Journal of Management and Business Insight
P-ISSN: 3031-0261 | E-ISSN: 3031-0253
Volume 1, Number 1, May 2023, Page 33-40

The effect of corporate social responsibility on profitability with leverage as moderating variable

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ARTICLE INFO

Article History
Received: 26-08-2023
Revised: 19-09-2023
Accepted: 20-09-2023

Keywords
Corporate Social Responsibility;
Size;
Capital Adequacy Ratio;
Debt Equity Ratio;
Inflation;
Return on Asset.

Paper Type: Research Paper

ABSTRACT

Purpose-This study aims to analyze the effect of corporate social responsibility on the profitability of listed banks in Indonesia and analyze leverage as the moderating variable.

Design/Methodology/Approach-This research uses data from 14 listed banks in the Indonesia Stock Exchange from 2017-2021. The equations to analyze the influence of corporate social responsibility and some control variables (firm size, capital adequacy ratio, leverage, and inflation) on profitability and the influence of leverage as a moderating variable are estimated using fixed effect panel data regression.

Findings-The results of this research show that firm size, capital adequacy ratio, leverage, and rate of inflation variables have a positive influence on profitability. Meanwhile, corporate social responsibility and the moderating effect of leverage do not significantly influence profitability.

Research limitations/implications-The research findings are expected to become a reference for the investor and the bank management on the influence of corporate social responsibility on a listed bank's profitability and the effect of leverage as a moderating variable.

Originality/value-As an intermediary, banks have different types of leverage than non-bank companies. This study analyzes the impact of corporate social responsibility with leverage as a moderating variable on the profitability of listed banks in the Indonesian Stock Exchange.

1. The Introduction

In the current era of globalization, competition between banks is increasing, and banks are required to improve financial performance and maintain the bank's soundness. A bank is a financial intermediary organization that collects and distributes public funds. Good bank performance is necessary for the smooth functioning of the banking system to become an institution that can channel debtor funds to creditors. Nowadays, socially responsible banking is an established concept, binding the bank's license to operate with the ability to reward investors without neglecting societal expectations (Gangi et al., 2018).

Corporate Social Responsibility (CSR) is considered an organizational activity that has a sustainable effect on society and, in turn, has the potential to positively impact the business organizations involved in it. Business organizations spend much money on social responsibility because they view CSR as a public relations act that large companies use to perform well in front of customers and other stakeholders (Ajide & Aderemi, 2014).

Given the large amount of expenditure spent annually on CSR, it is generally believed that CSR can increase corporate profits. However, only some managers are aware of research on this crucial subject. Most managers believe that CSR can increase profits. They understand that CSR can increase respect for their firm in the marketplace, leading to higher sales, increasing employee loyalty, and attracting better personnel to the company. In addition, CSR activities that focus on sustainability issues can also reduce costs and increase efficiency (Ajide & Aderemi, 2014).

In general, CSR is believed to increase company profits, so most large companies are actively involved. It is understood that CSR can increase respect for one's company in the market, which can result in higher sales, increase employee loyalty, and attract better personnel to the company (Ajide & Aderemi, 2014). Some researchers have conducted previous research on the influence of CSR on bank profitability. Based on the research by Gangi et al. (2018) and Maqbool Zameer (2018), CSR positively influences bank profitability. Meanwhile, the research by Matuszak & Różańska (2017) and Zhou et al. (2021) show that CSR negatively influences bank profitability.

Another previous research about determinants of bank profitability, among others, has found the influence of bank size (Zhou et al., 2021; Prieto et al., 2020), capital adequacy ratio (Alnajjar & Othman, 2021), and leverage (Gangi et al., 2018; Matuszak & Różańska, 2017). Other research has indicated the influence of the inflation rate (Owoputi et al., 2014; Horobet et al., 2021). Based on previous research, CSR can have positive or negative effects on profitability that need further analysis. Meanwhile, some previous studies found the moderating role of leverage on the CSR effect on the profitability of non-bank firms (Kusumawati, Asyilah, & Bukhori, 2022; Rosiana & Akhmadi, 2023). Since banks as intermediaries have different types of leverage than non-bank firms, this research analyzes the influence of CSR with leverage as a moderating variable on the profitability of listed banks in Indonesia.

