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## Article

# Tenure of independent directors and analysts following: Moderating role of institutional ownership

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## ACCOUNTING, CORPORATE GOVERNANCE & BUSINESS ETHICS | RESEARCH ARTICLE

# Tenure of independent directors and analysts following: Moderating role of institutional ownership

Chin Sok Fun<sup>1\*</sup>, Nor Shaipah Abdul Wahab<sup>1</sup>, Tye Wei Ling<sup>1</sup>, Premagowrie Sivanandan<sup>1</sup> and Nurliyana Haji Khalid<sup>1</sup>

**Abstract:** This study examines the impact of tenure of independent directors on analyst following, and the moderating role of institutional ownership between tenure of independent directors and analyst following. The data utilized in this study was collected from 3,656 firm-years of Malaysian public listed firms from 2013 to 2020. By employing Huber-White adjusted t-statistics to analyse the data using the STATA software, this study finds that short-tenured independent directors are preferred by analysts and the relationship is significantly moderated by institutional ownership. This study has significant ramifications on theory, policy, and practice. Theoretically, this study provides further evidence to support the executive cognition theory, social capital theory and stakeholder theory. In the perspective of policy, policy makers gather feedback on the implementation of a beneficial corporate governance practice by restricting the tenure of independent directors. Practically, market players with conservative risk appetite are encouraged to invest in firms, which are closely scrutinized by institutional shareholders, thus, ensuring enhanced corporate governance and accountability.

**Subjects:** Economics; Finance; Business, Management and Accounting; Sociology & Social Policy

**Keywords:** tenure; independent director; analysts following; institutional shareholders; corporate governance; Malaysia

### 1. Introduction

This study examines the extent to which institutional ownership moderates the relationship between tenure of independent directors and number of analysts following within Malaysian public listed firms. Empirical studies suggest that independent directors, acting as the agent of shareholders, enhance corporate credibility, assess board performance, advise on strategy, and report unethical behavior of management to protect interest of shareholders, in line with the agency theory (Bebchuk & Hamdani, 2017; Cotter et al., 1997). However, independent directors serving the same firm for a long period of time would become complacent over time, and having developed informal social bonding with the management, will impair their monitoring roles and expropriate the interest of shareholders (Reguera-Alvarado & Bravo, 2017). Hence, firms with long-serving independent directors signal poor governance (Vafeas, 2003), and this

has drawn the attention of financial analysts (Chou & Shiah-Hou, 2010), who incorporate this information into their financial analysis to predict the future financial prospects of the firms (Brauer & Wiersema, 2018).

In this context, accurate future predictions guide analysts in evaluating investment potential for investors. Brown et al. (2016) state that firms with high disclosures of corporate governance mechanisms attract analysts' following because this leads to more accurate calculation of a firm's cost of equity (Gupta et al., 2018), credit ratings (Lin et al., 2020), earnings' forecasts (Vanstraelen et al., 2003) and firm value (Bhat et al., 2018). In the same vein, Malaysian investors seek insightful analyses for informed investment decisions (Qasem et al., 2021), which the analysis uses, among others, data related to independent directors' tenure. However, to our knowledge, the evidence on the impact of tenure of independent directors on number of analysts following within the Malaysian setting is scarce. Therefore, this leads us to our first research question, i.e., can tenure of independent directors affect analysts following of Malaysian public listed firms?

Institutional investors employ managers to manage funds and are expected to deliver excellent returns from their portfolios and meet sustainable development goals (Money Compass, 2021). For effective asset management, institutional asset managers must use transparent, rule-based portfolio methods for active tracking and monitoring (Kahn & Lemmon, 2016). This entails a substantial amount spent on hiring both the buy-side and sell-side analysts as internal sources of investment ideas (Frey & Herbst, 2014). Analysts are entrusted to update investors on market trends and future concerns regarding investee firms (Lin et al., 2018). This information is subsequently used by the institutional investors as a basis for investment decisions (To et al., 2018). In addition, the analyst reports are also used as evidence that asset managers have exercised care and prudence to defend against poor investment performance (O'Brien & Bhushan, 1990). In view of institutional investors' substantial market power and influence (How et al., 2014), analysts will provide them with regular coverage of the firms they are interested in (CFA Institute, 2014). Thus, the analysts are inclined to motivate the institutional investors to increase ownership in the followed firms, which indicates a great accomplishment of their key performance indicator and successful marketing efforts (Lin & Fu, 2017). Hence, analysts strive to produce relevant content for institutional investors to incorporate their recommendations into the share trading (Kang et al., 2018). Since tenure of independent directors is an indicator of governance (Dou et al., 2015), we, therefore, delve into the second research question, i.e., whether the level of institutional investors' ownership in a firm would affect analysts' coverage of firms with extended-tenured independent directors.

Early studies on analysts following focus on firm characteristics such as firm size (Marston, 1997), returns variability (O'Brien & Bhushan, 1990) and credit ratings (Cheng & Subramanyam, 2008). The subsequent studies include capital market characteristics such as market liquidity (Roulstone, 2003) and analysts' forecast accuracy (Tan et al., 2011). In recent years, corporate governance characteristics such as audit committee's expertise (Farber et al., 2018), risk disclosure (Derouiche et al., 2020) and disclosure quality (Jiang, 2020) had been further highlighted as firm characteristics that can impact analysts following. However, studies that examine the impact of independent directors' characteristics, including tenure of the directors on analysts following within the Malaysian setting, are very limited (How et al., 2014). Similarly, extant literature on the impact of institutional investors on independent directors focus on the presence of independent directors (Chouchene, 2010; Petra, 2005), number of directorships (Liu et al., 2020) and independent directors' nationality (Miletkov et al., 2017). There is a general dearth of studies on institutional investors' role in overseeing the tenure of independent directors, as an indicator of effectiveness of the oversight role (Reguera-Alvarado & Bravo, 2017) that will draw analyst attention. Hence, this study aims to address the research gap concerning the impact of independent directors' tenure on analysts following, as well as the moderating role of institutional ownership on this relationship.

Consequently, the study seeks to contribute to the existing body of literature on corporate governance. Firstly, to assess the current practice of independent directors' tenure as an effective corporate governance mechanism within the firm. Understanding the impact of directors' tenure

allows firm to determine the optimal tenure length for maximizing board effectiveness and overall firm performance. Additionally, limiting tenure of independent directors is perceived as the act of embracing regulatory changes and best practices in corporate governance, which could enhance investors' confidence and attract long-term investments.

Secondly, in relation to the first point, the efficacy of independent directors' tenure as an indicator of risk levels and its relevance as input for earnings predictions of the analyst. This is in line with Lawrence et al. (2017) and Kerl et al. (2012) who affirm that sell-side analysts from large brokerage firms, who are tasked to conduct regular research updates on a list of firms from the same industry, will make recommendations to hold, buy or sell the firms' shares based on the earnings performance of the firms during the earnings season under review. In a competitive environment with a number of analysts covering the performance of the same firm, investors value and subscribe to accurate, unbiased and informative analyst reports (Merkley et al., 2017). Hence, an analyst will incorporate both financial and non-financial information in their earnings forecasts to reflect the firm's true operating environment and produce quality earnings predictions (Kerl et al., 2012). Therefore, corporate governance practices such as board profile and board structure are included as measures of risk levels and input for earnings predictions (Derouiche et al., 2020).

