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Auditee's payout policies: does audit quality matter?

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Abstract

Purpose – This study aims to explore whether an auditee's audit quality influences its payout policies (i.e. each form of dividend payouts and stock repurchase payouts).

Design/methodology/approach – Based on a panel data of US public firms, from 2004 to 2018, and Tobit estimators, this study aims to examine whether auditees' audit quality is related to their payouts and under which circumstances (from the standpoints of auditees' information asymmetry, refinancing risk, corporate governance and financial constraints) the aforesaid associations are more pronounced.

Findings – The findings of this study imply that auditees' audit quality is positively related to auditees' payouts. Further examination suggests that this positive relationship is stronger for auditees with higher information asymmetry, lower financial constraints and refinancing risk and for those with weaker governance. Finally, this study documents that dividend payouts are more stable for auditees with high-quality audits than those with low-quality audits. The results support the view that auditees' transparency (reflected in high-quality audits) could be a crucial driver and rationale for their payout policies and, ultimately, overall policies.

Originality/value – By combining two different research lines of audit quality and corporate payout policies, this paper adds to both literature, as it is a novel one to document the contributing function and impact of audit quality on auditee's payout policies (tangible financial decisions and policies). The findings are significant considering that it documents high-quality audits affecting the auditees besides their financial reporting quality. This study also shows the moderating roles of the auditee's information asymmetry, rollover risk, financial constraints and corporate governance in the relation between audit quality and an auditee's payout decisions. Furthermore, the findings can help shareholders (aiding them in determining companies with high payout policies), regulators and policymakers who emphasize audit quality. The results indicate that policymakers' and standard setters' efforts fostering high-quality audits should be in conjunction with firm payout standards.

Keywords Audit quality, Dividend payout, Stock repurchase payout, Information asymmetry

Paper type Research paper

1. Introduction

This paper explores whether auditees' audit quality impacts their payout policies (all types of dividend payouts and stock repurchase payouts). We believe that high-quality audits are powerful monitoring tools that curb managers' self-seeking manners about taking advantage of cash flows and discipline managers by foisting high corporate payouts. High-quality audits also aid auditees to have easier access to affordable external financing, thereby enabling them to provide higher payouts from internal cash flows.

Corporate payout policies, a crucial internal financial policy, indicate how companies give capital back to their investors, through stock repurchase and dividend payouts. As pivotal financial decisions, corporate payouts are topics of scholarly works in finance and

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accounting literature, owing to their influence on other miscellaneous corporate decisions such as cash hoardings, investment strategies, capital structure policies, and managers' remuneration plans (Al-Najjar and Kilincarslan, 2019). Moreover, firms use payouts as seminal instruments to signal their outlook (Al-Najjar and Kilincarslan, 2019). In summary, because of the economic significance of payout policies (real and tangible economic decisions), it is crucial to understand the factors which mitigate/intensify these policies.

Independent external auditors attempt to discover and divulge material misstatements (Chin and Chi, 2009). High-quality audits can maintain the stake of capital suppliers by searching for material abnormalities and inappropriate appropriation by insiders, disclosing unsatisfactory news in the early phases and eventually evaluating the trustworthiness of financial statement information (DeFond and Zhang, 2014). Based on this key function of independent external auditors, we argue that high-quality audits are powerful instruments for overseeing managers and mitigating information risk (by causing lower agency conflict, moral hazard and adverse selection costs) for capital suppliers (DeFond and Zhang, 2014).

Our reasoning that a high-quality audit is positively associated with the auditee's payouts rests on two central arguments. First, high-quality audits deliver transparent financial statements that alleviate information asymmetry and agency conflicts between external capital providers and auditees as capital seekers (Boubaker *et al.*, 2018). Therefore, capital providers consider high-quality audits of capital seeker as preventive governance mechanisms against moral hazards in capital contracting and award affordable external financing confidently. Capital providers are also better equipped to supervise managers' acts and face lower information risk and monitoring costs (Fredriksson *et al.*, 2020). Hence, auditees with high-quality audits face lower cost of capital and opportunity costs. This encourages them to hold less cash flow for safeguarding against their needs, and ultimately enables them to give higher payouts. Second, self-interested managers are inclined to retain cash flows than offering payouts to shareholders. Managers can perhaps achieve this goal when they work in an environment with less scrutiny and monitoring (e.g. a low-quality audit environment). This enables them to freely augment their own assets by allocating cash flows to pet projects (i.e. misallocation of the firm's cash flows to serve themselves). Thus, high-quality audits, as a powerful oversight tool, can control opportunistic actions and discipline managers by foisting high corporate payouts.

Focusing on 31,784 firm-year observations of nonfinancial and nonutility US publicly traded companies, which are auditees of one of the Big 4 auditors over the period 2004–2018, our study examines the following:

- whether auditees' audit quality is related to auditees' dividend and stock repurchase payouts; and
- under which circumstances (regarding auditees' information asymmetry, refinancing risk, corporate governance, and financial constraints) do these associations become stronger.

Rest on several audit quality proxies such as audit fee ratio, presence of small profit and small beat and enjoying an expert auditor, our results imply that high-quality audits are positively associated with auditees' payouts. Our findings continue to hold after several robustness tests like alternate proxies of audit quality and auditee's payouts, using two-stage least squares (2SLS), Heckman sample selection and propensity score matching (PSM) approaches and addressing omitted variable bias.

We also document that the positive association between audit quality and the auditee's payouts is stronger for auditees exhibiting ex-ante information asymmetry, lower financial constraints and refinancing risk and weaker governance. Furthermore, rest on Lintner's (1962) model, we report that auditees with low-quality audits adjust their dividend payouts

quicker than those with high-quality audits, indicating that dividend payouts are more stable for auditees enjoying high-quality audits.

This study adds to the existing literature in two ways. First, by combining two different research streams of audit quality and corporate payout policies, this paper contributes to both given that ours is a novel study to document the contributing function and impact of audit quality on the auditee's payout policies (tangible financial decisions and policies). Prior research suggests that many factors impact corporate payouts, such as board gender diversity (Ye *et al.*, 2019), managerial ability (Jiraporn *et al.*, 2016), national culture (Shao *et al.*, 2010), government ownership (Wang *et al.*, 2011), insider trading laws (Brockman *et al.*, 2014) and social capital (Hasan and Habib, 2020b). We add to the literature by introducing an unexplored factor of audit quality. Our findings are significant because we document high-quality audits affect the auditees besides their financial reporting quality. For instance, previous studies report that firms enjoying high-quality audits have lower stock price crash risk (Yeung and Lento, 2018), idiosyncratic return volatility (Chen *et al.*, 2017), cost stickiness (Liang *et al.*, 2014), cost of equity (Houqe *et al.*, 2017) and managerial slack (Fang *et al.*, 2018). These auditees also have higher corporate social responsibility (CSR) transparency (Hammami and Zadeh, 2019) and investment efficiency (Boubaker *et al.*, 2018). We add to these studies by explaining the unexplored outcomes of higher dividend and stock repurchase payouts.

Second, we provide evidence about the moderating roles of auditee's characteristics – information asymmetry, rollover risk, financial constraints and corporate governance – on the association between audit quality and the auditee's payout decisions. Besides, our findings can help equity holders (identifying companies with high payout policies), regulators and policymakers who underscore the importance of audit quality. Our results indicate that policymakers' and standard setters' efforts fostering high-quality audits are required to be in conjunction with payout standards.

The remaining parts of this study are made up as follows. Section 2 explains the literature and presents our hypotheses. Section 3 reports methodological points, and the primary empirical findings are outlined in Section 4. Section 5 presents further analyses, and, eventually, Section 6 suggests our conclusions.

2. Theoretical background and hypothesis development

2.1 Importance of high-quality audits

Based on the Public Company Accounting Oversight Board (PCAOB) [1]:

> Auditing regulations mandate auditors to arrange and conduct audits to achieve acceptable assurance about whether the financial statements are free of material misstatements and to state an opinion about the fair presentation of the financial statements.

