

Assessing the Dynamics of Cost of Equity: A Critical Literatures of Its Determinants, Models, and Implications for Financial Management

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Abstract: This paper conducts a comprehensive analysis of the Cost of Equity Capital (COE), crucial for guiding corporate finance and investment decisions. It delves into a variety of models for estimating COE, including the Residual Income Model (RIM), Price/Earnings to Growth (PEG) ratio, and Capital Asset Pricing Model (CAPM), each examined for its theoretical basis, assumptions, and relevance to market expectations and corporate performance. Beyond traditional financial metrics, the study expands to consider the impact of corporate governance and non-financial determinants such as corporate social responsibility (CSR) and environmental sustainability on COE. It highlights how these factors significantly influence investor perceptions and risk evaluations, thereby affecting the COE. Through analysis of empirical research, the paper illustrates the relationship between strong governance, CSR initiatives, and reduced equity costs, advocating for an integrated approach that balances financial performance with societal contributions. The findings suggest a need for further exploration into the interactions between financial and non-financial factors to enhance COE estimation methods and encourage corporate practices that promote sustainable development and social welfare. This synthesis underscores the complexity of COE estimation and calls for a holistic valuation strategy that aligns economic objectives with broader societal goals.

1. Introduction

In markets characterized by elevated information asymmetry, notably emerging economies, the cost of equity becomes a crucial metric for evaluating corporate efficacy and the attractiveness of investment opportunities. Fernando et al. (2010) emphasize that this is particularly pertinent in contexts where financial report reliability is questioned, thereby amplifying informational risk. Notably, the influence of equity cost is comparatively muted in dividend decisions as opposed to debt cost; this is attributed to the fact that dividend payouts are at the discretion of shareholders, unlike debt returns which are contractually stipulated and fixed (Nikoomaram et al., 2016).

Issuance of equity typically manifests in two forms: ordinary and preferred shares. A principal benefit of equity financing lies in the absence of mandatory interest and principal repayments, thereby mitigating risk and bolstering the firm's cash flows. This financial flexibility underpins commercial expansion and fosters long-term investor engagement, circumventing the pressure of immediate return payments on investments.

However, this comes with its own set of drawbacks, notably the higher cost of equity capital. Shareholders' voting rights embedded in equity also potentially complicate organizational decision-making processes (Sharma & Chadha, 2016). The cost of equity is not just a financial metric; it plays a pivotal role in strategic corporate decisions as a fundamental aspect of the overall capital cost structure (Cotner & Fletcher, 2000). An uptrend in equity costs may precipitate the dismissal of potentially lucrative investments, which could, in turn, impede prospective corporate growth (Embong et al., 2012).

However, numerous scholars have delved into the concept of the cost of equity capital, which Botosan (2006) defines as the minimum rate of return that equity investors expect when allocating capital to a firm. This rate embodies the returns investors demand for their company engagement, mirroring the forgone earnings from alternative ventures with comparable risk profiles (Daske et al., 2006). The cost of equity capital encapsulates the anticipated returns on ordinary shares within the stock market, serving as the requisite remuneration for shareholders to underwrite the firm's ventures amidst inherent uncertainties. Such compensation reflects the comparative expense of choosing corporate securities over other equivalent risk investments (Witmer & Zorn, 2007).

Pratt and Grabowski (2008) further characterize the cost of equity (COE) as the essential rate of return investors necessitate on an equity stake in a corporation. This threshold rate of return is imperative for the firm to present to appease stockholders for assuming risk (Swee Sim & Kim Leng, 2009). Rakow (2010) posits that the cost of equity capital represents the rate at which investors discount anticipated future cash flows to determine the present share price. Additionally, Eid (2015) describes it as the yield a firm disburses to investors as recompense for the risk associated with investing their capital. Similarly, Putra et al. (2016) articulate that the cost of equity signifies the financial burden on a company to satisfy the investor's expected investment return for a risk equivalent venture.

In academia, the term 'cost of ordinary shares' is often synonymous with the cost of equity, characterized as the necessary return rate for investments in ordinary shares. This rate should not fall below the potential earnings from alternate investments of similar risk levels. Any diminution in the expected return on the cost of equity capital for ordinary shares will concurrently diminish the economic value of the enterprise (King, 2009; Beigi et al., 2016; Baker & Al Thuneibat, 2011). Thus, the COE is perceived as a pivotal financial indicator, reflecting the expected dividend per share against the current market price per share (Abdelrehim & Yahya, 2023).

Integrating this within the existing introduction, we ensure continuity and coherence as follows:

In markets with heightened information asymmetry, particularly in emerging economies, the cost of equity is a vital measure for assessing corporate efficiency and investment appeal. Fernando et al. (2010) highlight this relevance in scenarios where financial reporting may not be trusted, amplifying the risk associated with information. In comparison to debt costs, the impact of equity cost on dividends is less pronounced due to shareholders' control over dividend payments, contrasted with the fixed nature of debt returns as stipulated by creditor agreements (Nikoomaram et al., 2016). Equity, issued as ordinary and preferred shares, offers significant financing advantages by eschewing obligatory interest and principal repayments, diminishing risk, enhancing cash flows, and promoting long-term commercial and investor relations. Nonetheless, equity financing is not without challenges, such as the heightened cost of equity and shareholder voting rights influencing company decisions (Sharma & Chadha, 2016). As a critical factor in corporate strategic decision-making, the cost of equity constitutes a key element of the total capital cost, influencing investment decisions that could impact the firm's future expansion (Embong et al., 2012).

Amplifying this discussion, scholarly research extensively examines the cost of equity capital as the minimum expected rate of return by equity investors (Botosan, 2006). This return rate serves as a proxy for the opportunity cost of missed gains from comparable risk investments (Daske et al., 2006), thus dictating the expected market return on ordinary shares (Witmer & Zorn, 2007). The COE, according to Pratt and Grabowski (2008), is the necessary return on equity investments, aligning with the risk undertaken by stockholders (Swee Sim & Kim Leng, 2009), and serves as a discount rate for future cash flows impacting current stock prices (Rakow, 2010). The return compensates investors for the risk entailed in capital investment (Eid, 2015) and represents the cost to a company of delivering the expected investor returns for an equivalent risk investment (Putra et al., 2016). The 'cost of ordinary shares' or the required return on these investments (King, 2009; Beigi et al., 2016; Baker & Al Thuneibat, 2011) must match or exceed what could be earned elsewhere at similar risk levels, as any decrease in the expected return on equity could devalue the firm economically. Therefore, the COE can be conceptualized as an anticipated dividend per share relative to the prevailing market price per share, underscoring its significance in financial and corporate governance spheres (Abdelrehim & Haji. Yahya, 2022).

2. Methodology

The present article adopts a theoretical-cognitive and methodological stance, anchored in a systematic review of contemporary scholarly works. As articulated by Kitchenham (2004), a systematic review entails a comprehensive process of identifying, evaluating, and synthesizing all extant research pertinent to a specific query or domain (Abdelrehim & Haji. Yahya, 2022). This form of secondary study utilizes extant research as its primary data source, allowing for a robust understanding of an established, albeit disparate field, underscoring the import of the current investigation (Webster & Watson, 2002; Kitchenham, 2004).

