

Exit vs Voice vs Denial of (Re)Entry: Assessing investor impact mechanisms on corporate climate transition across asset classes

Abstract:

The ongoing Voice versus Exit debate, which tries to find the most effective way for an investor to influence firm behaviour, for the vast majority of published research focuses on existing equity shareholders. This neglects debt capital, which due to its refinancing cycle represents a key lever for investors which aim to have an impact. This paper first develops a new additional mechanism, Denial of (Re)Entry, and subsequently assesses all investor impact mechanisms in terms of power of Voice, influence on cash flow, and influence on security price across the two asset classes: debt and equity. We distinguish between different points in the (re)financing cycle, namely pre initial issuance, post issuance and pre subsequent issuances. We find that the highest Voice power for an investor is Threat of Denial pre refinancing of debt capital. Debt Denial has a direct cash flow effect which is particularly strong when the company needs to repay existing debt coming towards the end of its maturity. We suggest investors strategically make use of this key moment to influence by threatening to deny fresh cash unless Paris-Alignment is ensured by imposing a sustainability-linked covenant with a significant penalty if failing to meet the set target.

Key words: Voice vs Exit, Engagement & Stewardship, Divestment, Investor Impact, Corporate Transition

JEL: D21, D23, D64, G23, G32, G34, L22

1.1. Introduction

There is increasing recognition of the role and responsibility of investment and the financial sector in driving corporate sustainable transitions (Battiston et al., 2021). The *United Nation's Principles for Responsible Investment* (UN PRI), which aspire to create a “more sustainable global financial system”, stand at over 3,800 signatories, with a cumulative of over USD 120 trillion in assets under management¹. The 2021 “Investing for a carbon-free world: what investors want” survey finds that more than 50% of investors anticipate allocating more of their wealth into “investments with a net zero focus” within the next year². They put special emphasis on the role of asset management, with again more than half believing that asset managers should use their influence as shareholders to drive corporate emission reductions.

The survey also covered whether investors prefer staying invested and supporting the corporate transitions or divestment, and notes that within this binary choice 57% of investors favour staying invested. In fact, we already see examples of these two mechanisms in the market.

Significant institutional investors have chosen the divestment route. For example, the Norwegian Sovereign Wealth fund³, the biggest of its kind, and also one of the largest pension funds worldwide, Dutch ABP⁴, are completely divesting from fossil fuels. Value-based investors such as religious organisations are found to divest for political reasons (Goodman, et al., 2014). Indeed, faith-based organizations account for a third of all fossil fuel divesting institutions⁵. Runner up are educational institutions (15%)⁶, philanthropic foundations (13%) and government institutions (12%). After initial top down approaches such as emission trading schemes or carbon pricing failed to deliver corporate transitions at the speed we need, divestment represents a bottom up approach (Linnenluecke, et al., 2015). However, on the larger scale, institutional investors – while increasing communication around climate pledges and sustainability – have not substantially divested from fossil fuels since the 2015 Paris Agreement (Giuliani, et al. 2022). Looking at Europe's largest 1000 pension funds, Egli et al. (2022) find that only 13% of them divested from fossil fuels - though representing 33% of assets under management. Indeed, the authors find that divestment is linked to larger and publicly owned pension funds, and usually only covers coal.

Yet also within the more popular Voice mechanism, more confrontational tactics are emerging as success in terms of outcomes has been limited⁷ (Gianfrate, et al., 2021). One of the most remarkable recent successes was by activist investor Charlie Penner of *Engine No 1* to join the

¹ <https://www.unpri.org/>

² <https://ninetyone.com/-/media/documents/sustainability/91-planetary-pulse-wave-2-reasearch-findings-1021-en.pdf>

³ <https://www.bloomberg.com/news/articles/2021-01-29/norway-wealth-fund-dumps-oil-stocks-amid-10-billion-2020-loss>

⁴ <https://www.ft.com/content/425d7c82-e69a-4fe2-9767-8c92bda731e7>

⁵ <https://divestmentdatabase.org/>

⁶ For example, Cambridge pledged to exit all fossil fuel investments by 2030 and aim for net zero emissions in its endowment fund by 2038 (<https://www.cisl.cam.ac.uk/news/news-items/university-of-cambridge-aims-to-divest-from-fossil-fuel-investments-by-2030-with-net-zero-targeted-by-2038#:~:text=The%20University%20of%20Cambridge%20has,reach%20net%20zero%20by%202038.>), see also Linnenluecke et al. (2015) for the Australian National University.

⁷ <https://www.ft.com/content/ee08d61d-4c98-4398-9971-93036d67e91e?desktop=true&segmentId=7c8f09b9-9b61-4fbb-9430-9208a9e233c8#myft:notification:daily-email:content>

board of ExxonMobil⁸. *Follow This* unites shareholders to gain bargaining power, submitting climate resolutions to shareholder meetings and thereby driving the green transition of major emitters⁹. *ShareAction* coordinated shareholder engagement that led to HSBC promising to cut fossil fuel financing and increase transparency on progress¹⁰.

Another response to limited success includes the Threat to Divest if no substantial progress is noted, such as in the case of Aviva Investors. The UK asset manager gave a warning to 30 fossil fuel intensive companies threatening to divest within the next one to three years should they fail to drastically reduce their emissions¹¹. Even previous advocates of engagement are gradually considering divestment: Robeco’s latest climate engagement programme contains an option to divest¹².

However, the current discourse still largely focuses on shareowners and the equity that already has been issued by the firm. This paper expands the current binary dichotomy of Voice versus Exit with a new mechanism, Denial of (Re)Entry, which is particularly effective for debt refinancing – an asset class largely ignored, despite being key for the fossil fuel sector.

Building on the existing literature, we propose a new mechanism for maximum impact: Denial of (Re)Entry on primary markets. This translates to an investor not (re)financing a company and thereby withholding fresh cash to activities which do not align with the investor’s stated goal. The proposed mechanism is visualised in the figure below.

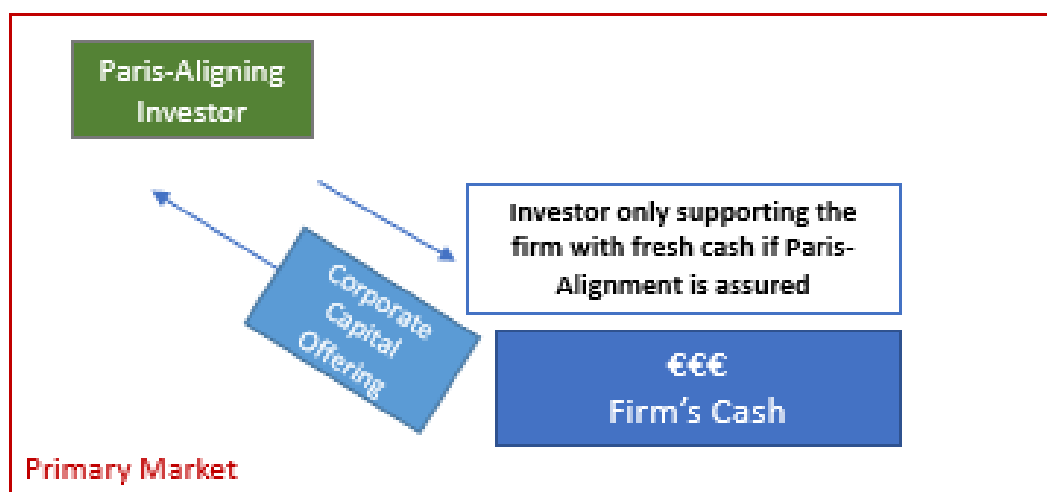


Figure 1: Key Moment to Influence

As we are proposing turning to primary markets for maximum impact, the fixed income space is of greatest interest. Equity, once issued in an Initial Public Offering (IPO), does not provide fresh cash regularly to a company; Seasoned Equity Offerings (SEO) are possible but much rarer¹³.

⁸ <https://www.ft.com/content/14f7761b-c104-4fb9-b6b8-8a10de074ec7>

⁹ <https://www.follow-this.org/>

¹⁰ <https://www.reuters.com/business/finance/britains-hsbc-firms-up-climate-pledge-after-activist-pressure-2022-03-16/>

¹¹ <https://www.ft.com/content/596e8402-2dcb-45f9-915c-c5ecfab7c7a>

¹² <https://www.robeco.com/en/sustainability/climate-investing/responsibility/>

¹³ Blitz et al (2020) report that the typical number of equity issuers is between 100 and 150 per annum, while the typical number of debt issuers is in the 200 to 300 range.

Debt on the other hand comes with a maturity where the principal must be repaid. Usually, due to cash flow constraints or for strategic reasons, this debt is not paid back but instead is refinanced. Hence debt investors are regularly required to decide whether or not to refinance: Existing debt is paid back, and new refinancing is sought. Companies need to keep refinancing their debt on primary markets and continuous and unconstrained access to debt cash markets is important. Hence this poses a key moment to influence for investors and the companies they finance.

The fixed income market is also of substantial importance when considering magnitude. A simple way to gauge part of the refinancing needs is to aggregate corporate bond issuance amounts by their maturity. At the beginning of 2021, over 5 years after the 2015 Paris Agreement, the 166 Climate Action 100+ target firms refinancing needs amounted to EUR 793 billion (2044 tranches from 143 firms) due until the end of 2025 (Source: Bloomberg), as visualised in Figure 13. These are only expected refinancing needs; real financing demand is likely larger due to growth plans and/or cash flow constraints.

