

Information Asymmetry and Dividend Payout Policy: A Critical Literature Review

By: Boniface Kinyua¹

Abstract

This study is a critical review of the literature that seeks to establish the effects of information asymmetry on the dividend payout policy. For this review, information asymmetry is assessed as adverse selection, moral hazard, and earning's disclosure. Whereas dividend policy is evaluated using dividend per share, profitability, growth, and the size of the firm. The reviewed literature includes both theoretical and empirical data. The methodology used reviewed various empirical literature, articles, publications, and conceptual studies where descriptive and quantitative analysis were applied. According to various publications reviewed, there are positive, negative, and contradictory outcomes amid the asymmetry of information and the dividend payout policy. Based on research, dividend payout policy can be enhanced or improved by decreasing the information asymmetry between agents and principals. It is suggested that a similar study should be done, where future researchers may introduce other variables other than; adverse selection, moral hazard, earning's disclosure, and the number of analysts following firms, to examine the relationship of information asymmetry and dividend payout policy.

Key Words: *Information Asymmetry, Dividend Payout Policy, Agency Theory, Size of the Firm*

1. Introduction

The valuation of a business is independent of financing decisions in a perfect capital market without information asymmetry. Disbursement of cash dividends to equity-holders does not affect the wealth of shareholders or the value of the company. However, if a business raises funds for dividend payments not expected with additional debt or by decreasing their investment, wealth transfers may occur between bondholders and equity holders. In protective agreements or primary rules, a firm funding decision not only affects its value, but is not important to the wealth of bondholders and shareholders. The asymmetry of information in owners and management can lead to a sale of securities at prices that differ from their actual value (Woolridge, 1983). In the case of information asymmetry, dividend effect decisions on stocks are very different.

The study focused on Agency, signaling, free cash flow, and pecking order theories. Jensen and Meckling (1976) advanced agency theory, they opined a conflict among the shareholders, agents, and suppliers of debt finance. These groups have different goals. Akerlof and Arrow initially

¹ PhD Student, Department of Finance And Accounting, University of Nairobi, E-Mail: kinyuaboniface@students.uonbi.ac.ke, kinyuaboniface58@gmail.com, Tel +254720583166, +254770868299

developed signaling. Later Spence in 1973 advanced it into signaling theory. This theory is about minimizing the information asymmetry that occurs when managers and not the investors have information on a firm's future expectations. The pecking order theory developed by Myers and Majluf (1984), supposes that business directors hold classified reports, that shareholders don't possess. In this theory, firms desire to fund their investment undertakings through initially retained earnings since it is less expensive. Another option for financing is through debt due to interest payments related to using debt capital. Equity financing is the last option in the pecking order theory as it's the most expensive financing option. The theory of free cash flow is about the change of gain on dividends as a means that decreases agency costs related variations. Dividend payments reduce the free flow of cash, making companies enter the stock market to distribute information as they try to get funding for investments and functions. Cash flow performs a crucial role in ascertaining a company's capability to get external funds.

1.1.1 Information Asymmetry

Asymmetric information as defined by Mishkin and Eakins (2012), is a state that occurs if one party does not have proper knowledge of the other party participating in the transaction. Okpara (2010) states that asymmetry information in investment occurs once certain shareholders do not have classified information about the worth of the company which others have within the same period. This is an important aspect of financial markets because corporate managers know whether they are honest or have a better knowledge of the performance of their businesses than shareholders. Information asymmetry is measured by proxies such as the share turnover and bid ask spread. Share turnover is derived by dividing the total number of shares traded during some period by the average number of shares outstanding for the same period. While, bid ask spread is the difference between purchase and sales price. Adverse selection, moral hazard, voluntary earnings disclosure, and the number of analysts following firms describe information asymmetry.

Adverse selection is a kind of disproportionate information in a financial structure in which those involved in a business benefit from information over others (Mehdi, Sahar & Mayahi, 2014). Adverse selection is an asymmetric information problem that occurs before the transaction. It is measured through stock volatility.

According to Mehdi et al. (2014) moral hazard is an information asymmetry from those that can earn their desire in a contract or potential transaction which the other party cannot. The principal-agent problem which is an example of a moral hazard arises from the fact that the manager has more information about his activities than the shareholders. So there is asymmetric information.

