



# Internal Auditing in India and China: Some Empirical Evidence and Issues for Research

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## Abstract

Internal auditing is an important element in the corporate governance framework. Yet, research related to internal auditing, particularly in emerging economies like India and China, is sparse. We use data from responses provided by chief audit executives to provide empirical evidence about the extent of support for internal auditing and the determinants of such support in India and China, and compare the data with those from the United States. We find that such support is negatively related to pressure on internal auditors to suppress or alter their findings. We also provide descriptive evidence about the work and staffing of the internal audit function. We discuss the role of internal auditing in India and identify some possible avenues for future research.

## Keywords

internal audit, India, China, governance, internal control

## Introduction

Legislators and regulators have often emphasized the important role played by audit committees in the financial reporting process (European Commission, 2014; Securities and Exchange Commission [SEC], 1999, 2003; U.S. Senate, 2002). As actual independence and, perhaps more importantly, perceptions of financial statement users about the independence of the directors from management are essential, the SEC and regulators around the world have been pushing for audit committees to consist of solely independent directors.

While audit committee director independence has many benefits—both actual and perceived—such independence also introduces information asymmetries between the directors and management (Scarborough, Rama, & Raghunandan, 1998). Internal auditing can be an effective mechanism in mitigating such information asymmetries.

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The Institute of Internal Auditors (IIA, 2016) defines internal auditing as follows:

Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.

Thus, one of the primary roles of internal auditing is in assessing and reporting on internal controls, as well as overall risk management. Hence, an effective internal audit function (IAF) is a useful mechanism in the checks and balances of effective corporate governance and can be an invaluable resource for audit committees, as well as management and external auditors, in effectively discharging their responsibilities and fulfilling their governance mandate (Bishop, Hermanson, Lapides, & Rittenberg, 2000; Gramling, Maletta, Schneider, & Church, 2004; Scarbrough et al., 1998). For example, the National Association of Corporate Directors (1999) noted that "the audit committee can look to today's internal auditing function to provide independent, objective assurance and consulting activities designed to add value and improve the organization's operations" (p. 47).

Hence, it is not surprising that many private-sector blue ribbon panels have emphasized the role of an effective IAF to ensure high-quality corporate financial reporting. For example, the National Commission on Fraudulent Financial Reporting (NCFRR, 1987) recommended that "public companies should maintain an effective internal audit function staffed with an adequate number of qualified personnel" as part of their efforts to prevent fraudulent financial reporting. Recognizing such importance of internal auditing, Section 303A.07(c) of the NYSE listing manual specifies that "each listed company must have an internal audit function." Such action is supported by empirical evidence; for example, prior research finds that an effective IAF is associated with the following:

- Better quality financial reporting (Abbott, Daugherty, Parker, & Peters, 2015; Christ, Masli, Sharp, & Wood, 2015; Prawitt, Sharp, & Wood, 2012; Prawitt, Smith, & Wood, 2009),
- Lower likelihood of management misconduct (Ege, 2015),
- Better safeguarding of assets (Beasley, Carcello, Hermanson, & Lapides, 2000), and
- Better quality of internal controls (Lin, Pizzini, Vargus, & Bardhan, 2011).

Thus, it is clear that effective internal auditing is an important element in the overall mosaic of corporate governance and financial reporting.<sup>1</sup> However, a notable feature is that all of the above studies use data from the United States.

Research related to internal auditing in emerging economies such as India and China is sparse. In this article, we provide some empirical evidence about the practice of internal auditing in India and China, with a particular emphasis on the levels of support to internal auditing and the pressure on internal auditors to suppress findings, and compare the results with those obtained in the United States. We focus on India and China because of their increasing importance in the global economy, and the fact that there is little research related to the IAF in these countries that has appeared in major academic journals. We believe this article is particularly relevant for the *TRACKS* section given the interest shown by the *Journal of Accounting, Auditing & Finance (JAAF)* on accounting- and governance-

related issues of current interest in India and China, and the need for additional research on such issues.<sup>2</sup>

Our comparison of the data from India and China with those from the United States is driven by the fact that the United States is seen as a global benchmark for many governance and financial reporting related issues. The history of internal auditing in the United States shows how internal auditing has gradually evolved from its early focus on cash and payroll fraud to a verification of all financial transactions to an “audit for management” emphasis to an “audit of management” approach (Ramamoorti, 2003). Gramling et al. (2004) note that such evolution in the role of internal auditing can be expected to continue and that the corporate governance role for the IAF will likely increase given the internal control-related requirements of Sarbanes-Oxley Act (SOX). The status and sophistication of the IAF in the United States make the United States the global benchmark for the IAF, particularly as it relates to the role of the IAF in corporate governance.

