The Relationship between Corporate Social and Financial Performance in the Real Estate Industry

A Global Study

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Abstract

The importance of Corporate Social Performance (CSP) as a strategic tool for businesses has earned substantial attention in recent years. This study aims to explore the relationship between CSP and Corporate Financial Performance (CFP) in the real estate industry. To achieve this objective, the study utilises a global dataset of 282 publicly listed real estate companies with ESG ratings operating worldwide between 2010 and 2021. A random-effects panel data model with one-year time lags is employed to examine the direction of the relationship between CSP and CFP. The results reveal a strong negative association between CSP and CFP in the real estate sector. The observed relationship can be justified by the trade-off and managerial opportunism hypotheses. This research adds value to the existing literature by presenting global industry-specific evidence based on several financial performance metrics, namely return on assets (ROA), funds from operations to total assets (FFO), Tobin's Q (TOQ), and market-to-book ratio (MTB). By including accounting-based and market-based measures, this research provides a robust assessment of the relationship between CSP and CFP in the real estate industry.

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Keywords: Real Estate Industry, Corporate Social Performance, Corporate Financial Performance, CSP-CFP link, ESG score, Environmental, Social, Governance, Trade-Off Hypothesis, Managerial Opportunism Hypothesis

Resumo

A importância da Desempenho Social Corporativa (CSP) como ferramenta estratégica para as empresas tem ganhado considerável atenção nos últimos anos. Este estudo tem como objectivo explorar a relação entre o CSP e o Desempenho Financeiro Empresarial (CFP) no sector imobiliário. Para atingir este objectivo, o estudo utiliza um conjunto de dados global de 282 empresas imobiliárias cotadas em bolsa com classificações ESG, a operar em todo o mundo entre 2010 e 2021. É utilizado um modelo de dados em painel de efeitos aleatórios com desfasamentos temporais de 1 ano para examinar a direcção da relação entre o CSP e o CFP. Os resultados revelam uma forte associação negativa entre o CSP e a CFP no sector imobiliário. A relação observada pode ser justificada pelas hipóteses de trade-off e de oportunismo de gestão. Este estudo acrescenta valor à literatura existente ao apresentar dados específicos do sector a nível mundial com base em várias métricas de desempenho financeiro, nomeadamente a rendibilidade dos activos (ROA), os fundos provenientes das operações em relação aos activos totais (FFO), o Q de Tobin (TOQ) e o rácio entre o mercado e o livro (MTB). Ao incluir medidas baseadas na contabilidade e no mercado, este estudo fornece uma avaliação sólida da relação entre o CSP e o CFP no sector imobiliário.

A Relação entre o Desempenho Social e Financeiro das Empresas no Sector Imobiliário

Katrin Jörger

Palavras-chave: Sector Imobiliário, Desempenho Social Corporativo, Performance Financeira Corporativa, Ligação CSP-CFP, Pontuação ESG, Ambiental, Social, Governação, Hipótese de Trade-Off, Hipótese de Oportunismo Gerencial

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List of Abbreviations

CFP	–	Corporate Financial Performance
CSP	–	Corporate Social Performance
CSR	–	Corporate Social Responsibility
ENV	–	Environmental Pillar
ESG	–	Environmental, Social, and Governance
FFO	–	Funds from Operations
GDP	–	Gross Domestic Product
GOV	–	Governance Pillar
MTB	–	Market-to-Book Ratio
ROA	–	Return on Assets
SOC	–	Social Pillar
TOQ	–	Tobin’s Q

1. Introduction

There has been a remarkable increase in engagement in Corporate Social Responsibility (CSR) activities over the last few years. The interest of customers, employees, regulators, and other parties in debates concerning the Environment, Social and Governance (ESG) has accelerated significantly over the past decades (Khan, 2019). Integrating Corporate Social Performance (CSP) as a business strategy became more relevant for the managerial practice of corporations (Schreck, 2011). Particularly during the pandemic in 2020, growing demand for investment products focusing on ESG characteristics could be observed (McDougall, 2020). With the growing interest in sustainable investments, its implications for companies' operational and financial performance are often questioned (McWilliams & Siegel, 2001). It is assumed that companies meeting stakeholders' expectations regarding social and environmental activities may take advantage of an increase in sales (Ambec & Lanoie, 2008), revenues (Lev et al., 2010), and reputation (Brammer & Millington, 2005). At the same time, they might benefit from a lower financial risk (Orlitzky & Benjamin, 2001) and, thus, lower cost of capital (Cajias et al., 2014a).

A remarkable research foundation is investigating the link between CSP and Corporate Financial Performance (CFP) (Friede et al., 2015). Their findings suggest that in nearly 90 per cent of the cases, a nonnegative CSP-CFP link exists. Even though among those the majority suggests a positive relationship (Friede et al., 2015), there remains some ambiguity since some studies present results of negative (Duque-Grisales & Aguilera-Caracuel, 2021), non-linear (Xie et al., 2019) or reverse-causal (Waddock & Graves, 1997) relationships. There are some assumptions for the explanation of the diversity among the findings. For example, the inconsistency in the assessment of CSP and CFP (Fischer & Sawczyn, 2013). For the empirical analysis, studies are also built on different approaches. Even though it is assumed that the effects of CSP on CFP (or vice versa) cannot be observed immediately, some studies neglect time lags (Scholtens, 2008). Besides, the linkage between CSP and CFP is often examined only from one perspective instead of being seen as a cause-and-effect relationship (Scholtens, 2008).

The research mentioned above provides answers concerning the question of the CSP-CFP linkage; however, research usually builds on a data sample consisting of companies from different industries rather than focusing on a single industry. The real estate industry is responsible for nearly 40% of the carbon dioxide emissions globally. As such, the industry has

gained more and more attention and is increasingly moving forward in the focus of the CSR debate (United Nations Environment Programme, 2020). Due to the growing interest in the linkage between ESG commitment and the relatively weak state of empirical findings for the real estate industry in particular, this work aims to understand the linkage between CSP and CFP of real estate companies and explore the direction of the relationship. Based on this, this thesis aims to provide an answer to the following research question:

> *"Whether there is a linkage between the corporate social performance of real estate companies and their corporate financial performance, and whether the relationship is positive, driven by the satisfaction of stakeholders and slack resources or negative, driven by incurred costs and managerial incentives."*

This work contributes to the existing literature by providing evidence that builds on an empirical analysis of the impact of ESG scores on CFP (and vice versa) among real estate corporations operating worldwide. For this, the empirical analysis of this work draws on a data sample retrieved from Thomson Reuters Eikon Datastream (Refinitiv Eikon) that covers 282 ESG-rated and publicly listed real estate companies operating worldwide. A random-effects panel data model determines the sign and direction of the relationship between ESG engagement and market-based and accounting-based financial performance. The findings suggest strong evidence for a negative relationship between CSP and CFP. The analysed relationship can be explained by the trade-off and managerial opportunism hypotheses.

This work builds on and contributes to prior studies from different angles. In line with the industry-specific approach focusing on only real estate, the data sample is selected based on the Kenneth R. French 48 industry classification, which makes it possible to identify real estate companies based on a four-digit SIC code. This work has a global scope compared to single-country or cross-country studies. It is thus based on a global dataset that allows geographical comparison. With an 11-year-timespan reaching from 2010 to 2021, this study can observe how the results change over time. Both the aggregated ESG score as well as the disaggregated ESG score pillars, namely the Environmental (ENV), Social (SOC), and Governance (GOV) pillars, are taken into consideration for the evaluation of the companies' commitment. Several operating and accounting metrics enable the appraisal of the market and financial performance comprehensively. To create robustness, various control variables are integrated into the regression model.

The paper develops as follows: Section 2 overviews existing research and presents predominant theories. In Section 3, hypotheses are derived, and the methodology is explained. Section 4 describes the data set, Section 5 presents the empirical findings and acknowledges the limitations of this study, followed by a comprehensive summary.

2. Theoretical Background

Over the past decades, a trend indicated a transition from the initially voluntary sustainable engagement towards an expected commitment to transparency driven by society and regulators (Brockett & Rezaee, 2012). The number of public policies ensuring responsible investment increased in the past years at a rapid pace worldwide. In 2016 almost 300 policy instruments enhancing long-term firm values, such as ESG factors, were identified in the most significant 50 economies, out of which more than half were launched between 2013 and 2016. In 2016 a set of initiatives could be observed indicating a change in the financial system regarding sustainable economies, such as China's guidelines on establishing the green financial system, France's action plan for transitioning to a low-carbon economy or the announcement of a sustainable finance strategy by the European Union. (PRI, 2016)

With time, more attention was drawn to the CSR engagement of companies and the linkage to their CFP, which led to a variation in studies and metrics presenting equivocal findings (Hussain et al., 2018). From the outset, the question is raised whether CSR reduces costs by creating value or whether it places a financial burden on companies destroying value (Alshehhi et al., 2018).

The role of CSP for CFP was already discussed in the early 60s and 70s (Friede et al., 2015). Back then, Friedman (1962) shared his views on the role of CSR, emphasising his conviction that a business has no social responsibility other than maximising profits for shareholders without being deceptive or fraudulent. In his opinion, the public benefit is no justification for using a firm's financial resources (Friedman, 1970). In contrast, Freeman (1984) advocates for the complete responsibility of companies to consider not solely shareholders but the interest of all stakeholders in the value enhancement. Based on his work, this is the only way for a company to speak of success and practical work. These contrary views have laid the foundation for today's research. Even after evolving over the years, research still provides contradictory results regarding the relationship between CSR and CFP (Gillan et al., 2021). Friede et al.

(2015) recognised this inconsistency. They endeavoured to compile a comprehensive review of previous studies, considering the results of around 2,200 studies that mostly suggest a positive relationship between the CSP and CFP.

Despite the prevailing assumption of a positive correlation nowadays (Velte, 2017), there are still many contrary statements, which can also be attributed to a measurement problem (Waddock & Graves, 1997). As mentioned above, there is already a substantial body of research on the CSP-CFP nexus for multiple industries reaching far back; however, studies investigating the implications for specific sectors are limited as authors usually aim to provide universal findings (Alshehhi et al., 2018). Since economic sectors have been identified as a critical variable in the CSP-CFP relationship, it is recommended to investigate the linkage in the context of a particular industry (Soana, 2011). This research gap also affects the real estate market, although it is particularly interesting in the CSP-CFP debate due to its asset-based characteristics (Cajias et al., 2014b). Real estate companies are becoming increasingly subject to the climate change debate as a significant driver of carbon emissions (RICS, 2022). Despite increasing importance and growing interest, research on the sustainable behaviour of real estate companies is still limited (Feng & Wu, 2021).

For this reason, the following two sections provide a comprehensive overview of previous research conducted to date with a focus on the considered market, the measures chosen for the assessment of performance as well as the ultimate conclusions drawn. First, studies dealing with the relationship between CSP and CFP are considered. The second part presents recent studies on this topic and its implications on the real estate market. Following this, the most prominent theories on the CSP-CFP relationship in literature are introduced, on which the leading hypotheses for this work are based.

2.1 The Linkage between CSP and CFP

Despite the growing number of studies, there is no uniform opinion on the correlation and causality between CSP and CFP. Whereas a series of studies find evidence for a positive link (e.g., Alareeni & Hamdan, 2020), another stream of research claims a negative connection (e.g., Duque-Grisales & Aguilera-Caracuel, 2021), and others are not able to find significant results for any linear relationship (e.g., Xie et al., 2019). Contrary to most studies confirming the effects of CSP on CFP, some studies find reverse causality in the relationship (e.g., Fischer & Sawczyn, 2013).

Among those claiming a positive impact of CSP on CFP, Velte (2017) finds that ESG positively influences the financial performance measured by return on assets (ROA) but not the market performance assessed by Tobin's Q (TOQ). Furthermore, his findings suggest that GOV has the most decisive impact on the CFP. His study is based on a sample of listed German companies and their ESG scores from 2010 to 2014. Alareeni & Hamdan (2020) present findings for similar variables but for a US sample of listed companies from 2009 to 2018. Like Velte (2017), they describe a positive impact of ESG disclosure on the operational, financial and market performance of firms with high assets and leverage; however, their findings show that only ENV and SOC have a positive effect on TOQ and a negative effect on ROA and ROE, whereas GOV harms ROE but has a positive impact on ROA and TOQ.

In contrast, Duque-Grisales & Aguilera-Caracuel (2021) belong to the research stream claiming that a negative linear relationship exists between the CSP and CFP as their findings suggest that a high overall ESG score, as well as high levels of each of the ESG score's sub-components, decrease financial performance measured by ROA. Their study is based on a data sample of emerging markets in Latin America between 2011 and 2015. Makni et al. (2009) explore the causality between CSP and CFP in the Canadian market between 2004 and 2005. Their findings also suggest a significantly negative impact of the ENV on market returns; however, they do not find support for a relationship between CSP and CFP overall since there are no significant effects from the ESG score on ROA and ROE.

Some studies also suggest non-linearity between CSP and CFP. Nollet et al. (2016) find evidence for a negative linear relationship between CSP and the ROC; however, the non-linear models lead them to the discovery of a U-shaped relationship between GOV and the accounting-based CFP measures, suggesting that CSP positively affects CFP over the time from 2007-2011 in the US. Xie et al. (2019) also present evidence of a U-shaped link between CSP and CFP for moderate ESG scores. Based on a global sample from 74 countries in 2015, they show that low ESG scores negatively affect corporate efficiency.

Another stream of research on the CSP-CFP relationship provides evidence of reverse causality. Waddock & Graves (1997) find that CSP positively relates to prior CFP and future CFP-based US data for 1990 and 1991. Likewise, Fischer & Sawczyn (2013) reveal a positive, significant, and causal relationship between CSP and CFP (ROA) and a positive impact of innovation. Their findings are based on a sample of German-listed firms for 2007 and 2008. Compared to most

studies, they create their own CSP index based on social and environmental core key performance indicators and further include R&D as a measurement for innovation.

2.2 CSP and CFP in the Real Estate Industry

More recently, studies have focused on the real estate industry in light of ESG disclosure (Feng & Wu, 2021). Like the above-mentioned research, there are contradictory results regarding the CSP-CFP linkage in the real estate industry. While some state a positive association between CSP and CFP (e.g., Fuerst, 2015), others find a contrasting (e.g., Cajias et al., 2014b) or non-significant link (e.g., Eichholtz et al., 2012).

Most studies find evidence of a positive relationship between CSP and CFP. For instance, Feng & Wu (2021) suggest that ESG disclosure is positively associated with debt financing and firm value due to higher transparency and comparability. In contrast, Cajias & Bienert (2011) find that human resources and stock price volatility play a significant role in a company's strength of CSR. They assume that providing capital markets with information on sustainable activities through higher complexity and transparency can lower the idiosyncratic risk; however, only if the company sends clear signals. Similarly, Fuerst (2015) presents findings on the positive impact of sustainable investments on a firm's risk exposure, volatility, and operational performance.

Focusing more on the market value, Cajias et al. (2014b) find a positive relationship between ESG ratings and TOQ, driven by concerns rather than strengths. Their findings also suggest that ESG ratings are associated with lower returns and that negative scores indicate higher returns in the short run. In contrast, positive scores do not affect returns at all.

Eichholtz et al. (2012), on the other hand, also find a positive relationship between the greenness of REITs and the operating performance, such as ROA or ROE, but no significant evidence for a relationship between the greenness of property portfolios and abnormal stock returns. In contrast, Chiang et al. (2019) predict that the involvement in CSR disclosure rises with the growth opportunities of a company. Their findings show that not all CSR dimensions have the same impact and that the environmental aspect of CSR is associated with growth opportunities through competitive advantage. In contrast, the governance and community factors lead more towards responsibility. This work aims to find evidence for a linkage between the CSP of real

estate companies and their CFP, thereby providing further insights into whether this is a positive or negative relationship and its direction.

2.3 Conceptual Frameworks

This study examines the relationship between CSP and CFP in light of the six most prominent theories on the CSP-CFP linkage in literature: the social impact hypothesis, slack resource hypothesis, trade-off hypothesis, managerial opportunism hypothesis, and the two synergetic hypotheses. This comprehensive framework is based on a typology introduced by Preston and O'Bannon (1997), which has been the foundation for many empirical studies since then. With their models, they distinguish between the direction of the relationship between CSP and CFP and the causal sequence. (Allouche & Laroche, 2005; Makni et al., 2009). The following section will present the different possible specifications of the CSP-CFP relationship and explain their significance for the investigations of this study.

