

Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

Journal of International Accounting, Auditing and Taxation



Audit fees, non-audit fees and access to finance: Evidence from India



Rasheed Alrashidi*, Diogenis Baboukardos, Thankom Arun

Essex Business School, University of Essex, Wivenhoe Park, Colchester CO4 3SQ, United Kingdom

ARTICLE INFO

Article history:
Available online 26 March 2021

Keywords:
Access to finance
Audit fees
Non-audit fees
India

ABSTRACT

This paper examines the impact of audit and non-audit fees on firms' ability to access finance by reducing their capital constraints. Unlike previous studies, which examined this phenomenon in developed economies, this paper focuses on one of the largest, albeit developing, economies in the world: India. India is an interesting empirical setting due to major concerns over the quality of the audit services offered, even by the Big 4 accounting firms. Following the limited attention theory, we argue that, in such settings where the effect of the Big 4 label is limited, capital providers will turn their attention to the fees paid as a more reliable proxy for audit effort. Employing a dataset of listed non-financial Indian firms from 2002 to 2017, we hypothesise and empirically demonstrate that both audit and non-audit fees are negatively associated with firms' financial constraints. The findings indicate that finance providers see audit and non-audit fees as signals of high-quality audits that enhance the credibility of financial statements and in turn positively impact firms' access to finance. The results remained unchanged after a battery of robustness tests.

© 2021 Elsevier Inc. All rights reserved.

1. Introduction

The purpose of this study is to examine the relationship between audit and non-audit fees and firms' access to finance in India, a developing economy and one of the largest in the world.

The auditing process plays a central role in financial reporting, as it enhances the reliability, credibility, and overall quality of accounting information (Alzoubi, 2018). Thus, financial reporting is of primary importance for creditors' assessments of a firm's ability to repay its debts (Beatty, Ramesh, & Weber, 2002; Francis, LaFond, Olsson, & Schipper, 2005). Therefore, high-quality audits decrease doubt, build capital providers' trust in financial statements (Tsipouridou & Spathis, 2012; Iatridis, 2013), and affect firms' access to finance (Minnis & Shroff, 2017; Vanstraelen & Schelleman, 2017). In addition, non-audit fees are found to signal greater accounting quality due to knowledge spillover effects (Simunic, 1984; Antle, Gordon, Narayanamoorthy, & Zhou, 2006) and the high quality of a firm's accounting system (Dhaliwal, Gleason, Heitzman, & Melendrez, 2008; Choi & Lee, 2015). In this paper, we examine the relationship between audit and non-audit fees and access to finance as proxied by firms' capital constraints.¹

* Corresponding author.

E-mail addresses: ra17412@essex.ac.uk (R. Alrashidi), d.baboukardos@essex.ac.uk (D. Baboukardos), tarun@essex.ac.uk (T. Arun).

¹ Access to finance refers to a firm's ability to obtain finance, and is closely connected to the concept of capital constraints. The inability of a firm to access finance increases its capital constraints and can be attributed "to credit constraints or inability to borrow, inability to issue equity, dependence on bank loans, or illiquidity of assets" (Lamont et al., 2001: 529).

Although previous studies show that audit quality improves firms' ability to access finance in developed countries, the examination of this issue in the Indian context adds to the extant literature by providing evidence from an empirical setting that differs from other countries in various ways. First, corporate governance plays a central role in helping firms to lower the cost of financial capital; firms need to finance their investment activity, and this role has grown considerably in developing countries (Arun & Turner, 2009). However, Indian firms exhibit limited corporate governance (Narayanaswamy, Raghunandan, & Rama, 2012). The dynamics of culture and corporate governance in India are ambiguous and there are clashes in the areas of related-party transactions, promoters' and large shareholders' actions, and boards' nominations, deliberations, and effectiveness (World Bank, 2011). Second, India is characterized by inadequate investor protection mechanisms (Narayanaswamy et al., 2012), as evidenced by the cases of misrepresentation by intermediaries and institutions, insider trading, and fraud. Third, the quality of audits is an important concern in India, particularly considering their role in validating the confidence of financial statement users. Although audit effort (with audit fees as a proxy) is high in India (Joshy, Desai, & Agarwalla, 2015), the quality of the audit services offered, even by the Big 4 accounting firms, has raised serious doubts (Joshy et al., 2015). In a similar vein, Chakrabarti (2005) finds that the penalties imposed by professional accounting organizations are inefficient. Finally, Gupta, Salter, and Lewis (2019) show that Indian accountants are more conservative than their American counterparts in terms of Gray (1988) cultural accounting values. The auditor's job and the quality of audit services could be affected differently in India versus the West, owing to their cultural differences. In this sense, it is important to understand capital providers' perspectives on audit quality within the Indian culture.

Based on 5,153 observations of non-financial listed firms on the Mumbai Stock Exchange of India (BSE) and the National Stock Exchange (NSE) from 2002 to 2017 (found in the Prowess_{dx} database), we examined the association of audit and non-audit fees with firms' capital constraints. Our results indicate that both audit and non-audit fees are significantly negatively correlated with some capital constraint proxies. This indicates that capital providers view audit effort (with audit and non-audit fees as proxies) as a signal of the reliability and credibility of firms' financial statements, which positively affect access to finance.

The results of this study make some contributions to the existing literature. First, there is little and conflicting evidence of the effect of audit and non-audit fees on firms' access to finance in emerging markets. For instance, Tee, Gul, Foo, and Teh (2017) show the positive impact of audit fees on access to finance in Malaysia. Alhababsah (2019) finds that Jordanian banks favor firms with high audit fees (indicating higher audit quality), whereas Al-Ajmi and Saudagaran (2011) indicate that audit and non-audit fees have a negative effect on access to finance in Bahrain. This study aims to extend the literature by clarifying capital providers' attitudes towards audit quality in a unique institutional setting.

Second, the study's results also broaden the theoretical understanding of the phenomenon examined through the application of the limited attention theory, which provides an alternative explanation for the negative relationship between audit and non-audit fees and firms' financial constraints. The limited attention theory derives from the psychology literature and assumes that individuals have a limited ability to handle information (Miller, 1956). The theory was first proposed in the finance field by Kahneman (1973); however, it is mainly used to interpret the phenomenon of investors' attention (i.e., Hirshleifer, Hou, Teoh, & Zhang, 2004; Barber & Odean, 2008; Engelberg, Sasseville, & Williams, 2012).

Finally, the results will be of interest to practitioners and authorities as they highlight the role of audit and non-audit fees in an emerging economy. This is of particular interest in light of the newly adopted 2013 Companies Act and other similar legislation, which regulate the provision of non-audit services to audit clients and determine the scope of audit services.

The remainder of this paper is structured as follows: In Section 2, we introduce the investigation, including a brief background of the institutional framework. In Section 3, we discuss the theoretical perspective of the study and the significance of exploring the audit effect on access to finance. In Section 4, the methodological framework is explained, including discussions of the research design and the variables, which are then employed in Section 5. Section 6 concludes the paper.

2. Audit in India: Background and institutional framework

The national culture is considered to have a strong influence on a country's accounting system, and the regional culture and environmental differences can make each country context unique. Hofstede (1980) states that nations might be differentiated on the basis of a number of dimensions, namely, power distance, uncertainty avoidance, individualism, and masculinity. Gray (1988) extends Hofstede's cultural dimensions by defining four accounting values, namely, uniformity, professionalism, secrecy, and conservatism, and creates a model connecting these accounting values and culture. Indeed, several researchers studied Gray's model and the relationship between national accounting systems and Hofstede's culture values (e.g. Salter & Niswander, 1995; Doupnik & Richter, 2004). In India, Gupta et al. (2019) explain that culture (national social values) affects the professional judgment and interpretations of existing standards. Kharuddin, Basioudis, and Hay (2019) assert that the auditing market is likely to differ considerably between countries because each has its own culture. In addition, the way auditors behave regarding earnings management differs markedly across all the countries in which they operate, which likely reflects the unique institutional settings and economic environments of each territory (Arnedo, Lizarraga, & Sanchez, 2008). Therefore, the auditor's job and the quality of the service could be affected differently in emerging markets due to culture differences.

India is a unique and interesting empirical setting. The economy in India has undergone major market-oriented reforms since 1991 and a solid investment-friendly environment has been created. India is also one of the fastest-growing economies,

with a Gross Domestic Product (GDP) of \$2.94 trillion, and has become the world's fifth-largest economy ([International Monetary Fund, 2018](#)). However, India suffers from weak regulatory enforcement and civil justice, which could limit the capital provider's ability to make financial decisions based on an audit report alone. The weak institutional environment significantly affects audit quality ([Habib & Jiang, 2015](#)). In 2016, India ranked 77th out of 113 countries for regulatory enforcement, and 93rd out of 113 for civil justice ([World Justice Project, 2016](#)). Furthermore, the Indian market is dominated by large family groups. For instance, [Chakrabarti, Megginson, and Yadav \(2008\)](#) find that more than 60 per cent of total market capitalization is owned by family groups. While family groups are a common feature of emerging economies, the strength of their control in India is unique ([Houqe, Ahmed, & van Zijl, 2017](#)). The domination of family groups could influence management and the credibility of financial statements.

Despite the growth of India's accounting bodies to monitor the auditing process, many questions have been raised regarding the auditing and accounting practices in the country. The Company Act 1956 required firms to be audited by a member of the Institute of Chartered Accountants of India (ICAI). The ICAI is a statutory body established by an act of parliament and is the prime professional accounting organization in India responsible for determining national auditing and setting standards. Therefore, the ICAI asks members to inspect firms' compliance with accounting standards in producing financial statements during their audits. Members receive disciplinary action if they do not report any non-compliance under the Chartered Accountants 1949 Act ([Houqe et al., 2017](#)). However, [Chakrabarti \(2005\)](#) states that the ICAI is not efficient in taking action against inadequate auditor quality, creating critical doubt regarding the assurance of audit services and the credibility of audits. Moreover, a large body of research suggests that Indian firms are actively involved in accrual-based earnings management ([Gakhar, 2014](#)). For example, the Satyam scandal, the 'Enron of India' in 2009, revealed an accounting scam of almost one billion dollars and caused doubt regarding financial reporting quality. This raised questions regarding auditors' judgment of financial statement credibility and affected capital providers' attitudes towards external auditors' efforts.

