The Impact of International Financial Reporting Standards on Information Asymmetry

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Abstract: The problem of business transparency for various groups of stakeholders has become more acute in the current context of growing economic uncertainty in the world. The IFRS implementation is one of the tools for improving the availability and quality of information, which is the special focus. The aim of the article is to determine the impact of the implementation and application of International Financial Reporting Standards (IFRS) on business transparency and the quality of information available to stakeholders for making their decisions. The study involved the synthesis method to identify trends in the development of the sample companies in the context of IFRS implementation, as well as economic and statistical methods to process the financial reporting data. The correlation and regression formed the methodological background of the analysis to determine the separate and joint impact of factors on the information asymmetry level, which is represented by the Cost of Capital (COC) of the selected companies within the scope of this study. Correlation and regression of the studied companies showed a decreased Cost of Capital of the companies after the IFRS implementation compared to the situation before IFRS implementation, which indicates reduced information asymmetry. The analysis of the data of the selected companies revealed that there is an inverse relationship between the information asymmetry level and the Debt to Equity ratio of the company, as well as between the information asymmetry level and the Earnings per Share of the company. Besides, the study of the impact of digitalization and the COVID-19 pandemic on the information asymmetry level is of interest to the researchers.

Keywords: Information asymmetry, International financial reporting standards, Transparency, Cost of Capital, Debt to Equity ratio.

JEL Classification: D24, L15.

1. INTRODUCTION

Information asymmetry is a phenomenon built into any economic system. However, the level of the information system may vary depending on a number of exogenous and endogenous factors. In economic theory, the key consequences of information asymmetry include high cost of capital, financial market illiquidity, and reduced investment activity. In gen eral, a reduced information asymmetry level is beneficial for the state of economic activity in the national and world economy because this state allows a wide range of stakeholders to make more informed decisions. This is manifested through better expectations of investors, the development of the securities market, greater trust of investors in the company, the growth of the profitability rate in the long run, the high quality of the financial results of companies in different sectors of the economy.

The introduction of international financial reporting standards (IFRS) by governments and their application by companies is one of the drivers of reducing information asymmetry. IFRS were proposed by the independent body *International Accounting Standards Board* (IASB) in 2006 (IFRS, 2020). According to Deloitte (2021), there are more than 160 countries of the world which have fully or partially adopted the

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decision to introduce IFRS reporting. Conceptually, IFRS represents a transition from rule-oriented to principles-oriented in the field of financial reporting, which contributes to the harmonization of accounting and financial data in the world (IFRS, 2022).

IFRS promotes transparency and comparability of accounting and financial data of companies. This stimulates greater transparency of companies and enables a better decision-making process by stakeholders, in particular, investors. This makes financial data reported under IFRS more valuable. IFRS, unlike national financial reporting standards, focuses on fair value. As a result, IFRS are able to realistically and timely incorporate the consequences of economic phenomena into the financial statements of companies. The introduction of IFRS contributes to the growth of the liquidity of the country's financial market, but primarily this is characteristic of jurisdictions with powerful legal institutions capable of guaranteeing full companies' compliance with the introduced financial reporting standards.

All the above-mentioned characteristics of IFRS together make companies more open, thus stimulating healthy competition — the efficiency of companies increases, stakeholders can make more informed decisions about companies, and the cost of capital for companies decreases. It also makes the necessary information more accessible to a wide range of external stakeholders as the basis for making their decisions. However, the impact of the implementation and application of IFRS on the information asymmetry level in individual countries is poorly studied. In particular, the problem of the effectiveness of the impact of IFRS on the information asymmetry separately in developed and developing countries has not been adequately explored. The problem of whether the implementation and application of IFRS has a significant impact in jurisdictions where national financial reporting standards are close or distant from IFRS in terms of form and substance is also poorly studied. The literature also does not provide any clear answer to the problem of mandatory and optional application of IFRS by companies, namely the approach under which the quality of IFRS implementation is better, and the impact of IFRS on reducing the information asymmetry level is more or less significant. All this necessitates the study of the impact of IFRS on the information asymmetry level.

1.1. The Aim of the Research

The aim of the research is to determine the impact of the implementation and application of IFRS by companies on the availability and quality of information for management decisions of external stakeholders. The aim involved a number of objectives:

1. Analyse the impact of IFRS on the information asymmetry of selected companies using regression;

2. Identify the impact factors on reducing the information asymmetry level in the context of the IFRS implementation;

3. Make suggestions for improving the practice of managing factors that contribute to reducing the information asymmetry level in terms of IFRS.

