes	Yes
Observations	432	432	432	432	432
R-squared	0.000	0.211	0.214	0.218	0.220

Panel B: Digging-in firms

	(1)	(2)	(3)	(4)	(5)
Constant	-1.307	-0.956**	-1.307***	-0.973**	-1.169***
	(0.999)	(0.345)	(0.003)	(0.368)	(0.322)
RussiaRelationship		-1.405		-1.336	-1.229
		(1.661)		(1.635)	(0.966)
zESG			-0.928**	-0.914**	-1.453**
			(0.346)	(0.346)	(0.578)
RussiaRelationship × *zESG*					3.850**
					(1.787)
Industry fixed effects	No	Yes	Yes	Yes	Yes
Country fixed effects	No	Yes	Yes	Yes	Yes
Observations	84	84	84	84	84
R-squared	-0.000	0.690	0.700	0.704	0.738

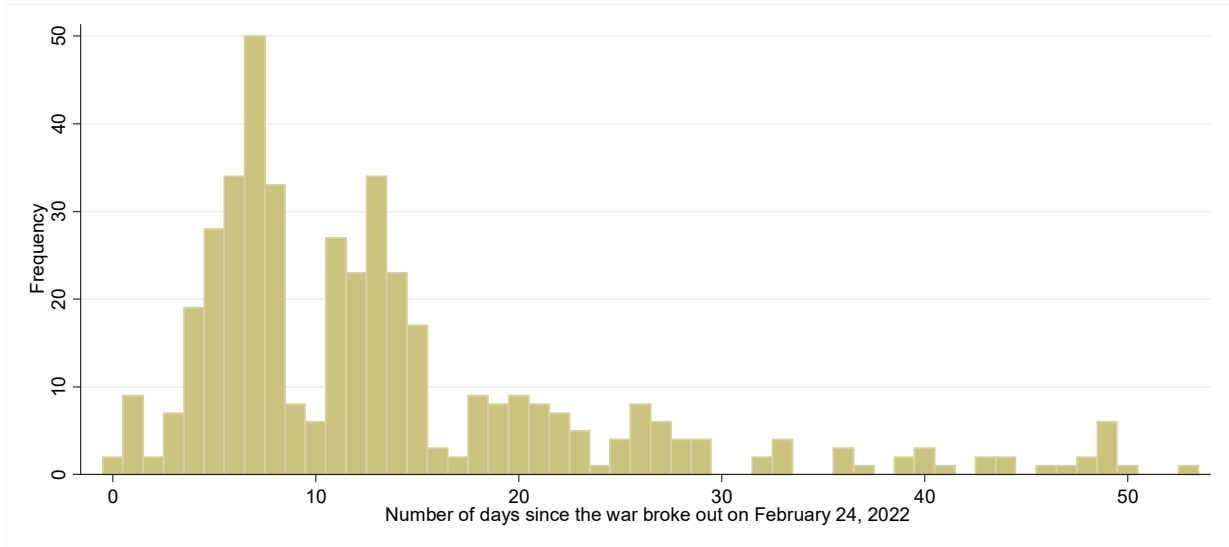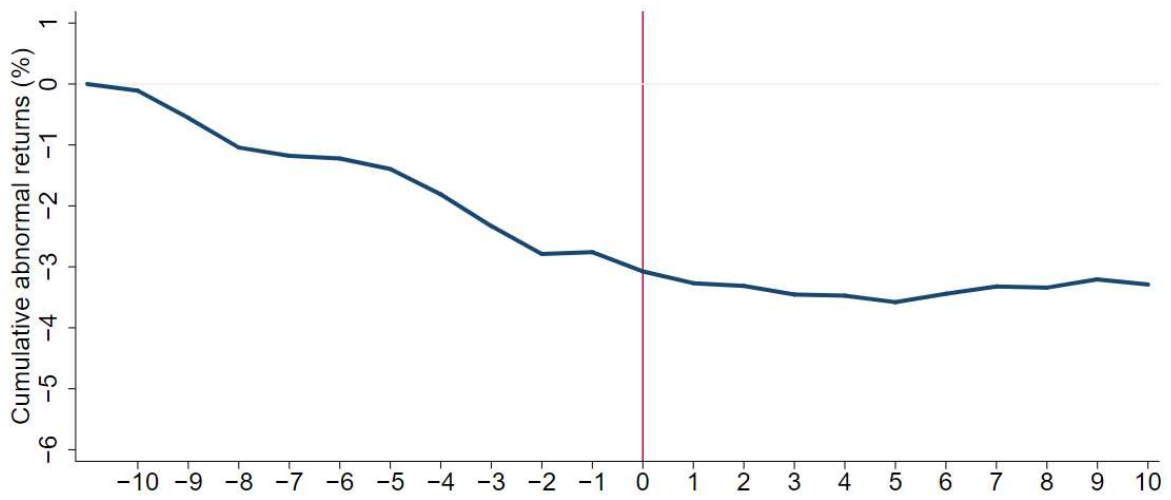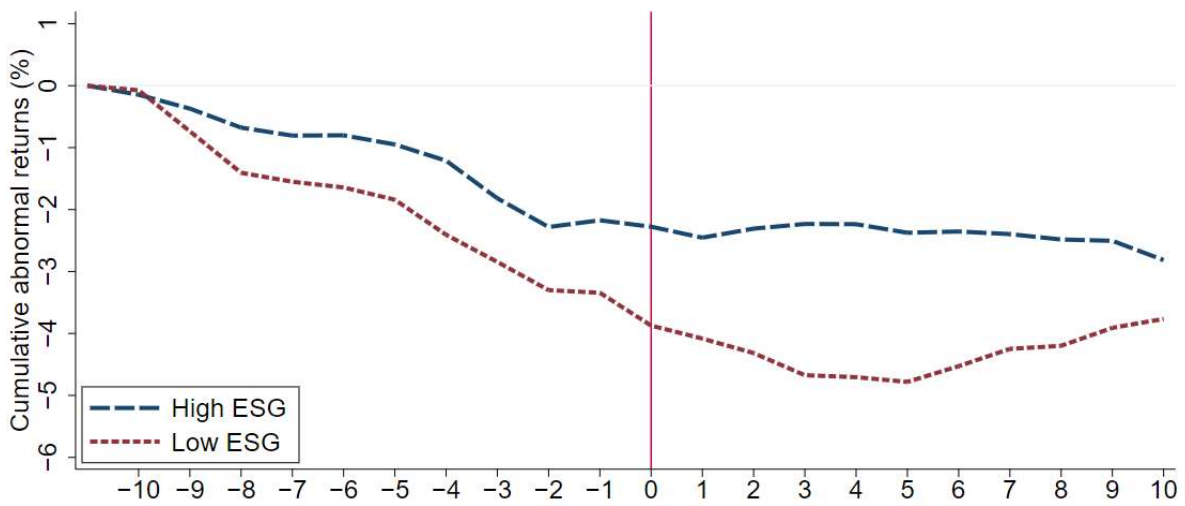**Figure 1: Distribution of decoupling announcements since February 24, 2022**

