

# To adopt or not: the influence of institutional pressures on Science-Based Targets adoption

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### **Abstract**

The science-based targets (SBTs) are targets developed for companies that are both science-based (Paris Agreement as foundation) and absolute (limit CO<sub>2</sub> emissions to stay well-below 2 degrees Celsius). The current Science-Based Targets (SBTs) focus on reducing CO<sub>2</sub> emissions, with the future ones also including biodiversity, water, oceans, and land. To mitigate climate change, it is important that as many companies as possible adopt such targets. To that end, this research answers the question which pressures influence companies to adopt science-based targets and how. By using an extended version of institutional theory, four pressure categories are found, comprised of coercive, mimetic, normative and internal. These four pressure types are exerted by their respective primary stakeholders. To find the answer to the research question, three methods are used. These are qualitative interviews, a content analysis, and a survey. The findings show that market and internal pressures work in conjunction with social and coercive pressures to create industry-wide movements towards more sustainable practices, among which SBTs adoption. Most notable are shareholder internal pressures who have developed a strong interest in the sustainability performance of the companies they invest in. Future research could focus on the impact of shareholder on climate target achievement as well as how shareholders and other stakeholders can cooperate to strengthen each other.

## 1. Introduction

In a recent article in *The Guardian*, Johan R ockstrom explains that “if we want to have any chance of keeping global warming within 1.5C, we need to cut emissions by half over the next nine years.” (Watts, 2021). If global temperature rise exceeds 2 degrees Celsius, the planet could drift towards an uninhabitable state called ‘hothouse Earth’ (Steffen et al., 2018). This would happen due to self-reinforcing feedback loops. In the *Guardian* article, R ockstrom briefly explains that the three largest economies consisting of China, the EU and the US are all aligning to work towards net-zero (Watts, 2021). The EU and the US in 2050 and China in 2060. These commitments are encouraging but the main question is how to achieve such targets, since there exist many different industries within those economies who all need to play their part. A possible solution is offered in the form of voluntary agreements. Specifically, the science-based targets. These targets are developed to aid companies in reducing their CO<sub>2</sub> emissions in line with a 1.5- or 2-degree Celsius temperature rise scenario. This means that companies who adopt them will have to be net-zero in 2050.

There exist many other targets, pacts, and agreements which companies can adopt, yet the SBTs stand out because of various reasons. Most prominent is the usage of absolute boundaries instead of relative: a company either commits to a 1.5- or 2-degrees Celsius temperature rise scenario instead of a reduction percentage since a certain year. Those scenarios are based on the Paris Agreement carbon emission goals. Furthermore, the SBTs also focus on the infamous scope 3 emissions for CO<sub>2</sub> reductions. Nevertheless, the SBTs are still a form of voluntary regulation, meaning that where mandatory regulations are obligatory, voluntary ones usually have to offer something in return that benefits the company (Aragon-Correa; Marcus & Vogel, 2020). This means that the current 1106 SBT committed companies have different reasons for adopting environmental targets such as the SBTs. By uncovering the reasons behind SBT adoption, this research offers new insights into the different pressures that cause a company to adopt the SBTs.

This research draws upon a combination of two theories, to understand what drives companies to adopt SBTs. These theories answer the fundamental question of what causes organisations to change. Firstly, there is institutional theory, which is about how different institutional pressures cause a company to change (DiMaggio and Powell, 1983; see Jennings and Zandbergen, 1995 for more). In total, four institutional pressures are identified that influence companies to change: coercive, mimetic, normative and internal. However, with this theory alone, questions about who exerts such pressures remain. Therefore, the second theory is stakeholder theory which focuses on how different stakeholders influence a firm (Henriques and Sadorsky, 1996). This theory is used for identification and classification of different stakeholder groups that in turn exert institutional pressures. Together, these two theories allow for the creation of a framework where four institutional pressures are exerted by different primary stakeholder groups.

This combination of stakeholder and institutional theory has been used before by Wang, Li and Qi (2020), where the authors conducted a meta-study about which pressure type is most influential when it comes to a company’s environment strategy. The goal of this research is not only about identifying a pressure that is most influential in SBTs adoption, but also how or why that pressure is most influential. Thus, the aim of this research is to develop and use a framework to explore which pressure

types and what stakeholders play an important role in SBTs adoption by investigating some of the 1106 companies currently involved with the SBTs and some that are not. This will allow the following question to be answered:

“Which institutional pressures exerted by primary stakeholder groups determine whether or not a company engages with the SBTs?”

To answer this question, the following sub-questions will be answered first:

- To what extent, and in what ways, do coercive pressures influence corporations to engage (or not) with the SBTs?
- To what extent, and in what ways, do market/mimetic pressures influence corporations to engage (or not) with the SBTs?
- To what extent, and in what ways, do normative/social pressures influence corporations to engage (or not) with the SBTs?
- To what extent, and in what ways, do internal pressures influence corporations to engage (or not) with the SBTs?

The structure of the research is as follows: first a theory section explaining the most important concepts and theories will follow, then the methodology will be explained, followed by the results section. After that comes the discussion section and lastly the conclusion.

## 2.Theory

The main research question is about the relationship between primary stakeholder, the pressures they exert and how those determine whether a company commits to the Science-based targets or not. To be able to answer this question, a framework needs to be built. The goal of this section is to provide such a framework which will form the foundation for the rest of the research. The framework will be built by firstly explaining the institutional pressures. Then the theory of institutional pressures is expanded to include internal pressures. After that, the primary stakeholder's role in exerting the institutional pressures will be added. However, before all that, the SBTs and its surrounding organizations will be explained to delineate a clear picture of what this research focusses on and what not.

### 2.1 Science-based targets: what they are

As already mentioned in the introduction, the SBTs are part of the science-based targets initiative (SBTi). The SBTi, in turn, is a partnership between CDP, the United Nations Global Compact (UNGC), World Resources Institute (WRI) and the World Wide Fund for Nature (WWF) (“Partners,” n.d.). According to their website, the SBTi “Defines and promotes best practice in emissions reductions and net-zero targets in line with climate science.” and also “Provides technical assistance and expert resources to companies who set science-based targets in line with the latest climate science.” (“About us”-a, n.d.). The foundation of their climate science is the Paris Agreement and IPCC, as is stated on their website (“How it works”, n.d.).

The SBTs are a form of voluntary environmental regulation. This means that the adoption of the SBTs is completely optional. The difference between voluntary and mandatory (environmental) regulation is defined by Aragon-Correa, Marcus and Vogel (2020, 340-341) as follows: “Legally constituted local, national, and supranational authorities have developed mandatory programs that hold firms accountable for their environmental impacts by making them conform to legal dictates. By contrast, voluntary programs derive from diverse sources including governments, standards organizations, civic organizations and nongovernmental organizations and industry trade groups.”. Apart from those various sources, the institutional pressures also play a role in SBTs adoption which will be explained in the next section.

Coming back to the SBTs, the core idea behind it is that good corporate targets will also lead to better governmental regulation: “We need a race to the top, led by pioneering companies. This will empower peers, suppliers and customers to follow suit and drive governments to take bolder action.” (“About us”-a, n.d.). Then there is another part of the initiative called the Science-based targets network (SBTN), which is partnered with the global commons alliance. The SBTN has its own set of goals and targets, together with the global commons alliance, made after demands for more methods, guidance, and tools to set science-based targets for the whole Earth system (“About us”-b, n.d.). The focus area of the SBTN extends to not only include companies but also cities and sets targets for air, water, land, biodiversity, and ocean (“About us”-b, n.d.). In this research the focus lies solely on the SBTi and their carbon emission reduction targets, which will be referred to as SBTs.

What is important when it comes to the SBTi is that they bring companies *in line* with climate science. Those two words contain various assumptions and raise questions. It implies that when a company is ‘in line’ it is contributing positively to climate change mitigation, despite a 2-degree scenario also being considered ‘in line’ with climate science. More on this will follow later. Furthermore, various questions can be raised such as who decides what ‘in line’ means in the first place and secondly how progress is being monitored of companies that are ‘in line’. Giesekam et al. (2021) mentioned a key concern regarding the ambition of target setting and actual emissions performance. Rietbergen, Rheede and Blok (2015) as well as Dahmann, Branicki and Brammer (2019) concluded that there appears to be a discrepancy between target ambition and required scientific action to reduce emissions. This leads to scenarios where companies adopt certain targets, such as the SBTs, and then do not undertake the necessary steps to achieve those targets.

Giesekam et al. (2021) conducted a study on SBT target achievement and found that, based on annual reports, 21% of targets have already been achieved, and 44% are on target, with 35% behind target (Giesekam et al., 2021, 14). However, these are the numbers based on the scope 1 and 2 targets. As Giesekam et al. explains: “In total, 75% of targets that do not include Scope 3 emissions are on target or achieved, this drops to 52% when Scope 3 targets are included” (Giesekam et al., 2021, 14). Due to the SBTs not requiring specific reporting on progress, there seems to be no penalty for lack of progress against targets. This is a flaw of voluntary agreements that Aragon-Correa, Marcus and Vogel (2020) also identified. Thus, despite the SBTs bringing companies ‘in line’ with climate science, it does not monitor if they stay in line.

Since the Paris Agreement is above all a political and global agreement, it means that a certain degree of consensus and ambiguity is at play. This had led to debates about how effective the agreement is (see Cléménçon, 2016). However, here the focus is only on those articles that relate to the SBTs. In

Article 2.1 of the agreement, it states: "Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change." ("Paris Agreement", 2015, 3). As a result, the SBTi made a 2-degree commitment target and claims it is in line with the latest climate science. However, the difference between the 1.5°C and 2°C scenarios is well-studied and is massive. For instance, by 2100, global sea level rise would be 10 cm lower with global warming of 1.5°C compared with 2°C and Coral reefs would decline by 70-90 percent with global warming of 1.5°C, whereas virtually all (> 99 percent) would be lost with 2°C. ("Summary for policymakers", 2018). None such differences are mentioned on the SBT website. Instead, the 1.5-degree scenario is advertised as 'most ambitious' implicating that a 2-degree scenario is just 'ambitious' but still ambitious. Therefore, the extent to which the SBTs, and the Paris Agreement for that matter, are completely science-based remains questionable.

However, despite these flaws, the SBTs are still a step in the right direction. This is because the SBTs address various issues that other targets do not, such as setting absolute targets and having the ambition to at least strive, and investigate what is needed, for a 1.5-degree temperature rise scenario. Furthermore, most other voluntary agreements suffer from the same issues of target enforcement (Aragon-Correa; Marcus & Vogel, 2020). Also, while Giesekam et al. (2021) are rightfully critical of the enforcement of the SBTs, their finding of more than 50% of the companies being in line with scope 3 is still a positive development. For companies who are not in line there can also be various reasons why that is, something that Giesekam et al. (2021) did not investigate since their study was rather binary: either you are in line or not. This research aims to partly fill this gap by providing the reasons why a company does or does not adopt SBTs.

Lastly, when it comes to target setting, the SBTi wants companies to set targets on three scopes of emissions. Companies are required to report on scope 1 and 2 by default, and on scope 3 if that scope contains 40% or more emissions of the combined scopes ("SBTi Criteria and Recommendations", 2021). These scopes vary in the extent to which the emissions are directly or indirectly related to the company, as explained below (extracted from: "SBTi Criteria and Recommendations", 2021).

- Scope 1: Direct GHG emissions that occur from sources owned or controlled by the company, for example, emissions from combustion in owned or controlled boilers, furnaces, vehicles, etc.; emissions from chemical production in owned or controlled process equipment.
- Scope 2: Indirect greenhouse gas emissions from consumption of purchased electricity, heat or steam.
- Scope 3: Other indirect emissions, such as the extraction and production of purchased manufacturings and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, electricity-related activities (e.g. T&D losses) not covered in Scope 2, outsourced activities, waste disposal, etc.

Scope 3 is considered the most challenging as it contains the emissions on which a company has no direct influence. Usually, these emissions are other indirect emissions incurred as a consequence of the activities of a company, but at sources not owned or controlled by the company (Giesekam et al. 2021). Thus, the company that set the targets is required to engage with their supply chain so that companies down the chain also set targets and reduce emissions. Now that a general understanding

of the SBTs has been established, the sections below will delve into the theory to build the framework for this research.

## 2.2 Applying institutional theory to sustainability

When it comes to the institution pressures, one must start at the very beginning to get a good grasp of its logic. Institutional theory builds on the idea that companies and its surrounding stakeholders make up a field within which interactions take place. This field has been described by various authors using different concepts. Scott (1994, 86) uses the term 'institutional environment' to denote the "symbolic and behavioural systems containing representational, constitutive, and normative rules together with regulatory mechanisms that define a common meaning system and give rise to distinctive actors and action routines". DiMaggio and Powell (1983, 148) on the other hand use the 'organisational field' concept, which means "those organizations that, in the aggregate, constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products.". DiMaggio and Powell's description shows that the 'organisational field' consists of any industry and its close constituents, and Scott's definitions also adds the social elements to this by including 'symbolic and behavioural systems' and 'rules [...] that define a common meaning system'. For the remainder of this research, the term 'institutional environment' will be used to refer to both the institutional environments from Scott (1994) and the organisational field from DiMaggio and Powell (1983).

According to Meyer and Rowan (1977), the implication of institutional environments is that the companies within them must behave according to certain rules to remain a part of said environments. The reason why companies will want to stay within such environments are as follows: "Organizations that conform to institutional rules and expectations come to be regarded as legitimate and secure the requisite resources for survival and growth" (Meyer and Rowan 1977, 352; see also Deephouse, 1999) which means that those who do not "are more vulnerable to claims that they are negligent, irrational or unnecessary" (Meyer and Rowan, 1991, 50 in Colwell and Joshi, 2013). In short, adhering to institutional rules and norms improves performance (Heugens and Lander, 2009). Within an institutional environment, various pressures can be exerted on companies to cause them to 'conform' to the institutional rules and expectations. These pressures are called the mechanisms of isomorphic change (DiMaggio and Powell 1977). In this case isomorphism means that more companies start adopting the SBTs. Before discussing those pressures in-depth, the relationship between sustainability and institutional theory must be explained.

Jennings and Zandenbergen (1995) extended the organisational field logic from DiMaggio and Powell (1983) to include ecological concerns. Due to institutional theory focusing on the process by which concepts or rules become embedded in institutions or accepted practice, it is possible to use the theory to see how sustainability practices become embedded in institutions (Jennings and Zandenbergen, 1995). Furthermore, since institutional theory emphasises the final acceptance of a practice, the theory can be used to back-track which institutional pressures caused that acceptance (Jennings and Zandenbergen, 1995). This research focusses on SBTs, which can be seen as a concept that has become embedded in institutions and/or accepted practice. Hence, institutional theory provides a means to back-track which institutional pressures caused the adoption of SBTs.

### 2.3 The key pressure types that affect a company

As mentioned in the institutional theory, organisations within an institutional environment are exposed to various institutional pressures which cause conformity with the rules of the institutional environment. These are so-called mechanism of institutional isomorphic change and are comprised of coercive, mimetic, and normative pressures (DiMaggio and Powell, 1983). Here I will mainly draw upon the work from Colwell and Joshi (2013) and DiMaggio and Powell (1983) to explain these three pressures. For the added internal pressure, the work from Wang, Li and Qi (2020) will be used.