Earning can be defined as the amount of profit that a company typically earns over time as shown in its financial statements. Earnings announcements provide information that allows some traders to assess the company's performance better than other traders. As a result, there may be more information asymmetries at the time of an announcement than in non-announcement periods. Besides, earnings indicate future dividend payments and an increase in the share price of a company. Voluntary earnings disclosure is an event that communicates the financial performance of a company and provides information that many market participants are not aware of (Kim & Verrecchia, 1994). Voluntary earnings disclosure is determined through its level, quantity, or quality.

The number of analysts following firms measures, asymmetric information existing in a company. The logarithm is always used. Analysts appear as asymmetric information proxies. Bhushan (1989), Brennan and Hughes (1991), Lang and Lundholm (1996), and Womack (1996) maintain that the greater the number of analysts following a company, the weaker the asymmetrical information. D'Mello and Ferris (2000) proposed that analysts tend to behave as mediators of information and their following is an excellent measure of information asymmetry.

1.1.2 Dividend Payout Policy

According to Nissim and Ziv (2001) dividend policy is the strategies and guidelines that management follows while rewarding business owners for investing their financial resources in a given business. Dividend policy is the company's governing requirements on the estimation and payment of dividends. It is one of the most important decisions in organizations. The Asymmetry of information for both the company and external shareholders exists as suggested by the signaling hypothesis. The organization can offer information to markets via payment of dividends. In comparison to the repurchase of equity stocks, dividend payout indicates not just an optimistic future forecast, but a major contribution to imminent cash flows (Lin, Chen & Tsai, 2017).

Consequently, dividends provide a costly mechanism to address the information asymmetry. Through a dividend payout, managers may lower information asymmetry. The dividend payout policy includes dividend per share, profitability, growth, and the size of the business. Dividend payout policy is measured by determining the dividend per share of a firm and dividing it by its earning per share.

1.2 Research Problem

Dividend payout policy is known to be influenced and contributes to financing decisions of corporations in the modern world. Studies in the past have indicated that dividends are irrelevant in a perfect capital market without information asymmetry, making firms independent of financing decisions. However, recent studies signify that in the existence of imperfect markets due to information asymmetry, dividend policy is certainly relevant to firms (Badu, 2013). Dividend payout is vital to investors as it acts as an indicator that a company is performing well since it has reserves to pay out dividends to shareholders. Prior literature suggests that information asymmetry between managers and shareholders is a contributing factor of dividend payout policy.

Extensive study in financial economics has centered on the nature and implications of asymmetric information on financial institutions. In this review, two of the key proposals are corporate insiders and dividend policy which is connected to asymmetric information (Khang & King, 2002). A majority of research has been done to establish the association existing on the asymmetry information and dividend payout policy. However, different reviews have been producing conflicting findings revealing core knowledge gaps. A sample of the studies which indicated a positive relationship are Abubakar (2019), Mehdi, Sahar and Mayahi (2014), Okpara (2010). Study with both the negative and positive relationship Basiddiq and Hussainey (2012). Whereas studies with the negative relationship include Harakeh, Matar and Sayour (2020), Ernestin, Murhadi and Sutejo (2020), Li and Zhao (2008), Deshmukh (2005).

Research has been done on asymmetry information. However, little research has been undertaken on asymmetry information and its effects on listed financial institutions. Research was undertaken in Iran on asymmetric information and dividend payout policy (Mehdi et al., 2014) but the duration of the study was too short thus 2 years only. Basiddiq and Hussainey (2012) analyzed the effect of

the number of analysts following firms on dividend tendency. The study indicated conflicting findings as to the levels of information asymmetry which caused lower dividend propensity were inconsistent with signaling theory but compatible with both the agency and pecking order theories.

Okpara (2010) did a study in Nigeria to analyze the connection between asymmetric information and dividend policy. However, the study revealed a methodological gap as it used secondary data only. Deshmukh (2005) focused on the manufacturing companies that transact on New York Stock Exchange to establish how information asymmetry affects dividend policy, but the research represented a contextual gap as it was done in a developed country and only manufacturing firms were considered.

Locally, Kemei (2014) evaluated the impacts of asymmetry information in the banking sector in a County in Kenya called Mombasa, but there was a lack of theoretical foundation in the study and a conceptual gap. The lack of consistency and adequate empirical literature in the results of the previous studies necessitates further research to be conducted. Therefore, this study aims to undertake a critical literature review with the aim to identify research gaps and areas for further studies.

