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**SATYAM FAILURE AND CHANGES IN INDIAN AUDIT  
COMMITTEES**

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## **Satyam Failure and Changes in Indian Audit Committees**

### **Abstract**

Audit committees have received considerable attention globally in recent years. We examine the effects of the Satyam failure on changes in the composition and functioning of Indian audit committees. A corporate collapse that shook India's markets and regulators, and widely noted of as "India's Enron", should have led to major improvements in the functioning of audit committees of Indian companies. Our empirical results show that the Satyam failure had a limited effect on Indian audit committees.

**Keywords:** audit committee; Satyam; India; corporate governance

**JEL classification:** M42, M48, G38

## **Satyam Failure and Changes in Indian Audit Committees**

*The United States has led the way in academic corporate governance research.... But [the US centric approach] leaves a void, as indeed corporate governance practices, and reforms, move apace and are important the world over.... Chinese and Indian companies, in particular, have gained global prominence...[and their] corporate governance systems and practices are different. Such differences are important to understand in any event, but they are especially worthy of study when they accompany shifts in the economy, which, in turn, and over time, often create momentum for corporate governance change and reform.*

(Balachandran et al. 2010, 523-524).

### **1. Introduction**

In this paper, we provide empirical evidence about changes in the composition and functioning of corporate audit committees in India after the Satyam Computer Services Ltd. (“Satyam”) fraud. We compare such changes with those that occurred in the U.S. in the immediate aftermath of the Enron and WorldCom failures—and the results highlight the point by Balachandran et al. (2010) that results from U.S. based research often may not be relevant to examine growing economies like India. Based on such comparison, we then derive an agenda for future research in corporate governance in general, and audit committees in particular, in the Indian context. This paper is motivated by the (a) importance of audit committees in the corporate governance process, coupled with (b) the paucity of research related to corporate governance in general, and audit committees in particular, related to emerging markets, and (c) the importance of the Satyam scandal for Indian corporate governance. The increasing globalization of Indian companies, coupled with the adoption of international accounting and governance standards, makes such issues more urgent than in the past.

Our paper also is related to calls from others for going beyond the U.S. (or, Anglo-Saxon countries) for specific issues in corporate governance related research. For example, based on detailed interviews with experienced auditors, Cohen et al. (2010) find that there are substantive changes in the “seriousness that audit committee members bring to their role as monitors of the quality of the financial reporting process” in the post-Enron/SOX period when compared to the pre-SOX period. Cohen et al. (2010, 783) note that a potential explanation for such a shift is that in the post-SOX period “audit committee members may perceive that there is an increased fear of legal liability associated with being on the committee that necessitates audit committee

members to take their monitoring roles much more seriously” and suggest that “future research may examine how the litigation regime in various countries potentially affects the role that audit committees play. Perhaps in countries where audit committee members are less fearful of litigation they may be playing a more symbolic role than they appear to be playing in the United States.” Similarly, Carcello et al. (2011, 23), in their summary of the research literature related to corporate governance, call for research on governance practices in emerging market (Brazil, Russia, India, Indonesia, China or BRIIC) countries because of differences in cultural, legal and regulatory traditions.

In recent years many studies have appeared in leading journals that examine a variety of accounting, auditing, and governance issues using data from China. However, such research using Indian data is non-existent—even though India has had a long history of public capital markets. Our paper thus attempts to fill an important void in the corporate governance literature.

The issues we raise are particularly important as India seeks to harmonize its accounting and governance standards with international benchmarks. For example, India seeks to attain convergence with International Financial Reporting Standards (IFRS). A basic premise behind IFRS is fair value based measurements—which requires both technical expertise and professional judgment. The emphasis on professional judgment also implies that there should be strong governance mechanisms in place to provide support to external auditors. Since audited financial statements are often the product of negotiations between management and auditors, strong audit committees are necessary to support the external auditor and thereby ensure high quality financial reporting. Without such support, judgment-based standards, such as IFRS, only increase the available opportunities for earnings management.