2. LITERATURE REVIEW

There is a significant body of research on the impact of IFRS on information asymmetry. A number of works study the economic essence of information asymmetry. Harakeh (2020) notes the negative impact of information asymmetry on the investment activity of economic agents. In particular, the consequence of the information shock is a reduction in corporate investments. Antounian, Dah and Harakeh (2021) study the "principal-agent" conflict, which is one of the vivid manifestations of information asymmetry in the context of the performance of companies and their financial results. Chakraverty and Agarwal (2020), Solodovnik, Zhemoyda, Soroka, Matsola, Tytarchuk and Bielialov (2021) examines information asymmetry in the context of economic growth rates in general and corporate dividend policies in particular. Tawiah and Gyapong (2021), Sysoyeva, Bielova, Ryabushka and Demikhov (2021) research the problem of the quality of the functioning of institutions and the availability of financing in the context of information asymmetry.

A number of works deal with the range of factors affecting information asymmetry. According to Harakeh, Lee and Walker (2019), the information asymmetry level is influenced by both financial market regulations and IFRS regulations. Bar-Yosef, D'Augusta and Prencipe (2019) consider IFRS as a key driver of improving the state of information availability of private companies, which contributes to a general reduction in the information asymmetry level. De Moura and Gupta (2019) study investor protection mechanisms as a factor in reducing the information asymmetry level. Odia and Osazevbaru (2018) note in the context of the problem of information asymmetry that the "principal-agent" conflict characteristic of the phenomenon of information asymmetry stimulates the potential risk that the company's management may intentionally or unintentionally distort the company's financial data. According to Odia and Osazevbaru (2018), the aforementioned risk decreases with the transition from the application of national financial reporting standards to IFRS. Akisik (2020) studies the impact of IFRS and the rule of law on information asymmetry. Houcine, Zitouni and Srairi (2021) examine the problem of the impact of corporate governance in combination with the introduction of IFRS on information asymmetry on the example of companies from continental Europe.

Particular attention in the literature is paid to the problem of factors affecting information asymmetry in the context of small and medium-sized companies. Zahid and Simga-Mugan (2019) study the impact of applying IFRS as a driver of reducing the level of information asymmetry for small and medium-sized companies. Tawiah and Gyapong (2021) support the aforementioned findings, who consider the adoption of IFRS as a driver for reducing the information asymmetry level and, as a result, increasing the availability of financing for small and medium-sized companies.

One of the manifestations of the impact of IFRS on the information asymmetry level is the change in the cost of capital of companies. De Moura, Altuwaijri and Gupta (2020) study the mandatory adoption of IFRS as a driver of lower cost of capital for Brazilian companies, which indicates a reduction in the information asymmetry level. Harakeh et al. (2019) also note that the IFRS implementation and the reduction of the information asymmetry level helps to reduce the cost of capital, in particular, to attract equity capital, thus contributing to the development of the financial market and the real sector of the national economy. Bansal (2022) studies the impact of the IFRS implementation in public companies in India on the information asymmetry level in terms of the dynamics of capital costs and liquidity on the Indian stock exchange.

A number of studies deal with the specifics of the impact of the implementation and application of IFRS on information asymmetry. Abad, Cutillas-Gomariz , Sanchez-Ballesta and Yagüe (2018) note that the introduction of IFRS contributes to the increased comparability of financial information. Yousefinejad, Ahmad, Salleh, Rahim ana Azam (2018) draw attention to the fact that the information asymmetry reduced through the IFRS implementation fits into the framework of the signalling theory, which implies that the IFRS implementation sends a signal about the increased transparency and the reduction of costs for processing and analysing accounting information. Harakeh et al. (2019) note that the IFRS implementation in the EU in the early 2000's had a significant positive impact on the state of the financial market, the availability of financing, and the frequency of merger and acquisition contracts.

The study of Wahyuni, Puspitasari and Puspitasari (2020) reveal the impact of the IFRS implementation on the quality of financial data on the example of Indonesia, indicating the impact of IFRS on the information asymmetry level. Harakeh et al. (2019) also draw attention to the fact that the IFRS implementation has a significant impact on the level of information asymmetry by reducing git in countries where national financial reporting standards differ significantly from international standards. Odia and Osazevbaru (2018) prove that the quality of financial reporting improves as a result of IFRS implementation, which helps to reduce the information asymmetry level. In their work, Odia and Osazevbaru (2018) also emphasize that sound investment decisions are made with the availability of relevant information, which is facilitated by the use of IFRS. Hoti and Krasniqi (2022) note the growth of investors' interest in small and medium-sized companies as a result of the implementation and application of IFRS, which indicates the positive impact of the IFRS implementation on the information asymmetry. Coram (2018) emphasizes the importance of harmonizing financial reporting standards through IFRS implementation, which contributes to reducing the information asymmetry level.