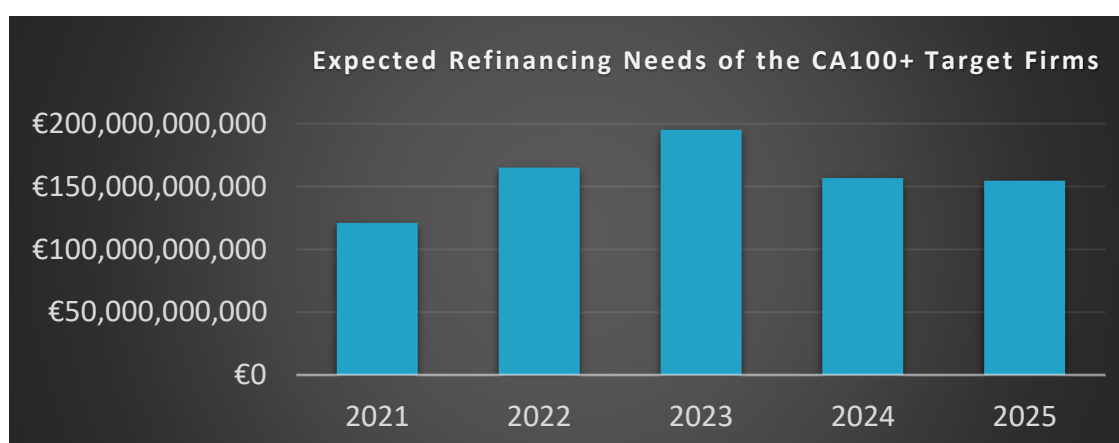


Figure 2: Expected Refinancing Needs of Climate Action 100+ Firms, Data from Bloomberg (2021).

Moreover, in some of the sectors with the most urgent need to transition, such as the fossil fuel sector, financing largely relies on fixed income as the dominant source of funding. Cojoianu et al. (2021) report that nearly two thirds of funds from the oil and gas sector came from bank loans and over a quarter from bonds, while equity only accounted for 10% of the funds raised.

Contribution

This paper adds two contributions to the ongoing Voice vs. Exit debate. First, we introduce a new mechanism: Denial of (Re)Entry. Then we analyse existing mechanisms' impact across asset classes: Divestment and engagement, as well as Threat to Exit and Deny, for both, equities and debt. We distinguish between different stages of the (re)financing cycle, namely pre first issuance, post first issuance and pre subsequent issuance. Additionally, we suggest a feasible approach to ensuring Paris-Alignment of fresh debt capital and recommend the '*Engage in Equities, but Deny Debt*' strategy for maximum investor impact. Lastly, this paper demonstrates the real world relevance of the different mechanisms for the world's largest greenhouse gas emitters.

The next section gives context to why investors are interested in impacting a firm's behaviour with regard to the climate transition. Section 3 subsequently outlines each mechanism an investor can follow, including our proposed extension of the existing, and elaborates on the impact of each across the different asset classes, equities and fixed income, in terms of effect on security price

and cash flow and resulting power of Voice. Section 4 provides a literature overview of existing studies on the ongoing Voice versus Exit debate and provides insights as to the asset classes and data considered within these studies. In Section 5, we propose a strategy across asset classes and how investors can scientifically link climate change mitigation targets to fresh capital. A discussion on which mechanism is most relevant within the *ClimateAction100+* company universe is provided in Section 6. Lastly, Section 7 concludes.

1.2. Context

“Without urgent, effective and equitable mitigation actions, climate change increasingly threatens the health and livelihoods of people around the globe, ecosystem health and biodiversity.” (IPCC, 2022)

The latest Intergovernmental Panel on Climate Change (IPCC) report – besides outlining the dire state and pathway we are currently on - stresses the important role of non-state actors and specifically mentions businesses when it comes to the sustainable transition we so urgently need.

The impact of the climate crisis on the economy is already and will be substantial. While of course it is impossible to put a number on the value of human life or costs for loss of biodiversity, financial losses, however, can be measured. For example, the year of 2018 saw insured losses amounting to \$80 billion – that is double the inflation-adjusted average for the last three decades (IMF, 2019). The real figure is expected to be substantially higher as less developed countries bare uninsured losses on top of this. Reuters surveyed climate economists regarding “business as usual” trajectories and found the median output loss figure for 2100 to be 18%¹⁴. BlackRock, the world’s largest asset manager, predicts an even higher figure for climate inaction, with cumulative loss in economic output aggregating to 25% over the next two decades¹⁵. Should climate change not be mitigated, the losses for financial assets only related to physical risk would amount to USD 2.5 to 24 trillion, according to Dietz et al.’s (2016) estimation.

On top of this, materialising transition risk will incur costs for example when the so called carbon bursts. The CarbonTracker Initiative analysed oil and gas assets and finds that over USD 1 trillion are at risk of ending up as stranded assets¹⁶. This aspect alone gives rise to substantial systemic risk, considering that the global financial crisis of 2008 was triggered by initial losses of only USD 300 billion (Baranova et al., 2017). Finally, increasing climate litigation highlights the relevance of liability risk as yet another cost incurred due to climate inaction (Monnin, 2018). Generally, the climate crisis brings a new type of financial risk to the market which will need to be managed using tools beyond standard risk management strategies (Battiston & Monasterolo, 2020).

Overall, the cost of climate inaction exceeds the amount of investment needed to get us to net zero by 2050. For the global perspective, the International Monetary Fund (IMF) suggests that unchecked warming will result in a real Gross Domestic Product (GDP) per capita decrease by more than 7% worldwide by 2100, while limiting temperature increase in line with the Paris Agreement would limit losses to 1% (Kahn, et al., 2021). Service provider Deloitte reports that in the United States, inaction on climate change could cost over \$14 trillion by 2070 but also that

¹⁴ <https://www.reuters.com/business/cop/climate-inaction-costlier-than-net-zero-transition-economists-2021-10-25/>

¹⁵ <https://www.blackrock.com/corporate/literature/whitepaper/bii-portfolio-perspectives-february-2021.pdf>

¹⁶ <https://carbontracker.org/reports/unburnable-carbon-ten-years-on/>

the US economy could gain \$3 trillion if it accelerated towards a path of low-emission growth, thereby adding nearly 1 million jobs over the next 50 years¹⁷.

The Network for Greening the Financial System (NGFS), a group of world central banks, provides an overview of the different estimates as displayed in Figure 15, but also highlights that these are likely to underestimate true outcomes due to a range of reasons, from non-linear factors to underlying model assumptions such as constant socioeconomic variables.

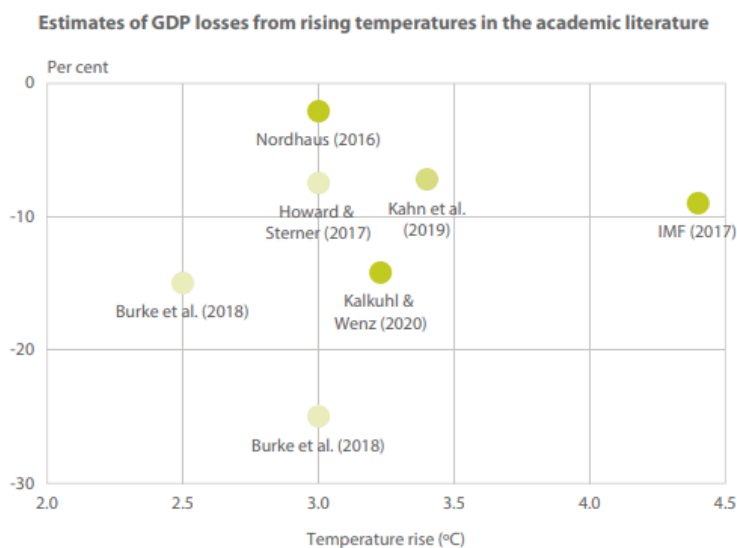


Figure 4: Shade of Marker Reflects Temperature Baseline Used in the Underlying Study. Burke, Howard & Sterner (Lightest Shade) Measure Temperature Rise Relative to Pre-Industrial Levels. Kahn (Medium Shade) Uses a Baseline of 1960-2014. Nordhaus, IMF and Kalkuhl & Wenz (Darkest Shade) Use a Near-Term Baseline (Ranging From 2005 - Present Day), Source: (NGFS, 2020)

Howarth et al. (2014) calculate a social cost of carbon of \$25.700 per metric ton of CO₂ for a scenario with unregulated emissions. According to their research, stringent control measures, however, are able to lower this down to \$4 per ton.

While putting an exact figure to the expected losses will be impossible, there is consensus on certain aspects going forward. One of these is that mitigating climate change sooner than later will limit damage and reduce total costs in the long run. Sanderson and O'Neill (2020) model alternative history scenarios where climate action is taken before today and find that for a 1.5C degree target costs for a 1990 start come to 17% of global GDP in 2070 and 35% 2035 for a 2020 start. They estimate that every year of further delay costs \$5 trillion each year.

The value of a cost-benefit analysis in the climate crisis context is contested (Tomassini et al., 2009). Ultimately, it does not matter what the exact figure is but that we take decisive and concrete action right now. Or, to put it in the words of Eric Neumayer, Professor of Environment and Development at the London School of Economics¹⁸:

¹⁷ <https://www2.deloitte.com/us/en/pages/about-deloitte/articles/press-releases/deloitte-report-inaction-on-climate-change-could-cost-the-us-economy-trillions-by-2070.html>

¹⁸ <https://www.reuters.com/business/cop/climate-inaction-costlier-than-net-zero-transition-economists-2021-10-25/>

'It's economists' hubris to say all the damage is going to be X percent of GDP. The cost of reducing emissions is Y percent of GDP and hence you should reduce emissions by a certain amount. As economists, we should listen to the scientists who tell us about the devastating impact of climate change.'

And this message seems to be heard as investors increasingly recognise the responsibility we all share, and the key lever finance could be¹⁹. There is growing acknowledgement that decisive action now will also be in the best financial interest especially for the insurance and reinsurance sector which will have to cover climate crisis related damages, but also even any diversified investor as a growing number of industries will be affected, all with interlinking consequences.

One example is investors unifying under the *ClimateAction100+* initiative which set its objective to drive the corporate transitions of the largest greenhouse gas emitting firms globally. The network gathered substantial traction, now comprising of 700 investors with over 68\$ trillion assets under management²⁰.