## **2. Corporate Governance in India**

India is an interesting context in which to examine the role of corporate governance.<sup>1</sup> India has an established tradition of public companies and stock exchanges; the Bombay Stock Exchange, established in 1875, is the oldest in Asia. *The Companies Act*, derived initially from its U.K. counterpart (and subsequently modified substantially), provides the legal framework related to the functioning of Indian companies. Additional regulations, for publicly listed companies,

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<sup>1</sup> Narayanaswamy et al. (2012) provide a detailed discussion of the corporate governance framework in India.

include the listing conditions of the stock exchanges (mainly the Bombay Stock Exchange (BSE) and the National Stock Exchange). The stock exchanges were directly overseen by the Ministry of Finance until 1988; the Securities and Exchange Board of India (SEBI) that was formed in 1988 by an executive order of the government (and, incorporated by statute in 1992) now administers securities regulations. SEBI prescribes listing requirements for public companies and has implemented major reforms in corporate governance and disclosure. The most important of these is the introduction of *Clause 49* in the Listing Agreement, arising from the recommendations of the Kumar Mangalam Birla Committee in 1999; *Clause 49* requires listed companies to include, in annual reports, a report on corporate governance. Some of the governance related provisions were later modified in 2003, based on the recommendations of another committee (Narayana Murthy Committee) formed to improve corporate governance.

In the U.S., both law (e.g., SOX) and related regulations issued by the SEC, and stock exchange listing requirements, distinguish between independent and non-independent directors. In contrast, in India, *Clause 49* distinguishes between three types of directors: executive, non-executive, and independent. All independent directors must be non-executive, but non-executive directors may sometimes be not independent.<sup>2</sup> Stock exchange listing requirements specify that companies must have (a) at least half the members of the board of directors as non-executive directors, and (b) one-half (one-third) of the board as independent directors if the chairman is a company executive (non-executive). Further, the audit committee of the board must have a minimum of three members, and at least two-thirds of the audit committee must be independent directors. The rules also specify that the audit committee shall meet at least four times a year.

The directors' responsibility statement and the other provisions of *The Companies Act* make the directors responsible for financial reporting. There is no class action litigation threat, but in theory even a director can go to jail for mundane corporate violations. However, this is one of many areas where the laws and regulations on the books may appear strict yet their application is

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<sup>2</sup> An independent director is defined as a non-executive director who apart from receiving director's remuneration does not have any other material pecuniary relationship or transactions with the company, its promoters, its senior management or its subsidiaries and associates which may affect independence of the director. Independent directors should not be related to a company's promoters or persons occupying management positions at the board level or at one level below the board, should not have been an executive of the company in the preceding three years, should not be a partner or an executive in the company's audit, law or consulting firm, should not be a material supplier, service provider or customer, should not own two per cent or more of voting shares, and should be not less than 21 years of age.

usually lax. Hence the disciplining mechanisms are very different from those in the U.S. or other Anglo-Saxon settings.

In the developed world, the classical agency problem arises because the manager owns a very small part of the firm. In contrast, a different set of agency problems arise in India due to the ownership patterns. In many Indian companies, the majority of publicly traded shares are controlled by “promoters” (i.e., founding families). This is facilitated by the dominance of debt financing leading to a low equity base. Often, equity ownership is held through a complex web of corporate cross-holdings in order to avert a take-over and to get around regulations.

Overall, there is a lot of form with respect to laws and procedures in India. But the substance is weak in terms of enforcement.

### **3. Satyam Fraud**

The Satyam Computer Services (“Satyam”) fraud, which came to light in January 2009, is the biggest known accounting fraud in India. Satyam was audited by Lovelock & Lewes, an affiliate of the PricewaterhouseCoopers international network. Satyam had revenues of about \$2 billion for the fiscal year ended March 31, 2008 and had a market capitalization of about \$6.8 billion as of December 2008. In September 2008, Satyam won the “Golden Peacock Award for Excellence in Corporate Governance” from the World Council for Corporate Governance, London, under the “risk management and compliance issues” category.