2. Literature Review and Hypothesis Development

CSR is a form of corporate responsibility towards internal, namely to shareholders and employees in the form of profits and progress of the company, as well as towards external companies related to providing jobs, paying taxes, developing competencies and welfare of the society, and caring for the environment for future generations. The reason banking companies are required to carry out CSR is because banking companies are a type of business that relies on public trust, especially users of banking services (customers). If the company can provide an excellent image to the public or customers, it will make the public or customers more confident in using the bank's services. Moreover, vice versa if the bank gives a negative image, it will make the public or customers no longer trust the bank. Alternatively, what is worse is customers withdrawing their funds from the bank, which worsens the bank's performance. Research carried out by Jahmane & Gaies (2020) shows that CSR positively affects profitability as measured by Return on Asset (ROA). These results align with the research by Cho et al. (2019) and Dat et al. (2022), which revealed that CSR has a positive effect on ROA. **H_1: Corporate Social Responsibility Has a Positive Effect on Return on Asset**

Size is a term used to describe the size of a company, which is determined by the company's total assets. The company will have reached its maturity stage if its total assets increase. The greater the total assets, the greater the invested capital, in which the more capital invested, the more the company's cash flow turnover will increase production so that more total sales will also increase the profit earned by the company. The results of the research by Akram et al. (2021) revealed that size positively affects ROA. **H_2: Size Has a Positive Effect on Return on Asset**

Capital Adequacy Ratio (CAR) measures a bank's ability to cover the risk of loss from its activities and its ability to finance its business activities. A considerable CAR value will make a bank more able to absorb risks associated with risky assets and fund bank operations, which will significantly affect bank profitability (Alnajjar & Othman, 2021). **H_3: Capital Adequacy Ratio Has a Positive Effect on Return on Asset**

Leverage describes several debts that fund the company's operational activities. The leverage variable in this study is proxied by the Debt Equity Ratio (DER), which calculates the debt-to-equity ratio. The risks associated with a company increase when the debt-to-equity ratio increases. Companies must be able to consider using equity or debt in order to minimize risk and avoid company bankruptcy. Companies with large leverage values will make the company dependent on debt obtained from creditors, which can result in more excellent bankruptcy. This aligns with the research results by Jahmane & Gaies (2020) and Samo & Murad (2019), showing that the results of DER hurt ROA. However, according to the research results of Afolabi et al. (2019), DER positively affects ROA. **H_4: Debt Equity Ratio Has a Positive Effect on Return on Asset**

Inflation is a condition of rapid price increases that occur repeatedly over a long period. High inflation rates can hamper bank efforts to collect public funds. This resulted from a decrease in actual interest rates caused by high inflation. This fact makes fewer and fewer individuals motivated to save their funds in banks, resulting in a decrease in the growth of bank funds from the public and bank profitability. This statement is supported by the results of the research by Mohd & Siddiqui (2020), which show that inflation affects ROA. **H_5: Inflation Has a Positive Effect on Return on Asset**

In this study, DER is one of the independent variables and also a moderating variable between CSR and ROA. Based on the research conducted by Rosiana & Akhmadi (2023) and Oware & Mallikarjunappa (2019), DER can strengthen the influence of CSR on ROA. Leverage can strengthen the impact of CSR on the performance of the company. Leverage exhibits the level of a company's dependence on debt to finance the operations of the company. Companies with a high proportion of leverage will conduct more CSR than companies with low leverage because, with CSR, it is expected that stakeholders such as investors and creditors will consider this as a guarantee for the company's sustainability (Ramadhani & Maresti, 2021). **H_6: Moderating Effect of Debt Equity Ratio Has Influence on the Effect of Corporate Social Responsibility to Return on Asset**

