

Strengthening Financial Efficiency In The Maritime Industry: A Systematic Review Of Internal Governance, Strategic Control Systems, And Operational Cost Management

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Abstract

This study examines the strengthening of financial efficiency in the maritime industry through a Systematic Literature Review (SLR) approach by analyzing the role of corporate governance, strategic control systems, and operational cost management. A total of 50 peer-reviewed articles were reviewed based on the PRISMA guidelines to identify research trends related to financial efficiency, governance mechanisms, digital-based control systems, cost optimization strategies, and organizational capabilities in managing maritime operations. The findings indicate that financial efficiency in the maritime industry is achieved through the integration of effective corporate governance, data-driven strategic control systems, and efficient operational cost management practices. Furthermore, technological transformation, analytics capabilities, and adaptive organizational resources enhance companies' ability to optimize resources, improve decision-making quality, and respond to dynamic market conditions. However, challenges remain regarding cost volatility, technological adoption, sustainability pressures, and alignment between operational strategies and long-term financial objectives. This study contributes to the literature by providing a structured synthesis of previous research and highlighting the importance of integrated management approaches in strengthening sustainable and competitive financial efficiency within the maritime industry.



Keywords: Financial Efficiency, Maritime Industry, Corporate Governance, Strategic Control Systems, Operational Cost Management, Resource-Based View Theory.

INTRODUCTION

The maritime industry is a strategic sector that supports international trade activities through its role in the distribution of goods and global economic connectivity. The development of an increasingly complex business environment has caused shipping companies to face various pressures, ranging from regulatory changes, market instability, to increased demands for operational efficiency. These conditions encourage companies to strengthen their ability to manage resources and maintain long-term competitiveness. Previous studies have shown that the shipping industry has a high level of vulnerability to external disturbances such as geopolitical risks, financial market volatility, and changes in global economic conditions (Papathanasiou et al., 2025; Wu, 2026; Akhtar et al., 2026).

Financial efficiency is one of the important indicators in the successful management of maritime companies because these business characteristics require large investments and significant operational costs. Components such as fuel, ship maintenance, labor, and logistics activities have a major influence on the company's spending structure. Therefore, the ability to control costs is a major factor in maintaining profitability and financial stability. Research shows that data-driven financial risk management is able to help companies understand risk patterns and improve the quality of managerial decisions (Bai et al., 2022). In addition, the cost control approach also plays a role in increasing the effectiveness of a company's operations (Naoum et al., 2023; Wang et al., 2026).

The implementation of corporate governance is an important aspect in improving financial efficiency because it relates to supervisory, transparent, and decision-making mechanisms in the organization. Good governance helps companies ensure that resources are used effectively and reduces potential conflicts between internal parties of the company. In the maritime industry, complex ownership structures can create challenges to the quality of oversight and management accountability. Research on shipping companies shows that related party transactions can give rise to conflicts of interest between controlling shareholders and minority shareholders (Andrikopoulos et al., 2021). In addition, institutional pressures also encourage companies to implement more responsible business practices (Almasabi et al., 2026; Chen et al., 2026).

In addition to governance mechanisms, maritime companies need strategic control systems to ensure that business strategies can run in accordance with organizational goals.



Strategic control systems function as tools to evaluate performance, identify deviations, and support information-based decision-making. The development of digital technology has expanded the application of control systems through the use of big data analytics, artificial intelligence, and integrated information technology. Digitalization in the shipping industry has been proven to improve business process efficiency and strengthen companies' ability to deal with changes in the industrial environment (Ichimura et al., 2022). The use of data analytics also contributes to managing energy consumption and improving the efficiency of ship operations (Yan et al., 2021; Zhao et al., 2026).

Operational cost management is an important part of the strategy to improve the efficiency of maritime companies because operational activities have a large contribution to total expenses. Optimizing fleet usage, route planning, fuel consumption, and transportation network management are widely developed approaches to reduce costs. Several studies show that the use of optimization models can help companies make more efficient operational decisions. Ship route and speed management strategies can reduce energy consumption while reducing operating costs (Luo et al., 2026; Guo et al., 2026). In addition, the management of hidden costs such as demurrage, detention, and storage costs is also an important factor in improving the efficiency of the maritime supply chain (Jelodari Mamaghani & Bouchery, 2026).

The transformation towards a sustainable maritime industry adds complexity to corporate decision-making because financial efficiency must go hand in hand with environmental demands. Companies need to consider green technology investments, the use of alternative fuels, and emission reduction strategies in long-term planning. These changes require a balance between economic goals and operational sustainability. Research on maritime decarbonization shows that technology investment decisions must consider economic risks, technological readiness, and regulatory uncertainties (Ye et al., 2026). In addition, the use of alternative marine fuels and self-sustaining fleet strategies are potential approaches to support the efficiency and sustainability of the shipping industry (Zhang et al., 2025; Niu et al., 2026).

