THE PERFORMANCE OF THE FINANCIAL SECTOR DURING THE COVID-19 PANDEMIC

Enni SAVITRI[1*], Nik Herda Nik ABDULLAH[2], Putri Nabila MUSFI[3]

¹Faculty of Economics and Business, Universitas Riau, Pekanbaru, Indonesia
²School of Accounting and Finance, Taylor's University, Subang Jaya, Malaysia
³Faculty of Economics and Business, Universitas Padjajaran, Sumedang, Indonesia

Abstract. The financial report of a company reveals how successfully it is competing and operating its business. The financial report serves as a guide for management in terms of making decisions that will help the company enhance its performance. The purpose of this study is to examine the effects of intellectual capital and enterprise risk management on the financial performance of businesses, with corporate governance serving as a moderating factor. The annual reports of 91 financial sector companies listed on the Indonesia Stock Exchange were analysed in this study. The data is based on a four-year period, from 2016 to 2020. Panel data regression and moderated regression analysis were used in this study, which was conducted using Eviews statistical software. The findings indicate that intellectual capital has a negative effect on financial performance. Meanwhile, enterprise risk management was found to have no effect on financial performance. In addition, the findings show that corporate governance represented by independent commissioners can moderate the negative effect of intellectual capital on financial performance and institutional ownership has a moderating effect on intellectual capital and enterprise risk management on financial performance. The research indicates that corporations should increase their intellectual capital and risk management disclosure, as well as aiming for great corporate governance.

Keywords: company's financial performance, intellectual capital, enterprise risk management, corporate governance.

JEL Classification: O16, G32, M41.

Introduction

Companies that have good financial performance will attract investors. Good financial performance ensures the survival of a firm and leads to the generation of earnings, demonstrating the organisation's achievement of goals. Thus, financial performance is the practice of comparing a company's financial results over time to those of other companies. Globalisation has changed the management of business strategy. Company performance reflects the achievement of goals. Analysis of financial performance is a way of comparing a company's financial health over time (Bekhet et al., 2020). In addition, financial performance is used to assess a company's financial strength and its potential for short- and long-term growth. Prior financial performance research findings are still inconsistent. Thus, a contingency approach is needed to overcome this inconsistency. Corporate governance is an internal control structure designed to protect corporate assets and increase shareholder value over time (Savitri, 2018). Saeidi et al. (2021) claim that corporate governance can improve the link between investment and performance. Measurable corporate governance improves a company's performance and goals.

Financial performance is closely related to corporate governance, enterprise risk management and intellectual capital. Corporate governance, enterprise risk management and intellectual capital all impact on financial success. Capital employed, human capita, and capital structure information enable organisations to leverage knowledge and information technology to gain competitive advantages. Companies in knowledge-intensive industries, such as technology and services, require intellectual capital. Companies must also assess and handle all risks. The establishment of ERM is a regulatory act for organisations that must manage all risks and changes generated by globalisation. Everything works if company governance is good. Corporate governance is required to shape a firm's internal control structure

---

Corresponding author. E-mail: enni.savitri@lecturer.unri.ac.id

to manage substantial risks, secure company assets and increase shareholder investment value over time. It is crucial to study the financial sector's performance on the Indonesia Stock Exchange, which declined during the COVID-19 pandemic.

The Indonesian economy is stagnating due to COVID-19, thus it needs financial organisations that can supply consumer financial services, especially banking. The banking industry drives a country's economic growth, hence financial performance is vital to the Indonesian economy (Mohapatra et al., 2019). The banking industry is frequently referred to as the lifeline of a country's economy (Mohapatra & Jha, 2018). Thus, the banking industry must always operate successfully to support the country's economy and the community's economy. For the six Indonesian banks, 2020 has been a difficult year for stock prices. The financial sector has lost 2.33% of its shares since the start of 2020 due to COVID-19 and large-scale social limitations (PSBB), according to Wawan Hendrayana, head of Investment Research Infovesta Utama. This raises risk in the financial sector. Banks are under pressure from credit defaults and restricted liquidity. Not only did the stock prices fall, but so did the company's return on assets (ROA). Five majors Indonesian banks' stocks moved in opposite directions. In the last two years, starting in September 2019, the average ROA in Indonesian banks has fallen from 2.55% to 2.48% (Sitanggang, 2019).

There are several factors that can affect a company's financial performance, such as intellectual capital (IC), and ERM or corporate risk management. IC helps a company by employing knowledge and information technology to give the company competitive advantages to add value that leads to an increase in financial performance (Pulic, 2004). Thus, past research, such as that by Ahangar (2011), Adegbayibi (2021) and Mohapatra et al. (2019), has found that IC has a positive impact on financial performance. Thus, financial performance is can also be influenced by ERM (Husaini et al., 2020; Malik et al., 2020; Muslih & Marbun, 2020). ERM is a strategy used by companies to evaluate and manage all existing risks (Shad et al., 2019). Regulations regarding ERM appear in the Financial Services Authority Regulation Number 18/PJOK.03/2016 concerning the application of risk management for commercial banks and PSAK 60 (2014 Revision) regarding financial instruments. Additionally, Bank Indonesia Regulation Number 11/25/PBI/2009 stipulates that commercial banks are required to disclose the existence of risk management. The objective of this study is to examine the effects of IC and ERM on the financial performance of businesses, with corporate governance serving as a moderating factor. The structure of this paper is as follows. The next section reviews the literature and develop the hypotheses. This if followed by a section that discusses the methodology and then a discussion of the findings. The last part concludes the study.