The methodology of this study is structured into several distinct phases: planning, development of a search strategy, execution of database searches, selection of pertinent studies, synthesis of findings, and expert interpretation culminating in the reporting phase (Kitchenham, 2004).

An expansive search strategy was employed, beginning with the identification of existing systematic reviews and gauging the breadth of potentially pertinent studies. Preliminary searches employed a variety of search term combinations related to the research theme, accompanied by reviews of research outcomes and expert consultations, as recommended by Kitchenham (2004).

Primary study searches were conducted across multiple international databases, including Scopus, ScienceDirect, EBSCO, Emerald, and ProQuest Central. Complementary evidence was manually gathered from esteemed libraries such as the Moravian Library in Brno, the Library of the Brno University of Technology, the Bibliothèque nationale de France in Paris, the Dauphine University Library, the Library of the Vienna University of Economics and Business, and the Russian State Library in Moscow. Acknowledging the pivotal role of data source diversity and accessibility in quantitative research, a multi-source strategy was utilized for data accumulation.

Upon finalizing the compilation of potential primary studies, a rigorous assessment of their actual relevance was undertaken. Inclusion and exclusion criteria were meticulously established to manage the extensive corpus of potential studies. A study was included if it contained keywords related to the research topic within its title, abstract, or full content. Relevant text segments were annotated, and a conceptual model was developed, delineated as a conceptual matrix. A record of included and excluded studies was maintained, with justifications for exclusions as per the guidelines provided by Kitchenham (2004) and Tranfield et al. (2003). A data extraction matrix was constructed, encapsulating details such as extraction date, title, authors, publication outlet, and additional remarks.

Subsequently, a detailed analysis of the literature was performed to discern the interrelationships, causations, and ramifications of the phenomena under scrutiny. This in-depth examination identified eighteen internal factors reported to exert influence on the Cost of Equity Capital (COE). The study also aimed to ascertain the intensity and trajectory of these influences.

The analysis and synthesis phase culminated in reporting the findings. Internal factors, defined as those associated with corporate activities under managerial influence, were categorized into corporate disclosure, governance, and social aspects. A prominent nexus among these factors and the COE was recognized as information asymmetry. For instance, heightened corporate disclosure is associated with reduced information asymmetry, which, in turn, is conjectured to lower the COE. Corporate disclosure policies are crafted to bolster transparency and minimize information asymmetry, ultimately impacting corporate performance. The disclosure can be conceptualized as an ensemble of discrete factors, each exerting a distinct influence on the COE, which were analyzed individually within this research framework.

This systematic review, therefore, significantly enriches the theoretical understanding of the subject by consolidating scattered data on factors that influence the internal COE. The review presents an examination of theories and research methodologies pertinent to the study of internal factors, whilst endeavoring to unearth connections amongst them. This comprehensive approach addresses the lacuna in extant research that has hitherto concentrated predominantly on the impact of isolated factors (Abdelrehim & Yahya, 2023).

3. Results and discussion

In the comprehensive landscape of equity valuation, the Cost of Equity Capital (COE) stands as a critical indicator, guiding both corporate decision-making and investment strategies. This study delves into the intricate determinants of COE, unraveling the complex interplay between accounting information quality, information asymmetry, corporate governance, and societal influences on equity valuation metrics. Through a nuanced exploration, we aim to shed light on the multifaceted factors that shape the perceptions and calculations of COE, offering insights into their direct and indirect impacts on financial and non-financial performance metrics. Section 3.1, "The Multifaceted Interplay Between Accounting Information Quality and Equity Valuation Metrics," examines how the integrity and transparency of accounting information influence investor trust and valuation, highlighting the pivotal role of accurate and comprehensive financial reporting in determining COE. In Section 3.2, "Dissecting the Nuances of Asymmetrical Information Dissemination and its Consequences for Equity Valuation," we dissect the dynamics of information asymmetry—how disparities in information accessibility between corporate insiders and the investment community shape risk perceptions and, consequently, the COE. Section 3.3, "Corporate Governance Dynamics: Deciphering Influence on Equity Valuation Metrics," scrutinizes the governance structures within organizations, emphasizing the significance of robust governance mechanisms in mitigating agency conflicts and enhancing equity valuation through increased transparency and accountability. Finally, Section 3.4, "The Integral Role of Societal Constructs in Modulating the Cost of Equity Capital," explores the burgeoning recognition of social factors, including corporate social responsibility (CSR) and environmental sustainability. This section articulates how these non-financial determinants increasingly factor into investment decisions and COE evaluations, reflecting a shift towards more holistic approaches in corporate valuation. This analysis aims to integrate these diverse determinants into a cohesive understanding of their collective impact on COE, setting the stage for a discussion that not only acknowledges the complexity of equity valuation but also underscores the evolving considerations in contemporary financial analysis and corporate strategy.

3.1 The Multifaceted Interplay Between Accounting Information Quality and Equity Valuation Metrics

Accounting information constitutes a cornerstone in the architecture of corporate decision-making and operational paradigms. The caliber and volume of accounting data disseminated can significantly sway the degree of information asymmetry, thereby influencing the ensuing cost of capital. Diverse facets of accounting information and their effects on capital expenditure have been the subject of scholarly scrutiny.

Initiating the discourse, Easley and O'Hara (2004) probed the impact of disparate information types on capital costs, culminating in the evolution of an asset-pricing model where both private and public information variants steer asset returns. Investors seek heightened returns from entities characterized by a prevalence of private over public information, attributing additional systematic risk to the former and demanding commensurate compensation. Consequently, in such an equilibrium, entities mired in an environment of predominantly private information are confronted with an escalated COE.

Progressing the dialogue, Li (2005) discerned that imprecise and nebulous information about projected aggregate dividend growth amplifies the risk premium and share return volatility, inversely, precision in information delivery diminishes both the risk premium and the cost of capital.

Theoretical constructs put forth by Apergis et al. (2011) illustrate that augmented expected cash flows, a byproduct of enhanced accounting information quality, catalyze a downturn in a firm's cost of capital. Enumerated factors contributing to this diminution include reduced variance in idiosyncratic and market-correlated firm cash flows, an expansion in shareholder base or market participant numbers, an escalation in market risk tolerance, and an upsurge in anticipated cash flows(Mahmoud et al., 2023b).

Corporate earnings, as a quintessential element of accounting information, have been widely analyzed for their potential to mitigate information asymmetry risks. Among earnings characteristics, the concept of earnings smoothness is frequently discussed; executives commonly associate it with a potential reduction in capital costs. Nevertheless, McInnis (2010) found no correlation between earnings smoothness and average stock returns over a thirty-year span, noting that the purported inverse relationship between capital costs and earnings smoothness could be attributed to analysts' optimistic long-term earnings forecasts, rather than volatility in earnings themselves.