Although research on the maritime industry has developed through various perspectives such as operational efficiency, digitalization, risk, and sustainability, studies linking corporate governance, strategic control systems, and operational cost management are still not widely found. Most of the previous research focused more on one specific aspect so that the relationship between the company's internal management mechanisms has not been comprehensively described. This condition shows the need to conduct a systematic study of how internal organizational factors can strengthen the financial efficiency of maritime companies. Therefore,



a systematic literature review approach is needed to map research developments, find study patterns, and identify research gaps related to strategies to improve financial efficiency in the maritime industry (Masoumi Hazhir & Foroughi, 2025; Mishra et al., 2025; Zhang et al., 2026).

LITERATURE REVIEW

Agency Theory

Agency theory describes the relationship between the owner of the company (principal) and management (agent) who have the possibility of different interests due to limited information and different objectives. This theory emphasizes the importance of oversight mechanisms to ensure that management decisions remain in accordance with the interests of the company. In the maritime industry, the characteristics of businesses that require large investments and complex ownership structures increase the potential for conflict so that governance mechanisms are needed to maintain organizational accountability and efficiency (Andrikopoulos et al., 2021; Bai et al., 2022; Chen et al., 2026).

The application of agency theory explains that a system of supervision, transparency, and performance evaluation can reduce conflicts between company owners and managers. In the maritime sector, these mechanisms help ensure that strategic decisions, risk management, and resource use are carried out effectively. Research shows that the quality of governance and decision-making structures play a role in improving companies' ability to cope with business pressures and maintain financial performance (Almasabi et al., 2026; Seo et al., 2025; Chen et al., 2026).

Corporate Governance

Corporate governance is a concept related to the structure, mechanisms, and control processes used by companies to ensure transparency, accountability, and effectiveness of decision-making. In the maritime industry, the implementation of governance is important because companies face high investment risks, market uncertainty, and complex relationships between shareholders and management. Good governance mechanisms can help reduce conflicts of interest and improve the quality of corporate management (Andrikopoulos et al., 2021; Chen et al., 2026; Almasabi et al., 2026).

In the context of financial efficiency, corporate governance plays a role in directing the use of resources to suit the company's strategic objectives. Effective supervision allows companies to improve risk management discipline, control investment decisions, and strengthen business



sustainability. Studies show that institutional mechanisms and decision-making quality are related to improving organizational performance as well as a company's ability to cope with changes in the business environment (Bai et al., 2022; Seo et al., 2025; Chen et al., 2026).

Strategic Control Systems

Strategic control systems are management concepts that describe the use of information systems, performance evaluation, and control mechanisms to ensure that organizational strategies run according to the goals that have been set. In the maritime industry affected by technological changes and market uncertainty, strategic control systems help companies integrate operational and financial information to produce more accurate decisions. The use of technology such as big data analytics and digital systems is an important part of strengthening organizational control (Ichimura et al., 2022; Yan et al., 2021; Zhao et al., 2026).

The implementation of strategic control systems allows companies to monitor performance, predict risks, and optimize operational activities on an ongoing basis. Data-driven systems help companies improve resource use efficiency and improve the quality of managerial decisions. Research shows that analytics, digitalization, and information technology capabilities can improve port performance, ship management, and the effectiveness of maritime business processes (Sugrue & Adriaens, 2021; Zhao et al., 2026; Wang et al., 2026).

Operational Cost Management

Operational cost management is a concept that describes the process of planning, controlling, and optimizing costs to improve the efficiency of a company's operational activities. In the maritime industry, cost management is a major concern as companies face various components of expenses such as fuel, ship maintenance, logistics costs, and fleet usage. An effective cost management strategy can help companies maintain profitability and increase competitiveness in a competitive business environment (Naoum et al., 2023; Bai et al., 2022; Yan et al., 2021).

Improving operational cost efficiency can be done through route optimization, technology use, and integration of supply chain activities. An optimization model-based approach is able to help companies make more effective operational decisions by considering costs and performance simultaneously. Research shows that shipping optimization, reduction of hidden costs, and increased logistics efficiency contribute to strengthening the operational performance of maritime companies (Luo et al., 2026; Guo et al., 2026; Jelodari Mamaghani & Bouchery, 2026).



METHOD

This study uses the Systematic Literature Review (SLR) method by following the guidelines of Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). The SLR method was chosen because it is able to provide a systematic approach in identifying, evaluating, and synthesizing previous research developments related to improving financial efficiency in the maritime industry. Through this approach, the research aims to understand how corporate governance mechanisms, strategic control systems, and operational cost management contribute to improving the performance and sustainability of maritime companies (Andrikopoulos et al., 2021; Yan et al., 2021; Bai et al., 2022).