1. Literature review and development of hypotheses

1.1. Financial performance

Analysis of financial performance is the process of measuring the results of a company's policies and operations in monetary terms. This is then used to measure the overall financial health of the company over a certain period and in comparison with other companies (Bekhet et al., 2020). Meanwhile, according to Barney (1991), the analysis of financial performance is carried out to ascertain the extent to which a company has followed financial implementation rules properly and correctly. Ross et al. (2019) states that financial performance is a condition that reflects the financial condition of a company based on the goals, standards and criteria that have been set.

1.2. Enterprise risk management (ERM)

Enterprise Risk Management (ERM), which is also referred to as corporate risk management, is a strategy used by companies to evaluate and manage all existing risks (Shad et al., 2019). The Committee of Sponsoring Organization of the Treadway Commission [COSO] in 2004 published ERM as an enterprise risk management process that is designed for and implemented into every corporate strategy to achieve corporate goals. The ERM Framework, according to the COSO (2004), involves eight interrelated components, namely (1) internal environment, (2) goal setting, (3) event identification, (4) risk assessment, (5) risk response, (6) monitoring activities, (7) information and communication, and (8) monitoring. These eight components are needed to achieve the company's objectives which include strategic goals, operational, financial reporting and compliance with statutory provisions.

1.3. Corporate governance

The Forum for Corporate Governance Indonesia (FCGI) defines corporate governance as a set of rules that govern the rights and obligations of shareholders, managers, creditors, governments, employees and other internal and external stakeholders. Thus, the goal of corporate governance is to add value for all parties (stakeholders). In this study, corporate governance is represented through independent commissioners and institutional ownership. Independent commissioners are defined as "commissioners from outside parties" under Article 120 (2) of Law No. 40 of 2007 respecting Limited Liability Companies (UUPT). Article 120 (2) of company law specifies that independent commissioners are appointed by parties unaffiliated with the principal shareholder, board members or other commissioners. Its goal is to add value for all parties involved (stakeholders). Section 34, Article 1 of Law No. 21 of 2008 on Sharia Banking and Central Bank Rules No. 11/33/2009 on the establishment of Sharia Commercial Banks and Sharia Business Units stipulates the need for good corporate governance. Corporate governance is

meant to improve the financial performance and control of companies (Elghuweel et al., 2017).

1.4. Institutional ownership

Institutional ownership is shared ownership by institutions such as insurance companies, banks, investment companies and others. Abdallah and Ismail (2017) states that institutional ownership plays an important role in the company because it encourages optimal supervision so that the welfare of shareholders is guaranteed. Institutional ownership is the sum of shares owned by institutions (insurance companies, banks, investment companies, asset management and other institutions) both inside and outside the country (Kapopoulos & Lazaretou, 2007).

1.5. Intellectual capital (IC)

IC is any asset that can generate value for a company. It encompasses knowledge, information, property and expertise (Stewart, 1997). Pulic (2004) states that IC is produced through the performance of human and structural capital. Buildings, land, equipment and technology are tangible assets utilised for business operations that are easy to buy and sell (Firer & Williams, 2003). Human capital is the ability of individuals in a corporation to perform professional services. Human capital, or human resources, is the main part of a company's activities in the context of knowledge-based industries. To maximise performance, an organisation's structural capital must be able to carry out its business activities and support its human capital component. Processes, hardware, procedures, databases, values, culture and organisational structure comprise structural capital (Sardo et al., 2018).

1.6. The effect of intellectual capital on a company's financial performance

Intellectual capital (IC) comprises a firm's competitive advantage and profitability (Barney, 1991). A capital structure supports human capital. This capital when used raises the company's worth and consequently profitability. The better a company manages its IC, the more profitable it is. Intangible capital boosts financial performance (Chen et al., 2005). According to Yalama (2013), value-added intellectual capital (VAIC) can improve Turkish banks' long-term financial performance. As a result, emerging countries can gain economic advantages by generating IC. Meanwhile, Ahangar (2011) claims that IC increases financial performance. Thus, companies can improve their financial performance by focusing on intangible assets as well as tangible assets and this can lead to profitable businesses that outperform their competitors in the industrial market (Savitri et al., 2020). A proper utilisation of IC use can greatly increase a company's financial performance (Obeidat et al., 2021). Hypothesis 1 is expressed as follows:

H_1: Intellectual Capital affects a company's financial performance.

1.7. The effect of enterprise risk management on a company's financial performance

Companies utilise enterprise risk management (ERM) to assess and manage existing hazards. Companies encounter frequent risks, thus they must be able to regulate and manage risk (Shad et al., 2019). High-risk companies will publish more information to justify and explain their actions (Li, 2018). Hence, the larger the risk faced by a firm; the more risk information must be disclosed. According to Linsley and Shrives (2006), management must explain the causes, impacts and management of risks. ERM can improve financial performance by improving capital spread and decreasing operating losses (COSO, 2004). Thus, implementing and disclosing ERM can not only mitigate risk but also help to uncover opportunities and improve operational and strategic decision-making processes (Mishra et al., 2019). Companies with excellent ERM adoption should see improved financial and accounting performance (Florio & Leoni, 2017; Malik et al., 2020; Muslih & Marbun, 2020). Hence by applying ERM, all risks to achieving organisational goals can be foreseen early. However, without ERM, it is almost impossible to improve a company's performance. Based on the aforementioned considerations, the study's second hypothesis is:

H_2: Enterprise Risk Management affects a company's financial performance.