High-quality auditors intend to discover and disclose material misstatements (Kitiwong and Sarapaivanich, 2020). Their outputs increase the trustworthiness and capital providers' confidence in the audit opinions (i.e. financial statement users have higher trust in audit reports) (Yeung and Lento, 2018; Orazalin and Akhmetzhanov, 2019). In addition, high-quality audits decrease litigation and reputation risks for independent high-quality auditors (Liang *et al.*, 2014). Recent studies consider the function of high-quality audits beyond the discovery of generally accepted accounting principles (GAAP) violations. These studies emphasize a high-quality audit's function to signify the faithful presentation of financial statements regarding the corporate underlying economics (DeFond and Zhang, 2014). High-quality auditors also boost corporate oversight and accountability by flagging auditees' malfunctions and ultimately reducing information risk for equity/debt holders (DeFond and Zhang, 2014). In other words, high-quality audits aid in protecting the interests of debt/equity holders because high-quality auditors detect and disclose managers' expropriation

and increase the reliability of financial statement information. Consequently, high-quality audits cause both assurance value (i.e. mitigating the managers' reporting prejudice and boosting the reliability of financial reports) and insurance value (i.e. a tacit financial burden that debt/equity holders might thrust upon auditors when the latter make a material mistake) (DeFond and Zhang, 2014).

2.2 Auditees' payout policies

As crucial tangible financial decisions, payout policies are the focus of many studies given that these policies have economic significance (as they involve a considerable amount of money). Furthermore, they have substantial influences on other firm dimensions such as corporate cash hoardings, investing, financing and capital allocation decisions, managers' remunerations, investors' tax payments and ultimately corporate valuation (Hasan and Habib, 2020a, 2020b; Al-Najjar and Kilincarslan, 2019; Hussainey and Aal-Eisa, 2009). In addition, as strategic instruments, payout policies can especially signal the firm's promise (e.g. better future performance) compared to its rivals and convey managers' private information to market participants (Al-Najjar and Kilincarslan, 2019). Self-interested managers prefer to keep free cash flows and increase their own assets (i.e. empire building) instead of paying out to shareholders (Hasan and Habib, 2020a; Al-Najjar and Kilincarslan, 2019). Payouts, as monitoring tools, attenuate the free cash flow problem, as they enforce the management to obtain external financing, which is under capital market scrutiny (Hasan and Habib, 2020a; Al-Najjar and Kilincarslan, 2019). Moreover, higher payouts raise the issuance likelihood of new equity for collecting new capital, exposing firms to more oversight by capital providers (Hasan and Habib, 2020a; Al-Najjar and Kilincarslan, 2019).

Based on payout irrelevance theory, the value of a company is determined according to the lucrativeness of its belongings (Miller and Modigliani, 1961). In this line, the magnitude of payouts given to equity holders does not influence company value (Miller and Modigliani, 1961). In a real-world environment, the payout irrelevance theory is not applicable because its underpinnings (e.g. a frictionless financial market) are violated. Numerous empirical and theoretical studies attempt to explain why firms have payouts. These explanations are supported by different theoretical approaches like life-cycle theory [2], signaling theory, agency theory and bird-in-the-hand theory [3] (Kalay, 1980; Fama and French, 2001; Bernheim and Wantz, 1992; Lintner, 1962). However, none of these explanations/reasons comprehensively clarify a firm's payout treatment and the payout mystery persists.

The dividend signaling proposition explains that the management can signal the firm's quality through payouts (Jabbouri and Attar, 2018). Raising (reducing) the payouts usually indicates a better (worse) tomorrow performance for the firm. Prior research (Miller and Modigliani, 1961) argues that investors have different preferences toward dividend income according to their risk aversion and tax bracket. Therefore, investors choose companies with payout decisions that are in line with their preferences. Farre-Mensa *et al.* (2014) suggest that:

> the accumulated evidence on payout and agency indicates that firms use payouts to reduce potential overinvestment by management. The market appreciates more dividends and repurchases paid by firms with more free cash flow. There is less evidence that signaling proposition plays a significant role in dividend policy decisions or in the decision to repurchase shares.

DeAngelo *et al.* (2008) further underpin the agency proposition: "the available evidence supports the view that the need to distribute [free cash flows] is a first-order determinant of the overall value and timing of payouts." Based on these studies, we understand that agency

[4] theory is the dominant explanation regarding the logic behind corporate payouts (Jabbouri and Attar, 2018).

Prior research suggests that many factors impact corporate payouts, such as board gender diversity (Ye *et al.*, 2019), managerial ability (Jiraporn *et al.*, 2016), national culture (Shao *et al.*, 2010), government ownership (Wang *et al.*, 2011), insider trading laws (Brockman *et al.*, 2014) and social capital (Hasan and Habib, 2020b). We add to the literature by introducing an unexplored driver of audit quality.

2.3 Audit quality and auditee's payout policies

The precautionary motive of corporate cash holdings explains that financially constrained firms prefer to hold more cash out of cash flows because these firms are more dependent on internal sources than external ones to meet their operational and non-operational needs (Hasan and Habib, 2020a). The tendency to hold more cash prevents them from providing high payouts. Hence, we can conclude that any element that can make firms less financially constrained can also enable and encourage them to provide higher payouts. Previous studies also document that firms exposed to high firm-wide information asymmetry tend to be more financially constrained (Zhao and Xiao, 2019). High-quality audits flag the credibility of financial statement information, broaden the accessibility of material and value relevant information about a company's fiscal condition and eventually attenuate informational asymmetry (Yeung and Lento, 2018). High-quality audits yield more transparent financial statements, which lessen information asymmetry and agency problems between external capital providers and managers (Boubaker *et al.*, 2018). Hence, capital providers are empowered to oversee managers and enjoy lower information risk and monitoring costs (Fredriksson *et al.*, 2020).

Furthermore, high-quality audits foster a more transparent environment with a higher level of reliance and greater interaction and information sharing, which limits opportunistic behavior in transactions, and ultimately helps alleviate the free-rider concern (Boubaker *et al.*, 2018). Capital providers consider high quality-audits of capital seekers as a preventive governance mechanism on capital contracting and award affordable external financing more easily. Hence, capital seekers with high-quality audits face lower cost of capital and opportunity costs, which encourage them to hold less cash for safeguarding against their needs, and ultimately provide higher payouts. Consistent with our argument, Aivazian *et al.* (2006) suggest that firms with easier access to public debt (bond) markets have higher payouts. The authors argue that such firms have greater incentives to increase their payouts, as they want to decrease information asymmetry and agency problems to induce capital providers to hold their debt.

Former research finds that firms with high-quality audits have a better informational environment reflected in more precise financial analysts' earnings forecasts (Reichelt and Wang, 2010) and lower cost of debt (Karjalainen, 2011). In the setting of the UK and France, Harakeh *et al.* (2019)[5] use similar logic and argue that mandatory adoption of International Financial Reporting Standards (IFRS), as an exogenous shock to the corporate financial information environment, can mitigate information asymmetry and solve the moral hazard problem, which is ultimately reflected in higher dividend payouts. In addition, Boubaker *et al.* (2018) report that auditees enjoying high-quality audits have higher firm-level investment efficiency. This higher performance (reflected in higher investment efficiency) can increase auditees' ability to provide higher corporate payouts. In summary, as an integral factor, high-quality audits facilitate auditees' access to cheap external financing, thereby enabling them to have higher corporate payouts from internal cash flows.

As another argument, self-interested managers prefer to retain cash flows than paying them out to shareholders. One route that managers can achieve this goal is that they work in an environment with less scrutiny and monitoring (e.g. a low-quality audit environment) so that they can easily increase their personal belongings by investing cash flows in pet projects (i.e. misallocation of the firm's cash flows to serve themselves). High-quality audits, as a powerful monitoring mechanism, can curb opportunistic actions and discipline managers by foisting high corporate payouts. Conversely, capital providers of auditees with low-quality audits face more uncertainty (e.g. a low-quality audit makes the scrutiny of managerial activities hard and expensive) and difficulty in aligning the management's interests with their own interests. This condition ultimately aggravates managers' inclination to squander cash flows instead of giving high payouts. Based on this information, our first hypothesis [6] is stated below:

H1a. There is a positive association between the audit quality of an auditee and its dividend payout.

H1b. There is a positive association between the audit quality of an auditee and its stock repurchase payout.

