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جامعة الدوحة للعلوم والتكنولوجيا
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Sustainability Performance, Credit Ratings and Share Price: A Global Study

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Abstract:

This thesis investigated the impact of the Environmental, Social, and Governance (ESG) overall score, in addition to the standalone ESG pillars on the corporate credit ratings (CR). Second, this study examined the moderating role of ESG in strengthening the relationship between credit ratings and share price (SP). This research required a sample of 400 non-financial firms from the global market, considering the four continents, namely, Asia, Europe, the Americas, and Oceania, during the period 2008-2022. The empirical findings demonstrate a significant positive relationship between the ESG scores and the corporate credit ratings. This research also validated the moderating role of ESG in strengthening the positive relationship between credit ratings and share price.

Objectives:

1. To examine the impact of ESG on credit ratings.
2. To understand the influence of credit ratings on share price.
3. To identify the moderating role of ESG in strengthening the relationship between credit ratings and share price.

Sampling Strategy:

Sampling Technique	Stratified Random Sampling
Population	Total number of listed non-financial stocks in Asia, the Americas, Europe, and Oceania was 43,722 in 2022
Strategy	Population was segmented into two strata: Continent and GICS sector
Final Sample	400 listed non-financial firms from 4 continents over the period 2008 to 2022. Total of 6000 observations.

Methodology:

Model 1		Model 2
Impact of ESG on CR		Moderating Role of ESG
Ordinal-Logistic Regression Model	Methodology	Panel Regression Analysis
Nature of Credit Rating is based on ordinal ranking	Rationale	Panel data set
Dependent: Credit ratings **Independent:** ESG **Control variables:** Firm size, EBIT margin, cash conversion cycle, leverage, GDP and inflation	Selected Variables	**Dependent:** Share price **Independent:** Credit ratings **Moderating variable:** ESG **Control variables:** Firm size, EBIT margin, leverage, GDP and inflation

Model 1 Framework

Independent variable
ESG (ESGS)

Dependent variable
Credit Rating (CR)

Control variables
Firm size (FS), EBIT margin (EBITM), Cash conversion cycle (CCC), Leverage (LVG), GDP growth (GDPG), and Inflation (INF)

Model 2 Framework

Moderating variable
ESG (ESGS)

Independent variable
Credit Rating (CR)

Dependent variable
Log Share Price (Log (SP))

Control variables
Firm size (FS), EBIT margin (EBITM), Leverage (LVG), GDP growth (GDPG) and Inflation (INF)

Econometric Model 1. DV: Credit Rating

$$CR_{t,i} = \alpha_0 + \beta_1 ESGS_{t,i} + \beta_2 CCC_{t,i} + \beta_3 FS_{t,i} + \beta_4 LVG_{t,i} + \beta_5 EBITM_{t,i} + \beta_6 GDPG_{t,i} + \beta_7 INF_{t,i} + \varepsilon_{t,i}$$

Findings of Model 1: Sustainability Reporting and Credit Ratings

Expected Hypothesis	Results	Supporting Studies	Theory
H_1: The firm's ESG score is positively associated with CR	Accepted at the 5% significance level.	Kim and Li (2021)	Legitimacy theory
H_{1a}: The firm's Environmental score is positively associated with CR	Accepted at the 1% significance level.	Zanin (2022) Jang et al. (2020)	Signaling theory
H_{1b}: The firm's Social score is positively associated with CR	Accepted at the 1% significance level.	Yang (2020)	Signaling theory
H_{1c}: The firm's Governmental score is positively associated with CR	Accepted at the 5% significance level.	Devalle et al. (2017) Sareen and Vij (2014)	Agency theory

Econometric Model 2. DV: Log(Share Price)

$$Log(SP)_{t,i} = \alpha_0 + \beta_1 CR_{t,i} + \beta_2 ESGS_{t,i} + \beta_3 CR * ESGS_{t,i} + \beta_4 EBITM_{t,i} + \beta_5 LVG_{t,i} + \beta_6 FS_{t,i} + \beta_7 GDPG_{t,i} + \beta_8 INF_{t,i} + \varepsilon_{t,i}$$

Findings of Model 2: Moderating Role of ESG

Expected Hypothesis	Results	Supporting Studies	Theory
H_1: Credit ratings are positively associated with the firm's share price	Accepted at the 1% significance level.	Krishnan et al. (2020)	Market Efficiency
H_2: The ESG score moderates the relationship between credit ratings and share price	Accepted at the 1% significance level.	Leite and Uysal (2023)	Legitimacy Theory
H_{2a}: The Environmental score moderates the relationship between credit ratings and share price	Accepted at the 1% significance level.	Zerbib (2022)	Signaling theory
H_{2b}: The Social score moderates the relationship between credit ratings and share price	Accepted at the 1% significance level.	Albuquerque et al. (2020)	Signaling theory
H_{2c}: The Governance score moderates the relationship between credit ratings and SP	Accepted at the 1% significance level.	Ng and Rezaee (2020)	Signaling theory

Practical Implications

- For corporate firms to understand the importance of practicing ESG
- For shareholders and investors in their decision-making process
- For portfolio managers and policymakers

Implication

Social Implications

- Environmental concerns, consumer safety and investor protection
- Minimize harmful carbon emissions and help promote a sustainable future for a long-term value creation
- Social trust can enhance the transmission efficiency of information

Conclusion

- The firm's overall ESG score, and its pillars positively impact credit ratings.
- Larger firms with increased profitability, lower leverage and cash conversion cycle, reduced inflation rates and a higher GDP growth rate could have a better credit rating.
- The firm's credit ratings have a positive impact on share prices, and ESG plays a moderating role in strengthening the relationship between credit ratings and share price.
- Larger organizations with higher credit ratings and profitability, lower leverage, reduced GDP growth and inflation rates could have higher share prices.

Recommendations

1. Conduct a standalone study involving financial institutions
2. Study the sectoral implications for the relationship between ESG and credit ratings

References:

Kim, S., & Li, Z. (2021). Understanding the Impact of ESG Practices in Corporate Finance. Sustainability, 13, 1-15.

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