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THE INFLUENCE OF CORPORATE FINANCIAL PERFORMANCE ON CORPORATE SOCIAL RESPONSIBILITY (CSR) WITH QUALITY MANAGEMENT AS A MODERATION VARIABLE IN THE BANKING SUB-SECTOR

BY

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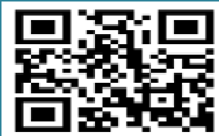

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Abstract

This research was conducted with the aim of knowing the effect of Corporate Financial Performance on Corporate Social Responsibility (CSR) with Quality Management as a Moderating Variable in the Banking Sub Sector. This study uses a quantitative model using the company's annual report data. The sample of this study is the annual financial statements of financial sub sector banking companies listed on the Indonesia Stock Exchange for the period 2017 to 2021. The statistical method used is Moderated Regression Analysis (MRA).

Keywords*: Corporate Social Responsibility (CSR), Corporate Financial Performance, Return on Investment (ROI). Return on Assets (ROA), Return on Equity (ROE), Quality Management, Moderated Regression Analysis (MRA).*

INTRODUCTION

Stakeholder theory according to Freeman (1984) every group or individual that can affect or be influenced by an organization. A narrower definition is that stakeholders in a company are designated as suppliers, customers, employees, investors, and society. Stakeholder theory says that a company is not entities that only operate for their own interests but must provide benefits to their stakeholders who are related and/or affected by the existence of the company. From this theory, the concept of Corporate Social Responsibility (CSR) was born. Based on the basic assumptions of stakeholder theory, companies cannot escape from the surrounding social environment (Kartini et al., 2019).In this condition, Corporate Social Responsibility (CSR) plays an important role in managing the risk of bank financing. (Kokoreva, 2022). According to (Aderibigbe, 2018), Corporate Social Responsibility (CSR) is a concept in which companies integrate social and environmental concerns in business operations and in voluntary interactions with stakeholders that lead to sustainable business success. According to ISO 26000 that "*Responsibility of organization for the impacts of its decisions and activities on society and the environment, through transparent and ethical behaviour that contributes to sustainable development, including health and the welfare of society; takes into account the expectations of stakeholders; is in compliance with applicable law and consistent with international norms of behaviour; and integrated throughout the organization and practiced in its relationship.*" Disclosure of Corporate Social Responsibility (CSR) is a concept about the need for a company to build harmonious relationships with the community and other stakeholders according to (Abidin & Lestari, 2020).

LITERATURE REVIEW

Corporate Social Responsibility (CSR)

(Cahya, 2022) Corporate Social Responsibility (CSR) is a concept in which companies integrate social and environmental concerns in business operations and in voluntary interactions with stakeholders that lead to sustainable business success. According to research (Franco et al., 2020) measuring Corporate Social Responsibility (CSR) in companies is by using the Economic, Social, and Governance responsibility (ESG) score consisting of 178 indicators which are grouped into economic, environmental, and governance dimensions which cover issues -Issues related to ten main themes, namely resource use, emissions, innovation, labour, human rights, community, product responsibility, management, shareholders, and CSR strategy. (Kim et al., 2014; Theodoulidis et al., 2017).

Financial performance

Financial performance is an analysis of a company's financial position report in a certain period, to find out how efficient and effective a company is in generating income According to Wibowo (2020). Performance measurement is a very important factor for the company because it is an effort to map the strategy into actions to achieve certain targets. desired results. (Hendi & Kitty, 2022). whereas according to

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(Winnie Eveline Prengkuan, 2017) financial performance is an important factor for assessing the overall performance of a company, including the assessment of assets, debt, liquidity, and so on.

Return on Investment (ROI)
Return on Investment (ROI) is a ratio that shows a company's ability to obtain profits that are used to cover the investment issued According to Sutrisno, in (Riani et al.,2023). If the Return on Investment (ROI) increases, this means that the profitability ratio also increases so that it can affect the increase in profitability obtained by shareholders.

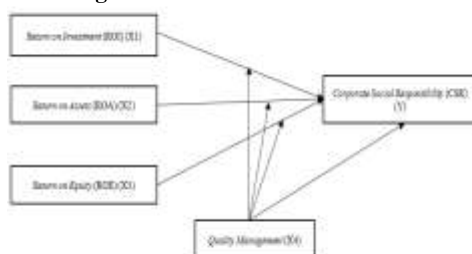
Return on Assets (ROA)
Return On Assets (ROA) measures a company's ability to generate net income based on a certain level of assets or ratios that show how capable a company is of using existing assets to create profits (Saputra, 2022). The higher the value of Return on Assets (ROA) indicates the higher the profit earned. The high and low Return on Assets (ROA) is influenced by how much assets are used to invest, where the size of the company's total assets can be caused by several factors and one of them is the use of assets in paying or paying off company obligations (Irman & Purwati,2020).

Return on Equity Ratio (ROE)
Return on Equity (ROE) measures how much profit is the owner's right to his capital (Saputra, 2022). Return On Equity (ROE), shows the extent to which a company manages its own capital effectively, measures the level of profit from investments that have been made by the owners of their own capital or the company's shareholders. The greater this ratio the better (Winarno, 2019).

Quality Management
Previous researchers argue that there are seven Quality Management techniques, namely management leadership, training, employee relations, quality data and reporting, supplier quality management, product/service design, and process management, and these techniques are the same as those mentioned. Meanwhile, a study from the European Center for Total Quality Management - university of Bradford, has a broader understanding, which includes corporate quality culture, strategic quality management, quality improvement measurement systems, human and customer management, operational quality planning, external interface management, supplier partnerships, teamwork structure, customer satisfaction orientation, communication of improvement information (Daragmeh & Bárczi, 2021)

Theoretical Framework

Figure 1. Theoretical Framework



HYPOTHESIS DEVELOPMENT

The Influence of Financial Performance on Corporate Social Responsibility (CSR).
Disclosure of Corporate Social Responsibility (CSR) activities is carried out to provide benefits to parties with an interest in the company, which can generate trust from parties with an interest in the company, thus it can be concluded that Financial Performance influences Corporate Social Responsibility (CSR). This is in accordance with research that has been done by previous researchers (Aderibigbe,2018; Citraningrum,2014; Dewi,2015; Priyanka,2013; Sameer,2021). H1: *Return on Investment (ROI) influences Corporate Social Responsibility (CSR)*