Earnings quality stands as another crucial characteristic. Studies ascertain that poor earnings quality amplifies information asymmetry and consequently elevates COE (Aboody et al., 2005; García Lara et al., 2011). Apergis et al. (2012) empirically examined the influence of accounting information and earnings quality on capital costs, positing that higher quality, indicative of more precise public disclosures, dilutes the advantages of privately informed investors. Earnings quality is often gauged by the magnitude of abnormal accruals—higher absolute values signifying lower quality. Discretionary accruals, as a metric of earnings quality, have emerged as a significant indicator of a corporation's information environment, with an extensive abnormal accruals component undermining the effectiveness of public earnings proclamations and increasing the risk of information asymmetry(Abdelrehim et al., 2023).

Furthermore, accounting conservatism is scrutinized as an earnings quality dimension, conceptualized as a method of economic income evaluation that encompasses transparency and information asymmetry. The Financial Accounting Standards Board's Statement of Financial Accounting Concepts in 1980 characterized conservatism as a prudent response to uncertainty, ensuring that inherent business risks are judiciously accounted for. Givoly and Hayn (2000) described it as a principle selection bias toward minimizing cumulative reported earnings. Two predominant measures of conservatism are the sign and magnitude of accrued totals over time and the differential response of stock prices to earnings signals during adverse versus favorable news periods. Watts (2003) discusses several rationales

for conservatism, including contracting, shareholder litigation, tax policies, and regulatory requirements. Conservatism in accounting practice bifurcates into *ex post* (conditional or news-dependent) and *ex ante* (unconditional or news-independent) conservatism. *Ex ante* conservatism pertains to initial accounting measures that yield anticipated unrecorded goodwill, whereas *ex post* conservatism relates to the practice of writing down asset values in adverse conditions but not equivalently appreciating them in favorable ones (Beaver & Ryan, 2005).

The nexus between accounting conservatism and financial reporting clarity has been extensively explored in relation to COE. Studies by Chan et al. (2009) reveal that *ex ante* conservatism is associated with a reduced COE, attributing this effect to the provision of more consistent and forecastable current and future earnings streams, which assures the market of the robustness of financial reporting. Further research by Artiach and Clarkson (2010) concurs with the negative relationship between *ex ante* firm-level conservatism and COE but notes that this association weakens in contexts of low information asymmetry.

Moreover, Basu (1997) characterized conditional conservatism as the more immediate acknowledgment in earnings of adverse financial prospects compared to positive ones. This is exemplified by a heightened sensitivity of earnings to negative, unforeseen returns as opposed to positive ones. García Lara et al. (2011), utilizing empirical data, advocate that conditional conservatism enhances information precision, thereby escalating firm value and reducing COE. It achieves this by diminishing uncertainties around the magnitude and distribution of future cash flows as well as the volatility of forthcoming share prices. Hence, enhanced conservatism mitigates information asymmetry issues, refines investment efficiency, and fortifies corporate governance frameworks.

In sum, there is an unequivocal consensus that superior accounting information quality substantially curtails information asymmetry, thereby easing managerial-investor tensions and culminating in a lower COE.

3.2 Dissecting the Nuances of Asymmetrical Information Dissemination and its Consequences for Equity Valuation

In the domain of financial decision-making, the equitable distribution of knowledge is paramount for strategic allocation of resources across both individual and systemic economic strata. The disparity in access to proprietary corporate insights relative to what is available to the investment community epitomizes the crux of information asymmetry.

Originating from the seminal perspectives of Myers (1984) and Myers and Majluf (1984), the premise that information asymmetry is a catalyst in fiscal determinations is robust; specifically, scenarios in which private insights eclipse publicly accessible data regarding prospective corporate trajectories necessitate a heightened Cost of Equity Capital (COE) as stipulated by investors who are comparatively less informed. Barron et al. (2012) elucidate this dynamic, revealing a direct correlation between the enhancement of informational precision and a contraction in COE. Moreover, they delineate that while the acuity of publicly disseminated information inversely correlates with COE, the influence of privately held information acuity on COE, though present, is markedly modest. The findings further denote an inversely proportional relationship between the abundance of public information and the efficacy of private information in attenuating capital costs.

Scholars have scrutinized the impact of information asymmetry on COE through various analytical prisms. Armstrong et al. (2010) assessed the modulation of capital costs by information asymmetry within competitive market paradigms. Their findings suggest that information asymmetry exerts a pronounced influence on capital costs in the presence of market imperfections, as opposed to environments characterized by impeccable market competition. Hence, inquiries into the nexus between information asymmetry and capital costs must be contextualized within the prevailing market competition spectrum.

The amorphous construct of 'information asymmetry' compels researchers to adopt a multiplicity of proxies to approximate its quantification within the COE matrix. Among the more prevalent of these metrics is the bid-ask spread, recognized for encapsulating the price differential stemming from transactions among investors with disparate levels of knowledge (Leuz & Verrecchia, 2000; Armstrong et al., 2010). A narrower bid-ask spread is indicative of a milieu with diminished information disparity. Alternative indices such as transactional volume and share price volatility are invoked as surrogates for information asymmetry (Lang & Lundholm, 1993; Leuz & Verrecchia, 2000; Masood et al., 2017), where price stability signals a dearth of asymmetry, and marked volatility connotes its exacerbation. However, these surrogates, while indicative, may be susceptible to extraneous factors beyond the realm of information asymmetry (Leuz & Verrecchia, 2000). In response, a synthetic approach employing a constellation of proxies may yield a more nuanced estimation of information asymmetry. For instance, Armstrong et al. (2010) integrate an array of five metrics, consolidating market-based and accounting-based measures with the breadth of analyst coverage, which potentially augments the informational ecosystem and diminishes asymmetry.

The strategic selection of market-based proxies, especially the adverse selection component of the bid-ask spread, is lauded for their precision in assessing the manifestations of information asymmetry. Concurrently, accounting-based metrics, such as the allocation of financial resources to research and development, are indicative of the presence of intangible assets, frequently entangled with information asymmetry. Fluctuations in the quality of scaled accruals are synonymous with variations in earnings quality and, by extension, levels of information asymmetry. Barron et al. (2012) also advocate for the utility of analyst coverage in gauging the characteristics of the informational environment, including asymmetry, by scrutinizing the anticipated divergence in analyst forecasts alongside the accuracy of mean forecast models based on antecedent data.

In the endeavor to attenuate the idiosyncratic volatility inherent in information asymmetry, and thus reduce the COE, the strategy of elevating disclosure levels emerges as a potent tool. Lopes and de Alencar (2010) contend that a strategic amplification of disclosure protocols can serve to minimize the informational chasm between corporate governance and investors, engendering a more symmetrical informational paradigm and potentially curtailing the COE.