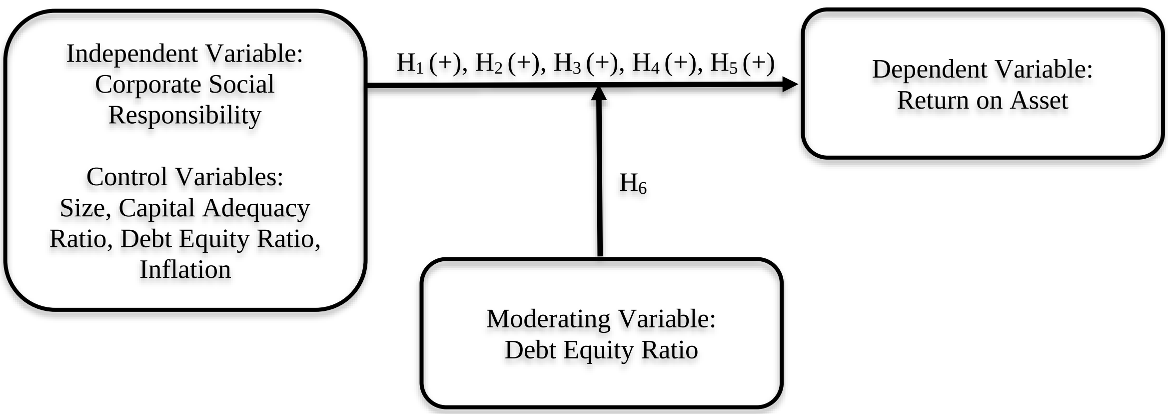

Figure 1. Research Framework

Figure 1 shows the direct influence of CSR on ROA. Then, this study also tested the effect of DER as a moderation variable between CSR and ROA. In this study, Size, CAR, DER, and Inflation were also control variables that tested for direct influence on ROA.

3. Research Methodology

This research uses data from 14 listed banks in the Indonesian Stock Exchange from 2017 to 2021. The equations are estimated using fixed-effect panel data regression to analyze CSR influence on profitability and leverage's moderating effect. This research uses equation (1) to analyze the influence of CSR and the control variables (size, capital adequacy ratio, debt equity ration, and inflation) as follows:

$$\mathbf{ROA = \beta + \beta_1 CSR + \beta_2 Size + \beta_3 CAR + \beta_4 DER + \beta_5 Inflation + e \quad (1)}$$

This research uses equation (2) to analyze the influence of debt equity ratio as a moderating variable of CSR effect on profitability as follows:

$$\mathbf{ROA = \beta + \beta_1 CSR + \beta_2 Size + \beta_3 CAR + \beta_4 DER + \beta_5 Inflation + \beta_6 CSR*DER + e \quad (2)}$$

The details of the variables are as describe in Table 1 below.

Table 1. Variable Description

Variables	Measurement	References
Return on Asset (ROA)	Net Profit to Total Assets	Prieto et al. (2020)
Corporate Social Responsibility (CSR)	The number of disclosed items in the company (i) for the period (t) divided by the total number of disclosure items included in the disclosure index	Zraqat et al. (2021).
Size	Logarithm of Total Assets	Zhou et al. (2021)
Capital Adequacy Ratio (CAR)	Eligible Capital Devided by Risk-weighted Assets	Alnajjar & Othman (2021)
Debt Equity Ratio (DER)	Total Liabilities to Total Equity	Matuszak & Różańska (2017)
Inflation	Inflation Rate	Horobet et al. (2021)

4. Result and Discussion

The descriptive statistics in Table 2 below show that ROA has an average value of 0.016 (1.60%) and a standard deviation value of 0.016 (1.60 %). The maximum value is 0.042 (4.22%), and the minimum is -0.049300.

Table 2. Descriptive Statistic

Variable	Average	Minimum	Maximum	Std. Dev.
ROA	0.016	-0.049	0.042	0.016
CSR	0.238	0.040	0.550	0.107
Size	32.561	25.134	35.084	2.328
CAR	0.205	0.105	0.357	0.045
DER	6.880	4.280	16.080	2.534
Inflation	0.026	0.016	0.036	0.007

CSR has an average value of 0.238 and a standard deviation of 0.107. It obtained a maximum value of 0.550 and a minimum value of 0.040. Size has an average value of 32.561 and a standard deviation of 2.328. The maximum value is 35.084, and the minimum value is 25.134. CAR with a mean value of 0.205 and a standard deviation of 0.045. This variable's maximum value is 0.357, and the minimum value is 0.105. DER has a mean value of 6.88 and a standard deviation value of 2.534, with a maximum value of 16.080 and a minimum value of 4.280. Inflation has a mean value of 0.026 and a standard deviation of 0.007. The highest value of 0.036, and the lowest was 0.016. The results of the multicollinearity test are presented in Table 3, indicating that the independent variables in this study have passed the multicollinearity test because the correlation value between independent variables is not greater than 0.8. This means that the independent variables are free from multicollinearity symptoms.

Table 3. Correlation Matrix

Variable	CSR	Size	CAR	DER	Inflation	CSR*DER
CSR	1.000					
Size	0.355	1.000				
CAR	-0.035	-0.147	1.000			
DER	0.333	0.050	-0.500	1.000		
Inflation	-0.360	-0.043	-0.253	-0.027	1.000	
CSR*DER	0.791	0.199	-0.270	0.796	-0.232	1.000

Figure 2 shows a probability value of 0.282 or greater than the significance level of 5% (0.05), so it can be concluded that the residuals are normally distributed.

