

Financial Reporting Quality and Information Asymmetry: A Review of Empirical Literature

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Abstract

This paper reviewed empirical works conducted and published from 2008 to 2023 regarding impact of financial reporting quality (FRQ) on information asymmetry (IA) as implied by signaling theory. An integrative review approach was used. Findings of the paper are that despite being mixed and varied, the results obtained by most of the studies carried out are in agreement with signaling argument, that is, sending high quality financial information (FRQ) trims down the level of IA between corporate firms and financial statements users. Also, in line with the summary of major findings, the paper concluded that signaling theory best explain the relationship between FRQ and IA and thus, engaging in FRQ will substantially reduce asymmetric information in capital markets and other economic dealings involving corporate firms and financial statements users. Based on the conclusions drawn, the paper suggested that corporate firms should be engaging in timely reporting of relevant information to users of their financial statements.

Keywords: Financial Reporting Quality, Information Asymmetry, Signaling Theory, Financial Statements Users, Capital Market.

1.0 Introduction

The basic assumption underpinning perfectly competitive market argument is that information or access to relevant information by parties to any transaction is symmetrical, that is buyers/lenders are assumed to be in possession of same relevant information that sellers/borrowers have. However, in real world, information is asymmetric in most of the business, economic or financial dealings and thus, resulting in market failure, monopoly of knowledge, imbalance of power, and other information asymmetric problems/risks such as adverse selection and moral hazards. Information asymmetry (IA) is a situation in which there is imbalance of information acquisition between two parties to a transaction (Almurni, 2018). It is a circumstance in which the two parties are in possession of unequal or disproportionate information about the transaction. For instance, when a corporate firm intends to fund investment projects through issue of shares or bonds, the corporate management is more informed than the financiers about the true value of the shares or bonds issued, the prospects of the projects and the firm in general. Also, in financial markets, financial professionals can have more access to relevant information than retail investors.

In response to the problems and risks posed by asymmetric information in capital markets and in other economic transactions, Spence (1973) came up with the signaling theory, which posited that parties in any economic transaction could overcome asymmetric information problems by having one party sending a signal (piece of relevant information or quality report) that would disclose some relevant facts about him to the other party. In consequence, that other party would make use of the information and change/adjust his purchasing behavior by offering a higher price than if he had not received the signal. Hence, signaling according to Spence (1973) is an activity in which an individual provides others with

relevant information in order to lower the level of IA between them thereby influencing the degree of confidence they have in him.

Consistent with signaling arguments, corporate quality financial reporting can be seen as an activity in which companies attempt to reduce the extent of IA and influence the behavior of financial statements users by furnishing them with quality financial reports or information about results from its operating, investing and financing activities. A quality financial reporting as defined by Alizadeh et al. (2015) is the precision and exactness of financial reports in expressing information related to firm's operations, especially regarding expected cash flows, in order to inform investors. Hicks (2014) argued that FRQ is that which complies with standards, regulations and meets the needs of users. It is a financial reporting which provides useful information to investors, lenders and other creditors for making decisions about providing resources to the entity.

FRQ has been viewed from different viewpoints and so, can be seen to be affected by many factors. For instance, aside from level of compliance with relevant accounting standard as suggested by Hicks (2015), other factors that could affect the quality of financial reporting according to Thornton (2002) as cited in Poorzamani and Keivanfar (2015) include high quality accounting standards, creativity and attitudes of management, experience of audit committee and auditing quality. Thornton (2002) maintained that weakness in any one of these factors could affect quality financial reporting in negative direction.

Studies from different parts of the world have tried to test the validity of signaling arguments by empirically assessing the relationship or impact of FRQ on IA using different methodologies. This paper took a broader perspective of FRQ by considering its different aspects based on viewpoints of extant research studies and measurement methods used. Beest et al. (2009) broadly classified the methods developed so far into accrual models, value relevance models, methods focusing on specific elements in the annual report, and methods that operationalize qualitative characteristics of financial reports. Therefore, this paper is aimed at reviewing relevant empirical studies on FRQ and IA carried out and published from 2008 to 2023 with a view to knowing their position on the subject matter and eliciting information for developing financial reporting policies. Other sections of the paper covered review of empirical evidence, methodology, results and discussion and conclusions.