1.8. Independent commissioners can moderate the influence of intellectual capital on the company's financial performance

The inconsistency in the relationship between Intellectual Capital (IC) and financial performance shows that other factors influence the relationship too. In this situation, the independent commissioner's proxy for corporate governance should increase the link between IC and financial success. An independent commissioner is one form of GCG. Independent commissioners have no commercial or family ties to the board of directors or shareholders. An independent commissioner must also ensure that the board of commissioners supervises management efficiently (Financial Services Authority, 2014). A high number of independent commissioners have great influence over managerial choices, influencing management to manage as well as possible and utilise the company's intellectual capital resources. Interacting with a firm's organisational structure is also a responsibility of the independent commissioners. So the corporation may maximise its financial performance. Independent commissioners can help the corporation manage its intellectual property better (Ahangar, 2011). Increased IC disclosure can also improve a company's financial performance (Adegbayibi, 2021). Ahangar (2011) found that independent commissioners can help balance the relationship between IC and financial success. Using the preceding description, the third hypothesis is:

H_3: Independent commissioners can moderate Intellectual Capital on a company's financial performance.

1.9. Independent commissioners can moderate the influence of enterprise risk management on a company's financial performance

There is always a conflict of interest between the principle and the agent when a company operates. To reduce conflicts of interest, an independent third party is required, such as an independent commissioner. An independent commissioner is a member of the board of commissioners who is not employed by the firm. Because independent commissioners do not own stock in the corporation, they may make objective decisions that align the interests of the agent and shareholder (Khan & Ali, 2018). Internal and external enterprises might threaten and risk independent commissioners. The use of independent commissioners to supervise and monitor risk management is thought to promote transparency in terms of risk disclosure (Nasih et al., 2019). In order to focus on improving financial performance, independent commissioners from outside the company are deemed capable of effective supervision. Given that independent commissioners are not affiliated with any party, the independent commissioners' oversight of report production and disclosure is vital (Emar & Ayem, 2020). Companies with a high share of independent commissioners tend to pay more attention to company risk (Hatane et al., 2019). Beasley et al. (2005) observed that independent commissioners can increase the implementation of supervision of risk management. According to Husaini et al. (2020), there is a positive association between ERM implementation and financial performance, which suggests that effective ERM implementation will increase financial performance. Based on the aforementioned, the study's fourth hypothesis is:

H_4: Independent commissioners can moderate the influence of Enterprise Risk Management on a company's financial performance.

1.10. Institutional ownership can moderate the influence of intellectual capital on a company's financial performance

Institutional ownership can eliminate agency issues and ensure management actions focus on enhancing financial success (Shleifer & Vishny, 1997). It can impact the company's strategic goals and decisions, including the use of IC to boost company performance (Paputungan et al., 2020). The institutional party has a bigger responsibility to control management behaviour so that it operates in line with the company's aims, including by strengthening IC management. Institutional ownership can help management use and manage the company's IC, such as human resources, capital, innovation and strategy, to improve financial performance and accomplish profit goals. Companies with a strong institutional ownership structure

can better use their IC (Pratama et al., 2019). Institutional ownership can affect a company's strategic goals and decisions, including the use of IC to boost performance. A 2019 study by Pratama et al. (2019) found that institutional ownership can influence the relationship between IC and financial success. Using this description, the study's fifth hypothesis is:

H_5: Institutional commissioners can moderate the influence of Intellectual Capital on a company's financial performance.

1.11. Institutional ownership can moderate the influence of enterprise risk management on a company's financial performance

Institutional ownership oversees management in terms of managing risk so that the company's performance increases. Share ownership by institutions has a strong influence on controlling actions and increasing supervision of management performance, so that the demands for risk identification faced by the company increase. The higher the level of institutional ownership of the company, the greater the supervision of management performance and the more the risks faced are reduced. High institutional share ownership causes companies to disclose ERM to meet investor needs (Pristianingrum et al., 2018). Research by Florio and Leoni (2017) found that companies with good implementation of ERM showed higher company performance. Hence, the sixth hypothesis in this research is as follows:

H_6: Enterprise Risk Management affects the company's financial performance with Institutional Ownership as a moderating variable.

2. Research methodology

The population in this study is financial sector companies listed on the Indonesia Stock Exchange in 2016 to 2020. The population consists of 91 companies. The sampling technique used purposive sampling, with several criteria, namely: 1) companies that consistently publish complete financial and annual reports for the years 2016–2020 in a row; 2) companies that do not issue financial statements in foreign currencies; 3) companies that disclose company risk management in the annual report, and 4) companies that have complete data in the observation period. From these criteria, there were 91 companies with an observation period of 5 years. The first analysis technique or method used in this research is the panel data regression and moderated regression analysis (MRA). The data processing technique was carried out using the Eviews 11 program.

The measurement of the company's financial performance in this study uses Tobin's Q:

$$Tobin's \; Q = \frac{MVE + D}{TA} \times 100\%,$$

where MVE: *Market Value of Equity* is the result of multiplying the closing price with the number of shares outstanding; D: Book value of total debt; TA: Book value of total assets.

The measurement of IC in this study uses the VAIC^{TM} measurement by Pulic (2004). This measurement is a combination of Value Added Capital Employed, value-added human capital, and structure capital value-added.

$$VAIC = VAHU + STVA + VACA,$$

where VACA = value-added over capital employed; VAHU = value-added over human capital; STVA = structure capital over value-added; VAIC = sum of VACA, VAHU and STVA.