In India, the Companies Act of 2013 provides the scope for increasing the number of audit firms able to carry out most complex audits through mandatory audit firm rotation and the option of a joint audit report. There are increasing efforts by the government of India to increase the number of audit firms, to restrict the provision of non-audit services to audit clients, and to reduce the fees in the sector. In a recent consultative paper, the Indian Ministry of Corporate Affairs ([MCA, 2020](#)) highlights possible ways to minimize the dominance of Big 4 s and to bring more competency and transparency to the audit market. The [MCA \(2020\)](#) further reports that, although in theory the auditors are appointed by shareholders, in practice, the effective power over their appointment and dismissal rests with management. The MCA report suggests banning the provision of non-audit services by auditors, disclosing of any previous relationship with audit clients, and requiring that audit fees should be based on reasonable estimates of the time and expertise required. Clearly, most industry bodies have raised serious concerns regarding the 'complementary' non-audit services provided by auditors to firms ([Economic Times \(ET\), 2020](#)). However, Grant Thornton, PWC India, and Deloitte have already decided to stop providing non-audit services to clients in India to increase the public's confidence in auditor independence and quality.

3. Theory and hypotheses development

3.1. Theory

Deviating from the usual approach to interpreting audit quality using the agency theory ([Habbash & Alghamdi, 2017; Barroso, Ali, & Lesage, 2018](#))², the limited attention theory is applied. The theory stems from psychology literature, which assumes that an individual has limited working memory and can handle only a certain amount of information ([Miller, 1956](#)). The limited attention theory was first introduced in finance-related disciplines by [Kahneman \(1973\)](#), who argues that since an individual pays more attention to some events than to others, capital providers' decision making is impacted by their attention. Previous research incorporating this theory focused on investors' attention³. 'Attention' refers to the 'noticing, encoding, interpreting and focusing of time and effort by organizational decision-makers on both issues and answers' ([Ocasio, 1997, p. 189](#)). The basic technique is that noticing information impacts the perception of it, and perception influences decisions ([Ramos, Latoeiro, & Veiga, 2020](#)). This theory assumes that capital providers have limited attention and processing power. In this model, due to the limited attention of capital providers, information related to audit and non-audit fees is assumed to be noticeable as it signals the credibility of financial statements. Owing to cases of corporate fraud in India, the quality of financial reporting has become a major concern for capital providers ([Houqe et al., 2017](#)). For instance, the financial statements produced even by listed and large private firms in emerging markets can often not be relied on to the same extent as in developed markets, and this can result in creditors being reluctant to lend ([Claessens & Tzioumis, 2006](#)). Therefore, the limited attention theory might interpret the relationship between audit fees and non-audit fees as an attention grabber used to aid firms' access to finance.

² The agency theory is insufficient for developing countries due to high ownership concentration and weak capital markets ([Htay & Salman, 2013; Al-Hiyari, 2017](#)).

³ Indeed, [DellaVigna \(2009\)](#) states that the limited attention theory could be used to explain some abnormal phenomena underlying traditional finance theories. For instance, investors cannot efficiently handle all the obtainable information regarding stocks because of limited attention and time ([Engelberg et al., 2012](#)). [Hirshleifer et al. \(2004\)](#) state that firms take advantage of limited investor attention by releasing negative news while other firms are making important disclosures. [Barber and Odean \(2008\)](#) show that investors' attention is focused on stocks with abnormal trading volumes or those shown in the news.

In other words, capital providers only have a finite amount of attention to devote when allocating funds to the large number of loan applications, as humans only have a limited capacity in terms of processing information (Miller, 1956). For instance, for employees faced with an overwhelming amount of information, it is logical that individuals with limited capacity to process that information will complete fewer tasks (Washburn & Bromiley, 2012). This extends to capital providers' need to identify the most appropriate firms for providing their capital among hundreds of applications. For instance, many investors naturally wish to select stocks they believe are noteworthy (Barber & Odean, 2008); therefore, more prominent firms are likely to attract greater investor attention. Transferring this to the context of capital providers faced with many loan applications, some elements of loan requests made by firms might be overlooked because lenders do not focus on them.

Based on the above reasoning, auditing is likely to send capital providers a signal that influences their cognitive processes by implying a verification of accurate information. Thus, in finance, firms paying for high-quality audits signals through higher audit and non-audit fees are more likely to attract the attention of capital providers. For instance, capital providers might evaluate audit and non-audit fees as a major element regarding the credibility of financial statements. High audit fees might indicate the quality of the auditor's work and the external auditor's efforts, as well as an improvement in firms' accounting practices (Chen, Srinidhi, Tsang, & Yu, 2016). Choi, Lee, and Jun (2009) state that an increase in non-audit fees reduces earnings management which in turn increases the reliability of financial reporting. It is quite conceivable that these positive qualities would grab capital providers' attention, thereby helping to alleviate capital constraints related to firms' access to finance in India. In particular, the Indian institutional setting is characterized by weak investor protection and ineffective supervision by the ICAI. Consequently, firms that do not or cannot demonstrate a high-quality audit through high audit and non-audit fees might be overlooked and not granted a loan (DeYoung, Glennon, & Nigro, 2008).

In fact, previous studies have shown the benefits of having good audit quality (e.g. Lin & Hwang, 2010; Arens, Elder, & Mark, 2012). For instance, firms depend on audits to reduce any possible agency problems (Fan & Wong, 2005). Managers have opportunistic incentives, but the appointment of external auditors should serve as an effective monitoring mechanism that helps to verify the accuracy of the accounts, thereby helping to control agency costs (Tsipouridou & Spathis, 2012). In addition, the ability to manage earnings is greatly reduced when a firm appoints high-quality auditors because they undertake a certification task to ensure the credibility of financial statements (Alzoubi, 2018).

If an auditor does not provide a good quality audit, effectively monitoring the financial reports of the appointing firm may not be possible (Claessens, Djankov, Fan, & Lang, 2002). Consequently, there is a direct relationship between the quality of auditors appointed and the information credibility of the firm being audited. For example, in certain circumstances firms will attempt to strike a balance between appointing a high-quality auditor to demonstrate good corporate governance and appointing a relatively low-quality auditor to preserve a desirable degree of opacity, possibly so as to engage in earnings management (Lin & Liu, 2009).

The empirical literature establishes that financially constrained firms are significantly less likely to invest in a broad spectrum of strategic activities (Campello, Graham, & Harvey, 2010), such as research and development (Hall & Lerner, 2010) and investment in inventory (Carpenter, Fazzari, & Petersen, 1998). In addition, capital constraints affect a firm's performance by hampering their investment in profitable ventures. For instance, Faulkender and Petersen (2012) use the American Jobs Creation Act (AJCA) of 2004 as a natural experiment to examine the effect of its shock to the cost of internal finance. Their study findings indicate that AJCA triggered a large increase in corporate investment, albeit only among those firms that were previously credit-constrained. Levine (2005) distinguishes between new-entrant firms and incumbents, and confirms that newly established, small, and high-risk firms are disproportionately affected by capital constraints. Indeed, Carpenter and Petersen (2002) assert that the constraining effect of their internal capital explains why small US firms experience relatively poor asset growth. Moreover, they state that there is a significant positive relationship between the rate of growth and the ability to raise external funds. The term 'capital constraints' refers to restrictions on a firm's capital in relation to expansion (Lamont, Polk, & Saa-Requejo, 2001). In turn, a reduction in capital constraints positively affects the ability of a firm to expand and stay in business when otherwise it might not.

Audits could significantly affect capital constraints. High-quality audits plays a vital role in enhancing the credibility of financial reporting by decreasing earnings management (Alzoubi, 2018). This highlights the need for an auditor to actively monitor the investment and management decisions of a firm. High-quality audits lead firms to avoid unnecessary attention from capital providers as it decreases their doubts over firms' reporting quality and management skills which, in turn, results in better financing terms (Vanstraelen & Schelleman, 2017). Indeed, it is established that the audit fees charged by an auditor are indicative of the effort expended during the audit process (Leventis et al., 2011), whereas non-audit fees are also found to improve accounting practice and, hence, the reliability of accounting information (Choi et al., 2009). Consequently, it is interesting to investigate whether firms' access to finance is indeed associated to audit quality. In the following sections, previous theoretical and empirical literature are reviewed in order to develop the hypotheses of our study on audit fees and non-audit fees.

3.2. Hypothesis development

3.2.1. Audit fees

The price of an audit is interpreted by many studies to be an indication of the quality of the audit being conducted (Leventis, Hasan, & Dedoulis, 2013). The audit fees charged by an auditor are indicative of the effort that will be expended during the auditing process (Leventis, Weetman, & Caramanis, 2011), because a wide range of stakeholders

consider audit fees to be an essential aspect of the monitoring and agency cost analysis (Cobbin, 2002). For example, Alzoubi (2018) finds evidence to suggest that audit fees are negatively related to earnings management. This suggests that paying auditors a relatively high fee results in high-quality audits being conducted, reducing the likelihood that the management will engage in earnings management. In this sense, high audit fees could be an indicator of more reliable financial reporting, which reduces management manipulation. This decreases the cost of verifying a firm's financial information, increasing capital providers' trust in these firms' financial positions and, thus, increasing their ability to obtain finance. Empirically, Carcello, Neal, Palmrose, and Scholz (2011) provide evidence that audit fees increase when audit quality improves. Srinidhi and Gul (2007) state that in the US market, auditors' efforts, represented by audit fees, reduce earnings management. Similarly, Gerayli, Yanesari, and Ma'atooft, A. R. (2011) provide evidence based on a sample of Iranian firms indicating that there is a significant, negative relationship between earnings management and audit fees.

It appears that auditing decreases the information risk for capital providers as it allows them to validate the credibility of financial reports. High audit fees act as a solid monitoring mechanism and signal to capital providers that high-quality audits have taken place, which in turn reduces information asymmetry. Chen, Chen, Lobo, and Wang (2011) state that the audit is a monitoring device for improving the information available about a firm's performance. In fact, the purpose of auditing is to enhance information quality by decreasing information asymmetry between capital providers and firms.

