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INFORMATION ASYMMETRY AND COST OF CAPITAL: A REVIEW OF EMPIRICAL EVIDENCE

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Abstract

This paper reviewed relevant empirical studies that examined the effect of information asymmetry (IA) on corporate cost of capital (COC) over seventeen years (2007 -2023). Critical/integrative review approach was adopted and the paper found that results obtained by the reviewed studies regarding the impact of IA on COE or WACC are in two sets: positive and negative. However, most of them have agreed and corroborated one another on the positive effect of IA on COE or WACC. And, this goes in line with the basic argument of the pecking order theory in its first proposition. Also, regarding IA and COD, the reviewed studies have agreed that IA positively affects COD. Other findings of the paper are that most of the reviewed studies were carried out in Asia, focusing on non-financial firms. Moreover, most of the studies assessed IA's effect on COE by employing Bid-ask spread and Eastos's (2004) PEG ratio models as common measures. Based on the summary of major findings, the paper concluded that corporate firms will be experiencing a rise in financing cost as long as there is an increase in asymmetric information in the capital market. The increase will affect equity financing, debt financing and overall financing costs. Thus, in line with the conclusions drawn, the paper recommended that corporate firms should strive to minimize the level of IA in the capital market through a commitment to providing high-quality financial reports that furnish the capital providers with relevant, reliable and comprehensive information.

Keywords: Information Asymmetry, Adverse Selection, Moral Hazard, Cost of Equity, Cost of Debt, Weighted Average Cost of Capital

1. Introduction

Financing growth and expansion at times requires that corporate firms shift from cost-free internal funds to long-term sources of finance that generally bear cost. The long-term sources of finance available to firms are shares and debts. Borrowing via issue of shares and debts demands that a firm compensate the fund providers through periodic returns and yield in the form of dividends and interests that

constitutes a cost of capital (COC) from the firm's view point (Lukanima, 2023). COC, cost of borrowing, cost of finance, borrowing cost or financing cost are alternative terms used in finance to mean the rewards given to financiers for providing corporate firms with the required funds to meet various long-term financing needs. It is, in other words, seen as the minimum return required by finance providers (Khomsiyah & Susanti, 2003 in Dewi et al., 2020).

Firm's COC as first premised by Pecking Order Theory is a function of adverse selection and moral hazard risks associated with information asymmetry (IA). Adverse selection is when one party to a contract or transaction appears more informed than the other (Eid, 2015). On the hand, moral hazard is a situation that arises after an agreement is reached between parties to a given transaction. It was defined as the tendency of an imperfectly monitored person to engage in dishonest or otherwise undesirable behaviour (Mankiw, 2011 in Rymar, 2016).

Adverse selection and moral hazard as components of IA have been considered the source of problems or imperfections while borrowing or lending in the financial market (Pettinger, 2017). When a borrower is better informed about his real financial state than the financier, the latter will have some challenges in appreciating the borrower's creditworthiness and actual financial status. As a result, he would indemnify himself for the adverse selection and moral hazard risks by charging a higher risk premium resulting in higher COC.

COC is one of the key elements in corporate financial decisions. A change in COC and its determinants (for instance, IA) can have implications on the ability of corporate firms to undertake profitable investment projects (Majeed et al., 2018; Nasir et al., 2018; Ayagi & Kurawa, 2019; Ayagi & Salisu, 2023). The change may also have far-reaching implications on their capital structure, financial performance and value (Hussain et al. 2021; Kurniasih & Rustam, 2022; Lukanima, 2023). Hence, IA and COC have been two of the areas that have attracted the attention of research studies from different parts of the world.

The extant empirical literature on IA and COC has covered different industries in developed and developing economies. They have adopted other variable measurements, tools and data analysis technique in their various attempts to assess the effect of IA on corporate COC. For instance, Derrien et al. (2014) employed five different models of IA to examine the impact of IA on COD of 824 listed firms in the United State of America (USA). On the other hand, Ra and Lee (2018)

covered 25 industries in South Korea in their attempt to examine the influence of IA on COE using a quantitative research method.