The coercive pressures, or coercive isomorphism, are a result of “pressures placed on companies by entities in the institutional environment with the objective of constraining the organization’s strategic choice such that it is forced to conform to institutional expectations” (Colwell and Joshi, 2013, 75). Simply put, it is a forced steering effect usually enacted by governmental bodies. Environmental examples include the creation of pollution targets that are not allowed to be crossed or the requirement for reporting on sustainability issues. The description from Colwell and Joshi (2013) explains the formal side of coercive pressure, but according to DiMaggio and Powell (1983, 150) there is also an informal side: “coercive isomorphism results from both formal and informal pressures exerted on organisations by other organisations upon which they are dependent and by cultural expectations in the society within which organisations function”. Here, there is an additional inclusion of organisations upon which other organisations rely, showing that coercive pressures do not always have to come from governmental bodies.

Mimetic isomorphism, according to DiMaggio and Powell (1983), stems from uncertainty. This is based on the idea that when organisations do not have a clear vision on what is happening in the institutional environment, and consequently what the best course of action is, they look to their successful peers and imitate them (Colwell and Joshi, 2013). This assumes that the successful peers have more information or knowledge, and that when the course of action proves unsuccessful, both companies will be at a disadvantage, thus keeping the playing field ‘balanced’ (DiMaggio and Powell 1983). More modern reasons why companies use mimicry are plentiful, such as limited market experience, volatile business environment, complex customers' demand, and insufficient organizational capabilities (Delmas & Toffel, 2004 in Majid et al., 2020). Furthermore, various extensions on the mimetic pressures exist (see also Colwell and Joshi, 2013). One such extension entails the inclusion of various other pressures which are combined under the name ‘market pressures’ (Wang, Li and Qi 2020). Below this extension will be briefly explained.

Contrary to mimetic pressures, market pressures stem from competition (Wang, Li and Qi, 2020). In this case, the companies compete for an advantage through adopting new environmental strategies or new environmental technologies (see Bansal and Roth, 2000; Bernauer et al., 2007 for more). This puts increasing pressure on firms as more enterprises in the same institutional environment improve their production and business activities (Wang, Li and Qi, 2020). In the end, it is still a form of mimicry since companies copy each other’s behaviour, although not through uncertainty, but through competition. Supply chains are also included in the market pressures. This is important as the SBTs also entail scope 3, which is where emissions from the supply chain take place. As such, market pressure extends to suppliers who feel pressure from their buyers to become more environmentally aware and vice versa (Wang, Li and Qi, 2020; Lewis and Harvey, 2001). For the remainder of this research, the term ‘market pressure’ will be used to represent both mimetic and market pressures.



Normative pressures are understood as the socialization of organisations within the institutional environment (Colwell and Joshi, 2013). What this means is that organisations learn from each other through collaboration, for example in an industry association, and at the individual level through memberships in so-called professional associations (DiMaggio and Powell, 1983). DiMaggio and Powell (1983) identified two general ways in which professionalisation leads to isomorphism. First, there is the foundation of the knowledge of employees: usually universities or other forms of education. What is taught in those educational institutions is roughly the same, leading to similar levels of knowledge and general ideas about organisational norms among the employees in organisations (DiMaggio and Powell, 1983). Secondly, professionals within organisations also have their personal network through which new models and theories rapidly diffuse (DiMaggio and Powell, 1983). This leads to conformity not through coercion or mimicry, but through changing the organisational and individual mind-set in such a way that they become more alike (Colwell and Joshi, 2013). Thus, organisations conform with the mainstream norms and rules within the institutional environment 'because it would be unthinkable to do otherwise' (Oliver, 1991, p. 149).

Another way in which normative pressures play a role is the broader social context comprised of customers and NGO's. Marquis, Glynn and Davis (2007) demonstrate this in their article. They show that pressures at the community level shape corporate social action that extend beyond immediate profit maximization goals. This means that the company practices behaviour that is intended to increase social benefits or mitigate social problems (Marquis, Glynn and Davis, 2007). Wang, Li and Qi (2020) add that enterprises will be affected by environmental awareness of customers, which could make them consider environmental issues in company decision-making more often. The general ways in which NGO's exert pressures consist of spreading awareness under the public about environmental impact, benchmarking, and sometimes environmental litigation (Wang, Li and Qi, 2020).

The above-described pressures make a couple of assumptions when it comes to organisational action. Firstly, it assumes that organisations have the capacity to change according to the dynamic of the institutional environment and secondly, it assumes that organisations are mostly subjected to the pressures, which then leads to a response. The latter is important because it fails to explain how frontrunners come to be. This is where another pressure comes into play: internal pressures. Colwell and Joshi (2013) identified two factors that are important for organisational change: commitment to reform and capacity for change (Colwell and Joshi, 2013, 78). These two factors are influenced by the top management of a company. Colwell and Joshi (2013) explain that "the role of top management is especially critical because it can make the resource allocation and deployment decisions that are necessary to effect change" (Bansal and Roth, 2000; Oliver, 1997; Ginsberg, 1994; González-Benito and González-Benito, 2010 in Colwell and Joshi, 2013, 78).

However, it is important to note that while Colwell and Joshi (2013) describe how top management *reacts* to institutional pressures, this does not have to be the case for the internal pressures. For example, management can decide it wants to enact certain environmental actions to gain a competitive advantage before any institutional pressures are exerted (see for example Ponte, 2020). If an organisation does this in co-operation with other agent inside the institutional environment it can effectively steer the content of the environment (see Oliver 1991 for example). As such, there are generally two ways in which internal pressures play a role: either *a priori* and the organisation is a frontrunner in a certain aspect, or as a response to the other institutional pressures. The latter closely

resembles the competitive market pressure, however there is some degree of differentiation, as Colwell and Joshi (2013, 86) concluded: “the relationship between institutional pressure and corporate responsiveness to the pressure is enhanced when top management commitment to the natural environment is high.”. Those findings are echoed by Wang, Li and Qi (2020). As such, when a company experiences competitive market pressure, its response will be stronger when management also perceives it as needing attention.

The institutional pressures described above influence companies to possibly adopt SBTs. This is schematically shown in figure 1. However, those pressures do not simply appear out of nowhere. Instead, they are exerted by different stakeholders. These stakeholders each have their own type of pressure they exert, as will be explained in the next section.

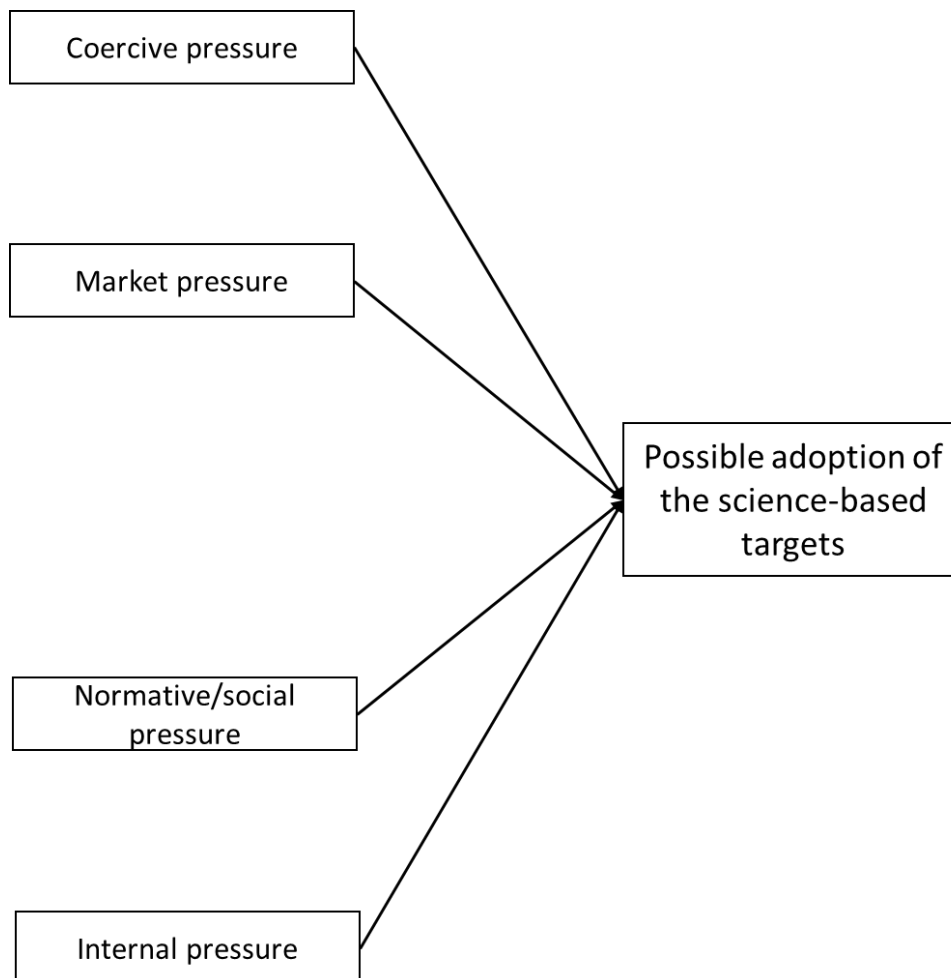


Figure 1: the influence of institutional pressures on SBTs adoption.

#### 2.4 The stakeholders that exert pressure

The four different pressures are exerted by various stakeholders in the institutional environment. These stakeholders can be divided into two categories depending on the type of transactions the stakeholders make with a company: direct or indirect (Charan and Murty, 2018). Primary stakeholders make direct transactions with a company and consequently have direct influence. Secondary stakeholders influence a company indirectly by influencing the primary stakeholders (Charan and Murty, 2018). Henriques and Sadosky (1996) added the distinction between internal and external

stakeholders. Coercive, market/mimetic and normative/social pressures are exerted by external stakeholders, whereas internal pressure is exerted by internal stakeholders. For this research, the focus will be limited to the external and internal primary stakeholders. Due to the absence of literature regarding stakeholder pressures and adoption of the SBTs, instead the literature about the relationship between stakeholder pressures and environmental strategy will be used as departure point.

Some of the primary stakeholders and the pressure they exert are rather straightforward, whereas others will need some further explaining since they exist on the brink of two pressures. To start with the coercive pressures: based on the literature, coercive pressures are most commonly associated with government regulation (DiMaggio and Powell, 1983, Wang, Li and Qi, 2020, Henriques and Sadorsky, 1996). This is because governments, including its international variants (e.g., the EU), are the only actors who can impose direct steering effects (Colwell and Joshi, 2013). However, other sources of coercive pressure exist, such as international agreements (Paris), increasing climate risks (climate change), and 'organisations on which other organisations depend' (DiMaggio and Powell, 1983, 150). An example for the latter would be an organisation that has multiple daughter companies, and it wants those companies to follow the same targets.

The mimetic and market pressures are already largely explained in the pressures section. As noted there, the mimetic pressures come from companies experiencing uncertainty and thus copying peers in the institutional environment (Colwell and Joshi, 2013). Market pressures emerge because of a similar need to keep up with competitors, this time through competition. However, some additional sources of market pressure exist. Apart from the already mentioned supply chain, industry associations also hold considerable influence (Wang, Li and Qi, 2020). With industry associations there is the added pressure of commitment, instead of just mimicking or keeping up with the competition. Lastly, customers also exert market pressure. For example, a company in the retail sector might experience customers that 'vote' with their wallet (Henriques and Sadorsky, 1996). Wang, Li and Qi (2020) add that enterprises will be affected by environmental awareness of customers, which could make them consider environmental issues in company decision-making more often.

Normative/social pressures are exerted by stakeholders such as NGO's, customers and media (Wang, Li and Qi, 2020). When it comes to NGO's, it should first be noted that NGO's can be divided into roughly two categories: antagonistic and synergistic. An example of an antagonistic NGO would be extinction rebellion: they confront and take strong standpoints. Synergistic NGOs could be associations for investors who make benchmarks, such as the Dutch Association of Investors for Sustainable Development (VBDO). Other examples include Greenpeace, the WWF etc. Media is understood as public media channels such as television and newspapers, but also social media like Twitter and Facebook. They play an important part in the distribution of (the type of) information the public sees, which could help in creating or affirming the acceptable norms inside an institutional environment. Lastly, customers also exert normative and social pressures, as Marquis, Glynn and Davis (2007) demonstrate in their article. This has to do with how customers perceive a company and how that affects the public image of companies.

The last pressure is internal pressures. The primary stakeholders that comprise internal pressures are shareholders, employees and managers (Henriques and Sadorsky, 1996) Henriques and Sadorsky (1996) found that the manager's interest in environmental issues is of importance if the company wants to improve that aspect. Wang, Li and Qi (2020, 5) found similar results, saying that "when top

management members pay more attention to environmental problems, they will allocate significantly more resources to environmental management activities and implement a series of environmental innovations.”. Shareholders are involved through a company’s environmental reputation, with a higher reputation leading to a better impression (Wang, Li and Qi, 2020, Henriques and Sadorsky, 1996). Furthermore, for shareholders, the risk for stranded assets increases as environmental risks increase. This risk for shareholders can translate into internal pressure on management to implement new environmental strategies. When it comes to employees, Alt et al. (2015) as well as Henriques and Sadorsky (1996) showed that for the success of a corporate environmental strategy it is important that the degree of coordination between companies and employees is high, since it leads to better implementation of the strategy.

If the stakeholders were to directly affect the adoption of SBTs it would look like figure 2. However, for this research the stakeholders are linked to their respective pressure, which in turn affect the adoption of SBTs.

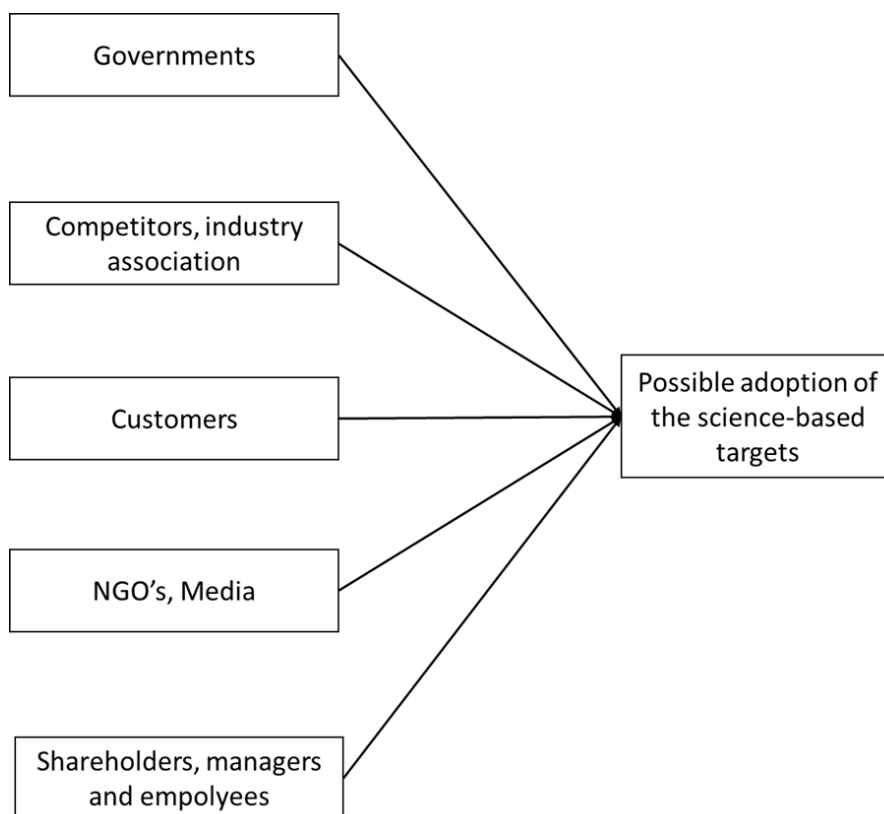


Figure 2: stakeholder influence on SBTs adoption.