H2: Return on Assets (ROA) affects Corporate Social Responsibility (CSR)

H3: Return on Equity (ROE) influences Corporate Social Responsibility (CSR)

Effect of Quality Management on Corporate Social Responsibility (CSR).
Implementation of Quality Management, namely leadership management, strategic planning, employee involvement that focuses on human resources, focuses on consumers, business, and process management by innovating products, as well as administrative activity processes. This proves that Quality Management is an effective approach aimed at satisfying stakeholders and benefiting the company by involving all levels of the organization towards achieving these goals. Thus it can be concluded that Quality Management has an influence on Corporate Social Responsibility (CSR) like previous research (Abbas,2020; Franco et al.,2020; Hazlet et al.,2007;kokoreva,2022).

H4: Quality Management influences Corporate Social Responsibility (CSR).

The influence of Quality Management moderates Corporate Financial Performance on Corporate Social Responsibility (CSR).

Quality Management identifies various values such as improving the quality of employees and providing the best service to society which is also part of concern for the environment. Thus it can be concluded that Quality Management moderates Corporate Financial Performance on Corporate Social Responsibility (CSR) like previous research (Franco et al.,2020; Hazlett et al.,2007; Quintana-Garcia et al.,2018).

H5*: Quality Management moderates Return on Investment (ROI) on Corporate Social Responsibility (CSR).*
H6*: Quality Management moderates Return on Assets (ROA) on Corporate Social Responsibility (CSR).*
H7*: Quality Management moderates Return on Equity on Corporate Social Responsibility (CSR).*

RESEARCH METHODOLOGY

Unit of Analysis, Population, and Sample
This study used a quantitative research analysis method with a descriptive approach and used a purposive sampling

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technique. The data used are companies that are registered and active on the Indonesia Stock Exchange with a research period of 2017 – 2021. Companies must submit and report their audited financial statements during the 2017 – 2021 research period in full on the Indonesian Stock Exchange website (www. idx.co.id) or the website of each company.

VARIABLE

In this research, Corporate Social Responsibility (CSR) is the only dependent variable. while the independent variable which is the cause of the change or the emergence of the dependent variable is Return on Investment (ROI), Return on Assets (ROA), Return on Equity (ROE). with the moderating variable quality management can strengthen or weaken the relationship between one variable and another. In assessing Quality Management in the banking industry using a dichotomous variable that measures whether a company has ISO 9001 certification (1) or not (0). Because ISO 9001 is a comprehensive and effective guide in implementing a company's Quality Management in a sustainable long-term manner.

Tabel 3. 1 Notasi Dummy

Criteria	Dummy Notation
- ISO 9001	1
- Without ISO 9001	0

Data Analysis

Deskriptif Analysis

Table 4.2 Statistik Deskriptif

	Variabel	Observation	Mean	Standar Deviation	Min	Max
ROI	Independen	200	0,05	0,08	-0,11	0,44
ROA	Independen	200	0,22	0,22	-0,5	0,90
ROE	Independen	200	0,11	0,27	-0,94	0,96
QM	Moderation	200	0,83	0,38	0	1,00
CSR	Dependen	200	0,36	0,22	0	0,75

Sumber: Lampiran Output EViews versi 12 (data diolah)

results of Descriptive Statistics data on Return on Investment (ROI) as an independent variable (X1). This variable is measured using the ratio formula Return on Investment (ROI) of 200 samples. minimum value of -0.11 comes from Bank Panin Dubai Syariah in 2017, maximum value of 0.44 comes from Bank Mestika Dharma in 2020 with an average of 0.0554 and a standard deviation of 0.08252. these results indicate that the average value of Return on Investment (ROI) is relatively small by looking at the closeness of the average and minimum values. While the variance of the data is relatively small by looking at the closeness of the average value to the standard deviation.

On the distribution of Return on Assets (ROA) data as the independent variable (X2). measured by the ratio formula Return on Assets (ROA) of 200 samples. the minimum value is -0.50 coming from Bank KB Bukopin in 2021, the maximum value is 0.90 coming from Bank Capital Indonesia in 2018, the average result is 0.2157 and the standard deviation is 0.21515. These results show that the average value of Return on Assets (ROA) is relatively large by looking at the closeness of the average and maximum values. While the variance of the data is relatively small by looking at the closeness of the average value to the standard deviation.

Return on equity (ROE) as independent variable (X3). measured using the ratio formula Return on equity (ROE) of 200 samples. the minimum value of -0.94 comes from Bank Panin Dubai Syariah in 2017, the maximum value is 0.96 from Bank Mestika Dharma in 2020 with an average of 0.1076 and a standard deviation of 0.27389. These results indicate that the average value of Return on equity (ROE) is relatively large by looking at the closeness of the average and minimum values. While the variance of the data is relatively small by looking at the closeness of the average value to the standard deviation.

Quality Management as a moderating variable (Z). This variable is measured using the Dummy variable 1 if the company has ISO 9001 and 0 for companies that do not have ISO 9001. With 200 the minimum value is 0, the maximum value is 1 with an average of 0.8250 and a standard deviation of 0.38092. These results indicate that the average company has relatively much ISO 9001 by looking at the closeness of the average and minimum values. While the variance of the data is relatively large by looking quite far from the average value with the standard deviation.

Corporate social responsibility (CSR) as the dependent variable (Y), this variable is measured using the GRI Index variable from 200 samples in this study which shows a minimum value of 0.00 from Allo Bank and a maximum value of 0.75 from Bank Central Asia with an average of - the average is 0.3560 and the standard deviation is 0.21615. These results show that the average number of companies that carry out Corporate Social Responsibility (CSR) according to the Global Reporting Initiatives 91 index standard is quite a lot by looking at the close average and minimum values. While the variance of the data is relatively small by looking quite close to the average value with the standard deviation.