3.3 Corporate Governance Dynamics: Deciphering Influence on Equity Valuation Metrics

Corporate governance stands as a formidable influence on the Cost of Equity Capital (COE). The definition of corporate governance is multifaceted. Claessens and Yortoglu (2013) categorize the definition into two principal dimensions: behavioral patterns and normative framework. The behavioral interpretation perceives corporate governance as a complex of constraints shaping the distribution of a firm's profits amongst stakeholders. In contrast, the normative view characterizes it as a selection of institutions and policies involved in pivotal corporate functions such as resource allocation, risk management, and information generation. Ashbaugh et al. (2004) describe corporate governance as an amalgamation of mechanisms designed to mitigate agency risks by enhancing management monitoring, curbing opportunistic behaviors, and refining the information flow within a firm.

Researchers often devise indices to measure corporate governance, typically encompassing attributes like board structure, ownership configuration, shareholder rights, information quality, disclosure, and audit committee independence. Ashbaugh et al. (2004) demonstrate that corporate governance wields considerable influence on COE. Notably, firms with larger abnormal accruals experience higher COE, whereas companies with more lucid earnings reports and more autonomous audit committees enjoy a reduced COE. The presence of blockholders, reflecting concentrated ownership, also appears to exacerbate agency issues, thus inflating COE. Byun et al. (2008) also find that robust corporate governance mechanisms lower COE by resolving agency problems and diminishing information asymmetry. Among these mechanisms, the protection of shareholder rights emerges as the most influential on COE, while board characteristics and disclosure practices also contribute to its reduction.

The impact of corporate governance on COE is contingent on its quality. Ali Shah and Butt (2009) assess this impact, employing a Corporate Governance Score as a proxy for governance quality within Pakistani non-financial listed companies. Their study reveals that a larger board size correlates with a lower COE and that a greater proportion of shares held by board members surprisingly leads to an increased COE. They further observe that board and audit committee independence exert a positive but statistically insignificant effect on COE. Firms with robust governance structures are typically associated with a lower COE. Zulkufly (2012) underscores the quality of governance in Malaysian firms based on multiple categories and finds that certain characteristics like board structure and procedures, shareholder rights, and audit accountability significantly explain COE variations, while other factors like board compensation and social responsibility show no significant impact.

Mazzotta and Veltri (2014) apply a nuanced corporate governance index to explore the influence on COE among Italian-listed firms. Their index encompasses board attributes such as independence, size, committee existence, and committee autonomy. Pae and Choi (2011) examine the overall impact of comprehensive corporate governance on the value premium and find that stronger governance correlates with lower COE, especially pronounced in firms with lax business ethics. On a more localized scale, Tran (2014) investigates the relationship between COE in German-listed firms and governance elements like financial transparency, ownership structure, and board remuneration. The findings indicate that enhanced financial transparency and incentive-based compensations correlate with reduced COE, and that block ownership by entities such as other corporations, managers, or founding families negatively correlates with COE.

Thus, corporate governance is a prism through which the cost implications of equity capital are viewed, reflecting a broader paradigm where quality governance translates into tangible fiscal advantages for companies, reducing capital costs and signifying a more efficient and equitable business environment.

3.4 The Integral Role of Societal Constructs in Modulating the Cost of Equity Capital

The fusion of sociology and psychology into the field of economics has catalyzed a paradigm shift toward incorporating social factors into the analytical framework of the Cost of Equity Capital (COE). These non-financial determinants have become increasingly prominent in contemporary discourse, reflecting their growing influence on corporate performance metrics, including COE. Among these, social disclosure and corporate social responsibility (CSR) are paramount, with research underscoring their substantive impact on equity capital costs.

Richardson and Welker (2001) demonstrated that social disclosure, encompassing diverse dimensions of corporate social performance, exerts a beneficial influence on the COE. This positive effect is attributed to the enhancement of corporate transparency through the dissemination of social information, spanning from human resources to community engagement and environmental stewardship.

The burgeoning interest in CSR is reflected in the investment community's emphasis on corporate social endeavors and the support from economists to advance corporate social policies. Ghoul et al. (2011) advocate that investments in employee relations, environmental practices, and consumer-centric product strategies are conducive to reducing COE. Furthermore, Dhaliwal et al. (2014) uncovered a negative correlation between CSR disclosure and COE, a relationship that intensifies in stakeholder-oriented nations, suggesting that financial and CSR disclosures may serve as effective substitutes in mitigating COE.

Feng et al. (2015) expanded this inquiry to a global scale, finding that CSR engagement is inversely related to COE in North American and European contexts. Conversely, in Asian markets, this association is positive, indicating nuanced regional differences. The EU Commission's definition of CSR as voluntary social and environmental engagement underscores the multifaceted nature of this index, which spans economic performance, governance, environmental, and social metrics.

Sustainability, often interlinked with social and environmental responsibility, is another aspect of non-financial performance impacting COE. Feng et al. (2015) and Ng and Rezaee (2015) substantiated that disclosure of economic sustainability and governance initiatives leads to reduced COE, whereas social sustainability's influence remains inconclusive.

Sharfman and Fernando (2008) highlighted the relevance of environmental performance management in legitimizing a company and bolstering investor confidence, thereby contributing to lower COE. They utilized both quantitative metrics like the Toxic Release Inventory data and qualitative evaluations such as the KLD social performance scores to assess environmental risk management.

Corporate ethics, too, have emerged as a crucial non-financial determinant. Choi and Jung (2008), through a composite index of corporate ethical commitment, revealed that a strong ethical foundation within a corporation is significantly associated with a lower COE, a sentiment further reinforced by Choi (2012) in the context of the Korean market.

In the realm of marketing, advertising efforts play a dual role in enhancing customer loyalty and brand promotion, which in turn can lead to increased shareholder value. Singh et al. (2005) discovered a negative relationship between marketing expenditures and COE, underscoring the importance of visibility and liquidity in market operations.

Expanding upon non-financial performance metrics, Himme and Fischer (2014) investigated the influence of customer satisfaction on COE. Their research posits that high levels of customer satisfaction, reflective of past experiences and future purchase intent, are instrumental in reducing COE.

In summary, non-financial performance indicators, particularly those aligned with social factors, exert a significant and tangible impact on the COE. The continuous improvement in areas such as social disclosure, CSR, employee relations, environmental stewardship, and risk management is instrumental in fostering a favorable environment for equity capital cost reduction.

4. Evaluating Equity's Expense: Models for Measuring the Cost of Equity

The Cost of Equity (COE) represents the expected return that investors require as remuneration for the risks they undertake by investing in a firm. A project is deemed beneficial if its return exceeds the COE, positioning this measure as a linchpin in guiding corporate decisions and project acceptability. Salteh and Valipour (2012) emphasize that determining the COE is fundamental in propelling management to pursue ventures yielding returns that surpass the COE. Researchers have elucidated various models for appraising the COE, which can be delineated as follows:

4.1 Residual Income Model (RIM)

Gebhardt et al. (2001) applied the Residual Income Model (RIM) alongside market valuations to derive the cost of equity, positing it as the internal rate of return that equates the present share price with the present value of anticipated future cash flows for a standard share. This concept aligns with dividend discount models, where the stock price reflects the present value of expected future dividends, informed by all accessible data at time t . The formula for calculating the present share price (P_t) based on expected future dividends is expressed as follows:

$$P_t = \sum_{i=1}^{\infty} \frac{E_t(D_{t+1})}{(1+r_e)^i}$$

Here, P_t represents the current share price, $E_t(D_{t+1})$ denotes the expected dividends for the forthcoming period ($t+1$) as forecasted at time t , and r_e is the cost of equity derived from information available at time t . This formulation underscores the principle that the value of a share today is fundamentally the discounted sum of all its future expected dividends, with the discount rate being the cost of equity, which compensates investors for the risk associated with holding the equity.

