The impact of hybrid goal intensity on firm financial performance: an empirical analysis of S&P 500 firms

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Chapter 1: Introduction

From prior research, we know that organizational goals are a crucial factor in organizational behaviour. In line with its conceptualization, which can be summarized as desired outcomes to guide action and judge performance on (Kotlar et al., 2018), goals affect organizational behaviour through two mechanisms. By setting desired organizational outcomes to guide action, goals influence how resources are allocated (Aguilera et al., 2024). At the same time, by comparing realized outcomes with desired outcomes, goals affect organizational risk-taking: managers generally take greater risks when goal performance falls below aspiration levels (the desired performance on a goal variable; performance below the aspiration level is seen as a problem), but become more risk-averse when goal performance comes closer to survival points (the minimum performance level that the organization should achieve to avoid the risk of (or actual) organizational failure) (Gaba & Greve, 2019).

Organizations almost always pursue multiple goals simultaneously (Meyer, 2003). An example of goals that can be conflicting are financial goals and social goals (Battilana et al., 2022). When organizations pursue both social goals (with the objective to advance the well-being of people, communities, and societies (Stevens et al., 2015)) and financial goals (with the underlying intention of profit maximization (Kotlar et al., 2018)) concurrently, it is referred to as organizations with '*hybrid goals*' (Abootorabi et al., 2024). Other related terms that indicate that both financial and social goals are pursued include ESG goals (Environmental, Social, and Governance goals) (Lee & Raschke, 2023), goals related to corporate social behaviour (CSP) (Hyun et al., 2023) or 'hybrid organizations' (Shepherd et al., 2019). In addition, Shepherd et al. (2019) argue that within hybrid organizations, an important distinction should be made between hybrid relativity (the way in which the economic and social logic are balanced relative to each other) and hybrid intensity (the absolute measurement regarding how strong the social and economic logic is held within an organization).

Hybrid goals have become increasingly important in today's business environment for several key reasons. Regulations like the EU's Green Deal require companies to disclose their environmental and social impacts (European Commission, n.d.), incentivizing the adoption of hybrid goals to promote transparency and accountability. Stakeholders, including customers, employees, and investors, more often demand that companies contribute positively to society (Battilana et al., 2022). Additionally, although the literature is divided, there appear to be indications that corporate social behaviour has a positive effect on organizational performance. Companies themselves can also have the moral will to be better for the environment and society.

Despite the existing knowledge about organizational goals, our understanding of hybrid goals remains incomplete (Mair et al., 2015; Nason et al., 2018; Quelin et al., 2017). This lack of insight can result in ineffective strategies, both in business and politics, causing economic performance and social impact to conflict rather than complement each other. Recent research indicates that merely the presence of hybrid goals has a positive effect on organizational performance (Abootorabi et al., 2024). However, the specific characteristics of these goals, such as the hybrid intensity, have not been thoroughly investigated. For instance, it is unclear whether the amount of social goals pursued also plays a relevant role in organizational performance. Additionally, it remains to be explored how this relationship varies under different circumstances. For example, do hybrid goals have a different impact in various environmental conditions characterized by industry munificence (accessibility to resources that create opportunities), dynamism (instability and uncertainty), and complexity (diversity in the environment that generates information load to process) (Dess & Beard, 1984)?

The growing societal and political consensus that organizations need to address social issues (Deloitte, 2019; Mudaliar & Dithrich, 2019) makes understanding hybrid goals increasingly urgent. Information about how social and financial goals can be profitably combined is essential for organizations feeling institutional pressure and for institutions aiming to create profitable business cases for socially responsible behaviour. Insight into the relationship between hybrid goals and organizational performance is a crucial first step towards this understanding.

To address this serious concern, this current paper builds on the suggestion of Abootorabi et al. (2024) and Battilana et al. (2022) by not just investigating the presence of hybrid goals, but specifically examining how the degree of *hybrid goal intensity* affects the financial aspect of organizational performance. For this study, I define hybrid goal intensity as *the strength with which the organizational goals of a firm reflect a social logic within that firm*. Furthermore, considering prior research showing that industry-related characteristics influence organizations, this study will investigate how the effect of hybrid goal intensity on firm financial performance is moderated by the external condition of industry dynamism.

Therefore, the research question of this thesis is the following:

"To what extent does hybrid goal intensity affect firm financial performance, and how does industry dynamism moderate this relationship?"

In summary, this research aims to contribute to both theory and practice by adding to the current limited knowledge about the effects of hybrid goals. This information can help firms manage the pressure for socially responsible operations and assist institutions in promoting business practices that consider social aspects, ultimately contributing to a sustainable future.

This paper will proceed as follows. First, a theoretical framework will be outlined in Chapter 2, leading to hypothesis development. The methodology chapter (Chapter 3) then explains how the research was conducted, and the results of the research will be shown in Chapter 4. Finally, Chapter 5 will reflect on the theoretical and practical contributions of this research.

Chapter 2: Theory

2.1: Background information

The concept of financial performance

Within the concept of financial performance, three types of measures can be distinguished: market-based measures, accounting-based measures and perception-based measures (Tehrani & Noubary, 2005). *Market based measures* are measures that show the market's reaction to a specific company, and reflect the long-term and future performance of organizations (Amit & Livnat, 1988; Baysinger & Hoskisson, 1989). Examples of market based measures are market index return and daily stock market return. *Accounting-based measures*, on the other hand, operationalize performance based on accounting numbers, that indicate the book value of the selected data. These performance measurements are most popular in strategic management literature, although critics warn for possible biases in the data. For example because of managerial manipulation (Rowe & Morrow, 1999; Watts & Zimmerman, 1990). Examples are variables as return on investment, return on equity and return on sales (Tehrani & Noubary, 2005). *Perception-based* measurements are measurements based on the managers judgement of the financial position of the firm (Capron, 1999; Lumpkin & Dess, 1995). Critics warn for possible inaccurate information in perception-based measurements because of biases or lack of knowledge by the managers (Phillips, 1981; Venkatraman & Grant, 1986).

Antecedents of financial performance

Various antecedents of the financial performance of organizations are known in the scientific literature. Daily and Johnson (1997) show that aspects of CEO power, such as structural power (e.g., CEO duality, board composition), ownership power (e.g. equity ownership), prestige power (e.g., service on other boards), and expert power (e.g., functional breath) are significant antecedents of firm financial performance, and that the relationship between CEO power and performance is reciprocal. But also a firm’s market orientation (Kirca, 2011) and absorptive capacity (Kostopoulos et al., 2011) are known antecedents. The study of Kirca (2011) indicates that multinational corporations (MNCs) with a robust market orientation (emphasizing the integration and coordination of marketing efforts to meet customer needs) experience improved financial performance. This improvement comes from the firms' enhanced ability to effectively gather, share, and act on market intelligence. This relationship is mediated by improvements in customer relationship performance, encompassing customer satisfaction, retention, and product/service quality. Additionally, the study underscores that the benefits of market orientation are stronger in environments characterized by high turbulence and competitive industry. Kostopoulos et al. (2011) find that a firm's absorptive capacity (its ability to acquire, assimilate, and utilize knew knowledge) positively impacts its innovation performance, which mediates the relationship between absorptive capacity and financial performance. Research has also been conducted into how pursuing more than just financial goals can influence financial performance. Lee and Raschke (2023) find that higher ESG (environment, social and governance) performance directly improves firm financial performance. Hyun et al. (2023) researched the effects of corporate social performance for CSP leaders (firms with CSP performance above the industry average) and CSP laggards (firms with CSP performance below the industry average). Their results indicate that CSP laggards experience more severe financial penalties compared to the gains enjoyed by CSP leaders for similar deviations from the industry average. And, in addition, the financial benefits of exceeding CSP expectations diminish over time, indicating that continued CSP efforts beyond a certain point yield lesser incremental financial gains. For CSP laggards this diminishing effect was not observed.

An important factor that impact the mechanism's regarding financial performance, are environmental conditions. A widely used framework to depict continuous environmental conditions (instead of shock situations) is that of Dess and Beard (1984), including munificence (degree of accessibility to resources create opportunities), complexity (the diversity in the environment that generates information load for organizations to process) and dynamism (the amount of changes that create instability and uncertainty) of an organizational environment (Luo & Shinkle, 2024). Particular dynamism has a significant impact on performance. Firms operating in highly dynamic environments must continuously adapt and innovate to maintain their competitive edge and financial success. Dess and Beard (1984) emphasize that industry dynamism creates instability and uncertainty, requiring firms to develop strong adaptive capabilities to thrive. Additionally, Candi et al. (2019) demonstrate that innovation with a social intent positively influences customer acceptance, particularly in markets characterized by high turbulence.

Organizational goals

Goals are desired organizational outcomes to guide action and judge performance, and can vary on their goal content (financial or non-financial, with an internal and or external source) and their goal attributes (difficulty, novelty, specificity and duration) (Kotlar et al., 2018). Examples of financially oriented goals are maximizing profitability (Baardman et al., 2019; Gaba & Greve, 2019), firm's growth (Gaba & Joseph, 2013; Opper et al., 2017), innovation (Tyler & Caner, 2016) and operational efficiency (Canales, 2014; Savva et al., 2019). Non-financial goals are goals without a directly financial underlying orientation. For example transparency, participation, trust, timely feedback and outcome orientation (Gong et al., 2013). Another category within non-financial goals, are social goals. Social goals are goals that have the underlying intention to provide 'social value', which broadly can be defined as goals with the objective to advance the well-being of people, communities and societies (Stevens et al., 2015). For example, goals to contribute to employee well-being, goals regarding helping suppliers out of poverty, or goals regarding eco-friendly production (Battilana et al., 2022).

Organizations almost always pursue multiple goals simultaneously (Meyer, 2003). Known conflicting goals are goals to meet the needs of stakeholders versus the needs of the company, goals for exploration versus goals for exploitation, and goals to create social value versus economic value (Rozentale & van Baalen, 2021). When organizations pursue both social and financial goals concurrently, it is referred to as organizations with 'hybrid goals' (Abootorabi et al., 2024).

Antecedents and consequences of organizational goals

The literature identifies various antecedents of organizational goals (Kotlar et al., 2018). At the individual and group levels of analysis, goals are formulated through bargaining among individuals who often form coalitions to pursue their objectives. Organizational factors also influence goals, as organizations differ in terms of size, industrial sector, and the composition of upper echelons. These differences lead to the pursuit of goals that align with the specific needs arising from their unique characteristics. Additionally, institutional factors, such as industry norms and economic conditions, affect organizational goals. Institutional factors influence goals through adaptations aimed at maintaining legitimacy. All these antecedents are shaped by the organizational context.

There are multiple reasons why organizations pursue multiple goals simultaneously. Obloj and Sengul (2020) argue that if a particular aspiration is set as an organizational goal, the likelihood of achieving that goal increases. Organizations may pursue multiple goals to enhance performance in different areas, thus setting goals for both domains. However, their findings also indicate that the probability of improvement diminishes as the number of simultaneously pursued goals increases. Another explanation for the pursuit of diverse goals is stakeholder pressure. As Kotlar et al. (2018) note, antecedents of organizational goals include forces exerted by individuals through bargaining and groups through group salience. When different individuals and groups possess the power to influence organizational goals, and they prioritize different issues, this results in the establishment of various goals. A third reason for the simultaneous pursuit of multiple goals is legislative requirements. If companies are legally obligated to achieve certain goals, they must include these in their targets. Consequently, companies might have to pursue goals that do not align with their internal priorities but are forced by external regulations.

Known outcomes of organizational goals include their impact on individual-level factors such as motivation, commitment, and performance indicators, including task performance, organizational citizenship behaviour, and creativity, often driven by incentives and rewards. Similar effects are observed at the group level. At the organizational level, goals influence behaviour by guiding actions towards desired outcomes. When performance falls below set goals, organizations adapt through strategic and operational changes, such as launching new products, expanding into new markets, engaging in mergers and acquisitions, and increasing research and development efforts (Kotlar et al., 2018).

Pursuing different goals simultaneously can also affect organizational performance. The pursuit of multiple goals can be synergistic, as Abootorabi et al. (2024) demonstrated with hybrid goals. Possible explanations for this synergy include the positive impact of hybrid goals on employee motivation and commitment (Mitchell & Silver, 1990), collaborations with stakeholders (Birkinshaw et al., 2014; Spieth et al., 2019; Stephan et al., 2019), customer acceptance (Candi et al., 2019; Spieth et al., 2019), and customer willingness to pay for products and services (Servaes & Tamayo, 2013). However, multiple goals can also conflict when the pursuit of one goal hinders the achievement of others (Cohen, 1984). For instance, goals may compete for scarce resources such as attention or funding, or some goals may not directly contribute to organizational survival, thereby competing with those that do. Additionally, goals may not be equally intrinsically motivating (Latham & Pinder, 2005). In the context of organizations with hybrid goals, prioritizing financial objectives might conflict with the desires of social stakeholders, while focusing on social goals could clash with shareholder interests (Battilana & Dorado, 2010; Hahn et al., 2015).

Dealing with multiple goals

Organizations must deal different goals that are pursued simultaneously. Greve (2008) distinguishes three ways in which pursuing different goals simultaneously can influence decision makers in organizations. They can have a separate and independent effect on decision makers behaviour, called the *parsimonious model*. When decision makers shift attention between goals and thus pursuit one goal at a time, this is called the *sequential attention model*. The last model is called the *activation model*. When this is the case, performance on a first goal is positively related to a second goal, resulting in that decision makers pursue one goal more vigorously when another is not met. Research shows that when performance on multiple conflicting goals that have similar priority are below aspirations, the extent to which the various goals contribute to the survival of the organization determines which goals decision makers focus on (Gaba & Greve, 2019). In organizations that work with dangerous technologies, this mechanism will be even stronger, because the pursuit of safety is associated closely with firm survival.

Candi et al. (2019) show that firms are more pushed to focus more on social dimensions by their stakeholders than by their competitive environment. The findings also indicate that innovation including ‘social intent’ is positively related with customer acceptance, and that this relationship is partially mediated by perceived market turbulence.

Annosi et al. (2024) find that sustainability managers deal with conflicting goals, such as sustainability and financial goals, by performing brokering behaviour (the behavioural mechanisms by which organizational members influence the relationships of others). By connecting the right people with each other, skills are transferred helping to combine multiple goals successfully. They perform this both internal (to create connections within the firm) as external to (to build connection with other organizations).

D'Adderio (2014) shows that organizations use communities (for knowledge transfer) and artifacts (reflecting the knowledge and assumptions of the communities) to create and maintain co-existing routines for conflicting pressures, allowing the offsetting competing goals and related forces.

Ethiraj and Levinthal (2009) find that when organizations pursue multiple correlated performance goals, this can lead to a “performance freeze”, because making one specific decision can affect multiple performance goals, and when a decision improves performance on one performance goal but has a negative effect on one or more other goals this freezes managerial action (called the status quo trap). They find that this problem already occurs in simple organizations (with limited internal interdependencies), and becomes even stronger in complex organizations (with a lot of internal interdependencies). They suggest that organizations can mitigate this problem through strategies like myopia (focusing on a single goal or a subset of goals), spatial differentiation (dividing goals among departments) and temporal differentiation (periodically shifting goal focus) and thus improve organizational performance.