Investors aspiring to have an impact on the firms they invest in is by no means a new concept. The debate, of engagement versus divestment often dubbed Voice vs. Exit, is long standing and academic literature in the field keeps evolving after first being introduced by Hirschman in the 1970s.

Baumgärtner et al. (2018) interpret the concept of responsibility as an ethically neutral one, in a functional role. The authors deem a conceptual clarification of responsibility vital to introducing it into “cross-cutting contexts” like sustainability (Baumgärtner et al., 2018 p.3)

1.3. Theory

“Corporate Governance refers to the way in which companies are governed and to what purpose. It identifies who has power and accountability, and who makes decisions.”²¹

Agency problems naturally arise between management and investors of a firm, threatening efficient deployment of resources. Different mechanisms are conceivable to reconcile interests. Yet, so far, the debate on investor influence on corporate transition focuses on engagement and divestment, often dubbed Voice versus Exit. The terms were coined by Hirschman (1970) and his original publication also includes what is now considered a further mechanism: Threat of Exit. The following looks at each of these mechanisms in detail, describing to what extent they are used and how effective each one is. Zuideau (2009) specifically highlights Exit and Voice as appropriate reactions to environmental risk.

Voice

As admitted by Hirschman (1970) himself, Voice is far from a narrowly defined framework. Today, various terms can be categorized as Voice, including stewardship, engagement, intervention, shareholder activism, and active ownership. In our case, this translates to investors attempting to

¹⁹ <https://www.ft.com/content/79851eee-d9e6-4ceb-be16-e9cf8b8c4ddf>

²⁰ <https://www.climateaction100.org/>

²¹ <https://www.cgi.org.uk/about-us/policy/what-is-corporate-governance#:~:text=Corporate%20governance%20is%20the%20system,accountability%2C%20and%20who%20makes%20decisions.>

influence companies through for example private boardroom discussions but also issuing public letters, voting at annual meetings, replacement of boards of directors, support for takeover bids, and proxy initiatives to limit management discretion or to affect management compensation.

Given the secluded nature of some of these actions, they are hard to observe (Becht, et al., 2009) which in turn makes it hard to measure the success of this mechanism. Moreover, a free rider problem naturally occurs: Engagement cost for an active owner can be substantial, yet subsequent benefits are shared by all owners (Admati & Pfleiderer, 2009). Hence it is little surprising that existing literature points out that collaboration among activists is key to successfully influencing a firm's behaviour (Dimson, et al., 2015). Indeed, Brav et al. (2017) note that often it is one (or more) sizeable lead activist that implicitly coordinates with a broad range of smaller followers.

While environmental outcomes have been questioned, previous literature notes a positive financial impact of successful engagement (Dimson, et al., 2015).

Exit

To date, approximately more than USD 40 trillion have been divested by over 1500 institutions²². While exiting one's position in a firm may seem like the opposite of (inter)action to facilitate corporate change, it is also a governance mechanism. The approach often referred to as "Voting with your feet" and "Wallstreet Walk" means exiting an existing investment position. By selling her stake, the investor becomes external to the firm which means losing most Voice power. While Bill Gate's famously told the Financial Times in 2019 that "Divestment, to date, probably has reduced about zero tonnes of emissions"²³, the crucial contribution of divestment to end the Apartheid regime in South Africa has been recognized (Sparkes, 2002). Recent research also suggests that mutual fund decarbonization is successful in both reducing carbon emissions and stock prices (Rohleder, et al., 2022). Moreover, Trinks et al. (2018) find that fossil fuel divestment actually does not impair portfolio performance for investors over the long-term in diversified market indices, rebutting the argument that divestment is not a suitable strategy due to diversification losses. Over 10 years ago, Admati and Pfleiderer (2009) as well as Edmans (2009) already acknowledged that Exit constitutes an effective governance mechanism.

Exit carries a strong symbolic meaning. Public divestment raises awareness about the harmful impact of the firm's behaviour. It can represent a way to unite people around an issue and create public support which in turn enables governments to act and introduce tougher policies. It thereby helps break the grip that the fossil fuel lobby has on policymakers²⁴. By increasing reputational risk, pressure is added on stock prices and potentially on future cash flow (Dordi & Weber, 2019; Ansar & Caldecott, 2013). Overall, the idea is to remove the *Social License to Operate* (Demuijnck & FASTERLING, 2016) for target firms (Gunningham, 2017).

Sustainability performance is less quantifiable and hence more subject to interpretation than financial performance. Signalling legitimacy ahead of an IPO helps to reduce the liability of market

²² <https://divestmentdatabase.org/>

²³ <https://www.ft.com/content/21009e1c-d8c9-11e9-8f9b-77216ebe1f17>

²⁴ <https://influencemap.org/report/How-Big-Oil-Continues-to-Oppose-the-Paris-Agreement-38212275958aa21196dae3b76220bddc>

newness and improves stock performance (Certo, 2003). On the other hand, negative feedback - both in the form of Voice or Exit - can be framed as a threat to legitimacy (Nason, et al., 2018).

Within institutional theory²⁵, Zimmerman and Zeitz (2002, p. 418) define legitimacy as “a social judgment of acceptance, appropriateness, and desirability”. The authors continue to explain that legitimacy enables organisations to grow beyond mere survival as it is key to acquiring other resources such as capital. For that reason, the authors portray legitimacy as a resource of equal importance as technology or talent. Corporate Social Responsibility (CSR) is one way to gain legitimacy (Matten & Moon, 2018). Indeed, Mackey et al. (2007) explicitly include socially conscious investors in their model who demand returns as well as CSR activities from the firm.

Moreover, an organisation can gain legitimacy through its network. Matten and Moon (2018) list banks as part of this – meaning Exit directly impacts a firm’s legitimacy. Bitektine (2011) also specifically name investors as one of the audiences for legitimacy. Additionally, Exit affects legitimacy indirectly because legitimacy is an unobservable quality (Matten & Moon, 2018). The ability to obtain resources like capital and the survival of a firm serve as indicators of legitimacy; an Exit implies the opposite.

Another channel through which Exit may influence corporate decision making is the effect on security price. If divestment is significant, the respective security price may decrease. This in turn punishes management if executive pay is linked to the market price of respective security²⁶. For asset managers, Dasgupta and Piacentino (2015) note that the more of their own capital has been invested, the more effective the Exit mechanism is. Heinkel et al. (2001) show that when investors exclude groups of firms the resulting reduced risk sharing between the remaining investors leads to a decline in stock price, equalling increased cost of capital. However, there is no effect on cash flow from divestment. As shown in Figure 16, equity divestment takes place on the secondary market. First, the initial investor buys equity shares in an Initial Public Offering (IPO) or Seasoned Equity Offering (SEO) on the primary market and supplies the firm with fresh cash. Subsequently, as part of the divestment strategy, the equity share is sold from one investor to another. This transaction means that money which is already in the market changes hands; the divestment takes place in the secondary market.

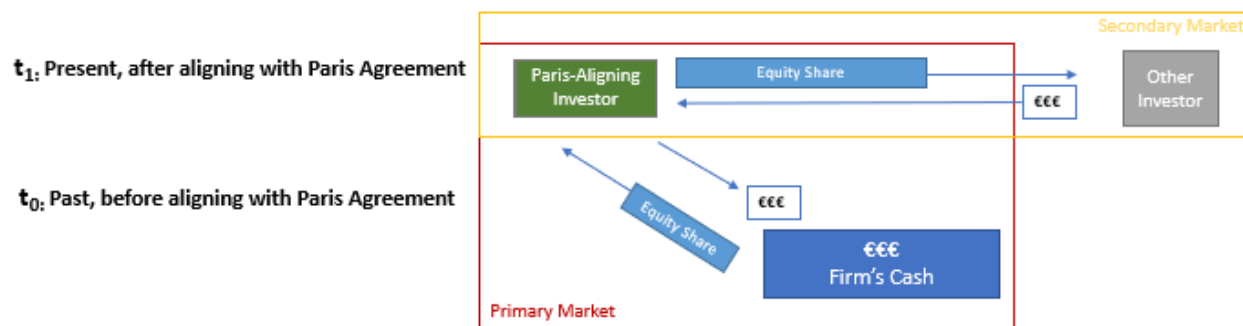


Figure 5: Equity Divestment

Figure 6 shows the Exit mechanism for debt. Initially, an investor buys corporate debt and supplies the firm with fresh cash on the primary market. Then, corporate debt is sold from one investor to another which again means that money which is already in the market changes hands as part of

²⁵ See for example DiMaggio & Powell (DiMaggio & Powell, 1991).

²⁶ This channel usually applies to equity capital, with compensation linked to share price.

a secondary market transaction. Again, this may carry a strong political symbol but is ineffective in terms of corporate cash flow if the respective debt was acquired in the primary market. In fact, some research argues that by lowering the security price on secondary markets divestment actually makes it a more attractive investment for other investors who are unconcerned with the underlying issue (Heinkel et al., 2001).

