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Determinants of audit report delay: Further evidence from Saudi Arabia

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Abstract

Research Question: What are the determinants of audit report delay (ARD) among publicly traded firms in Saudi Arabia?

Motivation: The motive to investigate audit report delays (ARD) in the Saudi context is driven by the critical need for timely disclosure of financial information. In emerging markets like Saudi Arabia, where information access is limited and delays are expected, understanding ARD determinants can offer insights into the efficiency of the audit process. Additionally, prior studies on the determinants of ARD have produced mixed and inconclusive results, likely due to the limited scope of their models. By examining both auditor- and client-related factors, this study fills these gaps and explores how governance practices influence audit timeliness, ultimately enhancing financial reporting quality.

Idea: This study adopts a more comprehensive model to investigate potential determinants of ARD, encompassing a broad spectrum of auditor-related and client-related variables.

Data: This study is based on a sample of non-financial listed firms, encompassing 1,191 firm-year observations during the 2006–2021 period. Financial data are downloaded from the S&P Capital IQ database, while corporate governance data are hand-collected from the firms' annual reports.

Tools: The study uses multiple OLS regressions to predict the impact of the auditor and client attributes on ARD.

Findings: The results revealed that auditor change, tenure, audit committee size, audit committee independence, board size, and board independence are associated with shorter ARD. Conversely, auditor size, frequency of audit committee meetings, and frequency of board meetings are associated with prolonged ARD.

Contribution: The present study makes a significant contribution to the literature on audit reporting delay, audit efficiency, timeliness of reporting, and corporate governance. It offers a clearer understanding of the multifaceted nature of ARD, which is crucial for audit firms

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and regulatory bodies. The insights gained from this research can help develop strategies to reduce ARD, ultimately enhancing audit efficiency and reducing information asymmetries in capital markets, thus fostering more transparent financial reporting and better-informed investors.

Keywords: Audit Report Delay (ARD); Corporate Governance; Financial Reporting; Saudi Arabia

JEL Codes: M41; M42

1. Introduction

This empirical study explores the impact of diverse auditor-related and client-related variables on audit report delay (ARD) in the specific context of Saudi Arabia. ARD, also called audit lag, is defined as the number of days from the firm's fiscal year-end to the date of the release of the auditor's report (Ashton *et al.*, 1987). ARD impacts the timeliness of accounting information releases, a critical attribute of an effectively functioning capital market. Prior literature has shown that timeliness is crucial in reducing information asymmetry among investors and consequently attracting additional capital inflows into the market (Owusu-Ansah & Leventis, 2006; Bushman & Smith, 2001). Firms that release their financial information in a timely manner are generally viewed more favourably by markets and investors compared with companies associated with delayed reporting (Givoly & Palmon, 1982). Conversely, delayed release of financial information jeopardizes earnings quality and escalates the uncertainty related to investment decisions (Ashton *et al.*, 1987; Hakansson, 1977). Further, delays in releasing financial statements can compromise the usefulness of public disclosures, exacerbate information asymmetries among market participants, and lead to adverse market reactions (Chambers & Penman, 1984; Hakansson, 1977).

The importance of prompt divulgence of accounting information has led professionals and regulators to advocate for reducing the time allowed to issue audited financial statements (Securities and Exchange Commission [SEC], 2002). Analysing ARD determinants, particularly in emerging markets, is compelling for several reasons. First, recognizing the important role the audit function plays in the financial reporting process, Antle and Nalebuff (1991) contend that disclosed financial statements should be viewed as a joint statement from the auditor and firm management. Second, emerging markets are typically characterized by information availability restrictions and prolonged ARD (Errunza & Losq, 1985). Third, considering the impact of audit delay on the timeliness of financial statement disclosure, empirical findings about its determinants offer enhanced insights into the efficiency of the audit process (Bamber *et al.*, 1993). Finally, because ARD is one

of the few externally observable factors, it enhances our understanding of the audit function and financial reporting process (Givoly & Palmon, 1982). The value of information derived from audited financial statements diminishes as the delay in audit completion increases, leading users of financial statements to search for alternative information sources (Knechel & Payne 2001). To date, prior studies on the determinants of ARD have yielded mixed and inconclusive results, probably due to the non-comprehensive nature of their models (Bamber *et al.*, 1993). For the above reasons, this study adopts a more comprehensive model to investigate potential determinants of ARD, encompassing a broad spectrum of auditor-related and client-related variables. In this context, Cohen and Hanno (2000) argue that the quality and the strength of the client's corporate governance can affect the audit process (e.g., timing and extent), and thus, it is expected that firm-specific governance characteristics will influence ARD.ⁱ

Therefore, the primary objective of this research is to construct a more encompassing model for scrutinizing potential determinants impacting delays in audit report issuance in an emerging economic context—in this case, Saudi Arabia. The predictor variables selected for the investigation of determinants affecting ARD are based on prior literature (Sultana *et al.*, 2015; Carcello & Nagy, 2004; DeZoort *et al.*, 2003; Abbott *et al.*, 2000; Francis *et al.*, 1999; Vafeas, 1999; Beasley, 1996) and are related to both dimensions of the audit process: the auditor and the client. Specifically, this study examines the following nine variables that prior studies have indicated as potential ARD influencers. The study investigates auditor type, switch, and tenure from the auditor side. From the client side, there is an investigation of three characteristics of audit committees (size, frequency of meetings, and audit committee independence) and three board attributes (size, frequency of meetings, and board independence).

Employing ordinary least square (OLS) regression to test nine hypotheses (H1 to H9) on the relationships between predictor variables and ARD, the study utilized a panel dataset of 1,191 firm-year observations from non-financial firms listed on the Saudi capital market for the period from 2006 to 2021. In terms of auditor-related factors, the study reveals a positive association between the Big 4 audit firms and ARD, suggesting that larger audit firms take more time to complete audits and issue reports compared with smaller ones. Further, contrary to expectation, auditor switch is associated with shorter ARD. Moreover, there is a significant and negative relationship between audit tenure and ARD, implying that longer audit tenure enhances auditor knowledge about the client and reduces audit time.

Among audit committee characteristics, audit committee size and audit committee independence exhibit a statistically significant and negative association with ARD, indicating that a larger audit committee and an audit committee comprising mainly external independent directors are associated with shorter ARD. Surprisingly, the frequency of audit committee meetings is associated with longer ARD. In examining

board characteristics, the analysis reveals a negative and significant relationship between board size and ARD, suggesting that firms with larger boards experience shorter delays, likely due to improved monitoring by the larger boards. Unexpectedly, board meeting frequency positively relates to ARD, challenging the belief that more meetings lead to improved governance. Finally, board independence is negatively and significantly associated with ARD, aligning with agency theory and indicating that a board with more independent directors reduces the time required to complete and issue audit reports.