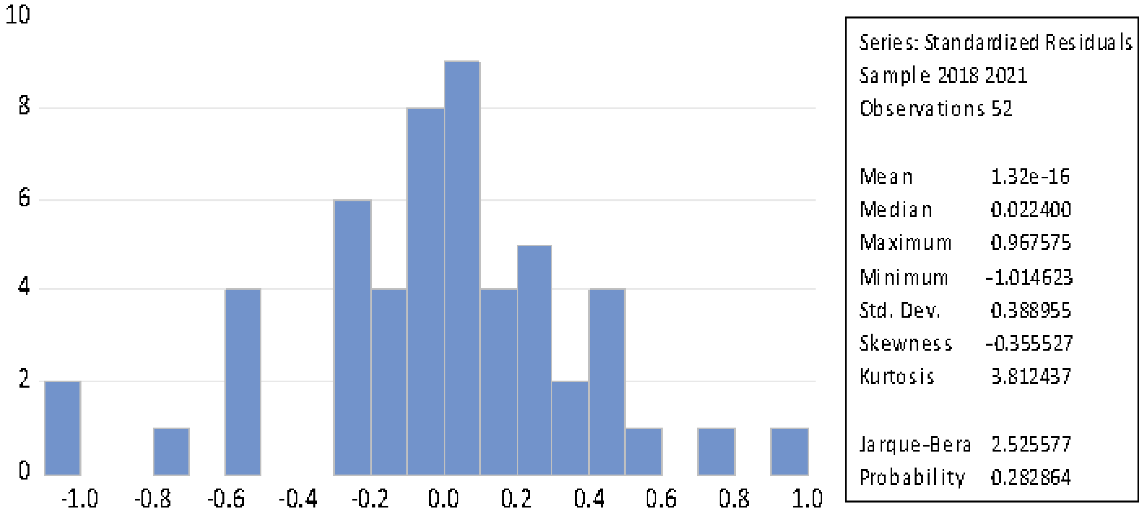

Figure 2. Normality Test

The results of the heteroscedasticity test (Table 4) show that the value of probability chi-square is 0.158 or greater than 0.05. It means that there is no problem with heteroscedasticity.

Table 4. Heteroscedasticity Test

Heteroskedasticity Test: (ARCH)			
F-Statistic	1.631	Prob. F (6.45)	0.160
Obs*R-Squared	9.288	Prob. Chi-Square (6)	0.158

The results of the autocorrelation test (Table 5) show the value of probability chi-square is 0.860 or more significant than 0.05. It means that there is no problem with autocorrelation.

Table 5. Autocorrelation Test

Breusch-Godfrey Serial Correlation LM Test:			
F-Statistic	0.125	Prob. F (2.49)	0.882
	0.301	Prob. Chi-Square (2)	0.860

Table 6 shows the results of CSR fixed-effect panel data regression on ROA. Based on equation (1), the results in Table 4 column (1) show that CSR does not affect ROA. This indicates that the level of CSR does not affect ROA. The results in column (2) of Table 4 also show that CSR does not affect ROA. The results of column (2) strengthen the results of column (1) that CSR activities carried out by companies to create a good image in the eyes of the public do not necessarily make people more confident in using the bank's services, which will affect ROA.

Table 6. Regression Result

	(1) Coefficient (Std. Error)	(2) Coefficient (Std. Error)
CSR	0.003	0.025
	(0.010)	(0.025)
Size	0.021	0.019
	(0.009)**	(0.010)*
CAR	0.077	0.083
	(0.035)**	(0.035)**
DER	0.002	0.003
	(0.001)**	(0.001)**
Inflation	0.980	0.967
	(0.182)**	(0.183)***
CSR*DER		-0.002
		(0.003)
Constant	-0.736	-0.681
	(0.317)**	(0.323)**
R-Square	0.872	0.874
F-Statistics	19.400	18.380
Prob. (F-Stat)	0.000	0.000
No. of Obs. (bank-year)	70	70

Note: * significant at 10%; ** significant at 5%; *** significant at 1%.

