FOUNDATION FOR AUDITING RESEARCH

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FAR PRACTICE NOTE:

INTERNAL CONTROLS

FAR Project 2017B03 Bédard

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FAR PRACTICE NOTE: INTERNAL CONTROLS

Executive summary

The auditor's reliance on client internal controls has always been a contentious issue. If clients have high quality internal controls, auditors should be able to rely on these controls, making the audit more efficient. However, what constitutes a "good" internal control system is unclear, which makes it difficult for the auditor to determine how to integrate a client's internal control system into the auditing procedures. Research suggests that the quality of a client's internal control system very much depends on the context of the firm, and no clear guidelines exist. This is worrisome, given that a high proportion of audit clients shows significant shortcomings in their internal control over financial reporting. Clear evaluation criteria are lacking and necessary, but the rise of data analytics is likely to partially solve this issue. Computer algorithms facilitate large-scale tests by the auditor and may flag suspicious transactions, reducing the need for the auditor to depend on their clients' internal control systems.

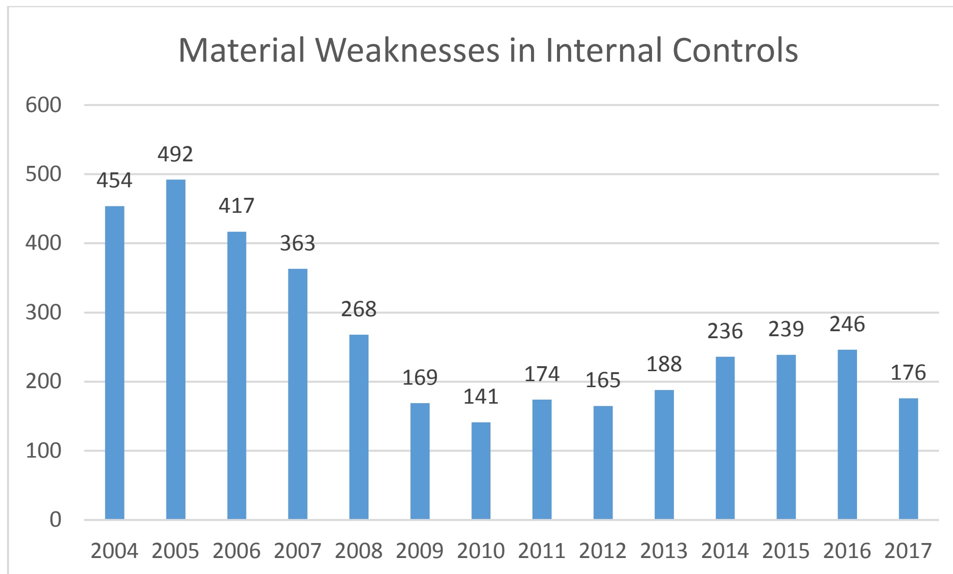
FAR PRACTICE NOTE: INTERNAL CONTROLS

Audit practice has been struggling with the integration of clients' internal control systems into auditing procedures. Auditors are increasingly held responsible for shortcomings in their clients' financial reporting. However, the quality of the information feeding into the audit process is dependent on the quality of that client's information environment, in particular its internal control system. If clients have high-quality internal controls in place, auditors are able to rely on these controls in their financial statement audit, thus reducing the extent of planned substantive testing. Conversely, weak internal controls heighten the risk of material misstatement, necessitating extended detailed testing. Hence, the audit process is strongly intertwined with client internal controls. The U.S. regulator has recognized this interdependency, and with the enactment of the Sarbanes-Oxley Act of 2002, and Section 404 of the Act in particular (effective as of November 2004), has made auditor evaluation of internal control over financial reporting (ICOFR) mandatory. However, this is less straightforward than it seems, and important questions arise. For example, when are client controls sufficiently strong? To what extent can auditors actually rely on these internal controls in designing the substantive procedures? And when auditors do rely on these internal controls, does this result in a more efficient and effective audit? Research has addressed some, but not all of these issues.