According to Rozentale and van Baalen (2021) managers use integrating strategies (searching for solutions that deal with conflicting goals simultaneously) and differentiation strategies (spatial or temporal separations to deal with conflicting goals). The four integrating strategies found are *focusing on singles* ("making such decisions that only entail choosing a single aspect to focus the organizational attention and resources to", p.10), *niche combinations* ("making decisions so that the solution originates from uniting the best aspects of both poles of the paradox internally to the organization", p.10), *complementarities* ("making decisions so that the solution involves integrating actors, resources, or structures external to the organization", p.10) and *flexibility* ("instead of focusing on the specific single decisions, awareness of both paradoxical goals is created, yet the decision-making is reactive and customized, depending on the specific problem at hand", p.10). The three founded differentiation strategies are *cross-subsidization* ("making decisions so that dual, parallel systems are crated, where separate actors, resources or structures cater for each of the paradoxical goal separately though shifting over time or in space", p.7), *differentiation through scale* ("making decisions so that the number of available work, employees, resources or structures is increased so that the likelihood that the totality of them caters for all the paradoxical goals increase", p.7) and *modularity* ("making decisions so that the solutions consists of several actors, resources or structures that are organized in a formal system where each part fulfils to the requirements of one of the poles yes can be rearranged and called into action depending on the specific situation", p.7).

Salvato and Rerup (2018) explored how organizations balance conflicting goals through routine regulation. They identify three regulatory actions the enactment of conflicting goals: *splicing* (actions to decide how a subset of routine actions is alternatively recombined as needed), *activating* (actions to decide how a subset of routine actions is activated when needed) and *repressing* (actions to decide how a subset of routine actions is deactivated when they are not needed). These measures enable flexible reorganization of tasks, active involvement of participants, and the ability to discontinue irrelevant activities. This establishes a dynamic balance that helps organizations handle conflicts between goals efficiently.

Aligning the phenomena of hybrid goals with theory

The theoretical foundation to legitimize the financial effect of hybrid goals is institutional theory. *Institutional theory* (Dimaggio & Powell, 1983) emphasizes the role of legitimacy for organizations, which broadly can defined as the level of cultural support an organization receives, or the extent to which established cultural narratives justify its existence, operations, and authority (Meyer & Scott, 1983). Three types of legitimacy are distinguished (Panwar et al., 2014): pragmatic legitimacy (actions are justified because it benefits the entity itself), cognitive legitimacy (actions are justified because of a societal understanding of inevitability and necessity) and normative legitimacy (actions are seen as moral, and thus justified). Research has showed that positive legitimacy perceptions can be beneficial for organizations because it can contribute to investors appeal (Pollock & Rindova, 2003), loyalty of individuals (Tyler, 2006), and it can create buffers against variation in stock prices (Bansal & Clelland, 2004). In the past, businesses have typically gained acceptance and respect by contributing to the economy through actions like offering necessary goods and services, creating employment opportunities, paying taxes, and adhering to relevant laws and regulations. However, with the rise of various social and environmental challenges (Donaldson & Preston, 1995; Freeman, 2022), organizations may no longer achieve legitimacy by singularly focusing on economic performance. Instead, organizations are expected to address social and environment concerns alongside financial performance (Roper, 2005). So, this perspective can legitimize the presence of hybrid goals based on the urge of decision makers to create legitimacy by aligning with the social norm, namely paying more attention to social aspects. At the same time, this theory suggests that legitimacy has a positive effect on organizational performance, providing a basis for hypothesis about the effects of hybrid goals.

2.2: Hypothesis development

I argue that firms that pursue hybrid goals more intensely exhibit better financial performance compared to those that pursue hybrid goals less intensely, based on several theoretical and empirical foundations.

At the individual level, employees are more likely to feel engaged and valued when they perceive their organisation as contributing positively to social causes in addition to achieving financial success (Mitchell & Silver, 1990). Heighted engagement can lead to improved individual performance, which can lead to higher organizational performance.

With regard to the external environment of the firm, firms that pursuit more hybrid goals tend to develop stronger relationships with stakeholders, including suppliers, customers and the community (Birkinshaw et al., 2014; Spieth et al., 2019; Stephan et al., 2019). These improved relationships can drive financial performance through increased customer loyalty, better terms with suppliers, and enhanced community support. A more intense pursuit of social goals alongside financial objectives can also lead to higher customer acceptance and willingness to pay for the firm's products or services (Candi et al., 2019; Servaes & Tamayo, 2013).

Related research on ESG performance and CSP provides support for the positive financial impact of hybrid goals. Lee and Raschke (2023) found that higher ESG performance improves firm financial performance. Similarly, Hyun et al. (2023) observed that CSP leaders, with higher CSP performance compared to the industry average, benefit financially, although the returns may diminish over time. Because organizational goals are an important antecedent of organizational behaviour (Kotlar et al., 2018), a similar effect would be plausible between organizational goals and financial performance.

From an institutional theory perspective (Dimaggio & Powell, 1983; Meyer & Rowan, 1977), it could be argued that firms that more intensely pursue hybrid goals and thus aligning with the social norm in current day gain greater legitimacy, which can attract investors, enhance customer loyalty and stabilize stock prices (Bansal & Clelland, 2004; Pollock & Rindova, 2003).

H1: *firms with higher hybrid goal intensity exhibit better financial performance compared to firms with lower hybrid goal intensity.*

In addition, I argue that this relationship of this hypothesis is moderated by the degree of industry dynamism. Industry dynamism (Dess & Beard, 1984) refers to the rate of change and uncertainty within an industry, which can significantly impact a firm's strategic decisions and performance outcomes.

The main empirical foundation for this hypothesis comes from notion that strong stakeholder relationships and customer acceptance are vital for firms operating in dynamic industries, and that hybrid goal intensity helps in this relationships (Birkinshaw et al., 2014; Spieth et al., 2019; Stephan et al., 2019). Furthermore, Candi et al. (2019) demonstrate that innovation with a social intent positively influences customer acceptance, particularly in markets characterized by high turbulence. This suggests that firms in dynamic industries benefit more from intensely pursuing hybrid goals as it helps in building stronger customer and stakeholder relationships, which in turn enhances financial performance.

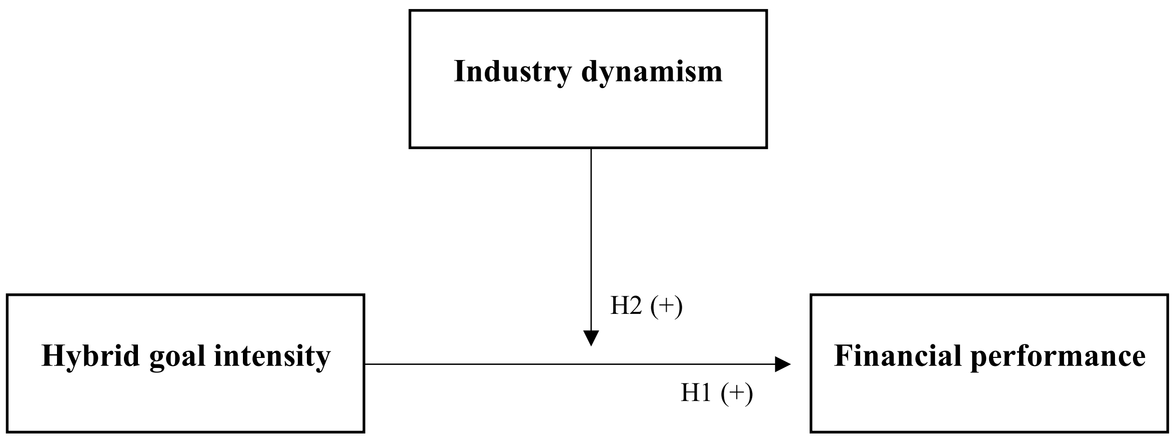
From an institutional perspective (Dimaggio & Powell, 1983; Meyer & Rowan, 1977), I argue that gaining legitimacy through hybrid goals can provide a competitive advantage, especially in dynamic industries where societal expectations and norms are constantly evolving.

By maintaining or enhancing legitimacy by aligning to social norms, firms can attract investors and stabilize their market position, and thereby improve their financial performance. Pollock and Rindova (2003) further suggest that positive legitimacy perceptions can buffer firms against market fluctuations, which is particularly beneficial in dynamic industries.

H2: *the relationship between hybrid goal intensity and firm financial performance is moderated by industry dynamism.*

2.3: Conceptual model

This current research will investigate the relationship between hybrid goal intensity and firm financial performance (hypothesis 1) and the possible moderating effect of industry dynamism (hypothesis 2), as shown in the conceptual model below.



Chapter 3: Methodology

3.1: Research setting

The S&P 500 was used to gather a sample of firms. This renowned index includes America's 500 largest companies (deGiro, n.d.) and covers approximately 80% of the available market capitalization (S&PGlobal, n.d.). The index is thus regarded as a suitable representative of the American economy and is deemed appropriate for this research. Three criteria were used to compile an appropriate dataset: the data must be available, it must be recent, and it must be minimally influenced by significant external pressures. A major recent development impacting the global economy is the COVID-19 pandemic (Schaeffer, 2023). COVID-19 was discovered at the end of 2019, and at the beginning of 2020 it was declared a global pandemic (World Health Organization, n.d.). With these criteria in mind, to test the relationship between hybrid goal intensity and firm financial performance, data for the independent variables was gathered for the year 2017. For the dependent variable, return on assets, data was gathered for T+1 (2018), considering the time required for effects to manifest.

3.2: Data collection

To conduct the proposed research, data on multiple organizational variables are required: data regarding social goals (for the independent variable), financial data (for the dependent variable), various control variables, and a variable capturing to the degree of dynamism. To obtain the necessary data, several databases were consulted: LSEG Workspace, Compustat, and Orbis Intellectual Property (Orbis IP). Ultimately, data were extracted only from LSEG Workspace and Orbis IP. Both LSEG Workspace and Orbis IP are considered reliable and suitable (Radboud University, n.d.), with LSEG Workspace combining economic, financial and other business information from numerous sources worldwide, and Orbis IP combining company information with patent data.

3.3: Measures

Dependent variable: financial performance

For this paper, the variable used to capture financial performance is return on assets (ROA). This aligns with common practices in strategic management literature as well as goal-setting literature (Gaba & Greve, 2019; Richard et al., 2009). Return on assets is defined as "the ratio of net operating profit to the firm's start-of-year assets recorded on its balance sheet" (Richard et al., 2009, p. 729).

Independent variable: hybrid goal intensity

The concept of 'hybrid goal intensity' is defined as the strength with which the organizational goals of a firm reflect a social logic within that firm. I capture this reflection of the social logic in organizational goals by examining how many types of social goals firms publicly commit to. The LSEG database distinguishes six different types of social goals and tracks whether companies are pursuing these goals. It differentiates between social goals related to emission reduction, fossil fuel divestment, water efficiency, energy efficiency, resource efficiency, and diversity & equal opportunities (table 1).

It is notable that the overarching themes are sustainability and equality, while other social themes, such as local community contributions, are not included. To maintain the reliability of the research and the robustness of the results, I decided to specify as much as possible. Since five of the six themes are sustainability-related, the study focuses specifically on these and excludes the sixth type of goal. This decision accounts for the potential differing impacts of implementing environmental goals versus equality goals or other types of social goals.

In short, hybrid goal intensity is operationalized as the number of environmental-oriented goals pursued. The measurement involves summing the number of pursued goals, allowing companies to achieve a hybrid goal intensity score ranging from 0 (when none of the social goals are pursued) to 5 (when all five types of social goals are pursued). A higher score indicates greater hybrid goal intensity.

Table 1: social goal variables

Different types of social goals
1. Has the company set targets or objectives to be achieved on **emission reduction**?
2. Has the company set targets or objectives to have public commitment on **Fossil Fuel Divestment**?
3. Has the company set targets or objectives to be achieved on **water efficiency**?
4. Has the company set targets or objectives to be achieved on **energy efficiency**?
5. Does the company set specific objectives to be achieved on **resource efficiency**?
6. Has the company set targets or objectives to be achieved on **diversity and equal opportunity**?

Moderator variables: dynamism

To capture dynamism, the variable '*stock volatility'* is used, because market share instability, a form of dynamism, contributes to the volatility of stock prices (Mazzucato & Semmler, 1999). This variable captures the annual price movement of a firm's stock to a high and a low from an average price for each year (London Stock Exchange Group, n.d.), at firm level. To obtain a more representative view of dynamism, a five-year average of stock volatility is taken, encompassing the previous five years. A higher value of average stock volatility indicates greater dynamism.

Control variables: size, leverage, patents filed and industry

The control variables are based on existing scientific studies examining the effects of Corporate Social Performance (CSP) and Corporate Financial Performance (CFP), such as the study of Brower and Dacin (2020). This research is considered suitable because it explores the impact of a social element (in their case, social behaviour) on financial performance. To isolate this relationship as effectively as possible, the study accounts for other factors influencing the relationship between social and financial elements. Based on their research, four variables were identified as important control variables in the regression model: firm size, financial leverage, number of patents filed, and industry.

It is important to control for firm *size* because larger firms often face lower risks (Flammer, 2015; Oikonomou et al., 2012) and encounter greater pressure from external stakeholders to contribute to social dimensions (Brower & Mahajan, 2013; Udayasankar, 2008).

Financial *leverage* is influential because high ratios of financial leverage are associated with increased risk, as these firms may find it more difficult to meet creditor demands, thereby threatening their viability (Flammer, 2015; Oikonomou et al., 2012; Perrault & Quinn, 2018).

Research and development (R&D) expenditures are influential because they drive innovation and are shown to be significant determinants of financial performance (Choi & Wang, 2009). However, data on R&D expenditures proved to be very limited, with both the LSEG database and Compustat having over 50% missing values. Removing observations with missing values on this variable would result in a sample size that is too small, and because the number of missing values exceeds 50%, the data is not suitable for imputation (Hair et al., 2019). R&D expenses are often used as a measure of innovation, typically expressed as R&D intensity (R&D expenses divided by the company's turnover). An alternative measure of innovation is the number of patents (Bellstam et al., 2021; Ketchen et al., 2013). Although there is criticism regarding the use of proxies, including patents as a measure (Ketchen et al., 2013), I consider it necessary for this study to partially compensate for the lack of R&D data. The data on patents was sourced from Orbis Intellectual Property, with only 24.5% missing data, making it a significant improvement over the R&D expenses data and suitable for imputation (Hair et al., 2019).

Table 2: missing values R&D expenditures (2017)

Database	Variable	Valid	Missing	% missing
LSEG	R&D expenses 2017	233	270	53.7%
COMPUSTAT	R&D expenses 2017	209	294	58.4%

The fourth control variable is *industry*, because different industries come with different competitive environments (Brower & Dacin, 2020). The industry is classified using ICB (Industry Classification Benchmark) industry codes. Eleven different industries are distinguished, each with its own code (in brackets): technology (10), telecommunications (15), health care (20), financials (30), real estate (35), consumer discretionary (40), consumer staples (45), industrials (50), basic materials (55), energy (60), and utilities (65).

Table 3: variables included in the analysis

Construct	Variable	Operationalization	Measurement	Source(s)
Hybrid goal intensity	Hybrid goal intensity (newly made)	Amount of different types of social goals that are pursuit in a specific year	Ratio	Lseg
Firm financial performance	Return on assets (existing)	the ratio of net operating profit to the firm's start-of-year assets recorded on the balance sheet in a specific year	Ratio	Lseg
Firm size	Number of employees (existing)	Total number of fulltime and parttime employees in a specific year	Ratio	Lseg
Firm leverage	Firm leverage (existing)	long-term debt divided by common equity in a specific year	Ratio	Lseg
Patents filed	Patents filed (existing)	Amount of patents filed in a specific year	Ratio	Orbis
Industry	Industry (existing)	The industry a firm operates in according to the ICB industry code	Nominal	Lseg
Industry dynamism	Average stock volatility (newly made)	The 5 year average of stock volatility	Ratio	Lseg

3.4: Analytical approach

The goal of this thesis is to understand the relationship between hybrid goal intensity and firm financial performance, and to determine how this potential effect is moderated by industry dynamism. Regarding the primary relationship between hybrid goal intensity and firm financial performance (H1), the aim is to understand this relationship and to predict changes in the dependent variable (firm financial performance) based on changes in the independent variable (hybrid goal intensity). For this analysis, Ordinary Least Squares (OLS) regression is recommended (Builtin, 2023; Hair et al., 2019) and will be performed using the statistical software SPSS.