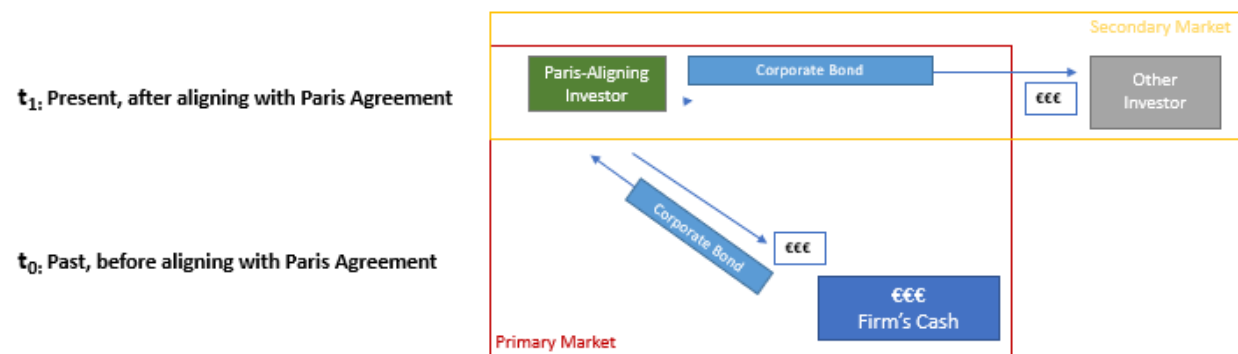


Figure 6: Debt Divestment

Threat of Exit

In the form of a threat, Exit can be used as a form of Voice (Admati & Pfleiderer, 2009). The two governance mechanisms can be framed as complimentary (McCahery, et al., 2016): If the “soft” approach of Voice is unsuccessful, a Threat of Exit may be added to increase pressure and if this still fails to achieve desired results Exit can be implemented. Whether actual or implied, the threat to sell holdings may influence managerial decisions by increasing the power of Voice. It provides the investor with the ability to punish management and thereby gives teeth to engagement. Indeed, Admati and Pfleiderer (2009) state that the Threat of Exit can be key to success for backroom negotiations, especially when executive pay is linked to market prices. The authors elaborate on credibility of the Threat of Exit being an important aspect and note that additional private information does not necessarily strengthen the mechanism. Dasgupta and Piacentino (2015) add that the type of investor plays an important role: As money managers compete for investor capital, their Threat to Exit is less credible.

Generally, in previous literature, all these mechanisms consider the situation of equities already issued; of an investor which is an existing shareholder of the company. Therefore, this mainly revolves around secondary market transactions. However, when distinguishing between different stages of the (re)financing cycle another mechanism can be identified: Denial of (Re)Entry.

Denial of (Re)Entry

This mechanism combines the best of both governance mechanisms, engagement and divestment. An Exit is only feasible ex post of investment, after capital inflow occurred to the issuing firm. Similarly, votes at annual general meetings and other popular Voice tools are tools reserved for current shareholders.

The proposed Denial of (Re)Entry mechanism refers to the point in the (re)financing cycle when a company seeks fresh capital on the primary market. This can be an Initial Public Offering (IPO) or a Seasoned Equity Offering (SEO) on the equity side, but also an Initial Debt Public Offering (IPDO) or a subsequent debt issuance after the IPDO. At this point in time, an investor is required

to decide whether she wants to provide fresh capital to the issuing firm or to deny it. Denial has a direct impact on cash flow, limiting new capital from being allocated to undesirable activities.

The proposed mechanism has a range of benefits. While an Exit mechanism is only feasible for an existing investor, the Denial of (Re)Entry mechanism can also be applied to an outsider. Additionally, this mechanism offers a convenient strategy for debt investors, who may struggle to implement Exit. Secondary debt markets generally are much less liquid than equity markets, making Exit costlier. This in turn makes the Threat of Exit less credible. Moreover, the security price effect of debt divestment is marginal and usually irrelevant for management compensation. Lastly, within debt, Voice tools are limited as fixed income investors do not have voting rights.

Figure 7 shows Debt Denial of an outsider: First, the investor buys corporate debt and thereby supplies the firm with fresh cash as part of the primary market. This debt has a fixed maturity and is usually not paid off but refinanced once it is due. When the time comes, outsiders can refuse debt offerings unless Paris-Alignment is assured, thereby not supplying the firm with unconditional fresh cash on the primary market. This strategy has a strong political symbol as well as an effective impact in terms of reducing non Paris-Aligned corporate cash flow.

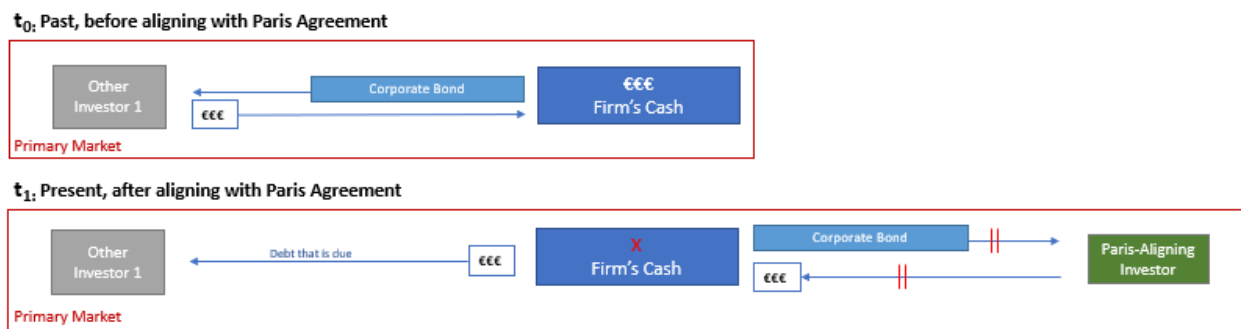
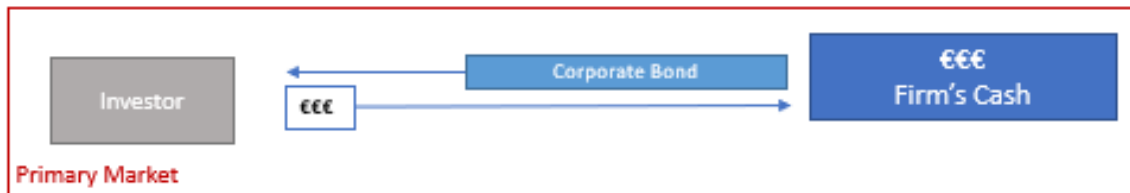


Figure 7: Debt Denial of Outsider

Lastly, Figure 8 shows Debt Denial for an existing investor – initially, the investor buys corporate debt and supplies the firm with fresh cash on the primary market. Again, this debt has a fixed maturity and is usually not paid off but refinanced. Once the debt is due, the investor can refuse to roll over the debt offering unless Paris-Alignment is assured, thereby not supply the firm with unconditional fresh cash. This strategy affects the primary market. It is a strong political symbol and very effective in terms of reducing non Paris-Aligned corporate cash flow. From an investor's point of view, an advantage of this mechanism is that it targets new issuance, rather than having to question previous investments which may be difficult or costly to revise. Especially the secondary debt market can be very illiquid.

t₀: Past, before aligning with Paris Agreement



t₁: Present, after aligning with Paris Agreement

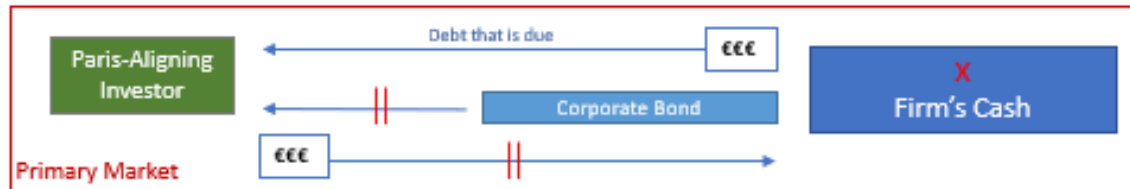


Figure 8: Debt Denial of Investor

Similar to the Threat of Exit mechanism, an investor can also increase her Voice power by threatening to Deny (Re)Entry. Anecdotal evidence seems to point towards bond investors in the market appreciating this mechanism as an effective escalation tool, with some of the bondholders considering a collaboration around issuers and communication of conditions for continued investment²⁷. Indeed, the topic has gathered considerable traction in media as well²⁸.

According to the Theory of Stakeholder Salience (Mitchell, et al., 1997), three aspects are essential to successfully influence: Power, Legitimacy and Urgency. In the context of climate transition and a responsible investor wanting to maximise her impact, we see all three aspects satisfied for Debt Denial when a firm needs to refinance. Consequently, threatening to Deny Debt when a firm is looking to refinance provides for the strongest Voice power. The following assesses each of the three aspects.

On the first aspect, power, the Paris-Aligned investor has the power to provide fresh cash to any corporation looking to refinance. This includes polluting firms without credible plans to transition.

Secondly, the Paris-Aligned investor has the legitimacy to withhold fresh cash by denying capital unless the respective issuer commits to covenants ensuring Paris-Alignment.

Lastly, on urgency: In the 50 to 100 days preceding a (re)financing exercise, such as a corporate bond offering, any corporation is under substantial time pressure to secure funding and avoid solvency challenges, which adds urgency to bond investor engagements. Most firms do not hold the cash needed to repay existing debt when it comes due and hence crucially rely on fresh cash from capital markets.

Effect and effectiveness of each mechanism

Most discussed in the context of Voice versus Exit is the security price effect. Post IPO or IPDO, an Exit represents a transaction on the secondary market and usually is only marginal unless the

²⁷ <https://shareaction.org/reports/sleeping-giants-are-bond-investors-ready-to-act-on-climate-change>

²⁸ <https://www.ft.com/content/953b0336-21d7-410b-b579-46b22d132e61?desktop=true&segmentId=7c8f09b9-9b61-4fbb-9430-9208a9e233c8#myft:notification:daily-email:content>

investor holds a substantial percentage of shares in the respective firm. However, in that case divestment means a significant financial loss for the divesting entity which reduces incentives for this mechanism. Similarly, denial pre IPO or IPDO has a limited effect on security price assuming there is sufficient demand in the market. The strongest case for a price effect is for exiting before a subsequent equity offering as here two forces come to play – on the one hand the shares for sale (supply) increases, on the other hand the implied denial weakens demand for the newly issued shares. On the debt side this logic does not hold as the maturing debt instrument is not relevant anymore once it is repaid.

The situation for cash flow effects is very different. Exit always represents a secondary market transaction and hence does not influence cash which is already in the firm. Exit has no direct cash flow impact. Denial, on the other hand, happens on primary markets. Both pre IPO and IPDO, and pre SEO and subsequent debt offerings there is a direct impact on cash inflow as the investor does not provide fresh capital inflows. For denial pre refinancing of debt there is an additional effect due to the cash outflow when the issuing firm has to repay maturing debt. Hence the largest cash flow effect stems from denying debt before refinancing.