In the Indian context, however, firms are found to seek audits of high quality not to enhance their credibility but merely to maintain their reputations, and signal that they are not concealing anything (Johl, Khan, Subramaniam, & Muttakin, 2016). In such a context, high audit fees can be seen as the only credible signal of high-quality financial reporting and, thus, strengthen capital providers' confidence. Based on these arguments, we expect a significant positive relationship between audit fees and access to finance in listed Indian firms. Capital providers are expected to react to firms with high audit fees by granting more loans or decreasing capital constraints due to their having credible financial statements. Under this presumption, the first hypothesis is proposed:

H1: A positive relationship exists between audit fees and access to finance for listed Indian firms.

3.2.2. Non-audit fees

Firms may acquire non-audit services from their external auditors. This action might be perceived by some stakeholders as impairing the auditor's independence and objectivity, which would in turn reduce the quality of the financial reports. This is because providing such services could create an economic bond between firm and auditor and, thus, reduce the independence of the auditor, which could reduce financial reporting quality (DeAngelo, 1981; Beck, Frecka, & Solomon, 1988; Ashbaugh, LaFond, & Mayhew, 2003; Agrawal & Chadha, 2005). On the contrary, Dhaliwal et al. (2008) show that auditor independence is not impaired by non-audit services due to the fact that auditors care about their reputations (Watts & Zimmerman, 1983) and try to avoid litigation exposure (Palmrose, 1988; Shu, 2000).

It is well-evidenced that providing non-audit services improves the credibility of firms' financial reporting (Robinson, 2006; Cahan, Emanuel, Hay, & Wong, 2008; Choi et al., 2009; Nam & Ronen, 2012; Koh, Rajgopal, & Srinivasan, 2013). For example, Robinson (2006) states that non-audit services improve the information available regarding a firm's financial status. Kinney, Palmrose, and Scholz (2004) find a negative relationship between restatement and tax service fees. Moreover, a significant negative relationship between non-audit fees paid for tax services and earnings management is reported by Choi et al. (2009), suggesting that earnings quality improves through a reduction of aggressive accounting and introduction of conservative accounting practices. Providing non-audit services also allows auditors to become more familiar with the firm's financial system, and leads to an improvement in the quality of the firm's accounting system through the knowledge spillover impact (Simunic, 1984; Antle et al., 2006). If non-audit fees influence the credibility of financial reporting, they could also influence access to finance because capital providers depend mostly on firms' financial reporting when making decisions about providing financing.

In the Indian context in particular, Chakrabarti (2005) states that the accounting organization has little real action against audit quality failure, creating serious doubts regarding the credibility of audit services in India. Therefore, the higher cost of non-audit services is likely seen by capital providers as an indicator of the high quality of audit services because of the knowledge spillovers between them. Desai, Desai, Singhvi, and Munsif (2012) find that there is a positive relationship between audit and non-audit services in India. Thus, a firm's non-audit fees increase capital providers' trust in the audit quality and provide an indicator of the effectiveness of a firm's accounting system. Thus, non-audit fees are expected to decrease capital constraints, thereby increasing access to finance for Indian-listed firms.

Therefore, a significant positive relationship is expected to exist between non-audit fees and financing access, with capital providers reacting to firms paying high non-audit fees with more plentiful loans or reduced capital constraints, due to believing that such firms have better mentoring and more credible financial statements. Under this presumption, the following hypothesis is proposed:

H2: A positive relationship exists between non-audit fees and access to finance for listed Indian firms.

4. Research design

4.1. Sample selection and data sources

Our sample and relevant data are drawn from the Prowess_{dx} database of the Centre for Monitoring of Indian Economy, which provides data on firms listed on the BSE and the NSE. The database provides important financial data on individual firms and supplementary background information about their operations. Prowess_{dx} is the most comprehensive database for Indian firms, and is used extensively in the finance and accounting literature (Elango & Pattnaik, 2007). Focusing on the period 2002–2017, we initially extracted 18,815 firm/year observations. After eliminating firms belonging to the financial industry and firms missing data, our final sample comprised 5,153 firm/year observations (979 unique firms). Table 1 illustrates the sample selection process.

4.2. Measurement of variables and model specification

Access to finance refers to a firm's ability to obtain finance. A firm becomes financially constrained when it struggles to raise money by borrowing, selling shares, or liquidating assets (Lamont et al., 2001). Consequently, reduced capital constraints render a firm more capable of attracting finance (Cheng, Ioannou, & Serafeim, 2014). Thus, firms that can access finance will show a reduction in their capital constraints. In this study, our main proxy for capital constraints, our dependent variable, is the 'KZ-index', which is used extensively in the extant literature (e.g. Lamont et al., 2001; Baker, Stein, & Wurgler, 2003; Bakke and Whited, 2010; Cheng et al., 2014). The KZ-index was developed by Kaplan and Zingales (1997) and is based on estimated coefficients of an ordered logit specification that uses accounting information to estimate whether or not a firm faces financial constraints. In accordance with the approach adopted in the empirical literature, regression coefficients are used to create a KZ-index for each firm/year observation, based on a linear combination of five accounting ratios: cash flow to total capital, market value to book value, debt to total capital, dividends to total capital, and cash holdings to capital. The approach of Baker et al. (2003) is followed in this paper through the application of the same coefficients.⁴ The value of the index increases with financial constraints (Cheng et al., 2014).

The first independent variable indicates audit fees, measured as the log of audit fees (AF)⁵, in an approach similar to Alzoubi (2016). If the audit investigation is large enough to consume more working hours or to require more sophisticated audit staff, higher audit fees will be incurred. Francis (2004) argues that high audit fees might indicate greater effort, making them a reasonable indicator of financial statement credibility.

The second independent variable is non-audit fees (provided by Prowess_{dx}), including taxation and firm law services fees. In an approach similar to that of Chen et al. (2017a), this is measured as the natural logarithm of non-audit fees (NAF)⁶. High non-audit fees may indicate that the auditor has more knowledge about the firm's accounting system, which means that high-quality accounting practices are in use (Antle et al., 2006; Choi et al., 2009).

The control variables are based on findings from prior research. Firm size shows the scope of a firm's activities and the complexity of its operations, with larger firms being expected to possess more complex operations (Andreas, Rapp, & Wolff, 2012). Firm size is recognized in the literature as a key to identifying the optimal financing mix (Frank & Goyal, 2009). Firm size is measured as a firm's total assets at the end of the year (Mallin, Melis, & Gaia, 2015). Both industry and year effects are incorporated in this study (Goh & Gupta, 2016). The National Industry Classification codes are assigned to each firm based on the appropriate industry group (Industry). Appendix A includes the definitions of the variables.

4.3. Model specification

To test the hypotheses, the dependent variable is the KZ-index for the current year. The independent variables are audit fees and non-audit fees in the previous year. An additional control variable, firm size, is lagged by one year. The methodology adopted is similar to that of Caramanis and Lennox (2008), with independent variables being lagged by one year to predict the dependent variables in the following year.

An ordinary least squares approach is adopted to estimate Models 1 and 2. To control heteroscedasticity and to address any potential cross-sectional dependence issues, we follow Petersen (2009) and cluster standard errors at firm and year level (García Lara, García Osma, Mora, & Scapin, 2017; Baboukardos, 2018). Furthermore, to mitigate the effects of extreme values, the variables are winsorised at the 1st and 99th percentiles (Chang, Tam, Tan, & Wong, 2007).

To test the main hypotheses regarding the lagged effects of an audit on a firm's access to finance, the following models are used:

$$KZ_{it} = \alpha_0 + \alpha_1 AF_{it-1} + \alpha_2 \text{Firm size}_{it-1} + \alpha_3 \text{Industry}_{it} + \alpha_4 \text{Year}_{it} + \varepsilon_{it} \quad (1)$$

⁴ See Appendix B for a more detailed construction of the main and alternative capital constraint indices (KZ, WW, KZE, and KZ4).

⁵ Our data for AF are expressed in thousand US dollars with many of our observations having AF lower than \$1,000 and, hence, their log transformation produced negative numbers. Our results remain unchanged if actual numbers instead of log transformations are used.

⁶ Our data for NAF are expressed in thousand US dollars with many of our observations having NAF lower than \$1,000 and, hence, their log transformation produced negative numbers. Our results remain unchanged if actual numbers instead of log transformations are used.

Table 1
Sample selection process.

	Firms	Observations
Initial number of listed firms in National Stock Exchange (NSE) and Mumbai Stock Exchange (BSE), data found in Prowess _{idx} database, for the period from 2002 to 2017.	2,557	18,815
Less financial firms.	-468	-3,289
Less firms with missing values	-1,110	-10,373
Final sample	979	5,153

$$KZ_{it} = \alpha_0 + \alpha_1 NAF_{it-1} + \alpha_2 \text{Firm size}_{it-1} + \alpha_3 \text{Industry}_{it} + \alpha_4 \text{Year}_{it} + \varepsilon_{it} \quad (2)$$

where the dependent variable is the KZ index for the current year, the independent variables are AF and NAF for the previous year, and the control variables are lagged by one year.

5. Empirical results and discussion

5.1. Descriptive statistics

Table 2 shows the descriptive statistics for the whole sample, presenting descriptive statistics for our main variables of interest. Beginning with the KZ-index, its mean value is -0.43 , and the standard deviation is 1.35 , implying that variations exist across firms regarding the capital constraints faced. The mean value of the WW-index is -0.21 , and the standard deviation is 0.34 , suggesting relatively less variation. The average of AF in the sample is -3.14 , that of NAF is -4.26 , and the average log (Firm size) is 5.29 . Correlations for all variables of interest are presented in Table 3.

5.2. Regression analysis

In this section, the relationship between access to finance, measured by the KZ-index, and both audit and non-audit fees in the previous year is demonstrated. Table 4 shows the results from Model 1. After controlling for firm size, industry, and year effects, we find that the coefficient of AF is negative and highly significant (-0.211 , p -value < 0.01), suggesting that firms with higher audit fees are less financially constrained. Our results support the argument that audit fees can influence capital providers' decision making, thereby positively affecting access to finance. This would suggest that paying auditors a relatively high fee results in high audit quality, reduces the likelihood of opportunistic earnings management, and increases the credibility of financial reporting. Therefore, high audit fees seem to positively affect capital providers' opinion about firms' future prospects. Conversely, the results do not support the argument that the price of an audit will increase if auditors anticipate that a firm's audit risk has become elevated (Leventis, 2018). Based on these results, capital providers would be expected to react to an increase in audit fees by granting more loans. As such, the results support H1.