Moreover, when auditees are afflicted with information asymmetry ex-ante [7], the function of a high-quality audit (as a credible information source) gains more importance (e.g. causing superior informational influence and more powerful alleviating effect in darker information atmospheres). This is because a high-quality audit supplies value-relevant and credible information, allows capital suppliers to assess auditees' profiles more accurately from various standpoints such as risk, and tomorrow costs and benefits, and eventually, encourages capital provisioners to award affordable external financing to auditees. This facile availability of inexpensive external financing for auditees enjoying high-quality audits is reflected in their higher payouts. In contrast, capital providers may have less attention to audit quality (i.e. having inferior informational influence in a more crystal information atmosphere) when auditees are not hugely afflicted with information asymmetry (because of inferior level of agency conflict in this condition, capital provisioners are less inclined and motivated to analyze a high-quality audit as a credible source of information and its marginal effect will be smaller). Consequently, our second hypothesis is as follows:

H2. The relationship between an auditee's audit quality and its payouts is stronger for auditees with greater company-wide information asymmetry.

3. Research design

3.1 Data

To explore the relationship between audit quality and auditee's payouts, we focus on all US publicly traded firm-year observations with the needed information from the audit analytics database from 2004 to 2018. Our sample begins from 2004 to be less influenced by the Enron misconduct case and the failure of Arthur Anderson. Next, we drop the auditees of non-Big 4 auditors. Our concentration is on auditees with a Big 4 auditor to mitigate self-selection bias stemming from auditor selection [8]. Notably, more than 92% of the companies, by market value, are auditees of one of the Big 4 in our sample period. Pursuing previous research (Hasan and Habib, 2020a, 2020b; Al-Najjar and Kilincarslan, 2019), firms operating in the utility industry (SIC codes of 4900–4999) and financial industry (SIC codes of 6000–6999) are omitted. We subsequently combine Compustat, Audit Analytics, CRSR and IBES. Our final sample includes 31,784 firm-year observations with the required data for our multivariate

analyses. Variables in the utmost 1% of their related distributions are winsorized to reduce the effect of outliers.

3.2 Model determination

To investigate the effect of audit quality on the auditee's payouts, we use the Tobit [9] regression model in equation (1), which is in line with prior research (Hasan and Habib, 2020a, 2020b):

$$\begin{aligned} PO_{i,t} = {} & \alpha_0 + \alpha_1\ AQ_{i,t-1} + \alpha_2\ SIZE_{i,t-1} + \ \alpha_3\ SysRisk_{i,t-1} + \alpha_4\ ROA_{i,t-1} + \alpha_5\ LEV_{i,t-1} \\ & + \alpha_6\ INTAN_{i,t-1} + + \alpha_7\ EX_{i,t-1} + \alpha_8\ Cash_{i,t-1} + \alpha_9\ CExp_{i,t-1} + \alpha_{10}\ CF_{i,t-1} \\ & + \alpha_{11}\ MTB_{i,t-1} + \alpha_{12}\ ASY_{i,t-1} + \sum \alpha_k Industry \quad dummies \\ & + \sum \alpha_j Year \quad dummies + \epsilon_{i,t} \end{aligned} \tag{1}$$

PO refers to company-level dividend payout (*Dividend*) and company-level stock repurchase payout (*Repurchase*) for company *i* at time *t*. *Dividend* (*Repurchase*) variable is computed [10] using the common dividends scaled by total assets (common and preferred stock repurchases adjusted for any reduction in preferred stock, scaled by total assets) (Hasan and Habib, 2020a, 2020b). *AQ* implies the auditee's audit quality, and we estimate it using each of our four proxies. We use two output-based proxies and two input-based proxies. Our output-based proxies are *SP [11]* (a dummy variable having the value of 1 if *ROA* (return on assets calculated as earnings before interests scaled by total assets) is lower than 3%, and 0 otherwise) and *SB* (a dummy having the value of 1 if the year-on-year change in *ROA* is lower than 1%, and 0 otherwise). Former research reports that the inclination to meet/beat earnings targets can positively foretell the assumed audit defects (i.e. higher amounts of *SP* (*SB*) imply lower audit quality) (Rajgopal *et al.*, 2021; DeFond and Zhang, 2014). In this setting, α_1 is predicted to be negative and significant for our output-based proxies (i.e. *SP* and *SB*) in equation (1) to support *H1a* and *H1b*. Our input-based proxies are audit fee ratio (*FeeRatio*) and industry expert (*Expert*). Audit fee ratio [12] can speak for the audit effort level and incorporates both the demand and supply aspects related to audits, and it is calculated as the ratio of audit fees to the sum of audit fees and non-audit fees for a specific firm-year observation (DeFond and Zhang, 2014; Rajgopal *et al.*, 2021). Based on former research (DeBoskey and Jiang, 2012; Sun and Liu, 2011), we also use industry expert *(Expert)* as the other input-based proxy for audit quality. Auditors' industry expertise can aid auditors in achieving higher capability in the auditing operation. Such expertise (i.e. auditor's wisdom about the auditee's industry and content of its business, its master plans and accounting information system) will help auditors present a reasonably high-quality audit report (DeFond and Zhang, 2014; Rajgopal *et al.*, 2021). Moreover, because of auditors' valuable experience and remarkable investment in technologies adapted to the auditees' segment, expert auditors are typically more vigilant of the types and frequencies of possible errors, empowering them to supply high-quality audit reports (DeFond and Zhang, 2014).

We define *Expert* as a dummy variable having the amount of 1 if the auditor meets one of the coming circumstances:

- if the auditor has the biggest yearly market share (according to two-digit Standard Industrial Classification codes) in the industry and if the annual market share is at least 10% points greater than its nearest competitor in the audit market; or
- if the auditor has an annual market share greater than 30% in the industry, and zero otherwise.

In this setting, α_1 is predicted to be positive and significant for our input-based measures (i.e. *FeeRatio* and *Expert*) in equation (1) to support *H1*. Other variables (i.e. independent variables) are explained in the Appendix. We lag *AQ* and independent variables by one period, in equation (1), to alleviate the issue associated with synchronous endogeneity (Petersen, 2009). We include year and industry (according to two-digit Standard Industrial Classification codes) fixed effects, and we estimate our model with *t*-statistics clustered at the company level. *t*-statistics are also robust to heteroscedasticity and within-company serial correlation (Petersen, 2009).

4. Empirical findings

4.1 Descriptive statistics

Table 1 illustrates descriptive statistics for the modeled variables. Based on Table 1, the average *SP* (*SB*) is 0.21 (0.17), and the average *FeeRatio* (*Expert*) is 0.36 (0.39). The average amount of *Dividend* (*Repurchase*) is 0.01 (0.03), with a standard deviation of 3% (5%). On average, a firm has almost 23% in *LEV*, *ROA* of 2%, *MTB* of 3.57 and *SysRisk* of 1.15. Table 2 displays the bivariate correlation matrix for the variables defined in equation (1). As we can see in Table 2, findings suggest that there are positive (negative) correlations between *FeeRatio* and *Expert* (*SP* and *SB*) with *Dividend* and *Repurchase*. These findings present preliminary results that audit quality can be effective in increasing the auditee's payouts.