The IFRS implementation is accompanied by other factors of reducing the information asymmetry level, namely, institutional factors: investors' rights protection, corporate governance, improvement of the tax system. Sellami and Gafsi (2018) study institutional factors (tax system, corporate governance) in the context of information asymmetry and IFRS implementation practices in developing countries. Pais and Bonito (2018) examine macroeconomic factors contributing to the adoption of IFRS, in particular, the institutional environment factor. According to Harakeh et al. (2019), IFRS contributes to the growing quality of accounting information, which leads to greater "normalization" of the state of the financial market, resulting in fewer overvalued and undervalued companies. In their work, Harakeh et al. (2019) emphasize that the impact of IFRS spreads through various channels in the context of reducing the information asymmetry level.

Bansal (2022) studies the IFRS implementation as a driver of reducing the information asymmetry level on the example of Indian companies and notes that the IFRS implementation in India played a significant role in reducing the information asymmetry level in the long run without a significant effect in the short term. Yousefinejad et al. (2018) point out that the problem of analysing the results of IFRS implementation in developing countries is poorly developed institution of corporate governance and investors' rights protection. On the other hand, the set of factors influencing the information asymmetry level mentioned above is significantly better in developed countries.

A number of studies deal with different effects of mandatory and voluntary implementation and application of IFRS. Opare, Houqe and Van Zijl (2020) note the growing success of transactions of companies on the financial market, which are focused on the additional issue of shares and the growth of additional equity capital in jurisdictions where the application of IFRS is mandatory. Mameche and Masood (2021) study the problem of the impact of the mandatory application of IFRS on macroeconomic dynamics, in particular the state of foreign direct investment. Bassemir (2018) studies the specifics of the voluntary application of IFRS on the example of German companies in terms of such factors as the company's debt burden, its management system, and the complexity of the organizational structure.

The researchers provided significant findings on the issues of the practice of implementing IFRS and prospects for their development. Gonçalves, De Moura and Motoki (2022) note Brazilian companies name an adequate process of implementing new financial reporting standards among the key factors contributing to the successful IFRS implementation. Yousefinejad et al. (2018) note that the implementation of new accounting standards entails additional costs, which should be taken into account by company management. Becker, Bischof and Daske (2021) study the issues of innovative potential in the development and IFRS implementation, namely, digitalized reporting (*XBRL*), standardized sustainability reporting (the so-called *ESG*). Yousefinejad et al. (2018) emphasize the importance of a sustainable approach to IFRS implementation, supported by the obligation to apply and maintain these standards. This promotes full implementation and actual application of IFRS.

There is a significant body of works on the issue of IFRS implementation in terms of reducing the information asymmetry level in individual regions and countries. Yousefinejad et al. (2018) determined that the IFRS implementation in the ASEAN region (the Southeast Asia) contributes to the growing foreign direct investment as a result of reduced information asymmetry level. Yousefinejad et al. (2018) mention acceptability for a wide range of stakeholders, which is not limited to the national government, among the advantages of implementing IFRS. Abad et al. (2018) write on the positive impact of the introduction of IFRS on reducing the infor-

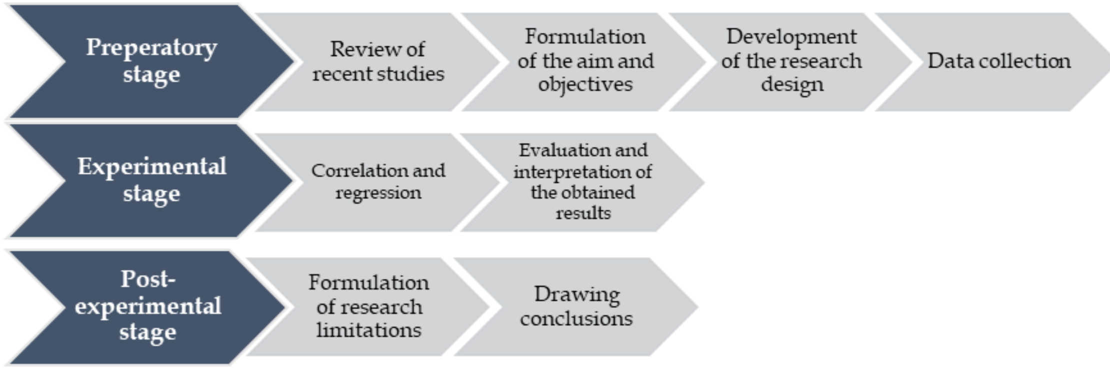

Fig. (1). Visualised research design.