Chow test

Tabel 4.3 Redundant Fixed Effect Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	10.392114	(39,156)	0.0000
Cross-section Chi-square	256.077209	39	0.0000

Sumber: Lampiran Output EViews versi 12 (data diolah)

the two probability values of Cross Section F and Chi-Square are smaller than Alpha 0.05 so that the null hypothesis is rejected. So according to the fixed effect, the best model to use is the model with the fixed effect method, based on the results of the Chow test which rejects the null hypothesis, the test continues with the Hausman test.

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Hausman test

Tabel 4.4 Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	7.873801	4	0.0963

Sumber: Lampiran Output EViews versi 12 (data diolah)

seen the value of p = 0.0963 so based on the Hausman Test, the best model used is the model using the Random Effect Model.

LM (Lagrange Multiplier) test

Tabel 4.5 Lagrange Multiplier Test

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	150.4086 (0.0000)	1.978714 (0.1595)	152.3873 (0.0000)

Sumber: Lampiran Output EViews versi 12 (data diolah)

the results of the Lagrange Multiplier Test (LM Test) prob value. Breusch-Pagan of 0.00 (<0.05) then the selected model is the Random Effect Model (REM).

Classical Assumption Test

Multicollinearity test

Tabel 4.6

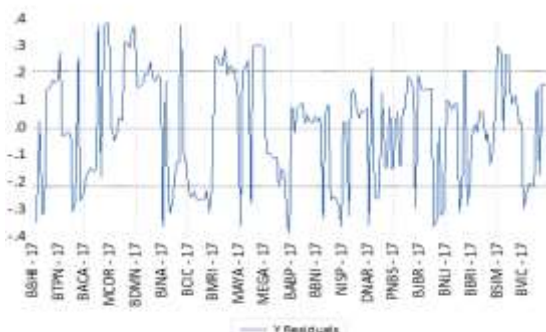
	ROI	ROA	ROE	QM
ROI	1	0,23	0,45	0,13
ROA	0,23	1	0,48	0,001
ROE	0,45	0,48	1	0,04
QM	0,13	0,001	0,04	1

Sumber: Lampiran Output EViews versi 12 (data diolah)

The correlation coefficient of X1 and X2 is 0.234970 <0.85; X1 and X3 of 0.451227 <0.85; X1 and Z of 0.134133 <0.85; X2 and Z are 0.001249 <0.85, so it can be concluded that Return on Investment, Return on Assets, Return on Equity and Quality Management are free of multicollinearity or pass the multicollinearity test (Napitupulu et al., 2021: 141).

Heteroskedastisitas test

Gambar 4.1



the residual graph (blue) can be seen not crossing the limits (500 and -500), which means that the residual variance is the same. Therefore there are no symptoms of heteroscedasticity or passing the heteroscedasticity test (Napitupulu et al., 2021: 143).

Durbin-Watson Autocorrelation Test

Tabel 4.7

Mean dependent var	0.110353
S.D. dependent var	0.127038
Sum squared resid	3.102760
Durbin-Watson stat	2.257980

Sumber: Lampiran Output EViews versi 12 (data diolah)

the Durbin-Watson value is 2.257 and we need to know DU < DW, 4-DU so that N = 200 and K (Independent Variable) = 4, then based on the Durbin-Watson reference table with α = 0.05 we get the following results: 1 .8094 < 2.257 < 2.2721. The conclusion is that the data does not show signs of autocorrelation or pass the autocorrelation test.

Hypothesis Testing Results test

Tabel 4.8

Observations: 200

Variabel	Coefficient	t-Statistic	Prob
C	0,265	6,787	0
ROI	0,467	2,271	0,024
ROA	0,157	1,974	0,049
ROE	-0,137	-2,022	0,044
QM	0,054	1,377	0,169

Sumber: Lampiran Output EViews versi 12 (data diolah)

H1: Return on Investment (ROI) affects Corporate Social Responsibility (CSR). The results of the t-test on the variable Return on Investment (X1) obtained a t count value of 2.271251 > t table which is 1.972012 and the prob value. 0.0242 <0.05, then Ha is accepted and Ho is rejected, meaning that the Return on Investment variable has a positive effect on Corporate Social Responsibility (CSR). This means that Return on Investment (ROI) affects Corporate Social Responsibility (CSR)H1 which states Return on Investment (ROI) has an effect on Corporate Social Responsibility (CSR) is accepted.

H2: Return on Assets (ROA) affects Corporate Social Responsibility (CSR). The results of the t-test on the variable Return on Assets (X2) obtained a t count value of 1.974558 > t table, namely 1.972012 and a prob value. 0.0497 <0.05, then Ha is accepted and Ho is rejected, meaning that the ROA variable has a positive effect on Corporate Social Responsibility (CSR). This means that Return on Assets (ROA) affects Corporate Social Responsibility (CSR). Then H2 which states Return on Assets (ROA) has an effect on Corporate Social Responsibility (CSR) is accepted.

H3: Return on Equity (ROE) affects Corporate Social Responsibility (CSR). The results of the t-test on the variable Return on Equity (X3) obtained a t count value of 2.022185 > t table which is 1.972012 and the prob value. 0.0445 <0.05, then Ha is accepted and Ho is rejected, meaning that the variable Return on Equity has a negative effect on Corporate Social Responsibility (CSR). This means that Return on Equity (ROE) has a negative effect on Corporate Social Responsibility (CSR). Then H3 which states Return on Equity

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(ROE) has an effect on Corporate Social Responsibility (CSR) is accepted.

H4: Quality Management influences Corporate Social Responsibility (CSR).

The results of the t-test on the Quality Management (Z) variable obtained a t count value of 1.377587 < t table which is 1.972012 and a prob value. 0.1699 > 0.05, then Ha is rejected and Ho is accepted, meaning that the Quality Management variable has no effect on Corporate Social Responsibility (CSR). This means that Quality Management has no effect on Corporate Social Responsibility (CSR). Then H4 which states that Quality Management has an effect on Corporate Social Responsibility (CSR) is rejected.