On January 7, 2009, Mr. Ramalinga Raju, the chairman and CEO of Satyam, resigned after admitting that he had fraudulently manipulated the company’s financial statements for several years to show inflated profits and fictitious assets totaling \$1 billion (Leahy 2009). The company’s stock plunged from Rs. 179 to Rs. 6.30 on the next trading day.

Satyam was the first Indian corporate fraud that was covered extensively in the global media.<sup>3</sup> Along with such attention came scrutiny of the governance of Indian companies in general. Many factors, including the rapid growth of India’s economy and the increasing dependence of

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<sup>3</sup> See, for example, *Economist* (2009); *Forbes* (2009); Leahy (2009); *Wall Street Journal Asia* (2009).

the global economy on Indian outsourcing companies, add to the significance of the scandal to managers, accountants, investors, and regulators in India and abroad.

Regulators and the law enforcement authorities took visible steps in response to the fraud disclosures. The audit partners in charge of the Satyam audit were arrested and denied bail for a lengthy period. Further, the Institute of Chartered Accountants of India removed six chartered accountants – two audit partners, two audit managers, head of internal audit, and chief financial officer – associated with Satyam’s accounting and auditing from the Institute’s membership and imposed a fine for professional misconduct.

#### **4. Related Literature**

In the U.S., the widespread publicity surrounding the failure of Enron (and, later, WorldCom) led to the enactment of the Sarbanes-Oxley Act (SOX 2002) in July 2002. While SOX addresses a variety of issues related to corporate governance, we focus on one specific issue: audit committees. Multiple sections of SOX deal with the composition and functioning of audit committees.<sup>4</sup> Such legislative and regulatory interest in audit committees arises because the committee “plays a critical role in providing oversight over and serving as a check and balance on a company’s financial reporting system” (SEC 2003). SOX and related regulatory changes, even if only codifying some of the “best practices” related to audit committees, substantially expanded the formal responsibilities and scrutiny of the audit committee.

Many commenters to the proposed SEC regulations expressed the fear that the changes would increase the reputational and litigation risks for audit committee directors and would dissuade qualified directors from serving on the committee (SEC 2003). There is some evidence that the behavior of audit committees changed after SOX. DeZoort et al. (2008) find that audit committee members are likely to provide greater support to the external auditor after SOX when compared to the results from a similar pre-SOX study. Further, when compared with the pre-SOX period, audit committee members in the post-SOX period noted greater responsibility for evaluating and resolving accounting issues, and also were more concerned with a need for conservative financial reporting. Cohen et al. (2010), based on interviews with auditors, state that “the corporate

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<sup>4</sup> Sections 301 and 407 of SOX deal with audit committee composition, section 204 specifies audit committee interaction with external auditors, and section 302 relates to disclosures by management to the audit committee.

governance environment has improved considerably in the post-SOX era with audit committees that are substantially more active, diligent, knowledgeable, and powerful.” In a later study, Cohen et al. (2013) report findings from interviews of audit committee directors. The authors note that there is a marked difference in the monitoring role of the audit committee in the post-SOX period, reflected in the form of increased interaction between the audit committee and the external auditor, as well as heightened attention to matters of audit and financial reporting addressed in such interactions. After citing another study (Tremblay and Gendron 2011) which found that such changes were less likely among Canadian audit committees post-SOX, Cohen et al. (2011) note that the differing results may be explained by legal and cultural differences. Such differences also suggest that it is worthwhile to examine changes in audit committees following systemic shocks in other countries.

Satyam was characterized by both Indian and western media as “India’s Enron” (e.g., Dasgupta 2009; *Economist* 2009; *Forbes* 2009; *Wall Street Journal Asia* 2009). The Satyam failure led to significant actions to improve corporate governance in India. The Council of Indian Industry (CII) set up a Task Force in February 2009 to recommend further improvements to Indian corporate governance standards and practices. Subsequently, in December 2009, the Ministry of Corporate Affairs issued the Corporate Governance Voluntary Guidelines based on the recommendations of the CII’s Task Force.

