Satyam’s Manipulative Accounting Methodology Unveiled: An Experience of an Asian Economy

Madan Lal Bhasin

ABSTRACT

Manipulative accounting practices are perennial and such practices have occurred in all eras, in all countries and affected millions of corporations. Unfortunately, there are few loopholes in accounting and auditing standards, which provide leeway and thus motivate accounting professionals to use aggressively manipulation practices. In fact, manipulative accounting (MA) involves the intentional cooking-up of financial records towards a pre-determined target. Every company indeed maneuvers the numbers, to a certain extent, as formally reported in its financial statements (FS) to achieve budgetary targets and generously reward senior managers. From Enron, WorldCom to Satyam, it appeared that window-dressing leading to MA is a serious problem that is increasing both in its frequency and severity, which undermines the integrity of financial reports and eroded investors’ confidence. The responsibility of preventing, detecting and investigating financial frauds rests squarely on Board of Directors and they should adopt preventive steps. Despite the raft of CG, and financial disclosure reforms, corporate accounting still remains murky and companies continue to find ways to play ‘hide-and-seek’ game with the system. Satyam computers were once the crown jewel of Indian IT-industry but were brought to the ground by its founders in 2009 as a result of financial manipulations in FS. The present study provides a snapshot of how Mr. Raju (CEO and Chairman) mastermind this maze of AM practices? Undoubtedly, Satyam scam is illegal and unethical in which computers were cleverly used to manipulate account books by creating fake invoices, inflating revenues, falsifying the cash and bank balances, showing non-existent interest on fixed deposits, showing ghost employees, and so on. Satyam fraud has shattered the dreams of investors, shocked the government and regulators and led to questioning of the accounting practices of auditors and CG norms in India. Finally, we recommend that “All types of MA practices should be legally recognized as a serious crime, and accounting bodies, law courts and regulatory authorities must adopt exemplary punitive measures to prevent such unethical practices.”

Keywords: Corporate governance, forensic accounting, financial statements, Manipulative accounting, India.
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1 Professor, School of Accountancy, College of Business, Universiti Utara Malaysia, Sintok, Kedah Darul Aman, Malaysia. Tel: 604-928-17779 Extn.7375 E-mail: madan.bhasin@rediffmail.com
1.0 INTRODUCTION

Corporate financial reporting (henceforth, FR) is intended to serve a number of user groups, with diverse and sometimes conflicting interests, such as, shareholders, creditors, lenders, labor leaders, and governments. A number of perspectives are, therefore, associated with FR but all tilt towards magnifying its importance in resolving the ‘principal-agent’ conflict occasioned by ‘asymmetric’ information available to the two parties. One perspective considers FR as the way by which company managers’ give account of their ‘stewardship’ by preparing their financial statements (henceforth, FS) to their owners and other stakeholders. Other considers FR as the ‘communication’ of FS information to shareholders and all other users, who have interest in a company for making ‘useful’ economic decisions. In a perfect world, of course, investors, board members, and executives would have full-confidence in companies’ FS. They could rely on the numbers to make intelligent estimates of the magnitude, timing, and uncertainty of future cash flows, and to judge whether the resulting estimate of value was fairly represented in the current stock price. Accordingly, they could make ‘wise’ decisions about whether to invest in or acquire a company, thus promoting the efficient allocation of capital. Recently, Sherman and Young (2016) stated, “Unfortunately, that is not what happens in the real world, for three reasons. First, corporate FS necessarily depend on estimates and judgment calls that can be widely off the mark, even when made in good faith. Second, standard financial metrics intended to enable comparisons between companies may not be the most accurate way to judge the value of any particular company giving rise to ‘unofficial’ measures that come with their own problems. Finally, managers and executives routinely encounter strong incentives to deliberately inject error into FS.”

Introducing ‘cooked-up’ accounting images therefore, increases the information ‘asymmetry’, which influences the functioning of financial markets. However, there are plenty of situations where users can be ‘influenced’, one-way or another, by presenting ‘distorted’ accounting images and thus, their behavior can be ‘manipulated’. According to the American Institute of Certified Public Accountants (AICPA), “Accounting manipulation may involve acts such as the following: “(a) Manipulation, falsification, or alteration of accounting records or supporting documents from which the financial statements are prepared; (b) Misrepresentation in, or intentional omission from, the financial statements of events, transactions, or other significant information; and (c) Intentional misapplication of accounting principles relating to amounts, classification, manner of presentation, or disclosures.” Similarly, Mamo and Alia (2014) defined it as, “Financial information manipulation is a distorted presentation, a misstatement of the financial position/performance, creating a false impression of an organization’s financial strength.” However, accounting manipulation (henceforth, AM) is also known by several other names, such as, revenue management, income smoothing, creative accounting, aggressive accounting, window dressing, etc., but the essence is the same. It creates a very large asymmetry of information for readers of FS that affect their decision-making.