4.2 Easton (2004) PEG Model

Easton (2004) examined the result of the expected return of equity estimated based on the P/E which takes only the forecasted accounting earnings into consideration assuming equal accounting earnings for economic earnings; price /earnings to growth ratio (PEG) which takes forecasting accounting earnings and growth in accounting earnings in the short term into account, assuming that there is a change in the growth rate after the period of prediction.

Modified PEG takes forecasting accounting earnings in addition to forecasting dividends and growth in accounting earnings in the short term; and refined PEG takes forecasting accounting earnings as well as forecasting the dividends and growth in the short term in the accounting earnings and the change rate in the expected long-term growth. In general, the P/E ratio is higher for a firm with a higher growth rate.

It is contended that the PEG method outperforms the other methods by finding the correlation of the expected return result based on the PEG method and the MPEG method (0.99), which indicates a low impact of non-inclusion of dividends in the model, and a correlation between the return result based on the PEG and the RPEG method (0.90). This shows that there is a lower impact of the model non-inclusion of dividends and growth in the earnings in the long term. Therefore, Easto (2004) concluded that there is a correlation between PE and PEG (0.48), which confirms that the PEG ratio is better than the PE ratio in estimating the expected return estimate.

Also, Botosan and Plumlee (2005) evaluated the most famous five ways to calculate the cost of equity using the model of cash flow deduction and concluded that Target Price Method and Price Earnings Growth (PEG) method produce an estimate of the cost of equity that is linked to the risks of the company in a moral and consistent manner, in the sense that the cost of equity estimated using these methods tolerates a change in risk in a predictable manner.

Target Price Method: The primary assumption underlying this method is that analysts' forecasts of dividends per share during the forecast horizon and stock price at the end of the forecast horizon capture the market's expectation of those values (Botosan and Plumlee, 2005).

Houqe *et. al.* (2015) measured the cost of equity capital based on the revised PEG method proposed by Easton (2004) as follows:

$$ke = \sqrt{\frac{(epst + 2 - epst + 1 + ke * Divt + 1)}{pt}}$$

Where:

- Ke is the cost of equity capital,
- $1epst+1$ represents the forecasted earnings per share for one year ahead,
- $epst+2$ denotes the forecasted earnings per share for two years ahead,
- $Divt+1$ is the forecasted dividends per share for one year ahead,
- Pt is the price per share at the end of the fiscal year.

4.3 Capital Asset Pricing Model (CAPM)

The required return (the cost of capital) depends on the investment risk (beta factor). The higher the beta factor, the higher the required return (Schlegel, 2015). The capital asset pricing model is one of the most used models for measuring the cost of equity by researchers considering that it studies this relationship (risk and expected return on stocks). Fu *et. al.* (2012) discussed how duplicate financial reports affect information inconsistencies and the cost of equity. They used a sample of 7, 654 corporate annual notes for the period 1951-1973. Their study concluded that whenever the level of accounting disclosure for financial reports increased, information asymmetry and cost of equity decreased. They showed that there were two categories of methods for estimating the cost of equity (or the cost of equity capital); one based on analyst expectations and the other based on stock returns. Since analysts' expectations during the sample period did not exist, the CAPM model was used to calculate the cost of equity.

According to this model, the cost of equity is reflected in the share price movements. These movements represent a high risk for companies causing investors to protect themselves by setting the minimum high cost of equity or rate of return as well as giving a low price to company shares. The rate of return on this investment is cash paid to shareholders (in the form of dividends) or (losses) in the capital, which is the difference between the share price when buying and the share price when selling (Yu *et. al.*, 2010).

Based on the CAPM model, the cost of equity consists of the rate of return on zero risk in addition to the expected market risk premium multiplied by the company's risk (market beta). It is calculated according to the following formula:

$$CAPM_{i,t} = Rf_t + \beta_{i,t} \times (Rm_t - Rf_t)$$

Where:

$CAPM_{i,t}$ = cost of equity capital calculated from Capital Asset Pricing Model

Rf_t = risk free rate

$\beta_{i,t}$ = beta of stock i, year t, using "Market model" to estimate the slope coefficient by regressing company's stock return against the market's return.

Rm_t = market rate of return

Or $(Rm_t - Rf_t)$ = risk premium.

There are also many studies that used CAPM, such as Meini and Siregar (2014), Moss (2016), Gao *et. al.* (2019), and Khlif *et. al.* (2015).

4.4 Fama and French (1993) Model

In addition to the market risk factor, Fama and French included the impact of volume measured through the SMB index (return on small portfolio, and return on large portfolio portfolio) and HML Index (return on portfolio with book value to high market value, return on portfolio with a ratio of book value to a low market value) for pricing of securities.

They concluded that the high returns for those stocks reflect the high risks they have and cannot be eliminated by diversification and therefore they must be priced separately from market risks as the market return cannot contain them (Fama and French, 2004). This

was explained as a result of the financial failure of companies, which makes sense for the investor in their shares to receive a return premium as compensation for the investment risks in them (Fama and French, 1993).

4.5 Ohlson and Juettner (2005) Model

Ohlson and Juettner model is based on linking the current share price and the expected earnings per share and the expected growth rate of the earnings per share to reach the cost of equity. This model is based on several assumptions including: 1) the current price per share is equivalent to the present value of the expected cash dividends per share, and 2) the rate of earnings growth in the short term is less than its permanent growth rate in the long term (Putra *et. al.*, 2016).

The study by Putra *et al* (2016) aimed to analyze the impact of real earning management, company size and stock liquidity on the cost of capital. The researchers used a sample of 259 companies for the period 2004-2015. The cost of capital equity was calculated by the Ohlson model and the reason they use this model is because it is a pioneering model in linking share prices, book value and cost of capital equity that is expected to be more representative in examining the relationship between independent variables over the dependent variable.

Several previous studies have used this model to estimate the cost of equity, such as Ben-Nasr and Al-Dakheel (2015), Embong *et. al.* (2012), Gamaliel and Sugiri (2013), Gode and Mohanram (2003), Firmansyah and Febriyanto (2018), Putra *et. al.* (2016), and Hope *et. al.* (2009).