The literature in this study was obtained through several reputable international academic databases, namely Scopus, Web of Science (WoS), ScienceDirect, and Emerald Insight. The article search strategy was carried out using a combination of keywords tailored to the focus of the research, such as "maritime industry", "shipping industry", "financial efficiency", "financial performance", "corporate governance", "governance mechanism", "strategic control systems", "management control systems", "operational cost management", "cost optimization", and "maritime operational efficiency". Based on the initial identification process, a total of 1,286 scientific articles were obtained that are related to financial efficiency, corporate governance, control systems, and cost management in the maritime sector. All of these articles were then processed through the selection stage based on the inclusion and exclusion criteria of research.

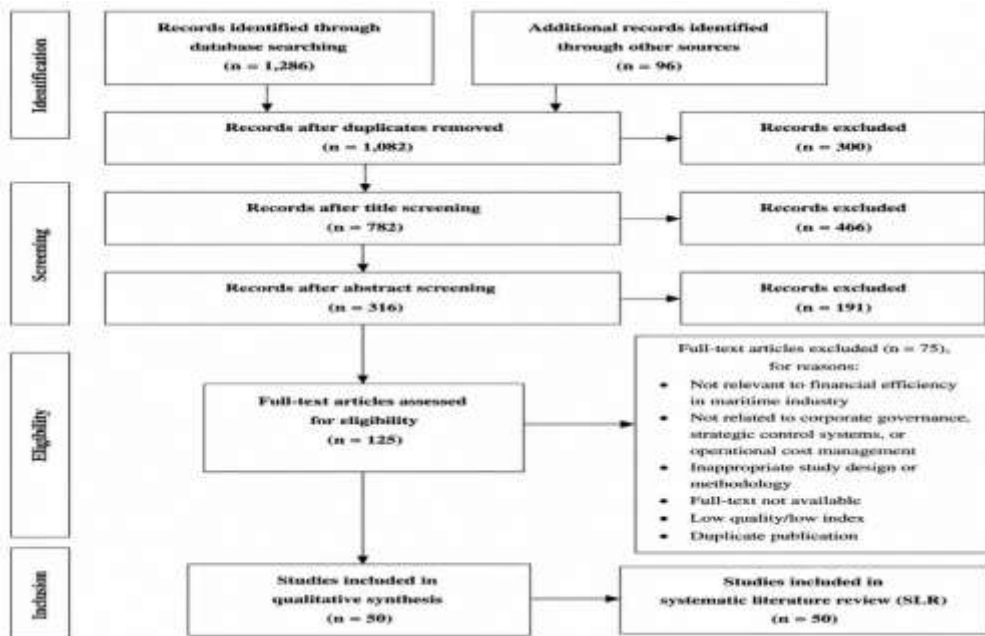
The next stage is the screening process of articles that have been obtained from various databases. Of the total 1,286 initial articles, 298 articles were deleted because they were found to be duplicate articles between databases. After the duplication elimination process was carried out, the remaining 988 articles were then evaluated based on titles (title screening) and abstracts (abstract screening). At this stage, as many as 672 articles were eliminated because they were not directly related to improving the financial efficiency of the maritime industry, did not discuss aspects of governance, control systems, or operational cost management, and focused more on technical issues of shipping without connecting them to organizational management aspects. The results of the screening resulted in 316 articles that entered the eligibility assessment stage.

At the feasibility evaluation stage, a more in-depth examination was carried out through full-text review of 316 articles that had passed the initial screening process. The evaluation was carried out based on several criteria, namely suitability with the research objectives, clarity of the research method, theoretical contribution, and the relationship of the discussion with the relationship between governance mechanisms, strategic control systems, operational cost



management, and financial efficiency of maritime companies. Based on the results of the evaluation, a total of 191 articles were issued because they did not meet the research criteria, such as not having a full text available, having too technical focus, not discussing the managerial aspects of the company, or not contributing to the understanding of financial efficiency in the maritime industry. After the evaluation process was completed, 125 articles were obtained that met the initial criteria for the advanced analysis stage.

Furthermore, a quality assessment of 125 articles was carried out based on the quality of the journal, the relevance of the theory, the methodology approach, and the contribution of the research to the study of the financial efficiency of the maritime industry. A total of 75 articles were eliminated because they had methodological limitations, were not relevant to the research variables, or did not provide adequate discussion of the relationship between corporate governance, strategic control systems, and operational cost management. Thus, 50 articles from international journals were obtained as the main literature that was analyzed using the thematic synthesis approach. The analysis was used to identify research patterns, concept development, intervariable relationships, and research gaps related to strategies to strengthen financial efficiency in the maritime industry (Andrikopoulos et al., 2021; Ichimura et al., 2022; Wang et al., 2026).