We expect to find significant differences in the practice of internal auditing between the United States, India, and China. This is because the development of capital markets and corporate governance arrangements differ significantly between these countries. Prior research notes the following issues in developing countries, when compared with the United States or European Union:

- Institutional voids such as absence of specialized intermediaries, regulatory systems, and contract-enforcing mechanisms (Khanna, Palepu, & Sinha, 2005);
- Deeper, more extensive connections or relationships with outside stakeholders to fill institutional voids (Miller, Lee, Chang, & Le Breton-Miller, 2009);
- Higher earnings management by insiders to protect their private control benefits (Gopalan & Jayaraman, 2012; Leuz, Nanda, & Wysocki, 2003);
- Interplay of firm- and country-level governance through national governance bundles (Aslan & Kumar, 2014); and
- A bigger role for banks as against stock markets in development of corporate governance practices (Black & Gilson, 1998).

Relative to the United States, both India and China are characterized by weak institutions, weak law enforcement, low investor protection, high insider ownership by founding families, and less developed stock markets. Both India and China have large state-owned enterprises (SOEs) that have different governance arrangements from those in non-SOEs. Such differences in capital markets and governance “should” affect the role and effectiveness of the IAF between the United States, India, and China.

Khanna et al. (2005) discuss the differences in four contexts related to capital markets across the United States and the BRIC (Brazil, Russia, India, China) nations: debt and equity financing, venture capital financing, accounting standards, and distress resolution. Khanna et al. (2005) suggest that, while there are significant differences in each category, India is closer, than China, to the United States with respect to the first three categories. This in turn suggests that the gap between India and the United States in terms of internal auditing practices should be smaller than the corresponding gap between China and the United States.

We first provide descriptive evidence about (perceived) support for the IAF. We then examine the determinants and consequences of such support. We find that both company characteristics and the longevity of the chief audit executive (CAE) are associated with the level of support for the IAF, but there is variation in the importance of such variables

across countries. Consistent with Khanna et al. (2005), we find that internal auditing in India, rather than China, more closely resembles internal auditing in the United States. We find that in each country, support to the IAF is inversely related with pressure on the IAF to suppress or alter findings.

Overall, our results suggest that inferences related to internal auditing, based on studies using U.S. data, may not be transferable to India or China—which points to a need for research on the IAF using Indian and Chinese data. After a discussion of the state of internal auditing in India, we highlight future research opportunities related to internal auditing in India.

## **Data**

The IIA has conducted surveys of its members worldwide, in 2006, 2010, and 2015. The survey is called the “Common Body of Knowledge (CBOK) Practitioner Survey.” The CBOK 2015 Survey was offered in 23 languages with participation from more than 14,500 practitioners representing 166 countries/territories. The survey has close to 100 questions, and many of the questions have multiple parts. The questions cover 16 broad areas including information about background (individual and organization), IAF staffing and maturity, audit processes, risks, governance, reporting lines, audit committee, IAF competencies, value and performance measures, auditing technology risks, IAF use of IT, and internal audit standards. The CBOK 2015 Survey elicited a total of 1,761 responses from China and 513 from India.

However, for the purposes of our study, we focus on responses from CAEs as CAEs would be most relevant for the analyses of governance-related matters. Accordingly, many of the CBOK 2015 Survey questions (such as those dealing with governance and interactions with the board and/or audit committee, internal audit planning, hiring, etc.) were answered only by CAEs. Furthermore, we restrict the analysis to the corporate sector (i.e., we delete responses from CAEs of governmental and nonprofit sectors); this is because the environment of governance is quite different in the governmental and nonprofit sectors from that in the for-profit sector. The 2015 CBOK Survey has responses from 2,172 corporate CAEs around the world including 59 from India, 70 from China, and 336 from the United States.