2.3.1 Social Impact Hypothesis

The social impact hypothesis is based on Freeman's (1984) stakeholder theory and suggests that CSP positively affects CFP as the satisfaction of stakeholders favours financial performance (Makni et al., 2009). For a firm to be successful, it should endeavour to good management practices to improve the relationship with key stakeholders (Waddock & Graves, 1997) and therefore operate following prevailing norms and ethics in the society (Metcalfe, 1998). Reciprocally, the disregard for the needs and claims of stakeholders might lead to an adverse effect of CSP on CFP (Preston & O'Bannon, 1997). According to the social impact theory, higher CFP of companies could result from considering stakeholders' needs and a more robust engagement in CSP.

2.3.2 Slack Resource Hypothesis

The slack resource hypothesis, also known as the available funds hypothesis (Preston & O'Bannon's, 1997), suggests a positive CSP-CFP relationship based on the assumption that CFP has an affirmative influence on CSP which depends on the availability of slack resources (Waddock & Graves, 1997). Consequently, an increase in a company's profitability leads to better CSP performance thanks to a more remarkable ability to fund discretionary social performance projects (Allouche & Laroche, 2005). Following this, better CSP is derived from higher CFP.

2.3.3 Trade-Off Hypothesis

The trade-off hypothesis refers to arguments of neoclassical economists such as Friedman (1970), for which CSP results only in a few measurable economic benefits at high costs (Waddock & Graves, 1997). Hence, companies investing in socially responsible activities are assumed to experience a competitive disadvantage (Aupperle et al., 1985), which reduces profits and, therefore, shareholder wealth (Waddock & Graves, 1997). According to this theory, CSP harms CFP.

2.3.4 Managerial Opportunism Hypothesis

The managerial opportunism hypothesis is based on the idea that managers can be tempted to put their goals above the ones of shareholders and other stakeholders. In pursuit of private gain, managers might intentionally reduce social expenditures, while weak financial performance might be covered up by exemplary social engagement. (Preston & O'Bannon, 1997) Under these assumptions, CFP negatively affects CSP.

2.3.5 Positive Synergy Hypothesis

The positive synergy hypothesis presumes that a higher engagement in CSP results in a better CFP, enabling the company to reinvest the gains in more socially responsible activities (Allouche & Laroche, 2005). According to this, CSP engagement rewards firms with an additional profit (social impact hypothesis), which then can be reallocated for social purposes (slack resources hypothesis) (Makni et al., 2009). Based on the uncertainty about the origin and the causation in both directions, in some cases, the simultaneous and interactive positive relationship between CSP and CFP is also referred to as a virtuous circle (Waddock & Graves, 1997). Therefore, the theory suggests that CSP improves CFP and vice versa.

2.3.6 Negative Synergy Hypothesis

The negative synergy hypothesis is based on the idea that synergetic effects are not necessarily positive but can also appear negatively (Preston & O'Bannon, 1997). Higher CSP engagement weakens the CFP, leading to the mitigation of socially responsible investments (Makni et al., 2009). Following this, the impact of CSP on CFP is expected to be hostile or vice versa.

3. Hypothesis and Methodology

Four hypotheses are developed to answer the research question: *"Whether there is a linkage between the corporate social performance of real estate companies and their corporate financial performance, and whether the relationship is positive, driven by the satisfaction of stakeholders and slack resources or negative, driven by incurred costs and managerial incentives."* Thereby, the first two hypotheses investigate the influence of CSP on CFP and whether it is of a positive or negative nature. In contrast, the third and fourth hypotheses examine the relationship and its sign from the other direction, hence the impact of CFP on CSP. After the derivation of the hypotheses, the panel data structure will be explained before describing the model-building process with the different regression models and tests. Lastly, the validity and robustness of the study are discussed along with different factors and procedures.

3.1 Main Hypotheses

3.1.1 CSP on CFP

The first hypothesis builds on the social impact hypothesis stating that an improvement in CSP could lead to a higher CFP thanks to the accommodation of the needs and claims of stakeholders' needs and a more outstanding commitment to CSP.

Hypothesis 1: *Better CSP results in higher CFP.*

The second hypothesis refers to the trade-off hypothesis if spending in CSP negatively affects CFP due to the low economic benefit compared to the high expenses, thereby leading to a competitive disadvantage.

Hypothesis 2: *Better CSP leads to lower CFP.*

3.1.2 CFP on CSP

The third hypothesis relates to the slack resource hypothesis concentrating on the positive influence of CFP on CSP stemming from the availability of slack resources that can be used to enhance social engagement.

Hypothesis 3: *Better CFP results in higher CSP.*

The last hypothesis is associated with the managerial opportunism hypothesis, assuming that greater CFP initiates a reduction of CSP due to managers prioritising private gains over the welfare of shareholders and other stakeholders.

Hypothesis 4: *Better CFP leads to lower CSP.*

3.2 Panel Data

Combining time series and cross-sectional elements, the dataset follows a panel data (or longitudinal data) structure (Wooldridge, 2015). The data sample contains quarterly observations between 2010 and 2021 for listed real estate companies worldwide. Due to missing observations for certain companies in some years, the dataset is unbalanced. For the regression analyses, research demonstrates several advantages associated with a panel data structure compared to cross-sectional or time-series data. In particular, it makes it possible to address a wider variety of complex challenges (Hsiao, 2007). Panel data may improve the test's power by incorporating dynamic information about the companies in the data set over a period, which increases the number of degrees of freedom (Wooldridge, 2015). Furthermore, a suitable regression model can lessen or eliminate the effect of omitted variable bias (Hsiao, 2007). The models and procedures employed to choose the most appropriate regression model for the data sample are described in the following sections.

3.3 Model Building

Different models can be applied depending on the properties of the data sample. The most prominent models, according to theory, are pooled OLS, fixed-effects models, and random-effects models (Wooldridge, 2015). To choose the appropriate model for the scope of this work, three commonly used tests are performed: the Poolability test, the Breusch-Pagan LM test, and the Hausman test. Before outlining the properties of the applied random-effects model and the formulas derived from that place, the following part will first describe the model testing process.

3.3.1 Model Testing

Three tests can be performed to choose the appropriate model among the above-presented. A Poolability test determines whether a fixed-effects model or pooled OLS should be applied. To investigate the presence of individual-specific effects, the joint F-test checks whether the coefficients of the fixed-effects model are equal to zero. In this case, the fixed-effects model is

tested against the null hypothesis of all individuals being sufficiently homogeneous, which results in the pooled OLS being the preferred model. (Kunst, 2009)

In the second step, the Breusch Pagan LM test is conducted, regardless of whether the data sample is collected randomly or not. Fulfilling the purpose of detecting the occurrence of heteroscedasticity, the chi-squared test checks whether the random-effect model or the pooled OLS is more appropriate (Wooldridge, 2015). The null hypothesis claims the presence of homoscedasticity, which means there are no individual variations; hence the error variance is constant, and pooled OLS is preferred. Alternatively, the data set outlines heteroscedasticity where residuals show individual variances. The random-effect model should be chosen (Breusch & Pagan, 1979).

Lastly, the Hausman test determines whether the random or fixed-effects model is appropriate for the regression analysis. To test for endogeneity, the Hausman test examines whether there is a correlation between the regressors and the individual errors (a_i). Therefore, the F-test compares the estimated coefficients of the random- and fixed-effects model. Stating that no correlation exists between the regressors and errors, the null hypothesis is opposed by the alternative hypothesis of an existing correlation. Since any correlation between an explanatory variable and the constant causes inconsistency among the random effects, the fixed-effects model would be chosen in such a scenario. (Hausman, 1978)

3.3.2 Random Effects

Equivalent to the fixed-effects model, the random-effects model presumes that the intercept captures individual-specific effects among the entities. However, the random-effects model assumes that these effects are randomly distributed with an expected mean and are uncorrelated with all explanatory variables across all periods (Wooldridge, 2015). Hence, the model has some benefits, such as using within and between variations. Furthermore, estimating the impact of time-variant variables is allowed (Hsiao, 2007). Consequently, the model includes the intercept in two parts, whereas the fixed α represents the population average next to a_i, which stands for the individual random differences from the population average (Wooldridge, 2015). The regression equations can therefore be described as follows:

$$CSP_{i,t} = [\alpha + a_i] + \beta_1 CFP_{i,t-1} + \beta_2 SIZE_{i,t-1} + \beta_3 LIQUIDITY_{i,t-1} + \beta_4 LEVERAGE_{i,t-1} + \beta_5 RISK_{i,t-1} + \beta_8 GDP_{i,t-1} + \beta_9 INFLATION_{i,t-1} + \beta_{10} UNEMPLOYMENT_{i,t-1} + \beta_{11} CRISIS_{i,t-1} + u_{i,t}$$

$$CFP_{i,t} = [\alpha + a_i] + \beta_1 CSP_{i,t-1} + \beta_2 SIZE_{i,t-1} + \beta_3 LIQUIDITY_{i,t-1} + \beta_4 LEVERAGE_{i,t-1} + \beta_5 RISK_{i,t-1} + \beta_8 GDP_{i,t-1} + \beta_9 INFLATION_{i,t-1} + \beta_{10} UNEMPLOYMENT_{i,t-1} + \beta_{11} CRISIS_{i,t-1} + u_{i,t}$$

3.4 Validity

When performing a regression analysis, potential issues and confounding factors may appear, which could compromise the model's reliability. To ensure the validity of the regression analysis, the underlying methods and measures must be carefully selected and applied. The following section identifies the potential constraints and their implication for the analyses in this study. Doing this, the chosen measures to create robustness are outlined for each issue.

3.4.1 Selection Bias

Selection bias occurs when the collected data does not fully represent the population from which it is drawn. Generally, it arises when the chosen sampling method or other factors lead to a non-random selection due to a selection criterion based on the dependent variable (Wooldridge, 2015). Due to the collection of exclusively real estate companies with ESG ratings for at least three years, the data sample might be subject to a selection bias. However, apart from these parameters, the dataset is retrieved randomly and restricted by data availability. Moreover, compared to other studies, it is ensured that the companies are not listed on the same index and that there are no geographical boundaries to provide a global view.

3.4.2 Omitted Variables

When a relevant variable is omitted, the regression analysis can be subject to heterogeneity bias. Excluding a relevant variable creates inconsistency and might lead to overestimating the other variables' relevance and weight, resulting in a biased output (Wooldridge, 2015). Innovation is frequently used as an explanatory variable in regression analysis to avoid misspecification and tackle the possibility of an omitted variable bias (McWilliams & Siegel, 2000). This is because innovation is commonly related to a firm's growth potential (Audretsch et al., 2014) and indicates financial profitability and competitiveness (Porter & Linde, 1995). Although several studies included research and development (R&D) expenses as a proxy for innovation (e.g., Fischer & Sawczyn, 2013), the parameter often turns out to be insignificant (e.g., Xie et al., 2019). Furthermore, in the case of this work, a lack of observations was observed for the R&D parameter. In light of these aspects and the fact that the impact of R&D on performance mainly varies across industries (Graves & Waddock, 1997), whereas this study examines companies solely within the real estate sector, R&D is excluded from this regression

analysis. The omission of the variable, however, is still a potential source of the heterogeneity bias. A comprehensive set of independent and control variables is selected to increase the robustness of the analysis. Besides that, considering a random-effects model and including robust standard errors is used to account for the omitted variable bias in the panel dataset.

3.4.3 Outliers

Outliers can be problematic because they can tremendously impact statistical analyses, such as measures of the mean, correlations, and regression results. Outliers can occur from mistakes made during the data collection or when several entities of a smaller population differ significantly. A high standard deviation often indicates the presence of extremely high or low values among the respective variable. To avoid incorrect or misleading results, there are several options to deal with outliers (Wooldridge, 2015). Instead of keeping outliers, a data sample suffering from influential observation can be treated with winsorising or trimming. In the former case, extreme variable values will be replaced with the closest value within a specific range, whereas the latter eliminates the observation. (Ghosh & Vogt, 2012) Previous studies show that the most common procedure is to winsorise variables, usually at the 5th and 95th or 1st and 99th percentile (e.g., Dyck et al., 2019; Flammer, 2015). For the scope of this work, particularly given the moderate sample size, all variables are winsorised at the 1st and 99th percentile to reduce the weight of influential observations and add more robustness to the regression analysis results.

3.4.4 Multicollinearity

In the case of a high correlation between two or more explanatory variables, a multiple regression model might be subject to multicollinearity (Wooldridge, 2015). Its occurrence makes it challenging to determine the effects of the explanatory variables on the dependent variable, leading to unstable estimates of the regression coefficients and inflated standard errors (Farrar & Glauber, 1967). A simple way to detect multicollinearity is to examine the correlation matrix of the independent variables. If two or more variables are highly correlated, multicollinearity may exist. The Pearson correlation matrix is provided to examine the relevance of collinearity in the data sample and will be further examined in section 4.3.3 Correlation Matrix.

3.4.5 Reverse Causality

Usually, the aim is to infer that one variable has a causal effect on another; however, causality can run in both directions. Particularly with time series data, it can be difficult to infer causality (Wooldridge, 2015). Reverse causality is observed when the causality goes from the explanatory variable to the dependent and vice versa (Leszczensky & Wolbring, 2022). It is recommended to include time lags to protect results from biased estimates due to reverse causality (Wooldridge, 2015). Therefore, to evaluate the effect of the explanatory variables on the dependent variables, a one-year time lag is applied. Current research highlights the importance of time lags as it is assumed that better performance in CSP does not immediately result in a higher CFP but in consecutive periods (e.g., Scholtens, 2008). For this reason, both the independent and control variables are lagged, which means that the impact of the explanatory variables from year t-1 on the dependent variable in year t is examined in the regression analysis (e.g., Waddock & Graves, 1997).

4. Data

To provide an overview of the data sample, the first section explains the data collection process and outlines the dataset screening and cleaning. The following part gives insights into the independent, dependent and control variables referred to in the regression analysis. In the last section, an outline of the descriptive statistics is presented.

4.1 Data Collection and Screening Process

The original company list is based on a Compustat query for the Global and North American Markets. Companies belonging to the real estate sector were identified using the Kenneth R. French 48 Industry classification based on SIC codes between 6500 and 6599. The initial list of 2,437 companies was significantly reduced with the consideration of CSP and CFP variables and led to a remaining group of 437 firms. Most of the data used in this study was retrieved quarterly from Refinitiv Eikon from 2010 to 2021. This includes the ESG scores, and the financial variables used to assess CFP: ROA, FFO, TOQ and MTB. Of the control variables, only those indicating size, leverage, liquidity, and risk come from Refinitiv Eikon. In contrast, GDP growth, inflation and unemployment rate are obtained from the World Bank. The crisis dummy is based on information published by the European Central Bank.

Due to limited availability and missing information, the data sample shows a variance regarding the number of observations between the variables, particularly in the case of ESG data. To increase the significance of the model, only firms with an ESG score available for at least three years are included, which resulted in the exclusion of 155 firms. Other than this adjustment, no companies were removed from the dataset. Outliers are instead handled in winsorisation, as previously described in the discussion of the variables' validity and the creation of robustness in 3.4.3 Outliers. After all, the screening process results in an average of 1,128 observations per year. The remaining data sample comprises 282 companies operating in 42 countries and eight industry sectors.

4.2 Variable Description

4.2.1 Corporate Social Performance

The CSP of a company is assessed using the ESG score and its three subsidiary components, the ENV, SOC, and GOV pillar scores. The four scores are independent and dependent variables in the regression analysis. The annual ESG information is uniformly obtained from Refinitiv Eikon. The scores are evaluated in a range from 0-100. Companies at the lower end of the scoring system do not show any publicly revealed engagement in the respective category. In contrast, those with a high score are considered to have a high level of transparency and commitment. The ESG score is expressed as the weighted sum of the three sub-components: ENV, SOC, and GOV, which are, in turn, also calculated as a sum of individual factors. Whereas category weights for ENV and SOC vary per industry, GOV weights remain constant across all industries. More information on the provider's methodology and guidelines for the scoring system is available in Appendix 1. For evaluating corporate ESG performance, various rating agencies such as Bloomberg (Nollet et al., 2016) or S&P Global (Alareeni & Hamdan, 2020) exist, which rely on a comparable scoring system ranging from 0 to 100. Whereas the calculation of the ESG score is comparable across the different providers, the composition of the underlying categories varies. (Bloomberg, 2023; S&P Global, 2023). However, this study is based solely on the CSP-CSP linkage without considering disparities among data providers due to restricted access and limited possibilities. Consequently, only ESG information available on Refinitiv Eikon is drawn upon for this research.

4.2.2 Corporate Financial Performance

Four different variables are considered for evaluating a company's CFP, which are used as both dependent and independent variables. ROA and FFO are chosen to determine the firm's

accounting-based profitability, whereas TOQ and MTB are used as estimates for the market-based performance. As one of the most familiar figures for CFP, ROA indicates a company's ability to use its assets for profit generation (Minutolo et al., 2019). ROA is expected to give information about a firm's economic success and competitive advantage (Padgett & Galan, 2010), which can be caused by a more extraordinary reputation or more efficient usage of resources (Fischer & Sawczyn, 2013). Nonetheless, it is essential to create awareness of the risk of biases when referring to accounting-based performance metrics. A potential bias that ROA can be susceptible to is, for instance, disparities in accounting practices or the manipulation on the side of the management. (Scholtens, 2008). Despite this, ROA will be used as a proxy for firm profitability.