After gathering the data, the output from the five goal-related variables was recoded. The original output, consisting of 'N' (if an organization does not pursue the goal) or 'Y' (if the organization does pursue the goal), was replaced by '0' and '1', respectively. The variable type was then set to 'numeric', and the measure to scale. A hybrid goal intensity variable was subsequently created by summing the values of the goal-related variables, allowing for values ranging from 0 to 5.

For the categorical variable industry, dummy variables were created for each category. In the analysis, the category with the highest frequency was used as the reference category and excluded from the analysis.

Additionally, an *average stock volatility* variable was created, taking the average stock volatility over the past five years. This approach provides a more representative picture of stock volatility, reflecting the dynamism in the industry in which a specific company from the sample operates.

To analyse the potential moderating effect of industry dynamism (H2), a moderator term was formed by multiplying the hybrid goal intensity variable by the average stock volatility variable, capturing the average stock volatility over the past five years. Both variables were mean-centred.

Chapter 4: results

4.1: Descriptive statistics

Descriptive statistics

As mentioned in Chapter Three, a hybrid goal intensity variable is created to capture the degree of hybridity by summing the number of types of environmental goals that a firm pursues. In the original sample before imputations, 480 out of the 503 firms provided a valid score for the created variable. These missing values could be addressed through imputation; however, the only feasible scores for this variable are zero, one, two, three, four, five, or six. If missing values were imputed on the independent variables, for example by the expectation-maximization method, this would result in scores that fall outside the valid range.

Because a sample of 480 firms is still considered sufficiently representative of the full population of 503 firms, the firms with missing values on hybrid goal intensity were excluded from the analysis.

From the sample of 480 companies, nearly half did not pursue any of the five types of goals, thus scoring a 0. The second-largest group pursued three of the five types of goals, followed by the group that pursued four goals, as can be seen in table 5. Within the sample, most firms belong to the 'industrials' industry, followed by consumer discretionary, financials, technology, and healthcare. Because the 'industrials' category has the highest frequency, it is chosen as the reference category in the analysis.

Preliminary examination of the data

Before including variables in any analysis, they should be independently tested for normal distribution (Hair et al., 2019). To test for normal distribution, descriptive statistics were consulted. With a suggested limit for skewness and kurtosis of 1.960 and -1.960 (Hair et al., 2019), the data on the variables *Return on Assets*, *Size*, *Leverage*, and *Patents Filed* were found to be not normally distributed, as shown in Appendix A1. For all these variables, it was checked whether skewness and kurtosis could be resolved by applying logarithmic and square root transformations (Hair et al., 2019). For the *Return on Assets* variable, the square root transformation was the most suitable. For the other non-normally distributed variables, the logarithmic transformation was considered the best fit.

Except for the kurtosis of the *Leverage* variable, all variables now comply with the principle of skewness and kurtosis between -1.960 and 1.960. Although the kurtosis for Leverage is still above this range with a value of 8.164, it was retained because if the square root transformation had been performed instead of a logarithmic transformation, the kurtosis would have been even higher, with a value of 13.087 instead of the current 8.395. In addition, I consulted a methodology teacher at Radboud University. He confirmed that, although the methodological responsibility always lies with myself (!) and he has no substantive insight into my thesis, kurtosis does not always have to be problematic as long as the skewness is sufficient (personal communication, June 10, 2024). For these reasons, I carefully made the methodological choice to consider the kurtosis for *Leverage* sufficient.

Missing values

After performing the transformations, a missing value analysis was conducted, including Little's MCAR test to assess the randomness of the data. The results are shown in table 8 . Little's MCAR test was significant with a p-value of 0.000, indicating that the missing values can be considered missing at random rather than missing completely at random. Most of the variables have less than 10% missing data, which according to Hair et al. (2019) is "acceptable and amenable to any imputation strategy" (p.62). However, for variables with missing values exceeding the 10% threshold, a specific imputation method suitable for data missing at random must be selected. The expectation-maximization (EM) imputation is appropriate for both data missing at random and data completely at random (Hair et al., 2019) and was therefore chosen. The EM imputation was performed using SPSS software, creating a new dataset with the imputed values. At this point, no missing values remained.

Table 4: descriptive statistics

Variable	Mean	S.D.	Minimum	Maximum	N
Hybrid goal intensity	1.473	1.646	0.000	5.00	480
Return on assets[a]	8.684	7.462	-10.030	55.030	480
Size[a]	52515.210	129899.186	20.000	2300000.0000	466
Leverage[a]	59.365	671.240	-10961.670	3131.550	480
Patents filed[a]	1064.850	2649.817	1	22703	364
Industry		*See industry frequency table*			480
Average stock volatility	22.250	6.758	11.190	46.780	431

Total sample = 480 firms
[a] actual values used in descriptive statistics; transformations and imputations are used in correlations and regressions due to missing values and variable skewness

Table 5: frequencies hybrid goal intensity

Score on hybrid goal intensity	N	Percent
0	229	47.7%
1	63	13.1%
2	10	2.1%
3	90	18.8%
4	86	17.9%
5	2	0.4%

Total sample = 480 firms

Table 6: frequencies industry

Industry	ICB code	N	Percent
Technology	10	59	12.3%
Telecommunications	15	10	2.1%
Healthcare	20	53	11.0%
Financials	30	59	12.3%
Real estate	35	31	6.5%
Consumer discretionary	40	73	15.2%
Consumer staples	45	33	6.9%
Industrials	50	88	18.3%
Basic materials	55	18	3.8%
Energy	60	24	5.0%
Utilities	65	32	6.7%

Total sample = 480 firms

Table 7: Pearson correlations and significance

		1	2	3	4	5	6
1	Hybrid goal intensity	1.000					
2	Return on assets[a]	-0.068	1.000				
3	Size[a]	0.303**	0.021	1.000			
4	Leverage[a]	0.159**	-0.173**	0.142**	1.000		
5	Patents filed[a]	0.258**	0.165**	0.439**	-0.001	1.000	
6	Average stock volatility	-0.164**	0.038	-0.158**	-0.117*	0.025	1.000

$**p \leq 0.01$; $*p \leq 0.05$

[a] *actual values used in descriptive statistics; logarithm was used in correlations and regressions due to variable skewness*

Table 8: missing values before imputation

Variable	N	Count missing	Percent missing
Hybrid goal intensity	480	0	0.0%
Return on assets	466	14	2.9%
Size	466	14	2.9%
Leverage	440	40	8.3%
Patents filed	364	116	24.2%
Industry	480	0	0.0%
Average stock volatility	431	49	10.2%

Total sample = 480
Little's MCAR test: Chi-Square = 181.065, DF = 62, Sig. = 0.000

Outliers

Potential outliers were identified using Z-scores. In datasets with more than 80 observations, any data points with Z-scores exceeding +/- 4 are considered outliers (Hair et al., 2019). In the outlier analysis, one outlier was identified for *Return on assets*, with a Z-score of 4.130. Additionally, one outlier was identified for *Size*, with a Z-score of -4.367. For *Leverage*, four outliers were identified, with Z-scores of -6.608, -5.781, -5.145, and -4.724. Although it is crucial to acknowledge these outliers, I adhere to the guidelines proposed by Hair et al. (2019), retaining the outliers unless there is demonstrable evidence proving they are not representative of any population observation.

Univariate assumptions

Hair et al. (2019) state that before a regression analysis can be performed, the variables must be independently tested for normal distribution, homoscedasticity, and linearity. To ensure normal distributions of the variables, skewness and kurtosis statistics were rechecked after the expectation-maximization imputation. As shown in appendix A1, the imputation did not cause any changes in the skewness and kurtosis values that required additional transformations. Therefore, the variables are still considered to be normally distributed.

A visual analysis was performed to test all the metric variables for homoscedasticity and linearity. For this purpose, scatterplots were created, comparing each independent variable separately to the dependent variable, as shown in appendix A2. For all variables, the distance between the fit line and the values is mostly (except for some outliers) relatively equal above and below the fit line, indicating sufficient homoscedasticity. However, it can also be concluded from the scatterplots that the values for the variables *Size* and *Leverage* are more concentrated than those for *Patents Filed* and *Average Stock Volatility*. Regarding linearity, none of the scatterplots reveal any apparent nonlinear patterns, making additional transformations unnecessary.

Multivariate assumptions

After independently testing the assumptions for the included variables, a regression analysis was performed, and the regression assumptions were checked. For multiple regression analysis, these assumptions include normality, constant variance of error terms (homoscedasticity), linearity of the phenomenon, and independence of the error terms (Hair et al., 2019). To assess normality, a normal probability plot was utilized (appendix A3). If the line representing the actual data distribution closely aligns with the diagonal, the distribution is considered normal (Hair et al., 2019). Upon examining the plot, this condition is deemed to be met.

The constant variance of error terms, linearity of the phenomenon, and independence of error terms were examined through a residual plot, which can also be seen in appendix A3. The plot shows a relatively equal spread of the residuals of the predicted values, although there are some outliers. Nevertheless, homoscedasticity is considered sufficient. The plot shows no obvious non-linear patterns, suggesting that the relationship between the independent and dependent variables is fairly linear. Additionally, there appears to be independence of error terms, as no clear pattern or structure is visible, indicating that the residuals are independent of each other.

4.2: Hypothesis and results

Table 9 shows the result of the performed regression analysis. In the first model, only the control variables are included: *Size*, *Leverage*, *Patents filed*, and 10 of the 11 dummy variables for industry. The overall model is significant, with an F-value of 13.044 and a p-value of 0.000, explaining 24.6% of the variability in the dependent variable, adjusted for the number of predictors. Size and leverage are significant with unstandardized Beta coefficients of -0.264 and -0.304, while patents filed is not significant. Regarding the different industries, only for the industries financials (B = -1.245), real estate (B = -0.839), consumer discretionary (B = 0.385), energy (B = -0.908), and utilities (B = -0.971), significance is found, indicating that compared to the reference category (industrials), being in these significant industries has a significant impact on the independent variable.

In model 2, the main effect of the independent variable, *hybrid goal intensity*, is added. Although the overall model is significant, explaining 24.9% of the variability with an F-value of 12.338 and a p-value of 0.000, the hybrid goal intensity variable indicates no significance with a p-value of 0.111. This result indicates that hypothesis 1, which suggested a positive effect of hybrid goal intensity on financial performance, is rejected. A small change occurred with regard to the significance of control variables, with patents filed also indicating significance in this second model, with an unstandardized Beta coefficient of 0.134.

In model 3, the main effect of the moderator variable, *stock volatility*, is added. The overall model is significant, with an F-value of 12.220 and a p-value of 0.000, explaining 26.0% of the variability in the dependent variable. The added stock volatility variable is significant with an unstandardized Beta coefficient of -0.023, indicating that average stock volatility independently has a direct effect on the return on assets. The hybrid goal intensity variable remains non-significant. There are no changes regarding significance in the control variables compared to model 2.

Finally, in the fourth model, the interaction term of hybrid goal intensity and average stock volatility is added. The variables are therefore mean-centred. The overall model is tested significant, with an F-value of 11.475, a p-value of 0.000, and explaining 25.9% of the variance. As expected from the results in model 2, with hybrid goal intensity being non-significant, the interaction variable in model 4 is also not significant. Because of this non-significance, hypothesis 2 is rejected.

All variables and models are tested for multicollinearity using the variance inflation factor (VIF) statistic (appendix A4). An often-used threshold for the variance inflation factor is 10 (Hair et al., 2019). For all variables, the VIF statistic was between 1 and 2.5, which is considered sufficient.

Table 9: regression results predicting the return on assets

	Return on assets			
Variable	Model 1	Model 2	Model 3	Model 4
Size	-0.264**	-0.233**	-0.300***	-0.310***
	(0.085)	(0.087)	(0.090)	(0.090)
Leverage	-0.304***	-0.295***	-0.292***	-0.286**
	(0.091)	(0.091)	(0.090)	(0.090)
Patents filed	0.109	0.134*	0.136*	0.140*
	(0.059)	(0.061)	(0.060)	(0.060)
Technology (D)	0.087	0.087	0.164	0.161
	(0.166)	(0.165)	(0.166)	(0.167)
Telecommunications (D)	-0.462	-0.468	-0.415	-0.392
	(0.324)	(0.323)	(0.321)	(0.323)
Healthcare (D)	-0.319	-0.318	-0.326	-0.321
	(0.170)	(0.169)	(0.168)	(0.168)
Financials (D)	-1.245***	-1.225***	-1.227***	-1.238***
	(0.169)	(0.169)	(0.168)	(0.169)
Real estate (D)	-0.839***	-0.748**	-0.844***	-0.856***
	(0.242)	(0.248)	(0.249)	(0.249)
Consumer discretionary (D)	0.385*	0.397*	0.509**	0.518**
	(0.166)	(0.166)	(0.170)	(0.170)
Consumer staples (D)	0.100	0.186	0.073	0.113
	(0.201)	(0.207)	(0.210)	(0.216)
Basic materials (D)	-0.124	-0.082	-0.051	-0.041
	(0.252)	(0.252)	(0.251)	(0.251)
Energy (D)	-0.908***	-0.915***	-0.844***	-0.833***
	(0.228)	(0.228)	(0.228)	(0.228)
Utilities (D)	-0.971***	-0.904***	-1.085***	-1.084***
	(0.219)	(0.223)	(0.230)	(0.230)
Hybrid goal intensity		-0.050	-0.049	-0.049
		(0.031)	(0.031)	(0.031)
Average stock volatility			-0.023**	-0.023**
			(0.008)	(0.008)
Goal hyb. * av. stock vol.				0.004
				(0.005)
Constant	4,593***	4,449***	5,228***	5,257***
	(0.368)	(0.378)	(0.466)	(0.467)
Adjusted R^2	0.246	0.249	0.260	0.259
F	13.044***	12.338***	12.220***	11.475***

N = 480
**** p ≤ 0.001; **p ≤ 0.01; *p ≤ 0.05*

4.3: Additional analysis

To assess the accuracy of the independent variable, *hybrid goal intensity*, two additional analysis were conducted. The first analysis examined whether the results remained consistent when evaluated within a different temporal context. The second analysis utilized dummy variables to test the different categories within hybrid goal intensity.

Testing the independent variable for T-2

A new measurement was established to capture the degree of hybrid goal intensity in the year 2015, aimed at predicting the return on assets in 2016. Additionally, a new metric was created to capture the average stock volatility by averaging the data from the years 2011, 2012, 2013, 2014, and 2015. Prior to analysis, firms with missing values for the *hybrid goal intensity* variable in 2015 were excluded to maintain the integrity of the measurement for the independent variable, resulting in a final sample of 469 firms

In the preliminary examination, the variables *Return on Assets*, *Size*, *Leverage*, and *Patents Filed* were found to be non-normally distributed. Both logarithmic and square root transformations were evaluated, resulting in the same transformations being applied as in the main analysis. The results of the transformations are shown in appendix B2.

Following the preliminary examination, a missing value analysis was conducted. The results are presented in table 10. The missing values were again found to be missing at random, and expectation-maximisation imputation was performed once more.

With a threshold of Z-scores of +/- 4, one outlier is identified for *size* with a Z-score of -4.361, and five outliers are identified for *leverage*, with Z-scores of -6.681, -5.216, -4.649,-4.423 and -4.135.