In addition, Table 4 also presents the results of Model 2. We find that the coefficient of NAF is negative and highly significant (-0.182 , p -value < 0.01), supporting our second hypothesis that firms with higher non-audit fees are less financial constrained. These results support the argument that non-audit fees can be seen as signal of lower earnings management and less aggressive accounting practice (Antle et al., 2006; Choi et al., 2009) which lead to capital providers forming a positive opinion about the firm and hence improving its access to finance.

5.3. Additional analyses

For robustness purposes, the KZ-index is substituted by an alternative index, the WW-index, in Models 1 and 2. The WW-index was developed by Whited and Wu (2006) and is used as an alternative measurement of capital constraints⁷ (Chen et al., 2017b; Chen, Hua, & Boateng, 2017b). Column 1 in Table 5 shows that the coefficient of AF is negative and highly significant (-0.035 , p -value < 0.01), suggesting that firms with higher audit fees encounter fewer capital constraints. Column 2 of Table 5 shows that the coefficient of NAF is also negative and highly significant (-0.033 , p -value < 0.01).

Moreover, following Ball, Jayaraman, and Shivakumar (2012) we focus on excessive audit fees (Excess Audit Fees - EX_AF), which is the residual from a regression of log audit fees (AF) on firm-level determinants. These variables are the log of Total assets (Firm size), return on assets (ROA), the Current ratio (Current_ratio), total liabilities divided by total assets (Debt_ratio), total accruals to total assets (Accruals), and a dummy variable for negative earnings (Loss). A regression of Model 1 is run using the lag of EX_AF instead of the lag of AF. The same technique is applied using the log of non-audit fees (NAF) to create a measure of excessive non-audit fees (EX_NAF), which is used in Model 2. Table 6 provides the results, which are consistent with the previous tests.

⁷ Also, for further robustness, we used two modified KZ-indices. The first was an equally weighted KZ-index (KZE) that assigns equal weight to each of the five accounting ratios. This is necessary to ensure that the weights are not the significant factor (Chang et al., 2007). The second index (KZ4) involved Tobin's Q being dropped while the same coefficients were kept for the remaining four variables (Baker et al., 2003). See Appendices C1 and C2 for the regression results.

Table 2
Descriptive statistics for the final sample.

	N	Mean	Median	S.D
KZ (Kaplan & Zingales index)	5,153	-0.435	-0.224	1.352
WW (Whited & Wu, 2006 index)	5,153	-0.215	-0.276	0.349
AF (in thousand US dollars)	5,153	0.109	0.042	0.185
AF (natural log of audit fees)	5,153	-3.147	-3.165	1.445
NAF (in thousand US dollars)	3,290	0.034	0.013	0.054
NAF (natural log of non-audit fees)	3,290	-4.265	-4.328	1.372
Firm size (natural log of total assets)	5,153	5.297	5.193	1.686

Notes: See Appendix A. for variable definitions. The variables AF and NAF used in the main tests are the log-transformed. Our results remain unchanged if actual numbers (in thousand US dollars) are used.

Table 3
Correlation matrix.

	KZ	WW	AF	NAF	Firm size
KZ (Kaplan & Zingales index)	1				
WW (Whited & Wu, 2006 index)	0.069	1			
AF (natural log of audit fees)	0.039	-0.153	1		
NAF (natural log of non-audit fees)	-0.024	-0.186	0.714	1	
Firm size (natural log of total assets)	0.170	-0.187	0.702	0.629	1

Notes: Table 3 reports Pearson correlation coefficients. See Appendix A. for variable definitions.

Table 4
Regressions results of lagged audit and non-audit fees on a firm's access to finance.

	Model 1	Model 2
Model 1 $KZ_{it} = \alpha_0 + \alpha_1 AF_{it-1} + \alpha_2 FirmSize_{it-1} + \alpha_3 Industry_{it} + \alpha_4 Year_{it} + \varepsilon_{it}$		
Model 2 $KZ_{it} = \alpha_0 + \alpha_1 NAF_{it-1} + \alpha_2 FirmSize_{it-1} + \alpha_3 Industry_{it} + \alpha_4 Year_{it} + \varepsilon_{it}$		
Variables		
AF	-0.211*** (0.046)	
NAF		-0.182*** (0.037)
Firm size	0.269*** (0.039)	0.222*** (0.037)
Constant	-2.262*** (0.584)	-2.418*** (0.580)
Observations	5,117	3,200
R-squared	0.241	0.274
Year Fixed Effects	YES	YES
Industry Fixed Effect	YES	YES

Notes: ***, **, and * denote statistical significance at the 1%, 5%, and 10% level, respectively. Two-way clustered (by firm and year) standard errors are shown in parentheses. See Appendix A for variable definitions.

Table 5
Additional analysis: Audit and non-audit fees, and different capital constraints index.

	Model 1	Model 2
Model 1 $WW_{it} = \alpha_0 + \alpha_1 AF_{it-1} + \alpha_2 FirmSize_{it-1} + \alpha_3 Industry_{it} + \alpha_4 Year_{it} + \varepsilon_{it}$		
Model 2 $WW_{it} = \alpha_0 + \alpha_1 NAF_{it-1} + \alpha_2 FirmSize_{it-1} + \alpha_3 Industry_{it} + \alpha_4 Year_{it} + \varepsilon_{it}$		
Variables		
AF	-0.035*** (0.003)	
NAF		-0.033*** (0.006)
Constant	-0.402*** (0.123)	-0.388*** (0.142)
Observations	5,117	3,200
R-squared	0.236	0.247
Industry Fixed Effects	YES	YES
Year Fixed Effects	YES	YES

Notes: ***, **, and * denote statistical significance at the 1%, 5%, and 10% level, respectively. Two-way clustered (by firm and year) standard errors are shown in parentheses. See Appendix A for variable definitions.

Table 6

Additional analysis: Regressions results of lagged Excess audit and non-audit fees on a firm's access to finance.

Variables	Model 1	Model 2	Model 3	Model 4
EX_AF		-2.506*** (0.337)		
EXNAF				-4.669*** (0.420)
Firm size	0.706*** (0.027)	1.735*** (0.225)	0.559*** (0.035)	2.614*** (0.231)
ROA	0.127* (0.077)		0.162** (0.077)	
Current_ratio	-0.046*** (0.013)		-0.006 (0.021)	
Debt_ratio	-0.000 (0.001)		-0.002*** (0.001)	
Accruals	-0.001** (0.000)		0.001** (0.000)	
Loss	0.072 (0.061)		0.131 (0.104)	
Constant	-6.864*** (0.380)	-18.173*** (2.247)	-7.539*** (0.511)	-35.664*** (3.103)
Observations	5,018	3,876	3,203	3,876
R-squared	0.618	0.250	0.439	0.411
Industry FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES

Notes: ***, **, and * denote statistical significance at the 1%, 5%, and 10% level, respectively. Two-way clustered (by firm and year) standard errors are shown in parentheses. See Appendix A for variable definitions.

To address the endogeneity issues in the model, two approaches are used. First, two-stage least squares (2SLS) regression is used, which is a typical remedy for endogeneity problems. The 2SLS regression employs instrumental variables that likely satisfy the exclusion restriction, in that they are associated with audit fees and non-audit fees but not associated with the KZ-index⁸. Table 7 shows that the coefficients of both AF and NAF are highly significantly negative (-0.258, p-value < 0.01, and -0.207, p-value < 0.01, respectively).

Second, the KZ-index could be high or low due to firms' characteristics rather than the audit or non-audit fees. Thus, the propensity score matching method (PSM) is used to overcome this issue. Using this technique, we can separate firms with a low value for the main independent variable (either audit or non-audit fees) that may have no obvious differences in other characteristics (such as a firm's financial condition) from firms with a high value for the main independent variable. Thus, the firms in each pair will be similar and thus more comparable to each other except the values of the main independent variable⁹. Column 1 and 2 of Table 8 show that the coefficients of both AF and NAF are consistent with the previous results, being significantly negative.

In summary, our findings suggest that capital providers react positively to Indian firms with high audit and non-audit fees, and consequently these firms are found to enjoy fewer financial constraints and better access to finance. In accordance with the limited attention theory, audit fees and non-audit fees attract capital providers' positive attention as they consider high audit and non-audit fees as a credible signal, which affects their cognitive processes by verifying the accuracy of accounting information (Stein, 2002). Based on the limited attention perspective, our results show that high audit and non-audit fees paid by the listed Indian firms have a significant positive influence on lenders that are constrained by limited attention capacity, providing those firms with easier access to funding. For an institutional setting such as India, which suffers from low investor protection and weak supervision by accounting organizations, audit and non-audit fees play a vital role in gaining capital providers' trust, thereby increasing access to finance for listed firms in India. Consequently, firms have incentives to show that they are paying high audit and non-audit fees to illustrate the credibility of their financial statements.

⁸ We follow Usman et al. (2018a, 2018b) in using instrumental variables. We use the main independent variable lagged by one year and the industry average of the main independent variable.

⁹ In order to construct our matched sample, we estimate propensity scores based on a probit model where we regress the indicator variable AFD (NAFD) that takes the value of one for observations with audit fees (non-audit fees) above the median of our sample (and zero otherwise) on a number of firm characteristics (Faccio, Marchica, & Mura, 2016).

Table 7

Additional analysis: (2SLS) Regressions results of lagged audit and non-audit fees on a firm's access to finance.