## 2.5 The framework

With the information from the above theories, the final framework for this research can be constructed (see figure 3). In the framework, customers have a unique position due to their ability to exert both market and normative pressures. Furthermore, although the pressures are depicted as going in one way and companies being on the received end, this does not mean that companies themselves have no influence over the pressures. Oliver (1991) stated this as a critique on the theory from DiMaggio and Powell (1983). Companies can actively influence the pressure they receive through so-called

strategic responses (Oliver, 1991). However, including strategic responses is beyond the scope of this research, as the focus is on how institutional pressures cause potential SBTs adoption.

While the framework is based on empirically tested theories, this does not mean that it can not be further improved or that it encompasses all pressures and stakeholders a company engages with. To that end, during the data-gathering period, questions will also be asked to accommodate for any shortcomings. Furthermore, while the different stakeholders are each depicted inside a box and only exert one type of pressure, this is a simplification and will most likely differ in reality, since stakeholders also affect each other. As such this framework provides a basis from which it becomes possible to interpret and categorise the results but is not exhaustive or complete.

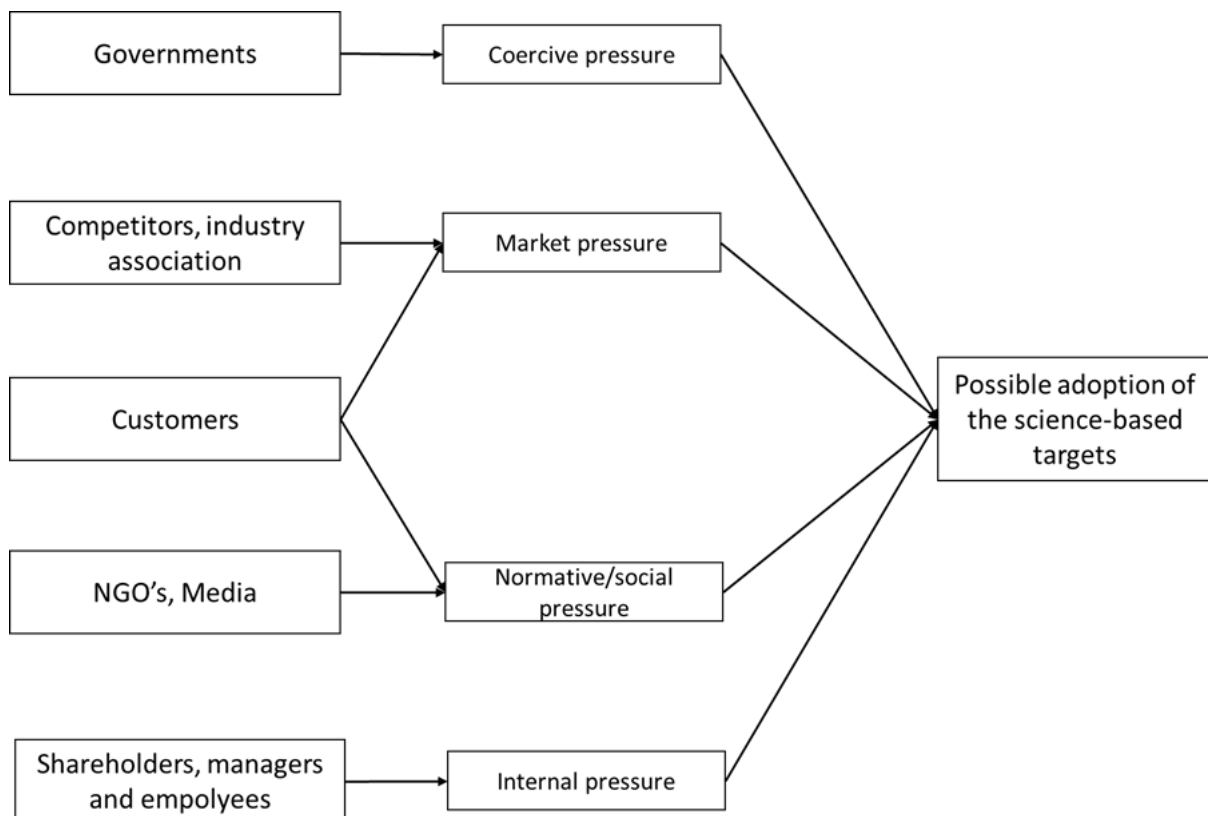


Figure 3: complete framework for SBTs adoption.

### 3. Methodology

This research uses a strategy that comprises multiple empirical methods. The overall approach of the research is qualitative in nature. The choice for a qualitative approach stems from the goal of this research to obtain knowledge about which pressures are most influential in SBTs adoption. To research this, the meaning behind those pressures and what it means for a company to experience them must be researched. That is what qualitative research excels at (Merriam, 2002). Furthermore, due to the qualitative nature of the research, an in-depth study is needed to compensate for the lack of numbers, hence the case study approach. Within that approach, three methods are chosen to obtain data. These methods consist of a content analysis of annual reports from Dutch SBTs committed companies,

comparative case study approach using semi-structured interviews, and a survey. By using three empirical methods, the confidence of the findings can be increased since multiple independent measures are used.

This is also known as method triangulation (see Nielsen et al., 2020). Using triangulation at a methods level, this study combines three qualitative data collection methods. Firstly, with the content analysis, the strength of the method lies in identifying initial trends, whereas the weakness is that it can not provide in-depth data and is solely based on the researcher's interpretation. Secondly, the survey results provide more in-depth data than the content analysis, but its weakness lies in possibly receiving a low response rate, simplified answers, or socially desirable answers. Lastly, interviews provide the most in-depth data, allowing for new perspectives to emerge which can also change the way the results from the other two methods are interpreted. By using these three methods together, "the limitations from each method can be transcended by comparing findings from different perspectives" (Heale and Forbes, 2013, 98 see also Graham, 2005).

A comparative case study analysis approach was chosen for this research. Due to the nature of the research question, conducting a comparative case study was deemed as best fit since it allows for analysing commonalities and differences across sites (Miles, Huberman and Saldaña 2018). Since it is expected that each company has its own mix of institutional pressures that caused SBTs adoption, being able to analyse differences and similarities between companies is the foundation of this research. A case study is understood as "an intensive study of a single unit for the purpose of understanding a larger class of (similar) units." (Gerring, 2004, 342). For this approach the context in which the research takes place is important. For that reason, only companies located in the Netherlands are selected. This also makes sure that exogenous factors are more similar across the cases. The specific case selection will be further elaborated in the case selection section.

### 3.1.1 content analysis

The content analysis serves to provide a basis for both the interviews and the survey by examining the pressures listed in various texts. The texts examined are the annual reports of the Dutch companies committed to the SBTs published in 2019. Apart from the annual reports, a press release or other official statement regarding climate change and SBTs is also examined. Because of the nature of this research, a directed approach is chosen for the content analysis. This means that the analysis starts with a theory or relevant research findings as guidance for initial codes (Hsieh and Shannon, 2006). After the texts have been analysed, the results will be put into a table for comparison between institutional pressure frequency for both the manufacturing and service sector. This distinction between manufacturing and service sector is made because it is known from previous research that those two sectors experience different motivations for adoption of voluntary agreements (see Pekovic, 2010).

### 3.1.2 Survey

The second method used is the web survey. This method is used as second option for companies who do not have the time for an interview. Its purpose is to gather information from companies about which pressures led to SBTs adoption (or not). This information includes explaining what motivation the company had for joining the SBTs and how the primary stakeholders influenced that. This takes the form of a scale from 0 to 5, with 0 being no influence and 5 being very influential. Furthermore,

the respondents are also asked to explain their score choice. The following definition of a survey is used here: "The survey is a systematic method for gathering information from (a sample of) entities for the purpose of constructing quantitative descriptors of the attributes of the larger population of which the entities are members." (Groves et al., 2004, 4 in Jansen, 2010). The type of companies that fill in the survey is also a result, for example if the majority of the responses come from the retail sector.

### 3.1.3 Semi-structured interviews

As a last method, semi-structured interviews are chosen. They serve to generate in-depth knowledge (DiCicco-Bloom and Crabtree, 2006) about the research topic and to verify or falsify the results from the content analysis and survey. Qu and Dumay (2011, 246) define a semi-structured interview as follows: "The semi-structured interview involves prepared questioning guided by identified themes in a consistent and systematic manner interposed with probes designed to elicit more elaborate responses.". Since the main themes for the research are already known in the form of the different stakeholders and institutional pressures, the semi-structured format is most suitable. On top of that, as mentioned in the theory section, since the framework used in this research is by no means exhaustive, eliciting more elaborate responses that go beyond the framework is also encouraged. This method, combined with the other two, means that the data provided can be verified between methods and its interpretation augmented.

### 3.2 Operationalization and data collection

In this section, the four institutional pressures will be operationalised. This is achieved by linking concepts that are associated with the institutional pressures to their respective type. The result is an overview where concepts and pressures are linked, as can be seen in table 1 below. The concepts are derived from the literature mentioned in the theory. For example, for the governmental pressures, the concepts 'mandatory legislation' and 'laws' are derived from Aragon-Correa, Marcus and Vogel (2020), whereas 'regulation' and 'regulatory bodies' is based on Wang, Li and Qi (2020). These concepts serve to structure the content analysis and determine which data belongs to which institutional pressure. The concepts can either be the direct pressure (i.e., laws) or the different stakeholders that exert that pressure (i.e., regulatory bodies such as EU and UN). The scale of the concepts varies from almost particular (i.e., board) to overarching (i.e., market demands, trends).

The way in which the key concepts are used in the content analysis is either through them being directly mentioned (presence of the word) or through the concept being explained (presence of the meaning). For example, the concept reputation could be mentioned directly as 'reputation' or as explanation: 'company x has decided to join y agreement and is one of the first in industry x to do so'. This can lead to potential overlap of meanings of different concepts in which case both meanings will be counted as it can be any of two. Therefore, the other two methods will have to further falsify or verify those findings. Lastly, such overlap in meaning is perhaps also an indication of overlapping pressure types.

One concept needs further elaboration as it can be present in multiple institutional pressures. This is the concept of climate change. Companies mention climate change as a driver for change but do not always elaborate how exactly climate change impacts their company. However, from the context in which climate change is mentioned, it can usually still be divided in any of the four pressure types. To

accommodate this, climate change is a key concept that can appear in all pressure types with a different manifestation in each. As a governmental pressure, climate change is depicted as 'science' since companies mention the IPCC, PA, sustainable development goals, or other scientific documents as reasons to act. Climate change as market pressure manifests as risk mitigation. Risk mitigation due to assets in certain areas being at risk because of climate change related natural events such as floods or hurricanes. For the social pressures, climate change related concerns are presented as climate protests. Lastly, a company can also be concerned that climate change will bring the long-term survivability in jeopardy. Thus, under internal pressure, climate change is connected to long-term survivability.

<b>Pressure type</b>	<b>Key concepts (operationalisation)</b>	<b>Sources</b>
Governmental pressures	<ul style="list-style-type: none"> <li>- Laws</li> <li>- Regulation</li> <li>- Regulatory/governmental bodies (EU, UN)</li> <li>- Climate change: science</li> <li>- Climate change: cost</li> </ul>	<ul style="list-style-type: none"> <li>- Aragon-Correa, Marcus and Vogel (2020)</li> <li>- Wang, Li and Qi (2020)</li> <li>- Henriques and Sadorsky (1996)</li> </ul>
Market pressures	<ul style="list-style-type: none"> <li>- Competition/competitors</li> <li>- Adapting to market demands</li> <li>- Industry association</li> <li>- Partnerships</li> <li>- Collaboration</li> <li>- Climate change: risk mitigation</li> <li>- Trends / mimetic</li> </ul>	<ul style="list-style-type: none"> <li>- Wang, Li and Qi (2020)</li> <li>- DiMaggio and Powell (1983)</li> <li>- Gold, Seuring, &amp; Beske, 2010 (in Majid et al., 2020)</li> <li>- Henriques and Sadorsky, (1996)</li> </ul>
Social pressures	<ul style="list-style-type: none"> <li>- Legitimacy</li> <li>- Reputation</li> <li>- NGO engagement</li> <li>- Public opinion</li> <li>- Climate protests</li> </ul>	<ul style="list-style-type: none"> <li>- Marquis, Glynn and Davis (2007)</li> <li>- Wang, Li and Qi (2020)</li> <li>- Charan and Murty (2018)</li> <li>- Henriques and Sadorsky (1996)</li> </ul>
Internal pressures	<ul style="list-style-type: none"> <li>- Employees</li> <li>- Manager ambition</li> <li>- Management environmental awareness</li> <li>- Climate change: long-term survivability</li> <li>- Shareholders' environmental awareness</li> <li>- Board</li> </ul>	<ul style="list-style-type: none"> <li>- Wang, Li and Qi (2020)</li> <li>- Henriques and Sadorsky (1996)</li> <li>- Alt et al. (2015)</li> </ul>

Table 1: overview of operationalised pressure.

### 3.3 Case selection



Since this research employs three different methods, each method has its own selection of cases. However, the starting point are the companies that are committed to the SBTs and located in the Netherlands. The choice for the Netherlands is made because it is also the country where the researcher lives. The reason behind that choice is that since the research is qualitative in nature, choosing a country similar to the researcher ensures that the researcher and the participants share, to some extent, the same constructions and interpretations of reality (Merriam, 2002). This, in turn, can result in better interpretations of the data provided by the participants.

### 3.3.1 Content analysis

The content analysis is performed for all 31 Dutch companies that are committed to the science-based targets. These are:

- Vodafoneziggo
- Ace & Tate Holding B.V.
- Geelen Counterflow
- Heineken n.v.
- Royal Schiphol group
- Royal frieslandcampina n.v.
- Arcadis NV
- Antea Nederland B.V.
- Wereldhave
- Nature's Management
- Magazine de Bijenkorf B.V.
- Koninklijke Ahold Delhaize N.V.
- Ingka Group
- IKEA
- Nutreco
- Farm Frites
- TenneT Holding B.V.
- Corbion
- PostNL
- Port of Rotterdam Authority
- Royal BAM group
- Royal DSM
- ASN bank
- Signify
- Royal Philips
- ABN Amro Bank N.V.
- Bugaboo International bv
- Actiam NV
- Koninklijke KPN NV
- Eneco
- ING Group

Of these companies, some did not have the required documents to perform a content analysis and were excluded. These companies are Geelen Counterflow, Nature's Management, Magazine de Bijenkorf B.V. and Bugaboo International bv.

### 3.3.2 Survey

For the survey, the same companies as for the content analysis were selected, excluding the same ones that did not make a statement about the SBTs. From that selection of companies, 12 contacts could be obtained, narrowing it further down to the following:

- Heineken n.v.
- Wereldhave
- IKEA
- Corbion
- ASN bank
- Signify
- Royal Philips
- Actiam NV
- Koninklijke KPN NV
- ING Group
- Eneco
- TenneT

In total, 8 open questions are asked in the survey with all of them being similar for each company.

### 3.3.3 Semi-structured interviews

For the selection of cases for the interviews, a closer look was taken at the different variables between companies committed to the SBTs. This data was extracted from the SBTi website (see "Companies taking action", n.d.). First, there are the two targets that companies can aim at: the well-below 2-degree Celsius target and the 1.5-degree target. Secondly, there are geographical differences, which as we know can have different impacts on external incentives. Here there is a distinction between countries and also between regions (EU, Africa, Asia etc.). Then there is a difference between sectors, which means the industry in which a company operates. For example, a company in the real estate industry will have a different way of dealing with the SBTs than a company in the food and beverage processing industry. Lastly, there is also the date on which a company adopted the SBTs that can be used as a potential variable. This leaves us with the variables 'target classification', 'country', 'region', 'sector' and 'date'. Yet there is another variable that is also mentioned on the SBTs website, but not integrated in the overview of companies. That variable is company size. Size is an important variable as larger companies will have a reason to adopt SBTs, as well as its implementation.