Over the past two decades, the Saudi corporate landscape has gained momentum, positioning it as an ideal setting for the in-depth exploration of ARD determinants, with several compelling factors. First, the country's economic prominence as the world's largest oil exporter and its status as a member of the G20 underscore its substantial influence in global financial markets. Understanding the dynamics of ARD in this context becomes paramount, as any insights gained can have far-reaching implications. Second, significant reform in corporate governance through introducing the corporate governance code in 2006 and its amendment in 2017 underscores a commitment to improving transparency and accountability, which are closely intertwined with ARD, in Saudi companies. Third, opening the Saudi capital market to foreign investors in 2015 transformed it into an international arena, making it crucial to investigate the potential determinants of ARD to provide further assurance to foreign investors. Fourth, the mandatory adoption of international financial reporting standards (IFRS) in 2017 further aligns Saudi Arabia's financial reporting practices with global standards. Exploring how these changes influence ARD in the Saudi corporate landscape is imperative. Finally, the Saudi capital market stands in ninth position globally regarding the total market value of all shares traded (as of the end of September 2023). Collectively, these five factors render Saudi Arabia an ideal and dynamic setting to study the determinants of ARD and their multifaceted implications.

The results of this research provide important implications for a wide array of financial statement users. In contrast to developed countries, capital markets in developing countries have comparatively restricted access to information and experience extended delays in the issuance of audited financial statements (Errunza & Losq, 1985); empirical research could shed light on factors causing delays in audit completion and financial statement issuance for Saudi companies. Most previous studies on factors influencing ARD have mainly focused on developed markets, including the US, the UK, China, and Australia (Chan *et al.*, 2016; Sultana *et al.*, 2015; Bamber *et al.*, 1993; Ashton *et al.*, 1987). Other studies have focused on emerging markets in the MENA: Bahrain (Abdulla, 1996), Kuwait (Al-Ghanem & Hegazy, 2011), and Egypt (Afify, 2009). The current study differs from the above in three ways. First, unlike earlier research focusing on only one aspect, this study integrates a broader model, encompassing a wide spectrum of auditor-related and client-related variables. Second, prior studies yielded mixed results, probably due to

the non-comprehensive nature of their examined models (Bamber *et al.*, 1993). Third, the dataset under examination possesses three noteworthy characteristics: it is substantial in size, comprising 1,191 firm-year observations; it is longitudinal, encompassing the years from 2006 to 2021; and it incorporates a significant amount of contemporaneous data.

The present study makes a significant contribution to the literature on audit reporting delay, audit efficiency, timeliness of reporting, and corporate governance. The importance of this study lies in its comprehensive approach, as it examines both auditor-related and firm-related governance factors, providing a holistic view of ARD determinants. By doing so, it offers a clearer understanding of the multifaceted nature of ARD, which is crucial for audit firms and regulatory bodies. The insights gained from this research can help develop strategies to reduce ARD, ultimately enhancing audit efficiency and reducing information asymmetries in capital markets, thus fostering more transparent financial reporting and better-informed investors. Overall, the findings of such research have the potential to offer valuable implications to audit firms, policymakers, regulatory bodies, investors, and academics, enhancing their understanding of the audit process and the factors influencing timely reporting in the context of an emerging market, such as the Saudi capital market.

The remainder of the paper is organized as follows. Section 2 reviews relevant literature and develops hypotheses. Section 3 discusses the sample selection and research design. Section 4 presents the discussion and results, and Section 5 concludes the article.

2. Literature review and hypotheses development

2.1 Audit report delay (ARD)

ARD is defined as the number of days from the firm's fiscal year-end to the date of the auditor's report (Ashton *et al.*, 1987). ARD is perceived as the most important determinant of financial statements timeliness and the earnings announcement (Abbott *et al.*, 2012; Givoly & Palmon, 1982). It is universally accepted that security market regulators do not allow listed companies to publish their financial reports until the external auditor has completed the audit (Abernathy *et al.*, 2017). Lengthy ARD contradicts the important property of accounting information, which is its timeliness, potentially jeopardizing its quality and informativeness. In other words, the longer it takes for the auditor to complete the audit and issue the report, the more significant the deterioration in the information's value. Therefore, a prolonged ARD is perceived as an alarm signal about the audit firm and the client.

Existing literature has demonstrated that the timing of earnings announcements and annual report releases conveys valuable information to the capital market. On average, companies that promptly report their earnings receive more favourable evaluations from the market than those with reporting delays (Chambers and Penman, 1984; Givoly & Palmon, 1982). Further, delays in the publication of financial statements can compromise the usefulness of public disclosures, exacerbate information asymmetries among market participants, and lead to adverse market reactions (Chambers & Penman, 1984; Hakansson, 1977). Consequently, capital market regulators, such as the Securities and Exchange Commission (SEC) in the US, initially required publicly traded companies to submit their audited financial statements within 90 days of the fiscal year-end. These regulations were later amended to reduce the submission deadline to 60 days (SEC, 2002; Schwartz & Soo, 1996). Similarly, in Saudi Arabia, the Capital Market Authority stipulates in Article 82 that listed companies must disclose their audited annual financial statements to the public within a period not exceeding three months after the firm's year-end (Capital Marketing Authority, 2023). Thus, recognizing the important effects of ARD on the timeliness of earnings announcements and the release of audited financial statements, a significant body of research has been published to identify the factors that influence the duration of ARD (Habib *et al.*, 2019; Leventis *et al.*, 2005; Bamber *et al.*, 1993; Ashton *et al.*, 1987; Givoly & Palmon, 1982).

2.1.1 The relationship between auditor type and ARD

Auditing plays a vital role in enhancing the quality of the financial reporting process. According to Antle and Nalebuff (1991), financial statements are perceived to be joint statements from the external auditor and company management. Prior studies have shown that auditor size (such as Big 4 vs non-Big 4) affects audit quality and earnings quality. DeAngelo (1981) argues that larger audit firms are more likely to detect and report a weakness in the client's internal control systems because these auditors face greater risk if they fail to detect and report such weaknesses compared with smaller audit firms. Big 4 auditors have better access to advanced technologies and thus can employ higher quality audit specialists and procedures than non-Big 4 auditors (Lee & Jahng, 2008). Further, Big 4 auditors have brand-name reputations and expertise and are more capable of constraining reporting choices for their clients; as a result, they are associated with higher audit quality outcomes compared with non-Big 4 auditors, which lack such reputation and expertise (Myers *et al.*, 2003; Francis *et al.*, 1999). These differences between the two groups of auditors contribute to variations in the timing of issuing audit reports (Schwartz & Soo, 1996). Francis and Yu (2009) predict that Big 4 auditors would be more likely to produce higher-quality audits due to their cumulative expertise and knowledge in managing audits for public firms; the empirical evidence found in their study is consistent with this prediction. Similarly, Choi *et al.* (2010) provide evidence that Big 4 auditors charge higher audit fees to their clients, indicating that more prominent auditors deliver better audit services than their smaller counterparts. Francis *et al.* (2013) find that

Big 4 auditors have considerably fewer client restatements, primarily because they excel at ensuring the accurate application of GAAP when reviewing their client's financial statements, a capability that smaller auditors tend to lack.