Model 1 $AF_{it-1} = \alpha_0 + \alpha_1 LagAF_{it-1} + \alpha_2 AFM_{it-1} + \alpha_3 FirmSize_{it-1} + \alpha_4 Industry_{it} + \alpha_5 Year_{it} + \varepsilon_{it}$ Model 2 $KZ_{it} = \alpha_0 + \alpha_1 AF_{it-1} + \alpha_2 FirmSize_{it-1} + \alpha_3 Industry_{it} + \alpha_4 Year_{it} + \varepsilon_{it}$ Model 3 $NAF_{it-1} = \alpha_0 + \alpha_1 LagNAF_{it-1} + \alpha_2 NAFM_{it-1} + \alpha_3 FirmSize_{it-1} + \alpha_4 Industry_{it} + \alpha_5 Year_{it} + \varepsilon_{it}$ Model 4 $KZ_{it} = \alpha_0 + \alpha_1 NAF_{it-1} + \alpha_2 FirmSize_{it-1} + \alpha_3 Industry_{it} + \alpha_4 Year_{it} + \varepsilon_{it}$				
Variables	Model 1	Model 2	Model 3	Model 4
AF		-0.258*** (0.063)		
LagAF	0.892*** (0.011)			
AFM	0.091** (0.037)			
NAF				-0.207*** (0.057)
LagNAF			0.772*** (0.019)	
NAFM			0.325*** (0.071)	
Firm size	0.075*** (0.010)	0.262*** (0.059)	0.125*** (0.019)	0.227*** (0.057)
Constant	-0.490** (0.226)	-3.079*** (0.794)	0.844 (0.823)	-2.793*** (0.874)
Observations	3,876	3,876	2,241	2,386
R-squared	0.929	0.183	0.778	0.191
Industry Fixed Effects	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES

Notes: ***, **, and * denote statistical significance at the 1%, 5%, and 10% level, respectively. Two-way clustered (by firm and year) standard errors are shown in parentheses. See Appendix A for variable definitions.

Table 8

Additional analysis: Propensity score matching results of lagged audit and non-audit fees on a firm's access to finance.

Panel A. Estimation of propensity score functions				
Probit Model 1 $AFD_{it-1} = \alpha_0 + \alpha_1 FirmSize_{it-1} + \alpha_2 Current_ratio_{it-1} + \alpha_3 LEV_{it-1} + \alpha_4 ROA_{it-1} + \alpha_5 Industry_{it} + \alpha_6 Year_{it} + \varepsilon_{it}$ Probit Model 2 $NAFD_{it-1} = \alpha_0 + \alpha_1 FirmSize_{it-1} + \alpha_2 Current_ratio_{it-1} + \alpha_3 LEV_{it-1} + \alpha_4 ROA_{it-1} + \alpha_5 Industry_{it} + \alpha_6 Year_{it} + \varepsilon_{it}$				
Variables	Model 1	Model 2		
Firm size	0.833*** (0.022)	0.622*** (0.023)		
Current_ratio	-0.180*** (0.047)	-0.248*** (0.054)		
LEV	-0.019 (0.020)	-0.121*** (0.023)		
ROA	0.096** (0.039)	-0.051 (0.045)		
Constant	-3.474 (0.350)	-3.039 (0.801)		
Observations	4,931	3,031		
Pseudo. R2	0.407	0.273		
Industry Fixed Effects	YES	YES		
Year Fixed Effects	YES	YES		
Panel B. Specifications based on alternative matching methods				
Valuation model 1 $KZ_{it} = \alpha_0 + \alpha_1 AF_{it-1} + \alpha_2 FirmSize_{it-1} + \alpha_3 Industry_{it} + \alpha_4 Year_{it} + \varepsilon_{it}$ Valuation model 2 $KZ_{it} = \alpha_0 + \alpha_1 NAF_{it-1} + \alpha_2 FirmSize_{it-1} + \alpha_3 Industry_{it} + \alpha_4 Year_{it} + \varepsilon_{it}$				
Variables	(1) Unmatched sample	(2) Matched sample	(3) Unmatched sample	(4) Matched sample
AF	-0.206*** (0.051)	-0.205*** (0.051)		
NAF			-0.164*** (0.041)	-0.166*** (0.041)
Firm size	0.238*** (0.053)	0.235*** (0.052)	0.182*** (0.049)	0.197*** (0.047)
Constant	-1.961*** (0.639)	-1.945*** (0.641)	-1.634** (0.689)	-1.693** (0.684)
Observations	5,115	4,900	3,154	3,016
R-squared	0.159	0.165	0.169	0.179
Industry Fixed Effects	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES

Notes: ***, **, and * denote statistical significance at the 1%, 5%, and 10% level, respectively. Two-way clustered (by firm and year) standard errors are shown in parentheses. See Appendix A for variable definitions.

6. Discussion and conclusions

The purpose of this study is to examine how firms' access to finance is affected by the level of their audit and non-audit fees. Our investigation reveals interesting insights for firms by examining the attitudes of capital providers towards receiving auditing information. Our empirical evidence indicates that higher audit and non-audit fees lead to greater access to finance. Our sample is retrieved from the Prowess_{dx} database and consists of an unbalanced panel dataset of 979 firms listed in the Mumbai Stock Exchange and the National Stock Exchange of India, and a total of 5,153 observations from 2002 to 2017.

Our results show that capital constraints exhibit a significant and negative relationship with audit and non-audit fees, which leads to better access to finance. The findings support the view that firms in emerging markets try to maintain a certain level of opaqueness (Lin & Liu, 2009), and that high audit quality is beneficial for firms, particularly in India (Desai et al., 2012; Johl et al., 2016; Houqe et al., 2017). Our findings contribute to a recent and yet limited literature on the benefits of audit quality in emerging economies (Dhaliwal et al., 2008; Choi et al., 2009; Tee et al., 2017; Alhababsah, 2019). Although there are significant economic and cultural differences between developed and developing countries, our study suggests that Indian capital providers react similarly to their Western counterparts. They consider high audit and non-audit fees to be a positive signal of firms' financial reporting quality, which reduces capital constraints and increases access to finance.

Audit and non-audit fees serve as a strong signal for capital providers in India. The latter perceive high audit and non-audit fees as a credible indication of accounting quality, in a country characterized by weak investor protection and serious concerns over the accounting profession. This suggests that audit and non-audit fees can be used by firms to attract the positive attention of capital providers. Therefore, by employing the limited attention perspective, the implications of high audit and non-audit fees have a significant, positive influence on capital providers that are constrained by a limited attention capacity. Consequently, this leads to better access to finance for listed firms in India.

By drawing on the research findings, firms can determine the costs and benefits of audit and non-audit fees. According to the limited attention theory, firms can use high audit and non-audit fees to manage capital providers' perceptions and so gain better access to finance. Moreover, researchers can use the results to identify an audit's impact on firms in emerging markets, as well as to obtain new insights for future research. Such results should also be of interest to regulatory authorities who can ensure that audits will play a more active role in the oversight of Indian firms. Besides, the implications regarding audits can be generalised to other countries with emerging markets, because the Indian cultural and economic setting shares many similarities with other emerging market countries.

Acknowledgments

We are thankful to Robert Larson, Gaurav Gupta, and two anonymous reviewers whose comments extensively benefited our study. Also, we would like to thank Udichibarna Bose for her comments. An earlier version of the paper was presented in a conference organized as part of the UGC-UKIERI research initiative on 'Mainstreaming Financial Inclusion' (CONT/G/16-17/67). Any remaining errors are our sole responsibility.

Appendix A. Variable definitions

Variable	Description
Variables for testing H1 and H2	
KZ	KZ index, a capital constraints proxy. See appendix B for a description.
AF	Natural logarithm of audit fees (one-year lagged).
NAF	Natural logarithm of non-audit fees (one-year lagged).
Firm size	Natural logarithm of total assets (one-year lagged).
Industry	Multiple dummy variables based on 18 industries, according to the National Industry Classification (NIC) codes.
Year	Multiple dummy variables based on the 16 years under investigation, from 2002 to 2017.
Variables used in the models for sensitivity analysis	
WW	WW index (alternative proxy of capital constraints). See appendix B for a description.
EX_AF	Excessive Audit fees: The residuals from a regression of AF on lagged firm-level characteristics (Total assets; Return on assets; Current ratio; Debt ratio; Accruals to total assets; and Loss indicators).
EXNAF	Excessive Non-Audit fees: The residuals from a regression of NAF on lagged firm-level characteristics (Total assets; Return on assets; Current ratio; Debt ratio; Accruals to total assets; and Loss indicators).
LagAF	Natural logarithm of audit fees (two-year lagged) – Instrument for 2SLS.
LagNAF	Natural logarithm of non-audit fees (two-year lagged) – Instrument for 2SLS.
AFM	The industry average of audit fees (one-year lagged) – Instrument for 2SLS.
NAFM	The industry average of non-audit fees (one-year lagged) – Instrument for 2SLS.

(continued on next page)

Appendix A (continued)

Variable	Description
AFD	Binary variable which equals one if the firm has audit fees larger than the sample median in previous year, otherwise zero.
NAFD	Binary variable which equals one if the firm has non-audit fees larger than the sample median in previous year, otherwise zero.
ROA	Return on assets ratio calculated as net profit divided by total assets.
Current_ratio	Total current assets divided by total current liabilities.
Debt_ratio	Total liabilities divided by total assets.
Accruals	Total accruals divided by total assets.
Loss	Dummy variable that takes the value 1 for loss-making firms and 0 otherwise.
LEV	Leverage ratio calculated as total liabilities divided by shareholders' equity.
KZE	KZE index (alternative proxy of capital constraints). See appendix B for a description.
KZ4	KZ4 index (alternative proxy of capital constraints). See appendix B for a description.

Appendix B. Construction of indices

"KZ", following Baker et al. (2003), is derived as:

$$KZ_{it} \text{ (five-variable)} = -1.002 CF_{it}/A_{i(t-1)} - 39.368 DIV_{it}/A_{i(t-1)} - 1.315 C_{it}/A_{i(t-1)} + 3.139LEV_{it} + 0.283Q_{it},$$

where $CF_{it}/A_{i(t-1)}$ is cash flow over lagged assets; $DIV_{it}/A_{i(t-1)}$ is cash dividends over lagged assets; $C_{it}/A_{i(t-1)}$ is cash balances over lagged assets; LEV_{it} is leverage; and Q is the market value of equity (price times shares outstanding) plus assets minus the book value of equity, all over assets.

"WW index" is based on Whited and Wu (2006), derived as:

$$WW \text{ index} = (-0.091 * CF) - (0.062 * DIVPOS) + (0.021 * TLTD) - (0.044 * LNNTA) + (0.102 * ISG) - (0.035 * SG),$$

where CF is the ratio of cash flow to total assets; DIVPOS is an indicator that takes the value 1 if the firm pays cash dividends; TLTD is the ratio of long-term debt to total assets; LNNTA is the natural log of total assets; ISG is the firm's three-digit industry sales growth; and SG is firm sales growth.