Given the widespread media coverage and public outrage about the Satyam fraud, should we expect substantial changes in the composition and functioning of Indian audit committees after the Satyam failure? At least in *form*, corporate governance regulations in India are comparable to, and in some instances more stringent than, those in developed countries. Indian companies must produce compliance certificates unheard of in developed countries. These include: a statement from the directors that they are responsible for preparation of the financial statements, selection and application of accounting policies and maintenance of accounting records; a certificate from the auditors that the company has complied with corporate governance regulations; a certificate from an independent company secretary that the company has complied with the requirements of the company law and securities regulations. However, in *substance*, these guidelines are not as effective because of lax enforcement and extremely low litigation risk. So, it is an empirical issue whether the composition and functioning of Indian audit

committees changed post-Satyam. Comparing the changes in the composition and functioning of Indian audit committees post-Satyam with the changes in U.S. audit committees post-Enron yields some interesting insights.

## 5. Reactions to Enron and Satyam Frauds Contrasted

We begin with all the 500 firms in the Bombay Stock Exchange 500 Index (*BSE 500 Index*) as of March 31, 2010. We then delete firms that (a) have a fiscal year end other than March 31,<sup>5</sup> (b) are majority owned by the Government of India or State Governments of India,<sup>6</sup> (c) do not have annual report available for the three years ending March 31, 2008 and 2010 in the *ReportJunction* database of Indian corporate annual reports. This results in a sample of 323 firms. We obtain data about the composition and functioning of audit committees from the annual reports of the companies. The Satyam fraud came to light in January 2009. Hence, to compare the composition and functioning of audit committees before and after the Satyam failure, we examine the fiscal years ending March 31, 2008 and March 31, 2010.

For the USA, we focus on the S&P 500 firms. We obtain data from 432 firms that (a) were in the *S&P 500* as of the end of both years 2000 and 2002, and (b) have data about audit committees, based on proxy statements filed in years 2001 and 2003, in the Corporate Library database.

### Composition of Audit Committees

In the days following the Satyam disclosures, there were media stories that painted a picture of directors resigning from audit committees and companies finding it difficult to attract candidates for audit committees (e.g., *Business Line* 2009). The empirical evidence, however, tempers such anecdotal stories. Panel A of Table 1 shows that close to half the sample had only the required minimum of three directors pre-Satyam; this proportion drops to around one-third post-Satyam. The average number of audit committee directors increases significantly ( $p < .01$ ) from 3.69 in the pre-Satyam period to 3.94 in the post-Satyam period. Thus, it appears that the companies had no significant difficulty in being able to recruit replacement, and additional, audit committee directors after the Satyam failure.

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<sup>5</sup> March 31 is used as the fiscal year end by the overwhelming majority of Indian companies.

<sup>6</sup> Such companies differ in many ways from other companies. For example, government companies often serve as vehicles for political patronage.

Did the increase in audit committee size come about because the companies filled the slots with non-independent directors? Panel B of Table 1 shows that the average proportion of independent directors stayed virtually the same, just under 89 percent, in both the pre- and post-Satyam periods.

Table 2 provides details about audit committee composition for the 432 *S&P 500* firms in our sample. The average number of audit committee directors pre- and post-Enron is 4.16 and 4.23; the difference is not significant. But, Panel B of Table 2 shows that there is a significant ( $p < .01$ ) increase in the average proportion of independent directors from 89.4 percent in the pre-Enron period to 92.5 percent in the post-Enron period.<sup>7</sup> The proportion of audit committees with solely independent directors increased from 67.1 percent in the pre-Enron period to 75.9 percent in the post-Enron period.

Overall, the size of Indian audit committees increased in the post-Satyam period without an increase in the proportion of independent directors. In contrast, the proportion of independent directors in, but not the size of, U.S. audit committees increased post-Enron.