However, this research focusses on the difference between companies that are 'committed' opposed to 'not committed'. As such, that variable will be used as main basis. This means that the other five internal variables must be as similar as possible to reduce their 'static' from the main variable. Therefore, the to be compared companies should be most similar regarding size, activities, country,

target classification and sector/industry. Furthermore, the companies were selected in early 2021, meaning that any Dutch companies joining the SBTs after that period are not taken into account. The following companies are selected based on those characteristics:

- KPN (committed) vs T-Mobile/Tele2 or Vodafone (both non-committed)
- Ahold (committed) vs Jumbo (non-committed)
- TenneT TSO B.V. (committed, state-owned) vs Stedin Netbeheer B.V. (non-committed, state owned)
- Eneco (committed) vs Innogy or Vattenfall (both non-committed)
- ING/ABN AMRO/ASN Bank (all committed) vs Rabobank (non-committed)
- Actiam (committed) vs ASR vermogensbeheer / Robeco (non-committed)

After eliminating the companies that were unable to be contacted, the following companies were approached:

- KPN
- Ahold
- TenneT
- Eneco
- ING
- ABN AMRO
- Rabobank
- Actiam
- ASR vermogensbeheer
- ASN Bank

This means that the majority of data obtained is about companies committed to the SBTs, as only ASR is non-committed. Before the interviews were held, an informed consent form and a short summary of the research goal and aim were emailed to the participants. Furthermore, some additional remarks regarding the interviews must be made. Firstly, with regard to the effects of the interviewer on the participant during the interview, an interview scheme will be made to reduce those effects as much as possible. Secondly, depending on the level of cooperation of the companies, follow-up interviews will be conducted as well as member checks. Thirdly, the participants will remain anonymous as is required by the APA ethics code. The interviews will be referred to as 'Interview' followed by the company name (e.g. 'Interview UU') when quotes from the participants are cited or when a reference to something that participant said is made. Lastly, during the interviews, attempts will be made to try to get more interviews through the so-called snowball effect.

## 4. Results

The results will be organised as follows: first, the key findings of each method will be shown. For the interviews, this means the key findings of each interview will be presented. Due to the Covid-19 pandemic at the time of doing the research, the response rate for both the interviews and survey were lower than expected. In total, for 31 companies a content analysis was conducted, 5 interviews were

held, and 4 survey responses were received. Due to the snowball effect, the 5th interview was made possible.

#### 4.1 Content analysis: internal and market pressure prevalence

For the content analysis, environmental documents and reports from the 31 Dutch listed companies were analysed. The analysis was done using the key concepts table showed in the methodology section. Not all reports and documents directly mentioned the SBTs, but nonetheless made mention of ambitions or adoption of targets. Since it is known that all companies are committed to the SBTs, these statements were still counted as a potential pressure for the adoption of SBTs. After conducting the content analysis, a table summarizing these results was made which is shown below (table 2). In the first column, the company name is listed, the second one provides information about the sector the company operates in, where a distinction is made between service and manufacturing sector. In the third column the target the company aims for is listed. In the last column called 'pressures' the pressures that were found in the content are listed along with their analytical concept as per the operationalisation (e.g. 'market pressure' is found in the content and it relates to the specific concept of 'trends' within that pressure).

Company name	Sector	Target	Pressures
Vodafoneziggo	Service (telecommunication)	1.5°C	<ul style="list-style-type: none"> <li>Market pressure: trend/mimetic</li> <li>social pressure: reputation</li> </ul>
Ace & Tate Holding B.V.	Healthcare equipment and supplies (glasses etc.) Manufacturing	1.5°C	<ul style="list-style-type: none"> <li>social/normative pressure: legitimacy</li> <li>Internal pressure: employees/managers</li> </ul>
Geelen Counterflow	Electrical equipment and machinery Manufacturing	1.5°C	<ul style="list-style-type: none"> <li>No data found</li> </ul>
Heineken N.v.	Beverage processing Manufacturing	Well-below 2°C	<ul style="list-style-type: none"> <li>coercive pressure: climate change; science</li> <li>Internal pressure: managers ambition</li> <li>internal pressure: long-term survivability</li> <li>Market pressure: competition</li> </ul>
Royal Schiphol group	Airport services Manufacturing	1.5°C	<ul style="list-style-type: none"> <li>market pressure: risk mitigation</li> <li>internal pressure: managers ambition</li> <li>Internal &amp; market pressure: stakeholders</li> <li>internal pressure: climate change; long-term survivability</li> </ul>

			<ul style="list-style-type: none"> <li>• Internal pressure: employees private beliefs</li> <li>• Social pressure: NGO's; protests</li> <li>• Internal pressure: board</li> </ul>
Royal frieslandcampina n.v.	Food and beverage processing Manufacturing	unspecified	<ul style="list-style-type: none"> <li>• internal pressure: management ambition</li> <li>• Market pressure: customers</li> <li>• coercive pressure: regulation</li> <li>• internal pressure: shareholder's environmental awareness</li> </ul>
Arcadis NV	Professional services (advice & engineering) service	1.5°C	<ul style="list-style-type: none"> <li>• market pressure: adapting to market demands</li> <li>• market pressure: climate change; customers</li> <li>• coercive pressure: climate change; science</li> <li>• market pressure: trends</li> <li>• Internal pressure: management ambition</li> <li>• Social pressure: reputation</li> </ul>
Antea Nederland B.V.	Professional services (engineering) service	1.5°C	<ul style="list-style-type: none"> <li>• market pressure: trends</li> <li>• Internal pressure: manager environmental awareness</li> <li>• coercive pressure: climate change; science</li> </ul>
Wereldhave	Real estate Manufacturing	Well-below 2°C	<ul style="list-style-type: none"> <li>• coercive pressure: regulation</li> <li>• market pressure: customer demand</li> </ul>
Nature's management	Food production Manufacturing	1.5°C	<ul style="list-style-type: none"> <li>• No data found</li> </ul>
Magazine de Bijenkorf B.V.	Retailing Manufacturing	1.5°C	<ul style="list-style-type: none"> <li>• No data found</li> </ul>
Ahold Delhaize N.V.	Food and staples retailing Manufacturing	1.5°C	<ul style="list-style-type: none"> <li>• Internal pressure: management awareness</li> <li>• Market pressure: collaboration</li> <li>• Social pressure: public opinion</li> <li>• Social pressure: NGO engagement</li> <li>• Coercive pressure; regulation</li> </ul>
Ingka group	Retailing (furniture) Manufacturing	1.5°C	<ul style="list-style-type: none"> <li>• Internal pressure: managers ambition</li> <li>• Market pressure: collaboration</li> <li>• Coercive pressure: climate change costs</li> </ul>
IKEA	Retailing (furniture)	1.5°C	<ul style="list-style-type: none"> <li>• See ingka group</li> </ul>

	Manufacturing		
Nutreco	Food production Manufacturing	Unspecified	<ul style="list-style-type: none"> <li>Coercive pressure: climate change; science</li> </ul>
Farm frites	Food and beverage processing Manufacturing	Well-below 2°C	<ul style="list-style-type: none"> <li>Market pressure: trends</li> <li>Social pressure; reputation</li> </ul>
TenneT holdings b.v.	Electric utilities Manufacturing	1.5°C	<ul style="list-style-type: none"> <li>Internal pressure: shareholders</li> <li>Market pressure: partnerships</li> </ul>
Corbion	Food and beverage processing Manufacturing	2°C	<ul style="list-style-type: none"> <li>Social pressure: reputation</li> </ul>
PostNL	Air freight and transportation Manufacturing	1.5°C	<ul style="list-style-type: none"> <li>Market pressure: partnerships</li> <li>Internal pressure: manager awareness</li> </ul>
Port of Rotterdam authority	Water transportation Manufacturing	Unspecified	<ul style="list-style-type: none"> <li>Coercive pressure: climate change; science</li> <li>Coercive pressure; governmental agreement</li> </ul>
Royal BAM group	Construction and engineering Manufacturing	2°C	<ul style="list-style-type: none"> <li>Internal pressure: managers ambition</li> <li>Market pressure: trends</li> <li>Market pressure: customers demand</li> </ul>
Royal DSM	Chemicals Manufacturing	2°C	<ul style="list-style-type: none"> <li>Market pressure: trends</li> <li>Market pressure; adapting to market demands</li> </ul>
ASN bank	Bank, insurance service	Unspecified	<ul style="list-style-type: none"> <li>Coercive pressure: climate change; science</li> <li>Market pressure: industry association</li> <li>Internal pressure: manager ambition</li> </ul>
Signify	Electrical equipment and machinery Manufacturing	1.5°C	<ul style="list-style-type: none"> <li>Coercive pressure: climate change; science</li> <li>Social pressure: reputation</li> <li>Market pressure: trends</li> </ul>
Royal Philips	Electrical equipment Manufacturing	1.5°C	<ul style="list-style-type: none"> <li>Social pressure: reputation</li> <li>Market pressure: adapting to market demands</li> <li>Internal pressure: long-term survivability</li> </ul>
ABN AMRO bank n.v.	Bank, insurance service	Unspecified	<ul style="list-style-type: none"> <li>Market pressure: partnerships</li> </ul>

Bugaboo international	Consumer durables, household and personal products Manufacturing	Unspecified	<ul style="list-style-type: none"> <li>No data found</li> </ul>
Actiam NV	Bank, insurance service	Unspecified	<ul style="list-style-type: none"> <li>Market pressure: trends</li> </ul>
KPN NV	Services (telecommunication) service	1.5°C	<ul style="list-style-type: none"> <li>Internal pressure: ambition</li> </ul>
Eneco	Electri utilities and power producer Manufacturing	2°C	<ul style="list-style-type: none"> <li>Coercive pressure: climate change; science</li> <li>Social pressure: reputation</li> <li>Internal pressure: long-term survivability</li> <li>Coercive pressure: governmental institutions</li> </ul>
ING group	Banks, insurance service	Unspecified	<ul style="list-style-type: none"> <li>Coercive pressure: climate change</li> <li>Internal pressure: manager ambition</li> <li>Social pressure: reputation</li> <li>Coercive pressure: governmental bodies</li> </ul>

Table 2: overview of the content analysis results.

It is important to keep in mind that for the content analysis, the accuracy of the information depends on the amount of content found. This means that perhaps some companies experience more pressures than listed. Furthermore, for the information regarding the targets the companies have set, the SBTi website was used. Some companies have not listed a specific target yet and are thus classified as 'unspecified'. The 'customers' stakeholder group was not included as separate category as they are directly integrated in either the market or social pressures (e.g. 'adapting to market demands' under market pressures). This is done because customers as separate category here would only cause extra steps. Not all key concepts from the methodology were mentioned during the analysis, whereas some others were more frequent. For that reason, table 1 is further condensed to only show the frequency a certain pressure was mentioned, including its corresponding key concept (see table 3). In doing so, the most important pressures and concepts can be found.

Sector	Pressure type and frequency
Service 8 companies	<u>Coercive pressure: 5</u> <ul style="list-style-type: none"> <li>Climate change: science: 3</li> <li>Climate change: costs: 1</li> <li>Governmental bodies: 1</li> </ul> <u>Market pressure: 8</u> <ul style="list-style-type: none"> <li>Trends: 4</li> <li>Adapting to market demands: 1</li> <li>Climate change; customers: 1</li> </ul>

	<ul style="list-style-type: none"> <li>- Industry association: 1</li> <li>- Partnerships: 1</li> </ul> <p><u>Social pressure: 3</u></p> <ul style="list-style-type: none"> <li>- Reputation: 3</li> </ul> <p><u>Internal pressure: 5</u></p> <ul style="list-style-type: none"> <li>- Management ambition: 4</li> <li>- Manager environmental awareness: 1</li> </ul>
Production and retail (manufacturing) 23 companies	<p><u>Coercive pressure: 11</u></p> <ul style="list-style-type: none"> <li>- Climate change: science: 5</li> <li>- Governmental bodies: 1</li> <li>- Regulation: 4</li> <li>- Climate change: costs: 1</li> </ul> <p><u>Market pressure: 15</u></p> <ul style="list-style-type: none"> <li>- Competition: 1</li> <li>- Climate change: risk mitigation: 1</li> <li>- Adapting to market demands: 5</li> <li>- Collaboration: 2</li> <li>- Partnerships: 2</li> <li>- Trends: 4</li> </ul> <p><u>Social pressure: 9</u></p> <ul style="list-style-type: none"> <li>- Legitimacy: 1</li> <li>- Reputation: 5</li> <li>- NGO engagement: 2</li> <li>- Public opinion: 1</li> </ul> <p><u>Internal pressure: 16</u></p> <ul style="list-style-type: none"> <li>- Employees: 2</li> <li>- Manager ambition: 5</li> <li>- Management environmental awareness: 2</li> <li>- Long-term survivability: 4</li> <li>- Board: 1</li> <li>- Shareholders' environmental awareness: 2</li> </ul>

Table 3: frequency table of the content analysis' pressures and concepts.

As table 3 shows, for the manufacturing sector, the market and internal pressures have the most influence on a company's decision to adopt the SBTs. For the service sector only the market pressures stand out. The concepts, 'adapting to market demands' and 'trends' have the highest frequency in the manufacturing market pressure category. For the service sector, only 'trends' stood out with a frequency of 4. All those concepts relate to following the current developments within the institutional environment. Whether the concepts arise from an uncertainty or competitive stance is unknown at this stage, that is something the other results will have to clarify.

Within the internal pressures, 'long-term survivability' and 'manager ambition' were frequently mentioned concepts for the manufacturing sector. For the service sector, it was also 'manager ambition' as well as one mention of 'manager environmental awareness'. These concepts have a



connection to the market pressures. For example, when assuming a mimetic pressure scenario, a company could start following trends in the institutional environment to ensure its long-term survivability. Manager ambition has multiple interpretations. The most common one found in the content analysis texts has to do with increased environmental awareness which might cause a manager to switch to a more sustainable production method or business model. In some specific cases, a company was already implementing sustainability practices and aimed to go beyond the standard procedures. However, these interpretations are all still rather vague. Hence, the other methods will have to provide further insights here as well.

For the other two pressure types, it is more useful to describe them based on their differences. Firstly, the only social pressure that was found for the service sector is reputation, whereas for the manufacturing sector a variety of other concepts were mentioned (NGO engagement, public opinion, and legitimacy). This high frequency of reputation as motivation could indicate that companies are pressured by other stakeholders to adopt targets such as the SBTs. Secondly, for the coercive pressures, both sectors share the 'climate change' and 'governmental bodies' concepts. Of those two, the 'climate change: science' concept is most prominent. This relates to scientific evidence being 'coercive', meaning that certain climate scenarios could pose high risks for companies. The concept 'regulation' was only present for the manufacturing sector.

Although there are still more concepts present in the table, they will not be further discussed as they only entail one or two mentions. Hence, their importance is either not that high or they are, and it will become apparent in the other methods.

#### 4.2 Survey results: the return of social pressures

Despite the survey only receiving four responses, the results obtained still provide some valuable insights. In the survey, the respondents were asked to assign scores to each pressure type. Those scores are taken and further calculated into average scores which can be compared with the content analysis frequency table (see table 4). Keep in mind that the interpretation of each pressure is performed by the respondents instead of the author. In this method, customers are included as separate category since it can either be market or social pressure they exert. By making this a separate category, it can be identified which of the two pressures customers influenced. The respondents were also asked to explain their assigned score. Nonetheless, some survey responses were very minimal, to the point of only filling in a score without any explanation. The last two questions included in the survey returned unsatisfactory findings and were therefore excluded from the results.