In fact, manipulative accounting (MA) involves the intentional cooking-up of financial records towards a pre-determined target. Every company maneuvers their financial and operating numbers, to a certain extent, as formally reported in FS to achieve budgetary targets and generously reward senior managers. Factors such as greed, desperation, immorality and bad judgment drive some executives to ‘fudge’ the FS. Undoubtedly, the nightmare of ‘risky’ MA is on the increase more specifically in the global corporate sector. In the current economic climate, there is tremendous pressure (and personal financial incentive for managers) to report sales growth and to meet investors’ revenue expectations.

According to Securities and Exchange Commission (SEC 2016), “misleading financial reports, especially involving ‘game’ playing around earnings, are being issued at an alarming rate.” Needless to say, it is a nightmare that affects more than CEOs’ sleep: the shareholders suffer most. Little wonder that lawsuits related to FR are also on the rise. To avoid such a calamity, shareholders and their representatives on corporate boards should keep their eyes ‘peeled’ for common abuses in the following six areas: (a) revenue measurement and recognition, (b) provisions for uncertain future costs, (c) asset valuation, (d) derivatives, (e) related-party transactions, and (f) information used for ‘benchmarking’ performance. If disaster strikes, it will most likely occur in one of these accounting ‘minefields’.
Unfortunately, FS manipulation is an ongoing and common problem in the global corporate world. The ten worst corporate MA scandals of all time were: Waste Management, Enron, WorldCom, Tyco, Health South, Freddie Mac, American Insurance Group, Lehman Brothers, Bernie Madoff, and Satyam, respectively. Some of the greatest examples of corporations, who manipulated their accounts, are summarized in Table 1. As Bhasin (2012) stated, “If MA no longer dominate headlines as they did, when Enron and WorldCom imploded in 2001-02, that is not because they have vanished but because they have become routine.” For example, Lehman Brothers were cooking the account books far more than we ever imagined. At the height of the financial crisis in 2008, Lehman used ‘accounting gimmick’ to make it appear as if it had off-loaded risky assets and reduced its debts from balance sheet. In fact, executives had used a ‘complicated’ transaction that enabled them to remove liabilities from Lehman’s balance sheet for a short-time, when results were due, and hide the true level of its debts. The report found that Lehman used this transaction to create a materially misleading picture of the firm’s financial condition in late 2007 and 2008. Similarly, keen to project a perpetually rosy picture of the Satyam to the investors, employees and analysts, Mr. Raju (CEO and Chairman) manipulated the account books so that it appeared to be a far bigger enterprise than it actually was. According to the founder’s own public confession, Satyam had inflated its reported revenues by 25%, its operating profit margins by over 10 times, and its cash and bank balances by over 1 billion dollars.

Table 1: Some of the greatest financial accounting scandals of world

| Organization          | Loss                                        | Modus-Operandi                                                                 |
|-----------------------|---------------------------------------------|-------------------------------------------------------------------------------|
| Toshiba (2014)        | Profits were overstated by more than US$ 1 billion | Toshiba understated its costs on long-term projects. Toshiba CEOs put intense pressure on subordinates to meet sales targets, which pushed certain employees to postpone losses or push forward sales on accounting |
| Olympus (2011)        | US$1.7 billion accounting fraud             | Olympus created a Tobashi scheme to shift losses off the Olympus balance sheet. Companies located in Cayman Islands were purchased via exorbitant M&A fees. |
| Satyam (2009)         | Falsely boosted revenue by US$ 1.5 billion  | Falsified revenues, margins and cash balance to the tune US$ 1.5 billion.     |
| Lehman Brothers (2008)| Hid over US$ 50 billion in loans disguised as sales | Allegedly sold toxic assets to Cayman Island banks with the understanding that they would be bought back eventually. Created the impression Lehman had US$ 50 billion more cash and US$ 50 billion less in toxic assets than it really did. |
| Bernie Madoff (2008)  | Tricked investors out of US$ 64.8 billion through the largest ponzi scheme in history | Investors were paid returns out of their own money or that of other investors rather than from profits |
| WorldCom (2002)       | Inflated assets by as much as US$ 11 billion, leading to 30,000 lost jobs and US$ 180 billion in losses for investors | Inflated assets by as much as US$ 11 billion, leading to 30,000 lost jobs and US$ 180 billion in losses for investors |
| Enron (2001)          | Shareholders lost US$ 74 billion, thousands of employees and investors lost their retirement accounts, and many employees lost their jobs | Kept huge debts off balance sheets |