1.3 Research Objective

To determine the empirical, theoretical and conceptual literature on the effect of information asymmetry on dividend payout policy.

2. Theoretical Literature Review

Theories underpinning and informing the study are reviewed and discussed.

2.1 Review of Key Theories

The study is anchored on the agency theory as the key theory.

2.1.1 Agency Theory

Jensen and Meckling (1976) introduced the agency theory, which shows that an organization's management is focused on conflicts of interest between the company's owners and its staff. Each

of these groups has different priorities and objectives. Moreover, agency relations were described as an agreement for both a company's principal and agent, where the principals, appoint agents to operate the company for them. Shareholders will have to assign management decision-making powers to management as part of this agreement.

Owners demand agents to operate in their good faith. The theory presupposes the presence of an internal conflict on the principal-agent relationship leading to the issue of agency costs. This problem results in irregular payment of dividends due to the existence of information asymmetry (Basiddiq & Hussainey, 2012). It is assumed that giving dividend income would decrease the asymmetry of information between management and investors and thereby minimize the issue of agency costs. Needless to say, agency theory implies that a measure of asymmetric information is important when analyzing the causes of corporate dividend tendency.

2.1.2 Signaling Theory

Akerlof and Arrow developed signaling in marketing. Spence developed it into signaling theory in 1973. This theory is aimed at reducing information asymmetry between two parties, (the directors and the owners) which only happens when managers and not investors know about a company's future expectations. By reducing information asymmetry, shareholders can obtain signal information on changes in dividends (Khang & King, 2002).

Healy and Palepu (2001) assert that signaling theory indicates that by transmitting better information to the consumer, most successful businesses signal their competitive advantage. They also reasoned out that businesses can minimize asymmetry information through financial reporting and information disclosure between management and external investors. Earning disclosures narrows the expectation gap between investors, which reduces the advantage of informed investors from benefiting and thereby diminishes the asymmetry of information in the stock market. A firm with either low or high range of information asymmetry will pay a higher percentage of dividend.

2.1.3 Pecking Order Theory

Myers and Majluf (1984) developed the pecking order theory. It undertakes that corporate executives have private information that stockholders do not have. In addition, it postulates that

companies have several options to fund their investment operations. The first option being through initially retained earnings because they are affordable, the second is through debt, and thirdly through equity financing as the last option because it is the most expensive financing option. Equity capital like stock shares is more expensive than debt financing costs. Therefore, the amount of dividends distributed reduces the retained earnings of companies, which may then require debt financing.

The presence of asymmetric information can result in lower corporate payments in certain natural conditions. The risk of underinvestment instigating an ex-ante loss of value emerges from the lemons issue, decreasing underinvestment, and the subsequent ex-ante loss of the firm value via consolidation due to new capital issues (Deshmukh, 2005). Myers and Majluf (1984) posit that a firm can accumulate losses by decreasing its dividends. So, one can use dividend policies to manage underinvestment plans that consist of asymmetric information.

2.1.4 Free Cash Flow Theory

Jensen (1986) indicates that in the free cash flow theory, resources outstanding after paying all projects with positive NPV cause conflicts of interest between agents and principals. In these circumstances, Jensen argues that paying dividends and interest on debt reduces the free cash flow available for management to spend on projects with NPV and the consumption required by the manager. The free cash flow theory implies that, given the investment opportunity, the company with the highest current cash flow will pay the highest dividend. This hypothesis still concentrates on the distinction of interest between owners and managers on dividends. The dividend is paid to minimize free cash flow, requiring businesses to access capital markets more regularly and to reveal details to secure funding for their operations and investments.

2.2 Empirical Studies

Research both at the local and international level has been done to analyze the association of information asymmetry and dividend payout policy. This section reveals a literature study from different researchers and outlines further the proposed conceptual framework for the study as derived from the literature.

Harakeh et al. (2020) evaluated the response of dividend policy on asymmetric information changes. The Sarbanes-Oxley Act (the SOX) was implemented in the US in 2002 to resolve endogeneity issues and research the possible impact that this could have on the dividend. The study used a research design of distinction, in which the study population was US public companies and the control group was the UK public companies where the SOX was not implemented. In this research text, the two countries had related institutional systems and implementation of rules. The results showed that US companies are increasing their dividend payments relative to UK companies due to the SOX enactment which reduced asymmetric information.