<b>Company</b>	<b>Sector</b>	<b>Target</b>	<b>Pressure</b>
Scania	Manufacturing	1.5	Coercive: 2 Market: 1 Customer: 4 Social: 3 Internal: 3
Unknown	Unknown	Unknown	Coercive: 1 Market: 4 Customer: 1 Social: 0

			Internal: 5
Royal Philips	Manufacturing	1.5	Coercive: 3 Market: 3 Customer: 2 Social: 4 Internal: 5
Unknown	Unknown	Unknown	Coercive: 0 Market: 4 Customer: 1 Social: 4 Internal: 1
<b>Average</b>			Coercive: 1.5 Market: 3 Customer: 2 Social: 2.75 Internal: 3.5

Table 4: survey response scores.

Compared to the content analysis, which was only able to paint a basic picture about the motivation for companies to adopt SBTs, the survey provides explanations. Here, the two will be compared by first analysing the responses to the survey questions, followed by a comparison with the findings of the content analysis.

The survey started with a general question about the reason(s) why a company adopted SBTs. The responses can be summarised as follows: setting CO<sub>2</sub> targets that are externally verified, making sustainability ambitions believable, taking responsibility for achieving the Paris Agreement, and the drive to create a healthy planet. The two latter responses reflect a more internal pressures approach as it sounds like management ambition choices. The former two responses show more practical reasons focussing on external verification and believability. This relates to social pressure as it deals with reputation. These reasons already give a different view than the content analysis where internal and market pressures were dominant and social pressures the least important.

For the coercive pressures, the table shows that the average score assigned was 1.5. The explanations given for this included being (far) ahead of the current regulation, governments having no influence because the company wants to be a frontrunner, and a light pressure from universities with which one company works together. This lack of coercive pressures shows that the role of governments is low or even non-existent for these companies who are presumably frontrunners. Furthermore, of the companies who filled in the survey, it is known that two are from the manufacturing sector. In the content analysis, the service sector lists relatively more coercive pressures than the manufacturing sector. When combining these findings, it may be possible that the service sector depends more on coercive pressure than the manufacturing sector before adopting SBTs.

The market pressures had the second highest average score, scoring 3 out of 5. The explanations for the scores were similar, as all but one explanation mentioned the pressure of wanting to be, or to remain, a frontrunner. This means being continuously aware of what the competition is doing. In contrast, for one company the market pressure was very light since they were the first in the industry

to implement the SBTs. Being first in the industry, no competitive pressures can be experienced yet. Despite these findings, it remains largely unclear how competition regarding SBTs looks like. For example, do the companies compete for who achieves SBTs the fastest or do they compete by implementing more ambitious targets than their competitors? One response did mention that their company wants to 'be a step ahead of our competition' followed by the statement that the SBTs are a good tool to reduce CO<sub>2</sub> over the entire value chain. This implies competition over which company achieves its goals the fastest. However, this is only one response and does not speak for the others. Overall, these findings are in line with the content analysis where market pressures also had a high frequency.

The average score for customers was 2 out of 5, making it the second lowest score. However, in one response, the respondent assigned a score of 4 out of 5 to customers because they receive pressure from their clients to become more sustainable. Their clients, in turn, received the pressure from their commissioning party. This shows how a push for sustainability can ripple through a supply, or value, chain. Another respondent gave customers a low score but added that external ratings are becoming more important for customers, which can cause increased pressure on a company. The last two respondents listed no pressure from customers. Despite that, the findings are interesting as it shows that in at least one industry, pressure from clients can move multiple companies towards sustainability. This means that customers in that case exerted market pressure to which the companies adapted.

Continuing with social pressures, they received an average score of 2.75. This puts social pressures in the middle compared to the other scores for the survey. Reasons for this score are varied, as each respondent gave a different answer to why NGO's and media are important. The first one talks about media and how their company uses that to communicate with their clients and future employees. The respondent continued that in the media it is also becoming increasingly important to show your sustainability actions. The second respondent explains how NGO's are increasingly looking at SBTs and scrutinizing companies to see if they are on target and if their targets are ambitious enough. The third response includes working together with an NGO which resulted in the company learning about the SBTi and consequently, SBTs adoption. The last respondent felt zero pressure from NGO and media. This relatively high score attributed to social pressures deviates from the content analysis. This does seem to be in line with the responses to the first survey question where social concerns were mentioned as key pressure to adopt SBTs.

The internal pressures scored the highest in the survey. Two respondents gave the internal pressures the maximum score of 5 out of 5. Their reason for doing so was because they received pressure from their shareholders. Shareholders can exert major pressure due to their importance to the company. For the third company, shareholders also played a significant role although they only have one. This creates a different kind of shareholder relation and therefore they assigned a score of 3 out of 5. The last company gave internal pressures a score of 1 out of 5 due to it not playing a role at the time of SBTs adoption. Despite that one low score, the internal pressures scored highest in the survey and had the highest frequency in the content analysis. However, the mention of shareholders is a new finding, as the content analysis lists mostly manager ambition and long-term survivability.

Overall, the survey results reflect the main trends found in the content analysis as they both show that market and internal pressures are considered important drivers for SBTs adoption. Despite this similarity, the key concepts mentioned differed significantly between the two methods. For the

internal pressures, shareholders were the main driver behind SBTs adoption. The market pressures focussed mainly on keeping a frontrunner position, which differs from the following of trends found in the content analysis. Another difference lies in the social pressures, which received a significantly higher score in the survey than in the content analysis. Two companies mentioned social pressures as main reason for SBTs adoption. Lastly, the coercive pressures performed worse in the survey than in the content analysis. These differences might partially be explained by the fact that the companies who filled in the survey occupy a frontrunner position. As such, these findings give rise to a new differentiation between companies that follow and companies who are leading.

#### 4.3 Interview results: the rise of shareholders

The interviews took place over a span of 3 months. Due to the COVID-19 pandemic it took more time than expected to obtain replies from companies. In total, 5 companies participated of the 11 invited. Due to the first interview being shorter than the others, the questions regarding pressure scores could not be asked (see table 5). Nevertheless, the data that was obtained is still usable. Similar to the survey, customers are included separately to uncover which of the two pressure types they exert. The results will be organised in order of when the interview was held. This 'order of appearance' is also present in table 5. Lastly, it should be noted that certain pressures receive a score that ranges (e.g. 2-3). This is done to accommodate for participants elaborating on a pressure type by adding certain conditions such as indirect and direct influence of a pressure.

Company	Sector	Target	Pressures (scale 0-5)
ABN AMRO	Bank (service)	Unspecified	<ul style="list-style-type: none"> <li>- Coercive ?</li> <li>- Market ?</li> <li>- Social ?</li> <li>- Internal ?</li> </ul>
Ahold Delhaize	Retail (manufacturing)	1,5	<ul style="list-style-type: none"> <li>- Coercive 4 (indirectly), 3 (directly)</li> <li>- Market 4</li> <li>- Social 2</li> <li>- Internal ?</li> </ul>
ASR	Insurance/asset management (service)	1,5 (Paris)	<ul style="list-style-type: none"> <li>- Coercive 4-5</li> <li>- Market 2</li> <li>- Social 2</li> <li>- Internal 4</li> </ul>
KPMG	Accountancy (service)	1.5	<ul style="list-style-type: none"> <li>- Coercive 2</li> <li>- Market 4-5</li> <li>- Social 2-3 (customers)</li> <li>- Internal (shareholders) 4-5</li> </ul>
ASN Bank	Bank (service)	1.5	<ul style="list-style-type: none"> <li>- Coercive 3</li> <li>- Market 4</li> <li>- Social 2</li> <li>- Internal 4</li> </ul>

table 5: overview of pressure scores from the interviews.

Table 5 shows the scores assigned by the participants to each pressure type. However, those scores create the idea that the pressures exert pressure independently from each other. From the interviews it became clear that the different pressure types intertwine and overlap. Nevertheless, each interview had a certain pressure that served as 'starting point' or that was the main pressure, which was amplified by other pressures. The way in which the results are presented follows this logic, where the starting pressure is introduced and after that how it interacted with the other ones.

#### 4.3.1 ABN AMRO: the need for steering effects

The participant from ABN AMRO explained that the Dutch climate agreement was an important starting point for a move towards sustainability (Interview ABN). After the Dutch climate agreement was made, the Dutch association of banks (NVB) endorsed the agreement. This meant that the Dutch banking sector would be transparent about its scope 3 impacts. According to the participant, such governmental action is needed because the (banking) industry will not steer themselves towards a new sustainability path without some form of intervention (Interview ABN).

Departing from this governmental starting point, the participant mentioned the NVB. The NVB is an industry association and falls under the category of market pressures. The role of the NVB here is that it 'transfers' the coercive pressure into pressure for the banking industry due to its endorsement of the Dutch climate agreement. The participant mentioned no other market pressures.

When it comes to customers, the participant explained that they are mostly driven by coercive or market pressures as well. Customers who have set their own SBTs and are shifting their technology mix to become in line with decarbonisation scenarios were mentioned. However, how those customers influence ABN AMRO to engage with the SBTs remains unclear. Nevertheless, according to the participant, such customers cause steering effects for banks as well (Interview ABN).

With regard to NGO's and media, the participant explained how NGO's can be divided into cooperative and antagonistic NGO's. Both kinds of NGO's are valuable because they both make valid standpoints (Interview ABN). Media on the other hand do not really talk about SBTs, and when they do it is more about Paris alignment (Interview ABN). The effects of social pressures on SBTs for ABN were not discussed.

Lastly, internally, the shareholders are starting to understand more about sustainability and the importance of it, even asking questions about why the company chose certain environmental strategies over others (interview ABN). Such questions were "unthinkable 10 years ago" (Interview ABN). Employees also exert pressures through the implementation of sustainability in their daily lives. For example, if an employee wants to do more about sustainability in their daily life, then they also take that mentality with them to work, which results in more focus on improving sustainability aspects of the company (Interview ABN). The exact influence of internal pressures on ABN AMRO's SBTs adoption is unclear.

The way the participant ranked the pressures is as follows: firstly, the coercive pressures happen such as climate agreements, secondly industry associations start to support said agreements, customers help in steering through their 'demands'. NGO's and media exert pressure as well and lastly shareholders, managers, and employees follow those trends. It should be noted that these pressures do not necessarily happen in that chronological order. Some pressures can happen, and have

happened, at the same time. That mix of pressures led ABN AMRO to adopt SBTs in the end. From these findings it can be derived that there is a need for steering effects to guide a bank, such as ABN AMRO, in the right direction.

When comparing the results from this interview with the content analysis and survey, the following is found. In both the content analysis and survey, the coercive pressures scored low, however in this interview coercive pressure is mentioned as 'instigator' pressure. Furthermore, the industry association played an important role in transforming coercive pressure into direct pressure on banks through the endorsement. This differs from the content analysis as 'industry association' only got one mention and the concept was completely absent in the survey results. Lastly, the internal pressures mentioned in the interview were shareholders and to some degree employees. This also differs from the content analysis, where manager ambition is listed as a primary reason for action. However, this pressure from shareholders does reflect the findings from the survey where similar comments were made. Overall, the key finding is that the coercive pressures are needed as guidance, after which other pressures follow which ultimately leads to SBTs adoption.

#### 4.3.2 Ahold Delhaize: competing for sustainability

In comparison with the previous interview, with a focus on coercive pressures, the focus in this interview lies on market pressures. One of the first things the participant stated was that the "SBTs were chosen because our sustainability team found that within the market (i.e. institutional environment) others who take climate seriously are committed to SBTs." (Interview Ahold). The participant continued that: "no matter what the area of expertise is: climate, waste, tax, health etc., if you're at the bottom of the list, it'll cost a lot of time and resources [to climb up again] and will hurt your reputation" (Interview Ahold). Due to the pressures to remain competitive and keep a satisfactory score on benchmarks, Ahold Delhaize chose to adopt SBTs. That being said, this does not mean that the other pressure types do not play a role.

The 'lists', or rankings, the participant mentioned above are usually made by NGO's (e.g. Oxfam) or other organisations within the market that create rankings. An example of a ranking within the market would be the S&P Dow Jones Indices. NGOs, in turn, can make use of such indices as well for their benchmarks. This causes a synergy between social and market pressures where NGOs exert social pressure through benchmarks which increases competitive market pressure. However, when the participant was asked about social pressures, only climate protests were given as answer. This indicates that the pressure from rankings came from within the market.

Elaborating more on the social pressures (which include customers), the climate protests had some influence on the adoption of SBTs. This was because those protests made it to the boardrooms and supervisory board. As a result, questions were asked about how to deal with such protests and how to react to them (Interview Ahold). According to the participant, the pressure from NGOs consists mainly of talks about social issues and animal welfare at the moment and has not been substantial for SBTs adoption (Interview Ahold). Media also do not exert much pressure; they also focus more on the societal role of the stores, which concerns wages. Hence, the overall score of social pressures was 2 out of 5.

For the coercive pressures, the participant ranked its contribution 4 out of 5 indirectly. This was because coercive pressures, such as climate agreements are used as basis for further policy creation

which spreads its influence (Interview Ahold). The direct influence of a climate agreement was then ranked as 3 out of 5. This pressure comes mainly from the Paris Agreement, which leads to question within the company about how to react and deal with such an agreement. On the national level, the national climate agreement is also taken into consideration. However, that is something for each national branch to work out (Interview Ahold).

Lastly, the internal pressures did not get a score due to a forgotten question. However, from the responses of the participant it can be derived that it is considered an important pressure. Similar to ABN AMRO, Ahold also received question from shareholders regarding their climate policy, how they deal with climate and whether Ahold was thinking about SBTs (Interview Ahold). This triggers the CEO and CFO which leads to action as they want to know how to deal with such questions and what the proper course of action is (Interview Ahold). Since the pressure reaches the highest member of the company, it can be expected that the pressure will be experienced on a similar level as the competitive ones.

Overall, the results from this interview are in line with the picture that the content analysis and survey have painted so far. As a manufacturing sector company, Ahold Delhaize has to deal with strong international competition. This results in an intertwining of both market, social and internal pressures, as the company wants to first and foremost stay competitive which is necessary to keep their reputation in check, which also keeps the shareholders satisfied. On top of that comes the finding that the latter is increasingly more aware of the environmental impact of companies, potentially increasing the pressure further. The findings also indicate that Ahold is a follower of market trends, since they changed due to their competition changing. This does not mean that Ahold is not doing its part. Since the majority of companies in an institutional environment are more likely to be a follower than a trendsetter, knowing which pressure are most prominent for such companies is a key finding.

#### 4.3.3 ASR: Why SBTs are not the only solution

While ASR is not committed to the SBTs, they are the most sustainable insurer in the Netherlands (“Hoe duurzaam is jouw verzekeraar”, 2021). This position is a result of internal pressure as the participant explained: “ten years ago the asset management department started with their exclusion policy which was gradually expanded” (Interview ASR). The underlying idea back then was to use sustainability as distinctive trait. This also got the support from the then CEO, which led to further strengthening of that distinction (Interview ASR). This is still ongoing today, hence the score of 4 out of 5 for internal pressure. Instead of the SBTs, ASR strives to bring its emissions (including scope 3) in line with the Paris Agreement goals (Interview ASR). As such, ASR obtained a frontrunner position due to internal pressures.