Facilitated by the large amount of data on the quality of client internal controls that became available after Section 404 of the Sarbanes-Oxley Act came into force, an extensive body of research has investigated what drives the quality of an audit client's internal control system. The literature shows that firm characteristics such as complexity, distress, size, age, diversification, and control risk all have a profound influence on the quality of internal control systems (e.g., Doyle, Ge and McVay 2007; Ge and McVay 2005; Lawrence, Minutti-Meza, and Vyas 2017; Rice and Weber 2012). This suggests that what constitutes "good" internal controls is highly dependent on the organizational context, which makes it difficult for the auditor to evaluate the quality of a client's internal control system as no clear guidelines exist. Internal corporate governance mechanisms also seem to have an impact, as ample studies suggest that audit committee meeting frequency, independence and financial expertise are all positively associated with internal control quality (e.g., Hoitash, Hoitash and Bedard 2009; Hoitash 2011; Naiker and Sharma 2009). Similar findings exist for the board of directors (e.g., Bedard, Hoitash and Hoitash 2014). In contrast, for directors sitting on the audit committee, a conflict of interest appears to arise when providing these directors with share ownership. Despite their role and expertise, shareholdings of audit committee members appear to reduce their independent and critical evaluation of internal control processes (Cullinan, Du and Jiang 2010). The quality of a client's governance therefore seems indicative of its internal control quality and may help the auditor to determine his reliance hereon.

The relation between the quality of clients internal control systems and organizational characteristics is unsurprising, as internal control procedures affect essentially all aspects of an organization. Although the implementation of internal control systems may be costly, clear benefits from implementing these systems exist. Empirical evidence shows that high-quality internal control systems are associated with more efficient investment decisions, lower operational control risk, and better inventory management (Cheng, Dhaliwal and Zhang 2013; Feng, Li, McVay and Skaife 2014; Lawrence, Minutti-Meza and Vyas 2017; Sun 2016). Moreover, firms with a better internal control system are less likely to manage earnings and have more informative financial statements (Ashbaugh-Skaife, Collins, Kinney Jr, and Lafond 2008; Prawitt, Smith and Wood 2009). Improvements in internal control systems are indeed associated with improvements in accounting quality (Ashbaugh-Skaife, Collins, Kinney Jr. and Lafond 2008; Bedard, Hoitash, Hoitash and Westermann 2012). This evidence suggests that clients with

high-quality internal controls have better control over their financial reporting process, which is also the gist of the U.S. regulator. As well-developed internal control systems facilitate the audit, they can be of great value to the auditor, and research shows that auditors at least partially transfer this benefit to their clients in the form of lower audit fees (Raghunandan and Rama 2006; Hoitash, Hoitash and Bedard 2008; Munsif, Raghunandan, Rama and Singhvi 2011).



This graph plots the number of U.S. listed firms for which the auditor has disclosed a material weakness in internal controls.[1]

Despite the benefits of doing so, a surprising number of firms do not succeed in establishing an effective system of internal controls. The graph below shows the average percentage of U.S. listed firms for which auditors have identified a material weakness in internal controls.[2] Upon the enactment of the Sarbanes-Oxley Act, 450 audit clients did not have adequate internal controls over financial reporting, which equals about 15% of total audit clients. This proportion decreased every year, as over time auditors identified fewer weaknesses in their clients' internal control systems. This finding can imply that either internal control quality has increased over the years or that auditors are focusing less on client internal controls in the audit process. In recent years, the proportion of audit clients having material weaknesses in their internal control systems has stabilized at around 200 deficiencies (about 7.5% of total audit clients), with a further decrease in 2017. These findings suggest that for a sizable subset of audit clients (4.5%) internal control over financial reporting is still defective and therefore cannot be relied upon by the auditor in his financial statement audit.