Ernestin et al. (2020) examined the impact of information asymmetry on the dividend policy of non-financial companies listed on the Indonesia stock exchange. The research used a 365-year observation sample of the listed non-financial companies that paid dividends consecutively over the 2013-2017 period. Panel data was used. The findings of this study concluded that there was information asymmetry among managers and investors. But, this does not greatly affect the dividend strategy.

Abubakar (2019) explored the smoothing dividend behavior based on symmetric dividend smoothing models and assessed whether the behavior depended on the degree of information asymmetry. Panel data from a sample of 20 listed consumer and industrial goods firms in the Nigerian Stock Exchange with records of dividend payment for the period of 2009 to 2018 was utilized. Regression techniques estimated the modes and the best-fitted model was selected based on the level of speed of adjustment SOA coefficient. The empirical results revealed that net earnings and the previous dividend have a significant effect on dividend changes and smoothing behavior exists in the firms. When firms are categorized into small and large, dividend smoothing is only present in large firms and not in small ones. Therefore, in consistent with signaling theory, the study concludes that the information asymmetry level determines the smoothness of dividends in listed consumer and industrial goods firms in Nigeria.

Mehdi et al. (2014) explored asymmetric information and dividend payout policy in Iran. An analysis was carried out from the Tehran Stock Exchange (TSE) surveying 170 listed non-financial companies. The dataset was from 2009- 2011 and included Iran's listed firms. There was a strong

correlation linking the asymmetry of the information and the ratio of dividend payments, confirming the signaling theory in the Iranian capital market. There was also a significant correlation connecting the size of the company and the dividend payout ratio.

Kemei (2014) assessed the effects of information asymmetry in the banking sector on the lending and credit worthiness of debtors in Mombasa County. To illustrate the connection of dependent and independent variables, a conceptual structure model was used. Data was derived from the questionnaires, CBK publications, newspapers, journals, and annual statements. Data was collected, organized, and transformed to highlight useful information. The research design adopted was descriptive. The paper advocated the use of protective measures to reduce the effects of information asymmetry on the banking industry. The study also proposed additions to the legal system after reviewing the legal system for the regulation of financial contracts to find loops, which would minimize the impact of information asymmetry.

Chege (2014) analyzed the impact of the size of firms listed at NSE on the asymmetry of information concerning earning disclosure. A descriptive analysis was done on secondary data from 41 listed companies to determine the relationship between the variables, a regression was performed. In the days following annual earnings disclosure for the listed companies, the study showed great and effective returns. A circumstance that has been interpreted as an increased asymmetry of information. The asymmetry of information for small businesses decreased before the announcement of earnings.

Basiddiq and Hussainey (2012) evaluated the impact on the dividend tendency of the number of analysts following firms, for the fiscal year ending in 2007. The research used a multiple linear regression model to evaluate the connection of the variables. The study found out that after adjusting for certain company features, there is a negative correlation existing in the number of analysts following companies and the tendency to pay dividends. The results showed that wider analysis of UK companies decreased the level of information asymmetry, leading to a lower tendency to pay dividends. The results were not consistent with the signaling theory.

Vojtech (2012) surveyed the quality of disclosure of company communication, and how it influences the use of dividends by shareholders to resolve agency issues. The research was carried out on public corporations in the United States. Managerial compensation was related to business value. However, since the manager and shareholders are asymmetrically aware, to increase perceived firm value, the manager might very well manipulate the accounting details of the business. By adding to the costs faced by managers who exploit earnings, dividends will restrict those activities. Also, more than dividend payers, non-dividend payers altered earnings announcement behavior. Overall, the results presented here indicated that dividend policies are successful in restricting information asymmetries.

Okpara (2010) determined the association of asymmetric information and dividend policy in Nigeria's securities exchange. The vector error correction model, augmented Dickey-Fuller and Johanson co-integration tests evaluated the lasting connection between the variables. Also used was the Granger causality test. The researcher discovered supporting evidence of dividend policy being significantly associated with information asymmetry.