This paper is literature-based. It aims to assess, critique and synthesize empirical literature on IA and COC over 17-year period (2007 -2023). The paper aimed explicitly to critically the relevant empirical literature to know their position on the relationship or impact of IA on corporate cost of equity (COE), cost of debt (COD), and weighted average cost of capital (WACC). Other specific objectives of the paper are to find out about the focus of the relevant empirical literature, the nature of their sample, coverage of the study period, the cost of capital type they mostly analyzed, the common measurements of the study variables, common research methods used and data analysis technique. The remaining sections of the paper covered a literature review, methodology, result and discussion, conclusion and recommendation.

2. Review of related studies

Information Asymmetry is a situation where there is imperfect knowledge between buyers and sellers in the market (Pettinger, 2017). It is a circumstance in which one party in a transaction has more or superior information than another (Bloomenthal, 2019). The model of IA presupposes that at least one party to a transaction possesses some relevant information that the other party does not have. Aside from posing power imbalance in a transaction, IA creates two types of risks: adverse selection and moral hazard. Adverse selection refers to a situation where sellers have relevant information about some aspects of product quality that buyers do not have (Hayes, 2019). It is a situation where two (or more) persons are about to agree on a trade, but one of them appears to possess some information that the other(s) do not have (Quy-Toan Do, 2003). On the other hand, moral hazard is a circumstance in which IA arises after an agreement is reached between parties to a given transaction (Quy-Toan Do, 2003). Moral hazard is usually analyzed in the framework or context of a principal-agent problem whereby after signing the contract, the agent takes an action (hidden action) that is not observable by the principal or gathers some relevant information about the environment that the principal cannot obtain.

Diantimala et al. (2022) viewed COC from the perspective of fund providers. And so, they defined it as the compensation that capital owners and lenders charge for the funds they provide to a company for more productive investments. Dewi et al. (2020) viewed it from the perspective of a company that receives or borrows funds

as the cost of the funds obtained by that company. It is the cost a company must pay to obtain funds such as debt or equity (Souissi and Khlif, 2012). Thus, the term can be used to refer to the cost of debt, equity or preference shares. It can also be used to mean weighted average cost of capital (WACC), where a firm combines debt, equity and preference shares or at least two of the sources of finance while financing its activities. Therefore, WACC denotes the overall or total cost of capital for all sources of funds in a firm or the minimum return a company must make to repay capital providers (Wilkinson, 2013).

On the influence of IA on COC, Hughes et al. (2007) documented that the presence of IA in the capital market brings about higher risk premiums and, hence higher COC. Rogo (2007) studied 4,709 US firms from 1993 to 2003. Using the data generated from CRSP and Compustat, the study confirmed that the effect of IA on COE increases with a higher degree of uncertainty in the US capital market. Lambert and Verrecchia (2010) agreed with this position by confirming that IA could affect market liquidity and COC. Also, Consistent with Lambert and Verrecchia (2010) stance, Armstrong et al. (2011) in the study of US listed firms from 1976 to 2006 reaffirmed that in imperfectly competitive markets, higher IA results in higher COE of the sampled firms. Findings from Lambert et al. (2012) corroborate Armstrong et al. (2011) position.

Therefore, it can be deduced from the findings of Hughes et al. (2007), Rogo (2007), Armstrong et al. (2011) and Lambert et al. (2012) that IA influences COC by first bringing about uncertainty in the capital market. The level of uncertain will not only negatively affect investors' willingness to lend the required fund, it will also raise the risk premium to be charged by the providers of capital.

Subsequent studies like Barron et al. (2012) and Kazemi and Rahmani (2013) supported the stand point of Lambert et al. (2012). For instance, Kazemi and Rahmani (2013) established that investors would rationally demand higher risk premiums whenever there is IA in the capital market, which would raise the COC for corporate firms. However, it should be noted that Barron et al. (2012) further confirmed that the significance of the relationship between IA and COE might vary with the inclusion of moderating variables such as information precision, quantity and quality of available information and finally, market competition among investors.