5. Conclusion and Recommendations

This comprehensive exploration into the multifaceted domain of the Cost of Equity Capital (COE) has traversed through theoretical underpinnings, empirical methodologies, and the nuanced interplay of non-financial determinants, offering a rich tapestry of insights into what essentially drives and influences the COE. From the delineation of measurement models to the critical role of corporate governance and the emerging significance of social factors, this discourse has endeavored to encapsulate the breadth and depth of current knowledge, while also charting potential pathways for future research.

The examination of various COE measurement models underscores the complexity and diversity of approaches in estimating this critical financial metric. Models such as the Residual Income Model (RIM), the PEG ratio, the Capital Asset Pricing Model (CAPM), and the adaptations by Fama and French (1993), among others, highlight the dynamic nature of equity valuation. Each model, with its inherent assumptions and methodological nuances, contributes to a nuanced understanding of COE, reflecting the multifactorial influence of market expectations, investor behavior, and corporate performance indicators.

Corporate governance emerges as a pivotal element in this discourse, with its profound impact on the COE. The intricate relationship between governance structures, board independence, ownership patterns, and disclosure practices elucidates the mechanisms through which corporate governance exerts its influence on equity costs. This analysis not only reaffirms the critical importance of robust governance mechanisms in mitigating agency risks and enhancing transparency but also sheds light on the potential for governance practices to modulate the perceived risk and thereby the cost of capital.

Furthermore, the exploration into social factors and non-financial determinants such as corporate social responsibility (CSR), environmental sustainability, and ethical commitments enriches the conventional financial narrative. These elements, reflective of a broader societal and environmental consciousness, have been shown to significantly influence investor perceptions, risk assessments, and consequently, the COE. The nuanced understanding of how these non-financial factors interplay with traditional financial metrics opens new avenues for corporate strategy, emphasizing the importance of holistic corporate practices that align financial performance with societal and environmental stewardship.

The convergence of these diverse themes within the ambit of COE estimation presents a compelling case for a more integrated and holistic approach to equity valuation. It underscores the need for future research to further unravel the complexities of COE determinants, incorporating the evolving dynamics of global markets, regulatory landscapes, and societal expectations. Moreover, the increasing relevance of sustainability and ethical considerations in investment decisions points to the necessity for models that can seamlessly integrate these dimensions with traditional financial indicators.

In conclusion, the endeavor to elucidate the determinants and measurement methodologies of the COE reveals a landscape rich with theoretical diversity, practical implications, and emerging challenges. As the global financial ecosystem continues to evolve, the quest for accurate, comprehensive, and responsive models of COE estimation remains a pivotal concern, necessitating ongoing inquiry, methodological innovation, and interdisciplinary collaboration. This journey, while rooted in financial theory and empirical analysis, transcends the boundaries of finance to encompass the broader narratives of governance, sustainability, and societal well-being, marking a paradigm shift towards a more inclusive and reflective approach to understanding the cost of equity capital.

However, in light of the comprehensive analysis and discussions presented in this paper regarding the cost of equity capital (COE), its determinants, measurement models, and the influence of both financial and non-financial factors, several recommendations

emerge. These suggestions are aimed at practitioners, policymakers, and future research endeavors to enhance understanding, application, and implications of COE estimations in the evolving global financial landscape.

For Practitioners:

1. **Adopt a Holistic Approach to COE Estimation:** Organizations should integrate both traditional financial models and non-financial determinants such as CSR, environmental sustainability, and corporate governance in their COE calculations. This broadened perspective allows for a more accurate and representative assessment of equity cost, reflecting the comprehensive risk profile and growth prospects of the company.
2. **Enhance Corporate Disclosure and Transparency:** Given the significant impact of disclosure quality on COE, companies are encouraged to adopt best practices in transparency, going beyond the statutory requirements to voluntary disclosures. Enhanced disclosure regarding social responsibility initiatives, environmental impact, and governance practices can reduce information asymmetry and potentially lower the COE.
3. **Incorporate Environmental, Social, and Governance (ESG) Factors:** In alignment with global trends, firms should embed ESG factors into their strategic planning and reporting. Investment in sustainable practices and ethical governance not only aligns with investor values but can also contribute to a lower COE by signaling lower risk and long-term value creation to the market.
4. **Leverage Advanced Analytical Tools and Big Data:** The utilization of advanced analytics and big data technologies can aid in the nuanced estimation of COE by capturing dynamic market sentiments, ESG impacts, and real-time financial metrics. These technologies offer a more granular and accurate analysis, enabling better strategic decision-making.

For Policymakers:

1. **Promote Standardization in Disclosure Practices:** Regulatory bodies should work towards standardizing disclosure practices, particularly concerning non-financial information. Clear guidelines on ESG and CSR reporting can help reduce information asymmetry, making it easier for investors to assess company risks and for companies to attract investment at a lower cost of equity.
2. **Encourage ESG Integration:** Policymakers should encourage the integration of ESG factors into corporate evaluation and reporting. Incentives for companies that demonstrate strong performance in these areas could include tax benefits, grants, or other support mechanisms.
3. **Enhance Corporate Governance Standards:** Regulatory frameworks should emphasize the importance of strong corporate governance practices. Implementing stringent requirements for board independence, audit committee effectiveness, and shareholder rights can contribute to lower COE by mitigating agency risks and enhancing investor confidence.

For Future Research:

1. **Explore Interdisciplinary Approaches:** Future studies should consider interdisciplinary approaches that integrate insights from finance, sociology, environmental science, and corporate governance to enrich the understanding of COE determinants.
2. **Investigate the Impact of Technological Innovations:** Research into how technological advancements, including blockchain and AI, influence COE through improved transparency, enhanced risk management, and disruption of traditional business models, is warranted.
3. **Study the Global Variability of COE Determinants:** Given the varying impact of social responsibility and governance factors across different regions, more research is needed to understand these geographical nuances and their implications for global investment strategies.
4. **Longitudinal Studies on Non-Financial Determinants:** There is a need for longitudinal studies that track the impact of non-financial determinants on COE over time, particularly in response to global challenges such as climate change and social inequality.
5. **Develop and Validate New Models:** The evolution of financial markets calls for the development and validation of new models that can accurately reflect the current dynamics influencing COE, including the integration of non-traditional risk factors and investor sentiment analysis.

By embracing these recommendations, practitioners, policymakers, and researchers can collectively contribute to a more nuanced, accurate, and holistic understanding of the cost of equity capital. This, in turn, can facilitate better strategic decision-making, enhance market efficiency, and promote sustainable corporate practices that align with the broader societal and environmental objectives.