Furthermore, FFO, which is defined as the total of net income and depreciation (and amortisation) (Chiang et al., 2019), is often used to estimate the volume of a portfolio since a higher FFO commonly occurs among mature REITs (Eichholtz et al., 2012). Due to the sensitivity of net income to accounting treatments, this approach is commonly preferred in REIT research where depreciation plays a substantial role (e.g., Downs & Güner, 2006). Previous literature used FFO in different ways, such as FFO (Cajias & Bienert, 2011), FFO to total revenue (Eichholtz et al., 2012), or FFO to total assets (Chiang et al., 2019) to determine profitability. The FFO to total assets ratio is thus chosen for this work. Following previous empirical studies, it is essential to include market-based variables to respond to possible biases among accounting-based performance measures (Choi & Wang, 2009). Thereby TOQ is recognised as a commonly used metric to evaluate a company's market value, as it is initially defined as the ratio between a physical asset's market value and its replacement value (Velte, 2017). However, due to difficulties in determining the replacement value (Choi & Wang, 2009), it has become common to compare the market value of a company's equity and liabilities with its book values instead (Velte, 2017). This also applies to the metric referred to for this study since it is the underlying calculation method of the TOQ provided by Refinitiv Eikon. In addition to TOQ, research also refers to the market-to-book ratio (MTB) (e.g., Feng & Wu, 2021) or the book-to-market ratio and market capitalisation (e.g., Chiang et al., 2019). For this reason, both TOQ and MTB are chosen for this study. A summary of the metrics with individual composition is provided in Appendix 2.

4.2.3 Control Variables

In line with previous research analysing the CSP-CFP linkage, a set of different control variables is included to guarantee the internal validity of this work. The consideration of control variables referring to company-specific differences has been justified and declared relevant by comparable studies (e.g., Fischer & Sawczyn, 2013). One of the commonly used control variables in this field of research is the firm size which is usually measured by the natural logarithm of total assets (Velte, 2017). It is assumed that the size of a company affects its capability to maintain a competitive advantage and that larger firms, therefore, might benefit from economies of scale or scope to enhance the market value and revenues (e.g., Roberts & Dowling, 2002). However, previous studies reported a possible relation between size and the extent of stakeholders' interest in a firm's CSP, which can be both positive and negative (Velte, 2017). Another relevant control variable for the scope of this study is liquidity which can be determined as the ratio of cash and cash equivalents to total assets (e.g., Wong et al., 2021). Unlike non-REIT firms, REITs strongly depend on external capital markets for funding and hold only a little cash as real estate is known to be a capital-extensive industry (Feng & Wu, 2021). Since it is assumed that companies operating at high performance and generating high cash flows might use excess cash for CSR investments (Eichholtz et al., 2012), the liquidity variable is assumed to impact CSP and CFP positively. To control for unsystematic firm risk, comparative literature includes leverage, commonly defined as the ratio of total debt to total assets (e.g., Makni et al., 2009). There are indications for a lower assumption of risk among companies with higher CSP due to 'insurance-like' effects and, thus, lower cost of debt (e.g., Godfrey et al., 2009). In turn, it is assumed that firms operating at lower risk might have more stability in their return model and thus show more continuity in CSR investments (Roberts, 1992). Besides the unsystematic firm risk, it is also essential to control for the systematic market risk, which is often determined by the beta factor (e.g., Velte, 2017), since some studies present evidence of a negative influence of both a firm's leverage ratio and beta factor on its CFP (e.g., Choi & Wang, 2009). Notably, because of the global scope of this study, it seems essential to consider not only the firm-specific variations but also the economic conditions of the country a firm is operating in. This study includes GDP growth (Duque-Grisales & Aguilera-Caracuel, 2021), unemployment rate, and inflation rate of a firm's country of origin. Beyond that, a crisis dummy is included covering the European Sovereign Debt Crisis and the Global COVID-19 Crisis. Appendix 2 presents the sources referred to in the data collection process.

4.3 Descriptive Statistics

4.3.1 Sample Distribution

The data sample covers 282 global companies across four economic regions and 42 unique countries. Table 1 gives an overview of the distribution of observations across regions and countries and their percentual weighting on the total data sample. The dominating region is the Asian Pacific (APAC), accounting for 48.6% of the observations, followed by Europe, the Middle East, and Africa (EMEA), with 30.5%. Latin America (LATAM) and North America (NAM) constitute 8.2% and 12.8% of the sample. Whereas the most represented countries in EMEA and NAM, namely the United Kingdom (5.3%), Sweden (6.4%), and the United States (9.6%), amount up to nearly 10%, in APAC, Hong Kong and China reach up 10.3% and 17% respectively.

APAC	%
Australia	2.5%
China	17.0%
Hong Kong	10.3%
India	2.5%
Indonesia	1.4%
Japan	3.2%
Malaysia	1.4%
Philippines	1.8%
Singapore	4.3%
Taiwan	0.4%
Thailand	3.5%
Vietnam	0.4%
Total	**48.6%**

EMEA	%		
Austria	1.4%	Norway	1.4%
Bahrain	0.4%	Poland	0.4%
Cyprus	0.4%	Qatar	0.7%
Finland	0.7%	Saudi Arabia	0.7%
France	0.7%	South Africa	0.4%
Germany	3.2%	Spain	1.1%
Greece	0.4%	Sweden	6.4%
Isle of Man	0.4%	Switzerland	2.5%
Israel	0.4%	United Arab Emirates	1.8%
Kuwait	0.4%	United Kingdom	5.3%
Luxembourg	1.4%		
Morocco	0.4%		
Total	**30.5%**		

LATAM	%
Argentina	1.4%
Bermuda	0.7%
Brazil	3.5%
Chile	1.1%
Mexico	1.4%
Peru	0.4%
Total	**8.2%**

NAM	%
Canada	3.2%
United States	9.6%
Total	**12.8%**

Table 1: Distribution across Countries

As illustrated in Table 2, the data sample is dispersed among eight industry sectors within the real estate industry. Most of the observations originate from the sector land subdividers and developers and constitute 34.8% of the sample, followed by companies that make up the generally labelled real estate sector, accounting for up to 30.9%. After that come the operators of non-resident buildings (13.5%), real estate agents and managers (10.3%) and real estate operators and lessors (8.2%). The lowest contribution to the data sample can be assigned to lessors of railroad and real property (0.4%) and real estate dealers (0.7%).

Industry Sector	% of the Total Sample
Land subdividers & developers	34.8%
Lessors of railroad & real property	0.4%
Operators - apartment buildings	1.4%
Operators - non-resident buildings	13.5%
Real estate	30.9%
Real estate agents and managers	10.3%
Real estate dealers	0.7%
Real estate operators and lessors	8.2%
Total	**100%**

Table 2: Distribution across Industry Sectors

4.3.2 Regression Variables

The descriptive statistics for all regression variables across the sample period from 2010-2021 are presented in detail below in Table 3.

	N	Mean	SD	Min	Max
CSP Variables					
ESG	7,991	42.22	20.66	5.22	86.19
ENV	6,637	43.13	26.64	1.63	90.82
SOC	7,983	44.52	23.25	2.43	92.00
GOV	6,953	46.45	21.63	4.98	91.05
CFP Variables					
ROA (%)	12,057	4.82	5.76	-21.40	23.51
FFO (%)	12,272	3.70	5.52	-15.16	27.42
TOQ	11,541	0.93	0.61	0.29	4.49
MTB	11,583	1.46	1.49	-0.14	9.98
Control Variables					
Size (Ln)	12,347	16.79	2.61	10.44	23.98
Leverage (%)	12,328	33.31	17.42	0.00	82.91
Liquidity (%)	12,319	10.43	11.08	0.12	64.80
GDP (%)	13,476	3.21	3.53	-7.99	10.64
Inflation (%)	13,084	2.26	1.78	-1.14	9.03
Unemployment (%)	13,344	5.44	2.91	0.56	19.86
Risk	11,542	1.11	0.60	-0.28	2.95
Crisis (Dummy)	13,536	0.19	0.40	0.00	1.00

N = Number of Observations, SD = Standard Deviation, Min = Minimum Value, Max = Maximum Value

Table 3: Descriptive Statistics of all Study Variables

4.3.2.1 CSP

The average value of the ESG score and its three pillar scores vary remarkably depending on the economic regions in which the companies are based. As shown in Table 4, the highest average ESG scores are reached in the APAC (45.53) and EMEA (41.33), while the lowest scores can be found in LATAM (34.77) and NAM (35.03). A similar pattern can be observed for ENV, but the average score in LATAM is with 29.91 significantly lower. Concerning SOC, again, companies in APAC (46.32) and EMEA (44.19) reach the highest performance, whereas those operating in LATAM (40.32) and NAM (40.40) only account for lower average scores. Companies reach the highest averages for the GOV, particularly in APAC (49.74) and LATAM

(47.43). In this case, the average scores are the lowest in NAM (43.46) and EMEA (41.43). Appendix 3 presents the average CSP variables for the individual countries.

	ESG	ENV	SOC	GOV
APAC	45.53	46.11	46.32	49.74
EMEA	41.33	42.82	44.19	41.43
LATAM	34.77	29.91	40.32	47.43
NAM	35.03	37.73	40.40	43.46
Total	**42.22**	**43.13**	**44.52**	**46.45**

Table 4: Average ESG and Pillar Scores across Regions

As presented in Table 5, there are not only differentiations across regions but also across industry sectors. Firms working in the field of railroad and real property lessors score the highest average values for ESG (46.94), ENV (64.23), and SOC (65.10); however, when it comes to GOV (10.26), they reach by far the lowest. Land subdividers and developers, operators of non-resident buildings and real estate agents and managers, in turn, achieve the highest averages on GOV. The lowest performance overall can be assigned to real estate dealers.

	ESG	ENV	SOC	GOV
Land subdividers & developers	41.53	39.82	43.52	49.07
Lessors of railroad & real property	46.94	64.23	65.10	10.26
Operators - apartment buildings	37.23	34.77	43.51	42.72
Operators - non-resident buildings	44.29	46.91	47.34	47.50
Real estate	41.20	45.40	42.20	43.20
Real estate agents and managers	43.80	44.85	49.23	47.85
Real estate dealers	25.97	16.18	34.23	27.24
Real estate operators and lessors	45.63	42.13	48.70	46.20
Total	**42.22**	**43.13**	**44.52**	**46.45**

Table 5: Average ESG and Pillar Scores across Sectors

4.3.2.2 CFP

Regarding the financial performance measures, there are also recognisable deviations of the individual variables across the economic regions and countries, as depicted in Table 6. Whereas EMEA accounts for the highest average ROA (5.47%), it shows the lowest average MTB ratio (1.18) in the data sample. On the contrary, NAM reaches the lowest average ROA (3.38%) but the highest MTB (2.67). Among the FFO and TOQ, NAM displays 5.07% and 1.47, respectively, the highest average values, while the lowest FFO can be assigned to companies operating in LATAM (2.82%) and the lowest TOQ to those in APAC (0.81). A complete overview of the average CFP variables in the respective countries can be found in Appendix 3.

	ROA	FFO	TOQ	MTB
APAC	4.79	3.82	0.81	1.39
EMEA	5.47	3.16	0.94	1.18
LATAM	4.80	2.82	0.89	1.21
NAM	3.38	5.07	1.47	2.67
Total	**4.82**	**3.70**	**0.93**	**1.46**

Table 6: Average CFP Variables across Regions

There are also some differences in the CFP variables between the industry sectors, which can be observed in Table 7. Operators of apartment buildings and real estate dealers score the highest average ROA with 8.67% and 8.12%, respectively. However, only the latter performs best with a high average FFO of 10.21%, whereas the former shows 2.21%, the lowest FFO. Besides that, the highest average MTB ratio (3.38) is also found in real estate dealers; however, the lowest can be traced back to operators of apartment buildings (1.07). Regarding the TOQ, land subdividers and developers only reach an average ratio of 0.78, whereas the sector of real estate agents and managers accounts for the highest with 1.71.

	ROA	FFO	TOQ	MTB
Land subdividers & developers	4.60	3.35	0.78	1.18
Lessors of railroad & real property	7.17	7.55	0.91	1.33
Operators - apartment buildings	8.67	2.21	1.04	1.07
Operators - non-resident buildings	4.50	3.40	1.08	1.68
Real estate	4.55	2.91	0.85	1.25
Real estate agents and managers	5.48	8.54	1.71	3.31
Real estate dealers	8.12	10.21	1.31	3.38
Real estate operators and lessors	5.81	2.71	0.95	1.37
Total	**4.82**	**3.70**	**0.93**	**1.46**

Table 7: Average CFP Variables across Sectors

Looking at the average CFP values and their development over the sample period, shown below in Figure 1, makes some distinctions visible. Overall, there has been a constant evolution for all four variables, with a negative tendency reinforced through occasional slowdowns. Whereas both TOQ and MTB show a drop between 2010 and 2012, the time of the European Sovereign Debt Crisis, there is only a minor slowdown noticeable for ROA and FFO. However, from 2018 to 2020, a significant economic downturn can be observed across all four variables. In the case of ROA, the decline was already visible in 2017; the variable then continued its downward trajectory and suddenly took a reversed course with the sharpest rise in 2020. The upward trend coincides with the end of the Global COVID-19 Crisis; however, the downward trend had already started before the crisis.

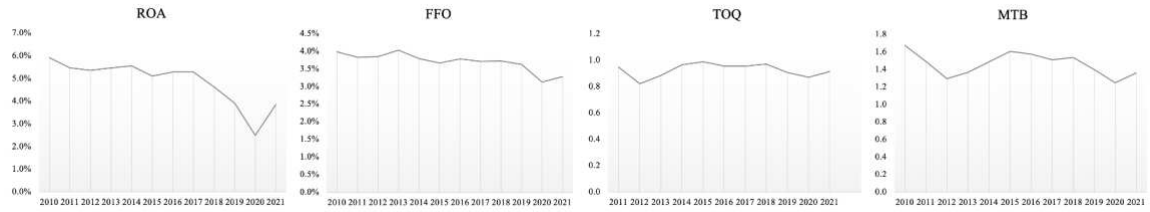

Figure 1: Average CFP Variables over Time

4.3.3 Correlation Matrix

The relationship between the dependent, independent and control variables is examined in the correlation matrix demonstrated below in Table 8. Regarding the CSP variables, one can observe a strong positive relationship between the ESG score and its components, which correlates by 0.87 with ENV, 0.89 with SOC and 0.70 with GOV. These results are not surprising since the overall ESG score is derived from its three pillar scores. Furthermore, there is a strong positive connection between ENV and SOC (0.71); however, the correlation between ENV (0.35) and SOC (0.45) to GOV is only weakly positive. Looking at the relationship between the CFP variables themselves, it is noticeable that there is a positive correlation at a moderate level between ROA and FFO (0.45), at a shallow level between ROA and TOQ (0.06) and none between ROA and MTB. FFO accounts for both, with a weak positive correlation with TOQ and MTB, with values of 0.28. TOQ and MTB, however, show a strong positive correlation of 0.73.

Analysing the relationship between the CSP and CFP variables, only a very weak positive correlation can be found between the CSP measures and the ROA and FFO. Whereas ESG, ENV, SOC and GOV correlate with ROA only very weakly, with values from 0.06 to 0.09, the correlation of the four scores with FFO is even smaller, reaching solely values from 0.03 to 0.06. At the same time, there is no significant result between FFO and ENV. TOQ and MTB, on the other hand, show a fragile negative relationship with the ESG score and its components, with values ranging from -0.12 to -0.03, whereas there is no correlation between MTB and SOC. The results are not only fragile due to the low correlation coefficients but also contradictory since findings within the CFP metrics are diverse. Whereas the connection between CSP and the accounting-based performance measures is positive, the linkage between CSP and the market-based metrics is supposedly negative.

Among the control variables, the correlation goes in both directions. However, the correlation matrix displays only weakly positive and negative correlation coefficients with values between -0.3 and 0.26, except for risk and leverage, where no correlation is found. Comparing the correlation coefficients between the control and CSP and CFP variables individually, positive and negative correlation coefficients can be observed; however, the obtained results are all very weak. As expected, size positively correlates with the CSP and CFP variables, except for a negative correlation with TOQ and MTB. Leverage is positively correlated with ENV and SOC, which goes against the assumptions but is negatively correlated with the CFP variables as predicted. Liquidity fulfils the assumption of a positive correlation with CSP and CFP; however, it only shows significant but very weak results for ESG, GOV, ROA and FFO. Lastly, the risk is negatively correlated with MTB negatively and positively correlated with ESG, SOC, GOV, and ROA.