Source : Data processed, 2026

Figure 1. PRISMA Flow Diagram

Figure 1 shows the stages of literature selection using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) approach. The selection process is carried out through several stages, namely identification of articles from various academic databases, removal of duplicate articles, filtering by title and abstract, and feasibility evaluation through full-text review. Based on all the stages of the selection, as many as 50 international journal articles that meet the inclusion criteria were obtained and used as the basis for the analysis of the Systematic Literature Review (SLR) regarding improving financial efficiency in the maritime industry through the study of corporate governance, strategic control systems, and operational cost management.

RESEARCH RESULTS

Based on the results of the literature selection, this study analyzed the characteristics of 50 international journal articles that became the basis for the Systematic Literature Review (SLR) study. The analysis was conducted to identify research development patterns based on journal quality, theoretical and conceptual perspectives, geographical distribution of research, and methodological approaches used in assessing financial efficiency in the maritime industry. This study focuses on how corporate governance mechanisms, the implementation of strategic control systems, and operational cost management strategies contribute to improving the ability of maritime companies to optimize resources, control costs, and maintain business sustainability. The results of the literature characteristics analysis are presented through the following main classifications.

Table 1. Journal Index Distribution

Journal Index	Number of Articles	Percentage
Scopus Q1	21	42,00%
Scopus Q2	17	34,00%
Scopus Q3	8	16,00%
Scopus Q4	4	8,00%
Total	50	100%

Source : Data processed, 2026

Based on Table 1, most of the articles used in this study came from 21 articles (42.00%) from the Scopus Q1 category, followed by 17 articles (34.00%) from the Scopus Q2 category. Overall, articles from high-reputable journals in the Q1 and Q2 categories reached 38 articles or

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76.00% of the entire literature analyzed. The composition shows that research on the financial efficiency of the maritime industry is widely published in quality international journals that pay attention to issues of strategic management, operational efficiency, and sustainability of the marine transportation sector.

The dominance of publications in reputable journals shows that financial efficiency in the maritime industry has evolved into a multidisciplinary study that not only addresses economic aspects, but also integrates governance, technology, logistics, and cost control perspectives. The high proportion of quality articles shows that research on the management of maritime companies is increasingly geared towards long-term value creation through the optimization of internal resources and the improvement of corporate adaptability.

Table 2. Distribution of Research Theories

Theory/Concept	Number of Articles	Percentage
Resource-Based View (RBV)	10	20,00%
Agency Theory	8	16,00%
Dynamic Capabilities Theory	7	14,00%
Management Control Systems	7	14,00%
Cost Management Concept	6	12,00%
Institutional Theory	5	10,00%
Technology-Organization-Environment (TOE)	4	8,00%
Other concepts	3	6,00%
Total	50	100%

Source : Data processed, 2026

Based on Table 2, the most widely used theory in research related to the financial efficiency of the maritime industry is the Resource-Based View (RBV) with a total of 10 articles (20.00%). The dominance of this theory shows that the company's internal capabilities such as technological resources, managerial capabilities, information systems, and organizational competencies are important factors in creating efficiency and competitive advantage. In addition, Agency Theory was used in 8 articles (16.00%) that described the importance of supervisory mechanisms, owner-management relationships, and transparency in improving the effectiveness of corporate governance.

The use of various theories shows that the financial efficiency of the maritime industry is



not only influenced by the ability to reduce costs, but also by the organization's ability to develop strategic capabilities. The perspective of Dynamic Capabilities Theory describes the company's ability to adapt to changes in the business environment, while Management Control Systems emphasizes the importance of control systems in ensuring effective strategies. Meanwhile, the concept of cost management provides an understanding of how companies optimize operational activities to improve financial performance.

Table 3. Distribution of Research Countries

Country	Number of Articles	Percentage
China	14	28,00%
English	7	14,00%
Singapore	5	10,00%
United States	5	10,00%
The Netherlands	4	8,00%
Norway	3	6,00%
Japan	3	6,00%
South Korea	2	4,00%
Germany	2	4,00%
Indonesia	1	2,00%
Other countries	4	8,00%
Total	50	100%

Source : Data processed, 2026

Based on Table 3, the most research on financial efficiency in the maritime industry was conducted in China with a total of 14 articles (28.00%). The high number of studies from China is related to the country's position as one of the world's largest maritime trade centers as well as the rapid development of the shipping and port industry. The United Kingdom and Singapore are the next countries with contributions of 7 articles (14.00%) and 5 articles (10.00 each), indicating that countries with strong international maritime activities have a great concern for improving the efficiency of shipping companies.

The geographical distribution shows that research on the maritime industry is developing,



especially in countries that have advanced shipping, port, and logistics sectors. Differences in economic characteristics, transportation policies, and technology adoption rates cause company management approaches to vary between countries. This condition provides perspective that the strategy to increase financial efficiency needs to be adjusted to the business environment and industry characteristics of each region.