Determination Coefficient Test

Tabel 4.9

R-squared	0.058155
Adjusted R-squared	0.038835
S.E. of regression	0.211915
Sum squared resid	8.757090
Log likelihood	29.05767
F-statistic	3.010090
Prob(F-statistic)	0.019371

Sumber: Lampiran Output EViews versi 12 (data diolah)

the adjusted R Square value of 0.038835 or 3.8% of the coefficient of determination shows that the independent variables consisting of Return on Investment, Return on Assets, Return on Equity, and Quality Management are able to explain the Corporate Social Responsibility variable in the banking sub-sector of 3 .8% while the rest is explained by other variables not included in this research model**.**

Moderated Regression Analysis

Tabel 4.10 Output

Variabel	Coefficient	Prob
C	0,312	0
ROI	0,435	0,014
ROA	0,074	0,168
ROE	0,065	0,134
QM	-0,009	0,854
ROI_QM	0,823	0,028
ROA_QM	0,142	0,275
ROE_QM	0,174	0,123

Sumber: Lampiran Output EViews versi 12 (data diolah)

The regression equation in the table above is as follows:
Y = 0.312 + 0.435*X1 + 0.074*X2 + 0.065*X3 - 0.009*Z + 0.823 + 0.142 + 0.174

H5: Quality Management moderates Return on Investment (ROI) on Corporate Social Responsibility (CSR). The Quality Management (Z) variable is a Pure Moderator variable because seen from the effect of Quality Management (Z) on Corporate Social Responsibility (Y) in the first output it has a prob value. 0.8 > 0.05 and the interaction effect of Return on Investment with Quality Management in the second output has a prob. 0.028 < 0.05, one of which is significant. The result is Pure Moderator. Quality Management moderates Return on Investment on Corporate Social Responsibility (CSR). Then H5 which states that Quality Management moderates Return on Investment (ROI) on Corporate Social Responsibility (CSR) is accepted.

H6: Quality Management moderates Return on Assets (ROA) on Corporate Social Responsibility (CSR).

The Quality Management (Z) variable is a non-moderator variable because the effect of Quality Management (Z) on Corporate Social Responsibility (Y) in the first output has a probability of 0.8 > 0.05 and the effect of Quality Management interaction with Return on Assets in the second output have probs. 0.275 > 0.05, none of which is significant. The result is Not Moderated. This means that Quality Management does not moderate Return on Assets on Corporate Social Responsibility (CSR). Then H5 which states that Quality Management moderates Return on Assets (ROA) on Corporate Social Responsibility (CSR) is rejected.

H7: Quality Management moderates Return on Equity on Corporate Social Responsibility (CSR). The Quality Management (Z) variable is not a Moderator variable, because it can be seen from the effect of Quality Management (Z) on Corporate Social Responsibility (Y) in the first output 0.8 > 0.05 and the effect of Quality Management interaction with Return on Equity in the second output 0.123 > 0.05, none of which is significant. The result is Not Moderated. Quality Management does not moderate Return on Equity on Corporate Social Responsibility (CSR). Then H5 which states Quality Management moderates Return on equity (ROE) on Corporate Social Responsibility (CSR) is rejected.

DISCUSSION

Overall, financial performance influences Corporate Social Responsibility (CSR), both Return on Investment (ROI), Return on Assets (ROA) and Return on Equity (ROE). In this case, the research sample uses a banking company, where the role of society is very important for the survival of the company.

banking also has commitment and corporate social responsibility policy. in implementing these activities, it also refers to the principle of sustainability as a form of the Company's commitment to support the SGDs campaign launched by the United Nations.

banking management always considers the Corporate Social Responsibility (CSR) policy which will be carried out every year referring to the company's profit.

Return on Investment (ROI) specifically has a positive effect on Corporate Social Responsibility (CSR). The higher the Return on Investment (ROI), the more efficient the capital or funds invested by shareholders. A positive return on investment (ROI) can indicate that the company is able to earn profits so that the company will be more productive. Sujoko

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and Soebiantoro in (Aditya & Djashan, 2022) In measuring company performance which is reflected in various ratios. One of the ratios used is Return on Investment (ROI).

This is in accordance with research that has been conducted by previous researchers (Aderibigbe, 2018; Citraningrum, 2014; Dewi, 2014; Priyanka, 2013; Sameer, 2021) which states that financial performance, more specifically, is in accordance with previous research which states that there is an effect of Return on Investment (ROI) on Corporate Social Responsibility (CSR) (Franco et al., 2020).

Return on Assets (ROA) affects Corporate Social Responsibility (CSR). Return on Assets (ROA) in this study is calculated by dividing Net Income by Total Assets, the amount of Return on Assets (ROA) generated by a sample of banking companies because the value of Return on Assets (ROA) shows that the total assets used for the company's operations are capable provide profit for the company and it can be said that the company's assets are used effectively and efficiently. Return On Assets (ROA) is the ratio between profit before tax to the bank's total assets. in accordance with previous research which stated that there was an effect of Return on Assets (ROA) on Corporate Social Responsibility (CSR) (Kartini et al., 2019).

Return on Equity (ROE) has a negative effect on Corporate Social Responsibility (CSR). Return on Equity (ROE) in this study is calculated by dividing Earning after tax by Common Equity, the ability of banking companies to generate profits by using existing capital. Sari dalam (Kartini et al., 2019) states that the profitability ratio can measure the ability of company executives to create profit levels both in the form of corporate profits and economic value on sales, company net assets, and equity (shareholders equity). Return on Equity (ROE) has been shown to have a negative effect on Corporate Social Responsibility (CSR) which means that the greater the profit that the company wants to obtain from the issued capital, the smaller the Corporate Social Responsibility (CSR) points made by the company. in accordance with previous research which stated that there was an effect of Return on Equity on Corporate Social Responsibility (CSR) (Kartini et al., 2019).

Effect of Quality Management on Corporate Social Responsibility (CSR).

Quality Management has no effect on Corporate Social Responsibility (CSR). Quality Management in this study is calculated by dummy = 1 if the bank has an ISO 9001 certificate and 0 if it does not. the results of research data, although 80% of companies have ISO 9001, not all points in the CSR index are carried out by companies. 70% of the sample does CSR with less than 50% points and 30% of the sample does CSR with more than 50% points. This means that companies that have ISO 9001 do not determine whether the fulfillment of CSR points is higher or lower. CSR with the fulfillment of points of more than 50% is only carried out by large banks or state-owned banks, especially environmental points, which are not carried out by other banks. Thus, quality management has no influence on Corporate Social Responsibility (CSR). this is not in accordance with research which states that Quality Management has an influence on Corporate Social Responsibility (CSR) like previous research. (Abbas, 2020; Franco et al., 2020; Hazlett et al., 2007; Kokoreva, 2022).