There is an interaction between those internal pressures and coercive pressures. The participant explained that the pressure from institutions such as the Dutch National Bank (DNB), the Authority Financial Markets (AFM), the Paris Agreement and the EU are substantial (Interview ASR). DNB for example is increasingly focussing on how financial institutions deal with climate risk (Interview ASR). This causes pressure because insurers and banks have to make proper plans since they will be checked. Another important impulse is the sustainable finance action plan from the EU aimed at promoting sustainable investment. These coercive pressures form the majority of the pressure received for ASR,

which is reflected in the score of 4-5 out of 5. Thus, for ASR, the coercive pressure comes from adapting their sustainable practices to new regulations.

Since the main pressures come from the internal and coercive categories, the other pressures play a much smaller role. Market pressures are, interestingly, of little concern for ASR as competition and customers do not really play a role. The participant explained that of course sometimes they do get a question from a customer about sustainability, but it has never been a driving force. There is some competition on sustainability as it becomes more important, but it is not something which would lead ASR to adopt SBTs (Interview ASR). The reason why market pressures still get a 2 out of 5 is because of the industry association which does play a role in conjunction with coercive pressures, since the association for insurers signed a climate commitment (Interview ASR).

Social pressures are also small: the participant gave it a similar score of 2 out of 5. The score of 2 is due to NGO's which do ask questions during annual general meetings. Furthermore, media is used to promote a certain image of the company. "The pressure comes from the positive image we currently have in the media, that is something we want to keep" explained the participant (Interview ASR). This is a similar comment to the findings from the survey, where the respondents listed the same motivation of retaining a frontrunner position. When asked about other internal pressures, the participant explained that shareholders are only now starting to make 'noise' (Interview ASR). For ASR, such pressures are 'too late' since the employees within asset management have already been working on this for the past 10 years.

The key message from the interview with ASR is that SBTs are good targets but are not needed to identify a company as sustainable. Due to ASR being a frontrunner, it is more concerned with bringing its investments in line with new regulations and targets. As a result, the company mainly experiences internal and coercive pressures. Consequently, ASR is the first company to not give market pressures a high score. This deviates from the results found so far where market and internal pressures play a prominent role. Compared to the results from the survey, where the companies are also concerned with keeping a frontrunner position, the high score attributed to coercive pressures deviates significantly. The trend of shareholders playing an important role is also broken since ASR acknowledges that they are starting to play a larger role, but not as significantly as in the other results.

#### 4.3.4 KPMG: shareholders increase competition

As an accountancy company, KPMG was able to provide information for both the company's own SBTs adoption as well as some general reasons why their clients adopt SBTs. The story of KPMG's SBTs adoption is similar to the one from Ahold Delhaize. KPMG committed to SBTs due to competition. The participant explained that the reasons behind the adoption reflect an earlier situation in 2007. In 2007 the topic was CO<sub>2</sub> reduction and this debate revolved around two questions: "what do we have to do with this?" And: "we help our clients with this, so why wouldn't we do it ourselves?" (Interview KPMG). These two questions were also asked for the implementation of net-zero targets: clients are moving to net-zero, so why wouldn't KPMG? And the competition was moving towards net-zero as well (Interview KPMG). As a result of KPMG following these companies towards net-zero, they adopted the SBTs. As such, the SBTs are adopted due to the pressure to become net-zero from competition and internal ambition to follow clients (customers).



According to the participant, this is different for some of their clients. They experience internal pressures from shareholders who want companies to join the Paris Agreement (Interview KPMG). As an example, the participant mentioned a group of investors known as climate action 100+ who focus on roughly 150 companies, demanding that they become climate neutral (Interview KPMG). This also gives a signal to many other companies that they must do something with climate because otherwise they might get in trouble (Interview KPMG). On top of that are companies who want to move to net-zero because it lowers their risk and improves their reputation, explained the participant. Lastly, all of this is further reinforced by what we saw earlier: once the competition starts moving, other companies follow.

However, the focus of shareholders on climate related performance is quite recent. Before they exerted pressure, there had to be other pressures. The participant explained that this was indeed the case: back in 2010, but mainly 2015-2016, companies used climate targets for competitive advantages. It was also used to strengthen reputation, and sometimes from a real purpose, for example: 'we want to be a company that is known for more than only making a profit' and becoming climate neutral is a part of that ambition (Interview KPMG). This reflects manager ambition tendencies and the use of sustainability for competitive purposes. As such, before the shareholders focussed on sustainability, it was used for competitive advantage and reputation improvement.

When asked about the remaining pressure types, coercive and social, the participant explained that those are influential, but not a main driving force for KPMG. The influence of coercive pressures is rather low because the net-zero movement is ahead of the Paris Agreement in terms of targets. However, the Paris Agreement does serve as context since net-zero is connected to it (Interview KPMG). NGO's and media scored a 2-3 out of 5 as their influence is not very noticeable although they do ask questions. The participant explained that perhaps for some companies it could be the last push they needed (Interview KPMG).

Apart from the explanations regarding the pressure types, the participant also had several additions regarding overall trends observed. Firstly, the participant had an addition to the internal pressures in the form of intrinsic motivation of CEO's or other leaders: "When those leaders notice the events that happen in the physical world, more floods, more tropical storms, and the ice caps melting, they receive an additional signal that something needs to happen" (Interview KPMG). Secondly, another trend is the awareness that sustainability can influence the continuity of companies: "This will only get more important as other categories become relevant as well, such as water and human rights" (interview KPMG). In short, people are starting to understand that their assets might be at increased risk, which also leads to more awareness and action. As a final remark, the participant added that some companies who have set net-zero targets lack concrete action plans to achieve those targets (Interview KPMG).

The main point from the interview with KPMG is twofold. Firstly, for KPMG itself, the situation that led to SBTs adoption is similar to Ahold: the competition adopted new targets and KPMG followed. This is combined with the internal pressure to follow clients' net-zero ambition as well. Secondly, for their clients, the internal pressure from shareholders is the main cause for change, together with increased environmental awareness from managers. This pressure from shareholders also indirectly affects competitive market pressure. Before shareholder started doing this, sustainability was used to gain a competitive advantage or improve reputation. Now, this has changed as sustainability has become something that is being demanded from companies by shareholders. The results from this interview

are very similar to those of the content analysis, where internal and market pressure were most prevalent. Similarly, in the survey the two highest scoring pressures were internal and market ones as well. Hence, this interview has served to verify those findings as well as elaborate on them.

#### 4.3.5 ASN Bank: steering the institutional environment

Due to ASN bank's position at the front of the frontrunners, there was not much information to obtain as to what led ASN bank to adopt SBTs. However, due to that position, the participant was able to share information about how each pressure type affected ASN bank to retain a frontrunner position, as well as how each pressure type steers the Dutch financial sector towards sustainability.

ASN bank already started working on measuring its climate impact in 2011. Their underlying idea is that while the financial sector usually follows wider market trends ("financing the current economy"), they could also take a different approach and start the change themselves (Interview ASN). This has led to the development of various measurements and methodologies to measure the impact of investments on the earth system. Examples include the carbon profit and loss methodology and later the PCAF methodology, including the workgroups (Interview ASN). The main reason for ASN bank to adopt SBTs came from shareholders, who asked the Volksbank (of which ASN bank is a part) about SBTs (Interview ASN). Since ASN bank was already largely doing the same things that are listed in the SBTs, they decided to embrace them (Interview ASN bank).

The participant explained that national coercive pressures could have a very significant influence on increasing sustainability in the financial sector. However, in reality, the (Dutch) government only starts moving once a majority of companies in the financial sector are already performing a certain practice (interview ASN). Due to this lack of action from the government, it is important to have something like the PCAF methodology to steer the financial sector, explained the participant. Since new parties keep adopting that method, it means others will have to follow too (interview ASN bank). Internationally, the EU-taxonomy is expected to give a significant boost to the sustainability practices of the financial sector. Such regulations are taken very seriously at the board level which means significant resources will be allocated to make sure the company is in line with the regulation (interview ASN). Overall, the participant gave the coercive pressures a score of 3 out of 5, with the added statement that national government *could* have a strong steering effect.

Since ASN bank puts a lot of emphasis on sustainability, the customers they attract are usually of the same mindset. The participant explained that this leads to interaction with customers about the choices and statements ASN bank makes. This puts social pressure on ASN bank to ensure they do the right thing with their customers' money (Interview ASN). However, the pressure from customers to take even more steps towards sustainability is not there. Usually, it is due to other banks (competition) taking steps which cause ASN bank to also take additional steps towards new sustainability practices (Interview ASN). Since sustainability is now a part of every bank in the Netherlands, this leads to increased competitive pressures. On top of that, the NVB annually collects information about the sustainability practices Dutch banks are using. Based on that information, the NVB creates a minimum sustainability policy that all banks should adhere to (Interview ASN). Due to these influential stakeholders, the market pressure received a score of 4 out of 5.

In the area of social pressure, the participant mentioned NGO's that create benchmarks as most influential. The benchmarks created by NGOs such as Oxfam Novib about the sustainability policy of

each bank are an important source of information for customers and media (Interview ASN). The pressure lies mainly in obtaining satisfactory scores on those benchmarks which means banks will need to have a proper sustainability policy. There is no other pressure received from the social stakeholders, hence they receive a score of 2 out of 5.

The internal pressure is mainly coming from keeping the current position ASN bank holds as frontrunner. This means that the internal and market pressures largely overlap, since staying a frontrunner means doing more than the current competition to stay distinctive (Interview ASN). At the same time, ASN bank shares all its sustainability related actions so other banks can follow suit. This means they both raise the sustainability ceiling and floor for the Dutch banking sector. Lastly, shareholders are also exerting pressure, but that is something the Volksbank experiences and not ASN bank. Nevertheless, due to those shareholder pressures, sustainability is becoming more prominent in the overall business strategy. Since the internal and market pressure share most of the pressure, the internal pressures also received a score of 4 out of 5.

During the interview with ASN bank, it became clear that they were at the absolute front of sustainability practices in the Dutch financial sector. ASN bank has played an important part in steering the Dutch financial sector (or institutional environment) towards sustainability by actively aiding the development of various methods to calculate the impact of investments. Currently, the most influential pressures that are steering the financial sector are competitive market pressure and shareholders who exert internal pressure. Those pressures are supported by new regulations, such as the EU-taxonomy, and by NGO's such as Oxfam Novib who create benchmarks. These findings are in line with the trends found so far in the interviews, where either shareholders or market pressures are mentioned as most influential. Similarly, the findings support the results from the content analysis and survey.

## 5. Discussion

In this section, the answers to the sub-questions will be given and discussed. This follows a pattern where first a sub-question is answered, followed by a discussion where the findings are compared with the literature. After all sub-questions have been answered, theoretical and practical implications of the research will be discussed. Lastly, directions for future research will conclude this section. Before proceeding with answering the sub-questions, there are a couple of distinctions between companies that are important to mention. As is already known, there is a difference between companies in the service and manufacturing sector. The results pointed out that there is also difference between companies who have a frontrunner position and those who follow. Depending on that position, the companies experience different pressures. This new differentiation is not meant to hold any normative weight, it simply means that depending on their position, companies will experience different kinds of pressures. As a result of this, the answers to the sub-questions might vary depending on which position a company holds within their institutional environment.

### 5.1.1 Sub-question one: coercive pressures provide a baseline

When combining the results from the three methodologies, a pattern emerges where coercive pressures can be interpreted on two levels. Firstly, there is the national level where the Dutch government operates. Secondly, there is the international level where the EU and Conferences of the

Parties are a part of. For most companies in this research, the international level is the most important one as global targets and/or regulations are created there. Examples include the Paris Agreement and EU-taxonomy. Such products send a clear message to companies about the direction they should move towards. Furthermore, as time passes, those international regulations and targets become embedded into companies making them a new institutional rule within institutional environments.

However, international targets must be adapted to the national level in order to be effectively implemented. That is the area of expertise of national governments. The Dutch government created its own national climate agreement where, in collaboration with different industries, arrangements were made about the burden each industry must bear. Despite these efforts, the interviews and survey showed that companies in the manufacturing sector are experiencing intense competition, causing them to adopt more ambitious targets than those of the national government. On top of that, the financial sector was at first excluded from the talks with the governments (interview ASR). As a result, frontrunners such as ASN bank made their own methodologies and targets. Other financial institutions eventually followed or are competing on an international level (such as KPMG), causing adoption of the SBTs due to different pressures. Hence, the results indicate that the national coercive pressures played a very minor role in the adoption of SBTs.

Nonetheless, there are instances where coercive pressures play a guiding role. In the interview with ABN AMRO, the participant explained how the Dutch climate agreement was an important sign that action had to be taken. Similarly, for ASR, adhering to international regulation is their main concern. Coercive pressure can also be indirect. In the interview with Ahold, the participant explained how other stakeholders use the Paris Agreement as basis for their policies which in turn might affect Ahold as well. The participant from KPMG also stated that coercive pressures 'provide context' (interview KPMG). These responses indicate that while coercive pressure is not the direct cause of SBTs adoption, the influence that is exerted is still of consequence.

In the survey it was found that it is possible that the service sector might depend more on coercive pressure before changing. This finding is partly supported by the interview from ABN AMRO and ASR. Based on the interview with Ahold and the survey it seems that coercive pressure is less influential for the manufacturing sector. Furthermore, both frontrunners and follower companies receive the same kind of coercive pressures, although it might be easier for frontrunners to incorporate new regulations.

Overall, the ways in which coercive pressures influence companies to engage with the SBTs is twofold. International coercive pressure influences companies through regulation and global agreements. It could be argued that without the Paris Agreement, the SBTs and other policies would not have a baseline to draw upon. This is indirect influence, however. The extent to which coercive pressures directly influence companies to engage with the SBTs is low since there is no national or international regulation that states that SBTs should be adopted.

When comparing these findings to the literature, a few additional remarks can be made. Firstly, with regard to the creation of regulation, frontrunner companies can develop advantages for themselves. Hart (1997) explains how companies can gain competitive advantages through creating initiatives that could become a new standard. In this study, this is showcased by ASN Bank. They are creating, and have created, various methodologies which measure the impact of investments on the earth system. Their methodologies have already been adopted by various other companies and have the potential

to become a new standard supported by governments. This would result in competitive advantages. Another study conducted by Clemens and Douglas (2006) shows that more coercive pressure leads to more voluntary green initiative adoption. This research partly supports that finding, as the results showed that when the Dutch national government created its own climate agreement, industry associations were quick to lend their support which led to more action being taken, including SBT adoption in some cases. On the other hand, the results also show a lack of national governmental regulation after that, with most companies adopting targets that go well beyond the ones required by the government.

#### 5.1.2 Sub-question two: mimicry and competition

In the theory section about institutional theory, a differentiation was made between mimetic and market pressure. There, it was explained how mimetic pressures stem from uncertainty and market pressures from competition. The results from all three methods show that competitive market pressure is most prevalent compared to mimetic pressures. Various participants from the interviews stated that it is no longer an option to not 'do something' with sustainability (interview Ahold). This indicates that sustainability, and the practices that are associated with that, have become part of the institutional rules within institutional environments. From this it can be derived that there is very little uncertainty within institutional environments about sustainability.

Competitive market pressures on the other hand are abundant. The content analysis showed that in both the service and manufacturing sector, market pressures in the form of trends and competition play a significant role. Similarly, in the survey the market pressures received the second highest score. The interviews showed the same trend. Whether the company is a frontrunner or follower, in both instances competition plays a role: either to stay ahead or to follow. Although companies that follow others can be interpreted as mimicking them, the main motivator was connected to competitive tendencies and not uncertainty. This is also connected to sustainability reporting, benchmarks, and ratings. Due to the existence of such rankings and reporting standards companies are compelled to perform well to receive high scores and write positive reports. This is important because it enhances reputation and signals that the company is putting in effort.