2.0 Literature Review

Research studies from both developed and developing countries have examined the effect of FRQ on IA. They looked at different dimensions of FRQ and also employed different measurements of both FRQ and IA. For instance, in a study of all New York Stock Exchange (NYSE) and National Association of Securities Dealers (NASD) firms during 1997-2006, Bhattacharya et al. (2008) established that Poor earnings quality had increased IA between sampled firms and their investors. The study further revealed that earnings quality influences IA for firms with poor information environments and that the negative relationship intensifies during earnings announcements.

In a study of 30 different industries listed on Tokyo Stock Exchange over a period of 12 years (1997 to 2008), Ajward and Takehara (2010) supported Bhattacharya et al. (2008) on one hand and disagreed with it on the other. Because, the study first documented a negative but insignificant correlation between earnings quality quantified using Modified Jones Model and IA proxied by adjusted version of Probability of Private Informed Trades (PIN Variable). In the second model, it established positive yet insignificant relationship between FRQ measured using Dechow and Dichev (2002) model and IA.

However, Ajward and Takehara (2010) attributed this positive association to stock market fluctuations during the study period.

Although Bhattacharya et al. (2008) and Ajward and Takehara (2010) used similar techniques of data analyses, other factors like differences in domain and variables measurement might be responsible for the varied results. This is evident from Ajward and Takehara (2010) work, in which as a result of employing Dechow and Dichev (2002) model while computing FRQ in the second model, the results from the study models failed to agree. Consistent with Bhattacharya et al. (2008), results found by Ma (2012) in a study of Chinese domestic A-share and foreign B-share markets revealed that high quality disclosure of public information could decrease uninformed (foreign) investors' information disadvantage compared to informed (local) investors. Also, Salehi and Rostami (2013) stance suggests that inadequate disclosure of relevant information could be among key factors responsible for widening the information asymmetry between contributors in the markets.

Cerqueira and Pereira (2013) examined the effect of FRQ on IA in European countries over a period of 9 years (2003 -2011). The study used earnings management (measured using modified Jones model with lagged return-on-assets) as a proxy for FRQ and then employed high-low spread estimator as a measure of IA. The results obtained from the regression analysis confirmed a positive relationship between FRQ and IA, hence, contradicting Bhattacharya et al. (2008), Salehi and Rostami (2013) and supporting Ajward and Takehara (2010) second model results.

In a related study of 37 companies, Purwanti and Kurniawan (2013) employed working capital accruals, disclosure index and abnormal returns as measures of earnings management, voluntary disclosure and IA respectively. In line with the positions reached in Salehi and Rostami (2013), the results obtained from the path analysis used showed that voluntary disclosure has negative and significant influence on the level of IA. However, regarding earnings management and IA, the results found showed positive and insignificant relationship between the variables.

Results from Nanyondo et al. (2013) correspond to the Salehi and Rostami (2013) findings there by conflicting Purwanti and Kurniawan (2013) stance. Nanyondo et al. (2013) is based on questionnaire administered in 2012 on various respondents from 132 small and medium enterprises registered in Kampala District of Uganda. After analyzing the data using ordinary least squares regression, the study established that FRQ has negative and significant impact on the level of IA. Subsequent studies like Yaghoobnezhad et al. (2013) and Bahmani (2014) have also confirmed the stance of Nanyondo et al. (2013) on the negative impact of FRQ on IA despite the fact that they covered longer period (2008 to 2012 and 2005 to 2012 respectively) and used secondary sources of data. Furthermore, Bahmani (2014) quantified IA using disclosure quality and Yaghoobnezhad et al. (2013) applied other techniques such as accruals quality, earnings predictability and earnings persistence as collective measures for FRQ.