The influence of Quality Management moderates Corporate Financial Performance on Corporate Social Responsibility (CSR)

Based on the research results, Quality Management has succeeded in becoming a variable that moderates corporate financial performance on Corporate Social Responsibility (CSR) namely Return on Investment (ROI), but Return on Assets (ROA) and Return on Equity (ROE) are not moderated by Quality Management on Corporate Social Responsibility (CSR).

results appear that there is no moderating effect on Return on equity (ROE) on Corporate Social Responsibility (CSR). This indicates that the company has good Quality Management, does not strengthen the influence of company policy to use its capital on company activities, so it does not affect the size of the Corporate Social Responsibility (CSR) points carried out by the company. Thus this is inconsistent with research which states that Quality Management moderates Corporate Financial Performance on Corporate Social Responsibility (CSR) like previous research (Franco et al., 2020; Hazlett et al., 2007; Quintana-García et al., 2018).

CONCLUSION

Results and research findings regarding the Effect of Corporate Financial Performance on Corporate Social Responsibility (CSR) with Quality Management as a moderating variable in the banking sub-sector, it can be concluded that Return on Investment (ROI) has an effect on Corporate Social Responsibility (CSR). A higher the value of Return on Investment (ROI) can impact Corporate Social Responsibility (CSR) activities. Return on Assets (ROA) affects Corporate Social Responsibility (CSR). The higher the value of Return on Assets (ROA) can increase Corporate Social Responsibility (CSR) activities. Return on Equity (ROE) has a negative effect on Corporate Social Responsibility (CSR). The higher the Return on Equity (ROE) value, the lower the budget allocation for Corporate Social Responsibility (CSR) costs. Quality Management has no effect on Corporate Social Responsibility (CSR). Quality Management moderates Return on Investment (ROI) and influences Corporate Social Responsibility (CSR). Quality Management does not moderate Return on Assets (ROA) on Corporate Social Responsibility (CSR). Means that Quality Management does not have an impact on Corporate Social Responsibility (CSR). Quality Management does not moderate Return on Equity (ROE) on Corporate Social Responsibility (CSR). Means that Quality Management does not provide an increase in the allocation of banking company capital to the allocation of banking costs.

BIBLIOGRAPHY

1. Abbas, J. (2020). Impact of total quality management on Corporate green performance through the mediating role of corporate social

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responsibility. *Journal of Cleaner Production*, *242*, 118458. https://doi.org/10.1016/j.jclepro.2019.118458

2. Abidin, J., & Lestari, S. A. (2020). The Pengaruh Ukuran perusahaan dan Ukuran Komite Audit terhadap Pengungkapan Corporate Social Responsibility. *Owner*, *4*(1), 48. https://doi.org/10.33395/owner.v4i1.214
3. Aderibigbe. (2018). Pengaruh Pengungkapan Corporate Social Responsibility (CSR) Terhadap Rasio Profitabilitas Pada Perusahaan Sektor Pertanian Yang Terdaftar Di Bursa Efek Indonesia (BEI) Periode 2014-2018. *Energies*, *6*(1), 1–8. http://journals.sagepub.com/doi/10.1177/1120700020921110%0Ahttps://doi.org/10.1016/j.reuma.2018.06.001%0Ahttps://doi.org/10.1016/j.arth.2018.03.044%0Ahttps://reader.elsevier.com/reader/sd/pii/S1063458420300078?token=C039B8B13922A2079230DC9AF11A333E295FCD8
4. Adlini, M. N., Dinda, A. H., Yulinda, S., & Chotimah, O. (2022). *METODE PENELITIAN KUALITATIF STUDI PUSTAKA*. *6*(1), 974–980.
5. Aisyah, S. (2022). The Role of Financial Performance as a Mediator Between Good Corporate Governance and Firm Value the Creative Commons Attribution 4.0 International License. Site Using OJS 3 PKP Optimized. *Atestasi: Jurnal Ilmiah Akuntansi*, *5*(1), 255–268. https://doi.org/10.33096/atestasi.v5i1.1080
6. AIVAZ, K. A. (2021). Financial Performance Trends and Corporate Responsibility Incentives in a Group of Support Services in Constanța County, Romania. In *Annals of Dunarea de Jos University of Galati. Fascicle I. Economics and Applied Informatics* (Vol. 27, Issue 1, pp. 52–60). https://doi.org/10.35219/eai15840409167
7. Aldama, R. A., Herwiyanti, E., & Srirejeki, K. (2021). Peran Mediasi Reputasi Pada Hubungan Pengungkapan CSR. *Jurnal Bisnis Dan Akuntansi*, *23*(1), 49–64.
8. Angelia, D., & Suryaningsih, R. (2015). The Effect of Environmental Performance And Corporate Social Responsibility Disclosure Towards Financial Performance (Case Study to Manufacture, Infrastructure, And Service Companies That Listed At Indonesia Stock Exchange). *Procedia - Social and Behavioral Sciences*, *211*(September), 348–355. https://doi.org/10.1016/j.sbspro.2015.11.045
9. Anggraini, I., & Dewanti, D. S. (2020). The Effect of Halal Foods Awareness on Purchase Decision with Religiosity as a Moderating Variable. *Journal of Economics Research and Social Sciences*, *4*(1). https://doi.org/10.18196/jerss.040116
10. Bawa, A. (2019). MARKET-BASED PERFORMANCE MEASURES: A SHAREHOLDER'S PERSPECTIVE. *DOKBAT 2019 - 15th International Bata Conference for Ph.D. Students and Young Researchers*, 76–83. https://doi.org/10.7441/dokbat.2019.007
11. Brigham, E. F., & Houston, J. F. (n.d.). *Fundamentals of Financial Management Eleventh Edition*.
12. Bt Abdul Wahab, N., Bt Ahmad, N., & Bt Yusoff, H. (2017). CSR Inflections: An Overview of CSR Practices on Financial Performance by Public Listed Companies in Malaysia. *SHS Web of Conferences*, *36*, 00003. https://doi.org/10.1051/shsconf/20173600003
13. Cahya, R. A. (2022). Implementasi CSR (Corporate Social Responsibility) PT. Semen Baturaja (Persero) Tbk Sebagai Upaya Dalam Pembinaan Lingkungan Dan Kemitraan. *JIM: Journal Of International Management*, *1*(1), 43–54.
14. Citraningrum, D. A. (2014). Pengaruh CSR terhadap Financial Perfomance dan Ffirm Value (Studi pada Peruusahaan-Perusahaan yang Terdaftar Pada Indeks SRI KEHATI). *Jurnal Administrasi Bisnis (JAB)*, *14*(1), 1–10.
15. Dani, A. R., & Mujanah, S. (2021). Pengaruh Servant Leadership, Beban Kerja Dan Kreativitas Terhadap Kinerja Karyawan Dinas Perhubungan Kabupaten Bangkalan Madura Dengan Komitmen Organisasi Sebagai Variabel Intervening. *Media Mahardhika*, *19*(3), 434–445. https://doi.org/10.29062/mahardika.v19i3.269
16. Daragmeh, A., & Bárczi, J. (2021). Assessing the Degree of Compliance with TQM Practices : Study of Banking Sector in Palestine. *Hungarian Agricultural Engineering*, *7410*(39), 5–10. https://doi.org/10.17676/hae.2021.39.5
17. Dewi, D. M. (2014). Csr Effect on Market and Financial Performance. *El Dinar*, *1*(02), 198–216. https://doi.org/10.18860/ed.v1i02.2525
18. Erna, E. K. W., & Endang Kartini Panggiarti. (2021). Uji Beda Rata-Rata Penerapan Corporate Social Responsibility Sebelum Dan Saat Pandemi Covid-19 Pada Bank Syariah Mandiri. *BANCO: Jurnal Manajemen Dan Perbankan Syariah*, *3*(1), 23–34. https://doi.org/10.35905/banco.v3i1.2143
19. Februari, N., Juliawan, I. G. P., Ayu, I. G., Pramesti, A., Ayu, I., & Yuliastuti, N. (2023). *Pengaruh Mekanisme Good Corporate Governance (GCG) Dan Corporate Social Responsibility (CSR) terhadap Nilai Perusahaan pada Perusahaan Manufaktur Tahun 2019-2021*. *5*(1), 55–66.
20. Font, X., & Lynes, J. (2018). Corporate social responsibility in tourism and hospitality. *Journal of Sustainable Tourism*, *26*(7), 1027–1042. https://doi.org/10.1080/09669582.2018.1488856
21. Franco, S., Caroli, M. G., Cappa, F., & Del Chiappa, G. (2020). Are you good enough? CSR, quality management and corporate financial performance in the hospitality industry. *International Journal of Hospitality Management*, *88*(August), 102395. https://doi.org/10.1016/j.ijhm.2019.102395