Source: Grant Thornton and ASSOCHAM, Financial and Corporate Frauds (July 2016)

Galloping number of accounting scams, over the last three decades, has raised a heated debate over ‘manipulated’ FR systems and their inability to detect accounting ‘fabrication’ in the FS. Table 2 shows some leading examples of the Indian companies practicing AM from 1996-97 to 2008-09. “Recently, the Satyam scam in India had exposed serious lacunae in FR practices, and inadequacy of audit systems. The
MA scams in all these companies were not the result of a few accounting misstatements. Rather, it was more a culture of widespread AM practices followed-up by the top-level corporate management in these firms that eventually led to full-blown up accounting frauds,” said Bhasin (2015). The chairman & CEO of Satyam, Mr. Raju had publicly acknowledged that the accounting books for the entire company was in a complete sham for several years. The tide had gone out and caught Satyam with its pants down. Actually, Satyam had not been wearing any pants for many years. An attempt has been made by the author to provide a brief description about the MA methodology used by the Satyam to commit the fraud in FS. Satyam is certainly a company worth investigating further as a case study and one that will surely be a topic of many business classes in the future.

Table 2: Manipulative and fraudulent reporting practices followed by some Indian companies

| Company Name                           | Years                  | Method of Manipulations Applied                                      |
|----------------------------------------|------------------------|---------------------------------------------------------------------|
| WIPRO Ltd.                             | 1996-97 to 1999-2000   | Transfer of land to stock creating capital reserve with the fair value and using it to neutralize the effect on profit of reduction of land value. |
| Bombay Dyeing & Manufacturing Company Limited | 2003-04 and 2004-05    | Creating provisions for possible loss on firm purchase contract and subsequent write-back of such provision thereby converting operating losses into operating profit. |
| Larsen & Toubro Limited                | 1999-2000 and 2001-02  | Income recognition through transfer of loan liabilities at a lower consideration. |
| Apollo Tyres Ltd.                      | 2004-05                | Debiting profit and loss account with additional excise duty payable to the government and transferring equivalent amount from general reserve to neutralize the effect. |
| Asian Electronics Ltd.                 | 2004-05                | Impairment of assets: treatment of deferred tax.                      |
| Oil and Natural Gas Commission, Mukund Ltd., Torrent Power ACE Ltd. and Tata Motors Ltd. | 2004-05 | Capitalization of interest as well as other intangible assets to show fixed assets value upward and understating revenue expenses. |
| Hindustan Zinc Limited                 | 2003-04 and 2004-05    | Reclassifying assets in the balance sheet.                           |
| Tata Motors, Bombay Dyeing, Mahindra and Himachal Futuristic | 2001-02 | Direct write-offs from reserves.                                    |
| Satyam Computer Services Limited       | 2008-09                | Fraudulently incorporated a non-existent cash component by inflating the bank balances, fudging bills, accounts receivables, interest, and liabilities. |

Source: Jones, M. (2011) ‘Creative accounting, fraud and international accounting standards,’ John Wiley & Sons, London.

The situation is still grave in emerging Asian markets. There are many ‘motives’ for a company to manipulate its FS(s) and dupe the investors of their hard earned money. One of the most lucrative motives is an increase in the ‘share price’ of the company. We as investors, often tend to pay a higher price for companies that communicate ‘higher’ earning power. Although the SEC has taken many steps to mitigate this type of corporate malfeasance, the structure of management incentives, the enormous latitude afforded by the Generally Accepted Accounting Principles (GAAP), and ever-present conflict of interest between the independent auditor and the corporate client continues to provide the perfect environment for such activity (Adkins, 2016). Due to these factors, investors who purchase individual stocks or bonds must be aware of the issues, warning signs and the tools that are at their disposal in order to mitigate the adverse implications of these problems. “Law enforcement has crime scene investigators to tell them the significance of a bloody fingerprint or a half-smoked cigarette, but investors are often left to their own devices when it comes to trying to figure out whether an accounting crime has taken place and where the fingerprint might be. Now, more than ever, investors have to become
Satyam’s manipulative accounting methodology unveiled ... “forensic’ accountants themselves if they want to avoid being burned by unscrupulous accounting in a company’s financials,” said Bhasin (2016d). Although there are many interesting numbers in a company’s financials that allow you to make a quick decision about a company’s health, you cannot get the full story that way. Six signals to detect a possible financial manipulation and fraud are: (a) Pricey acquisitions; (b) Large idle cash reserves; (c) Capitalized expenses; (d) Rise in cash and bank balances; (e) Large revenue jumps; and (f) Change in promoter shareholdings.