### **Audit Committee Meetings**

Panel A of Table 3 provides data about the number of audit committee meetings pre- and post-Satyam. Less than half the audit committees (153 of 323, or 47.3 percent) met more than the required 4 times during the pre-Satyam (2007-2008) period; 56.2 percent (177 of 323) of the audit committees met more than 4 times during the post-Satyam (2009-2010) period. The average number of audit committee meetings for the firms in our sample increases from 4.83 for the fiscal year ending March 31, 2008 to 5.12 for the fiscal year ending March 31, 2010. This difference is statistically significant in the expected direction ( $p < .01$  using paired T-test). However, one can question if the increase in meetings, either in the average (from 4.83 to 5.12,

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<sup>7</sup> SOX, as well as the resultant SEC rules, require that all members of the audit committee be independent. However, many proxy advisory firms use a stricter definition for director independence than the stock exchange (NYSE and NASDAQ) listing standards. For example, NYSE standards deem a director to be independent even if the director is an executive officer of a company that makes payments to, or receives payments from, the listed company for property or services in an amount up to \$1 million or 2% of such other company's consolidated gross revenues (whichever is greater). Such definitional differences account for the average proportion of independent directors on the audit committees being less than 100 percent for our sample even in the post-Enron period.

or 6 percent) or the proportion of audit committees that met more than the required minimum (47.3 percent in 2007-2008 to 56.2 percent in 2009-2010), is significant in a *practical* sense.

Panel B of Table 3 provides data about audit committee meetings for the U.S. sample. In this sample too, just about half the audit committees (214 of 432, or 49.6 percent) met more than 4 times in the pre-Enron period; in sharp contrast, about 90 percent of the companies met more than 4 times a year in the post-Enron period. In fact, 192 (44.5 percent) of the audit committees met 8 or more times a year immediately after Enron. The average number of audit committee meetings for the firms in our sample increases from 4.76 a year pre-Enron to 7.59 a year post-Enron, or an increase of about 60 percent.

Thus, the meeting frequency of audit committees in the U.S. pre-Enron was about the same as that of Indian audit committees pre-Satyam. However, there was a big jump in the frequency of U.S. audit committee meetings post-Enron. In contrast, while the change in the meeting frequencies of Indian audit committees post-Satyam is statistically significant the effect size is quite low.

What about the attendance in audit committee meetings? In the U.S., such attendance data are not available. But Indian companies are required to disclose data about the directors' attendance at audit committee meetings. If indeed Satyam spurred audit committees to be more diligent post-Satyam, then we should expect that the average attendance at audit committee meetings would be higher post-Satyam—particularly since companies are required to disclose such data. In other words, if the intent of requiring public disclosure of attendance data is to indirectly put pressure on directors into having high attendance at committee meetings then the effect should be particularly pronounced in the immediate aftermath of Satyam.

However, the data show otherwise. Only 30.3 percent (98 of 323) of the audit committees had 100 percent director attendance in 2007-2008; contrary to expectations, the corresponding proportion drops to 22.6 percent (73 out of 323) in the post-Satyam period. The average attendance at audit committee meetings *declined* from 86.8 percent in the pre-Satyam period to 83.8 percent in the post-Satyam period. A paired T-test indicates that the reduction is statistically

significant ( $p < .01$ ), and the decline is contrary to the assumption that the directors would be more diligent in the immediate aftermath of Satyam.

### **Multiple Directorships**

We also examine whether audit committee directors were less likely to be “busy-boarding” (i.e., be board members in multiple companies) post-Satyam. When audit committee members serve on multiple boards they may be stretched too thinly to be effective in their monitoring responsibilities. For example, Sharma and Iselin (2012) show that financial misstatements are associated with audit committee directors having multiple-directorships.

If audit committee directors believed that they had to pay increased attention to financial reporting and related matters post-Satyam, it is logical to expect that “busy-boarding” would be less prevalent post-Satyam; given that directors have time constraints, if more attention is necessary for financial reporting related matters, then the number of other board memberships of the directors should decline. The same logic can be extended to chairing other boards, or the number of committee memberships in other public company boards.

We find that the average number of other public company board memberships of the audit committee directors was 5.11 in 2007-2008 and 4.97 in 2009-2010; the difference is not statistically significant in a paired T-test. The average number of other board chairships of the audit committee directors was 1.08 in 2007-2008 and 1.11 in 2009-2010. Finally, the average number of committee memberships in other boards (defined by *Clause 49* as membership of audit or investor grievance committee in other public companies) was 2.40 in 2007-2008 and 2.37 in 2009-2010; this difference is also not statistically significant in a paired T-test.