Thirdly, the involvement of institutional investors in overseeing corporate governance quality, and scrutinizing firms' activities and strategic decisions. Institutional investors are required to actively monitor the firm's financial performance and handle any issues that may arise due to underperformance (Chen et al., 2019). The objective is to safeguard the investment value of their beneficiaries, who account for the largest portion of the Malaysian equity market ownership (Abd Mutalib et al., 2016; The Edgemarkets, 2021). The engaging activities commonly used by institutional investors to monitor and correct the undesirable governance structure in investee firms include holding one-to-one meetings with key board members, proposing resolutions in the annual general meeting (AGM), voting for or against resolutions raised during the AGM, and removing incompetent directors from the board (Mallin, 2016). Alternatively, institutional investors would also resort to selling down their share ownerships (Ferreira & Matos, 2008) especially if the institutional investors are more fixated on short-term returns as opposed to long-term returns.

Fourthly, this study contributes to the stakeholder theory by highlighting how institutional investors' oversight enhances corporate governance in investee firms and reduces uncertainty. Stakeholder theory posits that a firm should consider the interests and concerns of all its stakeholders, not just shareholders, in its decision-making processes (Suhardjanto et al., 2018). Institutional investors, as the significant stakeholders in firms, uniquely shape and ensure effective corporate governance practices, therefore, directly effecting the well-being of various stakeholders. For instance, as the practices of independent directors' tenure are appropriate and aligned with ethical standards, employees can expect fair treatment, and better protection of their rights. Similarly, other stakeholders, such as customers, can benefit from the assurance that they are engaging with a reputable and reliable firm.

This study makes practical implications by raising awareness within the management of public listed firms to consider implementing independent directors' tenure limit as a mandatory need rather than "window dressing" to meet regulatory requirements. In addition, this study provides feedback for investors adopting a cautious approach to risk to assess whether to allocate their investments into firms that undergo thorough evaluation by institutional shareholders. Furthermore, this study also offers insights for policymakers on whether setting time limits for independent directors is a beneficial corporate governance measure.

The paper proceeds as follows: Section 1 presents the Introduction. Section 2 is about background. Section 3 discusses the theoretical literature review and is followed by section 4, empirical literature review and hypothesis development. Section 5 deliberates research design. Section 6 is empirical results and discussion. Finally, Section 7 contains summary and conclusion.

## 2. Background

Financial or accounting scandals involving independent directors have been occurring around the globe for an extended period of time. For example, a giant IT corporation in India, Satyam Computer Services, overstated its 2009's revenue by USD1.5 billion because the independent directors failed to apply due diligence on the firm's accounting affairs (Bhasin, 2013). In Germany, the management of Wirecard AG, a financial provider public listed-firm, falsified Euro 1.9 billion of cash balance in 2020 as a result of insufficient supervision from the firm's independent directors (Jo et al., 2021). Similarly, in Malaysia, independent directors have been part of accounting scandals in the corporate world. For instance, Genting Malaysia Berhad's independent directors backed a USD128 million investment in a loss-making US casino in 2019, linked to Chairman and CEO in a related-party deal (The Edgemarkets, 2019). Subsequently, in 2020, Serba Dinamik Holdings Berhad's independent directors neglected duties as financial statements had inflated revenue by RM6.01 billion (The Edgemarkets, 2022).

The role of independent directors as a "check and balance" in Malaysian public listed firms is emphasised in the *Malaysian Code on Corporate Governance (MCCG) 2000*. The Code was introduced as a reaction to the 1997 financial crisis, which resulted in the collapse of the Malaysian economy mainly due to ineffective corporate governance practices (Salim, 2011). Thereafter, revised MCCG versions (2007, 2012, 2017, 2021) stress independent judgment for effective strategy, performance, and resource management under challenging environments (Securities Commission Malaysia, 2021). In addition, the Securities Commission Malaysia mandates a senior independent director to facilitate ongoing communication with stakeholders and potential investors, fostering trust and confidence beyond annual meetings (Securities Commission Malaysia, 2021).

However, long tenures may hinder director independence, impairing oversight and adaptability in corporate governance (Fracassi & Tate, 2012); hence, independent directors in Malaysian public listed firms with tenure of more than nine years must pass a two-tier voting system in 2017. The tier one system is voted by shareholders with at least 33 percent voting shares, while the tier two system is voted by the rest of the shareholders to ensure that the decision to retain these directors is critically reviewed (Securities Commission Malaysia, 2021). However, in 2019, independent directors from 312 out of 868 Malaysian public listed firms have tenure of 13 years or more compared to 273 firms in 2018 (Securities Commission Malaysia, 2020). In 2019, a notable highlight indicated 98 percent passage for two-tier resolutions, with tier one seeing 99 percent favoring directors' reappointment (Securities Commission Malaysia, 2020). Consequently, this research addresses the concerns of the Securities Commission Malaysia regarding the impact of extended independent director tenure on market participants who rely on analysts' predictions for evaluation of investment decisions.

Mokhtar et al. (2018) concur that most Malaysian investors are lacking in financial knowledge and have little idea of the roles and functions of capital market regulators such as the Securities Commission Malaysia and *Bursa Malaysia* (Mokhtar et al., 2018). Therefore, investors seek unbiased analyst expertise to access and evaluate corporate information (Kelly et al., 2012). Financial analysts assess firm progress using industry-wide and firm-specific approaches, and studying cash flows, financing, and investments for insights (Bradshaw et al., 2013). Therefore, investors rely on the target share price, earnings forecast and buy/sell recommendations provided by analysts to make trading decisions (Thaker et al., 2018). As a result, trading activities, economic effects of the capital market, and the level of asymmetric information available in the share market are all impacted by analysts' decisions to follow and cover a firm (How et al., 2014; Yao & Liang, 2019).

The Analysts gather data about investee firms for institutional market participants (Newton, 2019) since institutional investors dominate Malaysia's capital market (Tan, 2019). For instance, in July 2022, institutional investors account for 75 percent of the value traded in *Bursa Malaysia* (Malaysia, 2022). The concentrated ownership with the largest share ownership in equity is held by

institutional investors comprising *Permodalan Nasional Berhad*, *Lembaga Tabung Haji*, and the Employee Provident Fund (Abd Mutalib et al., 2016). The dominant institutional investors may impact the corporate governance structure of their investee firms and motivate analysts to follow and supply comprehensive analyst research to assist investors' fundamental analyses (Song & Chu, 2017). Therefore, the Securities Commission of Malaysia is pressing institutional investors to exercise their stewardship role (Qasem et al., 2021) through interventions when worries about governance issue among the investee firms arise (Jong et al., 2018). For example, in the recent case of a Malaysian public listed firm, *Serba Dinamik's* corporate governance issue, which came to light in 2021, caused the firm's share price to drop by 80 percent in a month. Consequently, an influential institutional investor in Malaysia, Employee Provident Fund (EPF), disposed of its substantial shares in the firm to reduce EPF's losses, which results in unsubstantial shareholding by the institutional investor (The Star, 2021). Since selling shares during downtrends will incur significant investment losses for the firm, institutional investors with large shareholdings in the firm would prefer engaging with investee firms or favour firms with good board independence to reduce their monitoring costs (Bushee et al., 2014). Conversely, investors who do not engage with their investee firms (Black, 1990) would just sell off the shares when monitoring is either too costly or time-consuming (Manconi et al., 2012).