"KZE", based on Cheng et al. (2014), is derived as:

$$KZE_{it} = \{(1/5)*(-1.002CF_{it}/A_{i(t-1)})\} - \{(1/5)*(39.368DIV_{it}/A_{i(t-1)})\} - \{(1/5)*(1.315C_{it}/A_{i(t-1)})\} + \{(1/5)*3.139LEV_{it}\} + \{(1/5)*0.283Q_{it}\}.$$

We adjust the weights. Thus, each ratio of the KZ_{it} index accounts for 1/5 of the variation in the index, with the sign of the variable unchanged. Just as Chang et al. (2007) adjust the weights of the KZ index (four variables), such that each variable accounts for 1/4 of the variation in the index, with the sign of the variable unchanged, we do the same using 1/5 of the weight (Cheng et al., 2014).

"KZ4", based on Baker et al. (2003), is derived as:

$$KZ_{it} \text{ (four-variable)} = -1.002 CF_{it}/A_{i(t-1)} - 39.368 DIV_{it}/A_{i(t-1)} - 1.315 C_{it}/A_{i(t-1)} + 3.139LEV_{it},$$

where $CF_{it}/A_{i(t-1)}$ is cash flow over lagged assets; $DIV_{it}/A_{i(t-1)}$ is cash dividends over lagged assets; $C_{it}/A_{i(t-1)}$ is cash balances over lagged assets; and LEV_{it} is leverage.

Appendix C. Additional analysis: Different capital constraints indices

Model 1 $KZE_{it} = \alpha_0 + \alpha_1 \ln AF_{it-1} + \alpha_2 \text{Firm size}_{it-1} + \alpha_3 \text{Industry}_{it} + \alpha_4 \text{Year}_{it} + \varepsilon_{it}$

Model 2 $KZ4_{it} = \alpha_0 + \alpha_1 \ln NAF_{it-1} + \alpha_2 \text{Firm size}_{it-1} + \alpha_3 \text{Industry}_{it} + \alpha_4 \text{Year}_{it} + \varepsilon_{it}$

Model 3 $KZE_{it} = \alpha_0 + \alpha_1 \ln NAF_{it-1} + \alpha_2 \text{Firm size}_{it-1} + \alpha_3 \text{Industry}_{it} + \alpha_4 \text{Year}_{it} + \varepsilon_{it}$

Model 4 $KZ4_{it} = \alpha_0 + \alpha_1 \ln NAF_{it-1} + \alpha_2 \text{Firm size}_{it-1} + \alpha_3 \text{Industry}_{it} + \alpha_4 \text{Year}_{it} + \varepsilon_{it}$

Variable	Audit fees (H1)		Non-audit fees (H2)	
	Model 1	Model 2	Model 3	Model 4
ln AF	-0.041***	-0.245***		
	-0.01	-0.055		
ln NAF			-0.033***	-0.193***
			-0.008	-0.045
Firm size	0.048***	0.282***	0.036***	0.214***
	-0.011	-0.054	-0.01	-0.051

Appendix C (continued)

$$\text{Model 1 } KZE_{it} = \alpha_0 + \alpha_1 \ln AF_{it-1} + \alpha_2 \text{Firm size}_{it-1} + \alpha_3 \text{Industry}_{it} + \alpha_4 \text{Year}_{it} + \varepsilon_{it}$$

$$\text{Model 2 } KZ4_{it} = \alpha_0 + \alpha_1 \ln AF_{it-1} + \alpha_2 \text{Firm size}_{it-1} + \alpha_3 \text{Industry}_{it} + \alpha_4 \text{Year}_{it} + \varepsilon_{it}$$

$$\text{Model 3 } KZE_{it} = \alpha_0 + \alpha_1 \ln NAF_{it-1} + \alpha_2 \text{Firm size}_{it-1} + \alpha_3 \text{Industry}_{it} + \alpha_4 \text{Year}_{it} + \varepsilon_{it}$$

$$\text{Model 4 } KZ4_{it} = \alpha_0 + \alpha_1 \ln NAF_{it-1} + \alpha_2 \text{Firm size}_{it-1} + \alpha_3 \text{Industry}_{it} + \alpha_4 \text{Year}_{it} + \varepsilon_{it}$$

Variable	Audit fees (H1)		Non-audit fees (H2)	
	Model 1	Model 2	Model 3	Model 4
Constant	-0.392***	-2.717***	-0.327**	-2.290***
	-0.128	-0.664	-0.138	-0.712
Observations	5,115	5,115	3,154	3,154
R-squared	0.159	0.167	0.169	0.174
Industry Fixed Effects	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES

Notes: KZE is the equal-weighted KZ index; KZ4 is the KZ index using four ratios for the current year; ln AF is the log of the audit fees for the previous year; ln NAF is the log of the non-audit fees for the previous year; Firm size is the log of total assets of the firm for the previous year. ***, **, and * denote statistical significance at the 1%, 5%, and 10% level, respectively. Two-way clustered (by firm and year) standard errors are shown in parentheses.

References

- Agrawal, A., & Chadha, S. (2005). Corporate governance and accounting scandals. *The Journal of Law and Economics*, 48(2), 371–406.
- Al-Ajmi, J., & Saudagaran, S. (2011). Perceptions of auditors and financial-statement users regarding auditor independence in Bahrain. *Managerial Auditing Journal*, 26(2), 130–160. <https://doi.org/10.1108/02686901111095010>.
- Al-Hiyari, A. (2017). A critical review of corporate governance reforms in Malaysia. *Journal of Governance and Regulation*, 6(1), 38–44. <https://doi.org/10.22495/jgr>.
- Alhababsah, S. (2019). Ownership structure and audit quality: An empirical analysis considering ownership types in Jordan. *Journal of International Accounting, Auditing and Taxation*, 35, 71–84. <https://doi.org/10.1016/j.intaccudtax.2019.05.006>.
- Alzoubi, E. (2016). Audit quality and earnings management: Evidence from Jordan. *Journal of Applied Accounting Research*, 17(2), 170–189.
- Alzoubi, E. (2018). Audit quality, debt financing, and earnings management: Evidence from Jordan. *Journal of International Accounting, Auditing and Taxation*, 30, 69–84. <https://doi.org/10.1016/j.intaccudtax.2017.12.001>.
- Andreas, J. M., Rapp, M. S., & Wolff, M. (2012). Determinants of director compensation in two-tier systems: Evidence from German panel data. *Review of Managerial Science*, 6(1), 33–79.
- Antle, R., Gordon, E., Narayanamoorthy, G., & Zhou, L. (2006). The joint determination of audit fees, non-audit fees, and abnormal accruals. *Review of Quantitative Finance and Accounting*, 27(3), 235–266. <https://doi.org/10.1007/s11156-006-9430-y>.
- Arens, A. A., Elder, R. J., & Mark, B. (2012). *Auditing and assurance services: An integrated approach*. Boston: Prentice Hall.
- Arnedo, L., Lizarraga, F., & Sanchez, S. (2008). Discretionary accruals and auditor behaviour in code-law contexts: An application to failing Spanish firms. *European Accounting Review*, 17(4), 641–666. <https://doi.org/10.1080/09638180802172479>.
- Arun, T. G., & Turner, J. (2009). Corporate governance of banks in developing economies: Concepts and issues. In T. G. Arun & J. Turner (Eds.), *Corporate governance and development: Reform, financial systems and legal frameworks* (pp. 96–106). Edward Elgar.
- Ashbaugh, H., LaFond, R., & Mayhew, B. W. (2003). Do nonaudit services compromise auditor independence? Further evidence. *The Accounting Review*, 78(3), 611–639. <https://doi.org/10.2308/accr.2003.78.3.611>.
- Baboukardos, D. (2018). The valuation relevance of environmental performance revisited: The moderating role of environmental provisions. *British Accounting Review*, 50(1), 32–47. <https://doi.org/10.1016/j.bar.2017.09.002>.
- Baker, M., Stein, J. C., & Wurgler, J. (2003). When does the market matter? Stock prices and the investment of equity-dependent firms. *Quarterly Journal of Economics*, 118(3), 969–1005. <https://doi.org/10.1162/00335530360698478>.
- Bakke, T. E., & Whited, T. M. (2010). Which firms follow the market? An analysis of corporate investment decisions. *Review of Financial Studies*, 23(5), 1941–1980. <https://doi.org/10.1093/rfs/hhp115>.
- Ball, R., Jayaraman, S., & Shivakumar, L. (2012). Audited financial reporting and voluntary disclosure as complements: A test of the confirmation hypothesis. *Journal of Accounting and Economics*, 53(1–2), 136–166. <https://doi.org/10.1016/j.jacceco.2011.11.005>.
- Barber, B. M., & Odean, T. (2008). All that glitters: The effect of attention and news on the buying behavior of individual and institutional investors. *Review of Financial Studies*, 21(2), 785–818. <https://doi.org/10.1093/rfs/hhm079>.
- Barroso, R., Ali, B., & Lesage, C. (2018). Blockholders' ownership and audit fees: The impact of the corporate governance model. *European Accounting Review*, 27(1), 149–172. <https://doi.org/10.1080/09638180.2016.1243483>.
- Beatty, A., Ramesh, K., & Weber, J. (2002). The importance of accounting changes in debt contracts: The cost of flexibility in covenant calculations. *Journal of Accounting and Economics*, 33(2), 205–227. [https://doi.org/10.1016/S0165-4101\(02\)00046-0](https://doi.org/10.1016/S0165-4101(02)00046-0).
- Beck, P. J., Frecka, T. J., & Solomon, I. (1988). A model of the market for MAS and audit services: Knowledge spillovers and auditor-auditee bonding. *Journal of Accounting Literature*, 7, 50–64.
- Cahan, S., Emanuel, D., Hay, D., & Wong, N. (2008). Non-audit fees, long-term auditor-client relationships and earnings management. *Accounting & Finance*, 48(2), 181–207. <https://doi.org/10.1007/s11142-014-9291-x>.
- Campello, M., Graham, J. R., & Harvey, C. R. (2010). The real effects of financial constraints: Evidence from a financial crisis. *Journal of Financial Economics*, 97(3), 470–487. <https://doi.org/10.1016/j.jfineco.2010.02.009>.
- Caramanis, C., & Lennox, C. (2008). Audit effort and earnings management. *Journal of Accounting and Economics*, 45, 116–138. <https://doi.org/10.1016/j.jacceco.2007.05.002>.
- Carcello, J. V., Neal, T. L., Palmrose, Z. V., & Scholz, S. (2011). CEO involvement in selecting board members, audit committee effectiveness, and restatements. *Contemporary Accounting Research*, 28(2), 396–430.
- Carpenter, R. E., Fazzari, S. M., & Petersen, B. C. (1998). Financing constraints and inventory investment: A comparative study with high-frequency panel data Retrieved from. *Review of Economics and Statistics*, 80(4), 513–519 <http://content.ebscohost.com/ContentServer.asp?EbscoContent=dGJyMmto50SeprA4zOX0OLCmr1CeprZSR6a4Sq%2BWxWXS&ContentCustomer=dGJyMPCvtkmyqLdNuePfgexy9Yvf5ucA&T=P&P=AN&S=R&D=bsu&K=1450088>.
- Carpenter, Robert E., & Petersen, B. C. (2002). Is the growth of small firms constrained by internal finance? *Review of Economics and Statistics*, 84(2), 298–309. <https://doi.org/10.1162/003465302317411541>.