In line with Bahmani (2014), research works such as Beshkooh et al. (2015) and Ajina et al. (2015) established that corporate firms with high disclosure quality enjoyed low IA. It should be noted that factors such as domain, similar measures of study variables and technique of data analysis might have strengthened the similarities in results found by Bahmani (2014), Beshkooh et al. (2015) and Ajina et al. (2015). For instance, Bahmani (2014) and Beshkooh et al. (2015) were carried out in Iranian companies listed on the Tehran Stock Exchange. Beshkooh et al. (2015) and Ajina et al. (2015) were conducted in Iran and France respectively. However, they used same technique of data analysis and Bid-ask spread in computing IA. They also used similar measurement of disclosure quality, that is, summary measure for

earnings quality in line with Statement of Financial Accounting Concept (SFAC) No. 8 and disclosure index based on Eng and Mak (2003) work respectively. Thus, there is possibility for the two studies to arrive at similar results.

Other studies that firmed up the stance of Bahmani (2014) are Alves et al. (2015), Abdelghany (2015), Turki et al. (2016) and Ali and Abdelfettah (2016). Alves, et al. (2015) covered Iberian Peninsula listed companies and used Bid-Ask Spread to measure the level of asymmetric information. Abdelghany (2015) on the other hand covered 60 companies listed on the Egyptian stock Market over a period 2002 to 2014 and used adverse selection component of the average daily bid-ask spread to measure IA. The study further employed an index of 160 factors developed by Akhtaruddin (2005) in order to measure the disclosure quality. However, Ali and Abdelfettah (2016) is a literature-based research and majority of studies reviewed were not relevant to the title of the work.

In an analysis of 232 Listed European banks over a period of 11 years (2005-2015), Eliasson (2016) established that Level of discretionary accounting affects IA in the equity markets. Using same measure of IA (that is, Bid-Ask Spread) as employed by Eliasson (2016); Shiri, Salehi and Radbon (2016) in the study of 102 companies listed on the Tehran Stock Exchange corroborated the position of Eliasson (2016) by confirming that disclosure quality measured using reliability and timeliness had negative effect on the level of IA during 2007–2014 study period. Also, Nurcholisah (2016) assessed similar relationship in 13 Indonesian pension fund companies. However, the study failed to show any evidence to suggest that FRQ (quantified using discretionary accruals and value relevance, timelines and conservatism proxies) could explain IA, possibly because of its inability to employ a clear measure of IA and appropriate methodology.

Results found by Akker (2017) from the study of 29 listed North-American companies that use integrated reporting in the period between 2010 and 2015 and 32 similar non-integrated reporting companies showed that integrated reporting (another aspect of quality reporting) has significant negative effect on IA measured using bid-ask spread. Harakeh (2017) found similar result, even though, the study focused partially on the effect of IFRS adoption on the level of asymmetric information.

Martins and Barros (2018) also upheld the stance reached in Akker (2017) and Harakeh (2017) by confirming that higher information quality has a tendency to mitigate the level of IA in the emerging market. The analysis covered 15,000 publicly traded firms selected from 22 countries that made up the Morgan Stanley Capital International (MSCI) Emerging Markets Index. Furthermore, Almurni (2018) found that the three measures of FRQ used in the study (relevance, timeliness and conservatism) have negative and significant effect on IA in manufacturing companies listed on Indonesian stock exchange. Similar results were also found by Abad et al. (2018), Odia and Osazevbaru (2018), Lee and Tong (2018) and Shatnawi (2018).

It should however be noted that Abad et al. (2018) specifically assessed the effect of real earnings management on Information Asymmetry by focusing on listed non-financial Spanish firms. Odia and Osazevbaru (2018) is literature-based research focusing on accounting conservatism and information asymmetry, and so, a library research approach was utilized. On the other hand, Shatnawi (2018) paid particular attention to electronic accounting disclosure and its impact on the level of IA in the Jordanian business environment.