The above hints at the intertwinement of market pressure with other pressure types. As reputation is also something which is influenced by social pressures, and competition can be driven by internal pressures. An example: NGOs exert social pressure through benchmarks as well as engaging with companies at annual general meetings (such as the VBDO). Similarly, shareholders are also able to exert pressure (see Climate Action 100+). These pressures might eventually lead a company to the adoption of SBTs, which in turn is noticed by the competition. As a result, the competition also feels it has to adopt climate targets to avoid receiving similar pressures (based on interview KPMG). Similarly, frontrunner who have adopted climate targets also cause their competition to take steps towards adopting climate targets (interview ASN Bank).

There are two additional ways in which market pressure can occur. One is through industry associations and the other through supply chains. In the interview with ABN AMRO it was mentioned how the NVB played a role in starting a move towards sustainability. This was later verified by ASN Bank who also mentioned how the NVB creates a minimum sustainability policy based on the sustainability actions taken by Dutch banks. Companies can also exert market pressure down their

supply chain so that their suppliers start adopting the same targets. This is especially important if companies are looking to reduce their scope 3 emissions.

Based on the above there are three ways in which market pressures influence corporations to engage with the SBTs. The first and most common way is through competition. The second one is through industry associations, which was found to only occur for the financial sector. The third and final way is through the supply chain, which was only mentioned briefly. The extent to which market pressures influence corporations to engage with SBTs is large. Once one company adopts the SBTs, the three ways of influence described before can cause it to spread to many other companies.

These findings are in line with the existing literature on the topic of competition for sustainability. Schaltegger and Hörisch (2017) found that there are two arguments why companies are dealing with sustainability. One is from a profit-seeking perspective and the other one from a legitimacy-seeking perspective (Schaltegger and Hörisch, 2017). They concluded that the legitimacy-seeking argument is dominant. The same was found in this research: due to reputational concerns, companies adopted sustainability practices, including the SBTs. Similarly, this research also supports the findings from Albertini (2013) who showed that environmental action is important to maintain or increase the legitimacy of their firms. This, in turn, is positively linked with stock market reactions (Albertini, 2013). The same interaction was found in the results where reputation is also linked to shareholder satisfaction.

#### 5.1.3 Sub-question three: benchmarking and reputation

Social pressures received mixed results. On average, they received a low score in the content analysis and interviews but scored relatively high in the survey. Consisting of pressure from customers, NGO's and media, overall, social pressures are not the driving force behind SBT adoption in this research. However, there are a few exceptions to this. In the content analysis, both the service and manufacturing sector frequently mentioned 'reputation' as a reason to adopt SBTs. This is reflected by other findings: if a company is concerned about competition, it is usually also concerned about its reputation and vice versa (interview Ahold, KPMG, ASR). In one particular case, a survey respondent explained how a partnership with an NGO caused their company to become aware of the SBTs and eventually adopt SBTs. Although such a case only appeared once in this research, it does not exclude it from happening to other companies.

Other survey results showed that reputation related concerns were the cause for two companies' SBTs adoption. The companies mentioned reputation to be an important driver to adopt SBTs and continue working on them. The stakeholders behind that pressure were NGO's who scrutinize them, along with customers and other stakeholders who pay increasingly more attention to a company's sustainability performance. This is made possible by benchmarks and ratings. Furthermore, those two companies from the survey are also aiming to be, or already are, frontrunners and it is likely that they pay more attention to their reputation due to that reason. This is further reinforced by the interview with ASN bank who explained that questions from their stakeholders and customers are listened to. Lastly, customers also exert pressure through protests, as the participant from Ahold mentioned how climate protests were taken very seriously.

The ways in which social pressures are exerted comes mainly in the form of reputation and public opinion. Whether a company is a frontrunner or follower, in both instances it is subjected to

reputational risks if mistakes are made. For frontrunners the main concern is keeping the reputation of a frontrunner, whereas for followers it is important to not end up at 'the bottom of the list' as it costs a lot of resources and time to climb back up (interview Ahold). Those lists are primarily created by NGO's. Despite those pressures, the extent to which social pressures influence corporations to adopt SBTs is relatively low. However, in combination with other pressures, such as market or internal, social pressures can play a much more important role. This is the case when social pressures from benchmarks stimulate competitive market pressures. As such, social pressures might not be directly causing SBTs adoption, but they certainly play a role indirectly.

Previous work on the adoption of green practices shows that customer/normative pressure plays a significant role (Lee, Kim and Kim, 2018; Berrone et al., 2013; Menguc, Auh and Ozanne, 2010). Lee, Kim and Kim (2018) showed that social expectations (ethical norms and moral judgements) were an important driver for companies to adopt corporate environmental responsibility and green practices. Berrone et al. (2013) found that normative pressure plays a significant role in environmental innovation and Menguc, Auh and Ozanne (2010) found that customer sensitivity is among the most influential stakeholders who exert pressure on how firms respond to the natural environment. This is contrary to the findings from this research where social pressures are more indirectly perceived. Furthermore, social/normative pressure received the lowest scores in interviews and content analysis. A possible explanation is that these findings are context specific, and since the others works are performed in other countries, their context is different than the one in this research.

On the other hand, the overall effects of benchmarking on the adoption of sustainability targets and practices are supported by literature. Dubey et al. (2017) found that benchmarking for sustainability is effective in influencing organisational performance. Similarly, Vorhies and Douglas (2005) found that benchmarking can play an important role as learning tool for "identifying, building, and enhancing marketing capabilities to deliver sustainable competitive advantage" (Vorhies and Douglas, 2005, 80). The logic followed here is that other companies look to peers identified by a benchmark and learn from their capabilities, which are then adapted and possibly improved by those other companies (Vorhies and Douglas, 2005). Similar findings were found in this research, for example, ASN Bank fulfils the role of peer which other companies notice which causes them to learn and improve their sustainability practices.

#### 5.1.4 Sub-question four: ambitions and shareholders

Regarding the last pressure category, the internal pressures show an overwhelmingly clear outcome. This outcome is the increased shareholder interest in the sustainability performance of the companies they invest in. Initially, the content analysis created a picture showing that manager ambition and long-term survivability are the most frequent reasons for moving towards SBTs. Shareholder environmental awareness was only mentioned twice. However, when looking at the survey and interview results, a different picture emerges. The survey results show that internal pressures score the highest of all pressure types, with all but one respondent mentioning shareholders as cause. In a similar vein, the interviews all mention shareholders as a new, highly influential, stakeholder that exerts pressure.

There are a few other ways in which internal pressure is exerted. During the interview with KPMG, the participant mentioned how corporate leaders or managers who notice what is happening with the environment might change their environmental strategy based on an intrinsic motivation (interview

KPMG). In the interview with ABN AMRO, the participant also mentioned how employees can influence a company through their personal environmental beliefs, which manifests in their work (interview ABN AMRO). Those findings are more in line with the content analysis. However, those pressures were overshadowed by the shareholder internal pressure in terms of strength of the pressure.

The finding from the content analysis about long-term survivability is compatible with the pressure from shareholders. The pressure from shareholders to adopt SBTs or other climate targets will ultimately benefit a company's long-term survivability as those targets are aimed at staving off the worst climate change scenarios. Shareholders are understanding this as well, as they could own shares from multiple companies, some of which are prone to climate change related natural disasters. This understanding is still quite recent, as the interviews pointed out. Therefore, it can be assumed that the pressure from shareholders could have been the last push companies needed to adopt SBTs or other targets.

From the above it becomes clear that the ways in which internal pressures are exerted is mainly through shareholders. However, from the previous sub-questions it also became clear that those shareholder pressures take place in the context of other pressure types already happening. Nevertheless, the extent to which shareholders exert pressure to adopt SBTs is large, similar to market pressure with which this pressure is closely connected.

There are various understandings of the reasons why shareholders are exerting pressure. The understanding followed here is that as climate change continues to manifest its effects, it poses a material risk for individual financial institutions and systemic financial stability (Monasterolo and Vulz, 2020). This can be averted if climate mitigation policies are implemented early on (Battison et al., 2017). Shareholders play a large role in this as they can exert influence through voting and exclusion (see Galaz et al., 2018 and Hunt and Weber, 2019 for more). As a result, it is in the shareholders' best interest if companies adopt climate targets and practices such as the SBTs as it ensures that their investments are at lower risk. This, in turn, explains the prevalence of shareholder internal pressure found in this research.

## 5.2 Unexpected findings

Although this research focused on the circumstances that led to the possible adoption of SBTs, the findings also show general trends that are happening inside institutional environments. Since most interviews were held with companies from the financial sector, this research uncovered some general movements inside that institutional environment. The interview with ASN Bank for example revealed that what was said about the pressures that cause SBTs adoption are also true for other targets. The careful reader will have noticed that in some cases the sentence "SBTs adoption or similar targets" was used. This is to accommodate the finding that SBT adoption is but one consequence of the changes occurring inside the financial institutional environment. The pressures which cause entire institutional environments to move are the same ones that cause SBT adoption. As just mentioned above, companies from the financial sector dominated the interviews. This is also unexpected as various manufacturing companies were also approached. The implications of this will be further discussed below.

## 5.3 Theoretical implications



This research used a mix of stakeholder theory and institutional theory to build a framework with which to analyse what led to SBTs adoption or not. Furthermore, institutional theory was expanded to include another pressure type which took the form of internal pressures. Other work, such as the research from Delmas and Toffel (2004) already mentioned shareholders as part of the stakeholders who exert institutional pressure, but it was Wang, Li and Qi (2020) who included internal pressure as its own institutional pressure. This theoretical expansion was also adopted in this research and proved worthwhile. Therefore, this research serves as entry to show the potential of internal pressures as 4th institutional pressure.

The argument could be made that shareholders are part of the mimetic or market pressures, however that would lead to an overextension of that pressure type. Shareholders have a fundamentally different relationship with a company than the stakeholders which reside in the mimetic/market pressure category. An example would be the scenario where a company goes bankrupt. For the internal stakeholders this would be detrimental as shareholders will lose money and the managers and employees lose their job. On the other hand, competitors would see the loss of a competitor as potentially new opportunities. Simply put, the internal stakeholders experience negative effects whereas market stakeholders experience no negative effects and potentially even positive effects.

In institutional theory, the basis for mimetic pressures is uncertainty, yet the question can be asked if that is still the case. This research expanded mimetic pressure to include market pressures which uses competition as a basis instead of uncertainty. The original idea behind mimetic pressure is that companies who have less resources look to their peers in the institutional environment to copy their behaviour as to what choices to make when it is uncertain what the 'best' choice is. This logic seems to apply more to emerging markets than to long established markets such as those in Western Europe. This is something to keep in mind in future research that employs institutional theory to study corporate behaviour.

The above additions to institutional theory were validated through the interviews that were held. Previous research focussing on institutional pressure and the adoption of voluntary agreements, such as Daddi et al. (2016) and Zhu, Cordeiro and Sarkis (2013) employ a large sample survey method. While this provides valuable information, performing qualitative research results in more in-depth findings. For example, in the interviews there was no mention about uncertainty. Instead, when copying of others happened it was due to reasons as keeping up with competitors. Hence, such qualitative results go beyond their initial meaning to also question more fundamental aspects of theory.

This does not mean that institutional theory is unfit for this kind of research. Quite to the contrary it is very useful. However, this research does show the importance of using additions to a theory and not simply repeating something that is roughly 40 years old. Lastly, to the knowledge of the author, this research is the first to explore the relationship between stakeholders, institutional pressures and the SBTs in a qualitative way. Previous work from Giesekamp et al. (2021) performed a quantitative assessment of progress for the SBTs, mentioning the need for qualitative research to further the understanding of why companies adopt targets such as the SBTs. This research has aimed to partly fill this gap.

#### 5.4 Managerial or policy implication of research

The findings of this research have multiple implications with regard to SBTs adoption inside institutional environments. Although sustainability has been part of institutional environments for a while, it can be argued that the moment shareholders started getting more involved with companies' sustainability performance, it got a significant boost in importance within institutional environments. While the primary reason shareholders are concerned about the environmental performance of companies is monetary, this does not have to be negative. As Röckstrom mentioned in the article from the Guardian in the introduction, the main concern is staying within a 1.5-degree scenario. As such, whether the main motivation is monetary or purely ecological, it still tries to solve the same problem. Climate change is a humanitarian challenge that will require cooperation from every industry which, quite frankly, also means it needs large financial resources. Having support from shareholders in such cases can prove beneficial.

However, if there is one thing the results show, it is that not one pressure type operates independent of the others. This means that greater goals can be achieved through further cooperation between pressure types and stakeholders. The most common interaction between pressures was the reputation, competition and internal pressure combination. Due to companies' internal (read: shareholders) concern about their (sustainability) reputation, they want to keep up with their competition to stay legitimate. This is all according to institutional theory where companies within an institutional environment adhere to the institutional rules. Examples of this interaction became apparent in the interviews, where both Ahold Delhaize and KPMG explained their company adopted SBTs due to competitive market pressures. By stimulating each of those three pressures, SBTs adoption is also further stimulated.

NGO's play a role in SBTs adoption by creating benchmarks and reports about companies' environmental performance. However, this effect is more indirect as only one finding indicates that SBTs were adopted through NGO's engagement. More common is the reputational pressure that arises after benchmarking which causes copying behaviour of others who received higher scores on those benchmarks. If in such cases companies who scored higher had adopted SBTs, then others will follow. Hence, benchmarking stimulates the market pressures. Therefore, NGO's and other organisations who create benchmarks can amplify SBTs, or other absolute targets, adoption by attributing higher scores to companies who have adopted SBTs.

National coercive pressures have the ability to make companies implement SBTs, but this ability is not used. Instead, official institutions like DNB who conduct research about the risks of climate change for financial organisations exert pressure. The national government did implement a climate agreement which caused industry associations to support that agreement. For some companies this was the starting point which, after experiencing many more pressures, resulted in SBTs adoption. One way in which governmental policy could exert more significant influence is if it were to implement a new regulation that states that companies must adopt absolute climate targets instead of relative. As the SBTs are absolute targets, it is likely that such a policy would lead to an increased adoption of them.

Stakeholders who have influence over how sustainability is perceived and measured can further push institutional rules to steer the institutional environment. This takes place on a larger scale as it goes beyond just the SBTs. For example, due to the efforts of ASN Bank, measures became available to calculate the environmental impact of investments, moving the institutional environment more towards dealing with environmental impact. This is also a self-reinforcing feedback loop. Once ASN

Bank implements new measurement tools or targets such as SBTs, other frontrunners follow, which results in followers also following. Stimulating frontrunners to keep up what they are doing and providing financial support to them to experiment with what works can enhance their positive effects on institutional environments.

The above is in line with the core idea behind the SBTs mentioned in the theory sector: “We need a race to the top, led by pioneering companies. This will empower peers, suppliers and customers to follow suit and drive governments to take bolder action.” (“About us”-a, n.d.). This statement nearly sums up the order in which each pressure occurs, starting with frontrunners who cause a ripple effects and at the end of the line governments might act. The above implications are also quite straightforward, basically those who are stimulating SBT adoption should continue doing so. What has changed however is that there is now a new and powerful ally in the form of shareholders.

### 5.5 Limitations and future research directions

Some limitations for this research can be identified. Firstly, there are not as many results as expected. A likely explanation for this is the COVID-19 pandemic making it harder to approach companies for interviews and surveys. Due to the limited response rate, it becomes easier for one sector to become dominant. This can be seen in the interview results as they primarily consist of financial organisations. Furthermore, there was only one company interviewed which did not adopt SBTs. This means that the information regarding non-committed companies is very scarce. Almost all companies researched are large, meaning that no information regarding small or medium sized companies was obtained. Lastly, the context for this research is Western Europe, specifically the Netherlands, which means generalisations only applies to countries with similar circumstances.