4.2 Primary findings

Tables 3 and 4 show the findings [13] from executing the model in equation (1). Models 1–4 in Table 3 depict the findings of the single role of our four audit quality proxies on increasing the auditee's dividend payouts. As we can see in Models 1 and 2, the coefficients for the *SP* and *SB* (−0.022 and −0.008) are significant [14] at the 5% level and 1% level, and support *H1*. Moreover, the findings in Models 3 and 4 show that the coefficients for *FeeRatio* and *Expert* (0.069 and 0.097) are significant [15] at the 1% level and 10% level, which support *H1*. Models 1–4 in Table 4 demonstrate the findings of the single role of the four audit quality proxies in increasing the auditee's stock repurchase payouts. As we can see in Models 1 and 2

Variable	Number of observations	Mean	SD	Minimum	Maximum
Dividend	31,784	0.01	0.03	0.00	0.05
Repurchase	31,784	0.03	0.05	0.00	0.07
SP	31,784	0.21	0.28	0.00	1.00
SB	31,784	0.17	0.42	0.00	1.00
FeeRatio	31,784	0.36	0.24	0.00	1.00
Expert	31,784	0.39	0.18	0.00	1.00
SIZE	31,784	6.27	1.75	1.07	15.63
SysRisk	31,784	1.15	0.19	−1.74	2.27
ASY (%)	31,784	0.37	0.15	0.01	0.42
ROA	31,784	0.02	0.28	−0.19	0.37
LEV	31,784	0.23	0.37	0.00	0.58
INTAN	31,784	0.12	0.28	0.00	0.61
EX	31,784	0.04	0.09	0.00	0.23
CExp	31,784	0.06	0.17	0.00	0.14
CF	31,784	0.03	0.43	−0.18	0.47
MTB	31,784	3.57	2.23	0.69	37.03
Cash	31,784	0.27	0.33	0.00	0.63

Table 1.
Descriptive statistics

Table 2.
Pearson's correlation matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
(1) *Dividend*	1.00																
(2) *Repurchase*	0.17*	1.00															
(3) *SP*	−0.12*	−0.15*	1.00														
(4) *SB*	−0.11*	−0.09*	0.41*	1.00													
(5) *FeeRatio*	0.13*	0.17*	−0.14*	−0.09*	1.00												
(6) *Expert*	0.12*	0.13*	−0.10*	−0.07*	0.28*	1.00											
(7) *SIZE*	0.22*	0.24*	−0.12*	−0.14*	0.21*	0.24*	1.00										
(8) *SysRisk*	−0.02	−0.01	−0.01	−0.01	−0.00	0.02	−0.00	1.00									
(9) *ROA*	0.16*	0.13*	−0.39*	−0.33*	0.07*	0.05*	−0.15*	−0.00	1.00								
(10) *LEV*	−0.08*	−0.04*	−0.06*	−0.08*	0.05*	0.04*	−0.08*	−0.06*	−0.11*	1.00							
(11) *INTAN*	−0.06*	−0.10*	0.05*	0.06*	−0.00	−0.01	−0.05*	0.00	0.04*	0.15*	1.00						
(12) *EX*	−0.11*	−0.14*	0.02	0.00	−0.00	0.01	−0.03*	0.01	−0.01	0.07*	0.00	1.00					
(13) *CExp*	−0.02*	−0.06*	−0.02	−0.01	0.01	0.00	0.09*	0.00	0.00	−0.00	−0.00	−0.07*	1.00				
(14) *CF*	0.10*	0.18*	−0.06*	−0.09*	0.18*	0.14*	0.17*	−0.01	0.26*	−0.06*	0.01	0.03*	0.02	1.00			
(15) *MTB*	−0.05*	−0.09*	0.00	0.01	0.00	−0.01	−0.11*	−0.00	0.11*	−0.03*	0.09*	0.00	0.12*	0.14*	1.00		
(16) *ASY*	−0.23*	−0.17*	0.15*	0.13*	−0.11*	−0.16*	−0.14*	0.05*	0.00	0.01	0.04*	0.19*	0.00	0.00	0.01	1.00	
(17) *Cash*	−0.19*	−0.15*	0.16*	0.12*	−0.10*	−0.14*	−0.19*	0.08*	−0.06*	−0.21*	−0.12*	0.09*	−0.15*	−0.17*	0.08*	0.10*	1.00

Note: *Refers to significance at the 5% level

Response variable: *Dividend* Variables	(1) Coeff (*t*-value)	(2) Coeff (*t*-value)	(3) Coeff (*t*-value)	(4) Coeff (*t*-value)
SP	−0.022** (−2.27)			
SB		−0.008*** (−2.79)		
FeeRatio			0.069*** (3.02)	
Expert				0.097* (1.81)
ASY	−0.079*** (−2.86)	−0.084*** (−2.97)	−0.073*** (−3.12)	−0.077*** (−2.91)
*ASY * SP*	−0.051* (−1.81)			
*ASY * SB*		−0.039** (−2.10)		
*ASY * FeeRatio*			0.027** (2.26)	
*ASY * Expert*				0.049*** (2.91)
SIZE	0.051*** (3.35)	0.054*** (3.27)	0.058*** (3.19)	0.064*** (3.08)
SysRisk	−0.007 (−0.72)	−0.005 (−0.84)	−0.008 (−0.68)	−0.009 (−0.79)
ROA	0.029** (2.19)	0.035** (2.31)	0.037** (2.26)	0.031** (2.13)
LEV	−0.076*** (−2.76)	−0.072** (−2.22)	−0.077*** (−2.88)	−0.073** (−2.39)
INTAN	−0.024 (−1.16)	−0.026 (−0.79)	−0.023 (−1.07)	−0.029 (−0.84)
EX	−0.042*** (−2.93)	−0.041*** (−2.86)	−0.047*** (−3.04)	−0.049*** (−3.13)
CExp	−0.036*** (−2.87)	−0.034*** (−3.16)	−0.038*** (−3.09)	−0.036*** (−2.92)
CF	0.018** (2.05)	0.027** (2.17)	0.026** (2.12)	0.028** (2.19)
MTB	−0.001 (−1.42)	−0.002 (−0.72)	−0.001 (−0.94)	−0.000 (−0.79)
Cash	−0.075** (−2.35)	−0.069** (−2.29)	−0.063** (−2.18)	−0.067** (−2.11)
Intercept	0.113*** (3.12)	0.134*** (3.37)	0.127*** (3.51)	0.109*** (3.43)
Ind. FE.	YES	YES	YES	YES
Year FE.	YES	YES	YES	YES
Pseudo R^2	0.316	0.334	0.343	0.323
Observations	31,784	31,784	31,784	31,784

Note: *, ** and *** imply statistical significance at the 10%, 5% and 1% percent levels, respectively

Table 3. Influence of audit quality on dividend payouts

of Table 4, the coefficients for *SP* and *SB* (−0.112 and −0.091) are significant [16] at the 1% and 5% levels, and support *H1*. Moreover, findings in Models 3 and 4 report the coefficients for *FeeRatio* and *Expert* (0.036 and 0.073), which are significant [17] at the 5% and 1% levels, which support *H1*.

To examine *H2*, we interact *ASY* with each of our four audit quality proxies in Table 3 (Table 4) so that the additional impact of auditee's *ASY* on its *Dividend* (*Repurchase*) could be investigated. We measure *[18]ASY* using the dispersion of financial analysts' earnings forecasts. This measure is a pertinent representative of firm-level *ASY* (Li and Zhao, 2008). The findings in Table 3 illustrate positive coefficients for the interaction terms, *ASY * FeeRatio* and *ASY * Expert* (0.027 and 0.049), which are significant at the 5% and 1% levels, and support *H2*. Findings in Models 1 and 2 also support *H2*. Similarly, the results from Table 4 imply that the effect of audit quality on the auditee's stock repurchase payouts is stronger when the auditee exhibits more information asymmetry ex-ante.

The coefficients for most independent variables are in line with what we expect based on the literature (Hasan and Habib, 2020a, 2020b). For example, the coefficients of return on assets and company size are positive and significant, showing that lucrative and larger companies make more payouts. This is because lucrative companies have a greater chance of creating free cash flows, empowering them to provide higher payouts. Based on life-cycle theory, company size and firm payouts are positively correlated because large companies are typically more ripened, less insecure and have higher free cash flows. Hence, larger