Discussion

Meanwhile, Table 6 also shows the results of the influence of the size on ROA. In Table 4, column (1), size has an effect at a significant level of 0,05, while in column (2), size has an effect at a significant level of 0,10. These results indicate that the size of the company affects ROA. Based on the results obtained from this study in Table 4, columns (1) and (2), the CAR variable influences ROA. The regression coefficient value shows a positive relationship, which means if the CAR level increases, ROA will also increase and vice versa. These results indicate that the higher the CAR level, the better the company manages its capital and assets to develop the company and minimize risk. This can positively impact bank profitability (Alnajjar & Othman, 2021).

Table 6, columns (1) and (2) also show that DER positively influences ROA. This shows that the greater the DER, the greater the possibility of leverage that can be used to increase the company's operational activities to improve the company's ROA (Samo & Murad, 2019). This result is supported by agency theory, which argues that the greater the leverage, the less likely management is to misuse idle funds because the company has to reserve more cash to pay off its receivables and interest. With the amount of leverage, agency costs can be reduced, ultimately increasing company profits.

Inflation positively influences ROA, as evidenced by the results obtained in Table 6, columns (1) and (2). Inflation is when prices increase repeatedly and quickly over a long period. Inflation can encourage individuals to invest their money for productive and profitable uses. Currency values sometimes decrease due to inflation. As a result, individuals invest their money in the stock market rather than putting their money in savings and risking depreciation. The availability of investment will help companies find new sources of financing for business development and get maximum profits that affect the company's financial performance.

Whereas in the moderation test presented in Table 6 columns (2), the result shows that the DER variable cannot moderate the effect of CSR. The analysis of the effect of CSR on ROA in Table 6 columns (1) shows that there is no effect, and the analysis of the influence of DER in moderating CSR influence on ROA in Table 6 columns (2) also shows that DER cannot moderate the effect of CSR on ROA. In other words, CSR does not affect increasing or decreasing company profitability. CSR activities in Indonesia are mandatory activities that companies must carry out, so most companies refrain from providing relevant information and do not consider the impact on society. This can make the company's financial performance not affected by CSR (Fauzi, Mahoney, & Rahman, 2007). The commitment of a firm to undertake CSR activities is not affected by the level of leverage, and leverage does not affect the CSR-financial performance relationship (Oware & Mallikarjunappa, 2019).

5. Conclusion

Based on the discussion of the results of this study using the panel data regression model with e-views, it can be concluded that CSR, Size, CAR, DER, and Inflation as a whole simultaneously affect the ROA of banking companies listed on the IDX for the 2017 to 2021 period. CSR does not affect ROA in banking companies listed on the IDX for 2017 to 2021. Size affects the ROA of banking companies listed on the IDX for 2017 to 2021. CAR affects the ROA of banking companies listed on the IDX for 2017 to 2021. DER affects ROA in banking companies listed on the IDX for 2017 to 2021. Inflation affects the ROA of banking companies listed on the IDX for 2017 to 2021. DER does not affect moderating CSR on ROA in banking companies listed on the IDX for 2017 to 2021.

REFERENCES

Afolabi, A., Olabisi, J., Kajola, S. O., & Asaolu, T. O. (2019). Does Leverage affect the financial performance of Nigerian firms? *Journal of Economics and Management*, *37*(3), 5–22. https://doi.org/10.22367/jem.2019.37.01

Ajide, F. M., & Aderemi, A. A. (2014). The effects of corporate social responsibility activity disclosure on corporate profitability: Empirical evidence from Nigerian commercial banks. *IOSR Journal of Economics and Finance*, *2*(6), 17–25. https://doi.org/10.9790/5933-0261725

Akram, T., Farooq, M. U., Akram, H., Ahad, A., & Numan, M. (2021). The impact of firm size on profitability: A study on Pakistan's top 10 cement companies. *Jurnal Aplikasi Manajemen, Ekonomi Dan Bisnis*, *6*(1), 14–24. https://doi.org/10.51263/jameb.v6i1.137

Alnajjar, A., & Othman, A. H. A. (2021). The impact of capital adequacy ratio (CAR) on Islamic banks' performance in selected MENA countries. *International Journal of Business Ethics and Governance*, 116–133. https://doi.org/10.51325/ijbeg.v4i2.70

Cho, S. J., Chung, C. Y., & Young, J. (2019). Study on the relationship between CSR and financial performance. *Sustainability (Switzerland)*, *11*(2), 1–26. https://doi.org/10.3390/su11020343

Dat, N. M., Dai, N. Q., & Ngoc, P. B. (2022). The impact of corporate social responsibilities (CSR), entrepreneurship, and financial factors on the financial performance of the banks in ASEAN countries. *Contemporary Economics*, *16*(2), 227–240.