The above limitations are partly overcome in this research. Regarding the lower response rate, method triangulation was used to make up for a lack of findings, as well as the addition of the content analysis. For the main research question, answering which pressures lead to the adoption of SBTs is more important than pressures that do not. Hence a lack of non-committed companies in the dataset, while unfortunate, is not something which would hamper formulating an answer to the main research question. Regarding the context in which the research took place, it is argued that the sustainability transition should come from Western European countries. This is because they have the means to achieve such transitions more easily compared to less developed countries. For similar reasons, it is not necessarily harmful that only large companies are researched since those companies also have more impact.

The main finding that shareholders are exerting influence to improve corporate environmental strategies and climate target adoption presents various new research opportunities. Interaction between shareholders and other stakeholders now happens indirect through their respective pressure. Future research could focus on the question what would happen if that interaction became more direct and if that would be beneficial in making companies adopt targets such as the SBTs. Another interesting approach for future research is to study whether shareholder pressure also causes companies to implement concrete plans to achieve the SBTs, since those plans were lacking according to the interview with KPMG.

Lastly, another area of future research could be strategic responses and SBTs. This research focused on the pressures exerted on companies and how those pressure cause a company to change. However,

companies can actively influence those pressures instead of simply accepting them (See Wijethilake, Munir and Appuhami, 2017; Oliver, 1991; Clemens and Douglas, 2005). Future research could focus on the interaction between institutional pressures, strategic responses, and adoption of SBTs to investigate if companies comply with such pressures or not.

## 6. Conclusion

This research has presented new findings on how institutional pressures are exerted by primary stakeholders to adopt SBTs. By employing a combination of stakeholder and institutional theory, a framework was constructed which was used to explore the extent to which each stakeholder exerting a pressure contributed to possible SBTs adoption. To obtain the data for this research, three methods were used: content analysis, survey and semi-structured interviews. By using these three methods, methodological triangulation was achieved. This resulted in a separation of results between those that were uniformly supported and some that were more contested, adding more nuance to the findings. For the content analysis a frequency table was made to show which pressure type was most frequently mentioned. In the survey and interview, the respondents and participants were asked to assign a score to each pressure type. By comparing these scores to the frequency table, along with the in-depth data obtained from the interviews, the research questions could be answered.

The answers to the sub-questions show how some pressures have a direct influence on SBTs adoption whereas others have an indirect influence. From there it was also derived that the indirect pressure types strengthen, or enable, the direct types. What this implies is that considering each pressure type independent from each other would be a severe misstep. The main pattern that arises from the results points towards market and internal pressures being the most important for SBTs adoption. However, the drive behind market and internal pressures is inherently social: certain convictions, which are usually also institutional rules, form the basis for competition and internal pressures. Hence, without normative and social foundations, a competition for, and awareness of, sustainability would be impossible. In a similar vein there is a need for steering effects, which are provided by international and national coercive pressures such as climate agreements and global targets, laying fundamental groundwork. With coercive pressures providing context and normative pressures determining what is acceptable, internal and market pressure have a solid basis from which to exert their pressure.

When arriving at the main question “Which institutional pressures exerted by primary stakeholder groups determine whether or not a company engages with the SBTs?” the answer is multifaced. The sub-question answers show that it is not one institutional pressure which causes a company to engage with the SBTs, it is the interaction between them. However, as each pressure is exerted by a corresponding stakeholder, a pressure type can significantly increase its influence when a new stakeholder emerges. This happened with internal pressures where shareholder’s interest in environmental performance increased the influence of that pressure type. Shareholders changed this pressure in such a way that a company’s environmental performance not only has reputational but also financial implications. Thus, the answer to the research question is that together, all pressures determine whether a company engages with SBTs or not, and that internal pressures are currently most influential. This changed the narrative of sustainability, and therefore also climate targets, which is aptly described by one of the participants: “the question is no longer *if* a company is doing something with sustainability, but *what* a company is doing”.

The findings from this research have various implications that are both theoretical and practical. Main theoretical implications are the need to continuously keep thinking critically about the theory employed. This ensures that the theory can remain relevant through valuable additions. In this research, examples of this are the internal pressure category addition and the expansion of mimetic pressures with more market-oriented pressures. Practical implications revolve around the other stakeholders capitalising on the advent of shareholders and potentially cooperating with them to achieve more ambitious sustainability targets. The exact form this will take, and the impact it will have, is something future research could focus on.

## Acknowledgements

The writing of this research would have been a lot harder without the support and encouragement from my supervisor: Rak Kim. My sincere appreciation for the learning opportunities provided. Conducting this research would have been impossible without the support of the VBDO, who's employees were kind enough to provide me with contact information for the various companies that were approached.

A heartfelt appreciation for the respondents and participants who took the time to contribute to this research is also in order. Without their input this research would have been very difficult to conduct. Lastly, I would like to thank my parents and partner for their continuous support and ideas.

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## Appendix 1: content analysis sources

1. Vodafoneziggo – committed, Telecommunication Services
  - <https://jaarverslag2019.vodafoneziggo.nl/>
  - <https://www.vodafone.com/news/press-release/vodafone-commits-to-net-zero-carbon-emissions-by-2040>
2. Ace & Tate Holding B.V. – committed, Healthcare Equipment and Supplies
  - <https://www.aceandtate.com/nl/responsibility/goals>
  - <https://www.aceandtate.com/nl/responsibility>
3. Heineken n.v. - Well-below 2°C, Food and Beverage Processing
  - <https://www.theheinekencompany.com/our-sustainability-story/our-strategy-and-achievements/drop-c-reducing-our-co2-emissions>
  - <https://www.theheinekencompany.com/sites/theheinekencompany/files/Investors/financial-information/results-reports-presentations/heineken-nv-2019-annual-report.pdf>
4. Royal Schiphol group – committed, Air Transportation - Airport Services
  - <https://www.schiphol.nl/en/schiphol-group/page/a-co2-neutral-airport/#:~:text=The%20goal%20of%20Royal%20Schiphol,to%201.35%20kg%20in%2>

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5. Royal frieslandcampina n.v. – Committed, Food and Beverage Processing
- <https://www.frieslandcampina.com/sustainability/sustainability-on-the-farm/>
  - <https://www.frieslandcampina.com/uploads/2020/03/FrieslandCampina-Annual-Report-2019.pdf>
6. Arcadis NV – committed, Professional Services
- <https://www.arcadis.com/media/C/9/3/%7BC9319928-F9D5-4DB4-B70E-09359714C2C9%7D3Arcadis%20Integrated%20Annual%20Report%202019.pdf>
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- <https://anteagroup.nl/persberichten/antea-group-gaat-voor-ambitieuze-klimaatactie>
  - <https://www.anteagroup.nl/uploads/media/file/3a7b0360-4912-4a22-b58b-24522f37bb5d/maatschappelijk-jaarverslag-2019-.pdf>
8. Wereldhave - Well-below 2°C, Real Estate
- [https://www.wereldhave.com/siteassets/coporate-press--updates/2020/wh\\_press\\_release\\_csr\\_13032020.pdf](https://www.wereldhave.com/siteassets/coporate-press--updates/2020/wh_press_release_csr_13032020.pdf)
  - <https://www.wereldhave.com/siteassets/documents/reports/annual-reports/annual-report-2019-wereldhave.pdf>
9. Koninklijke Ahold Delhaize N.V. - 1.5°C target set, Food and Staples Retailing
- <https://www.aholddelhaize.com/media/10197/ahold-delhaize-annual-report-2019.pdf>
  - <https://www.aholddelhaize.com/en/media/latest/media-releases/ahold-delhaize-commits-to-science-based-targets/>
10. Ingka Group - 1.5°C target set, Retailing
- <https://www.ingka.com/news/ingka-group-supports-more-business-action-on-climate-change/>
  - <https://www.ingka.com/wp-content/uploads/2020/01/Ingka-Group-Annual-Summary-Sustainability-Report-FY19.pdf?1>
11. IKEA - 1.5°C target set, Retailing
- <https://www.ikea.com/us/en/this-is-ikea/newsroom/ikea-group-science-based-targets-approved-contributing-to-ikea-ambition-to-become-climate-positive-pub0d3d0e71>
12. Nutreco – committed, Food Production - Agricultural Production
- <https://www.nutreco.com/en/News/Press-releases/nutreco-commits-to-adopting-science-based-targets/1626289>
  - <https://sustainabilityreport2019.nutreco.com/pdf/nutreco-sustainability-report-2019.pdf>
13. Farm Frites – committed, Food and Beverage Processing
- <https://sustainabilityreport2019.farmfrites.com/our-sustainability-approach/>

- <https://www.farmfrites.com/en/news/farm-frites-declares-to-take-action-towards-climate-change/>
- 14. TenneT Holding B.V. – committed, Electric Utilities and Independent Power Producers and Energy Traders (including fossil, alternative and nuclear energy)
  - [https://www.tennet.eu/fileadmin/user\\_upload/Green\\_Finance\\_Report\\_2019.pdf](https://www.tennet.eu/fileadmin/user_upload/Green_Finance_Report_2019.pdf)
- 15. Corbion - 2°C target set, Food and Beverage Processing
  - <https://www.corbion.com/about-corbion/press-releases?newsId=2183141>
  - <http://www.corbion.com/base/DownloadHelper/DownloadFile/12325>
- 16. PostNL - 1.5°C target set, Air Freight Transportation and Logistics
  - <https://annualreport.postnl.nl/2019/business-report/environmental-value/green-innovations-and-efficiency#:~:text=Science%20Based%20Targets&text=The%20targets%20validated%20by%20the,operations%20of%20our%20delivery%20partners.>
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  - <https://www.bam.com/en/press/press-releases/2019/5/bam-commits-to-halving-emissions-by-2030>
  - <https://www.bam.com/en/flexpaper/768849>
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  - <https://www.dsm.com/corporate/news/news-archive/2019/07-19-dsm-sets-science-based-reduction-targets-for-emissions.html>
  - <https://www.dsm.com/corporate/sustainability/climate-energy/improving-our-carbon-footprint.html>
  - <https://www.dsm.com/corporate/sustainability/managing-sustainability/stakeholder-engagement.html>
  - <https://www.dsm.com/corporate/sustainability/managing-sustainability.html>
- 20. ASN bank – committed, Banks, Diverse Financials, Insurance
  - <https://www.asnbank.nl/over-asn-bank/duurzaamheid/klimaat/klimaatpositief-in-2030.html>
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- 21. Signify - 1.5°C target set, Electrical Equipment and Machinery
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- 22. Royal Philips - 1.5°C target set, Electrical Equipment and Machinery
  - <https://www.philips.com/a-w/about/news/archive/standard/news/press/2018/20181206-philips-sets-new-co2-emission-targets-for-the-2020-2040-period-approved-by-the-science-based-targets-initiative.html>
- 23. ABN Amro Bank N.V. – committed, Banks, Diverse Financials, Insurance

- [https://assets.ctfassets.net/1u811bvgvthc/25e8K6qdjWALQDgGYZPkka/2a5157cd17071ded3443be1c224a7c0c/ABN AMRO Bank Annual Report 2019.pdf](https://assets.ctfassets.net/1u811bvgvthc/25e8K6qdjWALQDgGYZPkka/2a5157cd17071ded3443be1c224a7c0c/ABN_AMRO_Bank_Annual_Report_2019.pdf)
- 24. Actiam NV – committed, Banks, Diverse Financials, Insurance
  - <https://www.actiam.com/4a6332/siteassets/perspectives/20200915-klimaatambities-climate-ambitions/actiam-perspective---paris-based-climate-ambitions.-whos-going-to-win-the-maillot-jaune.pdf>
- 25. Koninklijke KPN NV - 1.5°C target set, Telecommunication Services
  - <https://www.overons.kpn.nl/nieuws/2017/kpn-treedt-toe-tot-internationaal-science-based-targets-initiative>
  - [https://ir.kpn.com/download/companies/koninkpnnv/Results/Integrated\\_Annual\\_Report\\_2019.pdf](https://ir.kpn.com/download/companies/koninkpnnv/Results/Integrated_Annual_Report_2019.pdf)
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  - <https://sciencebasedtargets.org/blog/why-eneco-set-a-science-based-target#:~:text=That's%20why%20as%20an%20energy,to%20below%20%20degrees%20celsius.>
  - <https://yearreport2019.eneco.com/wp-content/uploads//2020/03/Eneco-Group-Annual-Report-2019-1.pdf>
- 27. ING Group – committed, Banks, Diverse Financials, Insurance
  - <https://www.ing.com/Sustainability/Sustainability-direction/Climate-action.htm>  
<https://www.ing.com/MediaEditPage/2019-ING-Terra-progress-report.htm>

## Appendix 2: survey questions

1. What are the reasons that made your company decide to join the science-based targets?
2. On a scale of 0 to 5, to what extent did coercive pressures from governmental bodies play a role in the adoption of science-based targets? (+ add a short explanation for your score)
3. On a scale of 0 to 5, to what extent did market pressures from competition and industry associations play a role in the adoption of science-based targets? (+ add a short explanation for your score)
4. On a scale of 0 to 5, to what extent did social/market pressure from customers play a role in the adoption of science-based targets? (+ add a short explanation for your score)
5. On a scale of 0 to 5, to what extent did social pressure from NGO's and media play a role in the adoption of science-based targets? (+ add a short explanation for your score)
6. On a scale of 0 to 5, to what extent did internal pressures from employees, managers and shareholders play a role in the adoption of science-based targets? (+ add a short explanation for your score)
7. With the above questions in mind: who notices the pressures exerted by the various stakeholders and how are those translated into action?
8. Which other influences or pressures also played a role in the adoption of science-based targets? (For example: partnerships, previously set goals etc.)

## Appendix 3: interview questions

### General questions

- Why have the SBTs been adopted?
- What is your company's reasons for engaging with sustainability?

### Question relating to coercive pressures

- What has the pressure from the government and other governmental bodies been on your company from a sustainability perspective?
- On a scale of 0 to 5, to what extent did governmental pressures play a role in the adoption of the SBTs? → can you explain your score?
  - o If no SBTs: to what extent did governmental pressures play a role in altering the environmental strategy?
- Have (recent) legislations or policies adopted by the government led to new challenges within your corporation?
  - o If so, then how?
- Who picked up the pressure and what did they do with it?

### Questions relating to market pressures

- On a scale of 0 to 5, to what extent did market pressures play a role in the adoption of the SBTs? → can you explain your score?
  - o If no SBTs: to what extent did market pressures play a role in altering the environmental strategy?
- (if applicable) Before adopting the SBTs, were there other companies that are competitors who had already adopted them?

### Questions relating to social pressures

- Have pressures from the 'social environmental' in which the company operates affected the decision to adopt the SBTs? (i.e. lawsuits for environmental reasons, NGO pressure, media coverage?)
  - o If so how?
- On a scale of 0 to 5, to what extent did social pressures play a role in the adoption of the SBTs? → can you explain your score?
  - o If no SBTs: to what extent did social pressures play a role in altering the environmental strategy?

### Questions relating to internal pressures:

- Have the views of (sustainability) management affected the adoption of the SBTs?
  - o If so to what extent?
- On a scale of 0 to 5, to what extent did internal pressures play a role in the adoption of the SBTs? → can you explain your score?

- If no SBTs: to what extent did internal pressures play a role in altering the environmental strategy?

Questions about the science-based targets/other targets

- What targets did your company have before the SBTs?
- Are there pressure that persist, even after adoption of the SBTs, to ensure that adequate progress is made towards the targets?
- Were there any pressures that are experienced and not mentioned in the interview?