mation asymmetry level is given on the example of Spain, where both national and international standards were actively used. At the same time, the national financial reporting standards in Spain are less understandable for stakeholders compared to IFRS. This testifies to the positive role of IFRS in increasing the transparency of companies. In France, researchers Harakeh et al. (2019) record an intensification of the activity in the financial market as a result of the introduction of IFRS in 2005. In particular, the number of transactions from the additional issue of shares increased. Researchers Harakeh et al. (2019) also found that the number of cases in the French financial market when the actual share price was lower than the forecast decreased after IFRS implementation, which indicates a positive impact of the IFRS implementation on the information asymmetry level. According to Harakeh et al. (2019), the forecasts of financial market analysts have become more adequate to the real situation as a result of the retreat from the accrual principle in income management (which is characteristic of national financial reporting standards) to real income management (in accordance with IFRS), which contributes to increased correspondence of projected financial results of the company with actual ones.

In Europe, a number of researchers study the practice of IFRS implementation and its impact on information asymmetry. Coram (2018) studies the issues of the introduction of IFRS in Italy and their impact on the state of information asymmetry of Italian companies. Bassemir (2018) investigates the issue of voluntary application of IFRS by companies in Germany and its impact on the information asymmetry level. Houcine et al. (2021) also dealt with the above-mentioned problem and examined the impact of IFRS on the state of information asymmetry in a number of companies from continental Europe. A number of researchers studied the IFRS implementation and their impact on information asymmetry in the Asian region. Adhikari, Bansal and Kumar (2021) examine the issue of accounting data quality in the context of IFRS implementation in India. Bansal (2022) also examines the issues of IFRS implementation in Indian public companies in the context of the dynamics of Cost of Capital and liquidity on the stock exchange in India.

Kaushalya and Kehelwalatenna (2020) found the positive impact of IFRS adoption for Sri Lankan companies. Wahyuni et al. (2020) study the experience of IFRS implementation in Indonesia, in particular, the impact on the quality of financial data of Indonesian companies. A number of studies dealt with the issues of IFRS implementation practice and their impact on information asymmetry in South America. De Moura and Gupta (2019) examine the implementation and application of IFRS in South America, namely Argentina, Brazil, Mexico, Peru, Chile. Gonçalves et al. (2022) examined the issues of IFRS implementation in Brazil and their impact on the state of information asymmetry in Brazilian companies.

Gonçalves et al. (2022) also examine the issues of IFRS implementation in Brazil with a focus on supporting this process. Mameche and Masood (2021) studied the issues under research on the example of the Persian Gulf region. The work of Mameche and Masood (2021) covers the impact of the mandatory IFRS implementation on the state of information asymmetry in a number of countries in the Persian Gulf region. Khlif, Ahmed and Alam (2020) examined the above issues in the African region. They examine the practice of implementing IFRS in the region of French-speaking Africa, namely in Algeria, Morocco, and Tunisia (Khlif et al., 2020).

3. METHODS

3.1. Research Design

Fig. (**1**) shows the main stages of the research. The first - preparatory - stage involved a study of recent works that consider the impact of IFRS on the information asymmetry level. The aim and objectives of the research were formulated on the basis of a critical assessment of the results of previous studies. The next component of the preparatory stage is the development of the research design and the collection of raw data for further processing and use.

The second stage of the study involves correlation and regression analysis, as well as interpretation of the results obtained. The final stage of the research involves specifying the methodological and implementation limitations of the conducted research and drawing conclusions of the research.

3.2. Objectives

The aim set in the research involves the following objectives:

- Analyse the impact of IFRS on the information asymmetry of a sample of companies through regression analysis;

- Identify influencing factors on reducing the information asymmetry level in the context of the IFRS implementation;

- Provide suggestions for improving the practice of managing factors that contribute to reducing the information asymmetry level in terms of IFRS.