Table 1 provides descriptive data about the sample used in our analysis. Public (listed) companies account for just over half of the U.S. sample; the proportion for India is around 40%, but much higher for China (67%). Respondents from the financial services (banking, insurance, brokerage, real-estate, and other financial services) sector account for 16% to 17% of the group for the India and China samples, and over a third of the U.S. sample. More than three fourths of the respondents from the United States and India functionally report to the audit committee or the board; the proportion is much lower for the Chinese sample. Turning to individual CAE characteristics, respondents from the United States and India have, on average, more than 8 years of experience as CAE; the average for respondents from China is much lower (mean of 4.9 years). Thus, in terms of personal characteristics and interaction with the audit committee, Indian responses are closer to those of U.S. responses when compared with Chinese responses.

## **Support for Internal Auditing**

To be effective, internal auditing must receive strong support from the audit committee and/or the board. Furthermore, what matters is not just actual support, but perception by

**Table I.** Descriptive Data.

## Panel A: Company Characteristics.

	USA (n = 336)	India (n = 59)	China (n = 70)
<i>PUBLIC</i>	53.0%	39.0%	67.1%
<i>FIN</i>	33.6%	16.9%	15.7%
<i>SIZE</i>	2.39	2.19	2.47
<i>ACB</i>	83.6%	78.0%	62.3%

## Panel B: CAE Characteristics.

	USA	India	China
<i>YRSCAE</i>	8.5	8.1	4.9
<i>IAEXP</i>	17.5	15.6	7.0

Note. The variables are defined as follows. *PUBLIC* = 1 if publicly listed company, else 0; *FIN* = 1 if from the financial services sector (banking, insurance, brokerage, real-estate), else 0; *SIZE* = company size based on number of employees (1 if < 500; 2 if 500-1,500; 3 if 1,501-10,000; 4 if > 10,000); *ACB* = 1 if the CAE functionally reports to the audit committee or board, else 0; *YRSCAE* = number of years as CAE at company; *IAEXP* = number of years of total internal audit experience; CAE = chief audit executive.

the CAE of such support. As with external auditor independence, CAE perceptions of such support matter because perceptions can drive reality—in terms of what is actually done by the IAF. We measure such support to the IAF using responses to three questions in the CBOK 2015 Survey.<sup>3</sup>

The first question is “How sufficient is the funding for your internal audit department relative to the extent of its audit responsibilities?” We code *FUNDSUPPORT* as 1 if the CAE’s answer is “completely sufficient” and 0 otherwise. The second question is “To what extent does the internal audit department at your organization have complete and unrestricted access to employees’ property and records as appropriate for the performance of audit activities?” We code *ACCESSSUPPORT* as 1 if the CAE’s answer is “all of the time” and 0 otherwise. The third question is “How much support does internal audit have from the board of directors (or equivalent) to review the organization’s governance policies and procedures?” We code *REVIEWSUPPORT* as 1 if the CAE’s answer is “complete support” and 0 otherwise. We then combine the above three variables to arrive at our overall measure, *IASUPPORT*. Table 2 shows that support for internal auditing from the board of directors is, in general, higher in the United States than in India or China.<sup>4</sup>

### Determinants of Support for Internal Auditing

We expect that the overall support for internal auditing will be associated with both company characteristics as well as personal characteristics of the CAE. With respect to company characteristics, we expect that support for the IAF will be greater at larger companies. CBOK has three measures of organization size: full-time-equivalent employees, assets, and revenues. We use CBOK data on the number of full-time-equivalent employees as a proxy for company size.<sup>5</sup> Given the greater regulatory requirements of publicly listed companies, we expect that the audit committees and/or boards of publicly listed companies would be more likely to provide greater support for the IAF than their counterparts at nonpublic

**Table 2.** Support for Internal Auditing.

	Levels of <i>IASUPPORT</i>				Total
	0	1	2	3	
India	11 (29%)	15 (39%)	6 (16%)	6 (16%)	38
China	11 (22%)	14 (28%)	12 (25%)	12 (25%)	49
USA	30 (11%)	68 (25%)	103 (38%)	72 (26%)	273

Note. This table provides details about the extent of support provided to internal auditing (*IASUPPORT*). The overall measure is based on the sum of three individual measures: *FUNDSUPPORT* (1 if the funding for the internal audit department is “completely sufficient” relative to the extent of its audit responsibilities, and 0 otherwise), *ACCESSSUPPORT* (1 if internal audit has complete and unrestricted access to employees’ property and records “all of the time,” and 0 otherwise), and *REVIEWSUPPORT* (1 if internal audit has “complete support” from the board of directors to review the organization’s governance policies and procedures, and 0 otherwise).

companies. Furthermore, given the highly regulated nature of financial institutions and concerns about the various risks associated with banks and other financial institutions, we expect that CAEs from companies in the financial sector would be more likely to indicate having higher levels of support for the IAF.