In assessing the effect of FRQ on IA of listed Deposit Money Banks (DMBs) in Nigeria for a period of 10 years (2008 - 2017), Ayagi and Kurawa (2019) established that FRQ has negative and insignificant effect

on IA in the Overinvesting banks and thus supporting the position of Martins and Barros (2018). However, the result found in the Underinvesting banks showed otherwise. Because, it suggested that FRQ exerts positive and insignificant effect on IA thereby contradicting Martins and Barros (2018) in this respect.

Results found by Al-Bahedili et al. (2019) reaffirmed Ayagi and Kurawa (2019) findings in Overinvesting banks. It suggested that FRQ reduces the level of IA thereby allowing investors to monitor the actions of corporate managers of firms listed on Iraq stock exchange. Like Al-Bahedili et al. (2019); Al-Sakini (2019) found similar results after carrying out similar study in Jordanian commercial banks listed on Amman Stock Exchange (ASE). The conclusions drawn by Lateef et al. (2019) from a literature-based study of FRQ and IA in listed Nigerian firms also suggested that high FRQ could result in lower IA. The stance of Al-Bahedili et al. (2019) was also firmed up by Emawati and Budiasih (2020) in the study of 84 mining Companies listed on Indonesian stock exchange from 2013 to 2015.

After analyzing similar relationship in all listed companies on the Tehran stock exchange in the period from 2007 to 2012, Mehr (2020) results agreed with Emawati and Budiasih (2020). Same position was also reached by Suharsono et al. (2020) in research covering 225 manufacturing companies listed on the Indonesian stock exchange. This is despite differences in industry, measurement of study variable and time frame. For instance, Suharsono et al. (2020) used disclosure index to score the quality of voluntary disclosure. The study also covered 2016-2018 and employed Partial least square as a method of data analysis.

Sriani and Agustia (2020) also assessed the effect of voluntary integrated reporting on IA of 94 firms in Europe and Asia. After analyzing the study data using regression, the result found, though insignificant, confirmed the results found by Suharsono et al. (2020) and thus suggesting that IA measured using spread could be mitigated through quality and voluntary integrated reporting.

Septriani (2022) analysed the impact of internet financial reporting on the level of IA using listed Indonesian manufacturing companies as sample. Internet financial reporting was measured using index developed by Almilia (2009) and IA was quantified using bid-ask spread. Data for the study was obtained through Quantitative method and direct observation. After analyzing the data using OLS regression, the result found agreed with Suharsono et al. (2020) indicating that internet financial reporting has negative and significant impact on IA.

Results found by Viviani et al. (2022) also suggested that FRQ plays a role in improving the quality of corporate information and hence reducing the level of IA measured using bid-ask spread. The study by Viviani et al. (2022) was based on the firm-level data generated from 39 countries, over a period of nine years. Makhoul et al. (2022) made attempt to examine the relationship between earnings management and IA with audit quality as moderating variable. However, the choice of IA as an independent variable and earnings management as dependent variable contravened the signaling theory argument which implied that FRQ (which is at times measured using earnings management) should be considered logically as independent variable. Other related works on quality reporting include Razaq et al. (2023), Mohammed et al. (2023) and Orshi et al. (2023).

3.0 Methodology

The paper employed critical approach to literature review, since, its aim is to assess, critique, and synthesize literature on FRQ and IA. And as stated in the introductory section, the paper took a broader

perspective of FRQ by taking into account its different aspects based on different viewpoints of extant literature and measurement methods used. Relevant empirical research articles published from 2008 to 2023 in various Accounting and Finance journals were used as the data for the study. Summary of the results found by the reviewed works was first presented using table and then analyzed and discussed using percentages and dots through the use of Pie chart and Simple Dot plot.

