ESIC2024, Vol 8.2, S1 Posted: 11/10/2024

The Impact of Sustainability Reporting on the Cost of Capital of the Iraqi-Listed Companies

Rawaa ghazi[1], Hossein Fakhari[2], Yahya Kamyabi[2]

[1]Ph.D. student of Accounting, Department of Accounting, Faculty of Economic Sciences, University of Mazandaran, Babolsar, Iran.
[2]Professor, Department of Accounting, Faculty of Economic Sciences, University of Mazandaran, Babolsar, Iran
Email: h.fakhari@umz.ac.ir

Abstract

Purpose: The cost of capital is a critical factor influencing investment decisions and company financing. Sustainability reporting also enhances the strategic and organizational legitimacy of companies. Therefore, it is expected that sustainability reporting can influence company legitimacy with enhancing trust of companies, their capital costs is reduced. Based on this premise, the objective of this research is to investigate the impact of sustainability reporting on the cost of capital of companies listed on the Iraq Stock Exchange. Method: for testing of hypothesis Data from 33 listed companies on the Iraq Stock Exchange during the company's period of 2012-2022 was collected and analyzed using a multiple linear regression approach with a combination of panel data analysis. Result: Our findings indicate that Iraqi firms experience higher costs of capital due to their weak implementation of sustainability reporting. Conclusion: reporting on corporate sustainability activities can enhance reputation of companies and, by gaining legitimacy for the companies, their cost of capital is reduced. Implication: These findings can inform policymakers about the need to strengthen requirements for sustainability reporting. Also help investor to form an optimal portfolio based on the policy of companies in compliance with the sustainability reporting.

Keywords: Sustainability Reporting (SR), Cost Of Capital (COC), Iraqi listed companies.

1. Introduction

Sustainable development, climate change, sustainability, and their corporate reporting are pivotal concerns in today's economic environment, which have sparked discussions among academic and professional communities. This issue has garnered substantial academic attention, prompting numerous theoretical debates (Steffen, 2020; Gjergji et al., 2021; Daugaard, 2020) in several field of study like finance management and environment science also accounting. Furthermore ,In the view of the accounting discipline .Accounting knowledge plays a crucial role in these discussions as an information system, which enabling companies provide sustainability reports, and from reliability of these reports ,accounting in specifically auditing has a unique role . so the consequence of sustainability reporting on the financing and investing activities of companies is a relevant discussion in the accounting studies as like other discipline.

Review of literature showed that there are several theory in accounting which support sustainable performance and sustainability reporting of companies. legitimacy theory and stakeholder theory (Kücükgül et al., 2022; Chowdhury et al., 2020; Fassin et al., 2017; Tran et al., 2020) offer explanations for corporate engagement in sustainability reporting. Legitimacy theory posits that companies report sustainability to enhance reputation and credibility, while stakeholder theory emphasizes satisfying stakeholder demands for transparency and accountability (Freudenreich et al., 2020).

Moreover, sustainability reporting influences market behavior, including financial and capital markets (Dmuchowski et al., 2023). Consequently, the positive reputation and credibility derived from such reporting are expected to enhance financial accessibility and decrease the cost of capital for these companies.

In spite of Extensive literature that explores the implications of sustainability reporting (Aifuwa, 2020; Shad et al., 2020), in developed economies, there are limited research in emerging markets like Iraq. Hence, this study aims to investigate the impact of sustainability reporting on the cost of capital for firms listed on the Iraq Stock Exchange.Given the limited financial sourcing methods and high cost of capital in Iraqi firms, coupled with the nascent adoption of sustainability reporting among Iraqi listed companies, motivate us for these study, also we expects this research has significant relevance and potential impacts our society and also help to development of Appling sustainability reporting in practice . Furthermore, we expect sustainability reporting not only enhances company performance but also contributes to environmental sustainability at corporate and national levels. Finally we expects Effective reporting can bolster corporate reputation, and by fostering stakeholder trust. Reduce capital costs of companies.