Translating this into power of Voice, we can first note that Voice without Threat naturally has weaker power than when combined with the Threat to Exit or Deny. The Threat of Exit is strongest in terms of influence on security price pre SEO due to the double effect of increasing supply and decreasing demand, hence Voice power in equities is strongest at this point in time. For debt, Voice power is strongest when threatening to deny debt at the pre refinancing stage because of the double cash flow effect from in- and outflow.

Table 1 provides a summary of the different mechanisms and their power of Voice as well as their effects on cash flow and security price, for both asset classes and across the different stages of the (re)financing cycle.

	Equity			Debt		
	Pre IPO	Post IPO	Pre SEO	Pre IPDO	Post IPDO	Pre Refinancing
Power of Voice						
Voice without Threat	Medium Voice Power	Limited Voice Power	Medium Voice Power	Medium Voice Power	Very Limited Voice Power	Strong Voice Power
Threat of Exit	<i>Not possible</i>	Medium Voice Power	Medium/Strong Voice Power	<i>Not possible</i>	Very Limited Voice Power	<i>Not possible</i>
Threat of Denial	Strong Voice Power	<i>Not possible</i>	Strong Voice Power	Strong Voice Power	<i>Not possible</i>	Very Strong Voice Power
Cash Flow Effect						
Exit	<i>Not applicable</i>	No Cash Flow Effect	No Cash Flow Effect	<i>Not applicable</i>	No Cash Flow Effect	No Cash Flow Effect
Denial	Yes on Inflow	<i>Not applicable</i>	Yes on Inflow	Yes on Inflow	<i>Not applicable</i>	Yes on Inflow and Outflow!
Security Price Effect						
Exit	<i>Not applicable</i>	Marginal	Considerable	<i>Not applicable</i>	Marginal	Limited
Denial	Limited	<i>Not applicable</i>	Limited	Limited	<i>Not applicable</i>	Limited

Table 1: Summary of the Different Mechanisms and their Power of Voice, as well as Effects on Cash Flow and Security Price, for Both Asset Classes and Across the Different Stages of the (Re)financing Cycle

1.4. Literature

Speaking about “The Power of Giants”, Galaz et al. (2022) remark a major concentration of influence among few financial actors. The authors call for these giants to harness their power to address the climate crisis.

There is vast literature coverage of responsible investment, investor activism and the Voice versus Exit debate. However, most of the work is theoretical and conceptual, and focuses on the shareholder perspective rather than primary and specifically primary debt financing markets. Usually, Voice versus Exit literature only looks at equity post IPO, traded on secondary markets. And even within this limited scope, McNulty and Nordberg (2016) in a literature review note that existing research on Voice is conceptually, methodologically, and empirically narrow.

Some commonly discussed aspects are differences in type of investor (McCahery, et al., 2016; Dasgupta & Piacentino, 2015; Brav, et al., 2008; Ryan & Schneider, 2002) and target firm (Dimson, et al., 2015), ownership structure (Aguilera & Jackson, 2003), liquidity (Edmans, et al., 2013; Norli, et al., 2014; Coffee, 1991; Maug, 2002), regulation (McNulty & Nordberg, 2016; Aguilera & Jackson, 2003) and credibility of Threat (Admati & Pfleiderer, 2009).

Blitz et al. (2020) do recognise the key role that primary markets play and analyse the impact of sustainable investing. Their empirical investigation is not specific to one governance mechanism, but rather looks at the overall ability of unsustainable firms to raise fresh cash. They find that for the period from 2010 to 2019 no constraints to raise capital were experienced²⁹. Aguilera and Jackson (2003) also identify debt versus equity as a dimension which influences governance. The authors point out that creditors have little rights of control and tend to be risk averse while owners share a larger portion of risk but possess substantial control rights. Owners can make use of property rights to influence firm behaviour and the authors suggest that in countries whose regulations are in favour of large shareholders, the predominant mechanism is *commitment* (Voice). On the other hand, in countries that have more favourable regulation for minority shareholders *liquidity* (Exit) is the predominant mechanism. Moreover, the paper highlights the geographic differences and interdependence with financial systems. While in Europe and Japan the financial system is heavily reliant on bank loans – which gives rise to long term commitment rather than Exit – the US and UK are relying on a more market-based financial system. Here, publicly owned shares and bonds create the need for (institutional) investors to monitor the firm's behaviour. The active market allows for liquidity and hence the Exit mechanism.

Looking specifically at funds, Ryan and Schneider (2002) propose that larger funds and funds with a longer investment horizon tend to engage more in Voice. Moreover, they suggest that mixed financial and nonfinancial performance expectations and a larger share of equities in their asset mix engage in more activism.

The following table provides an overview of existing literature on Voice versus Exit.

²⁹ So far, the authors only cover issuance volume but are looking to extend their analysis to also provide insights to cost of financing.

Author(s)	Title	Year	Source Title	Data	Point in (Re)financing Cycle	Asset Class	Finding
Hirschman	Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States	1970	Book: Harvard University Press	Conceptual	N/A	N/A	<ul style="list-style-type: none"> Exit: A member quitting the organization or for the customer to switch to the competing product Voice: Influence for change from within. <ul style="list-style-type: none"> Complete reliance on Exit is questioned as it Exit often undercuts Voice Loyalty is framed as delaying Exit, giving Voice time to work.
Coffee	Liquidity versus control: The institutional investor as corporate monitor	1991	Columbia Law Review	Conceptual paper	Post IPO	Equities	<ul style="list-style-type: none"> Institutional activism is impeded by overregulation. Corporate governance changes should follow objectives beyond reduction of agency cost. Public policy should promote specific institutional investors as corporate monitors. The optimal monitor holds a large equity share for a longer term and has no conflict of interest.
Admati, Pfleiderer and Zechner	Large shareholder activism, risk sharing, and financial market equilibrium	1994	Journal of Political Economy	Theoretical Model	Post IPO	Equities	<ul style="list-style-type: none"> If a large investor has access to a costly monitoring technology affecting securities' expected payoffs, allocations of shares are determined through trading among risk-averse investors. Even with the free-rider problem, risk-sharing benefits prompt monitoring.
Maug	Large shareholders as monitors: Is there a trade-off between liquidity and control?	1998	The Journal of Finance	Theoretical Model	Post IPO	Equities	<ul style="list-style-type: none"> Market liquidity leads to more effective corporate governance. Small shareholders can free ride on the costly monitoring carried out by larger shareholders. Liquid stock markets compensate for the free rider problem by making it cheaper to be and become a larger owner.
Anderson, Korsun and Murrell	Ownership, Exit and Voice after mass privatization: Evidence from Mongolia	1999	Economics of Transition	Surveys, trading info from exchange	Post IPO	Equities	<ul style="list-style-type: none"> Quality of corporate governance is linked to shareowner changes. In "outsider plurality enterprises" (p.235), Exit of small shareholders allows Voice to be effective. In Mongolia, both mechanisms are limited to a small share of the private sector.
Ryan and Schneider	The Antecedents of Institutional Investor Activism	2002		Conceptual paper	Post IPO/IDO	Mixed funds: Equities and debt	<ul style="list-style-type: none"> 12 variables determining investor activism: Fund size, investment time horizon, performance expectations, pressure sensitivity, percentage of firm stock, percentage of fund portfolio, proportion invested in equity, legal restraints, defined-benefit/contribution, active/passive investing, internal/external management, internal/external proxy voting rights. Investor activism is more prevalent in larger funds. Investor activism is more prevalent in funds with a greater share of equity in their asset mix. Investor activism is more prevalent in funds with mixed financial and nonfinancial performance expectations compared to funds with purely financial performance focus. Investor activism is more prevalent in funds with longer investment time horizons.

Aguilera and Jackson	The Cross-National Diversity of Corporate Governance: Dimensions and Determinants	2003	Academy of Management Review	Theoretical Model	Post IPO/IPDO	Equities and debt	<ul style="list-style-type: none"> • If the property rights of a country predominantly favour large shareholders, Voice (“commitment”) is the preferred mechanism. • If the property rights of a country predominantly protect minority shareholders, Exit (“liquidity”) is the preferred mechanism. • Bank-based financial systems prompt corporate governance through debt and Voice. • Market-based financial systems prompt corporate governance through equity and Exit. • A “high degree of multiplexity in inter-firm networks” (p.454), favours Voice while a lower degree favours Exit.
Parrino, Sias and Starks	Voting with their feet: institutional ownership changes around forced CEO turnover	2003	Journal of Financial Economics	Empirical [CEO turnover in public firms, 1982-1993]	Post IPO	Equities	<ul style="list-style-type: none"> • In the year preceding an enforced CEO replacement, institutional ownership as measured in aggregate institutional ownership and the number of institutional investors decreases. • Appointment of an outsider is also negatively linked to institutional ownership.
Clark and Hebb	Pension Fund Corporate Engagement: The Fifth Stage of Capitalism	2004	Relations Industrielles/Industrial Relations	Qualitative: Literature Review and Interviews	Post IPO	Equities	<ul style="list-style-type: none"> • Increased use of Voice by pension funds, driven by: <ul style="list-style-type: none"> ○ Passive index funds growth ○ The Corporate Governance Movement and the expanding power of socially responsible investing ○ Global regulatory developments. • Voice: <ul style="list-style-type: none"> ○ equals taking a long-term view ○ promotes corporate sustainability ○ adds share value. • Therefore it offers “long-term benefits to future pension beneficiaries” (p.142).
	Shareholding structure, depoliticization and firm performance: Lessons from China’s listed firms	2004	Economics of Transition	Survey	Post IPO	Equities	<ul style="list-style-type: none"> • Exit and Voice could depoliticize Chinese public companies and thereby improve their performance. • A higher share of individual domestic shareholders means less decision-making power for the Chinese Government Party. • Large institutional investor presence reduces the negative performance effect of Party control.
Hsu and Koh	Does the presence of institutional investors influence accruals management? Evidence from Australia	2005	Corporate Governance: An International Review	Empirical: Institutional shareholder ownership data, 1993-1997	Post IPO	Equities	<ul style="list-style-type: none"> • Short term institutional investors favour the Exit mechanism, long-term institutional investors apply Voice <ul style="list-style-type: none"> ○ Both types of investors present in the Australian market • Relationship between institutional ownership and earnings management is “not systematic across all firms and is context dependent.” (p. 810)
Lysandrou and Stoyanova	The anachronism of the Voice-Exit paradigm: Institutional investors and corporate governance in the UK	2007	Corporate Governance: An International Review	Conceptual paper	Post IPO	Equities	<ul style="list-style-type: none"> • Need for alternative to Voice vs. Exit • Both mechanisms are “mutually inclusive rather than exclusive acts” (p. 1070) • “Capital market’s corporate governance role is now exercised more through the gravitational pull of equity trading than through the medium of hostile takeovers” (p. 1070)