### 3. Theoretical literature review

The objective of this study is to examine the relationship between tenure of independent directors and analysts following, and the moderating role of institutional ownership on the relationship between tenure of independent directors and analysts following. Stakeholder theory, the executive cognition theory and social capital theory are employed as the underpinning theories of this research.

#### 3.1. Stakeholder theory

The stakeholder theory suggests that firms are obligated to take into account the concerns of diverse stakeholders, including employees, customers, suppliers, communities, and shareholders for long-term success (Roberts, 1992; Suhardjanto et al., 2018). In the context of institutional investors as agents of corporate governance, the stakeholder theory suggests that institutional investors have a duty to promote the long-term sustainability and success of the firms in which they invest, rather than just focusing on short-term financial gains (Ingley & Van Der Walt, 2004). Since institutional investors have a significant amount of market power and influence (How et al., 2014), the management of investee firms are encouraged to adopt corporate governance practices that support long-term success and stakeholder well-being. In order to safeguard the investment portfolio of the asset holders, institutional investors engage with the management of the investee firms through one-to-one meetings, voting, resolutions, focus lists, corporate governance rating system and shareholders' proposal process in deciding directors' structure including their tenures (Nili, 2016). Therefore, institutional investors play a role in mitigating corporate governance issues (Kałdoński et al., 2020).

#### 3.2. The executive cognition theory

The executive cognition theory refers to how a human acquire skills to perform multiple tasks and how he/she is able to meet task priorities (Meyer & Kieras, 1997). Applying this theory to the corporate world, top managers in a firm, over time, possess exceptional mental abilities such as focused attention, ability to remember and recall information, and ability to figure out and solve complex issues. These corporate leaders use these mental skills to understand challenging situations, make smart choices, and guide their organizations to achieve their goals (Brown et al., 2017; Hambrick et al., 1993), which supports the notion that directors' tenure impact their achievement towards a firm's strategies and success. Independent directors who have served in their roles for a longer period of time may acquire more firm-specific knowledge (Patro et al., 2018), and be better equipped to exercise their monitoring role due to enhanced cognitive function. Similarly, extant research suggest that when equipped with better firm-specific expertise, independent directors serving in audit committees perform careful scrutiny on contracts involving customers

or vendors, and help to prevent and curtail irregularities such as premature revenue recognition and unrecorded account payables that provide false representation of the firm's financial position and performance (Crawford & Weirich, 2011; Eisenhardt & Schoonhoven, 1990; Khanna et al., 2015; Okaily et al., 2019). Subsequently, the firm with enhanced governance quality led to a rise in the number of financial analysts tracking the firm because higher level of trust and reliability associated with its information (Lehmann, 2019).

### **3.3. The social capital theory**

The social capital theory refers to the concept that social relationships and networks have inherent value and can lead to various benefits for individuals (Adler & Kwon, 2002). Applying the theory to this study, over time, independent directors gain access to firm's resources and engage in building networks within the firm (Sauerwald et al., 2016), which transforms into effective resource provision and monitoring (Brown et al., 2017). In the same vein, long-tenured independent directors with the oversight role in mind will build relationships within the board to encourage active information sharing and disclosure (Bonini et al., 2017; Esmailzadeh, 2020) to reduce information asymmetry between the management and shareholders.

## **4. Empirical literature review and hypotheses development**

### **4.1. Tenure of independent directors and analysts following**

Using the executive cognition theory to describe the learning process to adapt in a firm, over a span of time, a new director tries to learn different skills to handle multiple tasks and manage tough work assignments. On the other hand, the social capital theory suggests that directors may also attempt to establish social connections and networks to carry out monitoring responsibilities. However, a younger and shorter-tenured directors are lacking in firm-specific expertise (Eisenhardt & Schoonhoven, 1990; James et al., 2021), which requires five to nine years to acquire and function effectively (Scott et al., 2014). In the same vein, Pellegrino (2018) and Rahman et al. (2020) state that shorter-tenured independent directors lack established network and their limited experience will result in the occurrence of more mistakes in accounting and finance matters than longer-tenured and more experienced independent directors (Bonini et al., 2022; Dou et al., 2015). For example, inappropriate judgement when adopting fair value accounting for property, plant and equipment (Yoo et al., 2018), improper revenue recognition in long-term projects (Franklin et al., 2018), and non-compliance with regulatory requirements such as the adoption of the *Malaysian Financial Reporting Standards* framework (Jamil et al., 2020). As a result, the firm is fined for producing misleading financial statements (Armour et al., 2017) due to the errors and inaccuracies in the reported financial statement items. Since the new independent directors are unfamiliar with their responsibilities, they are pressured to conform to existing rules set by the top management (Malette & Fowler, 1992), which are in conflict with their monitoring and oversight role (Bowling et al., 2017).

As the independent directors' tenure lengthens, they can carry out their oversight duty more diligently and develop greater confidence. This trend persists even when the Chief Executive Officer (CEO) who appointed them departs from the firm (Nili, 2016), as these independent directors have grown accustomed to the firm's operations and decision-making procedures. Therefore, familiarity coupled experience results in confident longer-tenured independent directors who are not afraid or in doubt when monitoring the firms.

Moreover, a longer tenure allows independent directors to gain reputation so that they can balance the influence of top management when making resource allocation decisions (Dou et al., 2015), especially top management with autocratic decision-making style (Iguchi et al., 2022), while simultaneously ensuring that the top management is being rewarded appropriately (Dou et al., 2015). This is supported by the National Association of Corporate Directors (2011) which



reports that directors who serve up to 10–15 years have the incentive to exercise their monitoring roles effectively, especially towards the tail end of their tenure. The motivation to perform an effective monitoring role is driven by the independent directors' aim to have their services extended by the shareholders (Jiang et al., 2016).

Although recent literature finds that analysts modify their actions in response to increased mandatory disclosures that are readily accessible to all investors, resulting in a decrease in analysts coverage (Chang et al., 2023); nevertheless, firms that choose to make higher discretionary disclosure can attract more analysts following who are motivated to produce accurate predictions on the investee firm's returns based on the available information, especially on a share that has been covered by many star-analysts whom are distinguished financial experts with exceptional analytical skills (Aharoni et al., 2019). For example, firms with corporate voluntary disclosure such as corporate strategy, employee information and social responsibility information are used as input to produce accurate earnings forecasts and as an update about an investee firm's (Lin et al., 2018) financial performance and financial position. A recent study unveils that firms may choose to invest in ensuring the accuracy of their corporate social responsibility reports, especially if such efforts could attract increased attention from analysts (García-Sánchez et al., 2022).

Conversely, long-tenured independent directors who are nominated by powerful top management with substantial shareholdings are aware that their election onto the board and retention are dependent on these controlling shareholders (Bebchuk & Hamdani, 2017). Over time, a career concerned independent director is likely to develop informal relationships and befriend the top management to promote and support the decision of the top management with controlling shareholdings, even though the decision is at the expense of public investors (Bebchuk & Hamdani, 2017) and the non-controlling shareholders. This is in line with current literature (Hassard & Morris, 2018), which affirm that independent directors serving more than nine years will compromise their independence, more so when the independent directors become less employable and mobile to compete in a job market with intense and insecure employment conditions.