So our main question is that, what is the effects of applying of sustainability report on the cost of capital of companies. For these purpose we used a multiple regression that by these we measure the effects of sustainability reporting of companies on the cost of capital of companies. Although we control some of the companies characteristics factors that they potentially effects on cost of capital of companies.

Our finding show that there is a significant effects of sustainability reporting on the cost of capital of Iraqi listed companies. These result can help investors in selecting an optimal portfolio, also help to policy maker in the evaluation of their policy, and promote name of companies and their reputation in subsequent and future financing.

The rest of article is structured as follows: Initially, the theoretical foundations and research background are discussed, followed by the statement of hypotheses, research methodology, findings, and discussion, and finally, conclusions are presented.

Hypothesis Development:

This study draws on Stakeholder Theory and Legitimacy Theory to understand the motivations and impacts of sustainability reporting. Legitimacy Theory suggests that companies engage in sustainability reporting to enhance legitimacy and reputation, thereby improving access to capital and reducing costs (Christensen et al., 2021; Shad et al., 2020).

Stakeholder Theory posits that stakeholders' interests in companies drive demands for sustainability reporting, influencing their expectations and potentially impacting companies' cost of capital (Gjergji et al., 2021; Aifuwa, 2020).

Research Background:

There are several research that support these theoretical background. For instance, Shad et al. (2020) examined Malaysian oil and gas firms and found that sustainability reporting reduces both debt and equity capital costs.

Christensen et al. (2021) demonstrated economic impacts of mandatory CSR and sustainability reporting rules, while Gjergji et al. (2021) explored how ESG disclosure affects capital costs among Italian SMEs.

Gonçalves et al.(2022) : This study examines the association between firms' environmental, social, and governance (ESG) performance and the cost of capital for the largest European firms listed. The results from this study point to a statistically significant positive relationship between a firm's cost of debt and sustainability performance.

However, research specific to emerging markets, particularly Iraq, remains limited. Therefore, this study hypothesizes that sustainability reporting significantly impacts the cost of capital for Iraqi listed companies.

Hypothesis:

"Sustainability reporting impacts the cost of capital of Iraqi listed companies."

Furthermore, reporting on companies' environment, social, financial risks and opportunities can influence stakeholder expectations, enhancing trust and potentially lowering capital costs. This conceptual framework guides our hypotheses development and we can depict these relationship as follow:

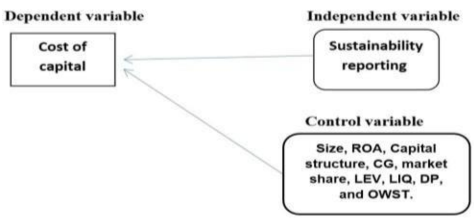

Figure1: Research theoretical framework

Source: By researcher

Therefore, the aim of this research is to examine and quantify the impact of sustainability reporting, which was previously classed as independent variable, on the cost of capital. This study specifically employed Size, Rao, Capital Structure, Cg, Market share, Lev, NOB, Liq, And Owst as control variables. In order to identify and analyses the elements that influence and enhance (SR) in the Iraqi listed companies.

2. Research Method:

This research is considered as an applied research in terms of purpose and based on the type of data is descriptive also it work with archival data.

The research population consists of a listed companies that they have some qualification:

-Companies must be active on the Iraqi Stock Exchange between 2012 and 2022.

-Financial companies, banks, financial institutions and holdings are not considered as statistical samples due to their nature.

-Companies must be listed on the Iraqi Stock Exchange before 2012.

Empirical Models: For testing of hypothesis, we have used these empirical models:

$$cost\ of\ capital_{it} = \beta_0 + \beta_1 SR_{it} + \beta_2 size_{it} + \beta_3 ROA_{it} + \beta_4 CSTRUC_{it} + \beta_5 CG_{it} + \beta_6 MSHAREE_{it} + \beta_7 LEV_{it} + \beta_8 LIQ_{it} + \beta_9 NOB_{it} + \beta_{10} OWST_{it} + \varepsilon_{it}$$

Which Variables are:

Dependent Variable: Cost of Capital (COC)

Cost of Capital (wacc) = (E/V × Re) + (D/V×Rd) × (1−Tc)

Where:

E=Market value of the firm’s equity in the end of period

D=book value of the firm’s debt

V=E+D

Re=Cost of equity

Rd=Cost of debt

Tc=Corporate tax rate

Independent Variable:

Sustainability Reporting (SR) Score:

It is a independent variable that is affected by the independent and control variables that are under the control of the researcher. It is calculated based on checklist by content analyses based on (GRI) standard checklist.