Nikolychuk and Sturgess	Shaping Exit and Voice: An account of corporate control in UK sports	2007	Management Decision	Comparative case study			<ul style="list-style-type: none"> ● Loyalty prevents certain shareholders groups from Exit ● Prioritisation of investment objectives over traditional economic measures of return. ● Collaboration of large shareholders as well as trust makes Voice effective. ● This effect is noted in terms of the ability for shareholder groups to communicate their interests but does not directly translate to an effect in performance.
Brav, Jiang, Partnoy and Thomas	Hedge fund activism, corporate governance, and firm performance	2008	Journal of Finance	Empirical: Hedge fund data, 2001-2006	Post IPO	Equities	<ul style="list-style-type: none"> ● US activist hedge funds are successful in applying Voice in 2/3 of cases. ● Irreversible abnormal return following announcement of activism amounts to 7%.
Admati and Pfleiderer	The "Wall Street Walk" and shareholder activism: Exit as a form of voice	2009	Review of Financial Studies	Theoretical Model	Post IPO	Equities	<ul style="list-style-type: none"> ● Threat of Exit can reduce agency costs, but "additional private information need not enhance the effectiveness of the mechanism" (p. 2645). ● Effect depends on "whether the agency problem involves desirable or undesirable actions from shareholders' perspective" (p. 2645).
Becht, Franks, Mayer and Rossi	Returns to shareholder activism: Evidence from a clinical study of the Hermes UK focus Fund	2009	Review of Financial Studies	Case Study: Data made available by Hermes	Post IPO	Equities	<ul style="list-style-type: none"> ● Voice in the form of private interventions preferred corporate governance channel for activist funds in UK. ● Outperformance of fund due to intervention.
Edmans	Blockholder Trading, Market Efficiency, and Managerial Myopia	2009	The Journal of Finance	Theoretical Model	Post IPO	Equities	<ul style="list-style-type: none"> ● "Blockholders have strong incentives to monitor the firm's fundamental value because they can sell their stakes upon negative information. ● By trading on private information, they cause prices to reflect fundamental value rather than current earnings. ● This in turn encourages managers to invest for long-run growth rather than short-term profits. ● Contrary to the view that the U.S.'s liquid markets and transient shareholders exacerbate myopia, they can encourage investment by impounding its effects into prices." (p. 2481).
Marler and Faugère	Shareholder activism and middle management equity incentives	2010	Corporate Governance: An International Review	Empirical [Management compensation data, 1997-2001]	Post IPO	Equities	<ul style="list-style-type: none"> ● "Voice activist shareholders are associated with the greater use of equity incentives, and higher total compensation at middle managerial levels, relative to Exit activists. <ul style="list-style-type: none"> ○ Results for CEO equity incentives are similar. ● As the presence of institutional ownership siding with management increases relative to Voice activists, the use of equity incentives at middle managerial levels declines. ● Results for CEO equity incentives are not the same." (p. 313)
Edmans and Manso	Governance Through Trading and Intervention:	2011	The Review of	Theoretical Model	Post IPO	Equities	<ul style="list-style-type: none"> ● A free rider problem for Voice arises due to most firms being held by multiple small blockholders. ● Yet this strengthens Exit due to competitive trading ● This fosters incorporation of information into prices.

	A Theory of Multiple Blockholders		Financial Studies				<ul style="list-style-type: none"> ● Threat of Exit is strengthened and incentives good corporate governance by managers.
Bharat, Jayaraman and Nagar	Exit as Governance: An Empirical Analysis	2013	The Journal of Finance	Empirical [Equity data for large public US firms, 1996-2002]	Post IPO	Equities	<ul style="list-style-type: none"> ● Threat of Exit is distinct from Voice. ● Stock market liquidity is positively linked to Threat of Exit. ● Larger blockholdings are associated with higher losses in firm value during crises <ul style="list-style-type: none"> ○ This is exacerbated when manager's compensation is share price linked.
Cohn and Rajan	Optimal Corporate Governance in the Presence of an Activist Investor	2013	The Review of Financial Studies	Theoretical Model	Post IPO	Equities	<ul style="list-style-type: none"> ● "Optimal level of internal board governance depends on both the severity of the agency conflict and the strength of external governance. ● Internal governance creates a certification effect, so greater intervention by the board can lead to worse managerial behaviour. ● Internal and external governance are substitutes when external governance is weak and complements when external governance is strong." (p. 985)
Edmans, Fang, and Zur	The effect of liquidity on governance	2013	Review of Financial Studies	Empirical [Hedge fund data, 1995-2010]	Post IPO	Equities	<ul style="list-style-type: none"> ● "Positive effect of stock liquidity on blockholder governance. ● Liquidity increases the likelihood of block formation. ● Conditional upon acquiring a stake, liquidity reduces the likelihood that the blockholder governs through Voice. ● Lower frequency of activism does not reflect the abandonment of governance, but governance through the alternative channel of Exit. ● Taking into account the increase in block formation, liquidity has an unconditional positive effect on Voice as well as Exit." (p. 1443).
Edmans	Blockholders and Corporate Governance	2014	Annual Review of Financial Economics	Literature Review	Post IPO	Equities	<ul style="list-style-type: none"> ● Exit as a corporate governance mechanism for blockholders. ● "Blockholders may also worsen governance by extracting private benefits of control or pursuing objectives other than firm value maximization. ● Empirical challenges in identifying causal effects of and on blockholders." (p. 23)
Goodman, Louche, van Cranenburgh, Arenas	Social Shareholder Engagement: The Dynamics of Voice and Exit	2014	Journal of Business Ethics	Case study	Post IPO	Equities	<ul style="list-style-type: none"> ● Religious organisations increasingly use Voice over Exit. <ul style="list-style-type: none"> ○ Silent Exit is not used. ● Divestment is chosen for political not economic reasons. ● Exit is "not always the consequence of unsatisfactory Voice outcomes and Voice can continue after Exit." (p. 193).
Dasgupta and Piacentino	The Wall Street Walk when Blockholders Compete for Flows	2015	Journal of Finance	Theoretical Model	Post IPO	Equities	<ul style="list-style-type: none"> ● "When money managers compete for investor capital, the Threat of Exit loses credibility, weakening its governance role. ● Money managers with more skin in the game will govern more successfully using Exit." (p. 2853)
Dimson, Karakas and Li	Active Ownership	2015	Review of Financial Studies	Empirical: Private engagement data of public	Post IPO	Equities	<ul style="list-style-type: none"> ● Successful Voice leads to abnormal returns. <ul style="list-style-type: none"> ○ Especially when related to environmental or social issues, it is associated with larger institutional

				firms, 1999-2009			<p>ownership, and enhanced accounting performance and governance.</p> <ul style="list-style-type: none"> • Success of Voice is positively linked to reputational concerns and the firm's capacity to implement changes as well as collaboration among activists. • Inferior governance and a socially conscious institutional investor base make a company a likely target.
Norli Ostergaard and Schindele	Liquidity and Shareholder Activism	2015	The Review of Financial Studies	Empirical [Voice events at US public firms, 1994-2007]	Post IPO	Equities	<ul style="list-style-type: none"> • "Blockholders' incentives to intervene in corporate governance are weakened by free-rider problems and high costs of activism. • [...] Activists may recoup expenses through informed trading of target firms' stock when stocks are liquid. • [...] Stock liquidity increases the probability of activism, but less so for potentially overvalued firms where privately informed blockholders may have greater incentives to sell their stake than to intervene. • [...] Activists accumulate more stocks in targets when stock is liquid. • Liquidity helps overcome the free-rider problem and induces activism via pre-activism accumulation of target firms' shares." (p. 486)
McCahery, Sautner and Starks	Behind the Scenes: The Corporate Governance Preferences of Institutional Investors	2016	Journal of Finance	Survey Data	Post IPO	Equities	<ul style="list-style-type: none"> • Voice and Exit as complementary mechanisms, where Voice precedes Exit. • Investment horizon is positively related to Voice. • Investor's concern about liquidity is negatively related to Voice.
McNulty and Nordberg	Ownership, Activism and Engagement: Institutional Investors as Active Owners	2016	Corporate Governance: An International Review	Conceptual	Post IPO	Equities	<ul style="list-style-type: none"> • "Cognitive, affective, and behavioural aspects underlying relations of distance and closeness" between corporations and investors (p. 358). • Important role of formal institutional aspects such as regulation. • Multidimensionality of engagement and relations of trust between institutions key to corporate governance.
Brav, Dasgupta, and Mathews	Wolf Pack Activism	2021	Management Science	Theoretical Model	Post IPO	Equities	<ul style="list-style-type: none"> • While corporate governance crucially depends on Blockholder monitoring, there are few shareholders with large enough ownership to be able to successfully govern alone. • Medium-sized shareowners are unlikely to use Voice, "especially when the blocks are held by delegated asset managers who have limited skin in the game" (p. 1)
Burkart and Lee	Activism and Takeovers	2017	The Review of Financial Studies	Theoretical Model	Post IPO	Equities	<ul style="list-style-type: none"> • "Due to free-riding behaviour by dispersed shareholders activism can be more profitable than a hostile takeover even if it is less efficient and activism is most efficient when it brokers, rather than substitutes for, takeovers. • Temporary ownership is a strength rather than a shortcoming of activism. • Takeover activism earns superior returns." (p. 1868)
Cundill, Smart and Wilson	Non-financial Shareholder Activism: A	2018	International Journal	Literature Review	Post IPO	Equities	<ul style="list-style-type: none"> • Loyalty as one way of explaining why a shareholder chooses Voice or Exit. <ul style="list-style-type: none"> ○ Function as a moderator.