The results obtained by Armstrong et al. (2011), Lambert et al. (2012), Barron et al. (2012) and Kazemi and Rahmani (2013) suggest that the impact and direction of the relationship between IA and COC is positive, that is, as the IA increases, COC also increases. The results also implied that the relationship is positive regardless of the studies' differences in domain, scope, variable measurements and data analysis technique used. For instance, the methods Barron et al. (2012) employed to measure both IA and COE capital in the study of USA firms differ from those used by Kazemi and Rahmani (2013). In their study, Barron et al (2012) used Sheng and Thevenot's (2011) model of IA, which differs from bid-ask spread model employed by Kazemi and Rahmani (2013). Also, for COC, Barron et al. (2012) used Easton's (2004) PEG ratio method, which is not the same as Omran and Pointon (2004) model applied in Kazemi and Rahmani (2013). Besides, the two differed in scope. Barron et al. (2012) covered a sample of 614 US firms from 1983 to 2010, which can be seen as more comprehensive compared to 109 Iranian firms over 2005 to 2010, covered by Kazemi and Rahmani (2013).

He et al. (2013) supported Kazemi and Rahmani (2013) documented a positive and significant relationship between IA and COE capital. He et al. (2013) used ex ante investor's required rate of return to proxy COE capital and two measures of IA i.e. earnings forecast dispersion and analyst coverage. In a review of evidence from three studies conducted by Kelly and Ljunqvist (2012), Choi et al. (2013) and Berkman et al. (2013) in the USA, China and Finland, respectively, Choi and Yan (2013) concluded that unequal access to relevant information between managers and investors has every tendency to increase the COC for corporate organizations.

An increase in asymmetric information resulting from loss of an analyst (that is, 43 broker closures and broker mergers) was found to have increased the COD of publicly listed firms in USA (Derrien et al. 2014). The study used five different measures of IA (Bid-ask spread, Amihud liquidity measure, Ratio of zero and missing returns days to total days, Magnitude of earnings announcement surprises and Volatility of the market reaction to earnings announcements) to capture changes in the degree of IA. In addition, the study used excess yield spread of a bond issue to proxy COD. The results confirmed that loss of an analyst of the sampled firms has significantly widened the level of IA between firms and debt holders, which in turn influenced the COD positively.

In their work, Levi and Zhang (2014) proved that not only long-lasting changes in firms' disclosure policies and information environment could influence the COE

capital, but a temporary increase in the level of IA could also significantly raise the cost. They argued that since corporate firms produce financial reporting information regularly (e.g. annually or quarterly), IA changes and adverse-selection risk increase between these disclosure dates or interval. Thus, expected returns increase significantly in days during the fiscal quarter when there is high adverse-selection risk and low liquidity.

Eid (2015) studied 50 companies listed on the Palestine Stock Exchange and measured COE using a required rate of return computed based on the closing price of the sampled companies' shares. Findings from the study revealed that the bid-ask spread employed to measure IA significantly affects COE in a positive direction. The position of Asadbakhti and Malgharni (2016) is in line with Eid (2015). However, Asadbakhti and Malgharni (2016) considered the effect of IA on the investment cost of corporations listed on the Tehran Stock Exchange. The study failed to explain how it defined and measured the IA and investment cost. Saa'deh et al. (2017) also supported the position of Eid (2015) after reviewing the literature on voluntary disclosure, IA and COC that focused on Amman Stock Exchange (ASE).

The position reached by Babaie et al. (2018) further strengthened the findings of Eid (2015). After analyzing similar relationships in about 123 corporate firms listed with the Tehran Stock Exchange from 2008 to 2014, the conclusions suggested that less IA resulting from quality financial reporting would give rise to lower COE. The study analyzed the data generated using GLS Regression Model. However, it should be noted that, despite the spread and disclosure quality index employed to measure IA and information quality respectively, the study failed to quantify and capture COE precisely in any model.

A similar result supporting Babaie et al. (2018) was obtained by Ra and Lee (2018) in a study of selected South Korean firms drawn from 25 industries. Ra and Lee (2018) specifically assessed the effect of changes in the information environment (attributable to adopting a capital market disclosure mechanism known as eXtensible Business Reporting Language in 2006 and 2007) on the cost of equity of voluntary and mandatory filers. Using 152 firm-year samples, the study found statistical evidence which suggests that a reduction in the level of IA resulting from eXtensible Business Reporting Language (XBRL) adoption has caused a decline in the COE of the sampled firms.