However, the expected impact of auditor type (Big 4 vs non-Big 4) on ARD is less predictable. It can be argued that because Big 4 auditors have greater access to resources, such as audit technologies, cumulative knowledge, and experienced staff, they can be expected to complete the audit work on time (Choi *et al.*, 2010; Francis & Yu, 2009). However, it can also be argued that Big 4 auditors are busier and face greater workloads and time pressures because of their extensive client base (Whitworth & Lambert, 2014). If this holds, one can expect increased size of audit firms to be positively related to audit delay. Given the abovementioned opposing views, the current study makes no prediction for signs of the impact of Big 4 auditors on ARD. Instead, the study proposes the following non-directional hypothesis:

H₁: *There is a significant relationship between Big 4 auditors and ARD.*

2.1.2 The relationship between auditor changes and ARD

Two opposing views regarding the relationships between auditor changes and audit report delay exist. One view suggests that when a new auditor–client relationship is arranged, the time needed to complete the audit process and issue an audit report is shorter. Knowing the circumstances associated with the predecessor auditor's termination and willingness to keep a long-term engagement with the new client, the successor auditor is expected to allocate more resources and show a higher level of commitment to completing the audit on time (Schwartz & Soo, 1996). Alternatively, Mautz and Sharaf (1961) suggest that an extended auditor–client relationship would jeopardize the auditor's independence (as the auditor becomes more familiar and less cautious) with time. In other words, a long-lasting auditor–client relationship is expected to reduce both the time and effort to complete the audit (i.e., reduced ARD). Further, Shockley (1982) argues that, over a long association with the client, the external auditor is expected to face fewer challenges (due to familiarity) and thus is less likely to use advanced or sophisticated audit techniques or may fail to maintain the required level of professional skepticism. As a result, calls for mandatory auditor switch have heightened on the basis that decreasing auditor tenure would alleviate concerns about independence and perceived audit quality (Myers *et al.*, 2003). A new auditor–client relationship might be expected to delay the timeliness of audit completion due to the extended time needed by the newly engaged audit firm to understand and become familiar with the new client's financial reporting environment, including their financial records, client industry, internal control systems, and prior period audit working papers (Dhaliwal *et al.*, 1993; DeAngelo, 1981). In addition, audit firms tend to perform a more extensive initial audit due to the potential risk of litigation associated with the new client (St. Pierre & Anderson, 1984). Overall, prior literature seems to suggest that when firms switch to an external

auditor, the audit report issuance is delayed. Consistent with this view, the study proposes the following hypothesis:

H₂: *There is a positive relationship between auditor switch and ARD.*

2.1.3 The relationship between auditor tenure and ARD

Knowledge about the client (such as the client's internal control environment and accounting system) is crucial to provide the auditor with a reasonable ability to detect material misstatements in the financial statements (Johnson *et al.*, 2002). According to the US Governmental Accounting Office (GAO, 2003), auditors may take two to three years to become adequately familiar with a new client's operations.

There are two conflicting views on the length of audit tenure. On the one hand, it is suggested that as audit tenure lengthens, auditors might become less critical and less inclined to challenge management's choices, potentially compromising their required independence (Geiger & Raghunandan, 2002). On the other hand, it is posited that during the initial years of the auditor–client relationship, auditors often lack adequate knowledge and familiarity with the client's operations, which could elevate the risk of audit failures (Myers *et al.*, 2003). Consistent with this view, Myers *et al.* (2003) provide evidence that longer auditor tenure is associated with higher earnings quality. Likewise, Johnson *et al.* (2002) find that short audit-firm tenures are associated with lower-quality earnings than medium ones. Further, Geiger and Raghunandan (2002) find that audit reporting failure is more likely to occur in the early years of an audit engagement. They considered that this finding contradicts the opponents' position of mandatory auditor rotation. Carcello and Nagy (2004) also prove that longer auditor tenure is associated with fewer fraudulent financial reporting incidents.

Caramanis and Lennox (2008) argue that in a new auditor–client relationship, the audit firm is expected to spend more time and effort in the initial years of engagement due to the high start-up work needed to assess the strength of a client's internal control systems. Lee *et al.* (2009) find evidence that as auditor tenure increases, ARD declines, suggesting that long audit-firm tenure lets auditors perform the audit function for their clients more efficiently. Collectively, this evidence indicates that lengthy audit tenure gives auditors more knowledge and familiarity with the client, making the audit function less challenged and more efficient over time. Therefore, this study proposes the following hypothesis:

H₃: *There is a negative relationship between auditor tenure and ARD.*

2.1.4 The relationship between audit committee size and ARD

In response to increased financial statements testaments in the US, a Blue Ribbon Committee (BRC) was formed. The primary objective of the BRC was to develop recommendations to improve the quality of financial reporting by reinforcing the

audit committee's position as a financial monitor. The BRC's (1998) report recommends that the audit committee comprise at least three members with relevant financial and accounting knowledge and expertise. Larger audit committees are perceived to be more powerful and, consequently, are recognized as an important mechanism of audit effectiveness (Kalbers & Fogarty, 1993). Further, in line with resource dependency theory, having larger audit committees brings greater expertise, knowledge, skills, experience, and connections to the audit process. As such, larger audit committees better resolve any conflict between the auditors and management, notably those related to audit reports, thereby improving audit report timeliness (Sultana *et al.*, 2015; DeZoort *et al.*, 2003).

Conversely, agency theory posits that a smaller audit committee can enhance the formation of a collective decision-making mindset. In contrast, a large audit committee could undermine group cohesion and raise the likelihood of self-serving behaviors. Scholars who advocate this view include Collier and Gregory (1999), who contend that a greater number of members on the audit committee could compromise the effectiveness of monitoring and control functions. Alkebesee *et al.* (2022) argue that, as the size of the audit committee increases, the likelihood of full member participation diminishes, leading to potential complexities in attaining a consensus on decisions related to audit work, consequently hindering the timely presentation of financial information. Given the abovementioned opposing views, the current study makes no prediction for the impact of audit committee size on ARD. Thus, the study proposes the following non-directional hypothesis:

H₄: *There is a significant relationship between audit committee size and ARD.*

2.1.5 The relationship between audit committee meetings and ARD

Audit committee's effectiveness or diligence measures the degree of competence exhibited by the audit committee in executing its oversight responsibilities (Kalbers & Fogarty, 1993). Prior literature has described diligence as the frequency of meetings of an audit committee with management and external auditors (Abbott *et al.*, 2000; Menon & Williams, 1994). The BRC's (1999) report recommends that an audit committee meet at least four times yearly. Menon and Williams (1994) contend that more frequent audit committee meetings suggest a heightened commitment to oversee management. In contrast, infrequent meetings indicate that an audit committee is less likely to carry out its monitoring roles. Goh (2009) argues that the audit committee that meets more frequently is better positioned to discuss remediation efforts with management and the auditors, thereby speeding up the process needed to detect and rectify material weaknesses.