Figure 2: Cumulative abnormal returns around decoupling announcements: All firms

(a) All firms

(b) High ESG score vs. Low ESG score

Appendix

Table A: Variable definitions

Variable	Description	Source
RussiaRelationship	A dummy variable that equals 1 if the firm has a customer/supplier/partnership relationship in Russia.	FactSet Revere Supply Chain Relationships
ESG	Overall ESG score.	Refinitiv
log Sales	Logarithm of firm sales (in million US$).	Compustat
Cash to assets ratio	Cash holdings divided by total assets.	Compustat
Return on assets	Operating income after depreciation divided by total assets.	Compustat
Debt to assets ratio	Long-term debt divided by total assets.	Compustat
CAR[t_0, t_1]	Cumulative abnormal returns between t_0 and t_1 around decoupling announcements.	Compustat
Goodwill	A dummy variable that equals 1 if the firm's ESG score is above the median and its *Book leverage* (total liabilities scaled by total assets) is also above the median. Alternatively, *Goodwill* takes a value of 1 if the firm's ESG score is above the median and its *Liquidity* (cash and short-term investments scaled by total assets) is below the median.	Refinitiv and Compustat
Agency	A dummy variable that equals 1 if the firm's ESG score is above the median and its *Book leverage* (total liabilities scaled by total assets) is below the median. Alternatively, *Agency* takes a value of 1 if the firm's ESG score is above the median and its *Liquidity* (cash and short-term investments scaled by total assets) is above the median.	Refinitiv and Compustat
NoConfidenceRussiaPresident	The standardized country-level mean percentage of people expressing no confidence in the Russian president. It is standardized within the regression sample.	Pew Research Center
WorldValueE&SIndex	A dummy variable that equals 1 if the country is in the highest tercile of the World Value E&S Index.	Dyck et al., (2019)

Table B: Sample composition based on whether or not the country condemned the invasion in the UN General Assembly resolution

This table presents the sample composition based on whether the country condemned the invasion in the UN General Assembly Resolution ES-11/1. Panel A includes firms in countries that approved the resolution. Panel B includes firms in countries that were against the resolution or abstained.

Action	Letter grade	With Russian relationship	Without Russian relationship	Total
		Panel A: Firms in countries that condemned Russia		
Withdrawal	A	29	107	136
Suspension	B	72	141	213
Scaling back	C	28	24	52
Buying time	D	33	40	73
Digging in	F	18	38	56
Not in Yale list	–	315	6,413	6,728
Total		495	6,763	7,258
		Panel B: Firms in countries that did not condemn Russia		
Withdrawal	A	1	1	2
Suspension	B	0	1	1
Scaling back	C	0	2	2
Buying time	D	0	1	1
Digging in	F	4	26	30
Not in Yale list	–	63	863	926
Total		68	894	962