In addition, influenced by their own beliefs and schemes, and being ideologically conservative, long-tenured independent directors become less open-minded and tend to insist on the acceptance of their own ideas (Barroso et al., 2011). Instead of encouraging free flow of information within the external environment to manage cultural diversities and management complexities while supporting firm growth through international expansion, the long-tenured independent directors' with agency-theoretic view presumes divergent interests between the manager who runs the diverse operations and the owners (Singh et al., 2004). In the same vein, Jung and Shin (2019) avert that this will discourage corporate diversification because the firm only focuses on its core business operations. As a result of this cautiousness, strategic decision-making is stagnated and their knowledge eventually become less valuable to the firm (Barroso et al., 2011). Moreover, their conservative approach would lead to reserved disclosure practice on discretionary disclosures such as Corporate Social Responsibility (CSR) activities, corporate governance disclosure, and financial forecasts and future economic plans (Nagar & Schoenfeld, 2021).

This low disclosure approach is not welcomed by analysts who need the extended notes of facts instead of basic financial statements to improve accuracy of the earnings forecast and share recommendation (Rahman et al., 2019). For example, the standalone-CSR disclosure and forward-looking information using Extensible Business Reporting Language (XBRL) (Liu et al., 2014) are important elements in analysts' investment and financial forecast models (Muslu et al., 2019). Moreover, the buy-side analysts who are employed by institutional investors to identify potential shares for investment (Brown et al., 2016) are interested in firms with potential future revenue driven by high productivity (To et al., 2018) and strong fundamentals. Therefore, the analysts may choose to reduce coverage on firms served by conservative long-tenured independent directors

who adopt low disclosure policy and discourage corporate diversification that would benefit the firm in terms of tax reduction (Gyan et al., 2017) and access to various resources (Drabble, 2000) to improve the firm's fundamentals (Hong et al., 2020).

In short, long-tenured independent directors tend to make less mistakes than short-tenured independent directors in accounting judgements and financial decision-making that require experience and firm-specific knowledge. Furthermore, long-tenured independent directors become more confident over time to promote good financial reporting such as timely and higher voluntary disclosure, which will attract more analysts following, who need input to produce accurate financial forecasts in a competitive business environment. However, long-tenured independent directors are dependent on top management to extend their services and having developed social bonding with top management would compromise their monitoring roles. Moreover, the narrow-mindedness of long-tenured independent directors who lean towards conservatism tends to sideline corporate diversification and curb the level of discretionary disclosure. This would subsequently limit the quality and readability of the firm's financial information, thus reducing the extent of analysts following. Therefore, it is hypothesized that:

**H<sub>1</sub>:** Tenure of independent directors is significantly and negatively related to number of analysts following.

#### **4.2. Tenure of independent directors, institutional ownership and analysts following**

The stakeholder theory posits that firms have a duty to consider the apprehensions of a wide range of stakeholders, including institutional investors, who hold significant influence as shareholders (Suhardjanto et al., 2018). The governance of public listed firms in Malaysia is significantly influenced by institutional investors, which can be further categorized as passive and transient investors (Abdul Wahab et al., 2022). Passive institutional investors, who hold on to their investee firms over a longer investment time horizon, are less frequent in trading shares compared to transient institutional investors, often rely on analyst reports to understand the investee firm's financial performance and position (Fu et al., 2021). Similarly, Bushee et al. (2019) affirm that passive institutional investors often justify their long shareholding decisions (Bushee et al., 2019). They also favour firms that can exploit strategic resources such as property, plant and equipment, exclusive licenses and patents to achieve a sustainable competitive advantage (Pombo & De La Hoz, 2021). This process can be expedited when the firm appoints independent directors who have graduated from prestigious Ivy League schools, whom are capable to handle more board responsibilities and are more likely to progress into long-tenured independent directors (Bonini et al., 2017).

Quality education helps to shape a person's personality and talent to the fullest potential, while developing a sustainable worldview through effective interaction and attention to needs of the business environment (Laininen, 2019). The extended tenure enables the independent directors who possess the resource-based view to gather firm-specific knowledge and assist the firm to survive crises and risk of litigation (Liu & Sun, 2021). For example, environmental-related lawsuits due to improper strategic decisions and legal proceedings due to excessive debt financing (Wu et al., 2020). Furthermore, long-tenured independent directors help in ensuring compliance with financial reporting regulatory requirements through critical scrutiny of financial statements, and insist on proper disclosure, effective audit procedures and internal control mechanisms (Reguera-Alvarado & Bravo, 2017).

Firms served by elite long-tenured independent directors that adopt transparent reporting approach with strong fundamentals are welcomed by institutional investors who aim for long-term returns as they need to adopt sound financial risk and returns-related considerations to avoid the pressure of selling based on short-term performance (Papaioannou et al., 2013). Institutional investors also possess substantial market power and influence (How et al., 2014) on the analyst's

career graph when they appraise an analyst based on the timeliness of the research report and quality of share picks (Yin & Zhang, 2014). In line with this, literature find that large and reputable brokerage houses are eager to provide timely communication and are responsive to institutional investors' requests by serving them with regular coverage of potential and investee firms' performance, and produce frequent forecasts using comprehensive metrics (Drake et al., 2020; Gibbons et al., 2021; Leone & Wu, 2007). The analyst's coverage that lead to an increase in institutional ownership in the investee firms is perceived as a successful marketing effort of the analyst (Lin & Fu, 2017) and the analyst will be rewarded accordingly (Leone & Wu, 2007). Hence, analysts will increase coverage on the firm with elite long-tenured independent directors when there is larger ownership by institutional investors with long-term investment horizons (Oikonomou et al., 2020).

Unlike institutional investors with long-term investment approach who are able to obtain insider information about the investee firm's operations (Cheng et al., 2020) due to their substantial shareholdings, transient institutional investors own smaller shareholdings in a firm, practice high diversification and portfolio turnover (Hejazi et al., 2020), and rely on publicly available information to trade. For example, transient institutional investors with short-term view sell down their shares in response to negative emotional content about a firm in social media (Nguyen et al., 2020) to cut their losses. This notion is supported by Chen et al. (2015) and Wang (2011) who find that transient institutional investors tend to increase shareholdings in firms with higher level of disclosure and extensive details of financial data reported during market downturn to maximize short-term trading returns. This is in line with Porter (1992)'s contention that transient institutional investors are not interested in long-term capital gain nor dividend income. Additionally, short-term focused transient institutional investors react efficiently based on sufficient management disclosure and timely stock recommendations (Chiu et al., 2021) to manage their short-term investment portfolios. Therefore, analysts are compelled to tailor their stock recommendations to meet the demands of institutional investors who engage in active trading. A recent research validates that in reaction to analysts' assessments, transient institutional investors act as substantial net purchasers (or net sellers) for "strong buy" and "buy" (or "hold" and "sell") recommendations (Kong et al., 2021). In response to transient institutional investors' interest on speculative shares, analysts will be driven to provide coverage on firms that can produce timely and informative announcement (Driskill et al., 2020) to meet the transient institutional investors' demands for short-term returns.