Prior literature suggests that audit committee diligence is expected to enhance audit functions and improve reporting timeliness for two reasons. First, through frequent interactions with internal audit teams, the audit committee will remain acquainted and informed about critical accounting and auditing matters, and second, the audit

committee is consequently able to draw the attention of external auditors toward auditing concerns on time (Abbott *et al.*, 2003; Raghunandan *et al.*, 1998). Thus, one can expect that an audit committee that meets more frequently is more likely to reduce year-end audit time pressure, therefore enabling auditors to issue the audit reports on time. This expectation suggests that a more diligent audit committee is more likely to reduce the time required to issue the audit report. The study proposes the following hypothesis:

H₅: *There is a negative relationship between audit committee diligence and ARD.*

2.1.6 The relationship between audit committee independence and ARD

Audit committee independence is a topic that has attracted significant attention from reform advocates, regulatory bodies, and academic scholars. The BRC's report proposes that all publicly listed companies should form audit committees consisting solely of independent board members. Research has shown that audit committee independence plays an important monitoring role. First, independent directors are expected to have no financial connections to management, enabling them to more objectively question and evaluate management's performance (Carcello & Neal, 2000). Second, independent members are strongly incentivized to preserve their reputations through effective and diligent monitoring of the firm (Abbott *et al.*, 2000). Abbott *et al.* (2000) document a negative association between audit committee independence and earnings management occurrence. An independent audit committee is more likely to demand an expanded and thorough audit scope from the external auditor to detect possible errors or misstatements in the financial statements (Abbott *et al.*, 2003). Due to a lack of bias, an audit committee comprising a majority of independent directors is more likely to disagree with management decisions, enhance internal control functions, and mediate the dispute with external auditors, thereby shortening the time required to issue the audit report (Bedard *et al.*, 2004). Based on the above discussion, the study proposes the following hypothesis:

H₆: *There is a negative relationship between audit committee independence and ARD.*

2.1.7 The relationship between board size and ARD

Fama and Jenson (1983) argue that the board of directors has the ultimate responsibility to ensure an effective internal control system is in place to monitor the actions of top management. Organizational theory contends that larger groups are more likely to take longer to form or agree on decisions in a corporate context. Lipton and Lorsch (1992) argue that on a large board (comprising more than ten members), directors will have limited time to express their views, discuss ideas, and reach a consensus. Therefore, Lipton and Lorsch recommend that the maximum size of a board should be ten directors, and the preferred number should be eight or nine. Jensen (1993) is in accord, noting that larger boards are less likely to perform their

duties effectively and are easier for the CEO to override and control. This view is supported by Yermack (1996), who documents a negative association between board size and firm value for U.S. companies. This finding confirms that limiting the size of the board of directors would improve its capacity for effective monitoring.

An alternative view suggests that larger boards are associated with better corporate governance. Xie *et al.* (2003) argue that although a smaller board might be more functional due to the reduced bureaucratic problems and ease of communication between members, larger boards may bring more expertise to the boardroom and better constrain earnings management. Empirical evidence supports this view. Dalton *et al.* (1999) document a positive and significant association between board size and the firm's financial performance. Given the abovementioned opposing views, the current study makes no prediction for the impact of board size on ARD. Thus, the study proposes the following non-directional hypothesis:

H₇: *There is a significant relationship between board size and ARD.*

2.1.8 The relationship between board meetings and ARD

Lipton and Lorsch (1992) note that one of the main challenges corporate directors face is a lack of time to carry out their managerial duties. Lipton and Lorsch suggest that a board of directors should meet frequently, ideally between eight to twelve times a year, to carry out their monitoring responsibilities effectively. Adams and Ferreira (2009) argue that attending board meetings is the primary means by which directors acquire the essential information needed to fulfill their obligations. Prior literature has suggested that the frequency of board meetings is critical in ensuring good corporate governance and often leads to favorable corporate outcomes (Conger *et al.*, 1998; Jensen, 1993). Existing empirical evidence is consistent with this notion. Xie *et al.* (2003) find a negative association between the frequency of board meetings and the magnitude of earnings management, indicating that when board directors meet more frequently, they are more capable of constraining opportunistic behavior. Vafeas (1999) finds that a board that meets more often is associated with improved financial performance. Therefore, we contend that increased board meeting frequency signifies the board's dedication and commitment to its monitoring role. This commitment, in turn, contributes to the timely release of audited financial reports, thereby reducing ARD. The study proposes the following hypothesis:

H₈: *There is a negative relationship between board meetings and ARD.*

2.1.9 The relationship between board independence and ARD

From an agency perspective associated with the separation of ownership and control, Fama and Jenson (1983) argue that independent board members are arbiters who seek to settle disagreements among internal directors and perform monitoring functions that curtail serious agency problems between managers and shareholders.

Fama and Jensen further argue that independent directors are less likely to collude with top management to expropriate shareholders' wealth. The Cadbury Committee (1992) report on the financial aspects of corporate governance emphasized the need for a greater representation of independent non-executive directors on boards, suggesting that such directors are more capable of providing independence and objectivity to board decisions.

Empirical research has provided evidence supporting the role of independent board directors in reducing agency costs and improving monitoring effectiveness. For example, Hermalin and Weisbach (1988) find that outside directors are more likely to be appointed after a firm performs poorly or leaves the market, signaling the need for outside guidance in a time of financial difficulty or uncertainties. Rosenstein and Wyatt (1990) find that the appointment of an independent director was associated, on average, with positive abnormal returns. Beasley (1996) presents evidence that US company boards comprising larger proportions of independent directors are associated with a reduced incidence of financial statement fraud. Peasnell *et al.* (2005) find that boards with higher proportions of independent directors are associated with less earnings management.