Table 4. Distribution of Research Methods

Research Methods	Number of Articles	Percentage
Quantitative	24	48,00%
Optimization Modelling	9	18,00%
Literature Review	8	16,00%
Qualitative	6	12,00%
Mixed Method	3	6,00%
Total	50	100%

Source : Data processed, 2026

Based on Table 4, the quantitative method is the most widely used approach in research on the financial efficiency of the maritime industry with a total of 24 articles (48.00%). The dominance of this method shows that research in this sector uses a lot of empirical approaches to test the relationship between governance mechanisms, control systems, cost strategies, and company performance. In addition, the optimization modelling method was used in 9 articles (18.00%) because many maritime studies focused on route optimization, fleet utilization, energy consumption, and operational cost efficiency.

The literature review/systematic review approach was used in 8 articles (16.00%) to evaluate the development of the concept and identify research gaps in the maritime sector. Meanwhile, a qualitative method of 6 articles (12.00%) was used to understand management practices, strategic decision-making, and corporate governance implementation. The mixed method method of 3 articles (6.00%) was used to combine quantitative analysis and in-depth understanding of organizational phenomena. The variety of methods shows that the study of the financial efficiency of the maritime industry requires a diverse approach because it involves strategic, operational, and technological aspects.

Table 5. Distribution of Research Sectors



Research Sector	Number of Articles	Percentage
Shipping and Sea Transport	15	30,00%
Ports and Maritime Terminals	8	16,00%
Maritime Supply Chain and Logistics	7	14,00%
Energy, Fuel, and Maritime Decarbonization	6	12,00%
Ship Fleet Management	5	10,00%
Digital Technology and Maritime Information Systems	4	8,00%
Shipyards Industry	3	6,00%
Other Maritime Sectors	2	4,00%
Total	50	100%

Source : Data processed, 2026

Based on Table 5, the shipping and marine transportation sector is the research sector with the largest contribution of 15 articles (30.00%). The dominance of these sectors shows that financial efficiency is a major concern in shipping activities because companies face high cost pressures, market uncertainty, and the need for resource optimization. Furthermore, the port and maritime terminal sector with 8 articles (16.00%) and maritime supply chain and logistics with 7 articles (14.00%) show that efficiency improvement does not only focus on ship activities, but also includes the management of distribution networks and supporting infrastructure.

The distribution of research sectors shows that the study of the financial efficiency of the maritime industry develops in various interrelated activities. The energy sector and maritime decarbonization are of concern because changes in environmental regulations encourage companies to invest in technology that requires strategic cost control. In addition, research on fleet management, digital technology, and the shipbuilding industry shows that improving financial performance requires integration between resource management, technological innovation, and organizational control systems. This shows that financial efficiency in the maritime industry is a cross-sectoral issue and requires a comprehensive management approach.

Table 6. Main Research Results



Main Research Results	Number of Articles	Percentage
Optimization of operational costs improves the efficiency and financial performance of maritime companies	12	24,00%
The use of digital technology and data analytics supports strategic decision-making	9	18,00%
Corporate governance mechanism strengthens corporate supervision and accountability	8	16,00%
Route, fleet and energy consumption optimization strategies reduce operational costs	7	14,00%
Strategic control system improves management effectiveness	6	12,00%
Integration of sustainability and green technology supports long-term efficiency	5	10,00%
Supply chain collaboration enhances the flexibility and resilience of maritime businesses	3	6,00%
Total	50	100%

Source : Data processed, 2026

Based on Table 6, the results of the main study show that the most dominant theme is the optimization of operational costs as a factor that contributes to the improvement of the financial efficiency of maritime companies with a total of 12 articles (24.00%). The findings show that cost control is a major concern because the shipping industry has high cost characteristics, especially in fuel consumption, ship maintenance, and logistics activities. In addition, as many as 9 articles (18.00%) show that the use of digital technology and data analytics increasingly plays a role in supporting more accurate and efficient decision-making.

Overall, the results of the study show that the improvement of the financial efficiency of the maritime industry is influenced by a combination of governance mechanisms, control systems, and cost management strategies. Research on corporate governance as many as 8 articles (16.00%) shows that the supervisory and accountability structure of the organization has an



important role in ensuring the effective use of resources. Meanwhile, the optimization strategy of routes, fleets, and energy consumption as many as 7 articles (14.00%) shows that operational decisions are closely related to the company's ability to control costs.

In addition, the implementation of strategic control systems in 6 articles (12.00%) shows that maritime companies need a performance measurement and evaluation system to adapt their strategies to changes in the business environment. Sustainability and green technology factors in 5 articles (10.00%) are also a concern because companies need to balance economic goals with environmental demands. The findings show that strengthening financial efficiency in the maritime industry does not only depend on reducing costs, but also requires integration between governance, technology, operational strategies, and organizational adaptability.