In summary, it appears that Indian audit committees were not significantly more diligent post-Satyam. While there was a statistically significant increase in the number of audit committee meetings, the practical effect was small (an increase in the average from 4.83 to 5.12); perhaps more importantly, and unexpectedly, there was a reduction in the average attendance of audit committee directors post-Satyam. Further, Satyam also did not lead to significant changes in the practice of “busy-boarding” by audit committee directors.

## 6. Summary and Discussion

The Satyam scandal is India's largest known accounting fraud. Satyam was thought to be a model of corporate governance—it had reputable independent board and audit committee members, it had a Big 4 affiliate as auditor, it was listed on the NYSE, its clientele included *Fortune 500* companies, and it had won awards for corporate governance. So the fraud disclosure shocked Indian industry and regulators, and had a systemic effect on the Indian market. It raised serious questions about the institutional arrangements for accounting, auditing and corporate governance in India and triggered major reforms in legal and regulatory safeguards.

Given the scale of the fraud and the considerable debate about the role of independent directors that followed in its wake, we would expect an improvement in audit committee diligence through more frequent audit committee meetings, increase in audit committee director attendance of meetings, and less “busy boarding.”

Using data from 323 of the BSE 500 companies, we find that the number of independent audit committee directors in the post-Satyam period was higher than in the pre-Satyam period indicating that there was no systematic and large-scale shunning of audit committee memberships. We find that there was a small increase in the number of meetings in the post-Satyam period. In contrast, attendance at audit committee meetings *decreased* in the post-Satyam period. There was no observable difference in other company board memberships or other board chairships. While it is possible that there may have been changes in other features related to the functioning of audit committees, it is striking that even the shock of Satyam was not strong enough to induce significant changes in the publicly observable activities of audit committees—particularly given the signaling element associated with publicly disclosed measures of diligence. This contrasts sharply with the significantly improved monitoring by audit committees post-Enron in the U.S.

Why the sharp contrast when compared to audit committees in the U.S. post-Enron? The lax legal environment and a weak market for audit committee director reputation in India are possible explanations for the very different response. In short, Satyam may be viewed as “India's Enron” in more than one way—it spawned many changes in form, but perhaps not in substance.

Overall, our empirical evidence contributes to understanding the working of audit committees in an important emerging market country that follows the common law. Our findings are also relevant to understanding the interaction between governance practices and the litigation environment. Policymakers need to be mindful of the legal, regulatory and cultural differences between India and the Anglo-Saxon world while developing a governance framework for India or other countries. Usually, regulators respond to a corporate collapse with additional and more stringent regulations—as happened in the U.S. after Enron. This approach is unlikely to be useful in emerging markets characterized by weak enforcement of regulations, an ineffective market for director reputation, and low litigation risk. There is a need to come up with different solutions to address the governance problems in such countries.<sup>8</sup>

There were extensive revisions to the *Companies Act* of India during September 2013. A notable feature of the new law is the introduction of class action litigation enabling investors to sue a company and its directors and auditors in certain cases, requirement of whistle-blowing on frauds by auditors, imposition of criminal liability on auditors for financial statement fraud, and mandatory rotation of audit firm every ten years. Arguably, Satyam triggered these far-reaching changes in the law. In addition, proxy advisory firms have recently emerged in India.<sup>9</sup> Whether such legal and other governance-related changes lead to substantive changes in the functioning of Indian audit committees is another interesting issue for future research.

This study has important implications for the on-going accounting and auditing reforms in India. Indian accounting standards are converging with the International Financial Reporting Standards (IFRS). IFRS is based on fair value, whereas Indian GAAP is based largely on historical cost. Preparing IFRS financial statements requires superior technical skills and considerably more judgment on the part of a company's managers, directors and auditors. While IFRS can lead to better monitoring and economic decision-making, companies with weak corporate governance arrangements may not produce credible, high quality IFRS financial statements. Interestingly,

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<sup>8</sup> SEBI seems to be aware of the need for a different set of corporate governance arrangements for India instead of copying the western model. For example, a senior SEBI official observed: "There is a strong view in certain quarters that our [corporate governance] framework is on the lines of the West and may not be best suited for India, where there are more family businesses" (Srivats 2011).