	ESG	ENV	SOC	GOV	ROA	FFO	TOQ	MTB	Size	Leverage	Liquidity	GDP	Inflation	Unemp.	Risk	Crisis
ESG	1.00															
ENV	0.867***	1.00														
SOC	0.891***	0.710***	1.00													
GOV	0.700***	0.346***	0.450***	1.00												
ROA	0.079***	0.061***	0.088***	0.074***	1.00											
FFO	0.030***	0.01	0.062***	0.028**	0.449***	1.00										
TOQ	-0.117***	-0.106***	-0.040***	-0.075***	0.055***	0.282***	1.00									
MTB	-0.059***	-0.043***	-0.01	-0.027**	-0.01	0.276***	0.732***	1.00								
Size	0.101***	0.123***	0.092***	0.052***	0.080***	0.081***	-0.048***	-0.078***	1.00							
Leverage	0.02	0.039***	0.046***	-0.01	-0.016*	-0.044***	-0.016*	-0.020**	0.060***	1.00						
Liquidity	0.030**	0.01	0.01	0.027**	0.021**	0.019**	0.00	0.00	-0.092***	-0.297***	1.00					
GDP	0.00	0.02	0.01	-0.01	0.042***	0.023**	-0.01	0.01	0.173***	-0.058***	0.112***	1.00				
Inflation	-0.01	-0.037***	-0.035***	0.00	0.019**	-0.00	-0.031***	-0.020**	0.118***	-0.142***	0.055***	0.259***	1.00			
Unemp.	-0.048***	-0.090***	-0.040***	-0.01	-0.026***	-0.060***	-0.01	0.01	-0.251***	0.020**	-0.043***	-0.210***	0.107***	1.00		
Risk	0.049***	0.02	0.041***	0.022*	0.033***	0.01	0.00	-0.029***	0.191***	0.00	0.092***	0.165***	0.172***	-0.032***	1.00	
Crisis	0.01	-0.01	0.020*	0.02	-0.01	-0.01	-0.00	0.01	0.027***	0.030***	-0.023**	-0.282***	-0.093***	0.133***	0.01	1.00

*** p<0.01, ** p<0.05, * p<0.1

Table 8: Correlation Matrix

As examined above, significant evidence exists for a correlation between the respective variables. However, due to the low coefficients for both negative and positive values, the results are overall weak and thus not very predictive.

5. Empirical Findings and Analysis

After a comprehensive discussion of the data collection process and a detailed exploration of the individual variables in the data sample, the regression analysis examines the relationship between the CSP and CFP of globally listed real estate companies. The following chapter outlines the choice of the regression model and presents the results from the regression analysis. Lastly, the regression findings and their relevance will be discussed, followed by a brief discussion of the limitations with suggestions for future research.

5.1 Choice of Model

For the scope of this work, the random-effects model turned out to be the appropriate model for the regression analysis. As outlined in section 3.3 Model Building, the three most prominent models, namely the pooled OLS, fixed-effects model, and random-effects model, were evaluated and tested in terms of suitability for the data sample. The first test was the Poolability test, which revealed the presence of individual-specific effects and suggested, therefore, running regressions based on the fixed-effects model instead of the pooled OLS. In a second step, the Breusch Pagan LM test was performed to detect heteroscedasticity, resulting in choosing the random-effects model over the pooled OLS. Lastly, the Hausman test was conducted to determine whether the fixed-effects or the random-effects model is the most suitable for the data sample. The results indicate that the regression analysis should be built on the random-effects model to obtain the highest accuracy for the regression output. More details about the model-building tests can be found in Appendix 4.

Conclusively the random-effects model is applied to the data sample for 32 regression equations. Thereby, model I-XVI analyse the effect of the ESG score and its three pillar scores on the CFP measures ROA, FFO, TOQ, and MTB, respectively. The models XVII-XXXII thus analyse the relationship in the other direction, hence the impact of the CFP variables on the CSP scores.

5.2 Regression Results

To determine the CSP-CFP relationship, the following chapter presents and discusses the results obtained from the random-effects model. Whereas the dependent and independent variables change with each model, the control variables, namely size, liquidity, leverage, risk, GDP, inflation, unemployment, and crisis, remain constant across the analysis. The presentation of the regression results is divided into two parts, the impact of CSP on CFP will be analysed first, and the influence of CFP on CSP after that, followed by the investigation of the role of the control variables. The main regression results and the individual tables for the economic regions can be found in Appendix 5-Appendix 9.

5.2.1 CSP on CFP

The regression analysis findings unveil an overall statistically significant and negative impact of CSP on CFP (Model I-XVI) for both the accounting-based and market-based performance measures. A summary of the results is provided below in Table 9. However, looking at the

economic regions individually, differences can be noticed. Regression results retrieved in APAC mirror similar findings since APAC contributes substantially to the global outcome. In contrast, results in EMEA indicate a positive but non-significant connection apart from one exception. LATAM and NAM show scattered significant results, also most of a negative connection.

A closer look at Models I-IV shows negative coefficients for ROA ranging from -0.04 to -0.02. This means that an increase of the ESG score or pillar scores by one-unit results in a decrease of ROA by -0.04 (ESG), -0.03 (ENV and SOC), and -0.02 (GOV) percentage points, respectively. These results are comparable to the findings of Duque-Grisales & Aguilera-Caracuel (2021), who present evidence that high overall ESG and pillar scores decrease financial performance as measured by ROA. Similarly, FFO (Model V-VIII) shows significant coefficients between -0.017 and -0.01 for all CSP measures except GOV. Consequently, FFO reacts with a drop of -0.013 (ESG), -0.01 (ENV), and -0.017 (SOC) to a one-unit rise of the respective scores. This contradicts the results from Chiang et al. (2019), who find that REITs show better CSP with greater financial profitability and growth opportunities, captured with the FFO ratio to total assets. Apart from the findings in APAC, which reveal similar results for ROA and FFO, the other significant coefficients are found in LATAM. They indicate a negative impact of the ESG score on ROA and SOC on FFO, respectively, whereas a better GOV leads to an increase in FFO.

Regarding the market-based performance, the impact of the CSP scores is also significantly negative but at lower levels than for the accounting-based metrics, as outlined in Table 9. Whereas the coefficients of TOQ (Model IX-XII) show a coefficient between -0.003 and -0.001, the coefficients for the MTB ratio (Model XIII-XVI) lie between -0.007 and -0.004. Following this, a one-unit increase among the CSP scores leads to a drop in the TOQ ratio by -0.003 (ESG), -0.002 (ENV and SOC), and -0.001 (GOV). Similarly, the MTB ratio reacts with a decrease of -0.007 to an increase in the ESG score and a drop of 0.004 to a one-unit rise among the other pillars. These findings are contradictory to the regression results from previous studies) revealing a non-significant positive link between CSP and TOQ (Velte, 2017) and MTB (Feng & Wu, 2021). In APAC, findings are again comparable; however, there is no significant coefficient for the impact of GOV on MTB. Across EMEA, only GOV shows a significant and negative result for MTB. Findings in LATAM reveal both a negative impact on FFO from SOC

and a positive one from GOV, whereas, in NAM, only SOC and GOV negatively affect TOQ and MTB.

	ROA	FFO	TOQ	MTB
Independent Variables				
ESG Score	-.04***	-.013*	-.003***	-.007***
Environmental	-.03***	-.01**	-.002***	-.004***
Social	-.03***	-.01**	-.002***	-.004***
Governance	-.02**	0	-.001**	-.004***

Table 9: Summary Results from Regressing CSP on CFP

5.2.2 CFP on CSP

Analysing the regression results regarding the impact of CFP on CSP (Model XVII-XXXII), significant results for a negative relationship can be found for both the ESG score and its pillar scores. However, not for each CFP measure. Table 10 presents an overview of the main results. The findings across the economic regions show higher deviation from the overall results in this case. As before, APAC results also indicate a negative relationship; however, regression results are more robust than the global ones. Whereas coefficients in EMEA are mostly insignificant again, two findings indicate a positive connection. In LATAM, regression reveals primarily negative and in NAM, mixed results.

It can be observed that some of the CSP variables are negatively affected, but only by one of the two accounting-based performance measures. More precisely, a 1% increase in ROA results in a drop in ESG score and SOC by 0.254 and 0.225, respectively. In contrast, Fischer & Sawczyn (2013) find evidence of a positive impact of CFP on CSP measured using ROA as a proxy. A closer look at the individual economic regions reveals that a better ROA leads to a decrease in each of the scores in APAC, whereas controversy in EMEA, ENV reacts positively to an increase in ROA, and GOV goes up with a higher FFO. In LATAM, ESG score, ENV, and SOC decrease with a rise in ROA, whereas a better FFO leads to a lower SOC but better GOV. In NAM, there are only positive results for the impact of FFO on ENV and SOC.

A closer look at the impact of the market-based performance measures on CSP shows a robust negative relationship between TOQ and both the ESG score and its pillar scores. Thereby, an increase in TOQ by one unit leads to an adverse change of 4.229 (ESG), 4.019 (GOV), 6.059 (ENV), and 2.93 (SOC). The MTB ratio, on the other hand, only influences the ESG and GOV scores by -1.079 and -0.848, respectively. These results differ from the findings of Feng & Wu

(2021), who indicate a positive impact of ESG disclosure on a firm's value measured by MTB. Comparing the results across the economic regions for both market-based performance measures, a decisive negative impact on CSP can be found in APAC. In contrast, in EMEA, again, no significant result can be obtained. However, TOQ negatively impacts ESG scores in LATAM, and GOV and the MTB ratio only show a negative relationship with GOV. The findings in NAM also indicate a negative connection; this time, only ESG is affected by TOQ and ENV and GOV by the MTB ratio.

	ESG	ENV	SOC	GOV
Independent Variables				
ROA	-.254***	-.243	-.225**	-.184
FFO	-.047	.114	-.063	.061
TOQ	-4.229***	-6.056***	-2.93***	-4.019***
MTB	-1.079***	-.935	-.608	-.848**

Table 10: Summary Results from Regressing CFP on CSP

5.2.3 Control Variables

Exploring the regression coefficients of the dependent and control variables reflecting company characteristics, it can be observed that a firm's size has a significant positive impact on ROA when controlling for ENV and on SOC holding ROA or FFO constant. This means that, as seen in previous literature (Xie et al., 2019), an increase in size positively affects the ROA and, in this case, also SOC, however not across all models. Among the economic regions, results are contradictory. Looking at the role of liquidity, there is a positive relationship in both directions across all models except for the market-based variables. These results can also be observed in all the individual regions apart from EMEA, where no significant coefficient is obtained. This aligns with the findings from Feng & Wu (2021), which report a positive link between a firm's liquidity and value. Whereas previous research suggests a negative link between the leverage ratio and CSP (Fischer & Sawczyn, 2013) and CFP (Makni et al., 2009), no significant results indicate a relationship between risk and any variable obtained in this study. Only the regional analysis detects positive coefficients for some CFP variables in EMEA and a few CSP variables in LATAM and NAM. Similarly, risk does not significantly influence the CSP or CFP of the firm in the data sample. Here, significant results can be only found in APAC and NAM; however, the impact is positive and occurs only for some CFP variables. This goes against the expectations of a negative impact of risk on CFP (Choi & Wang, 2009).

Looking at the control variables targeting the variation among countries, GDP positively affects MTB when controlling for ESG and SOC when the CFP variables are constant. This positive correlation is found in some literature focusing on individual economic regions. It is comparable to the findings of Duque-Grisales & Aguilera-Caracuel (2021), who measure a positive but non-significant relationship. Moreover, the analysis shows a negative influence of inflation on all CFP variables except for FFO, whereas CSP variables are affected negatively (SOC) and positively (GOV). The unemployment rate only negatively affects some of the CFP and CSP metrics. Lastly, a crisis significantly decreases ESG score and pillar scores, while MTB and TOQ increase slightly. Overall, the relationships mentioned above between dependent and control variables are all observed on significant levels; however, the coefficients are, except for the impact of a crisis on CSP, relatively small and thus suggest a limited impact of the selected control variables. In other words, the effect of the independent on dependent variables is not substantially affected by any of these control variables, which in turn leads to the assumption that the observed impact of the independent variable on the dependent variables is direct and substantial and not necessarily significantly distorted or influenced by other factors.

5.3 Discussion

This study aims to answer the research question: *"Whether there is a linkage between the corporate social performance of real estate companies and their corporate financial performance, and whether the relationship is positive, driven by the satisfaction of stakeholders and slack resources or negative, driven by incurred costs and managerial incentives".* Four hypotheses were derived to be tested during the regression analysis to achieve that goal. In this context, it is essential to underline that only the results collected in the primary global regression analysis are considered. In contrast, the above-presented findings for the respective economic region are solely considered as additional analyses to allow a deeper understanding of the CSP-CFP relationship and the possible differences across countries.

Showing responsibility towards the environment regarding resources and pollution, the community concerning human rights, or regulatory compliance by establishing management systems is commonly assumed to be in the stakeholders' best interest, which might be reflected in the financial performance (Makni et al., 2009). On these grounds, the first hypothesis relates to the social impact hypothesis presuming that a better CSP results in higher CFP thanks to the satisfaction of stakeholders' needs and a more outstanding commitment to CSP. However,

given the negative coefficients for the CSP-CFP relationship, this assumption cannot be confirmed; Hypothesis 1 is therefore rejected. This contradicts prior research (e.g., Alshehhi et al., 2018), which supports a positive relationship between CSP and CFP in nearly 80% of publications.

However, the negative results obtained for the impact of CSP on CFP are consistent with the trade-off hypothesis, according to which better CSR results in lower CFP as the benefits do not pay out the incurred costs causing a competitive disadvantage and an overall reduction of shareholder wealth. Consequently, Hypothesis 2 can be accepted. More precisely, the regression results reveal that CSP engagement negatively affects a firm's market value, as the results are strongly significant without restriction. Compared to other research (e.g., Makni et al., 2009), there is not only a partial connection between CFP and one dimension of CSP but with all the pillar scores except for GOV, which is not affecting FFO but ROA. Apart from the trade-off hypothesis, the results are assumed to be further consistent with the negative synergy hypothesis, which builds on the assumption that engagement in social activities leads to lower returns and reduced shareholder wealth, limiting a firm's capabilities to invest further in CSP strategies.

This idea is also reflected at the core of the slack resource hypothesis, from which the third hypothesis of this work was derived. However, in contrast to the negative synergy hypothesis, this theory focuses on a positive link between CFP and CSP. It states that better CFP favours higher CSP on account of the availability of unused resources. This presumption cannot be confirmed regarding the negative coefficients obtained in the regression analysis; Hypothesis 3 is therefore rejected. These findings differ from prior studies (e.g., Fischer & Sawczyn, 2013), which present evidence for improving CSP among firms with superior CFP.

This negative association between CFP and CSP aligns with the managerial opportunism hypothesis. Following this, managers might be tempted to reduce CSP due to the stronger preference for their gains. For this reason, Hypothesis 4 proves to hold. Although the influence of CFP on CSP is perceived to be predominantly negative, there is no significant evidence for all the dimensions of the CFP-CSP relationship. To be more precise, while there is strong evidence for a negative impact of ROA on all the pillars except for ENV, FFO results are both positive and negative but non-significant. The negative link between a firm's market value and CSP is also proven based on the substantial impact of TOQ, whereas MTB has been shown to

influence only ESG and GOV significantly. However, the overall negative influence of a firm's CFP on CSP demonstrates the possible consequences of economic and social performance dependence on established management incentives.

5.4 Limitations and Implications

5.4.1 Limitations

The above-presented results should be interpreted with care under consideration of some limitations. First, the dataset underlying the regression analysis consists of globally listed real estate companies with ESG data available for a timespan of at least three years which limits the study to a data sample of 282 entities. Despite the small sample size, the study comprises 42 countries across the four major economic regions. Nearly 50% of the data is explained by five major countries, whereas the rest is distributed among the other 37 countries. For this reason, country-specific considerations are discarded, and only a comparison of the regions is drawn up, with the primary analysis being based on the global results. Consequently, the findings of this data sample should be considered as a result of a global study but with consideration of the limitations regarding size and geographical distribution. Second, even though the data sample encompasses ten years, only short-term dependencies within the first year could be revealed, resulting from the chosen one-year time lags between dependent and explanatory variables. Third, CSP variables are known to be restricted regarding their validity since they are based on the statements and assessments of the companies themselves. Further, variables chosen to assess CFP are often subject to biases due to different definitions and valuation methods, particularly accounting-based metrics. Moreover, although the exclusion of R&D and the use of a random-effect model with robust standard errors are expected to create robustness regarding a heterogeneity bias, there might be other omitted variables which have not been considered in the scope of this study. Besides that, the study only investigates the correlation and direction but not the causation of the CSP-CFP link.