After the imputation, the data maintained a normal distribution (see Appendix B2), exhibited sufficient homoscedasticity and no specific non-linear patterns were identified, indicating linearity (see appendix B3).

The regression was performed with industrials again serving as the reference category for industry, as it was the most represented industry. After running the regression, the normality plot indicated no issues regarding normality and examination of the residual plot revealed that homoscedasticity, linearity, and independence of error terms were sufficient (see appendix B4).

Table 10: missing values for T-2

Variable	N	Count missing	Percent missing
Hybrid goal intensity	469	0	0.0%
Return on assets	424	45	9.6%
Size	455	14	3.0%
Leverage	426	43	9.2%
Patents filed	354	115	24.5%
Industry	469	0	0.0%
Average stock volatility	421	48	10.2%

Total sample = 469
Little's MCAR test: Chi-Square = 197.936, DF = 66, Sig. = 0.000

The results of the analysis for T-2 are presented in appendix B5. All four models were significant, with explained variances of 25.8%, 25.7%, 30.3%, and 30.5%. The independent variable, *hybrid goal intensity*, and the interaction term were not significant in any of the models, whereas *average stock volatility* was significant. This is consistent with the findings of the original analysis. Regarding the control variables, the only difference was that the variable *patents filed r*emained non-significant in the additional analysis. The VIF statistic for each variable (appendix B6) remained below 2.5, indicating that multicollinearity is not an issue.

Additional analysis with dummies for goal variables

To check whether there is a difference between the goal-related variables in the potential effect on financial performance, a regression was run with goal-related dummies. In order to maintain the integrity of the independent variable and considering that the missing values for the goal-related variables are well below 10%, which according to Hair et al. can be ignored, it was decided not to address the missing values for these variables, thus fully preserving the population of 503 firms.

To achieve a normal distribution of the individual variables, the same approaches as in the main analysis and the additional analysis for T-2 were sufficient, as can be seen in appendix C2 .

For the *Return on assets variable*, one outlier is identified with a Z-score of 4.098. For the *size* variable also one outlier is identified, with a Z-score of 04.426. For *Leverage*, four outliers are detected with Z-scores of -6.636, -5.805, -5.167 and -4.743.

Table 11: missing values for analysis with goal-related dummies

Variable	N	Count missing	Percent missing
Emission-related goal	481	22	4.4%
Fossil fuel-related goal	480	23	4.6%
Water-related goal	481	22	4.4
Energy-related goal	481	22	4.4%
Resources-related goal	487	16	3.2%
Return on assets	479	24	4.8%
Size	476	27	5.4%
Leverage	449	54	10.7%
Patents filed	380	123	24.5%
Industry	503	0	0.0%
Average stock volatility	437	66	13.1%

Total sample = 503
Little's MCAR test: CHI-SQUARE = 256.685, DF = 161, Sig. = 0.000

Again, to keep the independent variable as clean as possible, no imputation method is used on the goal related dummies. For the other variables, the expectation-maximization imputation is used. Again, all univariate and multivariate assumptions are checked and considered sufficient (see appendix C2, C3 and C4). Because the goal-related variable on emission was most pursued, this variable is used as the reference category.

For the regression, the dummies are mean centred for the interaction terms. The results of the regression with dummies are shown in appendix C5. None of the dummy variables for the goal-related variables indicate significance. This implies that having one of the four dummy goals or the emission-reduction goal (the reference category) makes no significant difference in the return on assets. This finding is consistent with previous results, which suggest that hybrid goal intensity has no significant effect on financial performance.

Multicollinearity is for this regression higher than the previous regressions but all below the 10.0 threshold (Hair et al., 2019), except for the fossil fuel related variable and the interaction term including the fossil fuel dummy. However, the VIF value on this variable (488) can be explained by the fact that almost every observation had the same value (0, not pursuing the goal) on this variable. Therefore, this is not seen as a problem that requires further action.

Chapter 5: Discussion

5.1: theoretical contributions

The objective of this paper was to investigate whether the degree of hybrid goal intensity, defined as the extent to which a firm's organizational goals reflect a social logic, impacts firm financial performance (H1), and whether this relationship is moderated by industry dynamism (H2). Contrary to expectations grounded in related findings and institutional theory, both the direct effect of hybrid goal intensity and the moderating effect of industry dynamism were found to be non-significant. These results lead to the rejection of both hypotheses, suggesting that the degree of hybrid goal intensity does not affect the financial performance of firms.

From an institutional perspective, several factors may account for the rejection of the first hypothesis. Firstly, additional legitimacy conferred by higher goal intensity may not translate into significant changes in financial performance. Secondly, high goal intensity might not significantly impact the perceived legitimacy of a firm. Alternatively, a combination of these factors could be at play. The non-significant results suggest that hybrid goal intensity does not positively influence financial performance, contrary to expectations. These expectations were based on anticipated benefits such as enhanced employee performance (Mitchell & Silver, 1990), improved stakeholder relationships (Birkinshaw et al., 2014; Spieth et al., 2019; Stephan et al., 2019), and increased customer loyalty (Candi et al., 2019; Servaes & Tamayo, 2013). Conversely, the lack of significant findings also implies that hybrid goal intensity does not negatively affect financial performance, despite potential conflicts of interest (Battilana & Dorado, 2010; Cohen, 1984; Hahn et al., 2015; Obloj & Sengul, 2020).

The non-significant results related to hybrid goal intensity help to explain why the tested moderation effect of industry dynamism on the relationship between hybrid goal intensity and financial performance was also non-significant. Despite industry dynamism not emerging as a significant moderator, the findings reveal that industry dynamism has a direct and significant effect on firm financial performance. This outcome aligns with organizational literature asserting that market conditions are pivotal in determining organizational performance (Dess & Beard, 1984).

Overall, this study expands upon existing theory regarding hybrid goals, and the results indicate that the degree of hybrid goal intensity does not result in a significant impact on firm financial performance. Although organizational goals are crucial antecedents of organizational behaviour, the findings of this study do not align with existing goal-related literature, which asserts that more socially responsible behaviour (i.e., ESG and CSP) leads to greater financial benefits (Hyun et al., 2023; Lee & Raschke, 2023).

Scholars can leverage these initial insights on hybrid goal intensity to further expand knowledge about hybrid goals. Additionally, the findings of this research can be used to deepen understanding of institutional theory by exploring potential explanations for the observed results. For instance, further investigation into the relationship between hybrid goal intensity and legitimacy, and the effect of legitimacy on financial performance, could provide valuable insights.

5.2: Practical contributions

This study comes with three practical contributions. Firstly, the result shows that managers should be cautious in assuming that the pursuit of more types of social goals will automatically lead to improved financial performance. Secondly, by demonstrating that pursuing multiple types of social goals (especially environmental goals) has no significant effect on firm financial performance, the study shows that there currently are still no financial incentives to integrate or exclude the pursuit of social goals in their organizational goals. If governments wants social and environmental aspects more integrated in businesses and society to achieve a sustainable future, the results should be a considered as a wake-up call to keep pushing for an institutional and economic environment in which pursuing hybrid goals more vigorously comes with financial benefits. At last, the significant impact of industry dynamism on financial performance underscores the need for firms to create strategies that enhance their adaptability and resilience to market fluctuations.

5.3: Limitations and future research

As with any study, this study also has multiple limitations. I will mention a few. With regard to the methodology, two limitations must be taken into account. Hybrid intensity is to my knowledge a relatively new concept (Shepherd et al., 2019), and has been operationalized for this research as the number of environmental orientated goals that the organisation has publicly set. However, the power and accuracy of this operationalization is still unknown. This uncertainty about the suitability of the independent variable means that the results must be interpreted very cautiously. A second limitation regarding the hybrid goal intensity operationalization used in this research is that the variables in the database used only involve social goals that are related to environmental issues. The results therefore say nothing about the effect of hybrid goal intensity on financial performance if the social goals contribute to society in other ways, such as for example by reducing poverty or stimulating a healthy lifestyle (Battilana et al., 2022). With regard to the dependent variable, financial performance is operationalized as the return on assets. Although this is a common used measurement in management literature, multiple measurements are possible that highlight different dimensions of financial performance, and all have different advantages and disadvantages (Tehrani & Noubary, 2005). This must be taken into account when interpreting the financial performance as operationalized in this study. Finally, the research used a sample of companies from the S&P 500. The S&P 500 covers the largest American public companies. This makes the results of the research limited in generalizability, for example for organizations in other countries (with other contexts) or of other sizes.

With the results of this study and its limitations in mind, I propose several suggestions for future research. Firstly, future research will need to examine multiple operationalizations of hybrid goal intensity and should assess how the concept of hybrid goal intensity can best be operationalized. In addition, the study should be replicated with different measures of organizational (financial) performance, to test if the results maintain the same. Thirdly, it should be tested if more hybrid goal intensity result in higher financial performance for different categories of firms. Lastly, I hope that this study will encourage scholars to look for ways in which institutions can make pursuing financial goals more intensely financial rewardable, to contribute to a better future for people, nature and society.

5.4: Conclusion

My research addressed two primary questions. First, it aimed to investigate the extent to which hybrid goal intensity affects firm financial performance. Contrary to expectations, the findings indicate that hybrid goal intensity, operationalized in this study as the pursuit of various types of social goals, has no significant effect on firm financial performance, measured by return on assets. The second aim was to examine how industry dynamism moderates the relationship between hybrid goal intensity and firm financial performance. Consistent with the non-significant findings for the direct effect of hybrid goal intensity, no significant moderating effect of industry dynamism, measured by average stock volatility, was observed.

Overall, although the used research method should be evaluated and the results should be interpreted with caution, the results seem to indicate that hybrid goal intensity, as operationalized in this study, does not significantly impact the return on assets for S&P 500 firms. Future research is necessary to validate the results for different operationalizations and get a more comprehensive insight into the relationship between hybrid goals and organizational performance.

Research ethics

To ensure that this research is ethically sound, I have adhered to the five principles of the NWO (2018). I complied to the honesty principle, by presenting knowledge gathered from articles honest and by referencing to the rightful author. I comply to the scrupulousness principle by anchoring the presented information and research method within scientific literature, most of it coming from journals that are considered good or top journals. In my research I reference extensively, I tried to present my line of reasoning as clear as possible and as verifiable as possible, in line with the transparency principle. This thesis is only for educational purposes and on behalf the master program Strategic Management at Radboud University. No commercial or political interests played a part in any part of this thesis, ensuring the independence of this thesis. This also complies to the responsibility principle, together with the supposed scientific and practical relevance as stated in the introduction.

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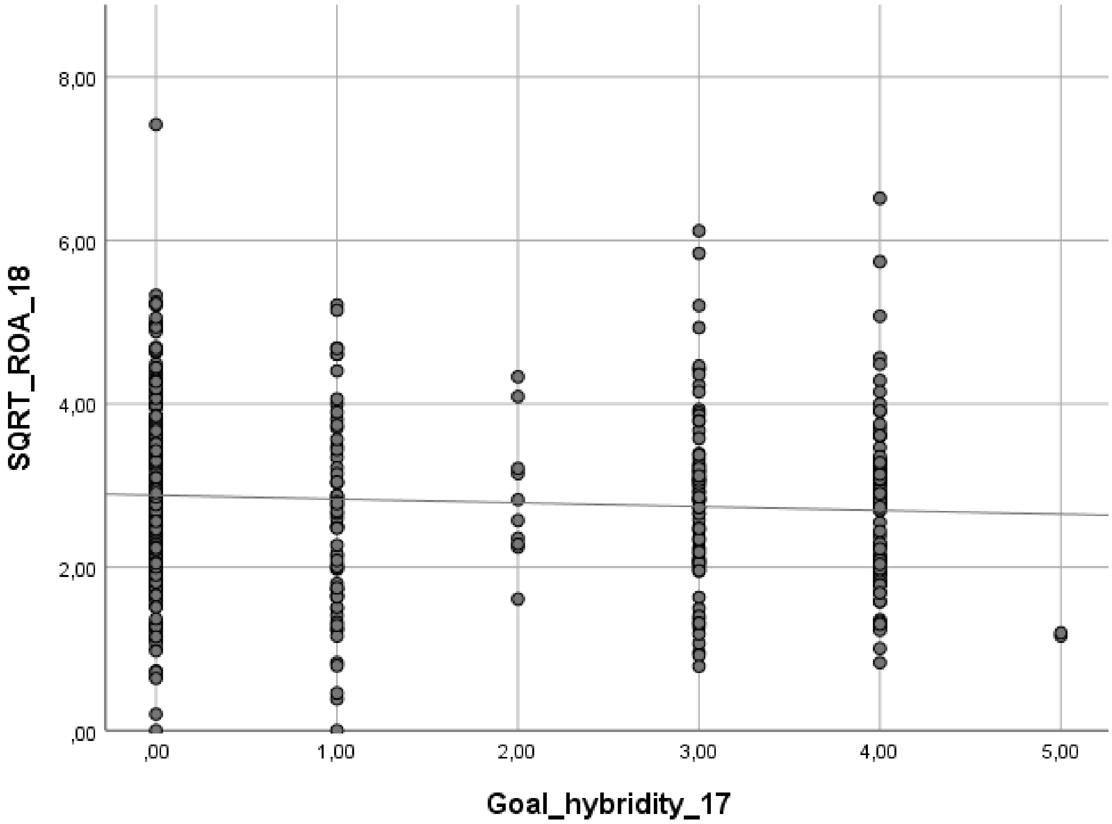
Appendix A: main analysis