In an audit quality context, O'Sullivan (2000) finds that increased non-executive director representation is positively associated with audit quality, as proxied by audit fees. O'Sullivan attributes this to the greater emphasis placed by non-executive independent directors on the audit's extent and quality than on the audit price, compared with executive directors. This, in turn, is likely to result in more extensive audit work and, consequently, more reliable financial statements. If this argument holds, ARD should be greater when the independent directors' representation levels are high. Alternatively, independent directors are more effective in monitoring management actions than internal directors. In that case, it can be argued that firms with more independent directors should have fewer material misstatements in their financial statements. Consequently, external auditors would be expected to devote less effort and spend less time detecting such misstatements. If this argument holds, ARD is expected to be shorter when independent directors' representation is high. Therefore, the study has no expectation for the relationship between board independence and ARD. The study proposes the following hypothesis:

H₉: *There is a negative relationship between board independence and ARD.*

3. Research methodology

3.1 Sample selection

The sample comprises all non-financial companies listed on the Saudi Stock Exchange (*Tadawul*) for the period 2006 to 2021. The selection of 2006 as the starting point for the data sample was justified by the introduction of Saudi corporate

governance reforms in that year, making it a significant milestone for the study of governance practices in Saudi Arabia. In accordance with past empirical research, financial firms are excluded, as they have different reporting requirements and are subject to additional regulations, which may impact the reporting behaviour of financial companies compared with non-financial ones (e.g., Owusu-Ansah & Leventis, 2006; Ball *et al.*, 2000). Further, firms with missing or incomplete data were excluded from any of the financial or governance variables used in the regressions. After these exclusions, the final pooled sample consisted of 1,191 firm-year observations. Observations with extreme values for all continuous variables are winsorized at the 1st and 99th percentiles to mitigate the impact of outliers on the regression analysis. Financial data are downloaded from the S&P Capital IQ database, while corporate governance data are hand-collected from the firms' annual reports.

3.2 Variables measurement

3.2.1 Dependent variable—ARD

The dependent variable, ARD, is measured as the natural log of the number of days from the firm's fiscal year-end date to the date of the auditor's report following prior literature (e.g., Ashton *et al.*, 1987; Whitworth & Lambert, 2014).

3.2.2 Independent variables

This study aims to investigate the factors that influence ARD. To achieve this, nine potential determinants of ARD are analysed, including auditor-related factors, audit committee characteristics, and board of directors' attributes. The selection of these variables aligns with prior research on ARD determinants.

The independent variables are measured following past studies (Sultana *et al.*, 2015; Carcello & Nagy, 2004; DeZoort *et al.*, 2003; Abbott *et al.*, 2000; Francis *et al.*, 1999; Vafeas, 1999; Beasley, 1996). Auditor type (*BIG4*) was a binary variable, which equaled 1 if the external auditor was one of the Big 4 auditing firms, and 0 otherwise; auditor change (*SWITCH*) was a binary variable, which equaled 1 if the firm switched auditor, and 0 otherwise; auditor tenure (*TENURE*) is the number of consecutive years the external auditor had been with the client. Audit committee size (*ACSIZE*) is the number of audit committee members; audit committee meeting (*ACMEET*) is the number of audit committee meetings in the sample year; and audit committee independence (*ACIND*) is the proportion of independent directors on the audit committee. Board size (*BSIZE*) is the number of directors on the board; board meeting (*BMEET*) is the number of board meetings in the sample year; and board independence (*BIND*) is the proportion of independent directors on the board.

3.2.3 Control variables

Following prior studies (e.g., Sultana *et al.*, 2015; DeZoort *et al.*, 2003; Ashton *et al.*, 1987), the study controlled for a number of firm-specific characteristics that might influence ARD. Specifically, this included a company reporting a loss (LOSS) measured as a binary variable, which equaled 1 if the firm reported a loss, and 0 otherwise; firm size (*LnSIZE*) calculated as the natural log of market value of total equity; and firm risk (*RISK*) measured as the ratio of current liabilities to current assets. Finally, the study controlled for period effects by constructing year dummies (*YEAR*) and for industry effects by constructing industry dummies (*IND*).

3.2 Regression model

The study estimated the following OLS regression specification to test for the association between the explanatory variables and the dependent variable, ARD:

$$\begin{aligned} LnARD_{it} &= \beta_0 + \beta_{1-9} X_{it}(\text{independent variables}) + Z_{it}(\text{controls}) \\ &\quad + YEAR_{it} + IND_{it} + \varepsilon_{it}, \end{aligned} \quad (\text{Equation 1})$$

Where: $LnARD_{it}$ is the log of *ARD* for firm *i* at year *t*; X_{it} represents each of the nine independent variables (*BIG4*, *SWITCH*, *TENURE*, *ACSIZE*, *ACMEET*, *ACIND*, *BSIZE*, *BMEET*, and *BIND*); Z_{it} is a vector of the control variables for firm *i* at year *t*; $YEAR_{it}$ is the year dummy; IND_{it} is the industry dummy; and ε_{it} is the error term. All variables are defined in Appendix A.

4. Empirical results

4.1 Descriptive statistics

Table 1 reports descriptive statistics of the variables used in the estimated regression. ARD's mean (median) value is 50.039 (51.000) days. This means that, on average, auditors take less than two months to complete an audit and issue reports. The reported ARD is slightly shorter than the average of 55 days reported by Aljaaidi and Almoataz (2020) for a sample of Saudi manufacturing firms. Compared with other audit delay studies in the Gulf Cooperation Council region, Khasharmeh and Aljifri (2010) reported mean ARD values of 51 days and 43 days for Bahrain and UAE, respectively. Interestingly, in the context of international research on ARD, Saudi firms tend to have a shorter average ARD than that observed in developed countries. For example, Whitworth and Lambert (2014) and Sultana *et al.* (2015) reported higher mean ARD values of 65 days and 87 days for the USA and Australia, respectively.

Table 1. Descriptive statistics

Variables	Mean	Median	Std. Dev.	Min	Max
<i>LnARD</i>	3.814	3.932	0.499	1.609	5.900
<i>ARD</i>	50.039	51.000	19.971	8.000	176.000
<i>BIG4</i>	0.586	1.000	0.493	0.000	1.000
<i>SWITCH</i>	0.610	1.000	0.488	0.000	1.000
<i>TENURE</i>	2.611	2.000	1.700	1.000	10.000
<i>ACSIZE</i>	5.374	5.000	0.606	4.000	7.000
<i>ACMEET</i>	5.458	5.000	2.320	0.000	21.000
<i>ACIND</i>	0.473	0.500	0.152	0.000	0.714
<i>BSIZE</i>	8.232	8.000	1.483	3.000	12.000
<i>BMEET</i>	5.364	5.000	2.257	1.000	22.000
<i>BIND</i>	0.494	0.444	0.177	0.000	1.000
<i>LOSS</i>	0.191	0.000	0.393	0.000	1.000
<i>LnSIZE</i>	14.654	14.370	1.434	11.615	19.652
<i>RISK</i>	1.052	0.726	1.063	0.076	6.231

Note: All variables are defined in Appendix A.