5.4.2 Implications

The negative relationship between CSP and CFP in the real estate industry underscores the importance of further research to elucidate the underlying mechanisms driving this relationship. To achieve more comprehensive global and regional insights into the CSP-CFP relationship, future research could expand on existing findings by using a larger sample size and extending the analysis timeframe while examining various lags to detect the long-term effects and dependencies of the relationship. In addition, future research could consider alternative ways

of assessing CSP, such as incorporating measures of social impact and environmental sustainability and examining the impact of control variables on the results, including the possibility of omitted variable bias. A Granger causality test could also be performed to determine the causal relationship between CSP and CFP.

The findings of a negative linkage between CSP and CFP also have important implications for government policymakers. In addition to providing subsidies or other incentives to help real estate companies offset the short-term expenditure of improving their social performance, governments could explore other ways of promoting social responsibility in the industry. For example, governments could encourage the development of industry standards for social and environmental performance or require companies to disclose their social and environmental impact. Governments can foster a more equitable business environment for companies prioritising sustainable practices by establishing a regulatory framework encouraging social responsibility.

For real estate companies, the negative relationship between CSP and CFP presents challenges and opportunities. Although investing in CSP initiatives may result in short-term financial losses, it can also positively impact revenues in the long run. In addition, companies committed to social responsibility can stand out as role models in the industry and create a competitive advantage. Real estate companies can achieve a balance between social and financial performance by considering the needs and interests of their stakeholders, taking responsibility for their impact on society and the environment, and adopting sustainable practices. By doing so, they can contribute to a more sustainable future while improving their financial performance over the long term.

6. Conclusion

In recent years, the concept of CSP has gained significant attention in the literature and practice. As one of the main drivers of carbon emissions, the real estate industry has been at the forefront of this debate. Despite the growing interest in this area, there is a gap in the literature regarding investigating the link between CSP and CFP for real estate companies. Although many studies have examined the impact of CSP on CFP among companies from various industries or specific countries, questions are still being raised about the direction and signs of this relationship.

This thesis sheds light on the relationship between CSP and CFP in the real estate industry and contributes to the literature by examining this relationship in detail. While previous studies have mainly focused on the impact of CSP on CFP, this research delves deeper by examining the relationship in both directions, providing valuable insights into the underlying dynamics. The study finds support for the trade-off and managerial opportunism hypotheses, revealing a negative relationship between CSP and CFP running in both directions. The strength of this relationship varies depending on the dimensions of CSP and CFP and the selected variables. Specifically, the evidence shows that ESG scores and their pillars have a strong negative influence on all CFP variables, except for GOV on FFO. Moreover, the findings highlight the negative impact of CFP on CSP, with ROA influencing ESG score and SOC but no significant result for FFO. Additionally, the study reveals that TOQ significantly impacts ESG score and its pillars, whereas MTB only affects ESG score and GOV.

This study contributes significantly to the literature on the relationship between CSP and CFP in the real estate industry. Its findings underscore the importance of balancing social and financial performance to create a more sustainable future and call for incentives by government policymakers and company management to enhance CSP. While this study provides valuable insights into the CSP-CFP relationship, there are still gaps in the literature that need to be addressed. Future research is needed to explore this topic further and to provide insights for companies and policymakers in the real estate industry and beyond. The study's limitations and suggested implications for future studies offer researchers the opportunity to expand the knowledge base and drive change in this vital area.

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Appendices

Appendix 1: Key Aspects of ESG Rating

This table provides an overview of the key aspects concerning the ESG rating implemented by Refinitiv Eikon. The table gives brief information on the ESG score methodology, decomposition, sources, data collection process, different pillar scores, score range and applied weighting methodology.

	Refinitiv ESG Company scores
ESG Score Methodology	Measures a firm's relative ESG performance, effectiveness, and level of commitment across 10 major topics based on verifiable reported data in the public domain. a transparent and objective procedure.
ESG Score Decomposition	Environmental: Emissions, Product Innovation, Resource Usage Social: Community, Human Rights, Product Responsibility, Workforce Governance: CSR Strategy, Management, Shareholders
ESG Data Sources	Annual Reports, Company Websites, NGO Websites, Stock Exchange Fillings, CSR Reports, News Sources
ESG Data Collection Process	Data is collected with more than 700 content research analysts combining local expertise and providing comprehensive up-to-date coverage. Over 630 ESG measures are processed manually for each company to create standardized and comparable information across companies. Since 2003 the coverage evolved over time and is already available for more than 12,500 companies worldwide. The database is refreshed on products on a weekly basis and yearly on the individual company disclosure. To ensure data quality a combination of both algorithmic and human processes is implemented.
ESG Score and Pillar Scores	ESG, ENV, SOC & GOV
ESG Score Weighting	Weighting depends on industry for ESG, ENV & SOC and remains constant across industries for GOV
ESG Score Range	0-100

Source: Refinitiv Eikon (2023)

Appendix 2: Collection of the Variables

This table provides an overview of the variables selected to assess the corporate financial performance (CFP) as well as the control variables selected to create robustness across the analysis. The table shows the variables' name, frequency, underlying formula, and source.

Name	Frequency	Formula	Comment	Source
Return on Assets	Annual	$ROA(\%) = \frac{((Net\ Income - Bottom\ Line) + (Interest\ Expense\ on\ Debt - Interests\ Capitalized)) \times (1 - Tax\ Rate)}{Average\ of\ last\ Year's\ and\ Current\ Year's\ Total\ Assets} \times 100$		Refinitiv Eikon
Funds from Operations to Total Assets	Annual	$FFO(\%) = \frac{(Net\ Income + Non - Cash\ Charges\ or\ Credit)}{Total\ Assets} \times 100$		Refinitiv Eikon
Tobin's Q	Time Series	$TOQ = \frac{Market\ Cap + Preferred\ Stock + Debt}{Total\ Assets}$		Refinitiv Eikon
Market-to-Book Ratio	Time Series	$MTB = \frac{Market\ Value\ of\ the\ Ordinary\ (Common)\ Equity}{Balance\ Sheet\ Value\ of\ the\ Ordinary\ (Common)\ Equity}$		Refinitiv Eikon
Size	Annual	$Size = Total\ Assets$	Represents the sum of Total Current Assets, Long-Term Receivables, Investment in Unconsolidated Subsidiaries, Other Investments, Net Property Plant and Equipment and Other Assets.	Refinitiv Eikon
Leverage	Annual	$Leverage\ (\%) = \frac{Total\ Debt}{Total\ Assets} \times 100$	Represents the sum of Short-Term Debt, Current Portion of Long-Term Debt and Long-Term Debt.	Refinitiv Eikon
Liquidity	Time Series	$Liquidity\ (\%) = \frac{(Cash + Cash\ Equivalents)}{Total\ Assets} \times 100$	*Represents Cash and Due from Banks for Banks, Cash for Insurance companies and Cash and Short-Term Investments for all other industries.	Refinitiv Eikon
GDP	Annual	$GDP\ Growth\ (\%)$	Annual percentage growth rate of GDP at market prices based on constant local currency. Aggregates are based on constant 2015 prices, expressed in U.S. dollars. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.	World Bank
Inflation	Annual	$Inflation\ Growth\ (\%)$	Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used.	World Bank
Unemployment	Annual	$Unemployment\ (\%)$	Unemployment refers to the share of the labor force that is without work but available for and seeking employment.	World Bank
Risk	Time Series	$Historical\ Beta$		Refinitiv Eikon
D Crisis	Annual	Euro Area Sovereign Debt Crisis (2010 Q1 – 2013 Q2) Global COVID-19 Crisis (2020 Q1 – today)	The euro area consists of those Member States of the European Union that have adopted the euro as their currency.	European Central Bank

Appendix 3: Average CSP and CFP across Countries

This table provides an overview of the average CSP and CFP variables used in the regression analysis for the four economic regions and each of the respective countries.

	ESG	ENV	SOC	GOV	ROA	FFO	TOQ	MTB
APAC	**45.53**	**46.11**	**46.32**	**49.74**	**4.79**	**3.82**	**0.81**	**1.39**
Australia	36.55	30.11	43.72		6.15	4.52	0.84	1.12
China	38.11	38.28	35.76	48.27	3.95	2.75	0.79	1.68
Hong Kong	52.87	55.95	52.68	51.26	4.98	2.60	0.61	0.80
India	37.74	27.41	42.69	46.66	3.65	2.18	0.84	1.28
Indonesia	32.40	12.56	39.54	45.74	6.68	3.62	1.11	2.09
Japan	52.49	60.07	49.58	51.27	3.25	4.94	0.96	1.71
Malaysia	56.63	46.80	64.04	58.03	3.50	2.12	0.82	0.95
Philippines	56.56	51.56	61.33	56.68	6.01	6.76	1.05	1.66
Singapore	43.52	49.87	45.31	45.01	5.07	2.68	0.68	0.80
Taiwan	18.29	19.22	9.73	36.11	6.55	5.57	0.81	1.01
Thailand	55.02	44.58	67.29	51.28	8.10	12.43	1.23	1.97
Vietnam	36.35	14.64	26.07	68.64	5.02	2.51	1.12	4.20
EMEA	**41.33**	**42.82**	**44.19**	**41.43**	**5.47**	**3.16**	**0.94**	**1.18**
Austria	46.75	34.93	50.95		3.94	1.54	0.82	0.83
Bahrain	26.82	17.17	4.90		-1.16	0.95	0.39	0.55
Cyprus	42.53	22.34	51.36	54.93	6.64	4.94	0.63	0.95
Finland	61.63	59.87	61.46	63.54	4.98	2.29	0.85	0.86
France	68.31	84.14	71.65	46.92	5.60	3.21	0.97	1.17
Germany	46.87	42.11	54.45	44.01	5.44	1.39	0.89	0.89
Greece	40.37	22.84	42.52	54.96	0.11	0.29	0.79	0.86
Isle of Man	32.09	34.85	27.19	34.83	0.53	3.97	0.96	1.05
Israel	38.39	19.57	61.18	31.53	5.20	2.39	0.98	1.21
Kuwait	11.94		3.94	31.63	3.00	1.37	0.76	1.01
Luxembourg	42.95	39.42	54.83	37.54	10.87	2.64	0.83	0.92
Morocco	7.40		7.50	14.82	4.07	2.93	0.75	1.36
Norway	36.16	40.88	38.59	31.75	6.44	3.91	0.83	0.93
Poland	19.34	13.91	13.08	31.48	1.22	1.68	0.88	0.97
Qatar	16.01	5.01	14.17	32.14	4.33	2.03	1.04	1.15
Saudi Arabia	11.93		9.23	26.45	1.54	1.83	0.83	0.91
South Africa	38.93	36.29	41.08	38.53	2.78	1.54	0.68	0.77
Spain	54.48	58.39	55.15	49.99	7.68	3.21	0.98	1.28
Sweden	36.32	34.94	44.44	31.33	5.14	2.22	0.96	1.15
Switzerland	24.41	28.70	19.78		7.64	8.36	0.76	1.29
United Arab Emirates	45.24	43.26	49.92	44.44	4.08	4.76	1.20	1.75
United Kingdom	58.59	53.95	56.52	65.94	5.50	0.98	0.85	0.85
LATAM	**34.77**	**29.91**	**40.32**	**47.43**	**4.80**	**2.82**	**0.89**	**1.21**
Argentina	32.08	19.31	26.67	83.53	4.59	2.88	0.75	1.73
Bermuda	33.64	36.12	47.28		7.22	2.38	0.53	0.49
Brazil	33.35	28.73	40.63	25.33	5.17	3.68	0.95	1.25
Chile	61.69	55.57	72.15	56.02	5.05	4.44	0.98	1.38
Mexico	30.14	21.50	28.52	50.60	1.99	-1.06	1.05	0.58
Peru	27.11	10.99	31.49	43.59	6.75	2.01	0.76	1.00
NAM	**35.03**	**37.73**	**40.40**	**43.46**	**3.38**	**5.07**	**1.47**	**2.67**
Canada	32.46	27.19	37.20	41.06	3.66	3.60	1.05	2.48
United States	36.09	43.55	41.73	44.46	3.27	5.62	1.64	2.74
Total	**42.22**	**43.13**	**44.52**	**46.45**	**4.82**	**3.70**	**0.93**	**1.46**

Appendix 4: Model Building Test Results

This table provides an overview of the test results used to determine the preferred model for regression analysis. The table includes the different hypotheses and probabilities underlying the Poolability test, Breusch-Pagan LM test and Hausman test.

Test	Hypothesis	Probability	Result	Preferred Model
Poolability test	H0: The individual-specific effects are jointly zero, indicating no individual-specific effects. H1: At least one individual-specific effect is non-zero, indicating the presence of individual-specific effects.	Prob>F 0.000	Reject H0	Fixed-effects model
Breusch-Pagan LM test (Heteroscedasticity)	H0: Homoscedasticity is present, meaning the error variance is constant. H1: Heteroscedasticity is present, meaning the error variance is not constant.	Prob>Chi 0.000	Reject H0	Random-effects model
Hausman test (Endogeneity)	H0: The random effects model is consistent and efficient. H1: The fixed effects model is consistent and efficient.	Prob>F 0.000	Accept H0	Random-effects model

Kunst, 2009

Appendix 5: Regression Results

This table provides an overview of the main regression results obtained from regressing CSP on CFP on the global data sample. The dependent variables are measured by *ROA* (return on assets), *FFO* (funds from operations to total assets), *TOQ* (Tobin's Q), and *MTB* (market-to-book ratio) which are observed at time *t*. The independent variables are the *ESG* (total ESG score), *ENV* (Environmental), *SOC* (Social), and *GOV* (Governance) *Pillar* provided by Refinitiv Eikon and are observed at time *t-1*. The control variables are *firm size* (natural logarithm of total assets), *liquidity* (cash and cash equivalents to total assets) *leverage* (total debt to total assets), *risk* (historical beta), *GDP growth*, *inflation growth*, *unemployment rate* and *cr*isis (dummy variable) which are also observed at time *t-1*.

	I ROA	II ROA	III ROA	IV ROA	V FFO	VI FFO	VII FFO	VIII FFO	IX TOQ	X TOQ	XI TOQ	XII TOQ	XIII MTB	XIV MTB	XV MTB	XVI MTB
Variables																
Intercept	4.61*** (1.78)	2.82** (1.42)	4.26** (1.76)	4.57** (2.02)	1.63 (1.512)	1.602 (1.454)	1.812 (1.478)	1.617 (1.688)	1.078*** (.119)	1.009*** (.089)	1.041*** (.116)	1.097*** (.131)	2.151*** (.333)	1.977*** (.272)	2.066*** (.314)	2.283*** (.388)
Independent Variables																
ESG Score	-.04*** (.01)				-.013* (.007)				-.003*** (.001)				-.007*** (.002)			
Environmental		-.03*** (.01)				-.01** (.004)				-.002*** (0)				-.004*** (.001)		
Social			-.03*** (.01)				-.017*** (.006)				-.002*** (.001)				-.004*** (.001)	
Governance				-.02** (.01)				0 (.007)				-.001** (.001)				-.004** (.002)
Control Variables																
Size	.09 (.1)	.18** (.08)	.09 (.1)	.05 (.11)	.116 (.079)	.118 (.081)	.119 (.079)	.103 (.087)	.003 (.006)	-.002 (.004)	.002 (.006)	-.001 (.007)	-.014 (.016)	-.022 (.013)	-.016 (.016)	-.022 (.018)
Liquidity	.04*** (.02)	.02*** (.01)	.04*** (.02)	.04** (.02)	.019** (.009)	.025*** (.008)	.019** (.009)	.017* (.009)	-.001 (.001)	0 (0)	-.001 (.001)	-.002 (.001)	-.005 (.004)	-.002 (.002)	-.005 (.004)	-.006 (.004)
Leverage	0 (.01)	.01 (.01)	0 (.01)	-.01 (.01)	.005 (.006)	.002 (.005)	.005 (.006)	-.002 (.006)	0 (.001)	0 (0)	0 (.001)	0 (.001)	-.001 (.002)	-.001 (.002)	-.001 (.002)	-.001 (.002)
Risk	.29 (.22)	.25 (.23)	.29 (.22)	.36 (.24)	-.017 (.146)	.007 (.161)	-.023 (.146)	-.003 (.162)	.016 (.014)	.01 (.014)	.016 (.014)	.016 (.016)	.022 (.043)	.029 (.046)	.021 (.043)	.021 (.05)
GDP	.01 (.01)	.01 (.02)	.01 (.01)	0 (.02)	.013 (.01)	.009 (.011)	.012 (.01)	.01 (.01)	.001 (.001)	.001 (.001)	.001 (.001)	.001 (.001)	.004* (.002)	.003 (.002)	.004 (.002)	.004 (.002)
Inflation	-.11** (.04)	-.13*** (.04)	-.11** (.04)	-.11** (.05)	.007 (.033)	.007 (.034)	.007 (.033)	.018 (.034)	-.006** (.003)	-.005 (.004)	-.006** (.003)	-.006** (.003)	-.015*** (.006)	-.017*** (.006)	-.014*** (.006)	-.016** (.006)
Unemployment	-.11 (.07)	-.16** (.07)	-.11 (.07)	-.12 (.08)	-.002 (.039)	-.017 (.034)	-.003 (.039)	-.009 (.045)	-.009** (.004)	-.006** (.003)	-.009** (.004)	-.011** (.005)	-.024** (.012)	-.016** (.006)	-.024** (.012)	-.026* (.014)
Crisis	-.14 (.2)	-.02 (.23)	-.12 (.2)	-.11 (.23)	-.028 (.122)	-.056 (.121)	-.03 (.125)	.021 (.137)	.016 (.013)	.028*** (.01)	.018 (.013)	.021 (.015)	.076** (.033)	.062*** (.023)	.082** (.034)	.089** (.04)
R^2	0.0000	0.0023	0.0000	0.0053	0.0012	0.0071	0.0001	0.0072	0.0197	0.0193	0.0072	0.0166	0.0074	0.0094	0.0045	0.0111
Adj. R^2	-0.0017	0.0003	-0.0017	0.0034	-0.0005	0.0051	-0.0016	0.0053	0.0181	0.0173	0.0056	0.0147	0.0058	0.0074	0.0028	0.0092
N	5,390	4,394	5,382	4,697	5,390	4,398	5,382	4,693	5,470	4,459	5,462	4,750	5,437	4,454	5,429	4,717