ERM measurement uses 108 disclosure criteria based on the COSO ERM Framework dimensions (COSO, 2004), which include eight dimensions, namely (1) internal environment, (2) goal setting, (3) incident identification, (4) risk assessment, (5) risk response, (6) monitoring activities, (7) information and communication, and (8) monitoring. The formula used to measure ERM is as follows:

$$ERM\ Disclosure\ Index = \frac{\Sigma ij\,D\,item}{\Sigma ij\,\Delta D\,item},$$

where ERMDI is ERM Disclosure Index, ΣijDItem is the total score of ERM items disclosed, and ΣijADItem is the total ERM items that should be disclosed.

In this study, independent commissioners are measured by calculating the percentage of the number of independent commissioners over the number of members of the board of commissioners (Financial Services Authority, 2015).

$$Independent\ Commissioner =$$
$$\frac{Number\ of\ independent\ commissioner}{number\ of\ members\ of\ the\ board\ of\ commissioners} \times 100\%.$$

According to Pratama et al. (2019), institutional ownership is expressed as a percentage (%), which is measured by comparing the number of shares owned by institutional investors divided by the number of shares outstanding.

$$Institutional\ Ownership =$$
$$\frac{Number\ of\ shares\ owned\ by\ the\ institution}{number\ of\ outstanding\ shares} \times 100\%.$$

3. Findings and discussion

3.1. Descriptive statistics

The descriptive statistics of variables are presented in Table 1.

Table 1 shows that the mean value of IC data is higher than the median value, indicating that most of the sample companies in this study have high IC. The mean value of the ERM variable data is higher than the median value, indicating that most of the sample companies in this study

Table 1. The result of descriptive statistics

Mea-sure	IC	ERM	TOBIN'S Q	KOMIND	KEPINST
Mean	16.029	0.389	1.040	0.521	0.700
Median	0.479	0.379	0.991	0.500	0.750
Maximum	1,175.756	0.574	2.835	0.800	0.999
Minimum	−1,874.435	0.221	0.083	0.250	0.050
Std. Dev.	158.241	0.067	0.339	0.122	0.219

Note: IC = Intellectual Capital, ERM = Enterprise Risk Management, TOBINS Q = Company's Financial Performance, KOMIND = Independent Commissionaires, KEPINST = Institusional Ownership.

have ERM which tends to be high. The mean value of the TOBIN'S Q variable data is higher than the median value, indicating that most of the sample companies in this study have high financial performance. The mean value of the KOMIND variable data is higher than the median value, indicating that most of the sample companies in this study have a large number of independent commissioners. The mean value of the KEPINST variable data is lower than the median value, indicating that most of the sample companies in this study have fairly low institutional ownership.

3.2. Panel data regression model selection

In panel regression analysis, there are 3 regression model approaches, namely: the Common Effect Model (CEM), the Fixed Effect Model (FEM), and the Random Effect Model (REM). To determine the best regression model approach that fits the research data, several tests must be carried out, namely the Chow test, Hausman test, and Lagrange test. The Chow test was used to determine the best model between the Common Effect Model (CEM) and Fixed Effect Model (FEM). If the probability value is greater than 0.05, Ho is accepted and the CEM model is determined to be the best, however if the probability value is less than 0.05, Ho is rejected and the FEM model is determined to be the best.

Table 2. Chow-test result

Model	Prob. Value	Hypothesis	Conclusion
Multiple Regression	0.0000	H$_a$ accept	Fixed Effect Model (FEM)
MRA	0.0000	H$_a$ accept	Fixed Effect Model (FEM)

Table 2 shows that the cross-sectional chi-square regression probability values from multiple regression and MRA are significant at 0.0000 and 0.0000. So the model chosen is the fixed effect model (FEM).

After the Chow test, the test was continued with the Hausman test. Hausman test is used to determine the best

model between Random Effect Model (REM) and Fixed Effect Model (FEM). If the probability value is > 0.05 then Ho is accepted and it is concluded that the REM model is the best, whereas if the probability value is < 0.05 then Ho is rejected and it is concluded that the FEM model is the best.

Table 3. Hausman-Test Result

Model	Prob. Value	Hypothesis	Conclusion
Multiple Regression	0.9897	H_0 accept	Random Effect Model (REM)
MRA	0.3307	H_0 accept	Random Effect Model (REM)

Table 3 above shows that the cross-sectional chi-square regression probability values from multiple regression and MRA are 0.9897 and 0.3307, respectively. Then the model chosen is the random effect model (REM).

After the Chow test and the Hausman test were carried out, the Lagrange test was carried out. The Lagrange test was used to obtain the most suitable model between the common effect model (CEM) and the random effect model (REM). The Lagrange test was carried out because the results of the Chow test and Hausman test were different resultsIf the probability value is greater than 0.05, Ho is accepted and the CEM model is deemed preferable; if the probability value is less than 0.05, Ho is rejected and the REM model is deemed preferable.

Table 4. Lagrange-test result

Model	Prob. Value	Hypothesis	Conclusion
Multiple Regression	0.0000	H_a accept	Random Effect Model (REM)
MRA	0.0000	H_a accept	Random Effect Model (REM)

Table 4 above shows that the cross-sectional chi-square regression probability values from multiple regression and MRA are 0.000 and 0.000, respectively. Then the model chosen is the random effect model (REM). The random-effect model was chosen after the Chow test, Hausman test, and Lagrange test were performed.