4.0 Results and Discussion

Table 1: Summary of Empirical Findings

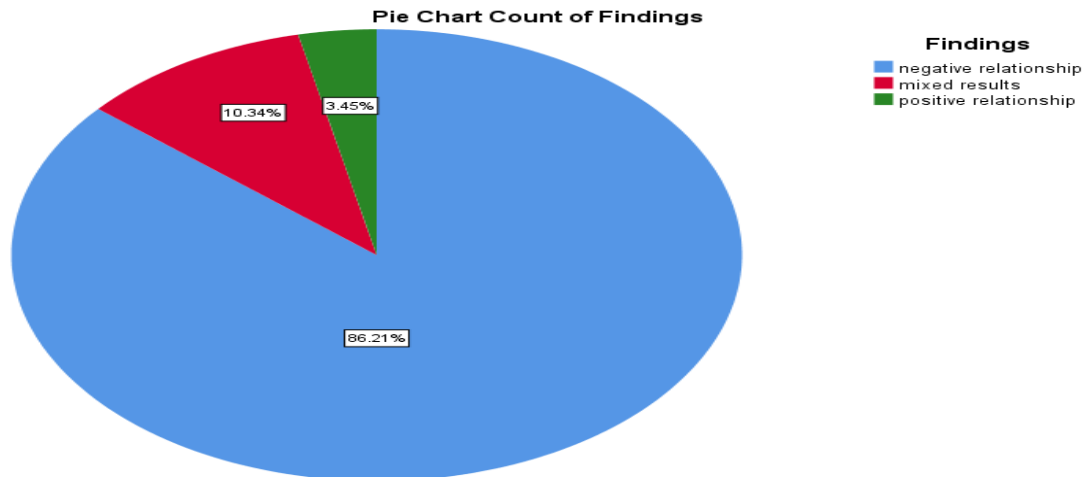
SN	Authors	Country	Study Period	Method	Findings
1	Bhattacharya et al. (2008)	USA	1997-2006	Quantitative	Negative relationship
2	Ajward and Takehara, (2010)	Japan	1997-2008	Quantitative	Mixed results
3	Ma (2012)	China	1995-2000	Quantitative	Negative relationship
4	Salehi and Rostami (2013)	Iran		Quantitative	Negative relationship
5	Cerqueira and Pereira (2013)	Europe	2003 -2011	Quantitative	positive relationship
6	Yaghoobnezhad et al. (2013)	Iran	2008-2012	Quantitative	Negative relationship
7	Purwanti and Kurniawan (2013)	Indonesia		Quantitative	Mixed results
8	Bahmani (2014)	Iran	2008-2012	Quantitative	Negative relationship
9	Nanyondo et al. (2014)	Uganda	2012	Survey	Negative relationship
10	Alves et al. (2015)	Liberia	2007	Quantitative	Negative relationship
11	Beshkooch et al. (2015)	Iran		Quantitative	Negative relationship
12	Ajina, Sougne and Lakhali (2015)	France	2004 -2007	Quantitative	Negative relationship
13	Eliasson (2016)	Europe	2005-2015	Quantitative	Negative relationship
14	Shiri, Salehi and Radbon(2016)	Iran	2007-2014	Quantitative	Negative relationship
15	Nurcholisah (2016)	Indonesia	2012	Quantitative	No relationship
16	Turki et al. (2016)	Europe	2002 - 2012	Quantitative	Negative relationship
17	Abdelghany (2016)	Egypt	2002 - 2014	Quantitative	Negative relationship
18	Harakeh (2017)	UK & France	2001 - 2008	Quantitative	Negative relationship
19	Akker (2017)	Countries	2010 - 2015	Quantitative	Negative relationship
20	Martins and Barros (2018)	22 countries	2000-2016	Quantitative	Negative relationship
21	Abad et al (2018)	Spain	2001-2008	Quantitative	Negative relationship
22	Lee and Tong (2018)	China	1993-2015	Quantitative	Negative relationship
23	Shatnawi (2018)	Jordan		Quantitative	Negative relationship
24	Al-Bahedili et al. (2019)	Iraq	2015 - 2017	Quantitative	Negative relationship
25	Ayagi and Kurawa	Nigeria	2008 - 2017	Quantitative	Mixed results
26	Suharsono, et al (2020)	Indonesia	2016-2018	Quantitative	Negative relationship
27	Mehr (2020)	Iran	2007 - 2012	Quantitative	Negative relationship
28	Emawati and Budiasih (2020)	Indonesian	2013 - 2015	Quantitative	Negative relationship
29	Sriani and Agustia (2020)	Europe and Asia	2016	Quantitative	Negative relationship
30	Septriani (2022)	Indonesia	2016	Mixed	Negative relationship