Good governance practices suggest that the CAE should report directly to the audit committee or the board of directors. The CBOK has the following question (and definition): “What is the primary FUNCTIONAL\* reporting line for the chief audit executive (CAE) or equivalent in your organization?” (\*Functional reporting refers to oversight of the responsibilities of the internal audit function, including approval of the internal audit charter, the audit plan, evaluation of the CAE, compensation for the CAE.) We define *ACB* as equal to 1 if the CAE reports functionally to the audit committee or the board of directors, and 0 otherwise.

We also expect that the experience of the CAE could affect the nature of the support received by the IAF. CAEs with longer tenure in the company may be more likely to have built up relationships and power bases, and hence more likely to receive higher levels of support. As part of sensitivity analyses, we use years of IAF experience but obtain similar inferences.

Table 3 provides the results from three ordinal regressions—one each for the United States, India, and China. The dependent variable is *IASUPPORT*. Each of the three regressions is statistically significant, but there is no consistency in the significance of the variables in the models. *SIZE* is positive and significant in the model for India and China, but is not significant in the model for the United States. The coefficients of both *ACB* and *YRSCAE* are positive and significant in the models for both the United States and India—but not significant in the model for China.

In our primary analysis, we combine three (constructed) binary variables. As noted earlier, we adopt this approach because the number of available options for the three support-related questions is different. As part of sensitivity analysis, we combine the three questions based on the original scales as used in the survey; this leads to a scale ranging from 3 (minimal support to the IAF) to 10 (maximum support to the IAF). Our overall inferences remain unchanged in such analysis.

In summary, both company and individual CAE characteristics are associated with the extent of support for the IAF. However, the determinants are unique to India, China, and the United States. This suggests that insights related to internal auditing, and perhaps other

**Table 3.** Regression Results.

	Dependent variable = <i>IASUPPORT</i>					
	USA		India		China	
	Coefficient	<i>p</i> value	Coefficient	<i>p</i> value	Coefficient	<i>p</i> value
<i>Intercept 1</i>	-0.954	.03	3.907	.02	0.663	.50
<i>Intercept 2</i>	0.575	.18	6.225	< .01	2.167	.03
<i>Intercept 3</i>	2.248	< .01	7.235	< .01	3.475	< .01
<i>SIZE</i>	0.082	.23	0.587	.05	0.850	.01
<i>PUBLIC</i>	0.142	.27	1.205	.05	-1.093	.10
<i>FIN</i>	0.504	.02	1.069	.11	2.898	.01
<i>ACB</i>	0.548	.04	2.131	.02	0.624	.15
<i>YRSCAE</i>	0.030	.03	0.146	.01	-0.008	.47
	$\chi^2 = 13.6, p = .02;$ pseudo $R^2 = .05$		$\chi^2 = 15.8, p < .01;$ pseudo $R^2 = .36$		$\chi^2 = 15.3, p = .01;$ pseudo $R^2 = .28$	

Note. This table presents the results from three different ordinal regressions. The dependent variable in each regression is *IASUPPORT*, defined as in Table 2. See Table 1 for definitions of other variables.

governance-related issues, cannot necessarily be transferred from U.S.-based studies to India or China. The results also support the view that internal auditing in India, rather than China, is perhaps closer to internal auditing in the United States.

### Pressure on Internal Auditing

Internal auditors may be subjected to pressure from auditees to suppress findings, or alter their reports. As the IAF often is viewed as a management training ground (MTG) where employees are rotated to expose them to all aspects of a company's operations, this is a particularly relevant threat to the objectivity of internal auditors. However, internal auditors who receive a higher level of support from the audit committee and/or the board of directors may be viewed as less susceptible and hence less likely to be subjected to such pressure.

One of the CBOK questions asks the respondents whether they have "experienced a situation where you were directed to suppress, or significantly modify, a valid internal audit finding or report?" We create a variable called *PRESSURE*, which is coded as 1 if the respondents indicated that they had been subjected to such pressure at least once, and 0 otherwise.

Table 4 provides the data about the association between *IASUPPORT* and *PRESSURE*.<sup>6</sup> In each of the three countries, CAEs with higher levels of *IASUPPORT* were less likely to indicate that they had been subjected to such pressure.