The result obtained by Ayagi and Kurawa (2019) from model two supported Babaie et al. (2018) and Ra and Lee (2018) by affirming that IA has a positive yet insignificant effect on COC in both Underinvesting and Overinvesting banks listed on the Nigerian Stock Exchange. Since their study involved testing the mediating role of IA, Ayagi and Kurawa (2019) used regression analysis and bootstrapping procedure in analysing the data generated from Thomson Reuters data stream and annual reports and accounts of the selected banks for a period of 10 years (2008 - 2017). Moreover, the study measured IA using Bid-ask spread developed by Chiang and Vinkatesh (1986), and then quantified COC in line with Kazemi and Rahmani (2013) model.

Contrary to Ayagi and Kurawa (2019) stance, Melinda and Barokah (2019) found a negative and significant association between IA and COE. The study covered one hundred and twenty-three (123) manufacturing firms listed on the Indonesian Stock Exchange from 2007 to 2012. Bid-ask spread and capital asset pricing model (CAPM) were employed to measure IA and COE respectively. The bootstrapping method as used in Ayagi and Kurawa (2019) was employed in hypotheses testing, since the study used IA as a mediator between earnings quality and COE.

Some factors that might be responsible for the differences in results obtained by Ayagi and Kurawa (2019) and Melinda and Barokah (2019) are studies' domain, market, industry, period, and variable measurement. Ayagi and Kurawa (2019) focused on Deposit Money Banks listed on the Nigerian stock exchange over 10 year period (2008 to 2017). In addition, the study considered weighted average cost of capital and thus, followed Kazemi and Rahmani (2013) model while computing the components of COC. On the other hand, Melinda and Barokah (2019) work centered on manufacturing firms listed on the Indonesia Stock Exchange over 6 years (2007 to 2012). Moreover, the CAPM used while computing COE differed from the Omran and Pointon (2004) model employed by Ayagi and Kurawa (2019).

Dewi et al.'s (2020) results disagreed with Melinda and Barokah's (2019) and reaffirmed the findings of Ayagi and Kurawa (2019). It should be noted that although Melinda and Barokah (2019) and Dewi et al. (2020) works were carried out in similar manufacturing firms listed on the Indonesian Stock Exchange, factors like study periods, samples, variable measurements and other methodological differences might be responsible for the varied results. For instance, while Melinda and Barokah (2019) covered 6 years (2007 to 2012), Dewi et al. (2020) covered only three years (2016-2018) that did not overlap at all. Also, the number of

sampled firms (that is, 123) covered by Melinda and Barokah (2019) is more significant than that of Dewi et al. (2020), which stood at 76.

Varied results were obtained by Muslim and Setiawan (2021), thus corroborating Dewi et al. (2020) on one hand and disputing it on the other. Muslim and Setiawan (2021) research work was conducted in the same domain as Dewi et al. (2020) and covered listed firms drawn from more than eight industries (including manufacturing) for the period 2016 to 2019. However, the study employed the Capital asset pricing model (CAPM) for measuring COE and then used two different measures of IA i.e. trading volume and Price non-synchronisation. The result found regarding the Trading volume and COE suggested that IA positively and significantly affects COE and for Price non-synchronization and COE, the result strengthened the stance of Melinda and Barokah (2019) by suggesting that IA exerts a negative and significant influence on COE.

In a related study, Diantimala et al. (2022) used IA and COE as the intervening variables while assessing the effect of voluntary disclosure on the value of non-financial firms listed on the Indonesian Stock Exchange from 2012 to 2019. However, the recursive path model used did not allow for the effect of IA on COC to be statistically tested and revealed. Hence, the study is silent about the possible link between the variables. To examine the relationship between IA and COC in companies listed on the Iraqi Stock Exchange, Khaleefah and Al-Hussainy (2023) used trading volume to quantify the level of IA and the autoregressive model to analyze data generated. The results confirmed that IA exerts a negative influence on WACC.