<sup>9</sup> On July 3, 2014, the shareholders of Tata Motors Limited rejected the proposal from the board of directors seeking payment of minimum remuneration in case of inadequacy of profits. The proposal was opposed by Stakeholder Empowerment Services, a proxy advisory firm. This was the first time that Indian shareholders have voted against such a corporate proposal.

Satyam was the first Indian company to prepare IFRS-based financial statements. The government and SEBI should perhaps improve enforcement and work on building technical expertise including forensic accounting skills prior to shifting to IFRS.

## REFERENCES

- Balachandran, K. R., A. Dossi, and W. Van der Stede. 2010. Corporate Governance Research in “The Rest of the World”. *Journal of Accounting Auditing and Finance* 25(4): 523-529.
- Business Line*. 2009. The flight of directors (January 24).  
<http://www.thehindubusinessline.com/2009/01/24/stories/2009012450040800.htm>
- Carcello, J. V., D. R. Hermanson, and Z. Ye. 2011. Corporate governance research in accounting and auditing: Insights, practice implications, and future research directions. *Auditing: A Journal of Practice & Theory* 30(3): 1-31.
- Cohen, J. R., G. Krishnamoorthy, and A. M. Wright. 2010. Corporate governance in the post-Sarbanes-Oxley era: Auditors’ experiences. *Contemporary Accounting Research* 27 (3): 751–786.
- Cohen, J. R., C. Hayes, G. Krishnamoorthy, G. S. Monroe, and A. M. Wright. 2013. The effectiveness of SOX regulation: An interview study of corporate directors. *Behavioral Research in Accounting*: 25 (1): 61-87.
- Dasgupta, A. 2009. Satyam is India’s Enron.  
<http://www.thehindu.com/2009/01/08/stories/2009010859951500.htm>
- DeZoort, T., D. Hermanson, and R. Houston. 2008. Audit committee member support for proposed audit adjustments: Pre-SOX versus post-SOX judgments. *Auditing: A Journal of Practice & Theory* 27 (1): 85–104.
- Economist*. 2009. India’s Enron. <http://www.economist.com/node/12898777>
- Financial Times*. 2009. Satyam scandalises (editorial). (January 8).  
<http://www.ft.com/cms/s/0/0f75a660-ddad-11dd-87dc-000077b07658.html>
- Forbes*. 2009. India’s Enron. [http://www.forbes.com/2009/01/27/india-satyam-raju-personal-finance-guru-insights\\_0127\\_satyam\\_fraud.html](http://www.forbes.com/2009/01/27/india-satyam-raju-personal-finance-guru-insights_0127_satyam_fraud.html)
- Leahy, J. 2009. \$1 bn fraud at India IT group. *Financial Times* (January 8): 1.
- Narayanaswamy, R., K. Raghunandan and D. V. Rama. 2012. Corporate governance in the Indian context. *Accounting Horizons* 26 (3): 583-599.
- Sarbanes-Oxley Act (SOX). 2002. Public Law No. 107-204. Washington, DC: GPO.
- Securities and Exchange Commission (SEC). 2003. Final Rule: Standards Related to Listed Company Audit Committees. SEC Release Nos. 33-8330; 34-47654. Washington, DC: SEC.

Securities and Exchange Commission (SEC). 2011. SEC charges India-based affiliates of PWC for role in Satyam accounting fraud. <http://www.sec.gov/news/press/2011/2011-82.htm>

Sharma, V. D., and E.R. Iselin. 2012. The association between audit committee multiple-directorships, tenure, and financial misstatements. *Auditing: A Journal of Practice & Theory*: 31 (3): 149-175.