3.3. Multiple regression model in panel data

The following is a table of panel data multiple regression results using the random effect model (REM)

Table 5. Panel data multiple regression

Variabel	Coeficient	t-statistic	Prob.
Constant	1.1931	11.3958	0.0000
IC	−0.0006	−6.3970	0.0000
ERM	−0.3661	−1.4346	0.1524

The Table 5 above is the result of multiple regression of panel data, which shows that the probability value of

the intellectual (IC) capital variable shows that IC has a significant negative effect on the company's financial performance. This shows that the high value of IC will be able to reduce the company's financial performance. While the probability value of the ERM variable shows that ERM cannot affect the company's financial performance.

3.4. Panel data regression model with moderation

The following is a table of moderated panel data regression results using the random effect model (REM)

Table 6. Panel data regression with moderation

Variable	Coefficient	t-statistic	Prob.
Constanta	1.0970	2.2201	0.0271
IC	−0.0037	−5.1847	0.0000
ERM	−0.3416	−0.2733	0.7848
IC*KOMIND	0.0023	2.2833	0.0231
ERM*KOMIND	−3.2696	−1.7193	0.0865
IC*KEPINST	0.0025	3.3343	0.0010
ERM*KEPINST	2.3135	2.0428	0.0419

Table 6 on panel data regression with moderation shows that the independent commissioner variable (KOMIND) can moderate the relationship between IC and company financial performance (prob = 0.0231). However, the independent commissioner (KOMIND) could not moderate the relationship between ERM and the company's financial performance (prob = 0.0865). Furthermore, the institutional ownership variable (KEPINST) can moderate the relationship between IC and the company's financial performance (prob = 0.0010). Likewise, the institutional ownership variable (KEPINST) can moderate the relationship between ERM and the company's financial performance (prob = 0.0419).

4. Discussion

IC negatively affects financial performance. The value of Tobin's Q shows that the higher a company's IC, the lower its financial performance. value-added human capital (VAHU), value-added capital employed (VACA), and structural capital value-added (STVA) are known to have low values. Employees who have not investigated and applied their knowledge to increase their company's performance and success in reaching its goals, mainly in terms of increasing profits, have a poor VAHU value (Li & Zhao, 2017). VAHU does not completely support a company's financial improvement, however. STVA values in the finance industry are also poor. This suggests that the company's organisational methods and procedures are not yet optimal for intellectual output. The VACA value is higher than the VAHU and STVA values, indicating that the sample organisations can rely on and manage available money like equity and net income, as well as employ physical capital effectively and efficiently. One

component alone cannot allow for successful management of IC since the results would be suboptimal (Li & Zhao, 2017). Not all corporations report on IC performance in their annual reports, and not all companies report on it separately. Investors have a greater appreciation of physical assets than of intangible assets because they can be seen and felt compared to intangible assets controlled by a corporation. The findings of this investigation resemble those of Britto et al. (2014). In contrast to Ahangar and Adegbayibi's study, Usman and Mustafa (2019) discovered that IC had no impact on financial performance (Ahangar, 2011; Adegbayibi, 2021).

As for ERM, the study shows this factor has no impact on the company's financial performance. The average disclosure of ERM in the banking sector is relatively low. This means many sample organisations still do not provide ERM, which is made up of 108 components. Financial firms have not appropriately reported ERM. Risk management is a novel concept in Indonesia.To avoid corporate acts that could result in public losses, the government has mandated integrated risk management for all SOEs in 2007. The rules for implementing risk management are established in the Minister of SOEs Decree 117 of 2002 on Good Corporate Governance. Risk management is still only used in roughly seven out of 138 non-financial SOEs, or about 5%. Government rules require BUMN and public firms to implement risk management and a company's revelation of ERM may not have been voluntary. The outcomes of this study confirm those of Quon et al. (2012) and Alawattegama (2018) but not Malik et al. (2020) or Muslih and Marbun (2020).

Independent commissioners can strengthen the influence of IC on a company's financial performance. The proportion of independent commissioners acts as a check and balance, leading to the provision of more information about the company's activities and results to ensure the company's actions benefit the owners and other stakeholders. Independent commissioners can encourage corporations to provide more information to investors and improve the board's performance (Solikhah et al., 2020). A company's supervisory function in managing its intellectual property can be improved by having an independent commissioner (Ahangar, 2011). Thus, having independent commissioners in a company pushes them to manage and deploy their IC optimally, increasing their performance. The study's findings back Ahangar (2011). However, this study also found that independent commissioners are unable to moderate the relationship between ERM and a company's financial performance. Independent commissioners as part of corporate governance who supervise the company. However, an independent board of commissioners may reduce risk disclosure. This is because the quality of the supervisory function is not determined by the level of independence but rather by the quality and educational background of the board members. Appointing independent commissioners is a legal requirement, not simply good company governance practice. Additionally,

the 30% independent commissioner provision may not be high enough for commissioners to control business policies, including ERM adoption. Based on Emar and Ayem's (2020) findings, independent commissioners cannot attenuate the effect of ERM disclosure on Tobin's Q. A robust committee board structure can boost corporate performance, but this study does not support Munfaida and Muhammad's (2020) finding.

Institutional ownership can strengthen the influence of IC on a company's financial performance. Companies with a concentrated institutional ownership structure can better leverage their IC to boost financial performance. An increase in institutional ownership will need management oversight and limit management's ability to release information only from the management side. With fragmented ownership, information disclosure is expected to increase (Hossain et al., 1994). Institutional ownership is crucial in management supervision because it promotes optimal monitoring. The amount of capital invested in the capital market reduces the influence of institutional ownership as a regulatory agent. Institutional shareholders with huge shareholdings have incentives to watch firm decision making, which can constrain the behaviour of opportunistic management. Thus, with institutional ownership as a supervision mechanism, the company's performance is maximised (Pratama et al., 2019). This study supports Pratama et al.'s (2019) findings that institutional ownership can moderate the relationship between IC and financial performance.