The above statistics suggest that caution is warranted when considering reliance on the client's internal controls. Even more troublesome is that prior research has not been able to come up with a

[1] These data have been produced by Audit Analytics. The report is accessible on the following site: https://www.auditanalytics.com/blog/sox-404-disclosures-a-fourteen-year-review/

[2] Section 404 of the Sarbanes-Oxley Act requires management to report on the effectiveness of its internal control systems, after which the auditor makes an independent evaluation in a separate report. This evaluation concerns the adequacy of the internal control systems in safeguarding financial reporting quality. Serious shortcomings are identified as material weaknesses. An evaluation by the auditor of the internal controls over financial reporting is necessary for providing "reasonable assurance about the reliability of a company's financial reporting and its process for preparing and fairly presenting financial statements in accordance with GAAP" (PCAOB 2004).

consistent set of conditions that explains firms' apparent failure to maintain a high-quality internal control system. These studies have focused mainly on the CEO and CFO, as these are the key parties involved in establishing and maintaining internal control systems. Not all executives may desire a strong internal control over their day-to-day operations, as this provides them with less leeway in their decision-making. However, empirical evidence regarding executive characteristics such as tenure, gender, and age is mixed, and related studies on management incentives likewise show that executive share ownership is not associated with internal control quality (e.g., Balsam, Jiang and Lu 2014; Lin, Wang, Chiou and Huang 2014). Hence, there is no evidence to suggest that CEOs or CFOs actively oppose the presence of internal control systems, nor that this is systematically associated with their individual characteristics. However, how the role of the CEO and CFO depends on the organizational characteristics is unclear. These complex interrelations between different organizational characteristics are a subset of the factors that we will consider in the FAR-project on internal controls.

The above discussion revolved around what drives internal control quality, and how internal controls relate to firm, executive and governance characteristics. Another important stream of literature has looked into internal controls from the perspective of the auditor. If a firm's internal control systems are of high quality, then its financial reporting process should be more transparent and trustworthy. Auditors should then be able to rely more on that client's internal control system in the auditing process. Prior research has indeed shown that auditors modify their planned audit work in response to the reliability of a client's internal control (Cohen and Kida 1989). Especially since the late 1990s, when substantive testing had established itself as one of the main auditing procedures, reliance on internal control significantly increased (Elder and Allen 2003). The quality of a client's internal control system therefore appears to feed back into the audit process, though to what extent and how has not been examined, yet. This is an explicit component of the FAR-project on internal controls, which will shed light on the interrelations between a client's internal control systems and the subsequent audit process.

The findings above necessitate an accurate evaluation of the quality of the internal control environment of the client. Besides requirements contained in Section 404 of the Sarbanes-Oxley Act, International Standard on Auditing 315 *Identifying and Assessing the Risks of Material Misstatement through Understanding the Entity and its Environment* explicitly requires the auditor to understand and evaluate an audit client's internal control system. Evaluating the internal control system of a client therefore nowadays is an explicit component of the auditor's work. In that respect, auditor independence is a necessary condition for a correct evaluation, as client influence may bias the auditor into deeming internal controls effective (e.g., Bhattacharjee and Brown 2018; Rice and Weber 2012; Wolfe, Mauldin and Diaz 2009). At the same time, prior research has shown that a more thorough understanding of a client's operations facilitates a correct evaluation of the internal control system, although auditor experience surprisingly does not appear to play a large role in this (e.g., Brazel and Agoglia 2007; Earley, Hoffman and Joe 2008). These findings suggest that it is difficult to train auditors in evaluating internal control systems, given that internal control systems are contextually dependent and differ widely across clients, making it difficult for auditors to build up expertise. How the auditor evaluates internal controls, and how this feeds back into the audit process, is part of the FAR-project on this issue.