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22. Giovanny Bangun Kristianto, Wita Ramadhanti, & Icuk Rangga Bawono. (2020). Pengaruh Independendi Terhadap Kualitas Audit dengan Motivasi Auditor Sebagai Variabel Moderasi. *Jurnal Ekonomi, Bisnis Dan Akuntansi*, *22*(1), 53–68.
23. Gomez-Mejia, L. R., & Wiseman, R. M. (2007). Does agency theory have universal relevance? A reply to Lubatkin, Lane, Collin, and Very. *Journal of Organizational Behavior*, *28*(1), 81–88. https://doi.org/10.1002/job.407
24. Hassan, M. ul, Mukhtar, A., Qureshi, S. U., & Sharif, S. (2012). Impact of TQM Practices on Firm s Performance of Pakistan s Manufacturing Organizations. *International Journal of Academic Research in Business and Social Sciences*, *2*(10), 232–259. http://search.proquest.com/openview/788f078378e766a49bd9736e7f9d4c13/1?pq-origsite=gscholar&cbl=696344
25. Hazlett, S. A., Mcadam, R., & Murray, L. (2007). From quality management to socially responsible organizations: The case for CSR. *International Journal of Quality & Reliability Management*, *24*(7), 669–682. https://doi.org/10.1108/02656710710774665
26. Hendi, & Kitty. (2022). Analisis Komparatif Pengukuran Kinerjra Entitas Syariah dengan Balance Scorecard dan Maslahah Scorecard. *Jurnal Ilmiah MEA (Manajemen, Ekonomi, Dan Akuntansi)*, *6*(1), 494–512.
27. Hutapea, N., & Ghozali, I. (2022). Pengaruh Rotasi Rekan Kerja Auditor, Spesialisasi Industri Auditor, dan Family Ownership terhadap Kualitas Audit. *JIMEA : Jurnal Ilmiah Manajemen, Ekonomi, Dan Akuntansi*, *6*(2), 1810–1827.
28. Indri Christina Ananda S, & Viriany. (2022). Faktor-Faktor Yang Memengaruhi Financial Performance Pada Perusahaan Manufaktur. *Jurnal Paradigma Akuntansi*, *4*(2), 927–936. https://doi.org/10.24912/jpa.v4i2.19702
29. Irman, M., & Purwati, A. A. (2020). Analysis On The Influence Of Current Ratio, Debt to Equity Ratio and Total Asset Turnover Toward Return On Assets On The Otomotive and Component Company That Has Been Registered In Indonesia Stock Exchange Within 2011-2017. *International Journal of Economics Development Research (IJEDR)*, *1*(1), 36–44. https://doi.org/10.37385/ijedr.v1i1.26
30. Jumiase, & Meirinawati. (2023). IMPLEMENTASI CORPORATE SOCIAL RESPONSIBILITY (Studi Pada Program Bina Lingkungan Perusahaan Daerah Air Minum Delta Tirta Kabupaten Sidoarjo) Jumiase Meirinawati Abstrak. *Publika*, *11*(2), 1889–1902.
31. Kai, K. De, & Rahman, I. B. A. (2018). The Impact of Financial Indicators towards Stock Returns of Finance Companies Listed on Bursa Malaysia. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, *8*(3), 128–140. https://doi.org/10.6007/ijarafms/v8-i3/4546
32. Kalantonis, P., Kallandranis, C., & Sotiropoulos, M. (2021). Leverage and firm performance: new evidence on the role of economic sentiment using accounting information. *Journal of Capital Markets Studies*, *5*(1), 96–107. https://doi.org/10.1108/jcms-10-2020-0042
33. Kamodi, J. G. B., Sumampouw, O., & Karundeng, F. (2022). Pengaruh Corporate Social Responsibility Terhadap Laba Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia. *Jurnal Akuntansi Manado (JAIM)*, *3*(3), 496–505. https://doi.org/10.53682/jaim.vi.3468
34. Khan, Z. A., & Nafees, B. (2013). *Static Trade-off theory or Pecking order theory which one suits best to the financial sector. Evidence from Pakistan*. *5*(23), 131–141.
35. Kim, Y., Li, H., & Li, S. (2014). Corporate social responsibility and stock price crash risk. *Journal of Banking and Finance*, *43*(1), 1–13. https://doi.org/10.1016/j.jbankfin.2014.02.013
36. Kokoreva, T. V. (2022). Service Quality Management of Bank Financing Based on Csr in the Digital Economy in the Interests of Sustainable Development. *International Journal for Quality Research*, *16*(3), 717–732. https://doi.org/10.24874/IJQR16.03-04
37. Kristin, C., & Fadrul. (2022). ANALISIS PENGARUH PROFITABILITAS (ROA) DAN CORPORATE SOCIAL RESPONSIBILITY TERHADAP NILAI PERUSAHAAN PADA PERUSAHAAN PERBANKAN YANG TERDAFTAR di BEI PERIODE 2016 – 2020 ABSTRAK. *LUCRUM: Jurnal Bisnis Terapan*, *2*(4), 453–463.
38. Liana, L. (2009). Penggunaan MRA dengan SPSS untuk menguji pengaruh variabel moderating terhadap hubungan antara variabel independen dan variabel dependen. *Dinamik*, *14*(2), 90–97.
39. Mangantar, A. A. ., Mangantar, M., & Baramuli, D. N. (2020). Pengaruh Return on Asset, Return on Equity Dan Debt To Equity Ratio Terhadap Return Saham Pada Subsektor Food and Beverage Di Bursa Efek Indonesia. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi*, *8*(1), 272–281.
40. Mutmainah, S., Purwanto, N., & Dianawati, E. (2021). *Investasi : Jurnal Ekonomi dan Bisnis*. *1*(1), 35–40.
41. Navickas, V., Kontautiene, R., Stravinskiene, J., & Bilan, Y. (2021). Paradigm shift in the concept of corporate social responsibility: COVID-19. *Green Finance*, *3*(2), 138–152. https://doi.org/10.3934/gf.2021008