- Chakrabarti, R. (2005). Corporate governance in India – Evolution and challenges. *Working Paper*.
- Chakrabarti, R., Megginson, W., & Yadav, P. (2008). Corporate governance in India. *Journal of Applied Corporate Finance*, 20(1), 59–72. <https://doi.org/10.1007/978-1-4614-9173-6>.
- Chang, X., Tam, L. H. K., Tan, T. J., & Wong, G. (2007). The real impact of stock market mispricing – Evidence from Australia. *Pacific Basin Finance Journal*, 15(4), 388–408. <https://doi.org/10.1016/j.pacfin.2006.06.003>.
- Chen, Y., Hua, X., & Boateng, A. (2017b). Effects of foreign acquisitions on financial constraints, productivity and investment in R&D of target firms in China. *International Business Review*, 26(4), 640–651. <https://doi.org/10.1016/j.ibusrev.2016.12.005>.
- Chen, H., Chen, J. Z., Lobo, G. J., & Wang, Y. (2011). Effects of audit quality on earnings management and cost of equity capital: Evidence from China. *Contemporary Accounting Research*, 28(3), 892–925. <https://doi.org/10.1111/j.1911-3846.2011.01088.x>.
- Chen, Y., Ge, R., & Zolotoy, L. (2017a). Do corporate pension plans affect audit pricing?. *Journal of Contemporary Accounting and Economics*, 13(3), 322–337. <https://doi.org/10.1016/j.jcae.2017.10.002>.
- Chen, L., Srinidhi, B., Tsang, A., & Yu, W. (2016). Audited financial reporting and voluntary disclosure of corporate social responsibility (CSR) reports. *Journal of Management Accounting Research*, 28(2), 53–76. <https://doi.org/10.2308/jmar-51411>.
- Cheng, B., Ioannou, I., & Serafeim, G. (2014). Corporate social responsibility and access to finance. *Strategic Management Journal*, 35(1), 1–23. <https://doi.org/10.1002/smj>.
- Choi, S. U., & Lee, W. J. (2015). The effect of IFRS non-audit consulting services on cost of debt: Evidence from Korea. *Journal of Applied Business Research*, 31(5), 1889–1898.
- Choi, W. W., Lee, H. Y., & Jun, B. W. (2009). The provision of tax services by incumbent auditors and earnings management: Evidence from Korea. *Journal of International Financial Management and Accounting*, 20(1), 79–103. <https://doi.org/10.1111/j.1467-646X.2009.01027.x>.
- Claessens, S., Djankov, S., Fan, J. P., & Lang, L. H. (2002). Disentangling the incentive and entrenchment effects of large shareholdings. *The Journal of Finance*, 57(6), 2741–2771.
- Claessens, Stijn, & Tzioumis, K. (2006). Measuring firms' access to finance. In *Access to Finance: Building Inclusive Financial Systems conference* (pp. 1–25). Washington, D.C.: organized by the Brookings Institution and the World Bank.
- Cobbin, P. E. (2002). International dimensions of the audit fee determinants literature. *International Journal of Auditing*, 6(1), 53–77. <https://doi.org/10.1111/j.1099-1123.2002.tb00005.x>.
- DeAngelo, L. E. (1981). Auditor size and audit fees. *Journal of Accounting and Economics*, 3(3), 183–199.
- DellaVigna, S. (2009). Psychology and economics: Evidence from the field Retrieved from. *Journal of Economic Literature*, 47(2), 315–372 <http://pubs.aeaweb.org/doi/abs/10.1257/jel.47.2.315>.
- Desai, R., Desai, V., Singhvi, M., & Munsif, V. (2012). Audit fees, nonaudit fees, and auditor quality: An analysis from the Indian perspective Retrieved from. *Journal of Accounting, Ethics & Public Policy*, 13(2), 151–165 https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2020316.
- DeYoung, R., Glennon, D., & Nigro, P. (2008). Borrower-lender distance, credit scoring, and loan performance: Evidence from informational-opaque small business borrowers. *Journal of Financial Intermediation*, 17(1), 113–143. <https://doi.org/10.1016/j.jfi.2007.07.002>.
- Dhaliwal, D. S., Gleason, C. A., Heitzman, S., & Melendrez, K. D. (2008). Auditor fees and cost of debt. *Journal of Accounting, Auditing & Finance*, 23(1), 1–22. <https://doi.org/10.1177/0148558X0802300103>.
- Doupnik, T. S., & Richter, M. (2004). The impact of culture on the interpretation of “in context” verbal probability expressions. *Journal of International Accounting Research*, 3(1), 1–20.
- Elango, B., & Pattanaik, C. (2007). Building capabilities for international operations through networks: A study of Indian firms. *Journal of International Business Studies*, 38(4), 541–555. <https://doi.org/10.1057/palgrave.jibs.8400280>.
- Engelberg, J., Sasseville, C., & Williams, J. (2012). Market madness? The case of Mad Money. *Management Science*, 58(2), 351–364. <https://doi.org/10.1287/mnsc.1100.1290>.
- ET. (2020, April 5). No need to further curb “non-audit” services of auditors: Industry bodies tell govt. The Economic Times. Retrieved from <https://economictimes.indiatimes.com/industry/services/consultancy/-audit/no-need-to-further-curb-non-audit-services-of-auditors-industry-bodies-tell-govt/articleshow/74991628.cms>. Accessed May 24, 2020
- Faccio, M., Marchica, M. T., & Mura, R. (2016). CEO gender, corporate risk-taking, and the efficiency of capital allocation. *Journal of Corporate Finance*, 39, 193–209. <https://doi.org/10.1016/j.jcorpfin.2016.02.008>.
- Fan, J. P., & Wong, T. J. (2005). Do external auditors perform a corporate governance role in emerging markets? Evidence from East Asia. *Journal of Accounting Research*, 43(1), 35–72. <https://doi.org/10.1111/j.1475-679x.2004.00162.x>.
- Faulkender, M., & Petersen, M. (2012). Investment and capital constraints: Repatriations under the American Jobs Creation Act. *Review of Financial Studies*, 25(11), 3351–3388. <https://doi.org/10.1093/rfs/hhs092>.
- Francis, J., LaFond, R., Olsson, P., & Schipper, K. (2005). The market pricing of accruals quality. *Journal of Accounting and Economics*, 39(2), 295–327. <https://doi.org/10.1016/j.jacceco.2004.06.003>.
- Francis, J. R. (2004). What do we know about audit quality?. *British Accounting Review*, 36(4), 345–368. <https://doi.org/10.1016/j.bar.2004.09.003>.
- Frank, M. Z., & Goyal, V. K. (2009). Capital structure decisions: Which factors are reliably important?. *Financial Management*, 38(1), 1–37. <https://doi.org/10.1111/j.1755-053X.2009.01026.x>.
- Gakhar, D. V. (2014). Earnings management practices in India: A study of auditor's perception. *Journal of Financial Crime*, 21(1), 100–110. <https://doi.org/10.1108/JFC-09-2013-0054>.
- García Lara, J. M., García Osma, B., Mora, A., & Scapin, M. (2017). The monitoring role of female directors over accounting quality. *Journal of Corporate Finance*, 45, 651–668. <https://doi.org/10.1016/j.jcorpfin.2017.05.016>.
- Gerayli, M. S., Yanesari, A. M., & Ma'atooft, A. R. (2011). Impact of audit quality on earnings management: Evidence from Iran. *Research Journal of Finance and Economics*, 66(1), 77–84.
- Goh, L., & Gupta, A. (2016). Remuneration of non-executive directors: Evidence from the UK. *British Accounting Review*, 48(3), 379–399. <https://doi.org/10.1016/j.bar.2015.05.001>.
- Gray, S. J. (1988). Towards a theory of cultural influence on the development of accounting systems internationally Retrieved from. *Abacus*, 24(1), 1–15.
- Gupta, G., Salter, S. B., & Lewis, P. A. (2019). Do accounting values influence accounting actions? Evidence from India and the US. *Journal of Theoretical Accounting Research*, 15(1), 105–143.
- Habbash, M., & Alghamdi, S. (2017). Audit quality and earnings management in less developed economies: The case of Saudi Arabia. *Journal of Management & Governance*, 21(2), 351–373. <https://doi.org/10.1007/s10997-016-9347-3>.
- Habib, A., & Jiang, H. (2015). Corporate governance and financial reporting quality in China: A survey of recent evidence. *Journal of International Accounting, Auditing and Taxation*, 24, 29–45. <https://doi.org/10.1016/j.intaccudtax.2014.12.002>.
- Hall, B. H., & Lerner, J. (2010). The financing of R&D and innovation. In B. H. Hall & N. Rosenberg (Eds.), *Handbook of the economics of innovation* (pp. 609–639). Elsevier-North Holland.
- Hirshleifer, D., Hou, K., Teoh, S. H., & Zhang, Y. (2004). Do investors overvalue firms with bloated balance sheets? *Journal of Accounting and Economics*, 38, 297–331. <https://doi.org/10.1016/j.jacceco.2004.10.002>.
- Hofstede, G. (1980). Culture and organizations. *International Studies of Management & Organization*, 10(4), 15–41.
- Houqe, M. N., Ahmed, K., & van Zijl, T. (2017). Audit quality, earnings management, and cost of equity capital: Evidence from India. *International Journal of Auditing*, 21(2), 177–189. <https://doi.org/10.1111/ijau.12087>.
- Htay, S. N. N., & Salman, S. A. (2013). Corporate governance: A case study of SMEs in Malaysia. *Middle East Journal of Scientific Research*, 18(2), 243–252. <https://doi.org/10.5829/idosi.mejstr.2013.18.2.12439>.