Fauzi, H., Mahoney, L., & Rahman, A. A. (2007). Institutional ownership and corporate social performance: Empirical evidence from Indonesian companies. *Issues in Social and Environmental Accounting*, *1*(2), 334–347.

Gangi, F., Mustilli, M., Varrone, N., & Daniele, L. M. (2018). Corporate social responsibility and banks' financial performance. *International Business Research*, *11*(10), 42. https://doi.org/10.5539/ibr.v11n10p42

Horobet, A., Radulescu, M., Belascu, L., & Dita, S. M. (2021). Determinants of bank profitability in CEE countries: Evidence from GMM panel data estimates. *Journal of Risk and Financial Management*, *14*(7), 307. https://doi.org/10.3390/jrfm14070307

Jahmane, A., & Gaies, B. (2020). Corporate Social responsibility, financial instability, and corporate financial performance: Linear, non-linear and spillover effects (The case of the CAC 40 companies). *Finance Research Letters*, *34*, 0–11. https://doi.org/10.1016/j.frl.2020.101483

Kusumawati, R., Asyilah, N. H., & Bukhori, I. (2022). Corporate social responsibility (CSR) impact on financial performance: Moderating effects of earnings management and leverage. *Jurnal Manajemen Bisnis*, *13*(2), 223–234. https://doi.org/10.18196/mb.v13i2.12888

Maqbool, S., & Zameer, M. N. (2018). Corporate social responsibility and financial performance: An empirical analysis of Indian banks. *Future Business Journal*, *4*(1), 84–93. https://doi.org/10.1016/j.fbj.2017.12.002

Matuszak, Ł., & Różańska, E. (2017). Examining the relationship between CSR disclosure and financial performance: The case of polish banks. *Journal of Accounting and Management Information Systems*, *16*(4), 522–533. https://doi.org/10.24818/jamis.2017.04005

Mohd, A. S., & Siddiqui, D. A. (2020). Effect of macroeconomic factors on firms ROA: A comparative sectorial analysis from Pakistan. *International Journal of Publication and Social Studies*, *5*(1), 1–17. https://doi.org/10.18488/journal.135.2020.51.1.17

Oware, K. M., & Mallikarjunappa, T. (2019). Corporate social responsibility investment, third-party assurance and firm performance in India: The moderating effect of financial leverage. *South Asian Journal of Business Studies*, *8*(3), 303–324. https://doi.org/10.1108/SAJBS-08-2018-0091

Owoputi, J. A., Femi Kayode, O., & Ademola Adeyefa, F. (2014). Bank specific, industry specific and macroeconomic determinants of bank profitability in Nigeria. *European Scientific Journal*, *10*(25), 1857–7881.

Prieto, A. B. T., Shin, H. K., Lee, Y., & Lee, C. W. (2020). Relationship among CSR initiatives and financial and non-financial corporate performance in the ecuadorian banking environment. *Sustainability (Switzerland)*, *12*(4). https://doi.org/10.3390/su12041621

Ramadhani, R., & Maresti, D. (2021). Pengaruh leverage dan ukuran dewan direksi terhadap pengungkapan CSR. *Ekonomis: Journal of Economics and Business*, *5*(1), 78. https://doi.org/10.33087/ekonomis.v5i1.262

Rosiana, & Akhmadi. (2023). The influence of corporate social responsibility on firm performance with leverage as a moderating variable in companies listed in the Srikehati index. *Journal of Management Science*, *6*(3), 404–410.

Samo, A. H., & Murad, H. (2019). Impact of liquidity and financial leverage on firm's profitability: An Empirical analysis of the textile industry of Pakistan. *Research Journal of Textile and Apparel*, *23*(4), 291–305. https://doi.org/10.1108/RJTA-09-2018-0055

Zhou, G., Sun, Y., Luo, S., & Liao, J. (2021). Corporate social responsibility and bank financial performance in China: The moderating role of green credit. *Energy Economics*, p. *97*, 105190. https://doi.org/10.1016/j.eneco.2021.105190

Zraqat, O., Zureigat, Q., Al-Rawashdeh, H. A., Okour, S. M., Hussien, L. F., & Al-Bawab, A. A. (2021). Employees' eesponse to CSR: Role of organizational identification and organizational trust. *Journal of Business Ethics*, *8*(1), 453–463. https://doi.org/10.13106/jafeb.2021.vol8.no8.0453