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42. Pada, R., Umum, B., & Akuntansi, G. (2023). *Determinan Penentu Capital Adequacy*. *08*(01), 8–22.
43. Penelitian, D., Pendidikan, I., Suriani, N., & Jailani, M. S. (2023). *Konsep Populasi dan Sampling Serta Pemilihan Partisipan Ditinjau*. *1*, 24–36.
44. Priyanka, F. (2013). Pengaruh Pengungkapan Corporate Social Responsibility (CSR) terhadap Profitabilitas pada Perusahaan High Profile yang Terdaftar Di BEI Periode 2009-2011. *Skripsi Jurusan Akuntansi Fakultas Ekonomi Dan Bisnis Universitas Negeri Yogyakarta*, 27–28.
45. Quintana-García, C., Marchante-Lara, M., & Benavides-Chicón, C. G. (2018). Social responsibility and total quality in the hospitality industry: does gender matter? *Journal of Sustainable Tourism*, *26*(5), 722–739. https://doi.org/10.1080/09669582.2017.1401631
46. Rafid, A. G., Pohan, H. T., & Noor, I. N. (2019). Pengaruh Kinerja Keungan Terhadap Nilai Perusahaan Dengan Pengungkapan Corporate Social Responsibility Sebagai Variabel Pemoderasi. *Jurnal Akuntansi Trisakti*, *4*(2), 245–258. https://doi.org/10.25105/jat.v4i2.4838
47. Rahmawardani, D. D., & Muslichah, M. (2020). Corporate Social Responsibility Terhadap Manajemen Laba Dan Kinerja Perusahaan. *Jurnal Riset Akuntansi Kontemporer*, *12*(2), 52–59. https://doi.org/10.23969/jrak.v12i2.2251
48. Riani, D., Hasnin, H. R., & Ridwan, M. (2023). Pengaruh Return on Investment (ROI), Earning Per Share (EPS), Net Profit Margin (NPM), dan Market Value Added (MVA) Terhadap Return Saham. *Journal on Education*, *5*(2), 3290–3301. https://doi.org/10.31004/joe.v5i2.1001
49. Rizky, A., & Hadinata, S. (2019). Pengaruh Environmental Performance Dan Environmental Disclosure Terhadap Financial Performance. *Jurnal Akuntansi, Ekonomi, Dan Manajemen Bisnis*, *7*(2), 136–147.
50. Rukmana, Y. T., Lestari, R., & Fitriah, E. (2017). Pengaruh Pengungkapan Corporate Social Responsibility (CSR) terhadap Tingkat Profitabilitas (Studi Empiris pada Perusahaan yang Listed di Bursa Efek Indonesia. *Jurnal Akuntansi*, *3*(2), 173–182.
51. S. Curkovic, S. A. Melnyk, R. B. H. and R. C. (n.d.). Investigating the linkage between total quality management and environmentally responsible manufacturing. *IEEE Transactions on Engineering Management*, *47*(4), 444–464. https://doi.org/doi: 10.1109/17.895340.
52. S, M. N., Mukhzarudfa, & Yudi. (2019). *PENGARUH PENGUNGKAPAN CORPORATE SOCIAL RESPONSIBILITY DAN PROFITABILITASTERHADAP NILAI PERUSAHAAN DENGAN MEDIA EXPOSURE SEBAGAIVARIABEL MODERATING*. *4*, 68–75.
53. Safitri, K. A., & Muid, D. (2020). … Intensity dan Ukuran Perusahaan Terhadap Tax Avoidance (Studi Empiris pada Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia Periode 2016-2018). *Diponegoro Journal of Accounting*, *9*(3), 1–11. https://ejournal3.undip.ac.id/index.php/accounting/article/view/29102
54. Sameer, I. (2021). Impact of corporate social responsibility on organization's financial performance: evidence from Maldives public limited companies. *Future Business Journal*, *7*(1), 1–21. https://doi.org/10.1186/s43093-021-00075-8
55. Saputra, F. (2022). Analysis Effect Return on Assets (ROA), Return on Equity (ROE), and Price Earning Ratio (PER) on Stock Prices of Coal Companies in the Indonesia Stock Exchange (IDX) Period 2018-2021. *Dinasti International Journal of Economics, Finance, and Accounting*, *3*(1), 2721–3021.
56. Sari, M., Hanum, S., & Rahmayati, R. (2022). Analisis Manajemen Resiko Dalam Penerapan Good Corporate Governance : Studi pada Perusahaan Perbankan di Indonesia. *Owner*, *6*(2), 1540–1554. https://doi.org/10.33395/owner.v6i2.804
57. Sarkar, S. (2005). The Trade-off Model with Mean Reverting Earnings: Theory and Empirical Tests. *SSRN Electronic Journal*, *February*. https://doi.org/10.2139/ssrn.209789
58. Serrasqueiro, Z., & Caetano, A. (2015). Trade-Off Theory versus Pecking Order Theory: capital structure decisions in a peripheral region of Portugal. *Journal of Business Economics and Management*, *16*(2), 445–466. https://doi.org/10.3846/16111699.2012.744344
59. Sirvanci, M. (2004). Critical issues for TQM implementation in higher education. *The TQM Magazine*, *16*, 382–386. https://doi.org/10.1108/09544780410563293
60. Sisca, S., Abdurohim, D., Alfiana, A., & Muniarty, P. (2022). *Corporate Social Responsibility Perusahaan* (Vol. 10, Issue 2). Widina Bhakti Persada Bandung All Right Reserved Dilarang. https://repository.penerbitwidina.com/publications/353742/corporate-social-responsibility-perusahaan
61. Slamet, D., & Ramdany, R. (2020). Indri Christina Ananda S & Viriany, 2022). *Jurnal Akuntansi*, *7*(2), 158–166. https://doi.org/10.37932/ja.v7i2.57
62. Suminto, A., & Maharani, S. (2020). Analisis Pengaruh Corporate Social Responsbility, Islamic Banking Service Quality dan Corporate Image terhadap Loyalitas Nasabah di Bank BRISyariah Kantor Cabang Pembantu Ponorogo. *El-Barka: Journal of Islamic Economics and Business*, *3*(1), 51–79. https://doi.org/10.21154/elbarka.v3i1.2013
63. Suprapti, E., Qonita, Q., & Hidayat, A. S. (2019). Analysis of Financial Performance in Predicting Earning Growth. *Journal of Accounting and*