	Process Model for Influencing Corporate Environmental and Social Performance		of Management Reviews				<ul style="list-style-type: none"> External factors such as the regulatory environment or a shareholder's sustainability concern can overpower Exit as well as Voice despite loyalty.
Corum and Levit	Corporate control activism	2019	Journal of Financial Economics	Theoretical Model	Post IPO	Equities	<ul style="list-style-type: none"> Shareholder activism (Voice) and takeovers (Exit) as complimentary forces. Activists characterised by higher credibility when using Voice on board compared to takeover bidders due to their position among shareholders. Shareholder activism is the market solution for the bidder's commitment problem.
Edmans, Levit and Reilly	Governance under common ownership	2019	Review of Financial Studies	Theoretical Model	Post IPO/IPDO	General: Traded equities and debt	<ul style="list-style-type: none"> "When investors own multiple firms, governance through both Voice and Exit can strengthen. Under common ownership, informed investors have flexibility over which assets to sell upon a liquidity shock." (p. 2673)
Levit	Soft shareholder activism	2019	Review of Financial Studies	Theoretical Model	Post IPO	Equities	<ul style="list-style-type: none"> Communication between investors and firms may be promoted by Threat of Voice, such as threatening to launch a public campaign. If Voice is ineffective or if the investor proposal is substantially challenging the status quo, Threat of Exit can be effective.
Levit	Words speak louder without actions	2020	Journal of Finance	Theoretical Model	Post issuance	General model, discussed for shareholder activism	<ul style="list-style-type: none"> "Negative correlation between activists' interventions and behind-the-scenes communications. Interestingly, factors that facilitate coordination among shareholders (e.g., influential proxy advisers, non-dispersed ownership structure) are likely to reduce the cost of campaigning and thereby undermine the ability of activists to influence the policies of their target companies." (p. 113)
Broccardo, Hart and Zingales	Exit vs. Voice	2022	ECGI Finance Working Paper N° 694/2020	Theoretical	Post IPO	Equities	<ul style="list-style-type: none"> "In a competitive world exit is less effective than voice in pushing firms to act in a socially responsible manner. If the majority of investors are even slightly socially responsible, voice achieves the socially optimal outcome. Exit does not unless everybody is significantly socially responsible. <ul style="list-style-type: none"> Exit can sometimes reduce social welfare. If the majority of investors are purely selfish, exit is a more effective strategy, but neither strategy generally achieves the first best." (p.1)
Edmans, Levit and Schneemeier	Socially Responsible Divestment	2022	ECGI Working Paper Series in Finance	Theoretical Model	Post IPO	Equities	<ul style="list-style-type: none"> Introduction of 'Tilting' as more effective strategy than exclusion for unsustainable assets. <ul style="list-style-type: none"> Defined as holding an unsustainable stock if it is best-in-class to encourage corrective action. Not feasible if the corrective action is unobservable to the other market participants because it would give rise to greenwashing allegations from them.
Jagannathan, Kim,	Environmental Activism,	2022	Working Paper	Theoretical Model	Post IPO	Equities	<ul style="list-style-type: none"> Modelling corporation transition from polluting to green

McDonald and Xia	Endogenous Risk, and Stock Prices						<ul style="list-style-type: none"> • Personally costly activism needed as manager that maximises shareholder value will not proactively transition even if it is socially optimal • Activists only successful if they hold large collective wealth • Voice as most effective mechanism
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Table 2: Literature Overview of Voice vs. Exit

In summary, it may be noted that nearly all literature focuses on equities after an initial issuance; at existing shareowners. In the context of our distinct analysis across asset classes and stages of the (re)financing cycle this means that most fields are not yet covered. Table 3 highlights gaps in research.

	Equity			Debt		
	Pre IPO	Post IPO	Pre SEO	Pre IPDO	Post IPDO	Pre Refinancing
Voice without Threat	Nothing	Extensive	Nothing	Nothing	No dedicated studies ³⁰	Nothing
Exit & Threat of Exit	Nothing	Extensive	Nothing	Nothing	No dedicated studies ³⁶	Nothing
Denial of (Re)Entry & Threat of Denial	Nothing	Nothing	Nothing	Nothing	Nothing	Nothing

Table 3: Summary of Existing Literature with Regards to Timing in Refinancing Cycle and Asset Class

1.5. Most effective strategy: Engage in Equities and Deny Debt

Based on the findings we suggest a strategy that uses distinct mechanisms according to asset class. For equities, where full divestment means losing Voice power while not having a direct cash flow impact, it makes sense to engage in Voice. Strongest Voice power is achieved when a company is about to issue new shares. Threat to (partially) divest may also increase Voice power.

The much bigger overall effect, however, can be achieved in debt. Here investors regularly face the decision to roll over maturing debt and refinance. This poses the key moment to influence where investors have strong Voice power due to the urgency of the need for fresh cash to pay off the maturing debt. We suggest exploiting this moment by threatening to Deny (Re)Entry unless the fresh capital is Paris-Aligned, see Figure 9. This overall strategy can be summarised as *‘Engage in Equities and Deny Debt’* and has been embraced by for example the Lothian Pension Fund in the UK³¹.

³⁰ Only mentioned in passing, usually in addition to equity.

³¹ <https://www.ipe.com/news/lothian-adopts-engage-our-equities-deny-our-debt-mantra-on-climate/10046456.article>

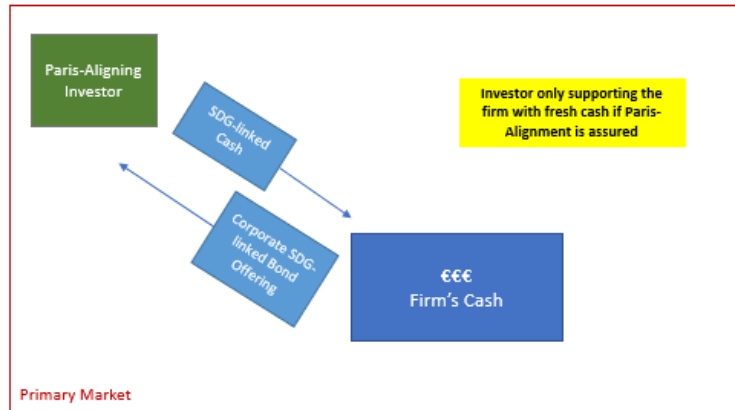


Figure 9: Aligning Fresh Capital with the Paris Agreement Using Sustainability-Linked Bonds

Technically, the link can be easily achieved through the currently fastest growing sustainable finance instrument: sustainability-linked debt. This entails the issuer signing up to sustainability key performance indicators (KPIs) as part of the financing, thus committing to certain targets as part of raising capital. While environmental KPIs related to greenhouse gas emissions are popular, a broad range of KPIs is conceivable, including social factors such as female leadership quotas. Anecdotal evidence shows that sustainability-linked bonds (SLBs) often entail more than one indicator. This reflects the complexity of sustainability, which encompasses a range of topics. Creating one aggregate indicator for sustainable development has been described as “the holy grail” (Jollands & Peterson, 2003).

In order for the link of sustainability performance and capital to be credible, investors must “put their money where their mouth is” and agree to penalties for missing set targets. This can for example take the form of step up (or step down) payments in their coupon rate, or absolute value payments. This way, sustainability performance is directly linked to the cost of capital.

KPI targets take the form of legally enforceable covenants. Implementing covenants is by no means a new idea and both investors and issuers are familiar with the concept. Moreover, guidance is available through for example the *Sustainability-Linked Bond Principles* issued by the ICMA³².

One example of sustainability-linked debt are Sustainable Development Goal (SDG) Bonds: A general purpose bond is linked to one or more of the SDGs³³. For Paris-Alignment, the relevant SDG is SDG 13: Climate Action. For example, it can take the form of absolute emission reductions. See Figure 10 for this strategy for the example of an existing investor.