The descriptive statistics from this research show that the average representation of Big 4 auditors is 0.586, which means that 58.6% of the financial statements in the sample firm-year observations are audited by a Big 4 auditor. The average auditor tenure (*TENURE*) is 2.611, suggesting that the typical duration of the external auditor's relationship with a client is approximately two and a half years. Statistics related to audit committee characteristics reveal that the average audit committee size (*ACSIZE*) is 5.374 members, with a minimum of four and a maximum of seven members. On average, audit committees met (*ACMEET*) 5.458 times during the year, and approximately 47.3% of audit committee members are independent (*ACIND*). When examining board characteristics, the average board size (*BSIZE*) is 8.2 members, varying from a minimum of 3 to a maximum of 12 individuals. Boards of directors met (*BMEET*) an average of 5.364 times annually, and roughly 50% of board members are classified as independent (*BIND*). As for control variables, 19.1% of the firm-year observations reported a loss (*LOSS*) at the end of the fiscal year. The average natural log of firm size (*LnSIZE*) is 14.654, and the mean risk ratio (*RISK*) value is 1.052.

4.2 Correlations analysis

Table 2 presents a Pearson correlation matrix among the variables used in the regression analysis. Many of the explanatory variables are significantly correlated with *LnARD*. Specifically, *BIG4*, *ACMEET*, and *BMEET* have positive relationships, while *SWITCH*, *TENURE*, *ACIND*, and *BIND* have negative ones. However, no significant univariate association exists between *LnARD* and either *ACSIZE* or *BFSIZE*. Overall, the results indicate that the relationships between the explanatory variables are reasonable, as none of the correlation coefficients exceed 0.8, which is the critical threshold that raises multicollinearity concerns (Hair *et al.*, 1995).

Table 2. Correlation matrix

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
<i>LnARD</i>	1.00												
<i>BIG4</i>	0.07**	1.00											
<i>SWITCH</i>	-0.08***	0.13***	1.00										
<i>TENURE</i>	-0.16***	0.10***	0.58***	1.00									
<i>ACSIZE</i>	0.03	0.12***	-0.03	-0.06**	1.00								
<i>ACMEET</i>	0.14***	0.00	-0.05*	-0.05*	0.12***	1.00							
<i>ACIND</i>	-0.07**	-0.13***	-0.02	-0.01	0.08***	-0.06**	1.00						
<i>BFSIZE</i>	-0.02	0.24***	0.05*	-0.02	0.29***	0.08***	-0.19***	1.00					
<i>BMEET</i>	0.07**	0.00	-0.02	0.01	0.12***	0.32***	-0.06**	-0.07**	1.00				
<i>BIND</i>	-0.10***	-0.25***	-0.04	-0.02	-0.05*	0.00	0.40***	-0.11***	-0.02	1.00			
<i>LOSS</i>	0.17***	-0.13***	-0.05	-0.03	0.00	0.01	0.06**	-0.09***	0.07**	0.10***	1.00		
<i>LnSIZE</i>	-0.01	0.41***	0.06**	0.02	0.31***	0.09***	-0.10***	0.38***	0.12***	-0.26***	-0.18***	1.00	
<i>RISK</i>	-0.12***	-0.12***	-0.05*	-0.02	-0.05*	-0.09***	-0.01	-0.02	-0.04	0.00	-0.04	-0.05*	1.00

Note: *, **, and *** denote significance level at 10%, 5%, and 1%, respectively. All variables are defined in Appendix A.

4.3 Multivariate analysis

Table 3 reports the regression analysis regarding the relationships between three selected auditor-related factors (*BIG4*, *SWITCH*, and *TENURE*, respectively) and *LnARD*. Model 1 displays the regression results related to hypothesis H1, which predicts a significant relationship between auditor type (*BIG4*) and *LnARD*. However, as there are two conflicting views on the impact of auditor type on reporting timeliness, H1 predicts a non-directional effect of *BIG4* on *LnARD*.

Table 3. The relationship between ARD and auditor characteristics

Model: $LnARD_{it} = \beta_0 + \beta_{1-3} X_{it} (BIG4, SWITCH, \text{ and } TENURE) + Z_{it} (controls) + YEAR_{it} + IND_{it} + \varepsilon_{it}$			
Variable	Model (1) <i>BIG4</i>	Model (2) <i>SWITCH</i>	Model (3) <i>TENURE</i>
<i>BIG4</i>	0.223*** (7.605)		
<i>SWITCH</i>		-0.048* (-1.830)	
<i>TENURE</i>			-0.031*** (-4.081)
<i>LOSS</i>	0.192***	0.181***	0.181***

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Model: $LnARD_{it} = \beta_0 + \beta_{1-3} X_{it} (BIG4, SWITCH, \text{ and } TENURE) + Z_{it} (\text{controls}) + YEAR_{it} + IND_{it} + \varepsilon_{it}$			
	(5.720)	(5.260)	(5.310)
<i>LnSIZE</i>	-0.012	0.020**	0.020**
	(-1.135)	(1.976)	(1.991)
<i>RISK</i>	-0.004	-0.010*	-0.010*
	(-0.642)	(-1.653)	(-1.687)
<i>Constant</i>	3.503***	3.225***	3.273***
	(20.179)	(18.596)	(18.927)
<i>Obs.</i>	1,191	1,191	1,191
<i>Industry & year</i>	YES	YES	YES
<i>Adj. R²</i>	0.286	0.253	0.261

Note: Numbers in parentheses represent robust t-statistics. *, **, and *** denote significance level at 10%, 5%, and 1%, respectively. All variables are defined in Appendix A.

Consistent with H₁, the coefficient on *BIG4* is significant. In terms of directionality, the positive coefficient on *BIG4* (0.223, $t = 7.605$, $p < 0.01$) indicates that Big 4 audit firms take longer to complete the audit work and issue audit reports for Saudi firms compared with non-Big 4 auditors. This result is consistent with the view that Big 4 auditors are busier and face greater workloads and time pressures due to their large client bases (Whitworth & Lambert, 2014). Model 2 displays the regression results related to hypothesis H₂, which posits that firms that switch external auditors are more likely to experience a delay in issuing their audited reports. Surprisingly, the coefficient on the variable *SWITCH* is negative and significant (-0.048 , $t = -1.830$, $p < 0.1$), indicating that when a new auditor–client relationship is arranged, the time needed to complete the audit process and issue an audit report is shorter.

This result is consistent with Schwartz and Soo (1996), who contend that due to their desire to maintain a long-term association with a new client, the successor auditor is expected to allocate more resources and show a higher level of commitment in completing the audit on time. Model 3 reports the regression results related to hypothesis H₃, which predicts a negative relationship between auditor tenure and *LnARD*. The coefficient on the variable *TENURE* is negative and significant (-0.031 , $t = -4.081$, $p < 0.01$), indicating that H₃ is supported. This finding aligns with previous research (e.g., Lee et al., 2009; Caramanis & Lennox, 2008; Carcello & Nagy, 2004; Myers et al., 2003), which suggests that a longer audit tenure gives auditors more profound knowledge and understanding of their clients. This enhanced familiarity can make the audit process smoother and more efficient, ultimately reducing the time needed to issue an audit report. Overall, the results reported in Table 3 support H₁ and H₃ but lend no support for H₂.