Control Variables:

Size: company size means the natural logarithm of total sales at the end of the year.

Lev: total debt ÷ total equity

Roa: Income before tax ÷ Total assets

Capital Structure: debt to equity ratio

Cg: calculates according to checklist.

Market share: Company Sales ÷ Total Market Sales

NOB: NUMBER OF BRANCH examines the number of BRABCHES companies have during a certain period of time

Liq: current assets ÷ current liabilities

Owst: percentage of stockholders according to kind of shareholders

Descriptive statistics of research variables:

In order to extract and swiftly summarize hidden information from a set of statistical data, the first step in managing the data is to classify, describe, and analyze the data. Table 4 displays descriptive statistics (mean, median, standard deviation, maximum, and lowest) gathered from the study. the cost of capital, whose mean and median are near to one another and indicate that, on average, 10% of businesses pay capital costs. The independent variable of the research is the sustainability of the company, which was obtained by the method of content analysis. For the highest value, the number is 12.789 and the lowest is 1.064. The control variable of company size has a mean of 22.349 and a median of 22.290, which shows that the numbers are close to each other.

Table 1: Descriptive statistics of research variables:

Variable		*average*	*mediam*	*Std*	*min*	*max*
WACC	Dependent	0/108	0/088	0/087	0/001	0/375
SRS	In Dependent	5/101	4/602	2/335	1/063	12/789
ROA	Controls	0/064	0/021	0/040	-0/793	0/826
Capital structure	Controls	0/847	0/274	1/760	-4/459	9/973
Size	Controls	22/349	22/290	1/427	18/681	26/895
market share	Controls	0/134	0/127	0/064	0/012	0/348
CG[1]	Controls	0/374	0/375	0/063	0/000	0/875
LEV	Controls	0/301	0/217	0/630	0/019	1/785
LIQ	Controls	2/315	1/976	0/040	0/044	6/945
OW-ST	Controls	0/367	0/381	0/103	0/087	0/871
NOB	Controls	2/793	2/000	1/817	1/000	7/000

Inferential statistics:

Analytical methods use data from a sample to draw conclusions about the larger population are referred to as inferential statistics. Deriving conclusions about social features from data gathered from a sample is the main goal of statistical analysis. Not all statistical problems end at the descriptive statistics stage; most involve drawing conclusions about the unique characteristics of a society from data obtained from a representative sample.

Pearson correlation coefficient matrix in Iraq:

Table 2: the correlation matrix between research variables was calculated and presented.

	Wacc	SRS	Size	ROA	CS	CG	MS	LEV	LIQ	DP	OWST
Wacc	1.000										
SRS	-0.510	1.000									
$size$	0.040	0.0031	1.000								
ROA	-0.012	0.0009	0.043	1.000							
CS	-0.032	0.042	0.046	0.113	1.000						
CG	-0.067	0.081	0.021	0.108	0.309	1.000					
MS	0.102	-0.018	0.021	0.147	0.126	0.013	1.000				
LEV	0.018	0.018	0.011	0.015	0.017	0.038	0.0104	1.000			
LIQ	-0.025	-0.120	0.0208	0.009	0.0034	0.058	0.067	0.078	1.000		
OWST	-0.051	-0.059	0.043	0.046	0.067	0.038	0.106	0.197	0.187	1.000	
NOB	0.116	0.013	0.098	0.045	0.058	0.078	0.088	0.034	0.034		1.000

Significance at the 99% level **: significance at the 95% level ***

Source: By researcher, Using Eviews software

According to the results of Table 2, the correlation coefficient between SRS (independent) and WACC (dependent) in Iraq is indirect and significant with a coefficient of -0.243.