3.3. Sample

The analysis of the data of the selected companies, which is designed to determine the impact of the introduction of IFRS on the information asymmetry level is the basis of the study. The sample includes the leading Singapore companies (a total of 30 companies), which are open joint-stock companies, regularly publish financial statements, and have a high quality of information disclosure for external stakeholders. This volume of a sample is sufficient for the purposes of analysing the factors of the company's exogenous and endogenous environment. The sample consists of the following companies:

1. DBS Group Holdings Ltd. (Singapore);
2. Sea Limited (Singapore);
3. Oversea-Chinese Banking Corporation Limited (Singapore);
4. United Overseas Bank Limited (Singapore);
5. Wilmar International Limited (Singapore);
6. Singapore Airlines Limited (Singapore);
7. CapitaLand Integrated Commercial Trust (Singapore);
8. Grab Holdings Limited (Singapore);
9. Singapore Technologies Engineering Ltd (Singapore);
10. Keppel Corporation Limited (Singapore);
11. Jardine Cycle & Carriage Limited (Singapore);
12. Ascendas Real Estate Investment Trust (Singapore);
13. Flex Ltd. (Singapore);
14. Great Eastern Holdings Limited (Singapore);
15. Genting Singapore Limited (Singapore);
16. Mapletree Logistics Trust (Singapore);
17. BOC Aviation Limited (Singapore);
18. City Developments Limited (Singapore);
19. Olam Group Limited (Singapore);
20. UOL Group Limited (Singapore);
21. Suntec Real Estate Investment Trust (Singapore);
22. Sembcorp Industries Ltd (Singapore);
23. Venture Corporation Limited (Singapore);
24. Frasers Logistics & Commercial Trust
25. SATS Ltd. (Singapore);
26. Keppel REIT (Singapore);
27. Kulicke and Soffa Industries, Inc. (Singapore);
28. Kenon Holdings Ltd. (Singapore);
29. NetLink NBN Trust (Singapore);
30. ComfortDelGro Corporation Limited (Singapore).

This sample is sufficient for the purposes of identifying the impact of factors on the Cost of Capital of companies, which reflects the state of information asymmetry within the scope of this study. The results of the impact of IFRS on selected companies were studied by analysing the official financial statements of these companies — by identifying trends before and after the introduction of IFRS. In Singapore, IFRS were mandatory implemented in 2018 (IFRS, 2022; Deloitte, 2021).

3.4. Methods

In order to study the problem of the impact of IFRS on information asymmetry, this research involved the method of synthesis to identify the development trends of the selected companies in the context of the IFRS implementation, as well as economic and statistical methods to process the financial reporting data of the selected companies.

The methodological background of the analysis consists of correlation and regression analysis to determine the separate and joint influence of factors on the information asymmetry level, as well as to quantify this impact.

The dependent variable under study is the information asymmetry level, which is represented in this study by the Cost of Capital (COC).

Independent variables are represented by:

1. SIZE (Company Size) – company asset size;
2. GROWTH (Sales Growth) –company's sales growth;
3. LEVERAGE (Leverage) – company's debt to equity ratio;
4. OCF (Operating Cash Flow) – operating cash flow;
5. EPS (Earnings per Share) – earnings per share.

The regression equation is as follows:

$$COCi,t = \beta 0 + \beta 1 \times SIZEi,t + \beta 2 \times GROWTHi,t + \beta 3 \times LEVERAGEi,t + \beta 4 \times OCFi,t + \beta 5 \times EPSi,t \quad (1)$$

The analysis of factors based on the data of the financial statements of the selected companies was carried out for 2018-2021. Table **1** provides an explanation of the analysed factors. *R*, *The Yahoo! Finance app*, *MS Excel* software packages were used in the research for analysing the data of the financial statements of the selected companies.

4. RESULTS

We will consider the impact of the implementation and application of IFRS on the information asymmetry level based on the data of the selected companies. Regression analysis of the data of the selected companies revealed the following:

1. The correlation analysis revealed the strongest direct relationship between the company's size (SIZE) and operating cash flow (OCF) with the cost of capital (COC) of the selected companies;

Table 1. Variables used in the economic and statistical analysis of selected companies.

Variable	Comment	Calculation Formulae
COC	Cost of Capital	(Earnings per share t - Earnings per share t-1) / Share price t) ^ 0,5
SIZE	Company Size	ln (Company size t)
GROWTH	Sales Growth	Net sales t / Net sales t-1
LEVERAGE	Leverage	Debt t / Equity t
OCF	Operating Cash Flow	Operating Cash Flow t / Assets t
EPS	Earnings per Share	Net income t / Average outstanding shares of the company t

Source: prepared by the author.