Robust standard errors are in parentheses
**** p<.01, ** p<.05, * p<.1*

This table provides an overview of the main regression results obtained from regressing CFP on CSP on the global data sample. The dependent variables are the *ESG* (total ESG score), *ENV* (Environmental), *SOC* (Social), and *GOV* (Governance) *Pillar* provided by Refinitiv Eikon and are observed at time *t.* The independent variables are measured by *ROA* (return on assets), *FFO* (funds from operations to total assets), *TOQ* (Tobin's Q), and *MTB* (market-to-book ratio) which are observed at time *t-1*. The control variables are *firm size* (natural logarithm of total assets), *liquidity* (cash and cash equivalents to total assets) *leverage* (total debt to total assets), *risk* (historical beta), *GDP growth*, *inflation growth*, *unemployment rate* and *cr*isis (dummy variable) which are also observed at time *t-1*.

	XVII ESG	XVIII ESG	XIX ESG	XX ESG	XXI ENV	XXII ENV	XXIII ENV	XXIV ENV	XXV SOC	XXVI SOC	XXVII SOC	XXVIII SOC	XXIX GOV	XXX GOV	XXXI GOV	XXXII GOV
Variables																
Intercept	38.109*** (3.468)	37.003*** (3.391)	41.984*** (3.558)	39.907*** (3.619)	41.33*** (5.339)	40.144*** (5.266)	44.193*** (5.709)	40.805*** (5.479)	38.429*** (3.885)	37.556*** (3.853)	42.501*** (3.989)	40.891*** (4.041)	44.721*** (4.844)	43.54*** (4.898)	48.856*** (4.702)	46.094*** (4.675)
Independent Variables																
ROA	-.254*** (.086)				-.243 (.157)				-.225** (.09)				-.184 (.128)			
FFO		-.047 (.117)				.114 (.175)				-.063 (.117)				.061 (.145)		
TOQ			-4.229*** (.902)				-6.056*** (2.173)				-2.93*** (1.131)				-4.019*** (1.01)	
MTB				-1.079*** (.411)				-.935 (.778)				-.608 (.42)				-.848** (.372)
Control Variables																
Size	.255 (.183)	.268 (.181)	.238 (.19)	.202 (.189)	.025 (.29)	.013 (.295)	.131 (.301)	.084 (.294)	.435** (.211)	.45** (.21)	.348 (.213)	.31 (.217)	-.046 (.257)	-.039 (.26)	-.076 (.257)	-.082 (.253)
Liquidity	.059*** (.02)	.062*** (.019)	.059*** (.019)	.06*** (.02)	.061** (.031)	.062** (.031)	.062** (.03)	.06** (.03)	.041* (.022)	.044** (.022)	.043* (.022)	.046** (.022)	.069** (.029)	.077* (.029)	.066** (.028)	.066** (.029)
Leverage	-.003 (.013)	-.002 (.013)	-.005 (.014)	-.001 (.014)	-.032 (.022)	-.032 (.022)	-.029 (.024)	-.027 (.023)	.004 (.015)	.006 (.015)	.007 (.015)	.01 (.015)	.002 (.021)	.004 (.022)	-.002 (.022)	.001 (.022)
Risk	-.424 (.361)	-.536 (.366)	-.258 (.371)	-.327 (.374)	-.719 (.555)	-.773 (.55)	-.625 (.572)	-.672 (.569)	-.315 (.466)	-.384 (.475)	-.304 (.455)	-.375 (.466)	.059 (.507)	-.13 (.505)	.349 (.526)	.36 (.501)
GDP	.035 (.025)	.038 (.024)	.005 (.022)	.014 (.023)	.027 (.041)	.026 (.04)	.003 (.039)	.013 (.04)	.076** (.029)	.076*** (.029)	.053* (.028)	.061** (.029)	.03 (.035)	.036 (.034)	-.003 (.034)	.003 (.033)
Inflation	-.1 (.068)	-.114* (.068)	-.115 (.071)	-.1 (.072)	-.151 (.131)	-.176 (.128)	-.198 (.127)	-.201 (.127)	-.254*** (.091)	-.263*** (.093)	-.284*** (.092)	-.267*** (.092)	.154 (.116)	.142 (.116)	.186* (.113)	.186 (.116)
Unemployment	-.022 (.093)	-.021 (.09)	-.044 (.09)	-.035 (.092)	.04 (.132)	.03 (.133)	.094 (.146)	.088 (.141)	-.174 (.109)	-.177* (.106)	-.234** (.102)	-.228** (.103)	.169 (.153)	.19 (.156)	.162 (.153)	.172 (.151)
Crisis	-1.375*** (.281)	-1.399*** (.279)	-1.346*** (.282)	-1.268*** (.288)	-1.135** (.449)	-1.227*** (.448)	-1.275*** (.47)	-1.279*** (.467)	-1.699*** (.329)	-1.715*** (.329)	-1.686*** (.327)	-1.581*** (.343)	-1.129** (.487)	-1.09** (.477)	-.901* (.495)	-.879* (.494)
R^2	0.0001	0.0090	0.0246	0.0084	0.0020	0.0004	0.0130	0.0030	0.0000	0.0060	0.0091	0.0061	0.0001	0.0011	0.0088	0.0022
Adj. R^2	-0.0014	0.0075	0.0231	0.0068	0.0002	-0.0014	0.0111	0.0011	-0.0015	0.0045	0.0075	0.0045	-0.0017	-0.0006	0.0070	0.0004
N	5,854	5,875	5,690	5,653	4,886	4,903	4,766	4,757	5,846	5,867	5,685	5,648	5,136	5,153	4,988	4,951

Robust standard errors are in parentheses
**** p<.01, ** p<.05, * p<.1*

Appendix 6: Regression Results across APAC

This table provides an overview of the regression results obtained from regressing CSP on CFP in APAC. The dependent variables are measured by *ROA* (return on assets)*, FFO* (funds from operations to total assets)*, TOQ* (Tobin's Q), and *MTB* (market-to-book ratio) which are observed at time *t*. The independent variables are the *ESG* (total ESG score), *ENV* (Environmental), *SOC* (Social), and *GOV* (Governance) *Pillar* provided by Refinitiv Eikon and are observed at time *t-1*. The control variables are *firm size* (natural logarithm of total assets), *liquidity* (cash and cash equivalents to total assets) *leverage* (total debt to total assets), *risk* (historical beta), *GDP growth*, *inflation growth*, *unemployment rate* and *cr*isis (dummy variable) which are also observed at time *t-1*.

	I ROA	II ROA	III ROA	IV ROA	V FFO	VI FFO	VII FFO	VIII FFO	IX TOQ	X TOQ	XI TOQ	XII TOQ	XIII MTB	XIV MTB	XV MTB	XVI MTB
Variables																
Intercept	5.18*** (1.391)	4.034*** (1.374)	4.773*** (1.48)	4.043*** (1.359)	2.9** (1.237)	2.099 (1.404)	3.047** (1.247)	2.742** (1.223)	1.006*** (.12)	.93*** (.126)	.984*** (.117)	.938*** (.121)	1.788*** (.319)	1.678*** (.31)	1.771*** (.316)	1.644*** (.327)
Independent Variables																
ESG Score	-.062*** (.01)				-.016* (.008)				-.003*** (.001)				-.005*** (.002)			
Environmental		-.045*** (.008)				-.01* (.005)				-.003*** (0)				-.005*** (.001)		
Social			-.049*** (.011)				-.02*** (.008)				-.003*** (.001)				-.005*** (.002)	
Governance				-.033*** (.01)				-.01 (.009)				-.001* (.001)				-.001 (.002)
Control Variables																
Size	.066 (.074)	.08 (.074)	.058 (.078)	.06 (.074)	.072 (.074)	.095 (.08)	.075 (.074)	.071 (.076)	-.003 (.006)	0 (.006)	-.003 (.006)	-.004 (.006)	-.011 (.015)	-.005 (.015)	-.012 (.015)	-.012 (.015)
Liquidity	.019** (.01)	.015* (.009)	.019** (.01)	.019** (.01)	.011 (.009)	.014 (.01)	.011 (.009)	.01 (.009)	0 (.001)	0 (.001)	0 (.001)	-.001 (.001)	0 (.001)	0 (.002)	0 (.001)	-.001 (.001)
Leverage	0 (.006)	0 (.005)	0 (.006)	.003 (.006)	0 (.004)	.001 (.004)	0 (.004)	.002 (.004)	0 (0)	0 (0)	0 (0)	0 (0)	0 (.002)	0 (.002)	0 (.002)	.001 (.002)
Risk	.408*** (.142)	.435*** (.164)	.385*** (.142)	.376** (.15)	.148 (.108)	.117 (.124)	.132 (.108)	.117 (.113)	.015 (.012)	.013 (.013)	.015 (.012)	.012 (.012)	-.012 (.044)	-.025 (.05)	-.016 (.045)	-.026 (.047)
GDP	.017 (.011)	.018 (.013)	.017 (.011)	.011 (.01)	-.004 (.009)	-.004 (.01)	-.004 (.009)	-.006 (.009)	0 (.001)	0 (.001)	0 (.001)	.001 (.001)	.003 (.002)	.002 (.002)	.003 (.002)	.004* (.002)
Inflation	-.025 (.038)	-.031 (.039)	-.024 (.04)	.008 (.036)	.029 (.025)	.043 (.028)	.028 (.025)	.042* (.025)	-.003 (.003)	-.004 (.003)	-.003 (.003)	-.002 (.003)	-.012** (.005)	-.016*** (.006)	-.011** (.005)	-.011* (.006)
Unemployment	-.018 (.033)	-.035 (.038)	-.017 (.034)	-.018 (.034)	.01 (.029)	.013 (.033)	.01 (.029)	.004 (.032)	-.003 (.003)	-.003 (.003)	-.003 (.003)	-.004 (.003)	-.008 (.006)	-.01 (.007)	-.008 (.007)	-.009 (.007)
Crisis	-.242 (.213)	-.025 (.221)	-.213 (.21)	-.256 (.224)	-.117 (.132)	-.062 (.15)	-.121 (.131)	-.125 (.13)	.024** (.012)	.023* (.013)	.024** (.012)	.032** (.013)	.057** (.025)	.057* (.03)	.059** (.026)	.074*** (.028)
R^2	0.0020	0.0113	0.0004	0.0056	0.0000	0.0048	0.0063	0.0036	0.0001	0.0121	0.0005	0.0001	0.0024	0.0210	0.0030	0.0064
Adj. R^2	-0.0013	0.0075	-0.0029	0.0021	-0.0033	0.0010	0.0030	0.0001	-0.0031	0.0084	-0.0027	-0.0034	-0.0008	0.0173	-0.0002	0.0029
N	2,762	2,356	2,754	2,549	2,758	2,352	2,750	2,545	2,811	2,401	2,803	2,582	2,803	2,393	2,795	2,574

Robust standard errors are in parentheses
**** p<.01, ** p<.05, * p<.1*

This table provides an overview of the regression results obtained from regressing CFP on CSP in APAC. The dependent variables are the *ESG* (total ESG score), *ENV* (Environmental), *SOC* (Social), and *GOV* (Governance) *Pillar* provided by Refinitiv Eikon and are observed at time *t.* The independent variables are measured by *ROA* (return on assets)*, FFO* (funds from operations to total assets)*, TOQ* (Tobin's Q), and *MTB* (market-to-book ratio) which are observed at time *t-1*. The control variables are *firm size* (natural logarithm of total assets), *liquidity* (cash and cash equivalents to total assets) *leverage* (total debt to total assets), *risk* (historical beta), *GDP growth*, *inflation growth*, *unemployment rate* and *cr*isis (dummy variable) which are also observed at time *t-1*.

	XVII ESG	XVIII ESG	XIX ESG	XX ESG	XXI ENV	XXII ENV	XXIII ENV	XXIV ENV	XXV SOC	XXVI SOC	XXVII SOC	XXVIII SOC	XXIX GOV	XXX GOV	XXXI GOV	XXXII GOV
Variables																
Intercept	44.615*** (6.474)	40.643*** (6.172)	52.522*** (6.692)	46.861*** (6.346)	51.692*** (8.184)	46.632*** (7.975)	60.816*** (8.884)	53.126*** (8.299)	45.473*** (6.673)	42.151*** (6.5)	54.594*** (7.386)	49.185*** (6.943)	50.9*** (7.844)	47.036*** (7.55)	54.029*** (7.512)	49.222*** (7.395)
Independent Variables																
ROA	-.822*** (.22)				-1.174*** (.42)				-.685*** (.242)				-.783*** (.27)			
FFO		-.136 (.297)				-.198 (.342)				-.192 (.363)				-.147 (.277)		
TOQ			-10.938*** (3.004)				-14.363*** (4.201)				-10.518*** (3.373)				-7.305*** (2.827)	
MTB				-3.242*** (1.163)				-4.624*** (1.675)				-2.994** (1.262)				-1.457 (1.189)
Control Variables																
Size	.227 (.331)	.284 (.329)	.132 (.334)	.18 (.327)	-.162 (.425)	-.114 (.438)	-.233 (.438)	-.11 (.437)	.242 (.349)	.31 (.35)	.1 (.368)	.129 (.364)	-.063 (.399)	-.021 (.399)	-.081 (.391)	-.049 (.385)
Liquidity	.085*** (.031)	.09*** (.031)	.094*** (.032)	.093*** (.031)	.072 (.046)	.084* (.048)	.085* (.045)	.082* (.045)	.08** (.032)	.086** (.034)	.093*** (.033)	.092*** (.032)	.089* (.048)	.096** (.046)	.095** (.047)	.093** (.046)
Leverage	-.006 (.02)	-.001 (.02)	-.016 (.022)	-.014 (.022)	-.032 (.028)	-.024 (.029)	-.041 (.033)	-.042 (.032)	.011 (.022)	.015 (.022)	.005 (.024)	.007 (.024)	-.015 (.028)	-.011 (.028)	-.024 (.029)	-.022 (.028)
Risk	.083 (.458)	-.044 (.467)	.337 (.482)	.288 (.468)	-.399 (.713)	-.429 (.689)	-.165 (.719)	-.322 (.698)	.214 (.661)	.116 (.669)	.336 (.664)	.307 (.665)	.508 (.632)	.443 (.643)	.717 (.657)	.646 (.644)
GDP	-.028 (.031)	-.023 (.03)	-.025 (.031)	-.032 (.029)	-.032 (.049)	-.037 (.05)	-.036 (.056)	-.049 (.053)	.022 (.039)	.025 (.038)	.024 (.039)	.018 (.038)	-.038 (.045)	-.035 (.044)	-.032 (.043)	-.034 (.042)
Inflation	-.166* (.095)	-.196* (.1)	-.159 (.102)	-.139 (.099)	-.182 (.195)	-.2 (.201)	-.22 (.194)	-.185 (.192)	-.306** (.138)	-.335** (.146)	-.301** (.15)	-.279* (.148)	.114 (.152)	.092 (.147)	.144 (.149)	.146 (.149)
Unemployment	-.039 (.141)	-.116 (.12)	-.186 (.114)	-.161 (.117)	.021 (.203)	-.102 (.201)	-.164 (.194)	-.122 (.197)	-.174 (.172)	-.242 (.154)	-.349** (.155)	-.326** (.155)	.17 (.184)	.154 (.18)	.145 (.167)	.175 (.168)
Crisis	-1.392*** (.419)	-1.44*** (.413)	-1.209*** (.42)	-1.089*** (.42)	-1.3* (.669)	-1.564** (.678)	-1.247* (.729)	-1.241* (.722)	-2.157*** (.493)	-2.216*** (.491)	-2.045*** (.509)	-1.891*** (.53)	-.033 (.583)	-.086 (.575)	.279 (.559)	.304 (.559)
R^2	0.0026	0.0055	0.0012	0.0025	0.0016	0.0006	0.0114	0.0126	0.000	0.0015	0.0001	0.0013	0.0060	0.0015	0.0005	0.0001
Adj. R^2	-0.0004	0.0025	-0.0019	-0.0006	-0.0018	-0.0028	0.0079	0.0091	-0.0030	-0.0015	-0.0030	-0.0018	0.0028	-0.0017	-0.0028	-0.0032
N	3,002	3,006	2,935	2,931	2,643	2,647	2,587	2,583	2,994	2,998	2,930	2,926	2,778	2,782	2,711	2,707