The paper used the first proposition of Pecking Order Theory to explain the relationship between IA and COC. The same was used in Ayagi and Kurawa (2019) and Muslim and Setiawan (2021). In the proposition, Pecking Order Theory premised that COC increases with the rise in the level of IA. Because; the adverse selection and moral hazard risks associated with IA have direct consequences on firms' COC. In other words, capital providers who have imperfect information and hence unable to forecast the real risk of investing in the company will rationally compensate themselves for the risks by demanding higher COC through charging higher risk premium on stock or debt issued by the company. According to the theory, this will then influence the choice between internal and external financing and between the issue of debt or equity.

Previous research works have also argued that COC is associated with asymmetric information between borrowers and lenders in the capital market. For instance, Easley and O'Hara (2004) and Xie (2013) have pointed out that shareholders who are always less informed about the company's future prospects respond by demanding higher returns on their shareholding in a company. According to Xie, (2013), the same applies to debt financing. Because; banks and bond-holders reimburse themselves for the asymmetric information risks by charging higher loan interest rates. Therefore, the position of Xie (2013) on IA and COC is that the two tend to move in the same direction.

3. Methodology

As the main aim of the paper is to assess, critique and synthesise empirical literature on IA and COC. It employed an integrative/critical approach to the literature review. The paper also took a wider view of IA and COC by considering, their various aspects based on different perspectives of the extant literature and measurement models employed. Relevant empirical research articles published from 2007 to 2023 in different Accounting and Finance journals were used as the data for the study. The major inclusion criteria used is that the article must have IA and COC in or as part of their title. They must also have an objective of assessing the effect of IA on COC. A summary of the results found by the reviewed articles and other information derived therefrom was first presented using Table and then analysed and discussed using percentages, bar and dots via the use of Pie chart, bar chart and simple dot plot.

4. Results and Discussion

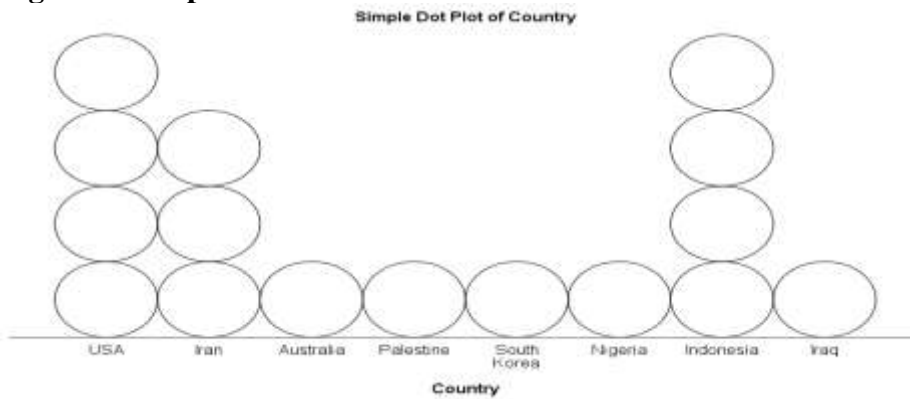
Focus of the Empirical Literature

It can be observed from the review that the sixteen (16) relevant studies presented were carried out in eight (8) different countries. Also, the simple dots in Figure 1(Simple Dot Plot of Countries) show that the studies were conducted mainly in the USA and Indonesia. Each recorded four dots that indicate the number of studies. They were followed by Iran, which recorded three studies. Other countries, Australia, Palestine, South Korea, Nigeria and Iran have one dot each, suggesting that the study was conducted only once.

Moreover, the simple dot plots in Figure 1 show that Asian countries (Iran, Palestine, South Korea and Indonesia) recorded nine (9) dots jointly. And that suggests most of the relevant studies on IA and COC were conducted in Asia. The

continent was followed by North America which recorded 3 dots. Africa and the Middle East have one dot each, suggesting that the issue (that is, the effect of IA on COC) is yet to attract more research efforts.