2. Correlation analysis should an inverse relationship between the company's debt to equity ratio (LEVERAGE) and the cost of capital (COC) of the selected companies;

3. The analysis of descriptive statistics showed that the cost of capital of the selected companies decreased after the mandatory IFRS implementation, which indicates a reduction in the information asymmetry level under the impact of IFRS;

4. The least squares regression analysis revealed that the following factors have a direct relationship with the cost of capital (COC): the company's sales growth (GROWTH); the company's size (SIZE); operating cash flow (OCF). In turn, the following factors have an inverse relationship: the company's debt to equity capital (LEVERAGE); the company's earnings per share (EPS).

5. Least squares regression analysis showed that the company's sales growth (GROWTH) and operating cash flow (OCF) have the strongest direct relationship with cost of capital (CCO); the company's debt to equity capital (LEVERAGE) has the strongest inverse relationship.

Based on the data of the selected companies, regression analysis was performed using the least squares method. This regression analysis is designed to determine the impact of a number of factors on the cost of capital, which reflect the state of information asymmetry within the scope of this analysis. An increased cost of capital of the selected companies means an increases information asymmetry level, and vice versa. The regression equation is as follows:

$$COC_{i,t} = 2.7359 + 0.1354 \times SIZE_{i,t} + 1.6915 \times GROWTH_{i,t} - 3.6827 \times LEVERAGE_{i,t} + 1.5363 \times OCF_{i,t} - 0.0361 \times EPS_{i,t} \quad (2)$$

We will describe the results of least squares regression based on the above equation. The impact of 5 variables on the cost of capital of selected companies was studied, which measures the information asymmetry level within the scope of this study. The analysis found that three of five variables had a direct relationship with the cost of capital, and two variables had an inverse relationship. The company's sales growth (GROWTH); the company's size (SIZE); operating cash flow (OCF) had a direct relationship with the cost of capital of the selected companies. The debt to equity ratio (LEVERAGE), as well as the company's earnings per share (EPS) were inversely related to the cost of capital of selected companies. The growth of the company's sales (coefficient: 1.6915), as well as operating cash flow (coefficient: 1.5363) had the strongest direct relationship with the cost of capital of the companies in the sample, and hence with the information asymmetry level. The company's debt to equity ratio (coefficient: -3.6827) had the strongest inverse relationship with the cost of capital of the selected companies and with the information asymmetry level.

This means that for 2018-2021, with the increase in the company's debt to equity ratio, as well as earnings per share, the cost of capital of the selected companies decreases, which means a reduction in the information asymmetry level. We can conclude that with greater involvement of loan financing, the company becomes more transparent and open to a wide range of external stakeholders. This, in turn, contributes to reducing the information asymmetry level. Similarly, with the growth of the earnings per share, the company becomes more understandable for the market, a wider circle of external stakeholders pay more attention to it, in particular, the financial market infrastructure (rating agencies, financial market analysts, professional investors, specialized mass media, others), which contributes to the reduction of information asymmetry level.

We will describe the results of the correlation analysis (Table **2**). The correlation analysis carried out with the data of the selected companies is designed to reveal the dependence between individual impact factors on the information asymmetry level, which is represented by the capital cost of the selected companies within the scope of this analysis. The results of the correlation analysis showed the strongest direct relationship between the company's size (r: 0.1336), as well as operating cash flow (r: 0.1083) with the cost of capital of the selected companies. Correlation analysis also revealed an inverse relationship between the debt to equity ratio (r: -0.5626) with the cost of capital of the selected companies. This can be interpreted as a reduction in the level of information asymmetry due to greater involvement of debt financing — the company becomes more transparent to financial market players which provide it with debt financing after a detailed study of financial data and prospects for its development.

Let's consider the results of descriptive statistics (Tables **3**, **4**). The analysis of descriptive statistics showed that the cost of capital of the selected companies decreased after the mandatory IFRS implementation, which indicates a reduced in-

Table 2. Correlation matrix of variables based on the data of selected companies.