### Additional Analyses

In Table 5, we provide descriptive evidence about internal audit activities and staffing. The data show that while there are some similarities across the countries, there are also some significant differences in how internal auditing is used. In all three countries, the majority of internal audit resources are spent on assurance activities (versus consulting activities). This inference is reinforced when we examine the proportion of time spent on internal

**Table 4.** Pressure to Change Internal Audit Findings.

	Level of <i>IASUPPORT</i>				Total
	0	1	2	3	
USA	17/30 (56.6%)	28/67 (41.8%)	36/102 (35.3%)	20/72 (27.8%)	101/271 (37.3%)
India	8/11 (72.7%)	6/14 (42.9%)	3/5 (60.0%)	0/6 (0%)	17/36 (47.2%)
China	7/11 (63.6%)	8/12 (66.7%)	3/12 (25.0%)	1/12 (8.3%)	19/47 (40.4%)

Note. This table provides details about the association between levels of support to the internal audit function and pressure on internal auditing. The numbers in each cell represent the number of respondents in each country who indicated that they had been subjected to pressure to “suppress, or significantly modify, a valid internal audit finding or report” as well as the total number of respondents answering that question. The percentages represent the proportion of internal auditors who answered that they had been subject to such pressure. *IASUPPORT* is defined as in Table 2.

audit activities that might be viewed as consulting related: operational audits and cost/expense reduction or containment. This proportion ranges from 25% in the United States to 32% in India.

One of the CBOK questions asks about the responsibility for internal audit to detect fraud. Less than 12% of CAEs from the United States indicate that the IAF has all or most of the responsibility to detect fraud; the proportion is less than 25% in India, but is nearly 40% for China. This reinforces the view that internal auditing in China is perhaps more markedly different than internal auditing in the United States, particularly when compared with the differences between the United States and India.

Panel B of Table 5 provides details about the skills sought by CAEs. The CBOK question provided a list of 14 specific skills, which we combine into five items: (a) accounting/finance, (b) analytical/critical thinking/communication skills, (c) business acumen/industry-specific knowledge, (d) cybersecurity and privacy/data mining and analytics, and (e) forensics and investigations/fraud auditing.<sup>7</sup> Here again, the data show that there are some significant differences across the countries. Interestingly, accounting/finance skills are sought after much more in China than in the United States or India; this is consistent with the higher level of responsibility on internal auditing to detect fraud in China than in the United States or India.

In summary, there are some similarities in the work done by internal auditors across the different countries, but there also are some significant differences in the relative emphasis on different types of work done by internal auditors. Such differences also manifest in the skills most sought by CAEs for their staffing needs. Together, such evidence again suggests that caution is warranted in transferring research results related to internal auditing from the United States to other countries.

## Internal Auditing in India

In India, external auditors were required to report on the quality of the IAF since 1975 until it was dropped in 2015. However, the language was almost always boilerplate—There was hardly any instance of issue or concern expressed by the auditor on this topic. This is in contrast to the United States: For example, a quick search of the Audit Analytics database indicates that there are more than 350 instances of management reports on internal control disclosing inadequate internal auditing as one of the reasons for indicating material weaknesses in internal controls.<sup>8</sup> Nevertheless, prior to 2015, there was at least some

**Table 5.** Internal Audit Work and Staffing.

Panel A: Internal Audit Work.			
	USA	India	China
Assurance vs. Consulting	2.27	2.15	2.16
Proportion of internal audit time spent on operational audits and cost/expense reduction	25%	32%	26%
Internal audit has all or most of responsibility to detect fraud	12%	23%	39%
Outsourcing of at least some internal audit work	68%	52%	36%
Internal audit used as a management training ground	24%	58%	29%

Note. Assurance vs. Consulting is coded using the following scale: 1 = all resources spent on assurance; 3 = resources spent equally on assurance and consulting; 5 = all resources spent on consulting.

Panel B: Internal Audit Staffing.			
	USA	India	China
Skills sought in hiring			
Accounting/finance	39%	51%	67%
Analytical thinking/communication skills	79%	80%	85%
Business acumen/industry knowledge	65%	59%	47%
Cybersecurity/data-mining	79%	66%	61%
Forensics/fraud auditing	15%	42%	51%

Note. This panel is constructed based on CAEs' responses to the following question: What skills are you recruiting or building the most in your internal audit department? In addition to the 10 choices above (combined into five categories), there were four other choices: information technology (general), legal knowledge, quality controls (Six Sigma; ISO), and risk management assurance. CAE = chief audit executive.

institutional support for internal auditing thanks to the requirement that external auditors had to evaluate the IAF; removing that requirement appears to be a step backward.