Figure 1: Simple Dot Plot of Countries



Source: SPSS 26 outputs based on scores of countries

Nature of Sample and Study Period

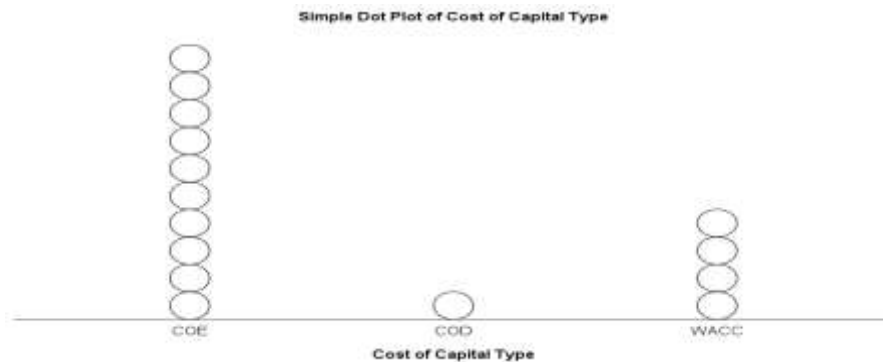
The sample covered by the reviewed works cut across various publicly listed firms and industries. They can be broadly classified into financial and non-financial based on the sample data presented in the Table. There was no evidence of covering or studying the relationship in private companies. Also, the period of the studies as reviewed shows that the analysis period covered by the reviewed works is about 44 years (that is, 1976 - 2020). The years can be ascertained by taking the study period covered by Armstrong et al. (2011), that is, 1976 – 2006 and then; Khaleefah and Al-Hussainy (2023), which covered 2010 – 2020. This suggests that research efforts to assess the impact of IA on COC have been ongoing for more than four decades.

Cost of Capital Type

The review.1 shows that the reviewed works assessed the effect of IA on the elements of COC (COE and COD) and the overall COC (that is, WACC). Using simple dot plots on Figure 2, it can be observed that COE has 10 dots, which suggests that ten (10) out of the sixteen (16) reviewed studies have focused on assessing the effect of IA on COE. WACC has four (4) dots, suggesting that four studies have attempted to examine the impact of IA on WACC. Only one paid attention to assessing the influence of IA on COD. It could be connected to the argument and view of Xie (2013), who argued that with IA in the capital, debt

holders react similarly by rationally raising the COD. Asadbakhti and Malgharni (2016) are about IA and investment costs. It is silent about what constitutes investment cost and how it is measured. Hence, it was not captured in Figure 2. Therefore, based on the information reviewed and depicted in Figure 2, this paper concluded that the reviewed empirical works focused mainly on COE capital.

Figure 2: Simple Dot Plot of Cost of Capital Type

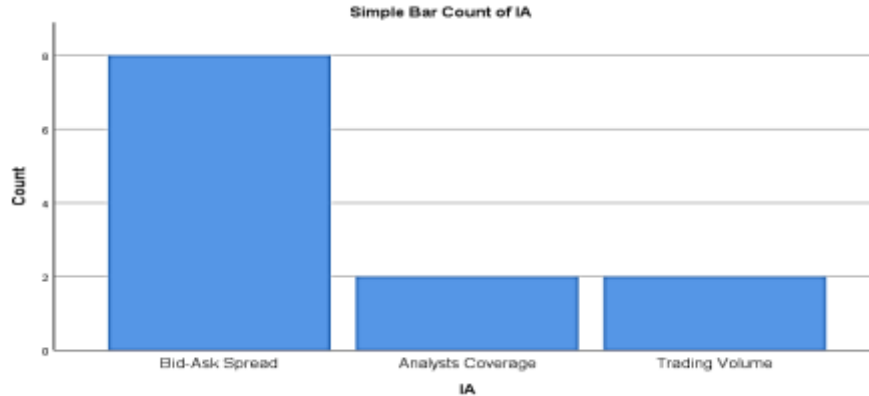


Source: SPSS 26 outputs based on scores of COC

Measurement of the Study Variables

The reviewed research works employed different measures of IA. The review shows that two research works (Asadbakhti & Malgharni, 2016; Dewi et al., 2020) did not disclose the method used in quantifying the value of IA and so, eighteen (18) measures of IA were found to have been used and disclosed clearly in the reviewed works. Thus, this paper used a simple bar count of the measures employed to show the commonly used method of measuring IA among the reviewed works. Figure 3 (Bar Count of IA Models) shows that Bid-Ask spread was the most widely used method of quantifying IA, as it recorded eight (8) counts. And this could be connected to the availability of data required in computing the spread. Analyst coverage and Trading volume recorded two (2) counts each, suggesting that they were used twice in the reviewed studies and were next after Bid-Ask spread.