	COC	*SIZE*	*GROWTH*	*LEVERAGE*	*OCF*	*EPS*
COC	1.0000					
SIZE	0.1336	1.0000				
GROWTH	0.0972	0.0373	1.0000			
LEVERAGE	-0.5626	0.3234	-0.1221	1.0000		
OCF	0.1083	0.1278	0.0297	0.4050	1.0000	
EPS	-0.1221	0.0307	-0.2679	0.2566	0.3366	1.0000

Source: analysis based on selected companies' dataset IFRS (2020).

formation asymmetry level under the influence of IFRS. So, the mean of the cost of capital of the selected companies before the mandatory IFRS implementation is 3.8478, but the mean significantly decreased to 1.2806 after their implementation. The median cost of capital after the mandatory introduction of IFRS also significantly decreased from 0.1759 (before the mandatory IFRS implementation) to 0.0433 (Fig. **2**). This indicates a reduction in the information asymmetry level after the mandatory IFRS implementation in Singapore, which is reflected in the cost of capital of companies within the scope of this analysis.

Table 3. Descriptive statistics on the Cost of Capital before the mandatory IFRS implementation.

Variable *COC*	
Mean	3.8478
Median	0.1759
Minimum	0.0127
Maximum	20.6652

Source: analysis based on selected companies' dataset IFRS (2020)

Table 4. Descriptive statistics on capital costs after mandatory IFRS implementation

Variable *COC*	
Mean	1.2806
Median	0.0433
Minimum	-10.5384
Maximum	29.7369

In summary, the analysis showed that the information asymmetry level decreases after the mandatory IFRS implementation. Based on the analysis of the data of the selected companies, we come to the conclusion that the company's debt to equity ratio and earnings per share are the key factors affecting the Cost of Capital, which represent the information asymmetry level within the scope of this analysis. These variables have an inverse relationship with the cost of capital of the selected companies, which means decreased cost of capital, and reduced information asymmetry level with increased debt to equity ratio of the company and increased earnings per share. We can interpret it in such a way that the company becomes more understandable for external stakeholders with greater involvement of debt financing. This, in turn, leads to a reduction in the information asymmetry level. Similarly, with the growth of the company's earnings per share, the external stakeholders (financial institutions, financial market infrastructure, specialized mass media, professional and non-professional investors, others) concentrate more attention on the company. This entails a reduced information asymmetry level. Besides, the requirements for the quality and volume of disclosure of its data for the use of external stakeholders increase because of the strengthening of the company's market position and its presence on financial market platforms.

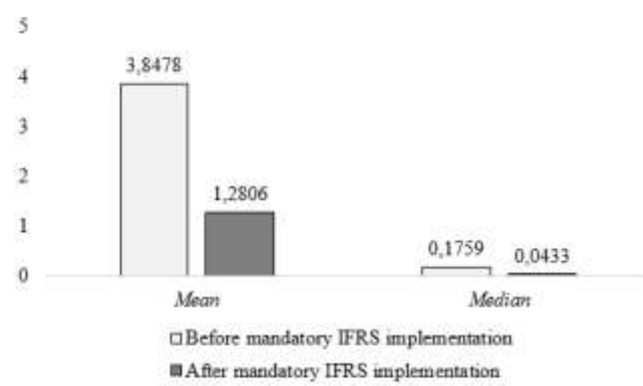

Fig. (2). Mean and median for the Cost of Capital of the selected companies before and after the mandatory IFRS implementation.

Source: analysis based on selected companies' dataset IFRS (2020).

5. DISCUSSIONS

So, the importance of the implementation and application of IFRS is established for reducing the information asymmetry level through the increased transparency for external stakeholders and the improvement of the quality of the company's financial information. The results of a sample of Singaporean companies in this study are supported by previously obtained results from both developed and developing countries.

This study indicates that the mandatory IFRS implementation stimulates the reduction of the information asymmetry level not only in the regions of Europe and North America, but also in Asia on the example of Singapore. In turn, Yousefinejad et al. (2018) determined that in the ASEAN region (Southeast Asia), IFRS implementation contributes to the growing transparency and comprehensibility of companies for a wide range of stakeholders, which leads to a reduced information asymmetry level. Adhikari et al. (2021) also investigated the quality of accounting and financial data in the context of the introduction of IFRS in India and determined that IFRS implementation contributes to reducing the information asymmetry level in this Asian country. This opinion is supported by Kaushalya and Kehelwalatenna (2020), who determined the positive impact of IFRS implementation in another Asian country — Sri Lanka — in terms of reducing information asymmetry. A similar opinion is held by Wahyuni et al. (2020), who studied the experience of implementing IFRS in Indonesia in terms of impact on the quality of accounting and financial data of Indonesian companies, which contributed to reducing the information asymmetry level.