However, some firms are not expected to produce timely announcements when they are led by older directors (Masulis et al., 2018). Over time, independent directors who are attached to the same firm age as their tenure is extended (Kim & Yang, 2014). Since age affects memory and attention span, older directors may be slow when performing tasks that require active memory and quick reaction time (Zarantonello et al., 2020). Moreover, aged long-tenured independent directors are also risk averse and will undertake conservative decision-making approach to avoid the risk of shareholders' litigation (Sultana et al., 2019). In view of the stringent and complex regulatory requirements for financial reporting, long-tenured independent directors may be slow in completing financial reporting reviews and could potentially miss the deadline of earnings announcement and disclosure (Aghabeikzadeh et al., 2017).

Delays in earnings announcement are usually not well received by transient institutional investors as they will trade actively during earnings announcement seasons to take on short-term profits on favourable announcements and avoid suffering losses from negative earnings surprises (Hu et al., 2018). Therefore, analysts need to provide timely forecasts on the earnings announcement day or the day after when institutional investors' attention on the firm is high (Chiu et al., 2021). Consequently, institutional investors reliant on analysts' research reports when making their trading decisions (Foucault et al., 2016). For instance, institutional investors may invest in shares with high price-to-earnings ratio based on speculations from expected improved performance (Prasetya & Riyanto, 2020). In the same vein, extant literature assert that analysts are motivated to have more coverage on good performing firms with optimistic views so that accurate earnings forecast are produced in response to the increase in transient institutional investors' ownership (Harford et al.,

2019; McNichols & O'Brien, 1997). Conversely, a drop in transient institutional investors' ownership among firms with conservative decision-making approach is driven by delays in earnings announcement (Aghabeikzadeh et al., 2017) by firms that are served by conservative long-tenured independent directors. This may subsequently reduce the number of analysts following for these firms.

In summary, institutional investors with long-term focus are attracted to invest in firms served by well-educated long-tenured independent directors with resource-based views, which will help the firm to survive tough business crises. Hence, analysts are willing to increase coverage on these firms in response to the powerful institutional investors' astute interest in these firms. On the other hand, institutional investors with short-term orientation need timely earnings announcements to trade and do not favour firms that postpone the earnings announcements, particularly when the delay is caused by aged long-tenured independent directors who adopt a conservative approach and are slow in completing the financial review. Therefore, analysts will reduce their coverage on these firms and focus on firms that can produce timely earnings announcements. Therefore, it is hypothesized that:

**H<sub>2</sub>:** Institutional ownership significantly moderates the relationship between tenure of independent directors and analysts following.

## 5. Research design

### 5.1. Dependent variable

#### 5.1.1. Measurement of analysts following

Similar to the extant analysts following literature (Bhushan, 1989b; Lehavv et al., 2011), we define analysts following using the number of analysts following on a firm in a year.

### 5.2. Independent variable

#### 5.2.1. Measurement of tenure of independent directors

Tenure of independent directors is measured using average number of years that the independent directors in service (Vafeas, 2003). It is calculated by adding the tenure of each independent director, starting from the year the independent director was appointed until the year the annual report is being examined, over the number of independent directors of the firm (Liew et al., 2017).

### 5.3. Moderating variable

#### 5.3.1. Measurement of institutional ownership

This study defines institutional ownership as the percentage of shares held by financial and non-financial firms (Saleem et al., 2016), which is measured by calculating the percentage of the firm's ordinary shares directly or indirectly owned by institutional investors in the top 30 substantial shareholders shareholding list (Alzoubi, 2016; Bhushan, 1989b).

### 5.4. Regression models

Panel regression model is used to estimate the data of this study. The base model follows Bhushan (1989b) through which the extent of analysts following is theorised as a function of return variability, firm size, ownership structure and diversification of business (Lee & So, 2017; O'Brien & Bhushan, 1990). We extend the model by adding tenure of independent directors as depicted in Model 1 that estimates the effect of tenure of independent directors on firms' analysts following.

$$AF_{it} = \beta_0 + \beta_1 TEN_{it} + \beta_2 FLU_{it} + \beta_3 SIZE_{it} + \beta_4 OWNS_{it} + \beta_5 NSEG_{it} + \beta_6 HSALES_{it} + \beta_7 HASSET_{it} + \beta_{7+k} \sum_{k=1}^{10} IND_{it} + \varepsilon_{it} \quad (\text{Model1})$$

where  $AF$  is the number of analysts following in a year (Bhushan, 1989a; Lehavy et al., 2011) and  $TEN$  is tenure from the year the independent director was appointed until the year of the annual report being analysed over number of independent directors (Liew et al., 2017). As fluctuation in returns increases uncertainty of the firm, which will affect investors' demand for analysts' services (He et al., 2019), we control for return variability using  $FLU$ , the statistical standard deviation estimated based on price target forecasted by the analyst (O'Brien & Bhushan, 1990). As firm size affects allocation of resources and may attract analyst coverage (Luo & Zheng, 2018), we, therefore, control for firm size ( $SIZE$ ), measured by natural log of market capitalization (Abdolmohammadi, 2005).

Compared to outsiders, directors have access to more insider information and may reduce demand for analyst services. We control for insider shareholding using  $OWNS$ , the percentage of firm's shares held by the directors (Huang & Boateng, 2017). As firms with diverse line of businesses increase analysts' time and effort in forecasting earnings of the firms (Brown et al., 1987; Dunn & Nathan, 2009), we control for diversification of the firm using  $NSEG$ , which, following (Bhushan, 1989b; Ng, 2014), is measured using the number of segments of business as defined by *MFRS 8 Operating Segments*. To control for diversification strategy of the firm, which indicated whether the firm has spread its sales or assets across multiple segments, we include sales and total assets using Herfindahl (H) index on sales ( $HSALES$ ) (Ishak & Napier, 2006) and Herfindahl (H) index on assets ( $HASSET$ ) (Che Ahmad et al., 2003). Since a firm's fundamentals may be affected by its macroeconomic factors in the same industry (Crawford et al., 2012), such as advancement in technology and competition, we use  $IND$ , industry to control for industrial classification (Shayan Nia et al., 2017).

To test the moderating effects of institutional ownership,  $INOWN$ , on the relationship between tenure of independent directors and analysts following, Model 1 is extended by the insertion of an interaction variable between  $TEN$  and  $INOWN$ ,  $TEN\_INOWN$ , as shown in Model 2:

$$AF_{it} = \beta_0 + \beta_1 TEN_{it} + \beta_2 INOWN_{it} + \beta_3 TEN\_INOWN_{it} + \beta_4 FLU_{it} + \beta_5 SIZE_{it} + \beta_6 OWNS_{it} + \beta_7 NSEG_{it} + \beta_8 HSALES_{it} + \beta_9 HASSET_{it} + \beta_{9+k} \sum_{k=1}^{10} IND_{it} + \varepsilon_{it} \quad (\text{Model2})$$

where  $INOWN$  is shareholdings of institutional shareholders measured using Model 1 and  $TEN\_INOWN$  is the interaction variable between  $TEN$  and  $INOWN$ . Table 1 summarises the variable measurements.