References

- Abdelrehim, M., & Haji.Yahya, M. H. D. (2022). *The impact of the international institutions policies and the reform programs on the FDI inflow in Africa*. 12.
- Abdelrehim, M., & Yahya, M. H. H. (2023). *LSDVC ESTIMATION OF THE INTERACTION EFFECT OF EXCHANGE RATE AND TRADE OPENNESS ON FISCAL DISCIPLINE : DYNAMIC PANEL MODELS*. 27(4), 1–15.
- Абдельрехим, М., Дато, М. Х., & Яхья, Х. (2023а). *Историко-эконометрический анализ факторов налоговой дисциплины в странах Африки Historical econometric analysis of the fiscal discipline determinants in the African countries*. September. <https://doi.org/10.31166/VoprosyIstorii202308Statyi24>
- Абдельрехим, М., Дато, М. Х., & Яхья, Х. (2023b). *История долгового кризиса в Африке : эконометрический анализ Historical study of the chronic debt crisis in Africa : an econometric analysis*. October. <https://doi.org/10.31166/VoprosyIstorii202308Statyi32>
- Aboody, D.; Hughes, J.; & Liu, J. 2005. Earnings quality, insider trading and cost of capital, *Journal of Accounting Research*, 43(5): 651-673.
- Ali Shah, S. Z.; & Butt, S. A. 2009. The Impact of Corporate Governance on the Cost of Equity: Empirical Evidence from Pakistani Listed Companies, *The Lahore Journal of Economics*, 14(1): 139-171
- Armstrong, C. S.; Core, J. E.; Taylor, D. J.; & Verreccia, R. E. 2011. When Does Information Asymmetry Affect the Cost of Capital? *Journal of Accounting Research*, 49(1): 1-40.
- Artiach, T.; & Clarkson, P. 2010. *Conservatism, disclosure, and the COE*, University of Queensland.
- Artiach, T.C.; & Clarkson, P. M. 2011. Disclosure, conservatism and the COE: a review of the foundation literature. *Accounting and Finance*, 51(1): 2-49.
- Apergis, N.; Artikis, G.; Eleftheriou, S.; & Sorros, J. 2012. Accounting information and excess stock returns: the role of the cost of capital – new evidence from US firm-level data, *Applied Financial Economics*, 22(4): 321-329.
- Apergis, N.; Artikis, G.; Eleftheriou, S.; & Sorros, J. 2011. Accounting information and cost of capital: a theoretical approach, *Modern Economy*, 2: 589-596.
- Baginski, S. P.; & Rakow, K. C. 2012. Management earnings forecast disclosure policy and the COE, *Rev Account Stud.*, 17(2): 279-321.
- Barth, M. E.; Konchitchki, Y.; & Landsman, W. R. 2013. Cost of capital and earnings transparency, *Journal of Accounting and Economics*, 55(2-3): 206-224.
- Barron, O.; Sheng, X.; & Thevenot, M. 2012. *Information Environment and the Cost of Capital: A New Approach*, American University. Available at:
- Basu., S. 1997. The conservatism principle and the asymmetric timeliness of earnings, *Journal of Accounting and Economics*, 24(1): 3-37.
- Beaver, W. H.; & Ryan, S. G. 2005. Conditional and unconditional conservatism: concepts and modelling, *Review of Accounting Studies*, 10(2-3): 269-309.
- Bushman, R. M.; Piotroski, J. D.; & Smith, A. J. 2004. What determines corporate transparency? *Journal of Accounting Research*, 42(2): 207-252.
-

- Byun, H. Y.; Kwak, S. K.; & Hwang, L. S. 2008. The implied cost of equity capital and corporate governance practices, *Asia-Pacific Journal of Financial Studies*, 37(10): 139-184.
- Chan A.; Lin S.; & Strong N. 2009. Accounting conservatism and the cost of equity capital: UK evidence, *Managerial Finance*, 35(4): 325-345.
- Chen, Z.; Dhaliwal, D. S.; & Xie, H. 2010. Regulation fair disclosure and the cost of equity capital, *Review of Accounting Studies*, 15: 106-144.
- Choi, T. 2012. Do ethical companies have lower implied cost of equity capital? Evidence from the Korean stock market, *Asian Business & Management*, 11(2): 219-246.
- Choi, T.; & Jung, J. 2008. Ethical commitment, financial performance and valuation: An empirical investigation of Korean companies, *Journal of Business Ethics*, 81(2). p. 447-463.
- Claessens, S.; & Yortoglu, B. B. 2013. Corporate governance in emerging markets: A survey, *Emerging Markets Review*, 15: 1-33.
- Copeland, T. E.; & Galai, D. 1983. Information effects on the bid-ask spreads, *Journal of Finance*, 38(5): 1457-1469.
- Core, J. E.; Hail, L.; & Verdi, R. S. 2014. Mandatory Disclosure Quality, Inside Ownership, and Cost of Capital, *European Accounting Review*, 24(1): 1-29.
- Dhaliwal, D.; Li, O. Z.; Tsang, A.; & Yang, Y. G. 2014. Corporate social responsibility disclosure and the cost of equity capital: The roles of stakeholder orientation and financial transparency, *Journal of Accounting and Public Policy*, 33(4), 328-355.
- Deboskey, D. G.; & Gillett, P.R. 2013. The impact of multi-dimensional corporate transparency on us firms' credit ratings and cost of capital, *Revue of Quantitative Finance and Accounting*, 40:
- Dokulil, J., Zlámálová, J., & Popesko, B. 2017. The perception of budgeting in Czech firms — results of a survey, *Oeconomia Copernicana*, 8(2), 273-285.
- Easley, D.; & O'Hara, M. 2004. Information and the cost of capital, *Journal of Finance*, 59(4): 1553-1584.
- Faldzinski, M.; Balcerzak, A. P.; Meluzin, T.; Pietrzak, M. B.; & Zinecker, M. 2016. Cointegration of Interdependencies among Capital Markets of Chosen Visegrad Countries and Germany. In: *34th International Conference Mathematical Methods in Economics (MME 2016)*. Technical University Liberec, 06–09 September. Liberec, Czech Republic, 189-194.
- Feng, Z-Y.; Wang, M-L.; & Huang, H-W. 2015. Equity financing and social responsibility: further international evidence, *International Journal of Accounting*, 50(3): 247-280.
- García Lara, J.M.; García Osma, B.; & Penalva, F. 2011. Conditional conservatism and the cost of capital, *Review of Accounting Studies*, 16(2): 247-271.
- Ghoul, S. E.; Guedhami, O.; Kwok, C. Y.; & Mishra, D. R. 2011. Does corporate social responsibility affect the cost of capital? *Journal of Banking & Finance*, 35: 2388-2406.
- Givoly, D.; & Hayn, C. 2000. The changing time-series properties of earnings, cash flows and accruals: has financial reporting become more conservative? *Journal of Accounting and Economics*. 29: 287-320.
- Himme, A.; & Fischer, M. 2014. Drivers of the cost of capital: the joint role of non-financial metrics, *Intern. J. of Research in Marketing*, 31(2): 224-238.
- Kim, J. W.; & Shi, Y. 2011. Voluntary disclosure and the cost of equity capital: Evidence from management earnings forecasts, *J. Account. Public Policy*, 30(4): 348-366.
- Kitchenham, B. 2004. *Procedures for Performing Systematic Reviews*. [Online]. NICTA Technical Report 0400011T.1. Eversleigh, Australia: Empirical Software Engineering, National ICT Australia Ltd. Available at: [Accesed: 2018, March 3].
- Kovacic, Z., & Vilotic, M. 2017. Characterising and testing European business cycles asymmetry, *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 12(3), 453–468.