Tying all studies together, the evaluation of client internal controls remains a difficult component of the audit, as it is unclear to what extent the auditor can rely on the client's information in the audit process, and clear evaluation criteria do not exist. Further insight is warranted, and will be delivered by the current FAR-project on internal controls. In the near future, technological progress and the emergence of big data will radically impact this evaluation. Data analytics are starting to affect the audit

profession, for example via the notion of continuous auditing, which at this point predominantly takes place in internal audits (Gonzalez, Sharma and Galletta 2012). The benefits of data analytics are clear, as being able to analyse process-related data allows the auditor to gain more assurance over internal controls and accounting procedures, and may help flag suspicious transactions (Jans, Alles, and Vasarhelyi 2013). This allows the auditor to effectively isolate problem areas. Moreover, having artificial intelligence go through the accounting records may drastically reduce the costs of the auditing process, while at the same time analysing all accounting records of the clients. Machine learning algorithms may, furthermore, identify suspicious patterns that are difficult to observe otherwise. Data analytics will hence reduce the need for the auditor to rely on clients' internal control systems, or assist the auditor in more efficiently evaluating the internal control systems faster. However, these last possibilities would only hold for clients operating on a sufficiently large scale to justify the related investments.

In conclusion, the internal control system of an audit client and the work of an auditor are closely intertwined. A client's internal control system permeates all dimensions of the firm, deeply affecting the firm's operations and reporting processes. The auditor responds to the information delivered by the client's internal control system in planning the audit, and a thorough understanding of the firm's internal control system is consequently crucial. What constitutes a high-quality internal control system is, however, highly context-dependent and clear guidelines do not exist. As the rise of data analytics facilitates large-scale tests by the auditor, his need to rely on clients' internal control systems will likely reduce in the upcoming years.

Our conclusions are drawn on the basis of the most recent empirical evidence available. However, an important shortcoming of the current state of literature on internal controls is that due to data availability the overwhelming majority of studies on this topic has been conducted in a single setting, the United States. Next to an extensive development of archival databases, the United States are the only major economy demanding an explicit auditor attestation of internal controls that is, visible to market participants and researchers. The lack of internal control research in other settings gives rise to significant concerns on the generalizability of the findings discussed above. Every country has its own characteristics, and the conclusions obtained in the United States may not fully translate to other settings. We therefore urge practitioners to be cautious in drawing on the conclusions of internal control research until validation studies in other settings outside the United States have been performed.

References

Ashbaugh-Skaife, H., Collins, D.W., Kinney Jr, W.R., & R. LaFond. 2009. The effect of SOX internal control deficiencies on firm risk and cost of equity. *Journal of Accounting research* 47 (1): 1-43.

Balsam, S., Jiang, W., & B. Lu. 2014. Equity Incentives and Internal Control Weaknesses. *Contemporary Accounting Research* 31 (1):178-201.

Bedard, J. C., Hoitash, R., & U. Hoitash. 2014. Chief Financial Officers as Inside Directors. *Contemporary Accounting Research* 31 (3): 787-817.

Bedard, J.C., Hoitash, R., Hoitash, U., & K. Westermann. 2012. Material weakness remediation and earnings quality: A detailed examination by type of control deficiency. *Auditing: A Journal of Practice & Theory* 31 (1): 57-78.

Bhattacharjee, S., & J. O. Brown. 2018. The impact of management alumni affiliation and persuasion tactics on auditors' internal control judgments. *The Accounting Review* 93 (2): 97-115.

Cheng, M., Dhaliwal, D., & Y. Zhang. 2013. Does investment efficiency improve after the disclosure of material weaknesses in internal control over financial reporting?. *Journal of Accounting and Economics* 56 (1): 1-18.

Cohen, J., & T. Kida. 1989. The Impact of Analytical Review Results , Internal Control Reliability , and Experience on Auditors ' Use of Analytical Review. *Journal of Accounting Research* 27 (2): 263–276.

Cullinan, C. P., Du, H., & W. Jiang. 2010. Is Compensating Audit Committee Members with Stock Options Associated with the Likelihood of Internal Control Weaknesses? *International Journal of Auditing* 14 (3): 256-273.