Li and Zhao (2008) studied how information asymmetries impact the dividend policies of companies. The study used the Center for Research in Security Prices (CRSP) and Compustat to analyze the dividend policy in industrial firms. The survey period was from 1983 to 2003 the absolute sample was the unbalanced panel containing 22,413 observations. The researcher argued that the analyst's forecast error and dispersion earnings provide a detrimental result on dividend policy, reflecting a negative correlation of information asymmetry and policies on dividends. The research showed that businesses with minimal asymmetric information pay more dividends.

In light of alternate interpretation, Deshmukh (2005) investigated the influence of asymmetric information on dividend policy for the period 1988-1992. The sample consisted of manufacturing companies trading on the New York Stock Exchange. Evidence was provided that dividends are insignificantly interrelated to the asymmetric information level. The findings concurred with the pecking order theory in which the greater the analyst following firms the greater the dividends, but not harmonious with the signaling hypothesis where the higher the analyst following the lower the dividends.

2.3 Conceptual Framework

In this research, the independent variable is the information asymmetry. Whereas the dependent variable is the dividend payout policy. Figure 2.1 below denotes a conceptual framework that focused on the research questions.

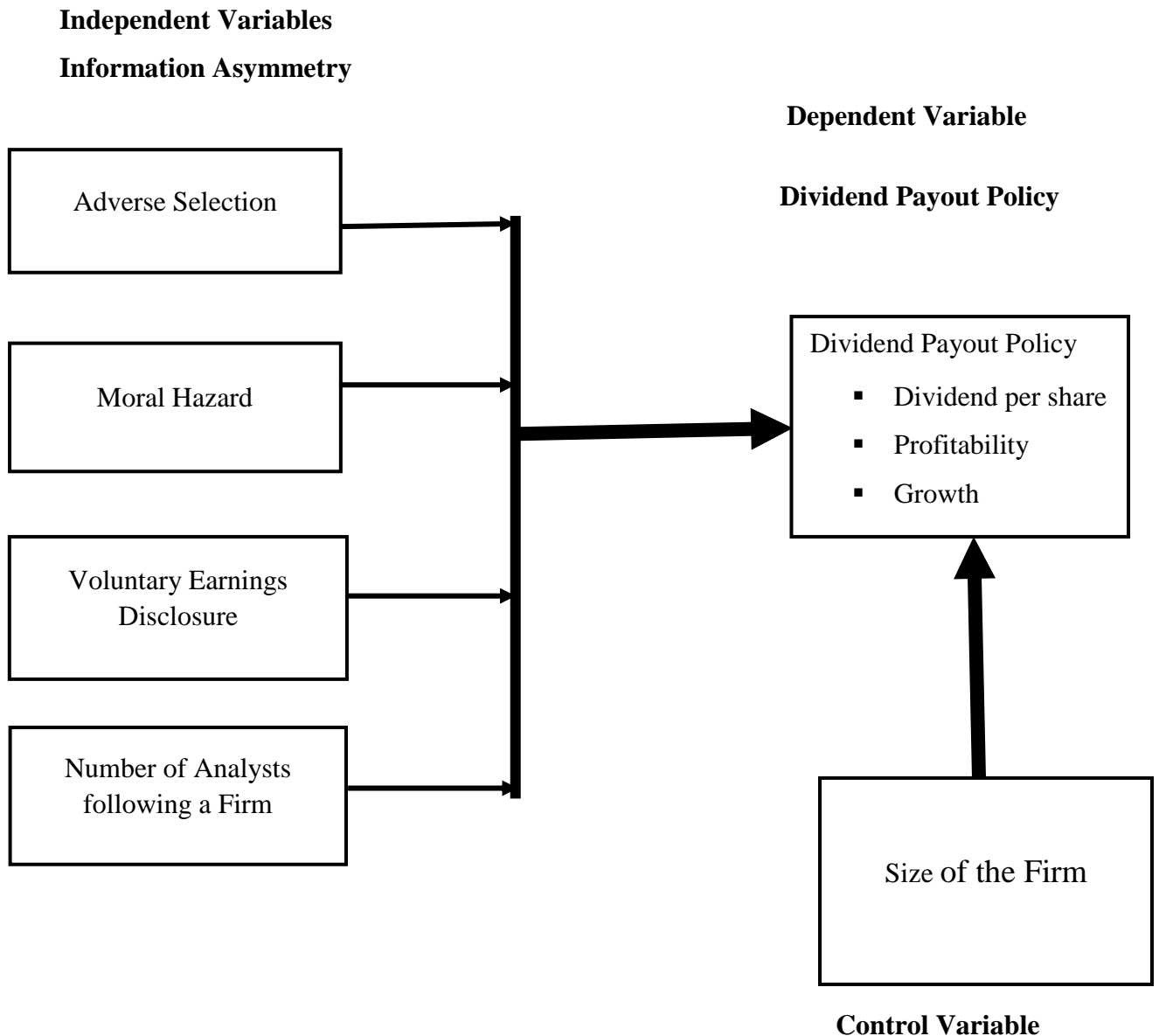


Figure 2.1 Conceptual Framework

3. Summary, Conclusions and Recommendations

3.1 Summary

The research aimed to establish the effects of information asymmetry on the dividend payout policy. There are conflicting findings on the consequences of data asymmetry on the dividend payout policy from the review of various empirical literature, articles, publications, and conceptual studies. Varied outcomes of positive, negative, and lack of association among the variables in terms of adverse selection, moral hazard, earnings disclosure and the number of analysts following a firm on one hand, and dividend per share, profitability, growth, and the size of the firm, on the other hand, were produced.

3.2 Conclusions

Information asymmetry, which resulted in the lower propensity of dividend, was compatible with the agency and pecking order theories from the study of previous researches but incompatible with signaling theory. Companies in the UK and the US are increasing their dividend payments as a consequence of the SOX enactment, following a reduction in asymmetric information. Conversely, higher coverage for UK companies by financial analysts reduced information asymmetry of information levels between principals and agents, which resulted in a decreased preference for dividends.