The following conceptual framework will illustrate the relationship between tenure of independent directors, analysts following, and institutional ownership.

### 5.5. Sample and data

The sample from this study comprises non-financial firms listed in the Main Market of Bursa Malaysia from 2013 to 2020. Year 2013 is chosen to control for possible reporting biasness as this is the first year all Malaysian public listed firms were required to mandatorily report its financial performance and financial position in accordance with *Malaysian Financial Reporting Standards* (Ooi et al., 2019). Additionally, 2020 reflects the latest available data at the point of data collection.

The potential temporal dynamics of the sample data during the research period are addressed by performing sensitivity analyses, and robustness checks by varying time periods to examine the stability of the results. Financial firms are filtered from the sample of this study to control for variations in financial reporting framework because financial firms fall under different compliance

and regulatory environment from non-financial firms (Aziz et al., 2017; Yatim et al., 2006). As a result, the initial sample list comprises a total of 541 firms. Then, two firms with negative book of equity were filtered to avoid biasness in interpreting economic condition when firms in financial distress were included (Brown et al., 2008). Twenty-nine firms that changed financial year-end were excluded to produce comparable financial results during the sample periods (Li et al., 2014). Seven firms that changed the industrial sector during the sample period were excluded to control for variations observed within industries (MacKay & Phillips, 2005). Two firms with missing data-analysts followings, and one firm with missing data-segmental details are also excluded to produce balanced panel data in the analysis (Baltagi, 2008) and control for unobserved heterogeneity (Gormley & Matsa, 2014). The data collection process results in 4,000 firm-years in the initial sample. Prior to conducting the multivariate analyses, we used studentized residual to control for outliers, through which observations with  $|r| > 2$  ( $n = 344$ ) are excluded (Abdul Wahab et al., 2018; Hair et al., 2006), leaving the remaining 3,656 firm-years in the final sample, i.e., 457 firms. Table 2 presents the sample reconciliation. In 2020, *Bursa Malaysia* had a total of 954 firms listed in the stock exchange (Malaysia, 2023). Therefore, a sample of 457 firms should be satisfactory for drawing valid conclusions (Krejcie & Morgan, 1970).

Financial data is gathered from *Refinitiv Eikon Datastream*, while analysts following, and fluctuation of share price information is collected from the *Institutional Brokers' Estimate System (I/B/E/S)*. Data related to tenure of independent directors, corporate governance and diversification are hand-collected from the annual reports. Data on industry classification is obtained from *Bursa Malaysia's* "Sector Classification" section.

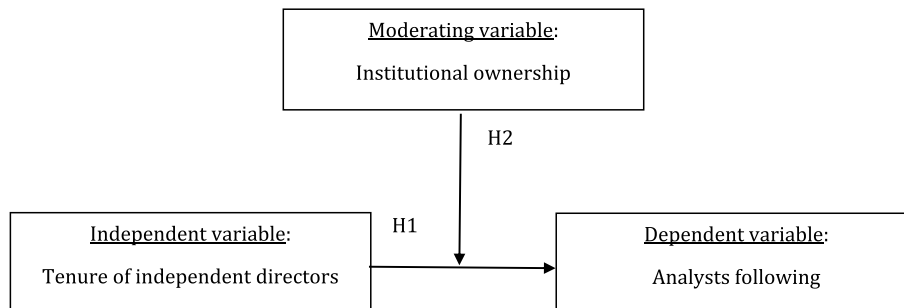
## 6. Empirical results and discussion

### 6.1. Descriptive statistics

Table 3 reports the descriptive statistics of the final sample. Majority of the firms are from industrial products (33.7 percent), consumer products and services (22.8 percent), and property (14.7 percent). The remaining firms are from plantation (7.7 percent), construction (5.2 percent), technology (5.0 percent), transportation and logistics (4.6 percent), energy (2.6 percent), utilities (1.5 percent), healthcare (1.1 percent) and telecommunication (1.1 percent). The sample firms' mean profit before tax is RM53.12 million (approximately USD12.24 million), with the lowest being losses before tax of RM1.58 billion (approximately USD364 million) and the highest profit before tax was RM2.81 billion (approximately USD648 million).

The mean total assets are RM1.32 billion (approximately USD304 million), ranging from the smallest value of RM16.52 million (approximately USD3.81 million) to the largest value of RM76.7 billion (approximately USD17.68 billion). Although there are firms covered by analysts as high as 17 times in a year, there are also firms having zero analysts following throughout the

### Conceptual framework.



**Table 1. Variable measurements**

Variable	Description	Measurement
<b>Dependent variable:</b>		
AF	Analysts following	Number of analysts following in a year
<b>Independent variables:</b>		
TEN	Tenure of independent directors	Tenure from the year the independent director was appointed until the year of the annual report being analysed/ Number of independent directors
INOWN	Institutional ownership	Percentage of shares held by institutional investors
<b>Control variables:</b>		
FLU	Fluctuation of return on share of the firm	The statistical standard deviation estimated based on price target forecasted by analyst
SIZE	Firm size	Market capitalization of equity, scaled using logarithm
OWNS	Directors' ownership	Percentage of firm's shares held by directors
NSEG	Number of business segments	Number of business segments as defined by MFRS 8 Operating Segments
HSALES	Herfindahl (H) index on sales	$\sum (\text{Sales per segment}/\text{Total sales})^2$
HASSET	Herfindahl (H) index on assets	$\sum (\text{Asset per segment}/\text{Total assets})^2$
IND	Industry	Coded 1 for each specific industry classification, 0 for otherwise

period, indicating analysts are selective in their coverage decisions. The mean of *TEN* is 7.83 with the highest at 27.5, suggesting most firms are served by independent directors with very long tenure with some even exceeding 12 years, which is above the maximum limit of tenure forewarned by the Securities Commission (Cassim, 2021).

### 6.2. Multiple regression results

Prior to performing the regression analysis, we test the study's estimation models for multicollinearity. Table 4 reports the bi-variate correlation coefficient between variables of the two estimation models. There is no significant multicollinearity found among the variables as the Pearson coefficient is less than 0.8 (Cooper & Schindler, 1998; Kim, 2019). Subsequently, we performed VIF analysis to confirm the level of multicollinearity. The VIF mean value of 2.23 with the highest VIF value of 3.78 for *INOWN* and 3.56 for *TEN\_INOWN*, suggest that multicollinearity is insignificant as the VIF mean is below 10 (Hair et al., 2006).