Perhaps the impetus for removing the requirement related to external auditors' evaluation of the IAF comes from the fact that after the Satyam scandal in 2009, there have been changes in the stock exchange listing regulations and in *The Companies Act*. As a result, *The Companies Act of 2013* now requires the external auditor to report on the adequacy and effectiveness of internal financial controls. The listing regulations have a discretionary requirement that the internal auditor *may* report directly to the audit committee. *The Companies Act of 2013* mandates the appointment of an internal auditor and provides that the findings of the internal auditor *may* be reported to the board. Clearly, while the IAF reporting to the audit committee is considered a good practice, it is not mandatory to do so.

In practice, based on personal experience of the first author (as an audit committee director) and anecdotal evidence (discussions with many audit committee and other company directors), Indian CAEs rarely meet with independent audit committee directors without management being present. Compounding the problem is the fact that the regulations only require that two thirds of the members of the audit committee shall be independent directors, but the rest can be executive or gray directors. Interestingly, the listing regulations provide that "occasionally" the audit committee may meet without the presence of any executives of the listed entity. This contrasts with the requirement that the independent directors *shall* hold at least one meeting in a year, without the presence of nonindependent directors and members of the management, and all the independent directors shall strive to

be present at such meeting. Overall, it appears that the IAF is not seen as a governance mechanism: It is seen as subservient to management, even if on paper it reports to audit committee or the Board of Directors.

There are two different staffing models that are generally used for internal auditing. The first uses internal auditing as a career, while the second uses the IAF as an MTG. The survey data indicate that using IAF as an MTG is widely prevalent in India. While there are some benefits from such practice—for example, bring in fresh talent, good training for general management, and so on—using the IAF as an MTG can lead to some unintended consequences, such as reluctance to question managers. Can we expect the internal auditor to be tough on a manager, if he or she knows that he or she might be dependent on the same manager for a line-position later, and could conceivably be working under that manager?

However, another type of problem arises when the IAF is staffed by career internal auditors. In general, the status of the IAF is not high in Indian companies. In fact, from anecdotal experience, it appears that in many instances, the inferior staff get posted to the IAF. This further diminishes the value of IAF.

While we have provided some evidence about the practice of internal auditing in India based on the CBOK 2015 Survey, some caveats are in order. First, to what extent are the survey results representative of the true nature of internal auditing in India? In the CBOK 2015 Survey, 44% of the Indian corporate CAEs indicated operations in more than one country, so the results may be biased toward larger companies. Furthermore, the responses are only from those who are members of the IIA. Here again, there is a high likelihood of large-company bias. This indicates the need for additional research on internal auditing in India, particularly in non-multinational corporations (MNCs). A related point is that foreign companies look to the IAF of their Indian subsidiaries for both assurance and advice, perhaps more for assurance than Indian companies do. An alternative view is that in family-controlled companies, the IAF is expected to do more assurance work. As the survey does not have data on ownership, this cannot be tested. An interesting issue for future research is to examine how the IAF differs between Indian affiliates of foreign multinational companies and Indian-origin companies (whether multinational or only domestic).

Both Enron and WorldCom were brought to light by internal whistle-blowers—WorldCom by internal audit—that led directly to the enactment of SOX. Increasingly, companies in the United States and elsewhere are using internal audit as a resource for whistle-blowing. Anecdotally, it appears that corporate whistle-blowing related to financial reporting is not much effective in India, despite the establishment of a mechanism in listed companies.<sup>9</sup> What is the role of the IAF in India in such whistle-blowing mechanisms? How often do Indian internal auditors receive such complaints (irrespective of whether or not they are responsible for receiving formal whistle-blowing complaints), how frequently are such complaints investigated, and what is found in such investigations? These are interesting, but difficult, questions for future research.

The Government of India has recently started major efforts to increase the proportion of transactions that are carried out electronically (as opposed to physical cash). Given the large proportion of the population that will be using such electronic transactions for the first time, there are security- and fraud-related issues that become relevant for Indian companies. This in turn means that the IAF needs IT security and related skills, including data analytics. This is particularly relevant to banks, given the large-scale increase in financial inclusion of the population. To what extent do Indian companies increase their investment in the IAF given the ongoing societal changes related to the role of electronic transactions?