Institutional ownership enhances the impact of ERM on financial performance. Institutional ownership is useful in monitoring a company and can encourage companies to pay more attention to hazards. It may also encourage management to disclose company risks helping achieve the company's aims, mainly in terms of making money. Risk management disclosure is one of the investing criteria for Indonesian institutional ownership. Publication of detailed risk management in the annual report is often pushed by institutional shareholders (Mazumder & Hossain, 2018). With the disclosure of risk management, the company's management will pay more attention to hazards and handle them better, increasing performance. Institutional ownership can help alleviate agency issues by enhancing supervision and management performance monitoring (Al-Sartawi, 2018). With proportional institutional ownership, management oversees risk management to decrease the risks faced by a firm and improve its performance. This research supports the conclusions of Malelak and Pryscillia (2020), Malik et al. (2020) and Muslih and Marbun (2020).

Conclusions and limitations

This study explores whether inefficient use of IC has a negative impact on financial sector performance. Unlike intangible assets or IC, physical assets can be seen and felt immediately by investors. The application of risk

management in BUMN and public firms is generally prompted by government requirements, and ERM disclosure in companies is suspected to be non-voluntary. Independent commissioners can help a corporation to monitor its intellectual property better. Independent commissioners can help a corporation to maximise its own IC. The quality of the monitoring function is dictated by the educational backgrounds of the board members, not by independence. Additionally, 30% provision of independent commissioners may not be adequate to prevent the commissioners from dominating corporate policy, including ERM. Institutional ownership as a supervisory mechanism in IC management maximises a company's success. Institutional ownership might also encourage management to disclose a company's risk.

There are some limitations which need to be addressed when interpreting these results. The research sample is 72% of the overall population, or 91 companies. Many new firms were listed on the Indonesia Stock Exchange in the last quarter of the research year. As a result, this restriction does not apply to all financial sector listed businesses in Indonesia. The COVID-19 pandemic may have hampered company performance in 2020, influencing the research outcome. This study's ERM indicator uses 108 disclosures. Disclosure of an item is given a value of 1 or 0, respectively. Then the scores for each item are summed up to give each company a total score. This measurement is less capable of assessing the quality of the disclosure.

Future research and implications

It is suggested that future researchers employ the different IC measurements from this research to prove the better hypothesis, such as MVAIC, which is the development of VAICTM. The following researchers can use different indicators to measure ERM to look at the consistency of the findings. Future research can examine all companies listed in IDX and extend the observation duration to generalise the results. This research implies that the corporation should strengthen the transparency and implementation of intellectual capital and risk management, as well as corporate governance. Intellectual capital can help a corporation manage its resources better. The company's performance will improve and its goals will be met. Investors and stakeholders can assess a company's risk management and intellectual capital disclosure policies to make informed decisions.

Funding

References

Abdallah, A. A. N., & Ismail, A. K. (2017). Corporate governance practices, ownership structure, and corporate performance in the GCC countries. *Journal of International Financial Markets, Institutions and Money*, *46*, 98–115.
https://doi.org/10.1016/j.intfin.2016.08.004

Adegbayibi, A. T. (2021). Intellectual capital and firm performance of listed firms in Nigeria: Moderating role of corporate governance. *Jurnal Administrasi Bisnis*, *10*(1), 1–12.
https://doi.org/10.14710/jab.v10i1.36415

Ahangar, R. G. (2011). The relationship between intellectual capital and financial performance: An empirical investigation in an Iranian company. *African Journal of Business Management*, *5*(1), 88–95.

Alawattegama, K. (2018). The effect of enterprise risk management (ERM) on firm performance: Evidence from the diversified industry of Sri Lanka. *Journal of Management Research*, *10*(1), 75. https://doi.org/10.5296/jmr.v10i1.12429

Al-Sartawi, A. M. M. (2018). Ownership structure and intellectual capital: Evidence from the GCC countries. *International Journal of Learning and Intellectual Capital*, *15*(3), 277–291.
https://doi.org/10.1504/IJLIC.2018.094716

Bank Indonesia. (2009). *On the implementation of good corporate governance for Syariah bank and Syariah business unit (Regulation No. 11/33/PBI/2009)*. Bank Indonesia.

Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, *17*(1), 99–120.
https://doi.org/10.1177/014920639101700108

Beasley, M. S., Clune, R., & Hermanson, D. R. (2005). Enterprise risk management: An empirical analysis of factors associated with the extent of implementation. *Journal of Accounting and Public Policy*, *24*(6), 521–531.
https://doi.org/10.1016/j.jaccpubpol.2005.10.001

Bekhet, H. A., Alhyari, J. A., Yusma, N., & Yusoff, M. (2020). Highlighting determinants of financial performance of the Jordanian financial sector: Panel data approach. *International Journal of Financial Research*, *11*(6), 237–252.
https://doi.org/10.5430/ijfr.v11n6p237

Britto, D., Monetti, E., & Lima, J. (2014). Intellectual capital intangible intensive firms: The case of Brazilian real estate companies. *Journal of Intellectual Capital*, *15*(2), 333–348.
https://doi.org/10.1108/JIC-10-2013-0108

Chen, M. C., Cheng, S. J., & Hwang, Y. (2005). An empirical investigation of the relationship between intellectual capital and firms' market value and financial performance. *Journal of Intellectual Capital*, *6*(2), 159–176.
https://doi.org/10.1108/14691930510592771