Next, we conducted heteroscedasticity analysis to examine whether the error terms of the regression models are normally distributed. The diagnostic tests were performed using Breusch-Pagan/Cook Weisberg and White model (White, 1980). The results of both tests show a significant chi-squared value at  $p < 0.01$  level, indicating significant heteroscedasticity of the models. Hence, the models are estimated using Huber-White adjusted t-statistics (Huber, 2004; White, 1980).<sup>1</sup>

Results of the regression estimations are presented in Table 5. Column 2 shows the multivariate results of Model 1 performed to test  $H_1$ , where a significant negative relationship between tenure of independent directors and analysts following is predicted. The results of Model 2's estimations to assess  $H_2$  are presented in Column 3, which predicts significant moderating effect of

**Table 2. Sample reconciliation**

Details	n
Non-financial firms from Bursa Malaysia listed throughout 2013–2020	541
Negative book value of equity	(2)
Change of accounting year-end	(29)
Change of industrial sector	(7)
Missing data – Analysts following	(2)
Missing data – Segmental detail	(1)
Initial sample	500
Firm-year (8 years)	4000
Outlier - R-studentized > 2	(344)
Final sample	3656

institutional ownership on the relationship between tenure of independent directors and analysts following. The results of estimation Model 1 indicate a significant negative relationship between the tenure of independent directors and the analysts following ( $p < 0.10$ ). Thus, H1 is supported. The results are consistent with Aharoni et al. (2019) who state that analysts' reputation and their status are associated with their ability to produce accurate earnings predictions. In the same vein, Nili (2016) affirms that analysts tend to provide more coverage on firms with shorter-tenured independent directors as these firms are believed to practice effective corporate governance (Al-Jaifi et al., 2023). As a result, these firms are more likely to promote transparency and higher level of disclosure (Byard et al., 2006; James et al., 2021; Lang & Lundholm, 1996). Fostering transparency could enhance trust among Malaysian investors, amidst the political upheaval and changes in Malaysia's ruling parties between 2020 and 2021 including the COVID-19 pandemic and subsequent economic uncertainty (Rahman, 2022). Investor uncertainties arose from the challenge of anticipating COVID-19's market effects and future government measures to address the pandemic's spread. Therefore, firms that embrace transparent sustainability reporting can positively influence investors' confidence amidst the uncertainties brought about by the COVID-19 pandemic, which has led to business shutdowns and reduced corporate operations (Hoang et al., 2020). Similarly, Malaysian firms with a higher count of independent board members increase environment, social and governance (ESG) disclosures in pandemic times, highlighting the role of independent directors in encouraging discretionary disclosure (Azhari et al., 2023).

According to Cormier et al. (2019) higher disclosure reduces estimation risk, thus, improving the accuracy of analysts' earnings predictions on these firms. Similarly, Hugon and Muslu (2010) find that analysts are interested to cover firms with growth potential when they are served by shorter-tenured independent directors. This is because firms with longer-tenured independent directors are likely to develop informal bonding with the top management and become complacent (Brown et al., 2020; Fracassi & Tate, 2012) due to the lackadaisical attitude that comes with familiarity and comfort. On the other hand, shorter-tenured independent directors who have served between five to nine years have gained extensive firm-specific knowledge to assist in the implementation of expansion strategies without impairing their independent judgement (Scott et al., 2014). Therefore, the main underpinning theories used to elucidate the results of this study are the executive cognition theory and the social capital theory. The results are in line with the executive cognition theory (Brown et al., 2017; Hambrick et al., 1993), which posits that directors' tenure impact their commitment towards a firm's strategies and success. The social capital theory (Adler & Kwon, 2002) explains that over time, independent directors gain access to firm's resources and engage in building networks within the firm (Sauerwald et al., 2016), which transforms into effective resource provision and monitoring (Brown et al., 2017). However, the benefits of experience will prevail in



**Table 3. Descriptive statistics**

<b>n=3,656</b>	<b>Mean</b>	<b>Standard deviation</b>	<b>Minimum</b>	<b>Maximum</b>
Profit before tax (RM'mil)	53.1223	196.0010	(1,579.2000)	2,811.5990
Total assets (RM'mil)	1,317.9380	4,337.9720	16.5158	76,700.0000
<b>Dependent variable:</b>				
AF	1.0832	2.3833	0.0000	17.0000
<b>Independent variables:</b>				
TEN	7.8284	4.2154	0.0800	27.5000
TEN_INOWN	92.9005	141.0338	0.0000	1,501.7970
<b>Control variables:</b>				
INOWN	13.0318	18.4501	0.0000	98.5700
FLU	0.0605	0.2139	0.0000	3.9000
SIZE	5.4775	1.3901	2.1300	10.7800
OWNS	37.5629	22.9036	0.0000	89.4300
NESG	2.9040	1.4990	1.0000	9.0000
HSALES	0.7571	0.2332	0.1300	1.0000
HASSET	0.6646	0.2686	0.1100	1.0000

AF = Analysts following, TEN = Tenure of independent directors, TEN\_INOWN = Interaction variable between TEN and INOWN, INOWN = Institutional ownership, FLU = Fluctuation of return on share of the firm, SIZE = Firm size, OWNS = Directors' ownership, NESG = Number of business segments, HSALES = Herfindahl (H) index on sales, HASSET = Herfindahl (H) index on assets.

the earlier tenure, while the entrenchment effect that impairs monitoring role will be dominant at the later tenure (Clements et al., 2018).

The alternative explanation for the findings in Model 1 (Column 2) is that short-tenured or new independent directors may attract increased investor attention and capital flows (Johnson et al., 2011). Analysts, therefore, intensify their scrutiny to evaluate the potential effects of the changes they might introduce thereby prompting analysts' attention to examine the implications on the firm's share performance.

The results of estimation Model 2 (Column 3) exhibits that institutional ownership significantly ( $p < 0.05$ ) and negatively moderates the relationship between tenure of independent directors and analysts following. The results, therefore, support H<sub>2</sub>, which predicts that institutional ownership significantly affects the relationship between tenure of independent directors and analysts following. Institutional investors are interested to invest in firms having growth opportunities (Sakawa & Watanabel, 2020). In response to institutional investors' request and interest, analysts would begin to follow a firm and provide optimistic forecasts to attend to the institutional investors' investment decision needs (Ackert & Athanassakos, 2003; Qasem et al., 2021).

Hence, in line with the stakeholder theory, institutional investors will strengthen the quality of corporate governance in the investee firms as their ownership increases (Gibbons et al., 2021; Suhardjanto et al., 2018; Wahab et al., 2007; Waheed et al., 2021). Furthermore, the demand for analyst research among these highly regulated firms will be lower as they are closely monitored (Hussain, 2000) by the various facets of corporate governance including the independent directors and institutional investors. This is in line with extant literature, which find that analysts are keen to follow firms with optimistic future earnings and are surrounded by high level of uncertainties in anticipating abnormal returns (Ackert & Athanassakos, 1997; Sulehri & Ali, 2020; Zhang, 2006).

**Table 4. Pearson correlation matrix**

<b>n=3656</b>	<b>AF</b>	<b>TEN</b>	<b>INOWN</b>	<b>TEN_INOWN</b>	<b>FLU</b>	<b>SIZE</b>	<b>OWNS</b>	<b>NSEG</b>	<b>HSALES</b>	<b>HASSET</b>
AF	1.0000									
TEN	-0.1230***	1.0000								
INOWN	0.4291***	-0.1173***	1.0000							
TEN_INOWN	0.2566***	0.2773***	0.7624***	1.0000						
FLU	0.5567***	-0.0408**	0.2925***	0.2130***	1.0000					
SIZE	0.6315***	-0.0538***	0.4617***	0.3736***	0.4492***	1.0000				
OWNS	-0.1183***	0.1055***	-0.4029***	-0.2869***	-0.1271***	-0.1199***	1.0000			
NSEG	0.0372**	-0.0060	0.0520***	0.0310*	-0.0153	-0.0419**	0.0302*	1.0000		
HSALES	-0.0500***	0.0203	-0.0608***	-0.0248	-0.0503***	-0.0868***	-0.0136	-0.6887***	1.0000	
HASSET	0.0419**	0.0193	0.0888***	0.1013***	0.0856***	-0.0442***	-0.0960***	-0.7324***	0.6432***	1.0000

\*\*\*, \*\* indicate significant at 1%, 5% and 10% levels, respectively.