Response variable: *Repurchase* Variables	(1) Coeff (*t-value*)	(2) Coeff (*t-value*)	(3) Coeff (*t-value*)	(4) Coeff (*t-value*)
SP	−0.112*** (−3.13)			
SB		−0.091** (−2.29)		
FeeRatio			0.036** (2.17)	
Expert				0.073*** (2.87)
ASY	−0.064*** (−3.16)	−0.069*** (−2.73)	−0.058*** (−3.23)	−0.061*** (−3.02)
*ASY * SP*	−0.092*** (−2.96)			
*ASY * SB*		−0.023** (−2.16)		
*ASY * FeeRatio*			0.041*** (3.07)	
*ASY * Expert*				0.073** (2.32)
SIZE	0.030*** (3.15)	0.033*** (3.37)	0.037*** (3.29)	0.033*** (3.18)
SysRisk	−0.015 (−1.11)	−0.014 (−0.95)	−0.017 (−0.73)	−0.018 (−0.81)
ROA	0.058*** (2.93)	0.054*** (3.01)	0.057*** (2.85)	0.052*** (2.76)
LEV	−0.105*** (−2.81)	−0.104*** (−3.14)	−0.106*** (−2.77)	−0.102*** (−2.89)
INTAN	−0.082 (−0.96)	−0.080 (−0.89)	−0.083 (−0.73)	−0.086 (−1.08)
EX	−0.112*** (−2.83)	−0.114*** (−3.17)	−0.116*** (−2.99)	−0.113*** (−3.07)
CExp	−0.054** (−2.16)	−0.053** (−2.26)	−0.058** (−2.09)	−0.056** (−2.21)
CF	0.071*** (3.05)	0.076*** (2.96)	0.074*** (3.23)	0.078*** (3.10)
MTB	−0.012* (−1.81)	−0.014 (−1.43)	−0.011 (−1.32)	−0.015 (−1.39)
Cash	−0.134*** (−3.32)	−0.136*** (−3.28)	−0.133*** (−3.17)	−0.137*** (−3.12)
Intercept	0.084*** (3.74)	0.073*** (3.63)	0.066*** (3.57)	0.098*** (3.93)
Ind. FE.	YES	YES	YES	YES
Year FE.	YES	YES	YES	YES
Pseudo R^2	0.278	0.269	0.274	0.286
Observations	31,784	31,784	31,784	31,784

Notes: *, ** and *** imply statistical significance at the 10%, 5% and 1% percent levels, respectively

Table 4. Effect of audit quality on stock repurchase payouts

companies enjoy substantial resilience and make higher payouts (Benlemlih, 2019; Hasan and Habib, 2020a, 2020b).

One may contend that *FeeRatio* is generally time-invariant, and a huge proportion of its variation is cross-sectional rather than time-series. To alleviate this issue, we use the first difference of *FeeRatio [19]* (i.e. *C_FeeRatio*) in our model in equation (1). Unreported findings imply that our understanding of *H1* and *H2* keeps on holding.

5. Further investigation

5.1 Robustness tests

5.1.1 Substitute proxies of auditee's payouts. We re-estimate our model in equation (1) using common dividends scaled by cash flow from operations (*Dividend_CF*), common dividends scaled by income before extraordinary items (*Dividend_IB*), common dividends scaled by net sales (*Dividend_Sale*), common dividends scaled by net income (*Dividend_NI*) and common dividends scaled by market value of firm equity (*Dividend_MV*) as other measures of auditee's dividend payout (Hasan and Habib, 2020a, 2020b). Untabulated findings imply that our understanding of *H1* and *H2* keeps on holding when we use these alternative proxies of the auditee's dividend payouts. Common and preferred stock repurchases adjusted for any decreases in preferred stock, scaled by income before extraordinary items (*Repurchase_IB*) is also used as another proxy for the auditee's *Repurchase* (Hasan and Habib, 2020a, 2020b). Unreported findings imply that our hypotheses still hold when we use

this alternative proxy. Thus, we can conclude that a single proxy of *Dividend* (*Repurchase*) does not drive our key results [20].

5.1.2 Alternative measures of audit quality. In our primary formulation, we use four proxies to catch auditees' audit quality. As a specification check, the total accrual (as another output-based measure of audit quality) and auditor tenure (as another input-based measure of audit quality) are used to capture *AQ* (DeFond and Zhang, 2014; Rajgopal *et al.*, 2021; Cheng *et al.*, 2021). Total accrual [21] (*ACCRUAL*) is calculated as earnings before extraordinary items minus net cash flow from operations excluding extraordinary items and discontinued operations, and higher *ACCRUAL* suggests lower audit quality as auditees with greater *ACCRUAL* are more probable to have audit failure (DeFond and Zhang, 2014; Rajgopal *et al.*, 2019). Auditor tenure (*Tenure*) is measured based on the time in years of the auditor–auditee association. Previous research documents that longer auditor tenure is associated with inferior audit quality as a lengthier auditor–auditee association can diminish auditor's autonomy (DeFond and Zhang, 2014; Rajgopal *et al.*, 2021). We re-conduct our examination by using these alternative audit quality measures (i.e. *ACCRUAL* and *Tenure*). Untabulated findings suggest that our understanding of *H1* and *H2* keeps on holding when we use these additional specifications. These findings imply that a unique proxy [22] for audit quality does not drive our results.

5.1.3 Two-stage least squares approach. As a robustness test of our findings, we use a 2SLS approach (also known as the instrumental variable (IV) approach). We start by introducing a combined [23] variable, *AQ_COMB,* to measure *AQ*. *AQ_COMB* is explained as follow [equation (2)]:

$$AQ\_COMB_{j,t} = D\_FeeRatio_{j,t} + \ Expert_{j,t} + D\_SB_{j,t} + D\_SP_{j,t} \tag{2}$$

Where *D_FeeRatio* is a dummy variable taking the amount of one if *FeeRatio* of firm *j* is greater than the average *FeeRatio* among all auditees in year *t* and zero otherwise. *D_SP* is a binary variable that takes the amount of 1 if return on assets (*ROA*, calculated as earnings before interests scaled by total assets) of firm *j* in time *t* is higher than 3% and 0 otherwise. *D_SB* is a binary variable taking the amount of 1 if the year-on-year change in *ROA* is higher than 1% for firm *j* at time *t* and zero otherwise. *Expert* is defined before. Higher *AQ_COMB* suggests a higher-quality audit. We instrument *AQ_COMB* and run the IV approach for our model in equation (1). Pursuing previous studies (Yeung and Lento, 2018), the industry mean value of our combined audit quality proxy (*AQ_COMB_IND*) is used as an instrument for *AQ_COMB*. It is perceptible to anticipate that *AQ_COMB_IND* to be positively associated with *AQ_COMB* (our endogenous variables). Nonetheless, it is improbable that each *Dividend* and *Repurchase* influences *AQ_COMB_IND*. It is also improbable that the *AQ_COMB_IND* influences *Dividend* and *Repurchase* other than through *AQ_COMB*, thereby meeting the pivotal conditions of the instruments. The findings [24] of IV approach are shown in Table 5. Results qualitatively resemble those documented in Tables 3 and 4, and the primary results associated with our hypotheses continue to hold.

5.1.4 Propensity score matched sample and Heckman's model. As a robustness test and to address possible endogeneity concerns (auditees can influence both its payouts and its audit quality), we use a propensity score matching (PSM) approach (Rosenbaum and Rubin, 1983). Building a well-balanced sample can mitigate self-selection bias (Rosenbaum and Rubin, 1983). In the PSM procedure, to handle related sample dissimilarities other than *AQ_COMB*, we apply a caliper [25] of 1%, indicating that the greatest discrepancy in PS score between treatment group and control group can be 0.01. Findings (untabulated) of the

PSM test are in line with *H1* and *H2*. A standard Heckman sample selection model is also used (Heckman, 1979). We aim to mitigate selection bias stemming from auditees with no *Dividend* (*Repurchase*) in a non-random way. Heckman's model groups the *Dividend* (*Repurchase*) decision into two subcategories and models them independently [26]. The first decision is the choice to have payout (i.e. the propensity to make a payout), and the next decision is to specify the value of payout contingent on non-zero payouts. Untabulated findings imply that the coefficient of the inverse mills ratio for *Dividend* (*Repurchase*) model is statistically insignificant, suggesting that the sample selection issue is not severe in our context. This specification check implies that even after controlling for self-selection bias, our understanding of our hypotheses remains persistent.

5.2 Moderating functions of rollover risk, financial constraints and corporate governance

Previous research documents that rollover risk (or refinancing risk) is a pivotal driver that increases auditees' cash holdings (reflected in lower auditee's payouts); hence, managers are inclined to generate inner support (e.g. cash reserving) to have smoother refinancing (Harford *et al.*, 2014). Moreover, holding cash for auditees with high refinancing risk aids them in having a lower likelihood of financial distress and bankruptcy (Chiu *et al.*, 2017). If this reasoning is correct, we expect that the association between audit quality and the auditee's payouts becomes less (more) pronounced with higher (lower) rollover risk. We estimate refinancing risk (*ROLL*) as the percentage of long-term debt due for repayment in the following period (Paul and Zhou, 2018). A greater *ROLL* indicates a higher requirement for refinancing, implying a higher refinancing risk (Chiu *et al.*, 2017). Results in Tables 6 and 7 (i.e. Model 2) suggest that the coefficient of the interaction term in Model 2 (*ROLL* * *AQ_COMB*) is negative and significant (-0.032, $p < 0.05$; -0.043, $p < 0.05$, respectively), implying that the relationship between audit quality and the auditee's payouts becomes less (more) pronounced with (without) higher rollover risk.