Doyle, J., Ge, W., & S. McVay. 2007. Determinants of weaknesses in internal control over financial reporting. *Journal of accounting and Economics* 44 (1-2): 193-223.

Earley, C. E., Hoffman, V. B., & J. R. Joe. 2008. Reducing management's influence on auditors' judgments: An experimental investigation of SOX 404 assessments. *The Accounting Review* 83 (6): 1461-1485.

Elder, R. J., & R. D. Allen. 2003. A Longitudinal Field Investigation of Auditor Risk Assessments and Sample Size Decisions. *The Accounting Review* 78 (4) 983–1002.

Feng, M., Li, C., McVay, S.E., & H. Skaife. 2014. Does ineffective internal control over financial reporting affect a firm's operations? Evidence from firms' inventory management. *The Accounting Review* 90 (2): 529-557.

Ge, W., & S. McVay. 2005. The disclosure of material weaknesses in internal control after the Sarbanes-Oxley Act. *Accounting Horizons* 19 (3): 137-158.

Gonzalez, G. C., Sharma, P. N., & D. F. Galletta. 2012. The antecedents of the use of continuous auditing in the internal auditing context. *International Journal of Accounting Information Systems* 13 (3): 248-262.

Hoitash, U. 2011. Should Independent Board Members with Social Ties to Management Disqualify Themselves from Serving on the Board? *Journal of Business Ethics* 99 (3): 399-423.

Hoitash, R., Hoitash, U., & J. C. Bedard. 2008. Internal Control Quality and Audit Pricing under the Sarbanes-Oxley Act. *Auditing: A Journal of Practice and Theory* 27 (1): 105-126.

Hoitash, U., Hoitash, R., & J. C. Bedard. 2009. Corporate governance and internal control over financial reporting: A comparison of regulatory regimes. *The Accounting Review* 84 (3): 839–867.

Jans, M., Alles, M., & M. Vasarhelyi. 2013. The case for process mining in auditing: Sources of value added and areas of application. *International Journal of Accounting Information Systems* 14 (1): 1-20.

Lawrence, A., Minutti-Meza, M., & D. Vyas. 2017. Is Operational Control Risk Informative of Financial Reporting Deficiencies?. *Auditing: A Journal of Practice and Theory* 37 (1): 139-165

Lin, Y.-C., Wang, Y.-C. , Chiou, J.-R., & H.-W. Huang. 2014. CEO Characteristics and Internal Control Quality. *Corporate Governance: An International Review* 22 (1):24-42.

Munsif, V., K., Raghunandan, D. V. Rama, & M. Singhvi. 2011. Audit Fees after Remediation of Internal Control Weaknesses. *Accounting Horizons* 25 (1): 87-105.

Naiker, V., & D. S. Sharma. 2009. Former Audit Partners on the Audit Committee and Internal Control Deficiencies. *The Accounting Review* 84 (2): 559-587.

PCAOB (Public company accounting oversight board). 2004. An audit of internal control over financial reporting performed in conjunction with an audit of financial statements (PCAOB release No. 2004-001). Washington, DC: PCAOB.

Raghunandan, K., & D. V. Rama. 2006. SOX Section 404 Material Weakness Disclosures and Audit Fees. *Auditing: A Journal of Practice and Theory* 25 (1): 99-114.

Rice, S., & D. P. Weber. 2012.. How Effective Is Internal Control Reporting under SOX 404 ? Determinants of the (Non-) Disclosure of Existing Material Weaknesses. *Journal of Accounting Research* 50 (3): 811–843.

Sun, Y. 2016. Internal control weakness disclosure and firm investment. *Journal of Accounting, Auditing & Finance* 31 (2): 277-307.

Wolfe, C. J., Mauldin, E. G., & M. C. Diaz. 2009. Concede or deny: Do management persuasion tactics affect auditor evaluation of internal control deviations? *The Accounting Review* 84 (6): 2013–2037.