AF = Analysts following, TEN = Tenure of independent directors, INOWN = Institutional ownership, TEN\_INOWN = Interaction variable between TEN and INOWN, FLU = Fluctuation of return on share of the firm, SIZE = Firm size, OWNS = Directors' ownership, NSEG = Number of business segments, HSALES = Herfindahl (H) index on sales, HASSET = Herfindahl (H) index on assets.

Since the institutional investors' attention and close monitoring will reduce the firm's uncertainties (Abdul Wahab et al., 2022), in an environment driven by sentiment, the firm loses its attractiveness as a speculative investment choice (Gurdgiev & O'Loughlin, 2020). Consequently, the analysts will reduce their coverage on these firms, which is consistent with the results of estimation Model 2.

An alternative explanation for the results in Model 2 (Column 3) is that institutional investors with significant shareholding might have established relationships and regular interactions with the firm's leadership team. For example, institutional investors would have access to private briefings, meetings, and direct communication with firm management. Analysts could assume that these investors have access to detailed insights, thus reducing the need for external analysis to fill information gaps.

### 6.3. Robustness tests

We further re-estimated the models to test the sensitivity of the results presented in Table 5.<sup>2</sup> The results from fixed-effect estimation are similar to the initial results of both estimation models. This confirms the robustness of the estimation models having controlled the correlation of heterogeneity of firm-specific factors with analysts following. To confirm the role of institutional ownership in moderating the relationship between tenure of independent directors and analysts following, we examined the r-squared difference between the two estimation models using hierarchical regression (Osborne, 2000; An et al., 2021). At  $f$ -statistic = 100.147 ( $p < 0.05$ ), the results confirm that Model 2 has shown an improved r-squared, which further validates the significance of institutional ownership in estimation Model 2. Next, we re-estimated both estimation models annually to understand the relationship over time. The significant negative impact of tenure of independent directors and analysts following is observed throughout seven out of the eight years, while the moderating effect of institutional ownership is maintained across the sampled periods. This indicates consistent relationship among the independent variables, dependent variable and moderating variable during 2013 to 2020.

To examine whether the predictor variable is correlated with the error term, we performed endogeneity test (Baum et al., 2007; Ullah et al., 2021). We use a year-lag variable of analysts following as the instrumental variables in both estimation models. The initial results presented in Table 5 are qualitatively similar upon the re-estimation.

## 7. Summary and conclusion

This study examines the moderating effects of institutional ownership on the relationship between tenure of independent directors and analysts following. Using 3,656 firm-years of Malaysian non-financial public-listed firms from 2013 to 2020, we find that firms with shorter tenure independent directors will attract analysts' coverage, while larger institutional ownership weakens the relationship between tenure of independent directors and analysts following. This study provides evidence to support both the executive cognition theory and social capital theory that tenure of independent directors is not only essential to firm success but is also a share picking factor that is considered by analysts. This study also provides evidence to support the stakeholder theory that institutional investors as agents of corporate governance strengthen their investee firm's corporate governance using the power that comes with share ownership.

The practical implication from this study suggests that management of public listed firms should consider shortening the tenure of independent directors to attract investments into the firms, rather than meeting the regulator's minimum requirement. From this study, policy makers can acquire feedback about limiting the tenure of independent directors as a good corporate governance practice. Although shortening the tenure of independent directors can bring in fresh perspectives and enhance agility, it also risks disrupting continuity, slowing decision-making, and incurring higher recruitment costs. Therefore, balancing these factors and tailoring the policy to the specific needs of the firm and its stakeholders are essential.

**Table 5. Regression results**

DV=AF	Model 1	Model 2
<b>Independent variable</b>		
TEN	-0.0189*	-0.0008
	-1.76	-0.09
INOWN		0.0369***
		5.46
TEN_INOWN		-0.0014**
		-2.51
<b>Control variable</b>		
FLU	1.8857***	1.8356***
	4.06	4.06
SIZE	0.6455***	0.5445***
	10.13	9.16
OWNS	-0.0020	0.0011
	-1.02	0.60
NSEG	-0.0021	-0.0041
	-0.05	-0.10
HSALES	0.1589	0.1359
	0.68	0.60
HASSET	0.0511	0.0344
	0.24	0.17
Constant	-1.4971	-2.1403**
	-1.41	-2.05
Industry dummy	Yes	Yes
R-squared	49.84%	51.53%
Wald	232.54***	276.60***
Breusch-Pagan	3592.08***	5188.95***
White	1752.99***	2237.05***
n	3,656	3,656

\*\*\*, \*\*, \* indicates significance at 1%, 5% and 10% levels, respectively.

AF = Analysts following, TEN= Tenure of independent directors, INOWN = Institutional ownership, TEN\_INOWN = Interaction variable between TEN and INOWN, FLU = Fluctuation of return on share of the firm, SIZE = Firm size, OWNS = Directors' ownership, NSEG = Number of business segments, HSALES = Herfindahl (H) index on sales, HASSET = Herfindahl (H) index on assets.

From the practical perspective, this study contributes to industry and capital market by providing empirical evidence that firms having larger institutional ownership will have lower uncertainties because they will be closely scrutinized by the institutional investors. Investors could consider investing in firms with larger institutional ownership if they wish to reduce uncertainties in their portfolio choices. The presence of institutional investors' close monitoring and oversight, and engagement with firms can lead to quicker dissemination of relevant information, better alignment between share prices and underlying fundamentals, and more accurate pricing, ultimately contributing to market efficiency. The increased scrutiny and oversight from these investors can help firms navigate challenges more effectively,

potentially leading to more stable share prices and reduced volatility. Therefore, firms with larger institutional ownership might exhibit more resilient market performance during times of uncertainty.

The findings of this study can also be applicable to other geographical regions when examining the reaction of analysts following towards corporate governance factors, especially among regions with institutional investors that play a key role in firm governance. Since this study focuses on the moderating role of institutional ownership within tenure of independent directors' context, the conclusion deduced may not be applicable to other measures of corporate governance features such as skills and gender of independent directors. In addition, considerations like ethical culture, attendance and participation, diversity, risk management and decision timeliness of independent directors, which undoubtedly play significant roles in shaping board effectiveness and corporate outcomes, remain outside the scope of this investigation. Future research can replicate this study to consider such measurements.

Given the insights gained from this study, there are avenues for future research to examine the influence of institutional ownership on corporate governance characteristics on selected industries, such as healthcare, technology, and energy. There is potential for diverse research opportunities to investigate the moderating role of institutional ownership across various legal systems, such as Civil Law versus Common Law systems, developed versus emerging markets, and countries with varying regulatory frameworks.

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#### Notes

1. The results of Breusch-Pagan/Cook Weisberg and White model are presented in Table 5.
2. For economic reasons, the results will be provided by authors upon requests.

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