The researcher argued that analysts' forecast error and dispersion earnings offer a significant negative result on dividend policy, reflecting that in companies with reduced asymmetric information, more dividends seem to be allocated. The theory of dividend signaling is not, however, validated by this observation. Results, on the other hand, suggest that the high or low asymmetry of the information available does not influence dividend payment; this is because the rule of dividend payment is costly.

Some results aligned with the theory of pecking order but were different from the theory of signaling. The theory of pecking order predicted that, the more the analyst following, the more dividends. The signaling theory, on the other hand, predicted that the more the analyst following, the fewer dividends. Besides, the firm size and dividend payout ratio had a significantly strong association. No association of dividend payout ratio and earnings per share was found, however.

The information asymmetries for small-sized firms reduced ahead of the disclosure of earnings then improved afterward, nevertheless, there were conflicting information asymmetries concerning the disclosure of annual earnings of large companies. Therefore, the influence of the size of the firm on the asymmetry of knowledge was inconclusive. Besides, dividend-paying companies showed less evidence of management of earnings moreover, non-dividend payers altered announcement conduct compared to the dividend payers. It is found that overall dividend policies are successful in limiting the asymmetry of information. In conclusion, the association of information asymmetry and the dividend payout policy is both positive, negative, and conflicting.

3.3 Recommendations

The findings from different literature concluded that the relationship between information asymmetry and dividend payout policy is inconclusive. The agency and pecking order theories are consistent with information asymmetry, whereas, the signaling theory is inconsistent. Based on this conclusion the study recommends that for a higher percentage of dividends to be distributed, asymmetry information between investors and managers should be reduced through ways such as; financial reporting and information disclosure between the management and external investors. This will further minimize the expectation gap between investors and reduce the advantage of only the informed investors from benefiting.

Strategies which ensures and support public sharing of information should be employed so as to reduce information asymmetry. The study sought to analyze the association of information asymmetry and dividend payout policy. The researcher encourages additional research to be conducted through introducing other different variables other than adverse selection, moral hazard, earning's disclosure, and the number of analysts following a firm to test their moderation, or mediating effect.

References

- Abubakar, N. (2019). Does Level of Information Asymmetry Determines Dividend Smoothing Behaviour? Evidence from Listed Goods Firms in Nigeria. 19, 14.
- Badu, E. A. (2013). Determinants of Dividend Payout Policy of listed Financial Institutions in

Ghana. *Research Journal of Finance and Accounting*, 7.