- Iatridis, G. E. (2013). Environmental disclosure quality: Evidence on environmental performance, corporate governance and value relevance. *Emerging Markets Review*, 14(1), 55–75. <https://doi.org/10.1016/j.ememar.2012.11.003>.
- International Monetary Fund (2018). India's strong economy continues to lead global growth Retrieved from <https://www.imf.org/en/News/Articles/2018/08/07/NA080818-India-Strong-Economy-Continues-to-Lead-Global-Growth>. Accessed September 16, 2018.
- Johl, S. K., Khan, A., Subramaniam, N., & Muttakin, M. (2016). Business group affiliation, board quality and audit pricing behavior: Evidence from Indian companies. *International Journal of Auditing*, 20(2), 133–148. <https://doi.org/10.1111/ijau.12061>.
- Joshy, J., Desai, N., & Agarwalla, S. K. (2015). Are Big 4 audit fee premiums always related to superior audit quality? Evidence from India's unique audit market Retrieved from *Working Paper*, 1–31.
- Kahneman, D. (1973). *Attention and effort*. Englewood Cliffs, NJ: Prentice-Hall.
- Kaplan, S. N., & Zingales, L. (1997). Do investment-cash flow sensitivities provide useful measures of financing constraints ?. *The Quarterly Journal of Economics*, 112(1), 169–215. <https://doi.org/10.2307/2951280>.
- Kharuddin, K. A. M., Basioudis, I. G., & Hay, D. (2019). Partner industry specialization and audit pricing in the United Kingdom. *Journal of International Accounting, Auditing and Taxation*, 35, 57–70. <https://doi.org/10.1016/j.intaccudtax.2019.05.005>.
- Kinney, J. W. R., Palmrose, Z. V., & Scholz, S. (2004). Auditor independence, non-audit services, and restatements: Was the U.S. government right?. *Journal of Accounting Research*, 42(3), 561–588.
- Koh, K., Rajgopal, S., & Srinivasan, S. (2013). Non-audit services and financial reporting quality: Evidence from 1978 to 1980. *Review of Accounting Studies*, 18(1), 1–33. <https://doi.org/10.1007/s11142-012-9187-6>.
- Lamont, O. A., Polk, C., & Saa-Requejo, J. (2001). Financial constraints and stock returns. *The Review of Financial Studies*, 14(2), 529–554. <https://doi.org/10.2139/ssrn.113336>.
- Leventis, S. (2018). An empirical test of SEC enforcement in the audit market. *Journal of International Accounting, Auditing and Taxation*, 30, 106–116. <https://doi.org/10.1016/j.intaccudtax.2017.12.007>.
- Leventis, S., Hasan, I., & Dedoulis, E. (2013). The cost of sin: The effect of social norms on audit pricing. *International Review of Financial Analysis*, 29, 152–165. <https://doi.org/10.1016/j.irfa.2013.03.006>.
- Leventis, S., Weetman, P., & Caramanis, C. (2011). Agency costs and product market competition: The case of audit pricing in Greece. *British Accounting Review*, 43(2), 112–119. <https://doi.org/10.1016/j.bar.2011.02.005>.
- Levine, R. (2005). Finance and growth: Theory and evidence. In P. Aghion & S. Durlauf (Eds.), *Handbook of economic growth* (pp. 865–934). Amsterdam: Elsevier. [https://doi.org/10.1016/S1574-0684\(05\)01012-9](https://doi.org/10.1016/S1574-0684(05)01012-9).
- Lin, J. W., & Hwang, M. I. (2010). Audit quality, corporate governance, and earnings management: A meta-analysis. *International Journal of Auditing*, 14(1), 57–77. <https://doi.org/10.1111/j.1099-1123.2009.00403.x>.
- Lin, Z. J., & Liu, M. (2009). The impact of corporate governance on auditor choice: Evidence from China. *Journal of International Accounting, Auditing and Taxation*, 18(1), 44–59. <https://doi.org/10.1016/j.intaccudtax.2008.12.005>.
- MCA (2020). Consultation Paper to examine the existing provisions of law and make suitable amendments therein to enhance audit independence and accountability Retrieved from http://www.mca.gov.in/Ministry/pdf/Comments_08022020.pdf. Accessed June 3, 2020.
- Mallin, C., Melis, A., & Gaia, S. (2015). The remuneration of independent directors in the UK and Italy: An empirical analysis based on agency theory. *International Business Review*, 24(2), 175–186. <https://doi.org/10.1016/j.ibusrev.2014.07.006>.
- Miller, G. A. (1956). The magical number seven, plus or minus two: Some limits on our capacity for processing information. *The Psychological Review*, 63, 81–97.
- Minnis, M., & Shroff, N. (2017). Why regulate private firm disclosure and auditing?. *Accounting and Business Research*, 47(5), 473–502. <https://doi.org/10.1080/00014788.2017.1303962>.
- Nam, S., & Ronen, J. (2012). The impact of non-audit services on capital markets. *Journal of Accounting, Auditing & Finance*, 27(1), 32–60. <https://doi.org/10.1177/0148558X11409143>.
- Narayanaswamy, R., Raghunandan, K., & Rama, D. V. (2012). Corporate governance in the Indian context. *Accounting Horizons*, 26(3), 583–599. <https://doi.org/10.2308/acch-50179>.
- Ocasio, W. (1997). Towards an attention-based view of the firm. *Strategic Management Journal*, 18, 187–206.
- Palmrose, Z.-V. (1988). An analysis of auditor litigation and audit service quality. *The Accounting Review*, 63(1), 55–73.
- Petersen, M. A. (2009). Estimating standard errors in finance panel data sets: Comparing approaches. *The Review of Financial Studies*, 22(1), 435–480. <https://doi.org/10.1093/rfs/hhn053>.
- Ramos, S. B., Latoeiro, P., & Veiga, H. (2020). Limited attention, salience of information and stock market activity. *Economic Modelling*, 87, 92–108. <https://doi.org/10.1016/j.econmod.2019.07.010>.
- Robinson, D. (2006). Tax service fees and auditor independence: Evidence from going-concern audit opinions prior to bankruptcy filings. *Auditing: A Journal of Practice & Theory*, 27(2), 31–54.
- Salter, S. B., & Niswander, F. (1995). Cultural influence on the development of accounting systems internationally: A test of Gray's [1988] theory. *Journal of International Business Studies*, 26(2), 379–1297.
- Shu, S. Z. (2000). Auditor resignations: Clientele effects and legal liability. *Journal of Accounting and Economics*, 29(2), 173–205. [https://doi.org/10.1016/S0165-4101\(00\)00019-7](https://doi.org/10.1016/S0165-4101(00)00019-7).
- Simunic, D. A. (1984). Auditing, consulting, and auditor independence. *Journal of Accounting Research*, 22(2), 679–702. <https://doi.org/10.2307/2490671>.
- Srinidhi, B. N., & Gul, F. A. (2007). The differential effects of auditors' nonaudit and audit fees on accrual quality. *Contemporary Accounting Research*, 24(2), 595–629. <https://doi.org/10.1506/ARJ4-20P3-201K-3752>.
- Stein, J. (2002). Information production and capital allocation. *Journal of Finance*, 57(5), 1891–1921.
- Tee, C. M., Gul, F. A., Foo, Y. B., & Teh, C. G. (2017). Institutional monitoring, political connections and audit fees: Evidence from Malaysian firms. *International Journal of Auditing*, 21(2), 164–176. <https://doi.org/10.1111/ijau.12086>.
- Tsipouridou, M., & Spathis, C. (2012). Earnings management and the role of auditors in an unusual IFRS context: The case of Greece. *Journal of International Accounting, Auditing and Taxation*, 21(1), 62–78. <https://doi.org/10.1016/j.intaccudtax.2012.01.005>.
- Usman, M., Zhang, J., Farooq, M. U., Makki, M. A. M., & Dong, N. (2018). Female directors and CEO power. *Economics Letters*, 165, 44–47. <https://doi.org/10.1016/j.econlet.2018.01.030>.
- Usman, M., Zhang, J., Wang, F., Sun, J., & Makki, M. A. M. (2018). Gender diversity in compensation committees and CEO pay: Evidence from China. *Management Decision*, 56(5), 1065–1087. <https://doi.org/10.1108/MD-09-2017-0815>.
- Vanstraelen, A., & Schelleman, C. (2017). Auditing private companies: What do we know?. *Accounting and Business Research*, 47(5), 565–584. <https://doi.org/10.1080/00014788.2017.1314104>.
- Washburn, M., & Bromiley, P. (2012). Comparing aspiration models: The role of selective attention. *Journal of Management Studies*, 49(5), 896–917. <https://doi.org/10.1111/j.1467-6486.2011.01033.x>.
- Watts, R. L., & Zimmerman, J. L. (1983). Agency problems, auditing, and the theory of the firm: Some evidence. *The Journal of Law and Economics*, 26(3), 613–633.
- Whited, T. M., & Wu, G. (2006). Financial constraints risk. *The Review of Financial Studies*, 19(2), 531–559. <https://doi.org/10.1093/rfs/hhj012>.
- World Bank (2011). Culture and corporate governance principles in India: Reconcilable clashes Retrieved from *The Global Corporate Governance Forum Publication: Private Sector Opinion*, 23, 1–14 <http://hdl.handle.net/10986/11070>.
- World Justice Project (2016). The Rule of Law Index Retrieved from https://worldjusticeproject.org/sites/default/files/documents/RoLI_Final-Digital_0.pdf. Accessed March 10, 2018.