³² <https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/sustainability-linked-bond-principles-slb/>

³³ <https://sdgs.un.org/>

t₀: Past, before aligning with Paris Agreement



t₁: Present, after aligning with Paris Agreement

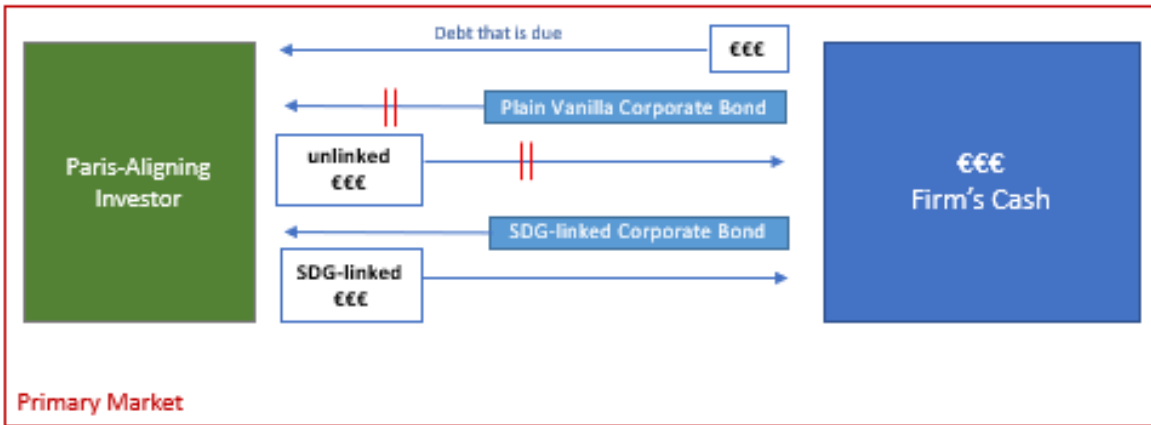
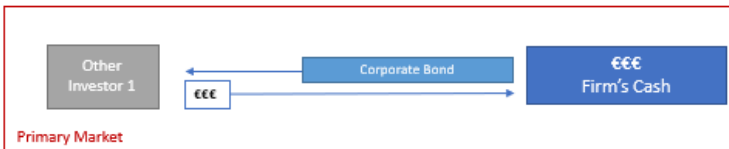


Figure 10: SDG-Linked Capital from Investor

One of the advantages of the Denial of (Re)Entry mechanism is that it can also be applied by outsiders who are not invested in the issuer at the time of issuance. See Figure 11 for the related visualisation.

t₀: Past, before aligning with Paris Agreement



t₁: Present, after aligning with Paris Agreement

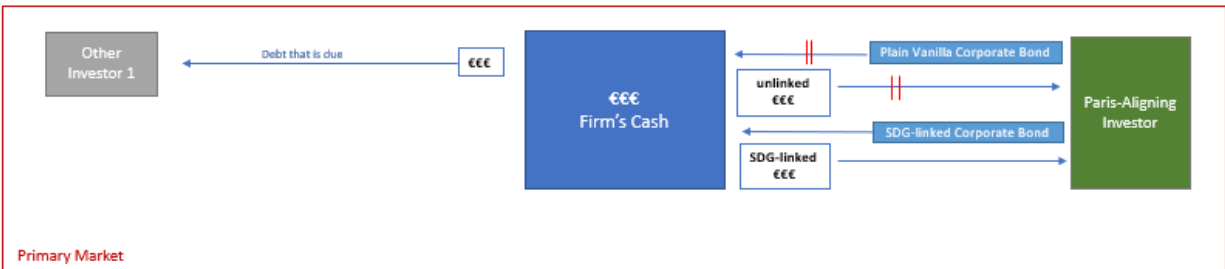


Figure 11: SDG-Linked Capital from Outsider

This is an inherently different approach to Green Bonds. Green Bonds are tied to specific, already green activities as they are use of proceeds instruments. They cannot be used for general purpose finance and cannot be used for activities with urgent need for transition. Hence the overall

financing capacity of Green Bonds is limited. Sustainability-Linked Debt on the other hand has no such restrictions and thus has unlimited potential. In theory, every new debt issuance could be sustainability-linked.

Indeed, the market has picked up this trend. The first ever sustainability-linked bond was issued by utility company Enel in 2019; yet recently Enel issued another single tranche of EUR 900 million linked to emission reductions³⁴. Besides being oversubscribed by almost 3 times, Enel reported a significant participation of socially responsible investors which allowed to diversify Enel's investor base. While Enel aims to have over 70% of all its debt linked to sustainability, TotalEnergies recently announced that all its new bond issues would be tied to climate performance indicators³⁵.

Besides the investor demand driving issuance, firms are also eager to issue such bonds as financial benefits may be enjoyed. First of all, as evident in the above example, sustainable bonds are generally oversubscribed and attract long-term and institutional investors.

Moreover, there is emerging evidence that sustainable debt leads to lower borrowing costs (Ben Slimane, et al., 2020). The so called *Greenium*, the premium investors are willing to pay for green investments, has been estimated to be in the range of between two (Zerbib, 2019) and eighteen basis points (Gianfrate & Peri, 2019). Explanations include the perception for such investments to have lower risk and better financial performance due to increased transparency (Sartzetakis, 2020).

The effectiveness of greening portfolios in terms of exposure to carbon has been demonstrated by Bressan et al. (2022): Combining sustainability criteria with other investment criteria they construct a portfolio of corporate bonds with a 10% reduction of exposure to transition risk (proxied by carbon intensities), limiting changes in yield to less than 80 basis points on individual bonds.

In the equity space, Monasterolo and de Angelis (2020) show that low-carbon assets have increased in their attractiveness following the 2015 Paris Agreement, however, cannot prove a penalty for carbon-intensive assets yet. On the other hand, Bolton and Kacperczyk (2020) do find a carbon premium on share prices. Moreover, carbon-intensive assets face the risk of becoming stranded, exposing their holders to risk. Besides delaying the transition, this poses stability risk to the financial system in its entirety (Monasterolo, 2020).

Furthermore, there is literature highlighting the existence of investors who have non-financial incentives to pursue sustainability goals. For example, Reyhanloo et al. (2018) outline the importance of the private sector in the fight against land degradation. In their related investor survey, the authors find that the main motivation for sustainable investment is emotional attachment and consciousness. This is mirrored by Dunz et al. (2018, p.1), who highlight that investors' climate sentiment may act as a "game changer" in driving the reallocation of capital toward sustainable assets.

Lastly, there are regulatory changes which may further exacerbate the speed of adoption of sustainability-linked debt. New reporting requirements in the EU and the US for financial companies are expected to drive the "greening" of portfolios and balance sheets. In the

³⁴ <https://www.enel.com/media/explore/search-press-releases/press/2022/04/enel-successfully-launches-a-750-million-pound-sterling-sustainability-linked-bond-in-a-single-tranche>

³⁵ <https://news.bloomberglaw.com/esg/total-to-sell-only-esg-linked-bonds-in-first-for-debt-market-1>

investment space, any fund with a climate objective wanting to classify as “deep green” as per Sustainable Finance Disclosure Regulation (SFDR) ³⁶ Art. 9 will have to track an EU Climate Benchmark³⁷. Both the Paris-Aligning and the Climate Transition Benchmark require a 7% year on year emission reduction across all scopes.

Hence it is little surprising that sustainability-linked debt currently is the fastest growing market within sustainable finance and projected to continue at accelerated speed, though still small in absolute terms compared to the more mature Green Bond market. Given the different characteristics of the two types of instruments no major cannibalisation is expected.

For Green Bonds, academic research already demonstrated credibility in terms of being a commitment to the environment (Flammer, 2020). Yet there is also growing recognition of the role of sustainability-linked bonds’ potential to promote issuers’ transition to net zero emissions (Vulturius, et al., 2022).

1.6. Discussion: Relevance of each mechanism in the real economy

While IPOs, and IPDOs only occur once in a firm’s existence, especially refinancing of debt follows predictable patterns. Investors regularly face the decision to roll over existing debt.

The striking relevance of debt is revealed by comparing both asset classes in each stage of the (re)financing cycle for the 100+ Climate Action Companies (CAC100+)³⁸. The initial corporate universe of 100 companies has been extended by a further 66 firms which have been identified through stakeholder consultation as also having substantial potential to drive a sustainable transition. Together the 166 firms account for up to 80% of global industrial emissions.

Nearly all of these firms are public and hence are already at the post IPO stage³⁹. Only 2 IPOs from ClimateAction100+ firms occurred since 2015⁴⁰, and only 59 firms carried out 109 SEOs since then³⁵. On the debt side, all of these firms have engaged in issuing bonds. Over 7000 bond tranches have been issued since the Paris Agreement, from over 90% of the 166 target firms. Currently over USD 2.7 trillion of Climate Action 100+ company bond issuance is active⁴¹. This once more highlights the key role that debt could play.

1.7. Conclusion

This paper suggests expanding the so far binary mechanism choice of Voice versus Exit, for investors wanting to influence corporate behaviour and specifically for responsible investors aiming to drive corporate transitions. The current engagement versus divestment dichotomy fails to account for the distinct characteristics of investment in different asset classes. Our proposed additional Denial of (Re)Entry mechanism targets primary markets and hence can achieve substantial cash flow impact. Divestment on secondary markets relies on security price influence and symbolic meaning yet does not hit corporate cash flow.

³⁶ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32019R2088>

³⁷ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32019R2089>

³⁸ <https://www.climateaction100.org/whos-involved/companies/>

³⁹ The only two exceptions are Eskom Holdings and Pemex, both state-owned.

⁴⁰ The respective IPOs were carried out by Saudi Aramco and CNOOC.

⁴¹ Data from Bloomberg.

Our overall recommendation for a strategy to maximise investor impact is to '*Engage in Equities, but Deny Debt*'. We find the strongest Voice power in equities for threatening to Exit in advance of a Seasoned Equity Offering (SEO), when the company is looking for fresh capital. Yet the absolute largest impact can be achieved on debt markets, as the cash route is more effective than the shares route. Debt financing works in cycles, as debt usually comes with a maturity at which the principal needs to be repaid. This adds urgency to a company's need for fresh capital and hence gives power to an investor looking to engage. By denying debt on a primary market, a direct cash flow effect is realised. Hence the Threat to Deny is a very powerful one. We suggest strategically utilising this moment in advance of debt refinancing: Investors Threat to Deny new debt unless the issuer commits to linking the fresh capital to sustainability performance. This can be achieved through sustainability-linked debt, a general purpose financing tool. To be credible, it involves a significant penalty should the sustainability targets not be met. Thereby sustainability performance is directly tied to the cost of capital for the issuer. This way, in fixed income there is a double hit in terms of cash flow: First, at issuance when the fresh cash is linked to sustainability (or denied if not) and secondly when a penalty for failing to meet targets occurs.

Besides this striking advantage for debt in terms of impact mechanism, the absolute volume and relative share within the fossil fuel sector also highlight why the discourse needs to move from focusing on equities and shareholders to fixed income: Until 2024 the Climate Action 100+ firms will be looking to refinance over EUR 470 billion⁴² and bonds and loans account for over 80% in fossil fuel financing, while equities only amount to 10% (Cojoianu, et al., 2021).

⁴² Data from Bloomberg.

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