DISCUSSION

1. Dynamics of Financial Efficiency in the Maritime Industry

The development of the global maritime industry faces increasingly complex challenges, especially related to increased operational costs, market uncertainty, and changes in the business environment that affect the company's sustainability. In these conditions, financial efficiency is a strategic aspect that determines the ability of maritime companies to optimize the use of resources and maintain competitiveness. Financial efficiency is no longer only understood as an effort to reduce expenses, but develops into an organization's ability to balance cost control, risk management, and long-term economic value creation. Previous research has shown that shipping companies need adaptive financial management strategies to deal with external pressures and changes in industry dynamics (Bai et al., 2022; Papathanasiou et al., 2025; Wu, 2026).

The results of the literature review show that one of the main factors affecting financial efficiency in the maritime industry is the high complexity of operational cost structures. Shipping companies must manage various cost components such as fuel consumption, fleet maintenance, port costs, and logistics activities that directly affect profitability. Energy price volatility and changing international trade conditions cause companies to develop a more flexible cost control approach. Studies show that data-driven financial and operational risk management can help companies understand cost patterns and improve the effectiveness of strategic decision-making (Bai et al., 2022; Yan et al., 2021; Wang et al., 2026).

In addition to internal factors, external pressures such as changes in environmental regulations, geopolitical risks, and economic uncertainty are also important factors in



determining the financial efficiency of maritime companies. Companies are not only required to increase profitability, but must also adapt business strategies to the demands of sustainability and industrial transformation. Research shows that climate risks, changes in carbon policies, and the need for new technology investments can impact the cost structure and financial decisions of shipping companies. Therefore, the organization's ability to anticipate changes is an important factor in maintaining long-term financial stability (Wu, 2026; Wang et al., 2025; Ye et al., 2026).

Research developments also show a change in approach to understanding financial efficiency in the maritime industry. Efficiency is no longer only seen from the company's ability to reduce costs, but also from the ability to integrate technology, operational strategies, and resource management optimally. The use of digital systems, data analysis, and sustainability strategies are starting to become an important part of improving the financial performance of maritime companies. Previous studies have shown that companies that are able to combine cost control with technological innovation have better ability to deal with industry competition and uncertainty (Ichimura et al., 2022; Zhao et al., 2026; Zhang et al., 2025).

Overall, the results of the SLR show that financial efficiency is a multidimensional concept that is influenced by operational, strategic, and external environmental factors. The maritime industry needs an approach that is not only oriented towards reducing costs, but also on improving the organization's ability to make information-based decisions and manage change. Thus, strengthening financial efficiency is an important foundation for maritime companies to achieve business sustainability through a combination of cost control, strategy adaptation, and organizational capability development (Bai et al., 2022; Papathanasiou et al., 2025; Niu et al., 2026).

2. The Role of Corporate Governance in Strengthening the Financial Efficiency of Maritime Companies

In the maritime industry, which has a high level of investment and great operational complexity, corporate governance is one of the important mechanisms in ensuring that corporate resources are managed effectively and responsibly. Corporate governance plays a role in creating a supervision, transparency, and accountability structure that supports the quality of financial decision-making. The implementation of good corporate governance allows maritime companies to reduce potential conflicts of interest between owners and management and ensure that strategic decisions are aligned with the goals of improving corporate performance. Previous research has shown that governance mechanisms are closely



related to the effectiveness of organizational control and the company's ability to optimally manage resources (Andrikopoulos et al., 2021; Chen et al., 2026; Almasabi et al., 2026).

The results of the literature review show that one of the main contributions of corporate governance to financial efficiency is through improving the quality of supervision of investment decisions and the use of company resources. In the maritime industry, decisions related to ship purchases, fleet development, technology investments, and expansion strategies require strong control because they involve large investment values. Effective governance mechanisms help companies evaluate the risks and economic benefits of each strategic decision. Studies show that a good supervisory structure can improve management discipline in allocating resources so as to support the achievement of better financial efficiency (Andrikopoulos et al., 2021; Chen et al., 2026; Seo et al., 2025).

In addition to the supervisory aspect, corporate governance also plays a role in increasing the transparency of information needed in the decision-making process. The availability of accurate information regarding financial conditions, operational performance, and business risks allows management to make more informed decisions. In maritime companies, transparency is becoming increasingly important because business activities are influenced by various external factors such as changes in energy prices, international regulations, and global trade conditions. Research shows that companies with stronger governance systems have better ability to manage uncertainty and improve the quality of strategic decisions (Almasabi et al., 2026; Chen et al., 2026; Wu, 2026).

The implementation of corporate governance in the maritime industry is also related to the company's ability to build long-term financial sustainability. Effective governance is not only oriented towards achieving short-term profits, but also considers risk management, regulatory compliance, and value creation for stakeholders. Maritime companies that have good governance mechanisms tend to be better able to adapt business strategies to changes in the industrial environment. This shows that corporate governance serves as an organizational foundation that connects the company's strategic goals with efficient resource management practices (Andrikopoulos et al., 2021; Seo et al., 2025; Almasabi et al., 2026).