Kyle, A. S. 1985. Continuous auctions and insider trading, *Econometrica*, 53(6): 1315- 1336.

Lang, M.; & Lundholm, R. (1993). Cross-sectional determinants of analyst ratings of corporate disclosures, *Journal of Accounting Research*, 31(2): 246-271.

Lenart, Ł., Mazur, B., & Pipień, M. 2016. Statistical analysis of business cycle fluctuations in Poland before and after the crisis, *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 11(4), 769-783.

Lopes, A. B.; & Alencar, R. C. 2010. Disclosure and cost of equity capital in emerging markets: the Brazilian case, *The International Journal of Accounting*, 45(4): 443-464.

Leuz, R.; & Verrecchia, R. E. 2000. The economic consequences of increased disclosure, *Journal of Accounting Research*, 38: 91-124.

Li, G. 2005. Information quality, learning, and stock market returns, *Journal of Financial and Quantitative Analysis*, 40(3): 595-620.

Masood, O.; Aktan, B.; Gavurová, B.; Fakhry, B.; Tvaronavičienė, M., Martinkutė-Kaulienė, R. (2017). The impact of regime-switching behaviour of price volatility on efficiency of the US sovereign debt market, *Economic Research-Ekonomska Istraživanja* 30(1): 1865-1881.

Mazur, B. 2017. Probabilistic predictive analysis of business cycle fluctuations in Polish economy, *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 12(3): 435-452.

Mazzotta, R.; & Veltri, S. 2012. The relationship between corporate governance and the cost of equity capital: Evidence from the Italian stock Exchange, *Journal of Management & Governance*, 18(2): 419-448.

McInnis, J. 2010. Earnings smoothness, average returns and implied cost of equity capital, *The Accounting Review*, 85(1): 315-341.

Meluzín, T. Pietrzak, M. B., Balcerzak, A. P., Zinecker, M., Doubravský, K., & Dohnal, M. 2017. Rumours Related to Political Instability and their Impact on IPOs: The Use of Qualitative Modeling with Incomplete Knowledge, *Polish Journal of Management Studies*, 16 (2), 171-187.

Michalak, A. 2016. The Cost of Capital in the Effectiveness Assessment of Financial Management in a Company, *Oeconomia Copernicana*, 7(2): 317-329.

Mikhail, M. B.; Walther, B. R.; & Willis, R. H. 2004. Earnings surprises and the cost of equity capital, *Journal of Accounting, Auditing and Finance*, 19: 491-513.

MSCI KLD scores. 2015. Network for Business Sustainability. [Online]. Available at: [2018, March 7].

Myers, S. C. 1984. The capital structure puzzle, *Journal of Finance*, 39(3): 575-592.

Myers, S.C.; & Majluf, N.S. 1984. Corporate financing and investment decisions when firms have information that investors do not have,

Journal of Financial Economics, 13(2):187-221.

Myskova, R.; & Hajek, P. 2016. The Effect of Managerial Sentiment on Market-to-Book Ratio, *Transformations in Business & Economics*, 15(2A): 498-513.

Ng, A. C.; & Rezaee, Z. 2015. Business sustainability performance and cost of equity capital; *Journal of Corporate Finance*, 34:128-149.

OECD. 2015. *G20/OECD Principles of Corporate Governance, Report to G20 finance ministers and central bank governors*. Paris.

Pae, J.; & Choi, T. H. 2011. Corporate governance, commitment to business ethics, and firm valuation: Evidence from the Korean stock market, *Journal of Business Ethics*, 100(2): 323-348.

Paseková, M.; Müllerová, L.; Crhová, Z.; Svitaková, B. 2018. Impact of reporting of deferred tax on sustainable development of a country: case of Czech Republic, *Journal of Security and Sustainability Issues* 7(4): 769-779.

Pieloch-Babiarz, A. 2017. Determinants of payout policy and investment attractiveness of companies listed on the Warsaw Stock Exchange, *Equilibrium, Quarterly Journal of Economics and Economic Policy*, 12(4): 675–691.

<https://doi.org/https://doi.org/10.24136/eq.v12i4.35>

Pietrzak, M. B., Fałdziński, M., Balcerzak, A. P., Meluzin, T. & Zinecker, M. 2017. Short-term Shocks and Long-term Relationships of Interdependencies among Central European Capital Markets, *Economics & Sociology*, 10(1), 61-77.

Pustynnick, I. 2017. Comparison of liquidity based and financial performance based indicators in financial analysis, *Oeconomia Copernicana*, 8(1), 83-97.

Rakow, K. C. 2010. The effect of management earnings forecast characteristics on cost of equity capital, *Advances in Accounting, Incorporating Advances in International Accounting*, 26: 37-46.

Richardson, A. J.; & Welker, M. 2001. Social disclosure, financial disclosure and the cost of equity capital, *Accounting, Organizations and Society*, 26(7-8): 597-616.

Sharfman, M. P.; & Fernando, C. S. 2008. Environmental risk management and the cost of capital, *Strategic Management Journal*, 29: 569-592.

Singh, M.; Faircloth, S.; & Nejadmalayeri, A. 2005. Capital market impact of the product marketing strategy: evidence from the relationship between advertising expenses and cost of capital, *Journal Academy of Marketing Science*, 33(4): 432-444.

Tomczak, S. 2017. Influence of the size of equity on corporate efficiency, *Oeconomia Copernicana*, 8(2), 239-254.

Tran, D. H. 2014. Multiple corporate governance attributes and the cost of capital – evidence from Germany, *The British Accounting Review*, 46(2): 179-197.

Tranfield, D.; Denyer, D.; & Smart, P. 2003. Towards a Methodology for Developing Evidence-Informed Management Knowledge by Means of Systematic Review, *The British Journal of Management* 14(3): 207-222.

Tvaronavičienė, M. 2018. Towards sustainable and secure development: energy efficiency peculiarities in transport sector, *Journal of Security and Sustainability Issues* 7(4): 719-725.

Watts, R. L. 2003. Conservatism in accounting Part I: Explanations and implications, *Accounting Horizons*, 17(3): 207-221.

Vukovic, D., Hanic, E., & Hanic, H. 2017. Financial integration in the European Union - the impact of the crisis on the bond market, *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 12(2), 195-210.

Zinecker, M.; Balcerzak, A. P.; Faldzinski, M.; Meluzin, T.; & Pietrzak, M. B. 2016. Application of DCC-Garch Model for Analysis of Interrelations among Capital Markets of Poland, Czech Republic and Germany. In: *International Scientific Conference on Quantitative Methods in Economics - Multiple Criteria Decision Making XVIII*. Univ Econ Bratislava, 25–27 May. Vratna, Slovakia, 416-421.

Zulkufly, R. 2012. Impact of corporate governance quality on the cost of equity capital in an emerging market: Evidence from Malaysian listed firms, *African Journal of Business Management*, 6(4).