Test of the hypothesis:

The results of the F-test of Limer, Hausman and Durbin-Watson of the first hypothesis are presented in Tables follows:

Table 3: Limmer, Hausman and Durbin-Watson F test of the first hypothesis

	Country		Iraq
Test	Number of years – firm	Chi-statstic	Pvalue
Flimer	363	479/3	000/0
Hasman	363	238/2	693/0
Durbin-watson	363	11/2	-

Source: By researcher, Using Eviews software

Based on the findings shown in Table 3, the Lemer's F test in Iraqi listed companies yielded a significance level of 0.000, which is below the threshold of 0.05. This suggests that the panel data technique should be employed instead of the pooled data approach. Additionally, the Hausman test demonstrates that employing the random effect approach is more advantageous compared to the Fixed technique. In order to examine the hypothesis of the research in Iraq, the random effect panel data approach has been employed. The Durbin-Watson test conducted in

Iraq with a significance level of 1.59 suggests that there is no presence of serial autocorrelation among the disturbance components of the model. The findings of the variance inflation statistic (collinearity) and the F statistic are presented in Table 4.

Table 4: Results of fitting the first hypothesis: The estimation results of the regression model of the first hypothesis:

$$wacc_{\ i,t} = b_0 + b_1 SRS_{i,t} + b_2 size_{i,t} + b_3 Roa_{i,t} + b_4 Capital\ structure_{i,t} + b_5 CG_{i,t} + b_6 market\ share_{i,t} + b_7 Lev_{i,t} + b_8 Liq_{i,t} + b_9 NOB_{i,t} + b_9 OWST_{i,t+}\varepsilon_{i,t}$$

Variable		$cofficent$	STD	$Tstatistic$	P-value	VIF
β		0/133	0/081	1/637	0/102	-
SRS	In Dependent	-0/044	0/003	-14/699	0/000	1/33
ROA	Controls	-0/019	0/044	-0/430	0/666	1/57
$Capital\ structure$	Controls	-0/006	0/005	-1/219	0/308	1/89
Size	Controls	0/005	0/007	0/731	0/464	1/27
$market\ share$	Controls	0/358	0/172	2/078	0/038	1/26
CG[1]	Controls	-0/005	0/008	-0/697	0/485	1/33
LEV	Controls	0/020	0/037	0/548	0/584	1/29
LIQ	Controls	-0/009	0/006	-1/496	0/135	1/78
OW-ST	Controls	0/043	0/049	0/877	0/380	1/91
NOB	Controls	-0/007	0/005	-1/487	0/128	1/34
Adjusted R	0/28	F		(0/000) 15/21		
Observation	363	Durbin- Watson		1/55		

*** Significance at 1% level * * Significance at 5% level * Significance at 10% level

Source: By researcher, Using Eviews software

In Table 4.5, the results of fitting the first hypothesis in Iraq are presented. It can be seen that SRS (independent variable) in Iraq has a indirect and significant relationship with the wacc (dependent variable) with-0/044 coefficients. Therefore, the first hypothesis of the research in Iraq is confirmed at the confidence level of 99%. The value of the adjusted coefficient of determination in Iraq is 28% of the changes in the dependent variable explained by the independent variables of the model. Also, the values of the variance inflation statistic (variance inflation < 5) indicate that there is no linearity between the independent variables of the research.

3. Summary of the results of research hypotheses:

Table 4: Summary of research results

Research hypothesis	Cofficent	Cofficent	Research hypothesis
(SR) effects on the (COC)	006/-0	003/0	Accept

Source: By researcher, Using Eviews software

The findings of the research hypotheses generally indicate that Iraqi firms experience minor levels of (COC) through the adoption of (SR).