Source: Reviewed Journal Articles (2008 - 2023)

Fig 1: Simple Dot Plot of the Findings



Fig 2: Pie Chart Count of the Findings



Source: SPSS 26 Outputs based on Scores of Empirical findings in Table 1.

Table 1 presents summary of the relevant studies reviewed. It can be observed from the table that efforts to examine relationship between FRQ and IA has been going on not only in developed economies but also in the developing ones like Nigeria, Uganda, Jordan, Liberia, etc. Also, the table shows that the period covered by the reviewed studies ranged from 1993 to 2018. The method employed by most of the reviewed studies has been quantitative. This is possibly because of the nature of the study and the type of data sourced. Out of the thirty articles summarized in the table, only two used different methods. For instance, Nanyondo et al. (2014) used questionnaire possibly because the study focused on small and medium enterprises that are not required in most cases to publish annual reports and accounts. Also, Septriani (2022) combined both quantitative and survey methods because the study attempt to observe the mandatory internet reporting practice among manufacturing companies in Indonesia. The last column of the table gives the summary of results found by the reviewed studies. The results found are varied containing negative, positive and mixed relationship between FRQ and IA.

Fig 1 is a simple dot plot employed to numerically show the number of studies under each category of the results found. Fig 2 was used to show the percentage that each category represents. It should be noted the category representing no relationship was dropped from the analysis. This is because of the faulty methodology that Nurcholisah (2016) used while assessing the relationship. From the simple dot plot, the number of studies that established a negative relationship between FRQ and IA is represented by 25 dots, implying that they are 25 in number. And this represents 86.21% (25/29) of the findings of the reviewed works as can be observed from Fig 2, the pie chart count. This category also supports the signaling theory argument which suggests that there should a negative association between FRQ and IA. For, sending quality information to users will reduce the level of asymmetric information in the capital market. A single dot under positive relationship suggests that only one study established a positive association between FRQ and IA. That is, high FRQ encourages high IA. This contradicts signaling theory

and represents only 3.43% of the findings as can be noted from fig 2. Mixed findings came from three studies. They accounted for 10.34% and are represented by three dots on fig 1.

5.0 Conclusion and Recommendations

Based on the analysis and discussion of findings in the previous section, this paper found that results from the reviewed studies are mixed and can be classified into three groups based on the nature and direction of the relationship established. The first group supported the signaling theory by confirming a negative association between FRQ and IA. The second group contradicted the theory by establishing a positive relationship between the variables. And by that, engaging in quality financial reporting will result in an increase in the level of IA. The last group supported the theory on one hand and contradicted it on the other, because of the mixed nature of their results. However, despite being mixed and varied, the results found by most of the reviewed studies are in agreement with signaling argument, that is sending high quality financial information (FRQ) can trim down the level of IA between corporate firms and financial statements users.

In line with the summary of major findings, this paper concluded that signaling theory best explains the relationship between FRQ and IA and thus, engaging in FRQ can substantially reduce asymmetric information in capital markets and other economic dealings involving corporate firms and financial statements users. Also, in line with the conclusions drawn, the paper suggested and stressed on need for corporate firms to be engaging in accurate and timely reporting of relevant information to users of their financial statements. The study also suggested for more empirical studies in this area taking into consideration the specific nature of certain industries and markets around the world.

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