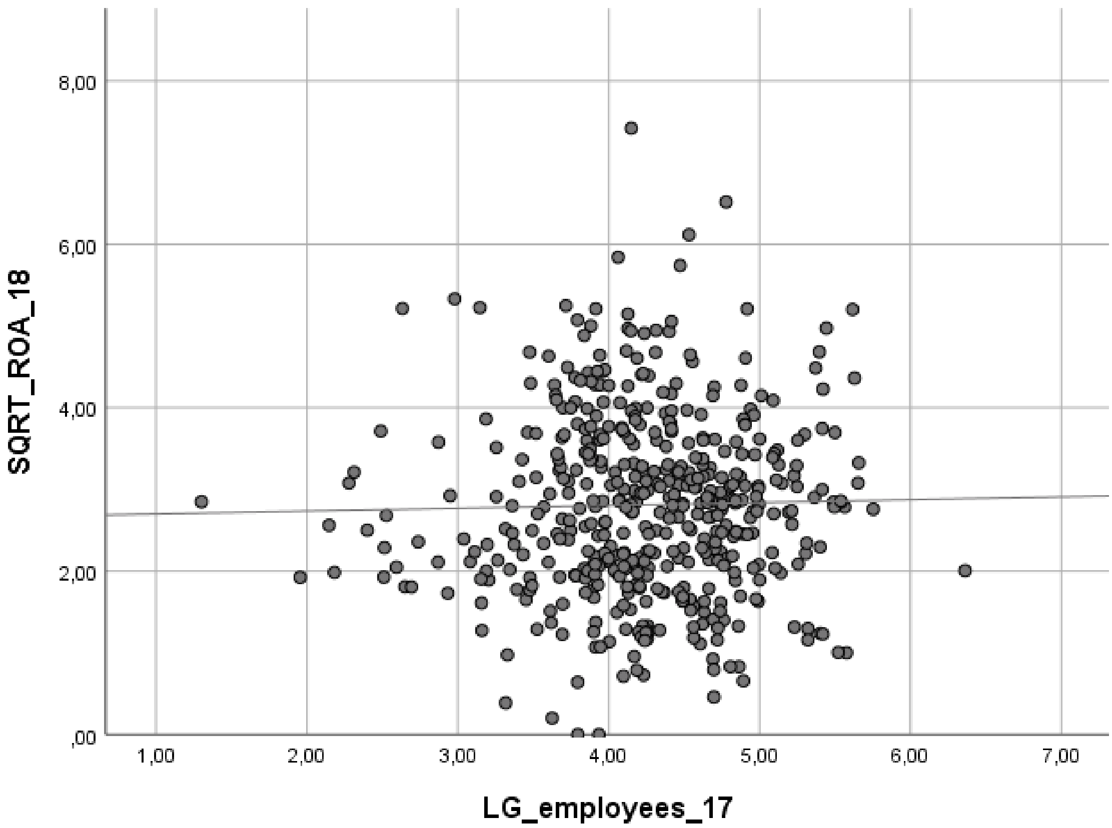
Appendix A1: normality of variables

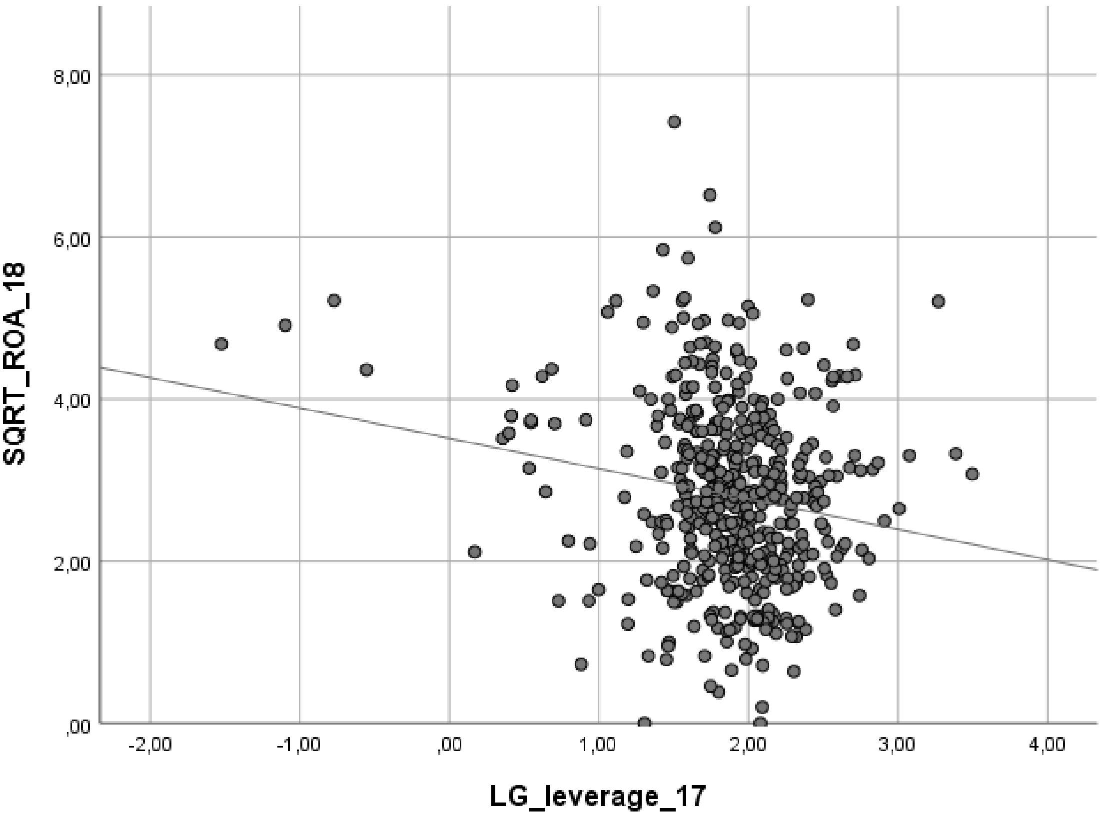
Variable	Skewness	Std. error of skewness	Kurtosis	Std. Error of kurtosis
Before transformations				
Goal_hybridity_17	0.498	0.111	-1.467	0.222
ROA_18	1.307	0.111	4.299	0.222
Emp_17	11.827	0.113	193.99	0.226
Leverage_17	-10.849	0.111	165.748	0.222
Patents_filed_17	4.77	0.128	27.052	0.255
Industry	-0.195	0.111	-0.933	0.222
Stock_volatility_average_13.17	0.910	0.118	.884	0.235
After transformations				
Goal_hybridity_17	0.498	0.111	-1.467	0.222
SQRT_ROA_18	0.413	0.113	0.311	0.226
LG_Emp_17	-0.53	0.113	1.151	0.226
LG_Leverage_17	-1.791	0.116	8.395	0.232
LG_Patents_filed_17	-0.132	0.128	-0.959	0.255
Industry	-0.195	0.111	-0.933	0.222
Stock_volatility_average_13.17	0.910	0.118	0.844	0.235
After EM imputation				
Goal_hybridity_17	0.498	0.111	-1.467	0.222
SQRT_ROA_18	0.391	0.111	0.356	0.222
LG_Emp_17	-0.513	0.111	1.177	0.222
LG_Leverage_17	-1.751	0.111	8.793	0.222
LG_Patents_filed_17	0.046	0.111	-0.882	0.222
Industry	-0.195	0.111	-0.933	0.222
Average_stock_volatility_13.17	0.832	0.111	0.918	0.222

N =480

Appendix A2: scatterplots univariate analysis



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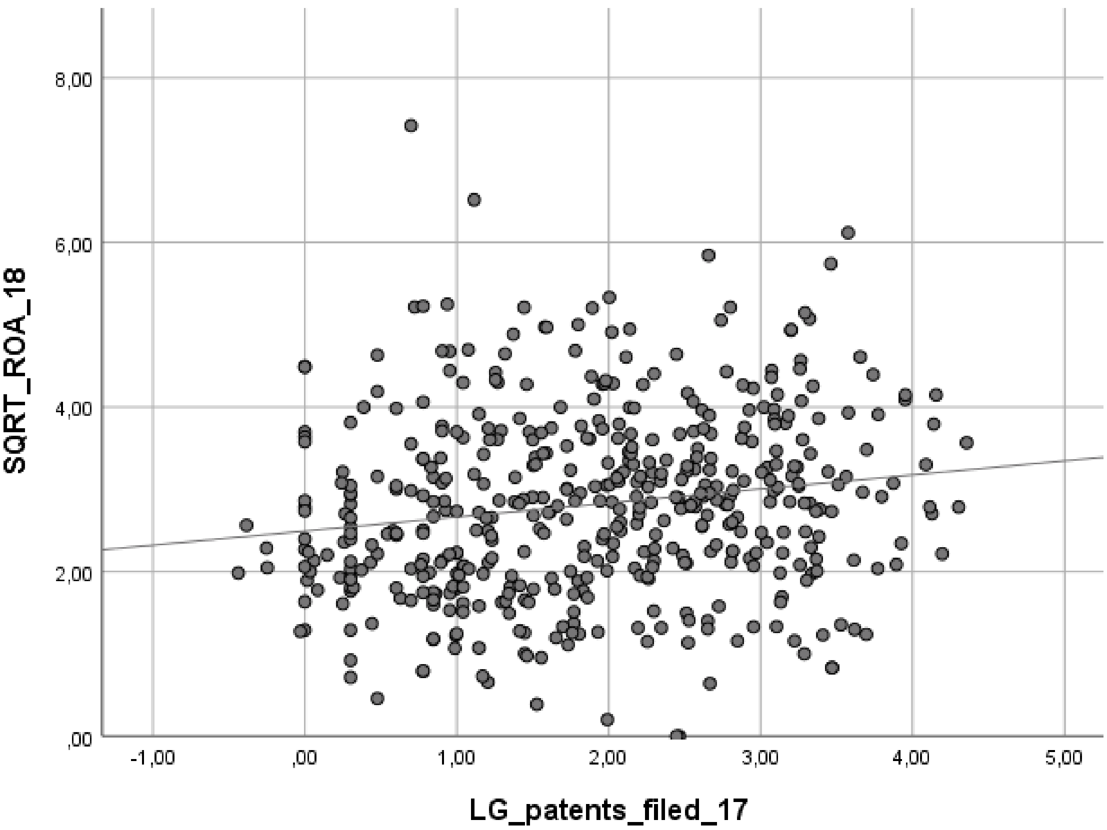
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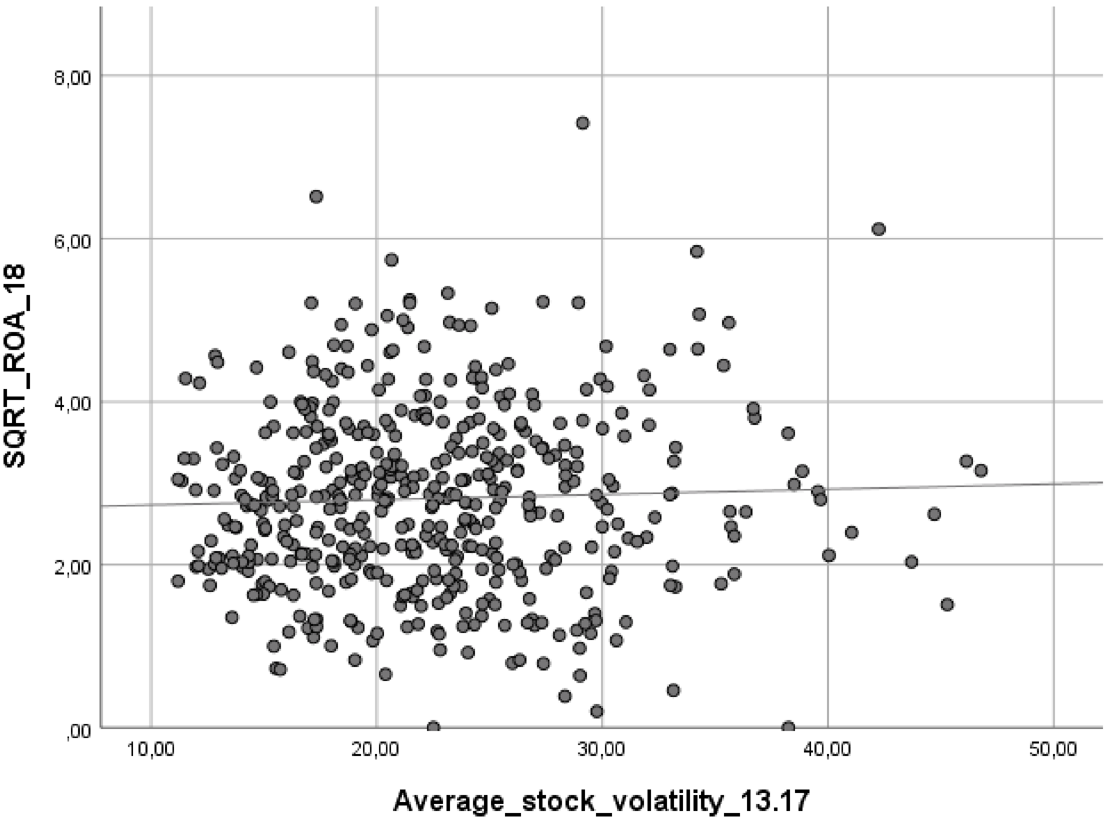
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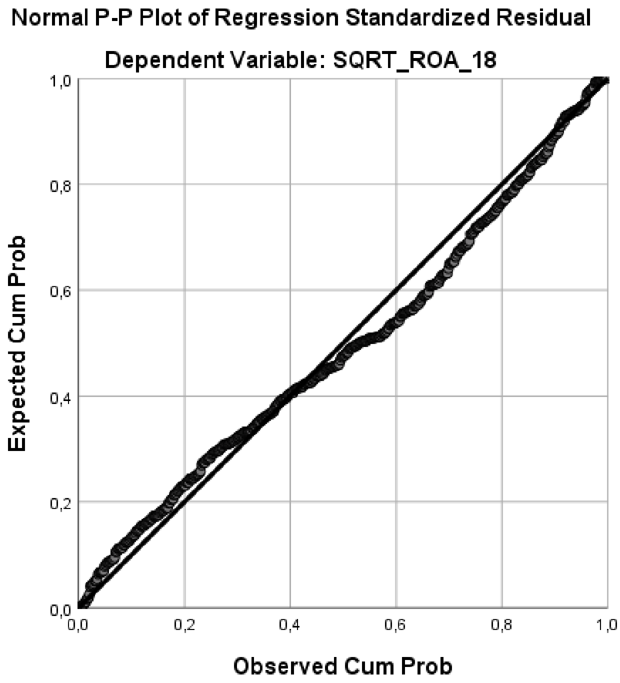
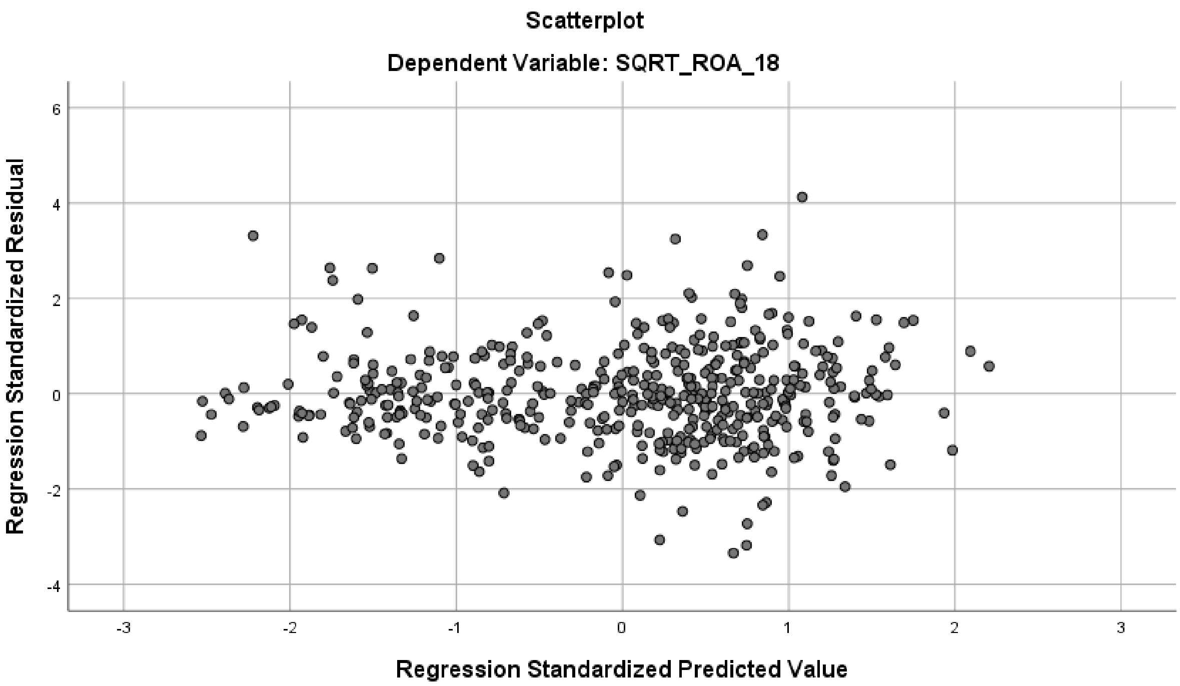
Appendix A3: plots multivariate analysis:





Appendix A4: Variance Inflation Factor

Variable	Model 1	Model 2	Model 3	Model 4
Size	1.682	1.770	1.904	1.943
Leverage	1.109	1.113	1.113	1.120
Patents filed	2.046	2.184	2.184	2.198
Technology (D)	1.515	1.515	1.557	1.558
Telecommunications (D)	1.093	1.093	1.097	1.106
Healthcare (D)	1.448	1.448	1.448	1.451
Financials (D)	1.581	1.589	1.589	1.600
Real estate (D)	1.810	1.909	1.945	1.952
Consumer discretionary (D)	1.825	1.829	1.934	1.943
Consumer staples (D)	1.322	1.415	1.468	1.553
Basic materials (D)	1.169	1.181	1.184	1.186
Energy (D)	1.266	1.267	1.282	1.287
Utilities (D)	1.532	1.587	1.720	1.720
Hybrid goal intensity		1.318	1.318	1.318
Average stock volatility			1.440	1.440
Goal hyb. * av. stock vol.				1.148

Appendix B: additional analysis with T-2

Appendix B1: frequencies

Degree of hybrid goal intensity	N	Percent
0	235	50.1%
1	52	11.1%
2	16	3.4%
3	78	16.6%
4	88	18.8%
5	0	0.0%

Total sample = 469 firms

Industry	ICB code	N	Percent
Technology	10	57	12.2%
Telecommunications	15	8	1.7%
Healthcare	20	54	11.5%
Financials	30	60	12.8%
Real estate	35	29	6.2%
Consumer discretionary	40	70	14.9%
Consumer staples	45	33	7.0%
Industrials	50	86	18.3%
Basic materials	55	18	3.8%
Energy	60	23	4.9%
Utilities	65	31	6.6%

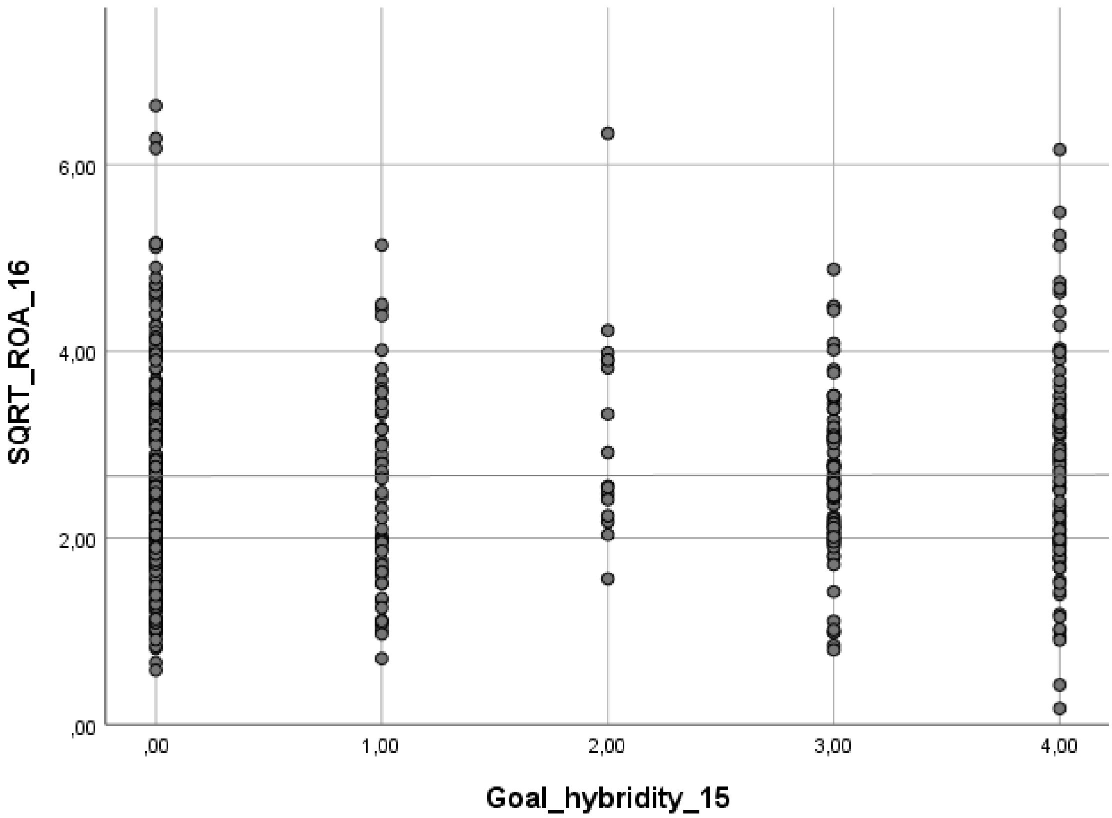
Total sample = 469 firms

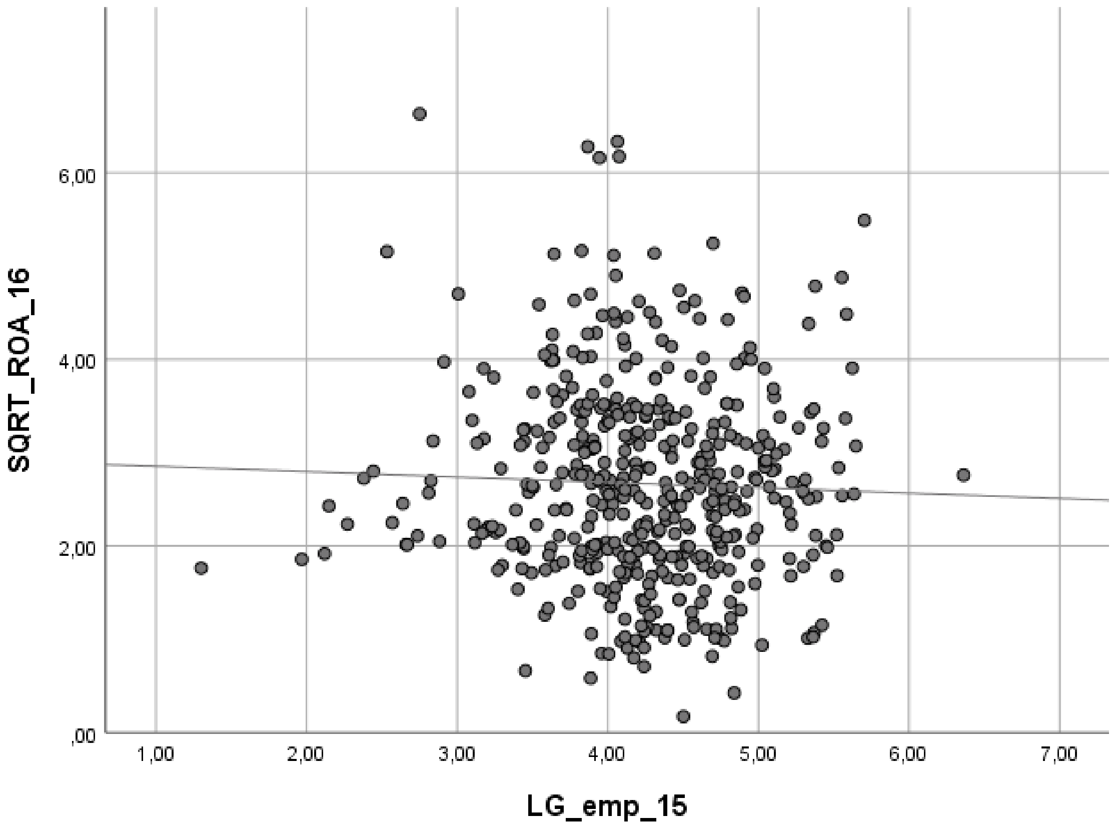
Appendix B2: normality of variables for T-2

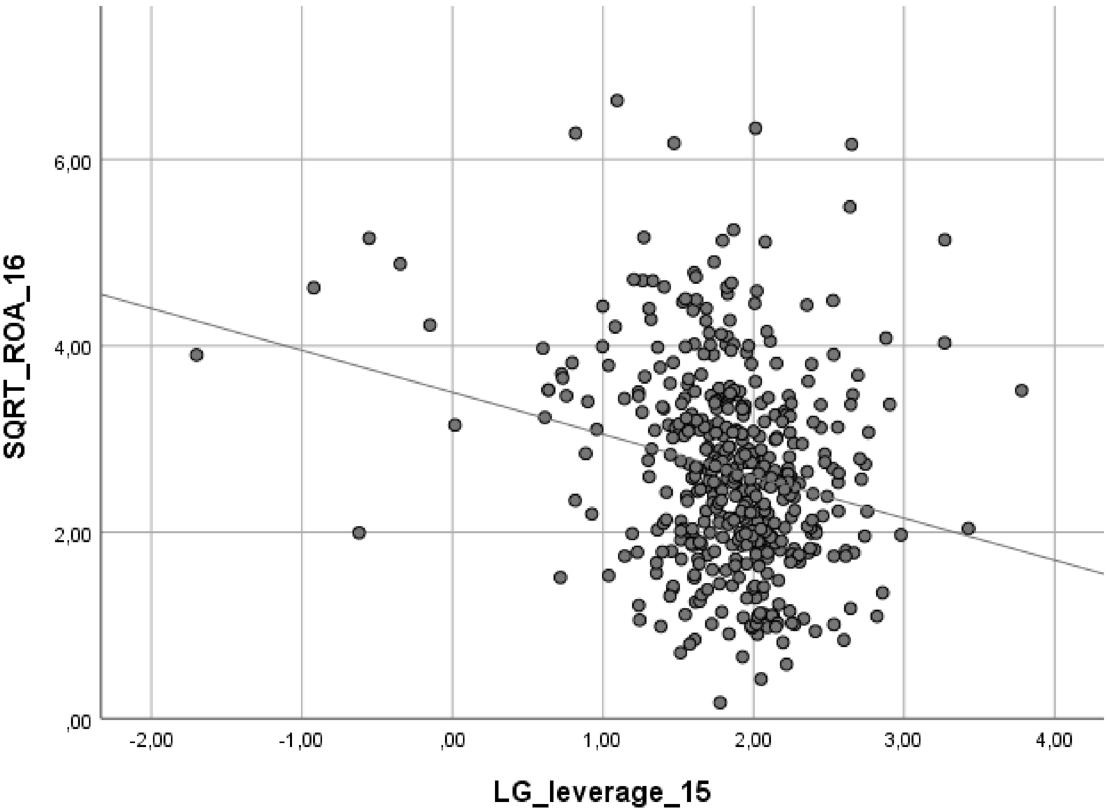
Variable	Skewness	Std. error of skewness	Kurtosis	Std. Error of kurtosis
Before transformations				
Goal_hybridity_15	0.535	0.113	-1.457	0.225
ROA_16	0.732	0.113	3.747	0.225
Emp_15	11.887	0.114	195.055	0.228
Leverage_15	-20.716	0.113	441.382	0.225
Patents_filed_15	5.154	0.130	33.498	0.259
Industry	-0.190	0.113	-0.930	0.225
Stock_volatility_average_11.15	0.785	0.119	0.454	0.237
After transformations				
Goal_hybridity_15	0.535	0.113	-1.457	0.225
SQRT_ROA_16	0.568	0.119	0.493	0.237
LG_Emp_15	-0.447	0.114	1.047	0.228
LG_Leverage_15	-1.606	0.118	7.990	0.236
LG_Patents_filed_15	-0.190	0.130	-0.847	0.259
Industry	-0.190	0.113	-0.930	0.225
Stock_volatility_average_11.15	0.785	0.119	0.454	0.237
After EM imputation				
Goal_hybridity_15	0.535	0.113	-1.457	0.225
SQRT_ROA_16	0.612	0.113	0.634	0.225
LG_Emp_15	-0.433	0.113	1.088	0.225
LG_Leverage_15	-1.540	0.113	8.243	0.225
LG_Patents_filed_15	0.038	0.113	-0.856	0.225
Industry	-0.190	0.113	-0.930	0.225
Stock_volatility_average_11.15	0.699	0.113	0.443	0.225

N = 469

Appendix B3: scatterplots univariate analysis







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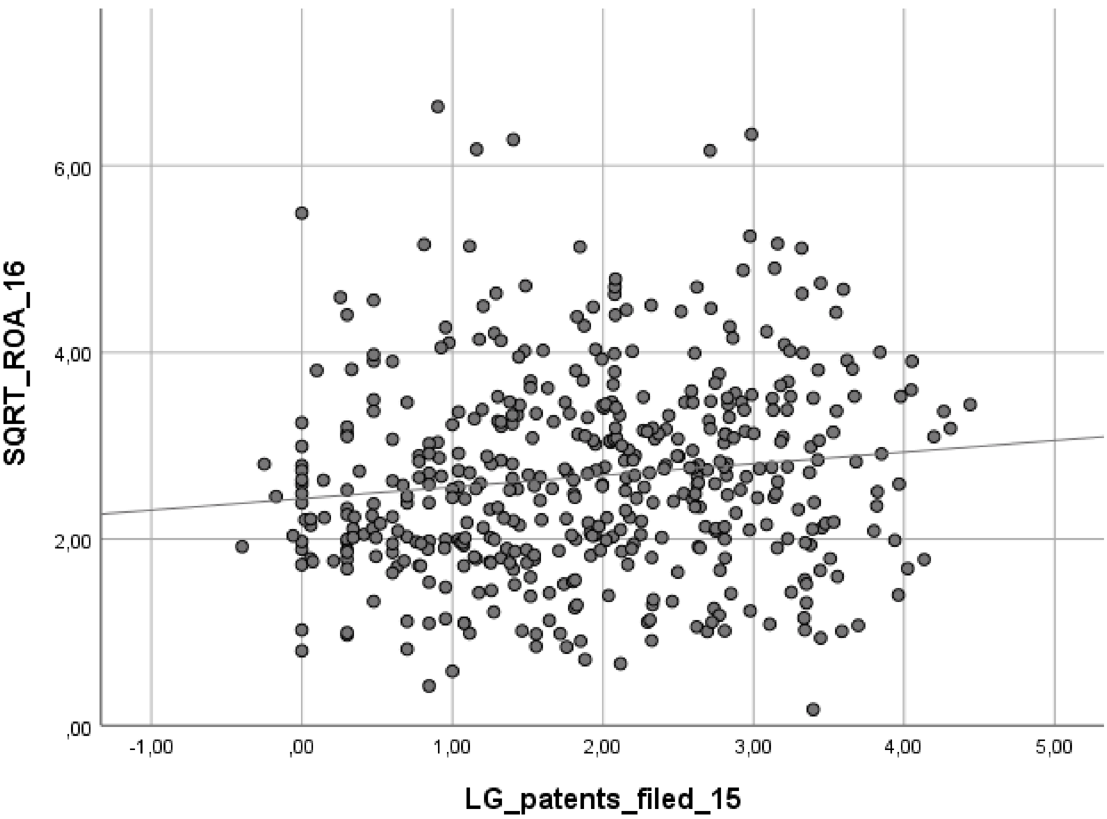