The results of this study showed a decrease in the Cost of Capital after IFRS implementation, which is evidence of the impact of IFRS on the decrease in the information asymmetry level. In particular, De Moura et al. (2020) identified IFRS implementation in Brazil as a factor in reducing the cost of capital for Brazilian companies. In turn, Harakeh et al. (2019) note that IFRS implementation in France and a reduced information asymmetry level leads to a reduction in the cost of capital of French companies. Bansal (2022) also recorded the downward dynamics of capital costs of Indian companies in the long-term perspective in the context of the IFRS application in India.

This study found that IFRS requires more detailed and in-depth disclosures than national financial reporting standards. This contributes to greater transparency of companies and comprehensibility for groups of external stakeholders (financial market analysts, investors). This thesis is supported by Odia and Osazevbaru (2018), who investigated information asymmetry through the prism of the “principal-agent” conflict, which potentially pushes companies’ management to intentionally or unintentionally distort the company’s financial information, and determined that the risk of negative consequences from the “principal-agent” conflict decreases with the transition from the national financial reporting standards to IFRS.

This study emphasizes that the mandatory introduction of IFRS contributes to better quality of information disclosure, which entails a reduction in the information asymmetry level. Mandatory IFRS implementation encourages company management to disclose information more fully and deeply, as well as adhere to stricter standards. In turn, Opare et al. (2020) note the growth in the success of transactions of companies on the financial market in countries where IFRS is mandatory. Mameche and Masood (2021) also study the problem of the impact of the mandatory introduction of IFRS on the state of information asymmetry in the macroeconomic terms, in particular, on the state of foreign direct investment.

However, in contrast to the previous studies, the results of this study emphasize the importance of the company’s Debt to Equity ratio in reducing the level of information asymmetry. A developing company that has prospects in the market is disposed to greater attraction of debt financing. In turn, the company’s management is stimulated to greater transparency and openness to external stakeholders, on which the attraction of debt financing depends, namely financial institutions, financial market infrastructure, regulators, specialized mass media, financial market analysts, professional and non-professional investors. As a result, it reduces the information asymmetry level.

The limitations of this study are that the factors of the quality of corporate governance and the protection of investors’ rights were not considered, which also significantly affect the information asymmetry level in general and the Cost of Capital in particular. The fact that the issue of voluntary implementation and application of IFRS by companies in terms of the impact on information asymmetry was not covered is also the limitation of this study. Another limitation of this study is the use of data of companies from other jurisdictions.

Prospects for further research involve the extended study of factors affecting information asymmetry, in particular, the problems of the institutional environment of some jurisdictions. The study of the impact of digitalization on reducing the information asymmetry level is promising. The study of the impact of COVID-19 on the information asymmetry level is also of interest to the researchers.

CONCLUSIONS

The problem of growing information asymmetry is becoming particularly acute in the current conditions of growing uncertainty. The implementation and application of IFRS is one of the drivers of reducing the information asymmetry level. This study found the impact of IFRS implementation on the level of information asymmetry of Singaporean companies for 2018-2021, which was manifested in the reduction of the Cost of Capital of selected Singaporean companies that represent the information asymmetry level within the scope of this study. The results of the analysis confirm the reduction of the information asymmetry level as a result of the mandatory IFRS implementation. This indicates the positive impact of the mandatory IFRS implementation, in particular, on the example of Singaporean companies.

The results of the analysis of the selected companies prove the improved quality of the information load of financial reporting, which is evidenced by the decreased Cost of Capital of the selected companies. The results of the study emphasize the positive effect of the mandatory implementation and application of IFRS, which improves the quality of information disclosure of companies. The results of the analy sis showed that company's Debt to Equity ratio, as well as the company's Earnings per Share are the main factors affecting the information asymmetry level. There is an inverse relationship between the information asymmetry level and the above two factors. That is, the company becomes more transparent for external stakeholders with the growing weight of debt financing, which means a reduction in the information asymmetry level. Similarly, the company becomes more open to financial institutions, financial market infrastructure, regulators, financial market analysts, specialized media, professional and non-professional investors with the growth of the company's Earnings per Share. This results in a reduction in the information asymmetry level.

The practical value of the results obtained in this research is the study of the results of the mandatory IFRS implementation in Singapore. First, an additional contribution to the body of research on the issue of IFRS implementation in the Asian region and their impact on the information asymmetry level has been created. Second, the results of a recent mandatory IFRS implementation in an individual jurisdiction are presented, while most jurisdictions had already implemented IFRS more than a decade ago in the 2000's. Third, the importance of adequate involvement of debt financing as a driver of reducing the information asymmetry level by improving the state of availability and quality of information for stakeholders is emphasized.

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