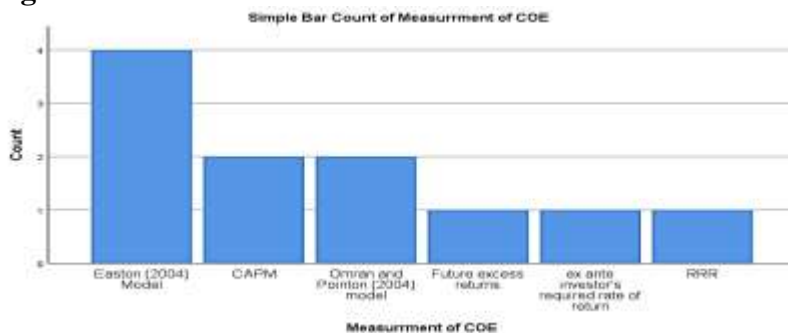
Figure 3: Bar Count of IA Models



Source: SPSS 26 outputs based on scores of IA Models in The review

Furthermore, four (4) out of the reviewed works (Asadbakhti & Malgharni, 2016; Babaie et al., 2018; Dewi et al., 2020; Khaleefah & Al-Hussainy, 2023) did not disclose the methods they used in measuring the COC. For measurement of COE, the review shows that reviewed research studies employed six (6) various measures. Also, Figure 4 (Bar Count of Measurement of COE) shows that the most commonly used model of measuring COE among the reviewed works was Easton's (2004) PEG ratio method. Four research studies used it. And this could be attributed to it being based on analysts' forecasts that could capture well variation in COE, as pointed by Pastor et al. (2008) in Peláez (2010). Easton's (2004) model was followed by CAPM and Omran and Pointon (2004) models that were employed in two works each. The required rate of return (RRR) and Ex ante investor's required rate of return were used once in separate studies.

Figure 4: Bar Count of Measurement of COE



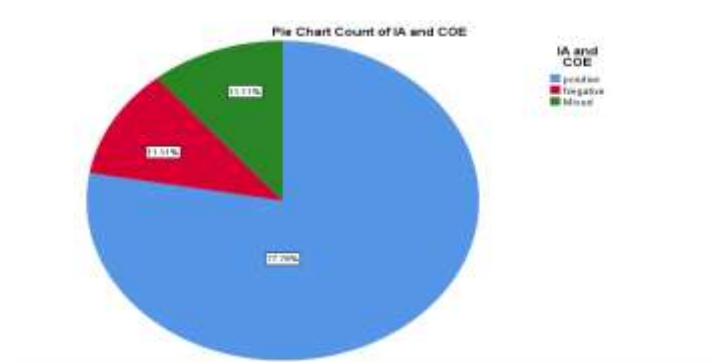
Source: SPSS 26 outputs based on scores of COE Measures in The review

Moreover, the review shows that the excess yield spread of a bond issue was the model Derrien et al. (2014) used in the study of 824 publically listed USA firms. Thus, Kazemi and Rahmani (2013) model of measuring COD was the most widely used model as it was used in two reviewed works, that is, Kazemi and Rahmani (2013) and Ayagi and Kurawa (2019). The review also shows that all the reviewed works used quantitative research methods. There was no evidence of qualitative or mixed methods used by the reviewed research studies. Also, the data analysis technique employed by the reviewed articles was a regression. Only one study, Diantimala et al. (2022), used recursive correlation in studying Indonesian non-financial firms.

Analysis of Findings from the Reviewed Articles

The analysis of findings from the reviewed articles is classified based on the effect of IA on each type of COC considered in the articles. It should be noted that Asadbakhti and Malgharni (2016) dropped due their failure to disclose what constitutes investment cost and how it was measured. Also, Diantimala et al. (2022) were dropped from the analysis due to inability of the technique employed (that is, recursive correlation) to capture the effect of IA on COE specifically. Thus, the study of findings is restricted to the remaining fourteen (14) reviewed articles, as depicted in figures 5, 6 and 7.