Table 4 reports the regression analysis regarding the relationships between the three selected audit committee characteristics (*ACSIZE*, *ACMEET*, and *ACIND*, respectively) and *LnARD*. Model 1 displays the regression results related to hypothesis H₄, which predicts a significant relationship between audit committee

size (*ACSIZE*) and *LnARD*. H_4 predicts a non-directional effect of *ACSIZE* on *LnARD* due to the complexity of their relationship. The study, however, finds a negative and significant coefficient for audit committee size ($p < 0.1$), indicating that larger audit committees help resolve conflicts between auditors and management, particularly regarding audit reports, thus improving audit report timeliness (Sultana *et al.*, 2015; DeZoort *et al.*, 2003). Model 2 displays the regression results related to hypothesis H_5 , which anticipates a negative relationship between audit committee diligence (*ACMEET*) and *LnARD*. Contrary to expectations, there is a positive and significant coefficient on *ACMEET* ($p < 0.1$). This result suggests that audit committee meeting frequency increases the time needed to issue an audit report for Saudi firms. Model 3 displays the regression results related to hypothesis H_6 , which predicts a negative relationship between audit committee independence (*ACIND*) and *LnARD*. The coefficient on the variable *ACIND* is negative and significant (-0.295 , $t = -3.485$, $p < 0.01$), indicating that H_6 is strongly supported. The negative coefficient suggests that the time necessary to complete the audit function is reduced when an audit committee comprises mainly external independent directors. This finding is consistent with the notion that due to a lack of bias, an audit committee mainly composed of independent directors is more likely to enhance the effectiveness of the audit process as it can disagree with management decisions and mediate disputes with external auditors (Bedard *et al.*, 2004; Abbott *et al.*, 2003). In summary, the results reported in Table 4 indicate that while H_5 is not supported, H_4 and H_6 are strongly supported.

Table 4. The relationship between ARD and audit committee characteristics

Model: $LnARD_{it} = \beta_0 + \beta_{4-6} X_{it} (ACSIZE, ACMEET, \text{ and } ACIND) + Z_{it} (\text{controls}) + YEAR_{it} + IND_{it} + \varepsilon_{it}$			
Variable	Model (1) <i>ACSIZE</i>	Model (2) <i>ACMEET</i>	Model (3) <i>ACIND</i>
<i>ACSIZE</i>	-0.041* (-1.751)		
<i>ACMEET</i>		0.011* (1.872)	
<i>ACIND</i>			-0.295*** (-3.485)
<i>LOSS</i>	0.198*** (5.824)	0.185*** (5.388)	0.187*** (5.458)
<i>LnSIZE</i>	0.046*** (4.718)	0.020* (1.909)	0.017* (1.662)
<i>RISK</i>	-0.005 (-0.847)	-0.009 (-1.512)	-0.010 (-1.597)
Constant	3.019*** (16.668)	3.165*** (18.056)	3.391*** (18.845)
Obs.	1,191	1,191	1,191
Industry & year	YES	YES	YES
Adj. R^2	0.263	0.253	0.259

Note: Numbers in parentheses represent robust t-statistics. *, **, and *** denote significance level at 10%, 5%, and 1%, respectively. All variables are defined in Appendix A.

Table 5 reports the regression analysis regarding the relationship between three selected board characteristics (*BSIZE*, *BMEET*, and *BIND*, respectively) and *LnARD*. Model 1 reports the regression results of the relationship between board size and *LnARD*. Specifically, H_7 predicts a significant relationship between board size (*BSIZE*) and *LnARD*. H_7 is a non-directional hypothesis because prior literature offers no consensus about whether smaller or larger boards are associated with better monitoring and performance (e.g., Yermack, 1996; Dalton *et al.*, 1999). The result supported H_7 , as the coefficient is significant on the variable *BSIZE*. In terms of the sign, the coefficient on *BSIZE* is negative (-0.018 , $t = -1.894$, $p < 0.1$), suggesting that larger boards are associated with reduced audit report delay. This result is consistent with the view that larger boards are associated with better monitoring and performance compared with smaller boards. Model 2 displays the regression results related to the relationship between board meeting frequency and *LnARD*. H_8 supposes a negative relationship between board meetings (*BMEET*) and *LnARD*. Contrary to the prediction, the coefficient on the variable *BMEET* is positive and significant (0.012 , $t = 2.059$, $p < 0.05$), and thus H_8 is not supported. This finding contradicts the prevailing belief that a board that meets more often is associated with improved governance and corporate outcomes (e.g., Vafeas, 1999; Conger *et al.*, 1998; Jensen, 1993). Finally, model 3 displays the regression results related to hypothesis H_9 , which posits a negative relationship between board independence and *LnARD*. The reported results support this prediction, as the coefficient on the variable *BIND* is negative and significant (-0.288 , $t = -3.759$, $p < 0.01$). The negative coefficient suggests that a board with a larger proportion of independent directors is associated with reduced time to complete and issue the audit report. This result aligns with the expectation of agency theory, which predicts that independent directors play a monitoring role by aligning the interests of management with those of shareholders (e.g., Peasnell *et al.*, 2005; Beasley, 1996; Fama & Jensen, 1983). Overall, the results reported in Table 5 give no support for H_8 but corroborate H_7 and H_9 .

Table 5. The relationship between ARD and board characteristics

Model: $LnARD_{it} = \beta_0 + \beta_{7-9} X_{it} (BSIZE, BMEET, \text{ and } BIND) + Z_{it} (controls) + YEAR_{it} + IND_{it} + \varepsilon_{it}$			
Variable	Model (1) <i>BSIZE</i>	Model (2) <i>BMEET</i>	Model (3) <i>BIND</i>
<i>BSIZE</i>	-0.018^* (-1.894)		
<i>BMEET</i>		0.012^{**} (2.059)	
<i>BIND</i>			-0.288^{***} (-3.759)
<i>LOSS</i>	0.190^{***}	0.177^{***}	0.188^{***}

Model: $LnARD_{it} = \beta_0 + \beta_{7-9} X_{it} (BSIZE, BMEET, \text{ and } BIND) + Z_{it} (controls) + YEAR_{it} + IND_{it} + \varepsilon_{it,s}$			
	(5.590)	(5.157)	(5.500)
<i>LnSIZE</i>	0.045***	0.017	0.008
	(4.747)	(1.630)	(0.785)
<i>RISK</i>	-0.006	-0.010	-0.010*
	(-0.901)	(-1.552)	(-1.655)
<i>Constant</i>	2.956***	3.189***	3.534***
	(17.579)	(18.360)	(18.380)
<i>Obs.</i>	1,191	1,191	1,191
<i>Industry & year</i>	YES	YES	YES
<i>Adj. R²</i>	0.263	0.254	0.260

Note: Numbers in parentheses represent robust t-statistics. *, **, and *** denote significance level at 10%, 5%, and 1%, respectively. All variables are defined in Appendix A.