Overall, the results of the SLR show that corporate governance is an important factor in strengthening the financial efficiency of the maritime industry through increased supervision, transparency, and quality of decision-making. Good governance allows companies to reduce inefficiencies, control the use of resources, and improve adaptability to changes in the business environment. Thus, strengthening financial efficiency in the maritime



industry does not only depend on operational strategies, but also requires a governance system that is able to ensure that all company activities run effectively, accountably, and are sustainability-oriented (Andrikopoulos et al., 2021; Chen et al., 2026; Seo et al., 2025).

3. The Role of Strategic Control Systems and Operational Cost Management in Improving the Financial Performance of the Maritime Industry

The increasingly dynamic development of the maritime industry causes companies to need a control system that is able to effectively connect business strategies with operational activities. In this context, strategic control systems serve as a mechanism that helps companies monitor performance, evaluate strategy achievements, and adjust decisions based on changes in the business environment. Strategic control systems allow maritime companies to integrate operational, financial, and market information so that the decisions taken become more accurate. Previous research shows that the use of information systems, data analysis, and digital technology can improve companies' ability to control operational activities and support the achievement of financial efficiency (Yan et al., 2021; Ichimura et al., 2022; Zhao et al., 2026).

The results of the literature review show that the application of strategic control systems in the maritime industry is evolving with the increasing use of digital technology and data-driven approaches. Shipping and port companies are starting to leverage big data analytics, ship monitoring systems, and real-time operational information to improve the quality of decision-making. The ability to process this information helps companies predict resource needs, evaluate fleet performance, and identify efficiency opportunities. Studies show that analytics and digitalization capabilities can improve organizational performance through improved accuracy in planning and controlling maritime business activities (Sugrue & Adriaens, 2021; Zhao et al., 2026; Wang et al., 2026).

In addition to the strategic control system, operational cost management is an important aspect in improving the financial efficiency of maritime companies. The shipping industry has a complex cost structure, especially related to fuel consumption, ship maintenance, fleet operational costs, and logistics activities. Therefore, companies need to implement cost management strategies that are able to optimize the use of resources without reducing service quality. Research shows that strategies such as shipping route optimization, ship speed regulation, and fleet management based on optimization models can contribute to cost reduction and increased operational efficiency (Bai et al., 2022; Luo et al., 2026; Guo et al., 2026).



Effective management of operational costs also relates to the company's ability to identify hidden sources of inefficiencies in the maritime chain of activity. Additional costs such as delays, storage, infrastructure utilization, and inefficiencies in logistics coordination can have a significant impact on a company's financial performance. Therefore, modern cost management approaches focus not only on reducing expenses, but also on increasing value through better planning and coordination of activities. Studies show that the integration between operational control, transportation network optimization, and resource management is able to improve the efficiency of maritime companies in a sustainable manner (Jelodari Mamaghani & Bouchery, 2026; Yan et al., 2021; Luo et al., 2026).

Overall, the results of the SLR show that strategic control systems and operational cost management have a complementary relationship in strengthening the financial efficiency of the maritime industry. The strategic control system provides information and evaluation mechanisms that support management decisions, while operational cost management implements efficiency strategies at the level of business activities. The combination of the two approaches allows maritime companies to increase productivity, reduce resource wastage, and maintain competitiveness in an increasingly competitive industrial environment (Wang et al., 2026; Guo et al., 2026; Jelodari Mamaghani & Bouchery, 2026).

4. Integration of Corporate Governance, Strategic Control Systems, and Operational Cost Management in Strengthening the Financial Efficiency of the Maritime Industry

The results of the literature review show that increasing financial efficiency in the maritime industry cannot be achieved through just one managerial approach, but requires integration between governance mechanisms, strategic control systems, and operational cost management. These three aspects have complementary roles in creating maritime companies that are able to optimize resources, control expenses, and make decisions more effectively. Corporate governance provides the basis through organizational oversight and accountability, while strategic control systems provide information that supports the decision-making process, and operational cost management ensures efficiency is applied in daily business activities. Previous research has shown that a combination of governance, technology, and operational strategy is an important factor in improving the financial performance of maritime companies (Andrikopoulos et al., 2021; Wang et al., 2026; Bai et al., 2022).

The integration of these three aspects shows a paradigm shift in the management of maritime companies from a traditional approach to an information-based strategic approach. Companies are no longer only focused on reducing costs, but are beginning to develop the



ability to understand operational patterns, predict market changes, and allocate resources more optimally. Technology-based control systems allow companies to obtain information faster and more accurately, while governance mechanisms ensure that the information is used in transparent and accountable decision-making processes. Studies show that the use of digital technology and analytical capabilities can strengthen the relationship between organizational control and the achievement of financial efficiency (Ichimura et al., 2022; Zhao et al., 2026; Sugrue & Adriaens, 2021).