Elghuweel, M. I., Ntim, C. G., Opong, K. K., & Avison, L. (2017). Corporate governance, Islamic governance and earnings management in Oman: New empirical insights from a behavioral theoretical framework. *Journal of Accounting in Emerging Economies*, *7*(2), 190–224.
https://doi.org/10.1108/JAEE-09-2015-0064

Emar, S, E., A., & Ayem, S. (2020). The effect of disclosure of enterprise risk management and disclosure of intellectual capital on firm value with good corporate governance as moderation. *Journal of Business Economics and Accounting*, *19*(2), 78–90.
https://doi.org/10.22225/we.19.2.1956.79-90

Financial Services Authority. (2015). *On the establishment and guidelines for the work implementation of the audit committee (Regulation No. 55/POJK.04/2015)*.

Financial Services Authority. (2014). *On the Board of Commissioners of Issuers or Public Companies (Regulation No. 33/PJOK.04/2014)*.

Firer, S., & Williams, S. M. (2003). Intellectual capital and traditional measures of corporate performance. *Journal of Intellectual Capital*, *4*(3), 348–360.
https://doi.org/10.1108/14691930310487806

Florio, C., & Leoni, G. (2017). Enterprise risk management and firm performance: The Italian case. *British Accounting Review*, *49*(1), 56–74. https://doi.org/10.1016/j.bar.2016.08.003

Hatane, S. E., Supangat, S., Tarigan, J., & Jie, F. (2019). Does internal corporate governance mechanism control firm risk? Evidence from Indonesia's three high-risk sectors. *Corporate Governance: The International Journal of Business in Society*, *19*(6), 1362–1376. https://doi.org/10.1108/CG-02-2019-0071

Hossain, M., Perera, M. H. B., & Rahman, A. R. (1994). Voluntary disclosure in the annual report of New Zealand Companies. *Journal of International Financial Management and Accounting*, *6*(1), 70–86. https://doi.org/10.1111/j.1467-646X.1995.tb00050.x

Husaini, Pirzada, K., & Saiful. (2020). Risk management, sustainable governance impact on corporate performance. *Journal of Security and Sustainability Issues*, *9*(3), 993–1004. https://doi.org/10.9770/jssi.2020.9.3(23)

Kapopoulos, P., & Lazaretou, S. (2007). Corporate ownership structure and firm performance: Evidence from Greek firms. *Corporate Governance: An International Review*, *15*(2), 144–158. https://doi.org/10.1111/j.1467-8683.2007.00551.x

Khan, S. N., & Ali, E. I. (2018). The moderating effect of intellectual capital on the relationship between corporate governance and companies. *Journal of Governance and Integrity (JGI)*, *2*(1), 29–55. https://doi.org/10.15282/jgi.2.1.2018.5534

Li, L. (2018). A study on enterprise risk management and business performance. *Journal of Financial Risk Management*, *7*(1), 123–138. https://doi.org/10.4236/jfrm.2018.71008

Li, Y., & Zhao, Z. (2017). The dynamic impact of intellectual capital on firm value: Evidence from China. *Journal Applied Economics Letters*, *25*(1), 19–23. https://doi.org/10.1080/13504851.2017.1290769

Linsley, P. M., & Shrives, P. J. (2006). Risk reporting: A study of risk disclosure in the annual reports of UK companies. *Journal the British Accounting Review*, *38*(4), 387–404. https://doi.org/10.1016/j.bar.2006.05.002

Malik, M. F., Zaman, M., & Buckby, S. (2020). Enterprise risk management and firm performance: Role of the risk committee. *Journal of Contemporary Accounting & Economics*, *16*(1), 1–28. https://doi.org/10.1016/j.jcae.2019.100178

Malelak, M. I., & Pryscillia, F. (2020). The impact of enterprise risk on firms' performance: An empirical analysis of Indonesia's public listed banking firms. *SHS Web of Conferences*, *76*, 01026. https://doi.org/10.1051/shsconf/20207601026

Mazumder, M. M. M., & Hossain, D. M. (2018). Research on corporate risk reporting: Current trends and future avenues. *The Journal of Asian Finance, Economics and Business*, *5*(1), 29–41. https://doi.org/10.13106/jafeb.2018.vol5.no1.29

Mishra, B. K., Rolland, E., Satpathy, A., & Moore, M. (2019). A framework for enterprise risk identification and management: The resource-based view. *Managerial Auditing Journal*, *34*(2), 162–188. https://doi.org/10.1108/MAJ-12-2017-1751

Mohapatra, A. K., & Jha, S. (2018). Bank recapitalization in India: a critique of public policy concerns. *FIIB Business Review*, *7*(1), 10–15. https://doi.org/10.1177/2319714518766113

Mohapatra, S., Jena, S. K., Mitra, A., & Tiwari, A. K. (2019). Intellectual capital and firm performance: Evidence from the Indian banking sector. *Applied Economics*, *51*(57), 6054–6067. https://doi.org/10.1080/00036846.2019.1645283

Munfaida, L., & Muhammad, A. (2020, 5 August). The influence of enterprise risk management on company performance moderated by the committee board structure. In *the Conference on Business and Economics in the Utilization of Modern Technology* (pp. 481–494). Magelang, Indonesia.