Figure 5: IA and COE



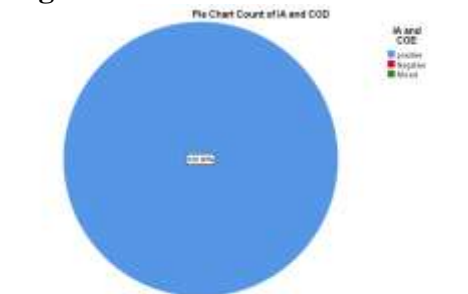
Source: SPSS 26 outputs based on findings from IA and COE review

The review shows that the results found by the reviewed studies regarding the influence of IA on COE are in three sets, that is, positive, negative and mixed.

Seven (7) articles established that IA positively affected on COE. This is represented by a blue area and about 77.78% in Figure 5. The implication is that COE will continue to increase as long as there is an increase in the level of IA. This supported and strengthened the first premise advanced by the Pecking Order theory, in which the theory proposed that an increase in asymmetric information would directly affect financing cost.

Conversely, the review shows that one study conducted by Melinda and Barokah (2019) confirmed a negative impact of IA on COE, which contradicts the basic argument of the Pecking Order theory. This is represented by the red portion and 11.11% in Figure 5. Another study also contradicted that basic proposition on the one hand and strengthened it on the other; it found results that varied with the models of IA used. This is also represented by 11.11% in Figure 5.

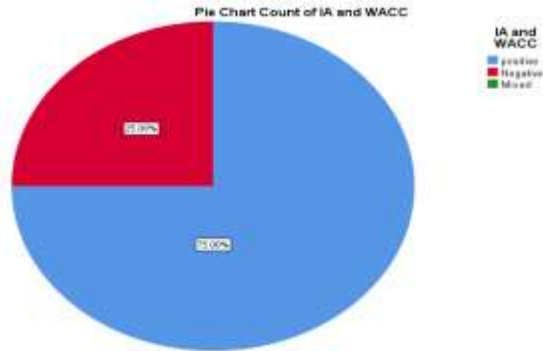
Figure 6: IA and COD



Source: SPSS 26 outputs based on findings from IA and COD review

From the review, only Derrien et al. (2014) was found to have specifically examined the effect of IA on COD and the result confirmed that IA positively impact COD. That also explains the 100% and all blue depicted in Figure 6. This position supported the arguments of scholars such as Xie (2013), who argued that COD will increase with an increase in IA.

Figure 7: IA and WACC



Source: SPSS 26 outputs based on findings from IA and WACC in the review

The review shows that the number of studies that examined the effect of IA on WACC is four (4) and the results found are in two sets, positive and negative impacts. The number of studies that confirmed that IA positively effects on WACC is three (3). They are represented by 75% and blue area in Figure 7. Their findings are in agreement with the first proposition of the Pecking Order theory. The remaining 25% in Figure 7 represents one study (Khaleefah and Al-Hussainy, 2023) as presented in the review, which found a conflicting result with the first three. Thus, its stance contravened the first premise of the Pecking Order theory.

5. Conclusions and Recommendations

From the critical review carried out in the previous section, this paper has found that results obtained by the reviewed studies regarding the impact of IA on COE or WACC are in two sets: positive and negative. However, most of them have agreed and corroborated one another on the positive effect of IA on COE or WACC. And; this goes in line with the basic argument of the pecking order theory in its first proposition. Also, regarding IA and COD, the reviewed studies have agreed that IA positively affects COD. Other findings of the paper are that most of the reviewed studies were carried out in Asia, focusing on non-financial firms. Most of the studies assessed the effect of IA on COE by employing Bid-ask spread and Easton's (2004) PEG ratio models as the respective measures. Moreover, the research method employed by the reviewed works is quantitative. Regression analysis has been the major data analysis technique used by the reviewed works.

Based on the summary of major findings, the paper concluded that corporate firms will be experiencing a rise in financing costs as long there is an increase in asymmetric information in the capital market. The increase will affect the equity financing, debt financing and overall financing costs. Thus, in line with the conclusions drawn, the paper recommended that corporate firms should strive to minimise the level of IA in the market through a commitment to providing high-quality financial reports that furnish the capital providers with relevant, reliable and comprehensive information.

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