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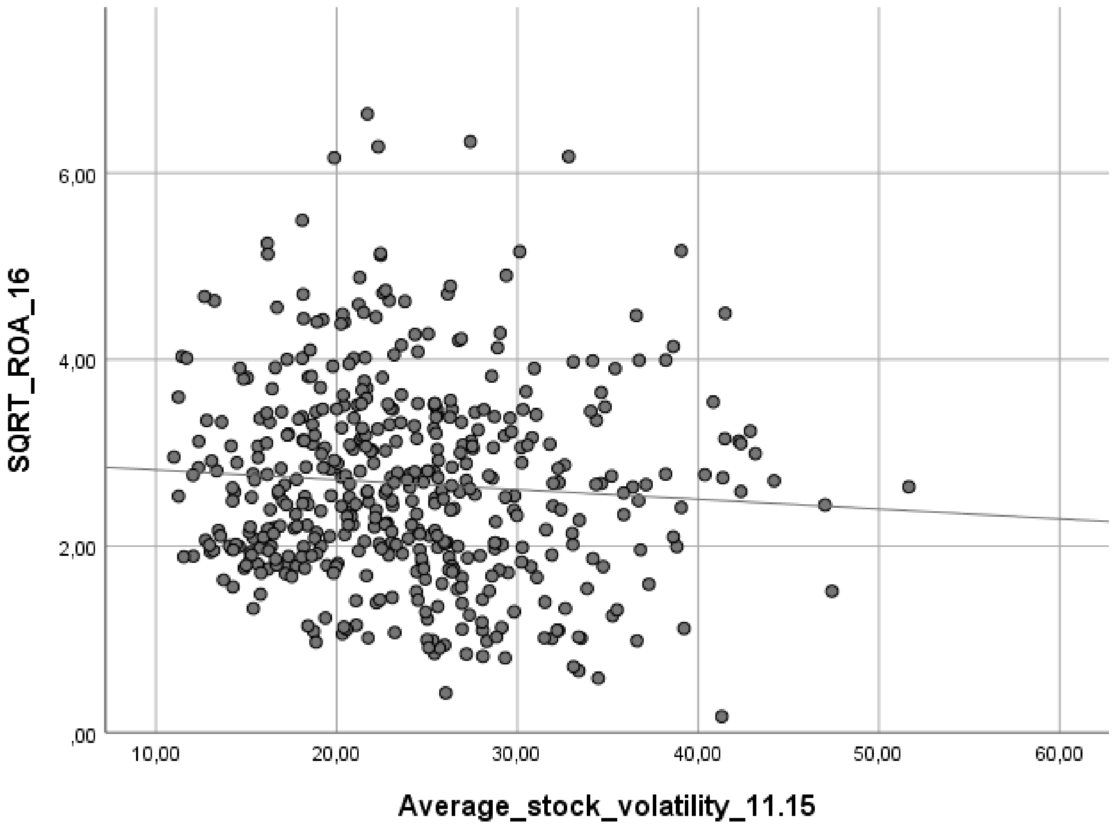
LG_patents_filed_15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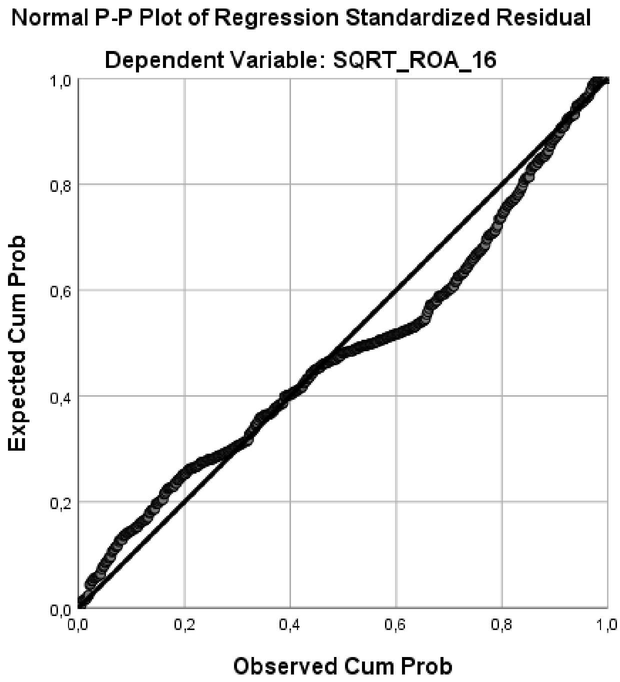
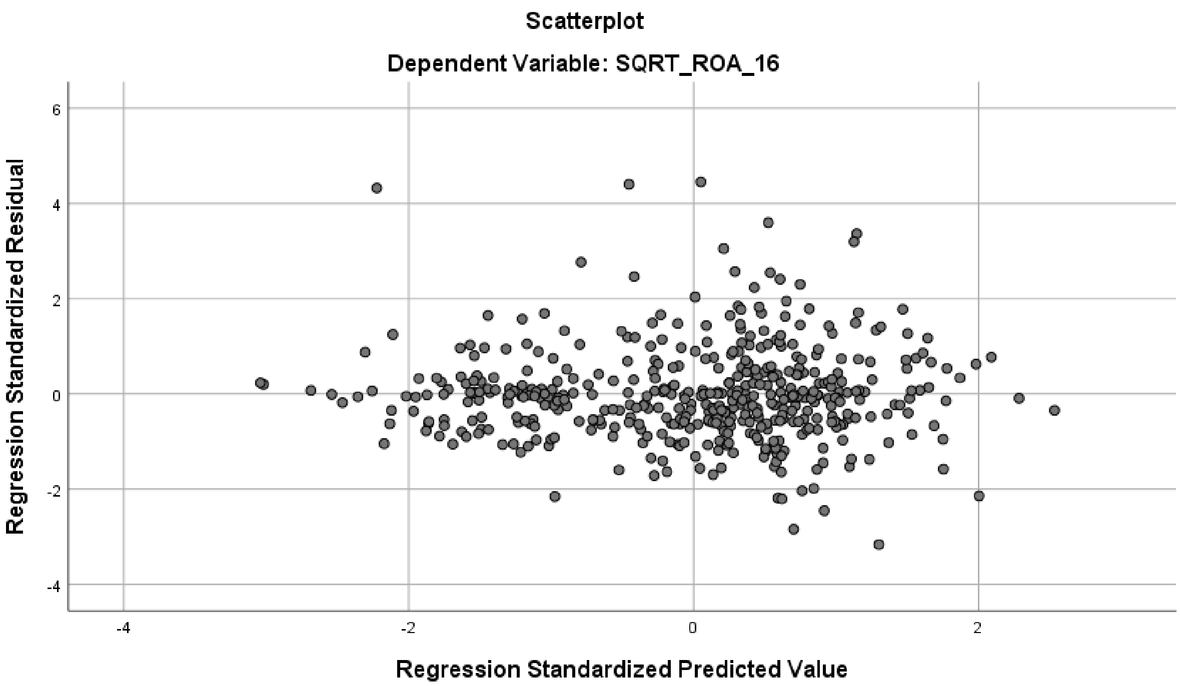
Average_stock_volatility_11.15

Appendix B4: plots multivariate analysis





Appendix B5: regression results for T-2

	Return on assets			
Variable	Model 1	Model 2	Model 3	Model 4
Size	-0.294***	-0.290***	-0.395***	-0.374***
	(0.079)	(0.081)	(0.080)	(0.081)
Leverage	-0.363***	-0.361***	-0.353***	-0.363***
	(0.084)	(0.085)	(0.082)	(0.082)
Patents filed	0.079	0.084	0.064	0.057
	(0.055)	(0.059)	(0.057)	(0.057)
Technology (D)	-0.052	-0.051	0.134	0.142
	(0.160)	(0.160)	(0.159)	(0.159)
Telecommunications (D)	-0.092	-0.089	0.072	0.035
	(0.339)	(0.339)	(0.330)	(0.330)
Healthcare (D)	-0.169	-0.171	-0.167	-0.180
	(0.161)	(0.161)	(0.156)	(0.156)
Financials (D)	-1.062***	-1.061***	-1.058***	-1.048***
	(0.159)	(0.159)	(0.154)	(0.154)
Real estate (D)	-0.563*	-0.549*	-0.698**	-0.676**
	(0.228)	(0.236)	(0.230)	(0.230)
Consumer discretionary (D)	0.369*	0.371*	0.582***	0.553***
	(0.156)	(0.156)	(0.156)	(0.157)
Consumer staples (D)	0.339	0.352	0.123	0.030
	(0.189)	(0.196)	(0.195)	(0.203)
Basic materials (D)	-0.138	-0.132	-0.056	-0.066
	(0.238)	(0.239)	(0.232)	(0.232)
Energy (D)	-1.170***	-1.170***	-1.077***	-1.091***
	(0.217)	(0.218)	(0.212)	(0.211)
Utilities (D)	-0.941***	-0.930***	-1.273***	-1.283***
	(0.207)	(0.212)	(0.215)	(0.214)
Hybrid goal intensity		-0.007	-0.009	-0.010
		(0.031)	(0.030)	(0.030)
Average stock volatility			-.039***	-.039***
			(0.007)	(0.007)
Goal hyb. * av. stock vol.				-0.006
				(0.004)
Constant	4.680***	4.660***	6.038***	5.978***
	(0.342)	(0.352)	(0.422)	(0.423)
Adjusted R^2	0.258	0.257	0.303	0.305
F	13.541***	12.552***	14.545***	13.844***

N = 469
**** p ≤ 0.001; **p ≤ 0.01; *p ≤ 0.05*

Appendix B6: Variance Inflation Factor for T-2

Variable	Model 1	Model 2	Model 3	Model 4
Size	1.593	1.654	1.751	1.797
Leverage	1.124	1.132	1.132	1.139
Patents filed	1.984	2.235	2.244	2.256
Technology (D)	1.544	1.544	1.615	1.617
Telecommunications (D)	1.084	1.086	1.094	1.100
Healthcare (D)	1.480	1.482	1.482	1.486
Financials (D)	1.580	1.581	1.581	1.583
Real estate (D)	1.704	1.814	1.839	1.846
Consumer discretionary (D)	1.738	1.743	1.853	1.876
Consumer staples (D)	1.309	1.419	1.486	1.616
Basic materials (D)	1.175	1.188	1.192	1.193
Energy (D)	1.242	1.243	1.250	1.252
Utilities (D)	1.493	1.563	1.703	1.705
Hybrid goal intensity		1.423	1.423	1.423
Average stock volatility			1.481	1.481
Goal hyb. * av. stock vol.				1.177

Appendix C: Additional analysis with dummies

Appendix C1: industry frequencies

Industry	ICB code	N	Percent
Technology	10	59	11.7%
Telecommunications	15	10	2.0%
Healthcare	20	59	11.7%
Financials	30	61	12.1%
Real estate	35	31	6.2%
Consumer discretionary	40	77	15.3%
Consumer staples	45	36	7.2%
Industrials	50	94	18.7%
Basic materials	55	19	3.8%
Energy	60	24	4.8%
Utilities	65	33	6.6%