Robust standard errors are in parentheses
**** p<.01, ** p<.05, * p<.1*

Appendix 7: Regression Results across EMEA

This table provides an overview of the regression results obtained from regressing CSP on CFP in EMEA. The dependent variables are measured by *ROA* (return on assets)*, FFO* (funds from operations to total assets)*, TOQ* (Tobin's Q), and *MTB* (market-to-book ratio) which are observed at time *t*. The independent variables are the *ESG* (total ESG score), *ENV* (Environmental), *SOC* (Social), and *GOV* (Governance) *Pillar* provided by Refinitiv Eikon and are observed at time *t-1*. The control variables are *firm size* (natural logarithm of total assets), *liquidity* (cash and cash equivalents to total assets) *leverage* (total debt to total assets), *risk* (historical beta), *GDP growth*, *inflation growth*, *unemployment rate* and *cr*isis (dummy variable) which are also observed at time *t-1.*

	I ROA	II ROA	III ROA	IV ROA	V FFO	VI FFO	VII FFO	VIII FFO	IX TOQ	X TOQ	XI TOQ	XII TOQ	XIII MTB	XIV MTB	XV MTB	XVI MTB
Variables																
Intercept	3.86 (3.681)	5.505 (3.56)	3.934 (3.543)	4.822 (4.347)	1.851 (2.06)	2.295 (1.904)	2.036 (2.004)	3.117 (2.229)	1.145*** (.252)	1.042*** (.173)	1.097*** (.237)	1.352*** (.256)	1.877*** (.454)	1.608*** (.297)	1.799*** (.429)	2.157*** (.512)
Independent Variables																
ESG Score	.025 (.018)				.005 (.006)				0 (.001)				-.002 (.001)			
Environmental		.011 (.018)				-.004 (.007)				0 (.001)				-.002 (.001)		
Social			.02 (.015)				0 (.005)				.001 (.001)				0 (.001)	
Governance				.019 (.018)				.005 (.006)				-.001 (.001)				-.002* (.001)
Control Variables																
Size	.126 (.209)	.064 (.22)	.129 (.207)	.072 (.237)	.018 (.095)	.024 (.09)	.018 (.095)	-.066 (.098)	-.009 (.011)	-.003 (.008)	-.009 (.011)	-.017* (.009)	-.027 (.019)	-.014 (.013)	-.028 (.019)	-.04** (.02)
Liquidity	-.004 (.014)	.003 (.014)	-.004 (.014)	-.006 (.015)	.012 (.011)	.017 (.011)	.012 (.011)	.007 (.013)	0 (.001)	0 (.001)	0 (.001)	0 (.001)	-.001 (.002)	-.001 (.001)	-.001 (.002)	-.002 (.002)
Leverage	.019 (.019)	.03 (.022)	.019 (.019)	.022 (.021)	.013* (.007)	.02** (.008)	.013* (.007)	.006 (.006)	.001* (.001)	.001* (0)	.001* (.001)	.001 (.001)	.002 (.001)	.001 (.001)	.002 (.001)	.001 (.001)
Risk	.288 (.483)	.189 (.483)	.289 (.484)	.428 (.534)	.041 (.263)	-.078 (.242)	.042 (.264)	.111 (.292)	-.019 (.024)	-.007 (.019)	-.019 (.024)	-.026 (.029)	-.015 (.046)	.005 (.038)	-.016 (.046)	-.021 (.053)
GDP	-.053 (.043)	-.057 (.046)	-.052 (.042)	-.058 (.049)	.003 (.013)	.002 (.012)	.003 (.013)	.008 (.015)	.002* (.001)	.002** (.001)	.002* (.001)	.002 (.001)	0 (.004)	.001 (.004)	.001 (.004)	0 (.004)
Inflation	-.215** (.102)	-.243** (.112)	-.218** (.102)	-.185* (.109)	.041 (.052)	.024 (.058)	.041 (.052)	.04 (.056)	-.012** (.005)	-.008** (.004)	-.012** (.005)	-.013** (.006)	-.021* (.011)	-.014 (.009)	-.021* (.011)	-.021* (.012)
Unemployment	-.424* (.223)	-.475** (.213)	-.422* (.22)	-.442* (.235)	-.051 (.092)	-.08 (.081)	-.051 (.092)	-.035 (.097)	-.018* (.01)	-.014* (.007)	-.018* (.009)	-.016* (.009)	-.042** (.017)	-.033*** (.013)	-.042** (.017)	-.038** (.018)
Crisis	.755 (.461)	.755 (.519)	.735 (.455)	.854 (.534)	.198 (.162)	.168 (.181)	.189 (.168)	.279 (.183)	.036** (.016)	.048*** (.016)	.038** (.016)	.041** (.017)	.051 (.031)	.069** (.032)	.055* (.032)	.05 (.033)
R^2	0.0474	0.0386	0.0409	0.0601	0.0080	0.0002	0.0043	0.0004	0.0324	0.0249	0.0348	0.0475	0.0432	0.0412	0.0382	0.0696
Adj. R^2	0.0415	0.0318	0.0350	0.0535	0.0019	-0.0069	-0.0019	-0.0066	0.0264	0.0180	0.0289	0.0408	0.0374	0.0345	0.0323	0.0631
N	1,466	1,278	1,466	1,296	1,462	1,278	1,462	1,292	1,473	1,285	1,473	1,296	1,484	1,296	1,484	1,307

Robust standard errors are in parentheses
**** p<.01, ** p<.05, * p<.1*

This table provides an overview of the regression results obtained from regressing CFP on CSP in EMEA. The dependent variables are the *ESG* (total ESG score), *ENV* (Environmental), *SOC* (Social), and *GOV* (Governance) *Pillar* provided by Refinitiv Eikon and are observed at time *t.* The independent variables are measured by *ROA* (return on assets)*, FFO* (funds from operations to total assets)*, TOQ* (Tobin's Q), and *MTB* (market-to-book ratio) which are observed at time *t-1*. The control variables are *firm size* (natural logarithm of total assets), *liquidity* (cash and cash equivalents to total assets) *leverage* (total debt to total assets), *risk* (historical beta), *GDP growth*, *inflation growth*, *unemployment rate* and *cr*isis (dummy variable) which are also observed at time *t-1.*

	XVII ESG	XVIII ESG	XIX ESG	XX ESG	XXI ENV	XXII ENV	XXIII ENV	XXIV ENV	XXV SOC	XXVI SOC	XXVII SOC	XXVIII SOC	XXIX GOV	XXX GOV	XXXI GOV	XXXII GOV
Variables																
Intercept	38.113*** (4.842)	37.04*** (5.217)	42.71*** (5.781)	42.381*** (5.404)	34.763*** (9.57)	33.815*** (9.223)	31.789*** (9.918)	34.133*** (9.361)	39.487*** (5.966)	39.216*** (6.196)	42.911*** (6.134)	44.39*** (6.132)	49.927*** (8.978)	48.007*** (8.982)	57.897*** (10.214)	53.642*** (9.385)
Independent Variables																
ROA	.183 (.192)				.432* (.224)				.146 (.211)				.229 (.198)			
FFO		.313 (.26)				.437 (.371)				.21 (.24)				.585* (.333)		
TOQ			-1.205 (2.882)				2.573 (3.02)				1.008 (2.751)				-5.827 (4.296)	
MTB				-.896 (.976)				.234 (1.321)				-.47 (1.012)				-2.108 (1.554)
Control Variables																
Size	.249 (.282)	.3 (.29)	.091 (.355)	.093 (.337)	.376 (.549)	.444 (.525)	.48 (.612)	.44 (.571)	.453 (.329)	.464 (.337)	.216 (.345)	.195 (.343)	-.493 (.507)	-.411 (.498)	-.56 (.551)	-.478 (.534)
Liquidity	.014 (.031)	.016 (.031)	.007 (.033)	.01 (.033)	.016 (.053)	.02 (.052)	.02 (.055)	.023 (.054)	0 (.034)	.003 (.034)	-.004 (.035)	-.003 (.035)	-.02 (.044)	-.019 (.044)	-.031 (.045)	-.024 (.044)
Leverage	-.027 (.029)	-.028 (.029)	-.013 (.037)	-.015 (.034)	-.049 (.054)	-.049 (.054)	-.018 (.064)	-.022 (.059)	-.049** (.023)	-.047** (.023)	-.028 (.025)	-.031 (.024)	-.016 (.054)	-.016 (.054)	-.008 (.06)	-.01 (.058)
Risk	-1.151 (.869)	-1.094 (.863)	-1.169 (.867)	-1.129 (.877)	-1.815 (1.483)	-1.733 (1.476)	-1.904 (1.498)	-1.654 (1.529)	-1.276 (1.042)	-1.213 (1.041)	-1.303 (1.03)	-1.233 (1.048)	-.402 (.956)	-.421 (.958)	-.307 (.963)	-.433 (.973)
GDP	.117** (.057)	.112* (.061)	.087* (.049)	.094* (.057)	.179** (.084)	.165* (.094)	.142* (.075)	.15* (.09)	.14** (.064)	.134** (.068)	.114** (.057)	.12* (.064)	.108 (.073)	.102 (.079)	.071 (.073)	.079 (.075)
Inflation	-.15 (.126)	-.149 (.132)	-.154 (.119)	-.178 (.125)	-.389* (.214)	-.313 (.209)	-.365* (.197)	-.416** (.206)	-.256* (.138)	-.242* (.146)	-.241* (.134)	-.267* (.137)	.035 (.228)	-.007 (.251)	.042 (.23)	.033 (.233)
Unemployment	-.054 (.181)	-.038 (.177)	.053 (.207)	.039 (.2)	.36 (.265)	.421* (.25)	.603* (.322)	.533* (.307)	-.209 (.197)	-.209 (.204)	-.109 (.193)	-.125 (.191)	-.026 (.361)	-.002 (.35)	.013 (.359)	.03 (.353)
Crisis	-.912 (.563)	-.957* (.563)	-.81 (.579)	-.843 (.579)	-.861 (.89)	-.861 (.878)	-1.084 (.912)	-1.167 (.922)	-1.072* (.557)	-1.096* (.57)	-1.03* (.586)	-1.056* (.585)	-1.403 (1.055)	-1.38 (1.035)	-1.238 (1.048)	-1.258 (1.052)
R^2	0.0331	0.0000	0.0063	0.0137	0.0443	0.0008	0.0013	0.0061	0.0349	0.0087	0.0232	0.0201	0.0184	0.0018	0.0085	0.0072
Adj. R^2	0.0277	-0.0056	0.0005	0.0080	0.0382	-0.0056	-0.0053	-0.0004	0.0295	0.0031	0.0175	0.0145	0.0122	-0.0045	0.0020	0.0008
N	1,618	1,617	1,560	1,571	1,422	1,425	1,368	1,379	1,618	1,617	1,560	1,571	1,432	1,431	1,386	1,397

Robust standard errors are in parentheses
**** p<.01, ** p<.05, * p<.1*

Appendix 8: Regression Results across LATAM

This table provides an overview of the regression results obtained from regressing CSP on CFP in LATAM. The dependent variables are measured by *ROA* (return on assets)*, FFO* (funds from operations to total assets)*, TOQ* (Tobin's Q), and *MTB* (market-to-book ratio) which are observed at time *t*. The independent variables are the *ESG* (total ESG score), *ENV* (Environmental), *SOC* (Social), and *GOV* (Governance) *Pillar* provided by Refinitiv Eikon and are observed at time *t-1*. The control variables are *firm size* (natural logarithm of total assets), *liquidity* (cash and cash equivalents to total assets) *leverage* (total debt to total assets), *risk* (historical beta), *GDP growth*, *inflation growth*, *unemployment rate* and *cr*isis (dummy variable) which are also observed at time *t-1*.

	I ROA	II ROA	III ROA	IV ROA	V FFO	VI FFO	VII FFO	VIII FFO	IX TOQ	X TOQ	XI TOQ	XII TOQ	XIII MTB	XIV MTB	XV MTB	XVI MTB
Variables																
Intercept	-5.978	-5.675	-7.512	- 33.462***	1.278	-.007	.836	- 23.072***	.81***	.93***	.813***	.942***	1.561***	1.755***	1.565***	.111
	(5.986)	(6.325)	(5.663)	(10.014)	(5.831)	(5.193)	(6)	(6.454)	(.243)	(.244)	(.243)	(.357)	(.312)	(.529)	(.342)	(.551)
Independent Variables																
ESG Score	-.096** (.038)				-.031 (.036)				0 (.003)				-.001 (.005)			
Environmental		-.054 (.052)				-.007 (.022)				-.003 (.003)				.001 (.003)		
Social			-.042 (.028)				-.048** (.022)				0 (.002)				-.003 (.004)	
Governance				-.003 (.057)				.11** (.051)				.001 (.003)				.007 (.004)
Control Variables																
Size	.543* (.319)	.481 (.298)	.519* (.305)	1.299* (.724)	-.07 (.274)	.011 (.248)	.011 (.281)	.622 (.426)	0 (.012)	-.003 (.016)	0 (.013)	-.012 (.028)	-.031 (.024)	-.038 (.031)	-.024 (.026)	.006 (.027)
Liquidity	.178** (.09)	.111** (.054)	.162* (.092)	.233** (.095)	.065 (.052)	.109** (.044)	.063 (.055)	.235** (.103)	0 (.002)	0 (.002)	0 (.002)	.007*** (.003)	0 (.004)	.002 (.004)	0 (.004)	.032** (.013)
Leverage	-.01 (.044)	-.005 (.036)	-.01 (.043)	.111 (.07)	.026 (.053)	-.019 (.031)	.022 (.055)	-.06 (.054)	0 (.002)	.001 (.002)	0 (.002)	.009*** (.003)	-.004 (.003)	-.007** (.003)	-.004 (.003)	-.012** (.006)
Risk	1.033 (1.256)	-.032 (1.128)	1.123 (1.241)	4.116* (2.334)	-.232 (.851)	-.204 (.899)	-.202 (.84)	-.303 (1.658)	.017 (.052)	-.02 (.064)	.017 (.052)	-.08 (.192)	.016 (.036)	.025 (.058)	.02 (.036)	-.036 (.153)
GDP	.036 (.055)	.121** (.056)	.021 (.054)	-.081 (.092)	.108 (.093)	.117 (.112)	.103 (.094)	-.079 (.187)	.002 (.007)	.005 (.009)	.002 (.007)	-.007 (.011)	.013*** (.003)	.013 (.009)	.013*** (.005)	.014 (.016)
Inflation	-.092 (.156)	-.059 (.124)	-.076 (.164)	-.119 (.36)	.068 (.15)	.101 (.153)	.083 (.155)	-.001 (.306)	-.007 (.006)	.015 (.028)	-.007 (.006)	-.035* (.019)	-.003 (.011)	-.003 (.012)	-.003 (.011)	-.02 (.024)
Unemployment	.154 (.284)	.103 (.249)	.209 (.281)	.212 (.854)	.176 (.121)	.17 (.115)	.185 (.13)	1.398*** (.474)	.002 (.012)	0 (.009)	.002 (.012)	.003 (.045)	.002 (.009)	-.001 (.01)	.002 (.009)	.07** (.029)
Crisis	-1.221* (.626)	-1.338 (1.01)	-1.311** (.583)	-.479 (1.543)	-.801 (.664)	-.85 (.787)	-.831 (.661)	-2.071 (1.751)	.006 (.054)	.072** (.033)	.006 (.055)	-.122 (.168)	.035 (.057)	.035 (.065)	.035 (.057)	.006 (.142)
R^2	0.0001	0.0027	0.0152	0.2150	0.0047	0.0139	0.0288	0.2952	0.0595	0.0190	0.0548	0.0375	0.0452	0.1422	0.0001	0.2803
Adj. R^2	-0.0196	-0.0214	-0.0042	0.1669	-0.0146	-0.0095	0.0100	0.2532	0.0418	-0.0039	0.0370	-0.0150	0.0273	0.1221	-0.0187	0.2410
N	467	382	467	157	475	390	475	161	489	395	489	175	489	395	489	175

Robust standard errors are in parentheses
**** p<.01, ** p<.05, * p<.1*

This table provides an overview of the regression results obtained from regressing CFP on CSP in LATAM. The dependent variables are the *ESG* (total ESG score), *ENV* (Environmental), *SOC* (Social), and *GOV* (Governance) *Pillar* provided by Refinitiv Eikon and are observed at time *t.* The independent variables are measured by *ROA* (return on assets)*, FFO* (funds from operations to total assets)*, TOQ* (Tobin's Q), and *MTB* (market-to-book ratio) which are observed at time *t-1*. The control variables are *firm size* (natural logarithm of total assets), *liquidity* (cash and cash equivalents to total assets) *leverage* (total debt to total assets), *risk* (historical beta), *GDP growth*, *inflation growth*, *unemployment rate* and *cr*isis (dummy variable) which are also observed at time *t-1*.