In addition, the integration between governance and cost management also plays an important role in dealing with various external pressures affecting the maritime industry. Changes in energy prices, environmental regulations, supply chain disruptions, and global economic uncertainty require companies to have flexible decision-making systems. Through strong governance, companies can ensure that cost control strategies remain in line with the organization's long-term goals. Meanwhile, implementing operational optimization strategies such as fleet management, fuel efficiency, and route planning helps companies maintain a balance between cost savings and quality of service. Research shows that sustainability strategies and operational efficiency are important factors in strengthening the financial resilience of maritime companies (Luo et al., 2026; Ye et al., 2026; Niu et al., 2026).

Based on the results of the SLR, the integration of corporate governance, strategic control systems, and operational cost management forms a management framework that supports the improvement of the competitiveness of maritime companies. Governance functions as a steering mechanism that ensures business decisions are made effectively, a strategic control system helps organizations evaluate and adapt to changes, while operational cost management translates the strategy into efficiency practices. The relationship between these three components shows that financial efficiency is the result of an organization's ability to integrate aspects of supervision, information, and resource optimization simultaneously (Chen et al., 2026; Wang et al., 2026; Papathanasiou et al., 2025).

Overall, the research in this SLR shows that strengthening the financial efficiency of the maritime industry requires an integrated and sustainable approach. Companies that focus solely on reducing costs without paying attention to governance and control systems have the potential to face limitations in maintaining long-term performance. On the other hand, companies that are able to combine effective governance mechanisms, data-driven control systems, and optimal cost management strategies will be better able to deal with the dynamics of the global maritime industry. These findings provide a direction that future research can



further explore the relationship between technological innovation, sustainability, and management strategies in improving the financial efficiency of maritime companies (Zhang et al., 2025; Ye et al., 2026; Niu et al., 2026).

CONCLUSION

Based on the results of a Systematic Literature Review (SLR) of 50 international journal articles on strengthening financial efficiency in the maritime industry, this study shows that financial efficiency is influenced by the integration of corporate governance, strategic control systems, and operational cost management. Financial efficiency is not only related to cost reduction, but also the ability of companies to optimize resources, improve the quality of decisions, and deal with increasingly complex changes in the maritime business environment (Bai et al., 2022; Papathanasiou et al., 2025; Wu, 2026).

The results of the study show that corporate governance plays a role in increasing transparency, accountability, and effectiveness of maritime company supervision. In addition, strategic control systems support information-based decision-making through the use of digital technology and data analysis. Meanwhile, operational cost management is an important strategy in controlling costs through fleet optimization, energy consumption, and logistics activities to improve the company's financial performance (Andrikopoulos et al., 2021; Zhao et al., 2026; Luo et al., 2026).

This research also shows that strengthening financial efficiency requires the ability of organizations to adapt to changes in technology, regulations, and global market conditions. Based on the perspective of Resource-Based View and Dynamic Capabilities Theory, companies that are able to develop internal resources and transform strategies have better ability to maintain competitive advantages. The integration of governance, strategic control, and cost management are the main factors in building an efficient and sustainable maritime industry (Wang et al., 2026; Zhang et al., 2025; Ye et al., 2026).

RESEARCH LIMITATIONS

This research has limitations because the SLR approach is highly dependent on the quality and availability of previous literature. The articles analyzed come from various countries, maritime sectors, research methods, and theoretical approaches so that they can affect the level of generalization of the study results. In addition, this study has not conducted a direct empirical test of the relationship between corporate governance, strategic control systems, operational cost management, and financial efficiency in certain maritime companies.



SUGGESTIONS

Further research is recommended to conduct an empirical study on the relationship between corporate governance, strategic control systems, operational cost management, and financial efficiency in various types of maritime companies. Future research can also consider technological factors such as artificial intelligence, machine learning, and big data analytics in supporting financial decision-making. In addition, sustainability aspects such as energy efficiency and decarbonization can be developed as additional variables.

PRACTICAL & THEORETICAL IMPLICATIONS

In practical terms, this study provides the implication that maritime companies need to strengthen their internal management systems through a combination of effective governance, technology-based control systems, and cost management strategies. Companies not only need to focus on reducing costs, but also improving their ability to optimize resources and make accurate informed strategic decisions to improve financial efficiency.

Theoretically, this research contributes to the development of strategic management studies by explaining that the financial efficiency of the maritime industry is formed through the interaction between internal resources and organizational adaptability. The perspective of Resource-Based View and Dynamic Capabilities Theory shows that technology, information systems, and organizational capabilities are important factors in creating competitive advantage and sustainability of the maritime business.

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