Again, according to the precautionary motive for cash holdings, financially constrained auditees are inclined to hold more cash (reflected in lower payouts) Hasan *et al.*, 2017). Subsequently, we expect that the relationship between audit quality and auditee's payout becomes less (more) pronounced for auditees with higher (lower) financial constraints. We estimate financial constraints (*FC*) according to the Whited and Wu index score and company-year observations in the top quartile of the yearly distribution of the Whited and Wu score are considered financially constrained auditees, and we attribute 1 to *FC* variable and otherwise 0 (Bao *et al.*, 2012; Whited and Wu, 2006; Zhao and Xiao, 2019). Results in

Table 5.
Two stage least squares regression findings for the influence of combined audit quality measure on auditee's payouts

Variables	First Stage (DV: A*Q_COMB*) (1) Coeff (*t-value*)	Second Stage (DV: *Dividend*) (2) Coeff (*t-value*)	Second stage (DV: *Repurchase*) (3) Coeff (*t-value*)
AQ_COMB_IND	0.148*** (3.03)		
AQ_COMB		0.119*** (2.81)	0.151** (2.36)
ASY		−0.086*** (−2.91)	−0.067*** (−3.13)
ASY * *AQ_COMB*		0.051** (2.27)	0.037*** (2.78)
All variables in equation (1)	YES	YES	YES
Ind. FE.	YES	YES	YES
Year FE.	YES	YES	YES
Adj R^2	0.451	0.341	0.289
Observations	31784	31784	31784

Notes: *, ** and *** imply statistical significance at the 10%, 5% and 1% percent levels, respectively

Table 6 and 7 (i.e. Model 3) show that the coefficients of interaction terms in the Model 3 (i.e. *FC* * *AQ_COMB*) are negative and significant (−0.074, $p < 0.01$;−0.035, $p < 0.01$, respectively), suggesting that the relationship between audit quality and the auditee's payouts becomes less (more) pronounced when financing constraints are high [27] (low).

Finally, we investigate the role of corporate governance (*GOV*) on the relationship between audit quality and auditee's payout. We can argue that *GOV* affects the auditee's payouts by mitigating the information asymmetry (between managers and investors) and agency costs (Hasan and Habib, 2020a; Khanchel, 2007; Srivastava *et al.*, 2019). Furthermore, we can argue that if a high-quality audit supplies material and incremental information for equity holders, and as an oversight function, if it curbs managers' opportunistic behaviors, its advantages should be maximized for a weakly governed auditee whose agency cost is the greatest. In other words, the function of audit quality as an oversight instrument is intensified when other controlling tools such as *GOV* are not powerful enough. *GOV* is estimated using [28] institutional shareholdings (measured by the percentage of common shares kept by

Response variable: *Dividend* Variables	(1) Coeff (*t*-value)	(2) Coeff (*t*-value)	(3) Coeff (*t*-value)	(4) Coeff (*t*-value)
AQ_COMB	0.107*** (2.76)	0.099*** (2.83)	0.116** (2.39)	0.113** (2.28)
ROLL	−0.215*** (−3.18)	−0.201*** (−3.04)		
*ROLL * AQ_COMB*		−0.032** (−2.36)		
FC	−0.172*** (−2.97)		−0.158*** (−3.18)	
*FC * AQ_COMB*			−0.074*** (−2.88)	
GOV	0.122*** (3.10)			0.141*** (2.74)
*GOV * AQ_COMB*				−0.062** (−2.17)
All variables in equation (1)	YES	YES	YES	YES
Ind. FE.	YES	YES	YES	YES
Year FE.	YES	YES	YES	YES
Pseudo R^2	0.312	0.296	0.291	0.307
Observations	23,694	29,664	30,818	23,694

Note: *, ** and *** imply statistical significance at the 10%, 5% and 1% percent levels, respectively

Table 6. Functions of refinancing (rollover) risk, corporate governance and financial constraint on the association of audit quality with auditee's dividend payouts

Response variable: *Repurchase* Variables	(1) Coeff (*t*-value)	(2) Coeff (*t*-value)	(3) Coeff (*t*-value)	(4) Coeff (*t*-value)
AQ_COMB	0.147** (2.26)	0.157** (2.17)	0.153** (2.36)	0.149** (2.12)
ROLL	−0.091*** (−3.32)	−0.106*** (−3.21)		
*ROLL * AQ_COMB*		−0.043** (−2.04)		
FC	−0.069*** (−3.14)		−0.078*** (−3.36)	
*FC * AQ_COMB*			−0.035*** (−2.97)	
GOV	0.161* (1.82)			0.173** (2.39)
*GOV * AQ_COMB*				−0.059** (−2.26)
All variables in equation (1)	YES	YES	YES	YES
Ind. FE.	YES	YES	YES	YES
Year FE.	YES	YES	YES	YES
Pseudo R^2	0.319	0.338	0.347	0.326
Observations	23,694	29,664	30,818	23,694

Note: *, ** and *** imply statistical significance at the 10%, 5% and 1% percent levels, respectively

Table 7. Functions of refinancing (rollover) risk, corporate governance and financial constraint on the association of audit quality with auditee's stock repurchase payouts

institutional investors). Findings in Tables 6 and 7 (i.e. Model 4) show that the coefficients of interaction terms in Model 4 (i.e. *GOV* * *AQ_COMB*) are negative and significant (−0.062, $p <$ 0.05;−0.059, $p < 0.05$, respectively), suggesting a substitution effect [29] for *GOV* in the association between the audit quality and auditee's *Dividend* (*Repurchase*). Results imply that shareholders need to ensure more influential corporate governance tools for auditees with low-quality audits to mitigate concerns about self-serving managerial behavior.

5.3 Omitted variable bias

To alleviate concerns coming from correlated omitted variables, we re-run our primary model, incorporating auditee's retained earnings (*Retained*) (calculated by the ratio of retained earnings to total assets to control for the auditee's life cycle), industry sigma [30] (*Sigma*) (calculated as the standard deviation of the operating cash flow over the past three years for firms in the same industry (based on the two-digit SIC codes) to control for cash flow riskiness) and age (*AGE*) (calculated by the log of one plus the number of years as the auditee is initially included in the Center for Research in Securities Prices (CRSP) to control for auditee's maturity) (Hasan and Habib, 2020a, 2020b). Findings (untabulated) imply that our understanding of our hypotheses holds even when we incorporate these additional covariates to equation (1). Then, we use firm fixed effects in the model in equation (1) to control for unknown time-invariant firm-specific features. Findings (untabulated) imply that our understanding of *H1* and *H2* keeps on holding by testing this specification. As a substitute approach, we also re-perform the models in equation (1) using the generalized method of moments (system GMM estimator) (Blundell and Bond, 2000). Results (untabulatd) resemble those documented in Tables 3 and 4. In summary, our robustness tests provide more confidence in our results and derived inferences.