Srivats, K. R. 2011. SEBI keen to gain control over corporate governance norms. *Business Line* (April 13). <http://www.thehindubusinessline.com/markets/sebi-keen-to-gain-control-over-corporate-governance-norms/article1694412.ece>

Tremblay, M. S., and Y. Gendron. 2011. Governance prescriptions under trial: On the interplay between the logics of resistance and compliance in audit committees. *Critical Perspectives on Accounting* 22 (3): 259–272.

*Wall Street Journal Asia*. 2009. Satyam: Sanskrit for ‘Enron’ (editorial). (January 9). <http://online.wsj.com/article/SB123143655097064873.html>

**Table 1**  
**Audit committee composition Pre- and Post-Satyam**

**Panel A: Audit Committee Size**

Number of audit committee directors	Number of companies ( <i>n</i> =323)	
	FY 2007-2008	FY 2009-2010
3	156 (48.3%)	106 (32.8%)
4	126 (39.0%)	147 (45.5%)
5	26 (8.1%)	52 (16.1%)
6	15 (4.6%)	18 (5.6%)
Average	3.69	3.94

**Panel B: Proportion of Independent Directors**

Proportion of independent directors on audit committee	Number of companies ( <i>n</i> =323)	
	FY 2007-2008	FY 2009-2010
Less than 0.67	62 (19.2%)	39 (12.1%)
0.67 to 0.75	48 (14.9%)	58 (17.9%)
0.76 to 0.99	15 (4.6%)	40 (12.4%)
1	198 (61.3%)	186 (57.6%)
Average	0.888	0.889

Note: The sample includes 323 Indian public companies that belong to the BSE 500 Index, and (a) have a March 31 fiscal year end, (b) are not majority owned by the Government of India or State Governments of India, (c) have annual report available for the years ending March 31, 2008 and 2010 in the ReportJunction database of Indian corporate annual reports.

**Table 2**  
**Audit committee composition Pre- and Post-Enron**

**Panel A: Audit Committee Size**

Number of audit committee directors	Number of companies ( <i>n</i> =432)	
	2000	2002
3 or less	142 (32.9%)	120 (27.8%)
4	147 (34.0%)	156 (36.1%)
5	83 (19.2%)	98 (22.7%)
6 or more	60 (13.9%)	58 (13.4%)
Average	4.16	4.23

**Panel B: Proportion of Independent Directors**

Proportion of independent directors on audit committee	Number of companies ( <i>n</i> =432)	
	2000	2002
Less than 0.67	73 (16.9%)	42 (9.7%)
0.67 to 0.75	33 (7.6%)	30 (7.0%)
0.76 to 0.99	36 (8.4%)	32 (7.4%)
1	290 (67.1%)	328 (75.9%)
Average	0.894	0.925

Note: The sample includes 432 firms that (a) were in the S&P 500 as of the end of both years 2000 and 2002, and (b) have data about audit committees, based on proxy statements filed in years 2001 and 2003, in the Corporate Library database.

**Table 3**  
**Audit committee meetings**

**Panel A: Pre- and Post-Satyam**

Number of audit committee meetings	Number of companies ( <i>n</i> =323)	
	FY 2007-2008	FY 2009-2010
Less than 4	17 (5.3%)	4 (1.2%)
4	153 (47.4%)	135 (41.8%)
5	78 (24.1%)	109 (33.7%)
6	43 (13.3%)	29 (9.0%)
7	14 (4.3%)	18 (5.6%)
8 or more	18 (5.6%)	21 (8.7%)
Average	4.83	5.12

**Panel A: Pre- and Post-Enron**

Number of audit committee meetings	Number of companies ( <i>n</i> =432)	
	2000	2002
Less than 4	106 (24.5%)	14 (3.2%)
4	112 (25.9%)	30 (7.0%)
5	86 (19.9%)	51 (11.8%)
6	57 (13.2%)	65 (15.0%)
7	29 (6.7%)	80 (18.5%)
8 or more	42 (9.7%)	192 (44.5%)
Average	4.76	7.59

Note: See Tables 1 and 2 for description of the samples used in Panels A and B, respectively.