4. Conclusions:

The concept of sustainability is an important goal for achieving social, economic and environmental balance. Achieving sustainability in companies has witnessed great development because of its great importance in attracting investment and capital because of the safe environment it provides that contributes to improving confidence in the financial statements in Iraqi securities companies. Through the information available in the reports of companies listed on the Iraqi Stock Exchange (research sample) from period (2012-2022), we conclude that Iraqi firms experience minor levels of (COC) through the adoption of sustainability reporting. Furthermore the result showed that there is a negative relationship between sustainability reporting and cost of capital of Iraqi listed companies. Therefore compliance with stock exchange policy about sustainability reporting can reduce cos of capital of companies. This findings convergent with the legitimacy and stockholder theory that support these voluntary disclosure activities of companies. Also these finding is like prior research that are done in developed countries.

5. Suggestions

The need to pay attention to the sustainability reporting of companies by the Iraqi Stock Exchange, by establishing an accounting legislative framework that makes companies obligated to report on sustainability in accordance with the standards of the Global Reporting Initiative (GRI).

The need to spread the culture of sustainability, its reports, and its determinants among those interested in the accounting and auditing profession by holding special training programs for that.

These findings Benefits to the researcher in conducting future research that they can include Sustainability indicators in the performance measurement systems of Iraqi listed companies on the Iraqi Stock Exchange.

WORKS CITED

Aifuwa, H. O. (2020). Sustainability reporting and firm performance in developing climes: A review of literature. Copernican Journal of Finance & Accounting, 9(1), 9-29.

Chowdhary, P., Bharagava, R. N., Mishra, S., & Khan, N. (2020). Role of industries in water scarcity and its adverse effects on environment and human health. Environmental Concerns and Sustainable Development: Volume 1: Air, Water and Energy Resources, 235-256.

Chowdhury, M. M. H., Paul, S. K., Sianaki, O. A., & Quaddus, M. A. (2020). Dynamic sustainability requirements of stakeholders and the supply portfolio. Journal of Cleaner Production, 255, 120148.

Christensen, H. B., Hail, L., & Leuz, C. (2021). Mandatory CSR and sustainability reporting: Economic analysis and literature review. Review of accounting studies, 26(3), 1176-1248.

Tiago Cruz Gonçalves 1 , João Dias 2 and Victor Barros.(2022) Sustainability Performance and the Cost of Capital. International Journal of Financial Studies, 10: 63

doi.org/10.3390/ijfs10030063

Daugaard, D. (2020). Emerging new themes in environmental, social and governance investing: a systematic literature review. Accounting & Finance, 60(2), 1501-1530.
Dmuchowski, P., Dmuchowski, W., Baczewska-Dąbrowska, A. H., & Gworek, B. (2023). Environmental, social, and governance (ESG) model; impacts and sustainable investment–Global trends and Poland's perspective. Journal of Environmental Management, 329, 117023.
Fassin, Y., De Colle, S., & Freeman, R. E. (2017). Intra - stakeholder alliances in plant - closing decisions: A stakeholder theory approach. Business Ethics: A European Review, 26(2), 97-111.
Freudenreich, B., Lüdeke-Freund, F., & Schaltegger, S. (2020). A stakeholder theory perspective on business models: Value creation for sustainability. Journal of business ethics, 166(1), 3-18.
Gjergji, R., Vena, L., Sciascia, S., & Cortesi, A. (2021). The effects of environmental, social and governance disclosure on the cost of capital in small and medium enterprises: The role of family business status. Business strategy and the environment, 30(1), 683-693.
Kücükgül, E., Cerin, P., & Liu, Y. (2022). Enhancing the value of corporate sustainability: An approach for aligning multiple SDGs guides on reporting. Journal of Cleaner Production, 333, 130005.
Shad, M. K., Lai, F. W., Shamim, A., & McShane, M. (2020). The efficacy of sustainability reporting towards cost of debt and equity reduction. Environmental Science and Pollution Research, 27, 22511-22522.
Steffen, B. (2020). Estimating the cost of capital for renewable energy projects. Energy Economics, 88, 104783.
Tsalis, T. A., Malamateniou, K. E., Koulouriotis, D., & Nikolaou, I. E. (2020). New challenges for corporate sustainability reporting: United Nations' 2030 Agenda for sustainable development and the sustainable development goals. Corporate Social Responsibility and Environmental Management, 27(4), 1617-1629.