5.4 Audit quality and auditee's payout stability

As a supplementary exploration, we use a statistical model to investigate the stability of dividend payouts of auditees enjoying high-quality audits versus auditees with low-quality audits. Following Von Eije and Megginson, (2008), we implement the Lintner's model (Lintner, 1962) regressions for dividend payouts based on equation (3):

$$C\_Dividend_{i,t} = \quad \alpha_0 + \alpha_{1t} Dividend_{i,t-1} + \alpha_2 \; E_{i,t} + \epsilon_{i,t} \tag{3}$$

Where $C\_Divident_{i,t}$ represents to the changes in yearly dividend payout from year *t-1* to year *t*, $Divident_{i,t-1}$ implies the lagged value of dividend payout, $E_{i,t}$ is earnings before interest but after tax for year *t*, and $\epsilon_{i,t}$ is the error term of equation (3). This model displays that, instead of shifting right away to the new goal dividend, firms smooth out changes in their dividends by moving part of the way to the target each year. Speed of adjustment (*SOA*) captures the fastness in which auditees adjust their dividends and is measured by $-\alpha_1$; greater *SOA* indicates faster adjustment and, consequently, a lower stable dividend payout (Von Eije and Megginson, 2008). Ultimately, we group our sample according to the sample average of *AQ_COMB* into two subcategories of low *AQ_COMB* auditees vs high *AQ_COMB* auditees to have a comparison about the dividend payout stability between auditees with high-quality audits and auditees with low ones. Findings (for both one lag and two lags of dividend payout) in Table 8 collectively imply that auditees with low levels of audit quality adjust their dividend payouts faster than those with high levels of audit quality. Models 1 and 2 of Table 8 suggest that the *SOA* of auditees with high-quality audits is less than auditees with low-quality audits (0.227 vs 0.292), suggesting that dividend payouts are more stable for auditees with high levels of audit quality. As we argue in *H1*,

auditees with low-quality audits have lower payouts and their managers keep more cash flow. Thus, these managers have more opportunities to play with payouts (making more payouts) than managers of auditees enjoying high-quality audits. Subsequently, auditees with low-quality audits are more probable to accelerate their payouts (reflected in lower stability) to flag their real values when the market undervalues their stocks.

6. Conclusion and discussion

Our study explores how audit quality can affect an auditee's payout policies having two forms of dividend payouts and stock repurchase payouts. Based on a large panel of US companies, we document evidence of positive and significant associations between our audit quality proxies and auditees' payouts. Our results are robust to alternative proxies of audit quality, auditees' dividend and stock repurchase payouts, use of IV and PSM approaches, and alleviation of omitted variable bias. We also document that the positive relationship between audit quality and an auditee's payouts is stronger for auditees exhibiting information asymmetry ex-ante, lower financial constraints and refinancing risk and weaker governance. Ultimately, we report that auditees with low-quality audits adjust their dividend payouts faster than auditees with high-quality audits, implying that dividend payouts are more stable in auditees enjoying high-quality audits. Practically, our results highlight the contributing effect of audit quality on auditees' payout policies. In addition, our findings are noticeable as we document that a high-quality audit affects the auditee beyond its financial reporting quality. Our findings emphasize the great worth of audit quality consideration in investors' decision-making processes as high-quality audits cause higher payouts for shareholders (smoothing the wealth transfer process to investors).

Our study is subject to some limitations, which provide avenues for future research. The measures used for audit quality, dividend and stock repurchase payouts, information asymmetry, rollover risk, financial constraints and corporate governance are vulnerable to estimation fault and measurement error, which are typical restrictions present in most audit quality and corporate payout papers. Nonetheless, checking the comparative robustness of miscellaneous measures and their differential influences in disparate settings could be instructive. Although our findings are robust to the use of IV and PSM approaches, lagged values of independent variables, alleviation of omitted

Table 8. Using Lintner approach for evaluating the dividend payout stability of auditees enjoying high quality audits vs auditees having low quality audits

	Response variable: *Change in dividend payouts (C-Dividend)*			
	(1)	(2)	(3)	(4)
Variables	Coeff *(t*-value*)*	Coeff (*t*-value*)*	Coeff (*t*-value*)*	Coeff (*t*-value)
	Low *AQ_COMB*	High *AQ_COMB*	Low *AQ_COMB*	High *AQ_COMB*
$Divident_{t-1}$	−0.292*** (−3.17)	−0.227** (−2.42)		
$Divident_{t-2}$			−0.374*** (−3.09)	−0.312** (−2.31)
E	0.141*** (3.37)	0.167*** (3.84)	0.134*** (3.29)	0.159*** (3.61)
Constant	−9.125 (−0.74)	−5.418 (−0.98)	−6.078 (−0.86)	−8.163 (−1.21)
Ind. FE.	YES	YES	YES	YES
Year FE.	YES	YES	YES	YES
Adj R^2	0.443	0.428	0.439	0.424
Observations	19,178	12,606	19,178	12,606
SOA	0.292	0.227	0.374	0.312

Note: *, ** and *** imply statistical significance at the 10%, 5% and 1% percent levels, respectively

variable bias and firm fixed effects, we cannot completely claim that the association between audit quality and corporate payouts is causal. Future studies can consider using diff-in-diff analyses and exogenous shocks if data availability and the existence of exogenous shocks are not an issue in the corresponding settings. Nevertheless, our findings present new insights into the relationship between audit quality and an auditee's payout policies. Eventually, the degree to which our results can be generalizable and applicable at different times, stages and country contexts (e.g. developing and undeveloped markets) remains unanswered.

Notes

1. https://pcaobus.org/Standards/Auditing/Pages/Auditing_Standard_14.aspx
2. Life cycle theory suggests that a firm will begin to have payouts at the maturity phase when its growth rate and profitability begin to drop (Jabbouri and Attar, 2018).
3. This theory explains why investors might prefer today's certain dividends over uncertain future capital gains (Fama and French, 2001; Jabbouri and Attar, 2018).
4. Based on the agency theory, corporate payouts can reduce potential overinvestment by management and hinder insiders (i.e. managers) from increasing their personal belongings by investing the cash flows in pet projects (i.e. misallocation of firm's cash flows to serve themselves) (Jabbouri and Attar, 2018). We use this proposition in Section 2.3 to explain the association between audit quality and corporate payouts.
5. Our study is different from Harakeh *et al.* (2019) and Aivazian *et al.* (2006), as we have investigated the effect and function of audit quality rather than the effect of IFRS adoption (Harakeh et al., 2019) or type of corporate debt (Aivazian et al., 2006). Use of stock repurchase as a corporate payout mechanism is also not the case in these studies, and they just focus on cash dividends.
6. Our position is that high-quality audits have a complementary role instead of a substitution role for payout policies. The counterargument (i.e. substitution role of audit quality for payout decisions) is that high-quality audits have a negative effect on payout policies because audit quality can substitute corporate monitoring. Based on this counterargument, as reputation-creating functions, payouts are used by auditees to signal that their free cash flows are not being squandered. In this line, high-quality audits can alleviate the free cash flow concern and substitute the need for using payouts as flagging instruments. Hence, auditees with high-quality audits perceive the marginal benefit of higher payouts to be lower. Conversely, our complementary argument suggests that high-quality audits as a strong monitoring mechanism can discipline managers by foisting high corporate payouts. Relying on which argument/mechanism is more powerful, the influence of high-quality audits on payout policies can be positive, negative or neutral.
7. Firm-level information asymmetry is specified by different dimensions of a company. For instance, the nature of a company's business and its complexity level, growth and industry conditions, structure of investors and their sophistication level and capital market status all can influence firm-level information asymmetry.
8. Our approach to drop non-Big 4 auditors is in line with prior research (e.g. Francis, 2011; Gaver and Utke, 2019; Francis and Yu, 2009). We limit the sample to Big 4 clients to avoid any self-selection bias that could come from auditor choice. In other words, we focus on those firms that are audited by the Big 4 auditors so that our audit quality measures are not affected by the institutional differences between Big 4 and non-Big 4 auditors We also know that only Big 4 auditors tend to be industry specialists (DeFond and Zhang 2014). In addition, the Big 4 audit over 92% of firms, by market value, over our sample period.

9. Because the response variables in this paper have been censored between 0 and 1, Tobit models are used. Findings still hold when we use the OLS approach. Use of Tobit estimators when the response variable is corporate payouts is in line with previous research (e.g. Hasan and Habib, 2020; Zadeh, 2020).

10. We use the auditee's payout ratios (i.e. *Dividend* and *Repurchase*), as they incorporate more information than payout dummy variables and payout ratios consider not only the auditee's payout inclination (i.e. whether they have payouts or not), but also the size of payouts.

11. Higher amounts for *SP* (*SB*) suggest lower audit quality for auditees.

12. *FeeRatio* as a measure for audit quality has two important characteristics making it appropriate for our context. First, it is a continuous measure that can catch subtle distinctions in quality, not limited to a constrained subset of companies (Rajgopal *et al.*, 2021). Second, because there is a competitive market among auditors, fee premium captures the auditee's propensity to pay for precious services that are related to higher quality financial statements verification, internal controls examination and alleviating the risk of misconduct such as fraudulent acts (Rajgopal *et al.*, 2021).