Recent regulatory requirements have raised the importance of an independent IAF, both in India and elsewhere. We need studies that investigate the actual effectiveness of these new requirements in India and elsewhere. We need more in-depth studies, using both internal auditors and others such as audit committee directors, management, and external auditors in addressing such issues. Also, almost all published research about the association between the quality of the IAF and financial reporting quality has been with the U.S. data. The institutional arrangements in India are very different (e.g., family/promoter ownership in even the largest companies, different legal environment) compared with the United States. Comparative studies would be useful in understanding the effect of these differences on internal control systems and internal audit in general, and the effectiveness of internal auditing in ensuring high-quality financial reporting.

Much of the recent literature on internal auditing in the United States has used archival data provided by the Audit Analytics database, collated from filings by publicly listed firms. The absence of such databases providing readily available data spanning a wide spectrum of Indian public companies makes it much more difficult to conduct similar studies in India. In the absence of such data, researchers may consider experiments with CAEs and internal audit staff and develop in-depth cases in companies. Archival databases make it easier for researchers, but in-depth interviews and cases enable the researcher to conduct the analyses at a much deeper level. While a detailed analysis of the pros and cons of different research methods is beyond the scope of this study, we refer researchers interested in nonarchival research to some excellent summaries that have recently been published about qualitative research in auditing such as Power and Gendron (2015) and Malsch and Salterio (2016).

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## Notes

1. Gramling, Maletta, Schneider, and Church (2004), in a survey of internal auditing research, note that there is consistent evidence that “the IAF can have a positive influence on corporate governance, including reporting quality and firm performance.”
2. The *Journal of Accounting, Auditing & Finance (JAAF)*, in collaboration with others, has held conferences in Mumbai and Ahmedabad in India (in 2015 and 2017, respectively) and held a joint conference with China Accounting and Finance Review (CAFR) in Chengdu, China, in 2016.

3. The available options varied across the questions; for two of the questions, there were three options (other than not applicable/not known) while the third question had four options. Hence, we recode the answers to the three questions in binary form (completely sufficient/complete support, or not) and combine them. Admittedly, when answers to different questions are combined, there are judgments involved—including whether each question should be equally weighted. In the absence of a clearly superior alternative, we chose to equally weight and combine the answers to the three questions. See also our sensitivity analysis, described later.
4. We include only those observations where the respondents answered all three questions; this explains why the sample sizes in Table 2 are lower than those in Table 1.
5. Abdolmohammadi (2013) uses Common Body of Knowledge (CBOK) 2010 Survey data to examine the correlates of internal audit outsourcing and suggests that the number of employees “is a more appropriate proxy for size than other measures. This is because assets or revenues as proxies for size can vary by type of organization and country” (p. 72). In addition, we lose many more observations when we use assets or revenues as our size measure. Nevertheless, as part of sensitivity analysis, we substitute other measures of size and obtain generally similar (albeit weaker, given lower sample size) results.
6. Note that we deleted from our analyses those observations where the chief audit executive (CAE) did not answer this question; to the extent reluctance to answer this question is associated with having experienced such pressure, our findings *understate* the extent of such pressure.
7. The other skills listed in the survey were information technology (general), legal knowledge, quality controls (Six Sigma; ISO), and risk management assurance.
8. Note that these are self-assessments by management; nonaccelerated filers (i.e., those with market float less than US\$75 million) are not subject to auditor attestation requirements. In 89 of these instances, the registrant is an “accelerated filer” and the auditor expressed concerns about the client’s internal audit function while issuing an adverse opinion on internal controls.
9. While the number of whistle-blower complaints appears to be low in comparison with the United States, some of the complaints have been widely covered in the media. Two prominent instances of whistle-blower complaints that had significant consequences involved Ranbaxy Laboratories (pharmaceuticals) and Infosys (IT services). Ranbaxy’s director of research found that the pharma firm falsified data to secure the U.S. Food and Drug Administration approvals. The company pleaded guilty and made a US\$500 million settlement with the U.S. Department of Justice. The whistle-blower was awarded US\$49 million. In Infosys, an anonymous whistle-blower raised questions about the price paid by the company for certain acquisitions. The company’s board and audit committee had the complaint investigated by outside agencies and concluded that there was no wrong-doing. The matter snowballed into a public confrontation between the board and the company’s founder. The CEO resigned citing “continuous distractions.”

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