	XVII ESG	XVIII ESG	XIX ESG	XX ESG	XXI ENV	XXII ENV	XXIII ENV	XXIV ENV	XXV SOC	XXVI SOC	XXVII SOC	XXVIII SOC	XXIX GOV	XXX GOV	XXXI GOV	XXXII GOV
Variables																
Intercept	32.386*** (8.086)	28.46*** (7.441)	31.598*** (6.987)	29.992*** (7.161)	25.322*** (7.835)	21.913*** (7.59)	20.012*** (6.96)	20.625*** (6.632)	28.361*** (10.743)	24.021*** (8.319)	30.801*** (8.528)	29.3*** (9.217)	-45.74* (24.237)	-32.181 (21.087)	-39.781* (20.831)	-46.032** (18.018)
Independent Variables																
ROA	-.278** (.117)				-.296* (.153)				-.403** (.191)				.095 (.158)			
FFO		-.115 (.147)				-.274 (.225)				-.309* (.182)				.731*** (.255)		
TOQ			-1.807** (.713)				-5.306 (5.318)				-2.07 (1.6)				-5.092*** (1.6)	
MTB				.449 (2.201)				-1.626 (2.201)				-1.304 (3.024)				9.379*** (2.105)
Control Variables																
Size	.388 (.416)	.595 (.413)	.618* (.367)	.586 (.422)	.329 (.473)	.524 (.509)	.894* (.458)	.737* (.439)	.952 (.604)	1.204** (.511)	1.022* (.539)	1.06* (.644)	3.725*** (1.088)	3.239*** (1.097)	3.763*** (1.011)	3.788*** (.916)
Liquidity	.068 (.07)	.055 (.078)	.055 (.067)	.058 (.073)	.041 (.066)	.057 (.072)	.061 (.09)	.055 (.087)	-.056 (.1)	-.063 (.103)	-.073 (.086)	-.068 (.1)	.483 (.311)	.339 (.312)	.814*** (.291)	.421* (.236)
Leverage	.019 (.037)	.002 (.039)	-.007 (.03)	-.002 (.03)	.007 (.046)	-.025 (.044)	-.041 (.047)	-.035 (.047)	.055 (.05)	.042 (.046)	.032 (.037)	.032 (.04)	.462*** (.176)	.458*** (.17)	.433*** (.12)	.447*** (.137)
Risk	-.685 (.933)	-.156 (1.055)	-.636 (.782)	-.901 (.706)	-.674 (.713)	-.33 (.789)	.158 (.959)	-.278 (.708)	-.204 (.926)	.65 (1.083)	-.513 (.765)	-.737 (.697)	3.9 (6.433)	2.652 (5.35)	.577 (6.71)	.348 (6.304)
GDP	.158*** (.056)	.127* (.065)	.027 (.086)	.049 (.085)	.125 (.089)	.099 (.083)	.018 (.1)	.035 (.096)	.255*** (.075)	.226** (.093)	.11 (.124)	.136 (.122)	-.014 (.636)	.049 (.593)	-.291 (.57)	-.411 (.569)
Inflation	-.179 (.207)	-.103 (.179)	-.163 (.163)	-.111 (.193)	-.026 (.249)	.051 (.241)	.007 (.256)	-.001 (.251)	-.58** (.255)	-.465** (.212)	-.535** (.21)	-.447* (.231)	-1.442 (2.312)	-1.402 (2.108)	-1.887 (2.163)	-1.088 (2.16)
Unemployment	-.266 (.221)	-.098 (.237)	-.334 (.238)	-.331 (.252)	-.409 (.357)	-.324 (.362)	-.244 (.404)	-.328 (.375)	-.308 (.257)	-.136 (.268)	-.476 (.321)	-.414 (.353)	95 (2.732)	.592 (2.063)	1.446 (2.87)	.506 (2.872)
Crisis	-1.289 (.827)	-1.818** (.868)	-1.705** (.861)	-1.529** (.778)	-.289 (.817)	-.672 (.812)	-1.51 (1.114)	-1.166 (.94)	-1.187 (.972)	-1.55* (.933)	-1.234 (.941)	-1.251 (.913)	-6.211 (9.01)	-5.795 (9.171)	-5.687 (7.83)	-5.954 (8.186)
R^2	0.0154	0.0003	0.0001	0.0042	0.0176	0.0016	0.000	0.0015	0.0202	0.0094	0.0065	0.0230	0.3230	0.3807	0.3750	0.4012
Adj. R^2	-0.0035	-0.0185	-0.0190	-0.0148	-0.0056	-0.0214	-0.0236	-0.0220	0.0014	-0.0093	-0.0124	0.0044	0.2849	0.3471	0.3415	0.3691
N	478	488	482	482	391	401	392	392	478	488	482	482	170	176	178	178

Robust standard errors are in parentheses
**** p<.01, ** p<.05, * p<.1*

Appendix 9: Regression Results across NAM

This table provides an overview of the regression results obtained from regressing CSP on CFP in NAM. The dependent variables are measured by *ROA* (return on assets)*, FFO* (funds from operations to total assets)*, TOQ* (Tobin's Q), and *MTB* (market-to-book ratio) which are observed at time *t*. The independent variables are the *ESG* (total ESG score), *ENV* (Environmental), *SOC* (Social), and *GOV* (Governance) *Pillar* provided by Refinitiv Eikon and are observed at time *t-1*. The control variables are *firm size* (natural logarithm of total assets), *liquidity* (cash and cash equivalents to total assets) *leverage* (total debt to total assets), *risk* (historical beta), *GDP growth*, *inflation growth*, *unemployment rate* and *cr*isis (dummy variable) which are also observed at time *t-1*.

	I ROA	II ROA	III ROA	IV ROA	V FFO	VI FFO	VII FFO	VIII FFO	IX TOQ	X TOQ	XI TOQ	XII TOQ	XIII MTB	XIV MTB	XV MTB	XVI MTB
Variables																
Intercept	6.821 (7.043)	-1.553 (6.107)	5.954 (6.601)	6.156 (6.96)	-2.365 (4.724)	-.361 (5.871)	-2.896 (4.375)	-2.942 (4.556)	1.423*** (.454)	1.241*** (.284)	1.438*** (.451)	1.355*** (.452)	4.208*** (1.486)	2.325* (1.363)	3.955*** (1.523)	4.124*** (1.394)
Independent Variables																
ESG Score	-.06 (.044)				-.007 (.054)				-.012** (.005)				-.039** (.016)			
Environmental		-.033 (.043)				-.036 (.04)				-.005 (.004)				-.008 (.015)		
Social			-.006 (.037)				.019 (.037)				-.008** (.004)				-.015 (.018)	
Governance				-.025 (.041)				.024 (.039)				-.004* (.002)				-.024* (.015)
Control Variables																
Size	.072 (.371)	.529** (.246)	.04 (.366)	.07 (.362)	.529** (.229)	.498 (.306)	.513** (.231)	.499** (.223)	.044* (.026)	.001 (.012)	.04 (.025)	.037 (.025)	.038 (.06)	.005 (.063)	.016 (.063)	.029 (.062)
Liquidity	.178*** (.048)	.079** (.037)	.173*** (.049)	.175*** (.048)	.037 (.039)	.053* (.031)	.036 (.039)	.035 (.038)	-.009 (.006)	.003 (.002)	-.009 (.006)	-.009 (.006)	-.028 (.02)	-.014 (.011)	-.03 (.02)	-.029 (.02)
Leverage	-.078** (.034)	-.02 (.023)	-.078** (.033)	-.08** (.034)	-.017 (.023)	-.018 (.025)	-.016 (.023)	-.016 (.023)	-.001 (.003)	0 (.001)	-.001 (.003)	-.001 (.003)	-.007 (.01)	-.008 (.01)	-.007 (.01)	-.006 (.01)
Risk	-.194 (.735)	1.023 (1.085)	-.227 (.721)	-.213 (.733)	-.232 (.472)	.707 (.663)	-.262 (.468)	-.27 (.438)	.125* (.067)	.117* (.064)	.123* (.064)	.115* (.062)	.29 (.266)	.438 (.27)	.254 (.252)	.275 (.254)
GDP	-.006 (.056)	.021 (.065)	-.01 (.055)	-.008 (.056)	.022 (.038)	.01 (.057)	.021 (.038)	.02 (.038)	.002 (.006)	.001 (.004)	.002 (.006)	.002 (.006)	.004 (.016)	.014 (.019)	.003 (.016)	.004 (.017)
Inflation	-.21 (.197)	-.482** (.199)	-.192 (.192)	-.199 (.196)	-.161 (.118)	-.369** (.168)	-.16 (.123)	-.149 (.12)	-.014 (.014)	-.026** (.011)	-.011 (.015)	-.013 (.015)	-.03 (.04)	-.047 (.059)	-.019 (.042)	-.032 (.04)
Unemployment	-.261 (.288)	-.526* (.302)	-.273 (.277)	-.261 (.287)	-.173 (.247)	-.325* (.182)	-.18 (.24)	-.179 (.242)	-.043 (.037)	-.009 (.008)	-.041 (.035)	-.043 (.034)	-.11 (.127)	.022 (.065)	-.105 (.115)	-.106 (.12)
Crisis	-.642 (.848)	-1.136 (1.258)	-.559 (.828)	-.628 (.863)	.649 (.632)	.15 (.591)	.672 (.658)	.726 (.663)	-.055 (.079)	-.08*** (.027)	-.041 (.083)	-.045 (.085)	.255 (.252)	-.001 (.175)	.302 (.264)	.258 (.267)
R^2	0.0578	0.0908	0.1021	0.0844	0.0177	0.0011	0.0227	0.0187	0.0596	0.0069	0.0426	0.0322	0.0105	0.0041	0.0078	0.0323
Adj. R^2	0.0454	0.0686	0.0903	0.0724	0.0048	-0.0233	0.0099	0.0058	0.0473	-0.0174	0.0301	0.0195	-0.0032	-0.0208	-0.0059	0.0189
N	695	378	695	695	695	378	695	695	697	378	697	697	661	370	661	661

Robust standard errors are in parentheses
**** p<.01, ** p<.05, * p<.1*

This table provides an overview of the regression results obtained from regressing CFP on CSP in NAM. The dependent variables are the *ESG* (total ESG score), *ENV* (Environmental), *SOC* (Social), and *GOV* (Governance) *Pillar* provided by Refinitiv Eikon and are observed at time *t.* The independent variables are measured by *ROA* (return on assets)*, FFO* (funds from operations to total assets)*, TOQ* (Tobin's Q), and *MTB* (market-to-book ratio) which are observed at time *t-1*. The control variables are *firm size* (natural logarithm of total assets), *liquidity* (cash and cash equivalents to total assets) *leverage* (total debt to total assets), *risk* (historical beta), *GDP growth*, *inflation growth*, *unemployment rate* and *cr*isis (dummy variable) which are also observed at time *t-1*.

	XVII ESG	XVIII ESG	XIX ESG	XX ESG	XXI ENV	XXII ENV	XXIII ENV	XXIV ENV	XXV SOC	XXVI SOC	XXVII SOC	XXVIII SOC	XXIX GOV	XXX GOV	XXXI GOV	XXXII GOV
Variables																
Intercept	23.091** (9.018)	23.695*** (8.859)	27.045*** (9.486)	24.313** (9.54)	31.63 (19.787)	29.407 (19.196)	28.754 (19.838)	30.788 (19.925)	26.932** (11.057)	25.677** (11.242)	26.843** (11.381)	25.867** (11.156)	29.773*** (10.615)	30.415*** (10.362)	33.297*** (9.773)	30.501*** (10.049)
Independent Variables																
ROA	-.094 (.105)				.068 (.198)				.025 (.058)				-.024 (.173)			
FFO		-.077 (.184)				.837*** (.285)				.127* (.068)				-.117 (.218)		
TOQ			-1.873* (1.081)				1.95 (1.514)				.377 (.612)				-1.817 (1.402)	
MTB				-.394 (.333)				.514** (.258)				.24 (.151)				-.627** (.273)
Control Variables																
Size	.224 (.453)	.194 (.448)	.141 (.459)	.149 (.464)	-.336 (1.09)	-.336 (1.04)	-.396 (1.083)	-.375 (1.108)	.427 (.56)	.474 (.56)	.416 (.56)	.433 (.559)	.316 (.564)	.316 (.54)	.226 (.507)	.259 (.523)
Liquidity	.034 (.04)	.048 (.038)	.04 (.037)	.046 (.04)	.097 (.074)	.128 (.101)	.101 (.079)	.101 (.079)	.019 (.048)	.017 (.049)	.012 (.048)	.036 (.044)	.107* (.059)	.122* (.067)	.107* (.061)	.104* (.061)
Leverage	.035 (.031)	.036 (.028)	.047 (.03)	.059* (.033)	-.052 (.058)	-.055 (.061)	-.033 (.055)	-.028 (.055)	.042 (.027)	.046* (.027)	.043 (.027)	.053** (.025)	.041 (.04)	.044 (.038)	.056 (.039)	.071* (.041)
Risk	-.572 (.716)	-1.166* (.624)	-.354 (.842)	-.315 (.914)	-.207 (1.259)	-.337 (1.349)	.572 (1.436)	.462 (1.474)	-.541 (.541)	-.875 (.579)	-.427 (.553)	-.605 (.568)	-.11 (1.517)	-1.134 (1.24)	.439 (1.799)	1.403 (1.461)
GDP	.103** (.051)	.115** (.052)	.03 (.051)	.041 (.054)	.033 (.074)	.025 (.07)	.04 (.087)	.047 (.082)	.083 (.061)	.091 (.06)	.076 (.064)	.084 (.064)	.175** (.076)	.198** (.08)	.077 (.094)	.051 (.08)
Inflation	.11 (.117)	.179 (.114)	.183 (.199)	.159 (.21)	.206 (.363)	-.029 (.288)	.31 (.375)	.264 (.375)	.064 (.211)	.095 (.201)	-.021 (.197)	-.01 (.198)	.151 (.252)	.288 (.246)	.418 (.263)	.293 (.256)
Unemployment	.524 (.414)	.557 (.395)	.573 (.396)	.616 (.435)	.159 (.333)	-.136 (.379)	.189 (.322)	.164 (.308)	.119 (.263)	.128 (.255)	.134 (.266)	.103 (.234)	.431 (.386)	.464 (.371)	.564 (.455)	.537 (.435)
Crisis	-2.508*** (.876)	-2.155*** (.783)	-2.457*** (.941)	-2.438** (1.007)	-.661 (.72)	-.981 (.787)	-.771 (.704)	-.22 (.505)	-1.412* (.736)	-1.169* (.696)	-1.443* (.778)	-1.083 (.733)	-3.878*** (1.395)	-3.169*** (1.154)	-3.953** (1.67)	-4.247** (1.692)
R^2	0.0664	0.1316	0.1670	0.1212	0.0239	0.0935	0.0041	0.0586	0.0696	0.0643	0.0413	0.1251	0.0676	0.0912	0.0954	0.0748
Adj. R^2	0.0551	0.1212	0.1563	0.1092	0.0030	0.0741	-0.0178	0.0370	0.0584	0.0531	0.0290	0.1132	0.0564	0.0804	0.0838	0.0622
N	756	764	713	669	430	430	419	403	756	764	713	669	756	764	713	669

Robust standard errors are in parentheses
**** p<.01, ** p<.05, * p<.1*