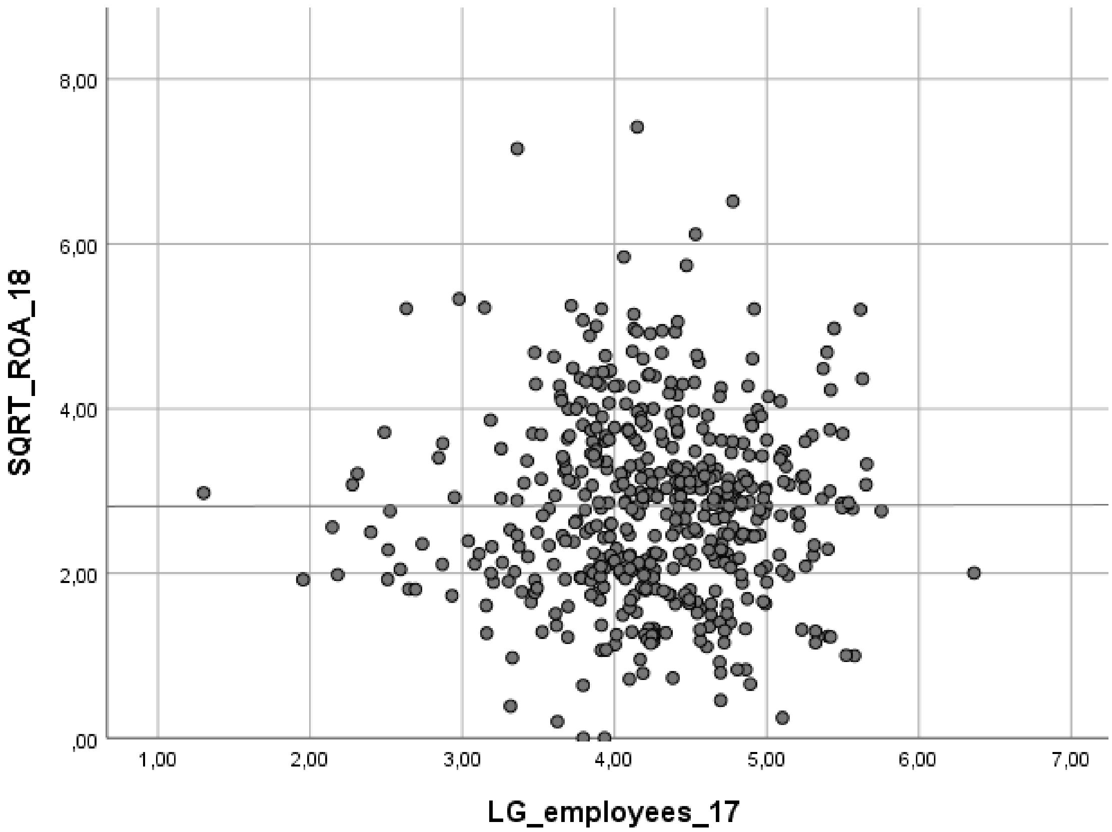
Total sample = 503 firms

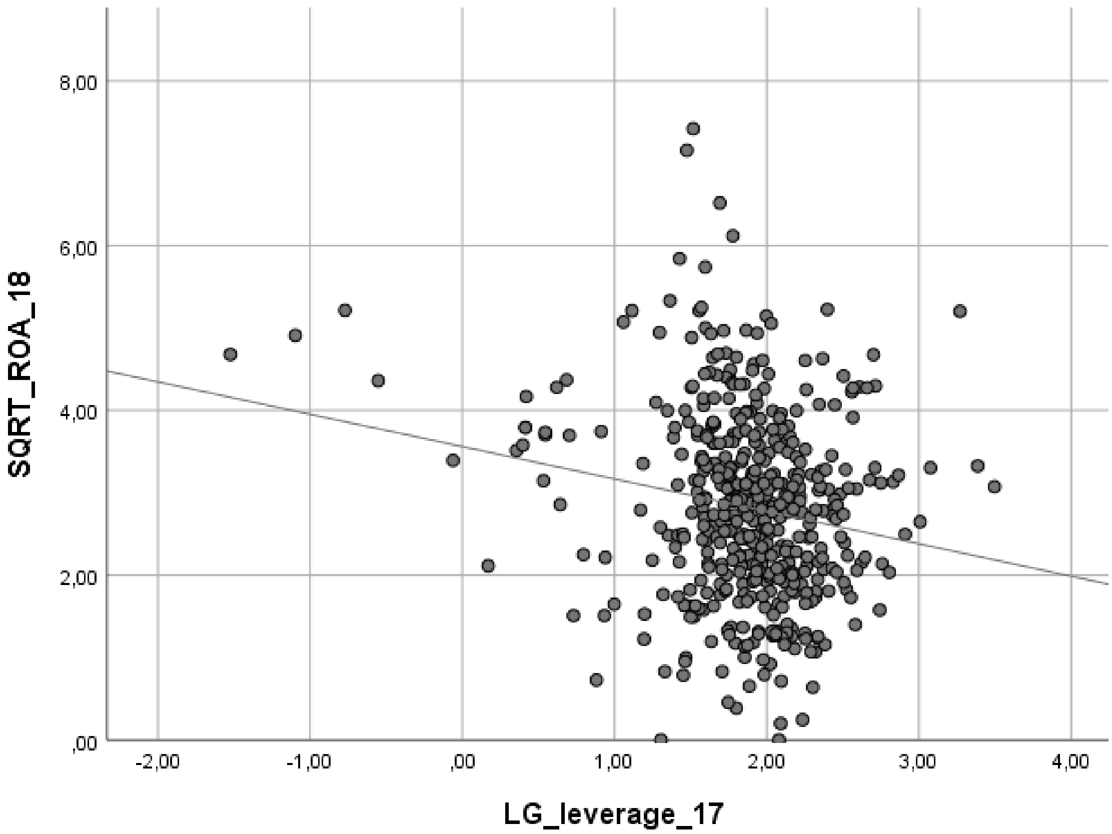
Appendix C2: normality of variables

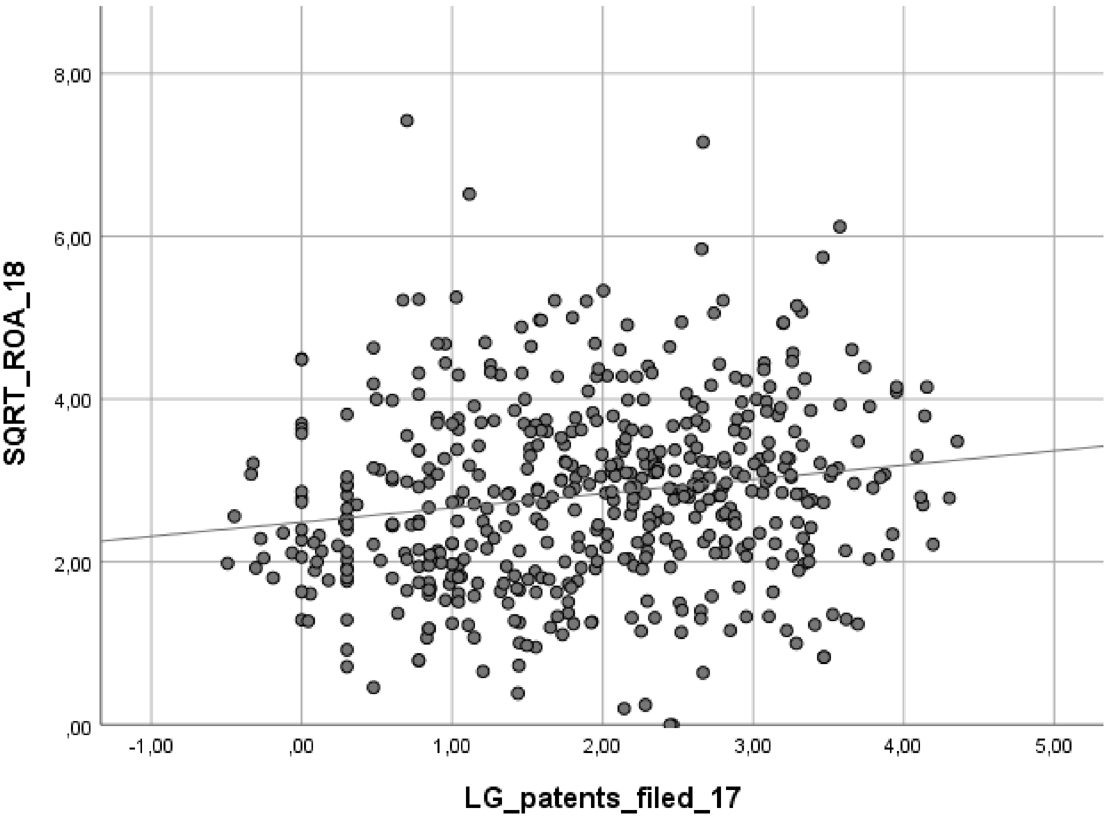
Variable	Skewness	Std. error of skewness	Kurtosis	Std. Error of kurtosis
Before transformations				
ROA_18	1.268	0.110	5.472	0.219
Emp_17	11.938	0.112	197.778	0.223
Leverage_17	-10.987	0.110	170.119	0.220
Patents_filed_17	4.772	0.125	27.285	0.250
Industry	-0.200	0.109	-0.924	0.217
Stock_volatility_average_13.17	0.909	0.117	0.870	0.233
After transformations				
SQRT_ROA_18	0.466	0.112	0.542	0.223
LG_Emp_17	-0.532	0.112	1.135	0.223
LG_Leverage_17	-1.799	0.115	8.164	0.230
LG_Patents_filed_17	-0.141	0.125	-0.938	0.250
Industry	-0.200	0.109	-0.924	0.217
Stock_volatility_average_13.17	0.909	0.117	0.870	0.233
After EM imputation				
SQRT_ROA_18	0.466	0.112	0.542	0.223
LG_Emp_17	-0.532	0.112	1.135	0.223
LG_Leverage_17	-1.799	0.115	8.164	0.230
IMP_LG_Patents_filed_17	-0.162	0.109	-0.266	0.217
Industry	-0.200	0.109	-0.924	0.217
Average_stock_volatility_13.17	0.909	0.117	0.870	0.233

N= 503
The dummies for the goal variables are excluded because they are dichotomous

Appendix C3: scatterplots univariate analysis



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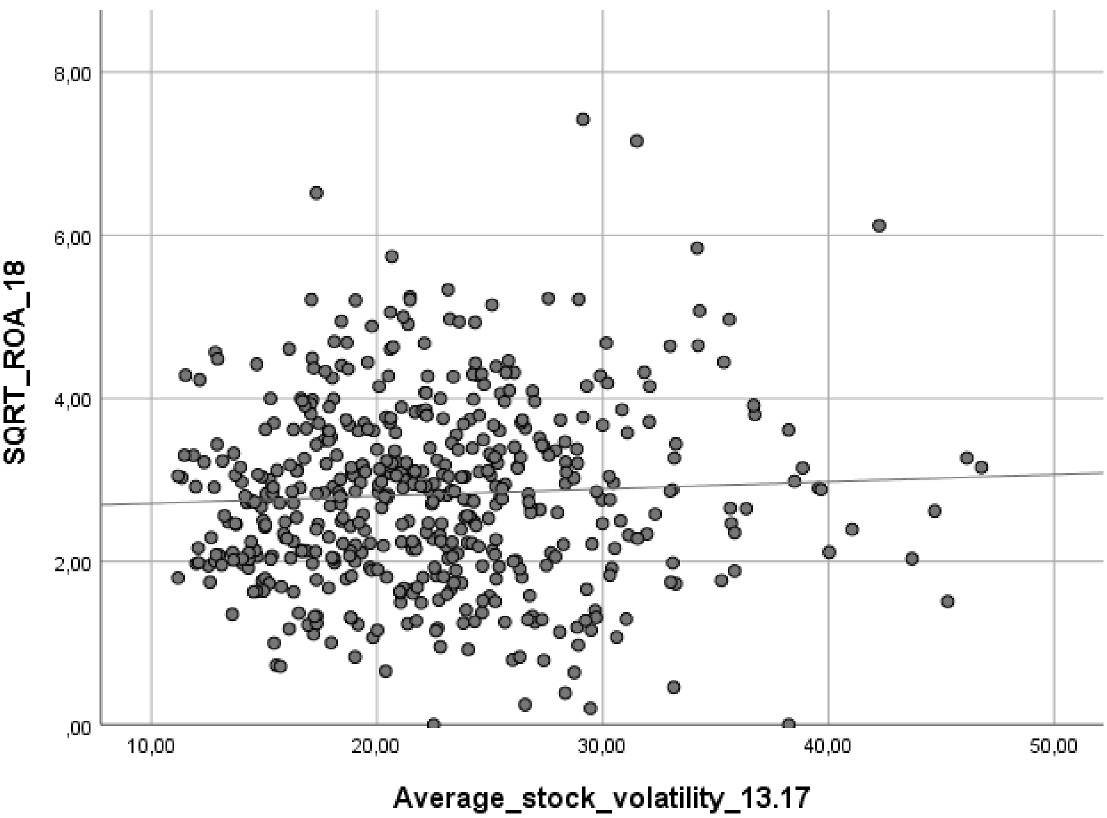
LG_patents_filed_17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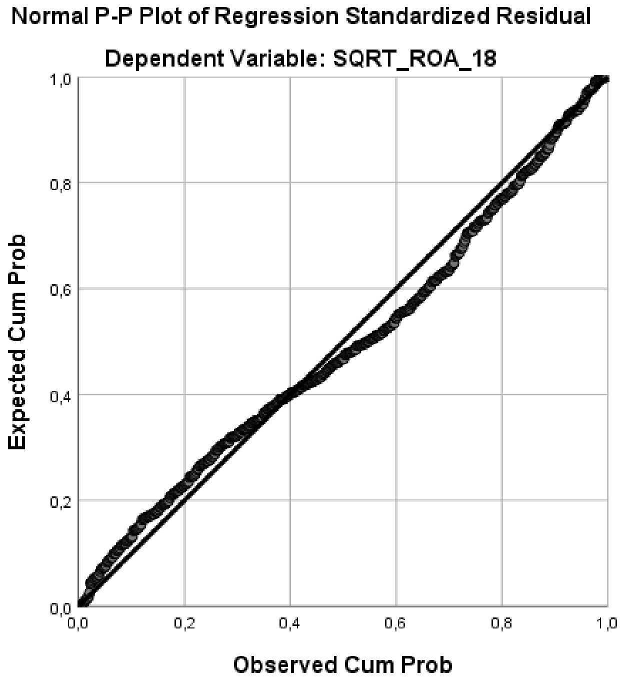
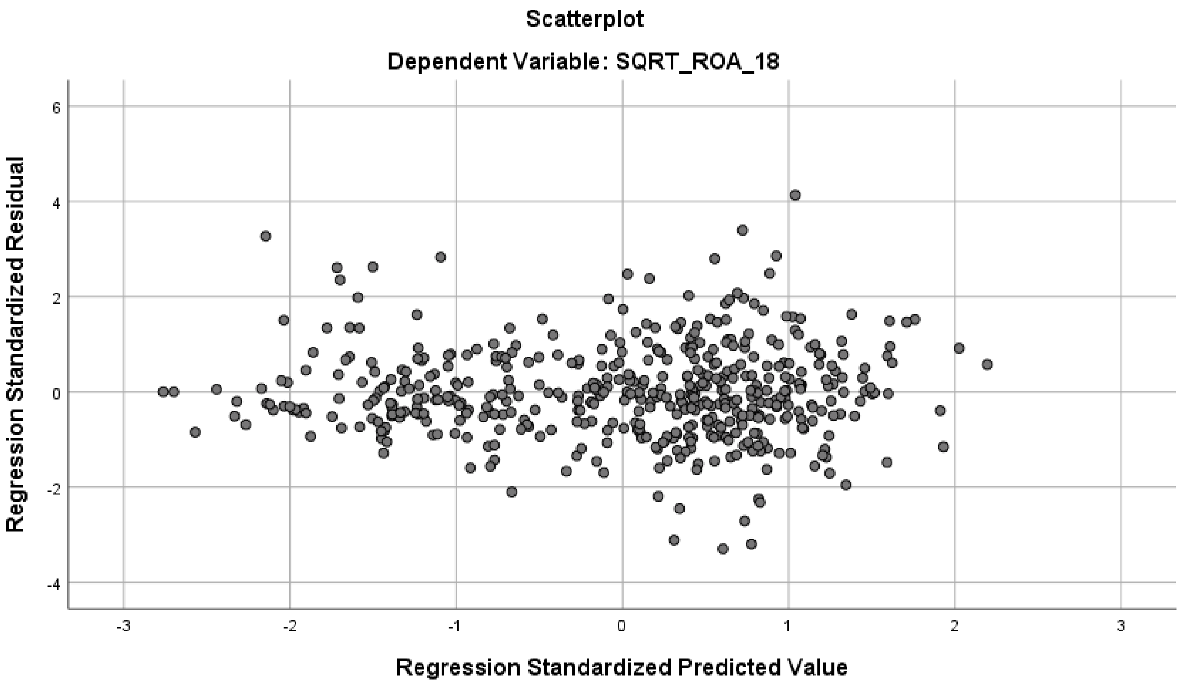
Average_stock_volatility_13.17

Appendix C4: plots multivariate assumptions





Appendix C5: regression results

	Return on assets			
Variabele	Model 1	Model 2	Model 3	Model 4
LG_employees_17	-0.275***	-0.253**	-0.322***	-0.344***
	(0.085)	(0.088)	(0.091)	(0.091)
LG_leverage_17	-0.300***	-0.289**	-0.284**	-0.278**
	(0.090)	(0.091)	(0.090)	(0.091)
patents_filed_17	0.115	0.132*	0.135*	0.136*
	(0.059)	(0.061)	(0.060)	(0.061)
D_technology	0.083	0.082	0.159	0.165
	(0.166)	(0.166)	(0.167)	(0.168)
D_telecommunications	-0.460	-0.460	-0.410	-0.334
	(0.323)	(0.324)	(0.322)	(0.325)
D_healthcare	-0.320	-0.318	-0.320	-0.305
	(0.170)	(0.171)	(0.170)	(0.170)
D_financials	-1.242***	-1.218***	-1.225***	-1.233***
	(0.169)	(0.172)	(0.170)	(0.171)
D_realestate	-0.824***	-0.747**	-0.841***	-0.870***
	(0.245)	(0.250)	(0.251)	(0.252)
D_consumer_discretionary	0.386*	0.390*	0.503**	0.530*
	(0.166)	(0.167)	(0.170)	(0.171)
D_consumer_staples	0.106	0.172	0.071	0.148
	(0.201)	(0.211)	(0.213)	(0.219)
D_basic_materials	-0.133	-0.089	-0.049	-0.044
	(0.252)	(0.255)	(0.253)	(0.254)
D_energy	-0.905***	-0.916***	-0.841***	-0.823***
	(0.228)	(0.229)	(0.229)	(0.230)
D_utilities	-0.964***	-0.938***	-1.117***	-1.146***
	(0.220)	(0.223)	(0.231)	(0.232)
Fossil_17		-0.468	-0.256	-4.126
		(0.706)	(0.705)	(15.087)
Water_17		-0.104	-0.160	-0.144
		(0.178)	(0.178)	(0.179)
Energy_17		-0.114	-0.115	-0.082
		(0.179)	(0.178)	(0.188)
Resources_17		0.037	0.083	0.068
		(0.238)	(0.237)	(0.246)
Average_stock_volatility			-0.023**	-0.029**
			(0.008)	(0.010)
Interaction fossil fuel				0.544
				(2.228)
Interaction water				0.040
				(0.026)

Interaction energy				0.021
				(0.028)
Interaction resources				-0.028
				(0.035)
Constant	4.619***	4.506***	5.285***	5.507***
	(0.368)	(0.377)	(0.469)	(0.498)
Adjusted R2	0.247	0.245	0.255	0.254
F	13.056***	10.123***	10.117***	8.421***

N = 503
**** p ≤ 0.001; **p ≤ 0.01; *p ≤ 0.05*

Appendix C6: Variance Inflation factor for regression with dummies

Variable	Model 1	Model 2	Model 3	Model 4
Size	1.695	1.783	1.934	1.971
Leverage	1.108	1.115	1.116	1.122
Patents filed	2.115	2.221	2.222	2.238
Technology (D)	1.515	1.515	1.560	1.573
Telecommunications (D)	1.093	1.094	1.098	1.116
Healthcare (D)	1.449	1.465	1.465	1.469
Financials (D)	1.578	1.620	1.621	1.630
Real estate (D)	1.852	1.932	1.969	1.981
Consumer discretionary (D)	1.815	1.828	1.941	1.957
Consumer staples (D)	1.323	1.458	1.503	1.595
Basic materials (D)	1.170	1.195	1.199	1.202
Energy (D)	1.266	1.275	1.293	1.301
Utilities (D)	1.536	1.583	1.719	1.730
Goal fossil fuel divestment		1.055	1.068	488.696
Goal water efficiency		3.331	3.376	3.435
Goal energy efficiency		3.439	3.439	3.813
Goal resources efficiency		6.905	6.940	7.448
Average stock volatility			1.478	2.242
Interaction fossil fuel				488.898
Interaction water				4.102
Interaction energy				5.455
Interaction resources				11.329