13. There is no variance inflation factor for our modeled variables to become higher than ten, suggesting that multi-collinearity is not a serious concern in our analyses.

14. Our results are also economically significant. For instance, according to Models 1 and 2 of Table 3, one standard deviation decrease in *SP* (*SB*) is related to a 0.006 (0.003) increase in *Dividend*, suggesting a 32.4% (17.6%) increase over the sample's average *Dividend*.

15. Based on Columns 3 and 4 of Table 3, when *FeeRatio* (*Expert*) increases by one unit, *Dividend* increases by 6.9% (9.7%).

16. According to Models 1 and 2 of Table 4, when *SP* (*SB*) decrease by one unit, *Repurchase* increases by 11.2% (9.1%).

17. According to Models 3 and 4 of Table 4, one standard deviation increase in *FeeRatio* (*Expert*) is related to a 0.008 (0.013) increase in *Repurchase*, suggesting a 22.1% (33.6%) increase over the sample's average *Repurchase*.

18. Bid-ask spread is not used as an *ASY* measure as bid-ask spread proxy is an admitted representative of both the liquidity costs in exchange-traded securities and the size of the transaction cost. Hence, it is not fully crystal whether this measure alone completely catches an auditee's information asymmetry (Li and Zhao, 2008).

19. Our understanding of *H1* and *H2* keeps on holding when a change regression is implemented. In this untabulated specification check, we took the first difference from our variables in the left and right sides of equation (1) and re-run the model.

20. As a specification test, we also use logit regressions to examine the influence of audit quality (each of our four proxies is used) on the inclination of auditees to have dividend (stock repurchase) payouts using a dummy variable having the amount of one if the auditee has dividend (stock repurchase) payouts and zero otherwise. Untabulated findings indicate that auditees enjoying high-quality audits are more likely to have dividend (stock repurchase) payouts. Furthermore, we outline the complete payout variable (*CPAY*) as the aggregate of *Dividend* and *Repurchase* to investigate the influence of audit quality on auditee's full payouts. Findings (unreported) imply that our understanding of *H1* and *H2* keeps on holding when we use this variable specification.

21. We also consider using discretionary accruals (*DACC*) calculated by the modified Jones model (DeFond and Zhang, 2014; Rajgopal *et al.*, 2021; Cheng *et al.*, 2021). *DACC* and *ACCRUAL* were highly correlated. Untabulated findings imply that our understanding of our hypotheses is robust to the utilization of *DACC* instead of *ACCRUAL*.

22. Our understanding related to our hypotheses keeps on holding when we use the log of the audit fee paid by auditee to audit firm as a measure of audit quality (DeFond and Zhang, 2014). Going concern opinions issuance and having material misstatement are not used (DeFond and Zhang, 2014; Rajgopal et al., 2021; Davis et al., 2009) as the alternative measures of audit quality in our formulation as these observations are infrequent and are typically issued in abnormal conditions, making these proxies unsuitable for our context (i.e. they have numerous missing amounts, thereby lowering the power of tests).
23. Yeung and Lento (2018) use an analogous way.
24. Our approach regarding the use of industry mean value of audit quality as an instrument for a firm's audit quality is consistent with prior research (e.g. Yeung and Lento, 2018; Xu *et al.*, 2014; Chen *et al.*, 2017; Kim *et al.*, 2014). The idea is that the industry average of audit quality as a monitoring attribute is likely to be correlated with the audit quality attribute of the focal firm. We carried out two tests to make sure that our IV approach is well-specified. Result of the first stage *F*-statistic (Column 1 of Table 5) was significant ($p < 0.01$) (*F*-statistic exceeds the critical value of ten) for *AQ_COMB_IND*, suggesting that our instrument was strong for *AQ_COMB*. Finally, results of Wald statistics ($p > 0.10$) suggest that there is no endogeneity concern related to *AQ-COMB*.
25. Our matches are specified using a caliper of 1% and without replacement. Our results keep on holding when we permit for replication and use different calipers of 3% and 5%.
26. In the first step, a probit model is used to regress a dummy variable (having amount of one if the auditee makes *Dividend* (*Repurchase*) and zero otherwise) on all independent variables from Equation 1. In the next regression, *Dividend* (*Repurchase*) is the dependent variable, our *AQ_COMB* variable is the variable of interest, the independent variables are those used in equation (1), and we incorporate the self-selection parameter (estimated by inverse Mills ratio in the first stage).
27. Consistent with prior research (e.g., Li and Zhao, 2008), we believe that firm-level information asymmetry is influenced by various dimensions of a firm. For instance, the nature of firm business and its complexity level, growth and industry conditions, structure of investors and their sophistication level, and capital market condition all can influence firm-level information asymmetry. In this line, we believe that three constructs and variables of information asymmetry, rollover risk and financial constraints are different (e.g. capturing different things). For example, rollover risk is more related to the debt structure of a company (short-term debt vs long term-debt) rather than firm-level information asymmetry (Harford et al., 2014).
28. We also use board independence (*BOARD*) as another proxy for corporate governance quality (Jaggi *et al.*, 2009). Former research (e.g. Jaggi *et al.*, 2009) shows that independent corporate boards supply powerful control on managerial activities and can alleviate agency concerns. Our findings (untabulated) about *H1* and *H2* keeps on holding by incorporating *BOARD* into our Model in equation (1).
29. The substitution impact between *GOV* and *AQ_COMB* is partial because the sum of coefficients *AQ_COMB* and *GOV* * *AQ-COMB* is not equal to zero ($p < 0.05$) in Tables 6 and 7.
30. We also incorporate Altman's ZSCORE (Altman, 1968) into our model in equation (1). Findings (unreported) are analogous to previous ones documented in Tables 3 and 4.

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Appendix

Table A1. Variable explanations

Variable	Variable explanation
Response variable = Corporate payout (Database: Compustat)	
Dividend	Ratio of common dividends to total assets
Repurchase	Stock repurchases proxied by common and preferred stock repurchases adjusted for any reduction in preferred stock, scaled by total assets
Variable of interest = Audit quality (Database: Compustat and Audit Analytics)	
SP	A binary variable that takes the amount of one if *ROA* (return on assets, calculated as earnings before interests scaled by total assets) is less than 3% and zero otherwise. Higher amounts of *SP* imply lower audit quality
SB	A binary variable that takes the amount of one if the year-on-year change in *ROA* is less than 1% and zero otherwise. Higher values of *SB* imply lower audit quality
FeeRatio	Audit fee ratio is measured by the ratio of audit fee to the sum of audit fee and non-audit fee for each firm-year observation
Expert	A binary variable that takes the amount of one if the auditor meets one of the two following conditions: 1) An auditor who has an annual market share greater than 30% in an industry (based on the two-digit SIC code in audit market) 2) An auditor who has the largest annual market share in an industry (based on two-digit SIC code) and its annual market share is at least ten percentage points higher than its nearest competitor in the audit market
AQ_COMB	Composite audit quality proxy defined based on equation (2). Higher amounts of *AQ_COMB* imply higher audit quality
Company controls (Database: Compustat and CRSP)	
SIZE	Log of total assets in the millions of USD
SysRisk	Systematic risk approximated by beta for a specific company in a specific year
ROA	Return on assets calculated as earnings before interests scaled by total assets
LEV	Leverage calculated as debt divided by total assets
INTAN	Intangible assets scaled by total assets
Cash	Cash and marketable securities scaled by net assets
CExp	Capital expenditure scaled by total assets
CF	Cash flow from operations calculated by the operating cash flow scaled by total assets
EX	Sum of research and development expenses and advertisement expenses, scaled by income before extraordinary items, for a given fiscal year
MTB	Market-to-book ratio calculated by the market value of equity scaled by book value of equity
ASY (Database: I/B/E/S and CRSP)	Information asymmetry measure calculated as the standard deviation of the financial analysts' earnings per share forecasts, scaled by the stock price at the start of the period. Greater amounts of *ASY* imply greater information asymmetry
GOV	Governance quality proxied by % of common shares kept by institutional investors
ROLL	Refinancing risk calculated as the % of long-term debt due for repayment in the following year
FC	Financial constraints based on Whited and Wu index score