- Basiddiq, H., & Hussainey, K. (2012). Does asymmetric information drive UK dividends propensity? *Journal of Applied Accounting Research*, 13(3), 284–297. <https://doi.org/10.1108/09675421211281344>
- Bhushan, R. (1989). Firm characteristics and analyst following. *Journal of Accounting and Economics*, 11(2), 255–274. [https://doi.org/10.1016/0165-4101\(89\)90008-6](https://doi.org/10.1016/0165-4101(89)90008-6)
- Brennan, M. J., & Hughes, P. J. (1991). Stock Prices and the Supply of Information. *The Journal of Finance*, 46(5), 1665–1691. <https://doi.org/10.2307/2328568>
- Chege, M. W. (2014). The Effect Of Firm Size On Information Asymmetries Surrounding Earnings Disclosure Of Firms Listed At The Nairobi Securities Exchange. 67.
- Deshmukh, S. (2005). The Effect of Asymmetric Information on Dividend Policy. *Quarterly Journal of Business and Economics*, 44(1/2), 107–127.
- D’Mello, R., & Ferris, S. P. (2000). The Information Effects of Analyst Activity at the Announcement of New Equity Issues. *Financial Management*, 29(1), 78–95. <https://doi.org/10.2307/3666363>
- Ernestin, L., Murhadi, W. R., & Sutejo, B. S. (2020). Analysis of the Effect of Information Asymmetry on Dividends. *Proceedings of the 17 Th International Symposium on Management (INSYMA 2020)*. *Proceedings of the 17 th International Symposium on Management (INSYMA 2020)*, Vung Tau City, Vietnam. <https://doi.org/10.2991/aebmr.k.200127.003>
- Harakeh, M., Matar, G., & Sayour, N. (2020). Information asymmetry and dividend policy of Sarbanes-Oxley Act. *Journal of Economic Studies*, 47(6), 1507–1532. <https://doi.org/10.1108/JES-08-2019-0355>
- Healy, P. M., & Palepu, K. G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature\$. 36.
- Jensen, C., & Meckling, H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. 56.
- Jensen, M. C. (1986). Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers. *The American Economic Review*, 76(2), 323–329.
- Kemei, J. C. (2014). The Effects of Information Asymmetry in the Performance of the Banking Industry: A Case Study of Banks in Mombasa County. 2(2), 6.

- Khang, K., & King, D. (2002). Is Dividend Policy related to Information Asymmetry: Evidence from Insider Trading Gains. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.342621>
- Kim, O., & Verrecchia, R. E. (1994). Market liquidity and volume around earnings announcements. *Journal of Accounting and Economics*, 17(1), 41–67. [https://doi.org/10.1016/0165-4101\(94\)90004-3](https://doi.org/10.1016/0165-4101(94)90004-3)
- Lang, M. H., & Lundholm, R. J. (1996). Corporate Disclosure Policy and Analyst Behavior. *The Accounting Review*, 71(4), 467–492.
- Li, K., & Zhao, X. (2008). Asymmetric Information and Dividend Policy. *Financial Management*, 37(4), 673–694.
- Lin, T.-J., Chen, Y.-P., & Tsai, H.-F. (2017). The relationship among information asymmetry, dividend policy and ownership structure. *Finance Research Letters*, 20, 1–12. <https://doi.org/10.1016/j.frl.2016.06.008>
- Mehdi, *, Sahar, E., & Mayahi, N. (2014). Asymmetric Information and Dividend Payout Policy: Evidence from Iran Stock Exchange.
- Mishkin, F. S., & Eakins, S. G. (2012). *Financial Markets and Institutions*. Global edition ed
- Myers, S. C., & Majluf, N. S. (1984). Corporate Financing and Investment Decisions When Firms Have Information the Investors Do Not Have. 61.
- Nissim, D., & Ziv, A. (2001). Dividend Changes and Future Profitability. *The Journal of Finance*, 56(6), 2111–2133.
- Okpara, G. C. (2010). Asymmetric Information and Dividend Policy in Emerging Markets: Empirical Evidence from Nigeria. *International Journal of Economics and Finance*, 2(4). <https://doi.org/10.5539/ijef.v2n4p212>
- Vojtech, C. (2012). The relationship between information asymmetry and dividend policy. *Finance and Economics Discussion Series*, 2012, 1–55. <https://doi.org/10.17016/FEDS.2012.13>
- Womack, K. L. (1996). Do Brokerage Analysts' Recommendations Have Investment Value? *The Journal of Finance*, 51(1), 137–167. <https://doi.org/10.2307/2329305>
- Woolridge, J. R. (1983). Dividend Changes and Security Prices. 10.