Muslih, M., & Marbun, S. O. (2020). The effect of risk management, firm age, and firm size on the performance of banking companies registered in Indonesia stock exchange moderated by corporate governance and budget as control variable. *International Journal of Science and Society*, *2*(4), 274–290. https://doi.org/10.54783/ijsoc.v2i4.211

Nasih, M., Harymawan, I., Paramitasari, Y. I., & Handayani, A. (2019). Carbon emissions, firm size, and corporate governance structure: Evidence from the mining and agricultural industries in Indonesia. *Sustainability*, *11*(9), 2483. https://doi.org/10.3390/su11092483

Obeidat, U., Obeidat, B., Alrowwad, A., Alshurideh, M., Masadeh, R., & Abuhashesh, M. (2021). The effect of intellectual capital on competitive advantage: The mediating role of innovation. *Management Science Letters*, *11*(4), 1331–1344. https://doi.org/10.5267/j.msl.2020.11.006

Paputungan, R. D., Subroto, B., & Ghofar, A. (2020). Does institutional ownership moderate the effect of intellectual capital and company value? *International Journal of Research in Business And Social Science*, *9*(1), 127–136. https://doi.org/10.20525/ijrbs.v9i1.579

Pratama, B. C., Wibowo, H., & Innayah, M. N. (2019). Intellectual capital and firm performance in ASEAN: The role of research and development. *Journal of Accounting and Investment*, *20*(3), 236–250. https://doi.org/10.18196/jai.2003126

Pristianingrum, N., Sayekti, Y., & Sulistiyo, A. B. (2018). Effect of firm size, leverage and institutional ownership on disclosure enterprise risk management (ERM). *International Journal of New Technology and Research*, *4*(8), 8–11. https://media.neliti.com/media/publications/263017-effect-of-firm-size-leverage-and-institu-50dc1623.pdf

Pulic, A. (2004). Intellectual capital: Does it create or destroy value? *Measuring Business Excellence*, *8*(1), 62–68. https://doi.org/10.1108/13683040410524757

Quon, T. K., Zeghal, D., & Maingot, M. (2012). Enterprise risk management and firm performance. *Procedia – Social and Behavioral Sciences*, *62*, 263–267. https://doi.org/10.1016/j.sbspro.2012.09.042

Ross, S. A., Westerfield, R. W., & Jordan, B. D. (2019). *Fundamentals corporate finance* (12th ed.). Irwin McGraw-Hill.

Saeidi, P., Saeidi, S. P., Gutierrez, L., Streimikiene, D., Alrasheedi, M., & Mardani, A. (2021). The influence of enterprise risk management on firm performance with the moderating effect of intellectual capital dimensions. *Economic research ekonomska istrazivanja*, *34*, 122–151. https://doi.org/10.1080/1331677X.2020.1776140

Sardo, F., Serrasqueiro, Z., & Alves, H. (2018). On the relationship between intellectual capital and financial performance: A panel data analysis on SME hotels. *International Journal of Hospitality Management*, *75*, 67–74. https://doi.org/10.1016/j.ijhm.2018.03.001

Savitri, E., Gumanti, T. A., & Yulinda, N. (2020). Enterprise risk-based management disclosures and firm value of Indonesian finance companies. *Problems and Perspectives in Management*, *18*(4), 414–422. https://doi.org/10.21511/ppm.18(4).2020.33

Savitri, E. (2018). Relationship between family ownership, agency costs towards financial performance and business strategy as mediation. *Business: Theory and Practice*, *19*, 49–58. https://doi.org/10.3846/btp.2018.06

Shad, K., Lai, F. W., Chuah, L. F., Klemeš, J. J., & Bokhari, A. (2019). Integrating sustainability reporting into enterprise risk

management and its relationship with business performance: A conceptual framework. *Journal of Cleaner Production, 208*, 415–425. https://doi.org/10.1016/j.jclepro.2018.10.120

Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. *The Journal of Finance*, *52*(2), 737–783. https://doi.org/10.1111/j.1540-6261.1997.tb04820.x

Sitanggang, L. M. S. (2019, November, 20). *ROA perbankan turun ke 2.48% per September 2020.* Kontan.co.id. https://amp.kontan.co.id/news/roa-perbankan-turun-ke-248-per-september-2019

Solikhah, B., Wahyudin, A., & Rahmayanti, A. A. W. (2020). The extent of intellectual capital disclosure and corporate governance mechanism to increase market value. *The Journal of Asian Finance, Economics, and Business*, *7*(10), 119–128. https://doi.org/10.13106/jafeb.2020.vol7.no10.119

Stewart, T. (1997). *Intellectual capital: The new wealth of organizations.* Doubleday Dell Publishing Group.

The Committee of Sponsoring Organization of the Treadway Commission. (2004). *Enterprise risk management-integrated framework. Sarbanes-Oxley guide for finance and information technology professional* (pp. 224–232). COSO.

The President of the Republic of the Indonesia. (2008). *Act of the Republic of Indonesia Number 21 of 2008, concerning Sharia (Islamic) banking).* http://www.flevin.com/id/lgso/translations/Laws/Law%20No.%2021%20of%202008%20on%20Sharia%20(Islamic)%20Banking%20(BI).pdf

Usman, H., & Mustafa, S.W. (2019). Pengaruh Intellectual Capital Terhadap Kinerja Keuangan dan Nilai Pasar Perusahaan yang Listed di Jakarta Islamic Index. *AkMen Jurnal Ilmiah, 16*(4), 529–535. https://doi.org/10.37476/akmen.v16i4.793

Yalama, A. (2013). The relationship between intellectual capital and banking performance in Turkey: Evidence from panel data. *International Journal Learning and Intellectual Capital, 10*(1), 71–87. https://doi.org/10.1504/IJLIC.2013.052079