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Strategic Finance, *2*(1), 70–81. https://doi.org/10.33005/jasf.v2i1.46

64. Talib, F., Rahman, Z., & Qureshi, M. N. (2013). An empirical investigation of relationship between total quality management practices and quality performance in Indian service companies. *International Journal of Quality & Reliability Management*, *30*(3), 280–318. https://doi.org/10.1108/02656711311299845
65. Theodoulidis, B., Diaz, D., Crotto, F., & Rancati, E. (2017). Exploring corporate social responsibility and financial performance through stakeholder theory in the tourism industries. *Tourism Management*, *62*, 173–188. https://doi.org/10.1016/j.tourman.2017.03.018
66. Tumandung, C., Murni, S., & Baramuli, D. (2017). Analisis Pengaruh Kinerja Keuangan terhadap Harga Saham pada Perusahaan Makanan dan Minuman yang Terdaftar di Bei Periode 2011 – 2015. *Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi*, *5*(2), 1728–1737.
67. Utomo, A. S. (2019). Pengaruh CSR, ROI, ROE terhadap Harga Saham pada Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia. *Jurnal PETA*, *4*(1), 82–94. https://scholar.google.co.id/scholar?hl=id&as_sdt=0%2C5&q=pengaruh+csr+roi+roe+terhadap+harga+saham&btnG=
68. Wau, R., Syarifuddin, A., & Herwanto, R. (2017). Analisis Perbandingan Economic Value Added (Eva) Dan Return on Investment (Roi) Dalam Menilai Kinerja Keuangan Sub Sektor Farmasi Yang Terdaftar Di Bursa Efek Indonesia. *Journal of Business Studies*, *2*(1), 99–110.
69. Wibowo, B. T. (2020). Analisis Laporan Keuangan Untuk Mengukur Kinerja Keuangan Pt Intan Segara Semarang Dalam Pandemi Covid-19. *Jurnal Ekonomi Dan Bisnis STIE Anindyaguna*, *Vol 2*(No 2), 118–130.
70. Winarno, S. H. (2019). Analisis NPM, ROA, dan ROE dalam Mengukur Kinerja Keuangan. *Jurnal STEI Ekonomi*, *28*(02), 254–266. https://doi.org/10.36406/jemi.v28i02.254
71. Winnie Eveline Parengkuan. (2017). Pengaruh Corporate Social Responsibility (Csr) Terhadap Kinerja Keuangan Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia Melalui Pojok Bursa Feb – Unsrat. *Jurnal EMBA*, *5*(2), 564–571.
72. Yap, H.-, & Awen, V. (2022). Analisis Pengaruh Kualitas Guru dan Pembelajaran Online Terhadap Kinerja Guru SD DR. Wahidin Sudirohusodo Dimasa Pandemi Covid 19. *Jurnal Administrasi Dan Manajemen*, *12*(2), 150–159. https://doi.org/10.52643/jam.v12i2.2296

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