4.4 Additional analysis

As an additional check, the study estimates the Model 1 of the Table 6 regressions by including all independent variables in a single OLS, and the results hold except for *SWITCH*, *ACSIZE*, and *ACMEET*, the coefficients on which become statistically insignificant.

Table 6. Additional analysis

Variable	Model (1) <i>LnARD_t</i>	Model (2) <i>LnARD_{t-1}</i>
<i>BIG4</i>	0.220*** (7.459)	0.192*** (6.139)
<i>SWITCH</i>	0.011 (0.367)	0.002 (0.057)
<i>TENURE</i>	-0.037*** (-4.146)	-0.034*** (-3.609)
<i>ACSIZE</i>	-0.007 (-0.323)	-0.006 (-0.224)
<i>ACMEET</i>	0.008 (1.245)	0.011* (1.680)
<i>ACIND</i>	-0.189** (-2.051)	-0.277*** (-2.859)
<i>BSIZE</i>	-0.021** (-2.107)	-0.002 (-0.206)
<i>BMEET</i>	0.011* (1.857)	0.010 (1.513)
<i>BIND</i>	-0.141* (-1.725)	-0.063 (-0.717)
<i>LOSS</i>	0.191***	0.138***

Variable	Model (1) <i>LnARD_t</i>	Model (2) <i>LnARD_{t-1}</i>
	(5.724)	(3.882)
<i>LnSIZE</i>	-0.014	-0.010
	(-1.204)	(-0.805)
<i>RISK</i>	-0.005	-0.013**
	(-0.938)	(-2.385)
<i>Constant</i>	3.889***	3.742***
	(18.852)	(17.156)
<i>Obs.</i>	1191	1172
<i>Industry & year</i>	Yes	Yes
<i>Adj. R²</i>	0.308	0.234

Note: Numbers in parentheses represent robust t-statistics. *, **, and *** denote significance level at 10%, 5%, and 1%, respectively. All variables are defined in Appendix A.

Model 2 displays a further robustness analysis using lagged effects of predictor variables on ARD following prior studies (e.g., Sultana *et al.*, 2015). The rationale behind this test is that a considerable proportion of the negotiations between the client and the external auditor take place after the fiscal year-end, which is the time when the external auditors begin the audit process. Therefore, the regression models are re-estimated by regressing the independent variables in the current year (e.g., time period *t*) against the dependent variable (ARD) in the preceding year (e.g., time period *t*-1). Model 2 yields results qualitatively similar to those in Model 1, except for board size (*BSIZE*) and board meeting (*BMEET*), which are now statistically insignificant.

5. Conclusion

This study sheds light on the multifaceted factors influencing ARD in the distinctive context of the Saudi capital market. The study underscores the critical role of ARD in shaping the timeliness of accounting information releases, which, in turn, is pivotal for the efficient operation of capital markets. By examining a robust dataset encompassing 1,191 firm-year observations from non-financial listed companies in Saudi Arabia spanning the period from 2006 to 2021, this investigation adopted a comprehensive model that incorporated various auditor-related and client-related variables.

The results revealed that auditor change (*SWITCH*), auditor tenure (*TENURE*), audit committee size (*ACSIZE*), audit committee independence (*ACIND*), board size (*BSIZE*), and board independence (*BIND*) are associated with shorter ARD. Conversely, auditor size (*BIG4*), audit committee meeting (*ACMEET*), and frequency of board meetings (*BMEET*) are associated with longer ARD. These findings deepen the understanding of the factors influencing ARD by both contributing to the existing literature and providing valuable insights into audit

efficiency, timely reporting, and governance mechanisms—areas where previous research has produced mixed results. The study has significant implications for audit firms, policymakers, regulatory bodies, investors, and scholars. By enhancing our comprehension of the audit process and the factors that impact the timeliness of reporting, particularly within the framework of an emerging market such as the Saudi capital market, this research equips stakeholders with the knowledge necessary for informed decision-making, regulation, and academic advancement. Ultimately, the knowledge generated by this study contributes to the ongoing discourse on ARD determinants and its broader implications for financial markets and corporate governance.

Despite the valuable insights gained into the determinants of ARD in the specific context of Saudi Arabia, this study had several limitations. First, the explanatory power of the regression model could be enhanced by the inclusion of additional variables that may have an impact on ARD. Second, this research is centered on a sample of non-financial listed firms, which implies that the findings may not be readily generalizable to other sectors, especially the financial sector. Furthermore, due to data unavailability, certain variables, such as audit fees and audit committee ownership, are not included in our analysis. Lastly, this research has focused solely on the determinants of ARD, without touching on the potential consequences, such as audit opinions and restatements.

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Appendix A. Variable definitions

Variable code	Variable name	Variable description
Dependent variable:		
<i>LnARD</i>	Audit report delay	The natural log of the number of days from the firm's fiscal year-end date to the date of the audit report
Auditor-related variables:		
<i>BIG4</i>	Auditor type	A binary variable which equals 1 if the auditor is one of the Big 4 auditing firms, and 0 otherwise
<i>SWITCH</i>	Auditor change	A binary variable which equals 1 if the firm switches auditor, and 0 otherwise
<i>TENURE</i>	Auditor tenure	The number of consecutive years the external auditor has been with the client
Audit committee variables:		
<i>ACSIZE</i>	Audit committee size	The number of audit committee members
<i>ACMEET</i>	Audit committee meeting	The number of audit committee meetings in the sample year
<i>ACIND</i>	Audit committee independence	The proportion of independent directors on the audit committee
Board variables:		
<i>BSIZE</i>	Board size	The number of directors on the board
<i>BMEET</i>	Board meeting	The number of board meetings in the sample year
<i>BIND</i>	Board independence	The proportion of independent directors on the board
Control variables:		
<i>LOSS</i>	Negative income	A binary variable which equals 1 if the firm reports a loss, and 0 otherwise
<i>LnSIZE</i>	Firm size	The natural log of market value of total equity
<i>RISK</i>	Firm risk	The ratio of current liabilities to current assets
<i>YEAR</i>	Year dummies	
<i>IND</i>	Industry dummies	

ⁱ Therefore, a set of variables relating to the board of directors and audit committee have been examined to determine their impact on ARD.