2.0 HOW FINANCIAL STATEMENTS ARE MANIPULATED?

There are three primary ‘reasons’ why management frequently manipulates the FS(s). First, in many cases the compensation of executives/managers is directly tied to the financial performance of the company. As a result, management has a direct incentive to paint a rosy picture of the company’s financial condition in order to meet established performance expectations and bolster their personal compensation. Second, it is relatively easy to manipulate corporate FS because the Financial Accounting Standards Board (FASB), which sets the GAAP standards, provides a significant amount of latitude in the accounting provisions that are available to be used by corporate management. For better or worse, these GAAP standards afford a significant amount of flexibility, making it very easy for corporate management to paint a favorable picture of the financial condition of the company. Third, it is unlikely that financial manipulation will be detected by investors due to the relationship between the independent auditor and the corporate client. While Big Four accounting firms are touted as ‘independent’ auditors, the firms have a direct conflict of interest because they are compensated by the very companies that they audit. As a result, the auditors could be tempted to bend the accounting rules to portray the financial condition of the company in a manner that will keep their client happy. According to Schilit and Perler (2010), there are seven primary ways in which corporate management manipulates the FS(s) of a company (see Table 3). Let’s look at these seven general categories of FS manipulations and the typical accounting processes that facilitate the manipulation.

| Table 3: Financial statement manipulations                                                                 |
|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Recording Revenue                                            | Recording revenue prior to completing all services                                                                     |
| Prematurely or of Questionable Quality                        | Recording revenue prior to product shipment                                                                          |
| Recording Fictitious Revenue                                  | Recording revenue for products that are not required to be purchased                                                   |
| Increasing Income with One-Time Gains                         | Recording revenue for sales that did not take place                                                                    |
| Shifting Current Expenses to an Earlier or Later Period        | Recording investment income as revenue                                                                               |
| Failing to Record or Improperly Reducing Liabilities           | Recording proceeds received through a loan as revenue                                                                |
| Shifting Current Revenue to a Later Period                    | Increasing profits by selling assets and recording the proceeds as revenue                                            |
| Shifting Future Expenses to the Current Period as a Special Charge | Increasing profits by classifying investment income or gains as revenue                                                |
| Shifting Current Expenses to the Current Period as a Special Charge | Amortizing costs too slowly                                                                                        |
| Shifting Current Expenses to the Current Period as a Special Charge | Changing accounting standards to foster manipulation                                                                |
| Shifting Current Expenses to the Current Period as a Special Charge | Moving expenses from the income statement to the balance sheet                                                      |
| Shifting Current Expenses to the Current Period as a Special Charge | Failing to write down or write off impaired assets                                                                   |
| Shifting Current Expenses to the Current Period as a Special Charge | Failing to record expenses and liabilities when future services remain                                                 |
| Shifting Current Expenses to the Current Period as a Special Charge | Changing accounting assumptions to foster manipulation                                                              |
| Shifting Current Expenses to the Current Period as a Special Charge | Creating a rainy day reserve as a revenue source to bolster future performance                                      |
| Shifting Current Expenses to the Current Period as a Special Charge | Holding back revenue                                                                                                |
| Shifting Current Expenses to the Current Period as a Special Charge | Accelerating expenses into the current period                                                                       |
| Shifting Current Expenses to the Current Period as a Special Charge | Changing accounting standards to foster manipulation, particularly through provisions for depreciation, amortization and depletion |

In the wake of recent MA practices around the world, commentators and regulators have called for stronger corporate governance (henceforth, CG) and board oversight to curb MA and frauds. These calls
have led to boards with more outside directors with greater financial expertise. Recent empirical evidence suggests that stronger CG and board oversight is associated with more ‘conservative’ accounting (Caskey and Laux, 2015). Nearly a decade after the Enron fraud made headlines around the world, the landscape of public company CG in the US and India is profoundly transformed by new regulations and the widespread adoption of sensible organizational safeguards—from the election of more ‘independent’ boards of directors to the establishment of anonymous ‘whistleblowing’ procedures. Today, as a result of these developments, boards and their Audit Committees perform a critical role in ensuring that the company avails itself of a thorough system of internal controls and FR compliance. Regulators, lawmakers and accounting professions have considered new rules, regulations and standards but as we see these measurements have not been sufficient to prevent the fraud in the FS.

### 3.0 LITERATURE REVIEW

Several analytical studies, from time to time, have been reported in the global media and majority of these studies were performed in developed, Western countries. Unfortunately, no study has been conducted to (a) examine the modus-operandi of the Satyam, India’s largest corporate fraud, and (b) analyze the behavioral aspects of top-level management team in the perpetuation of MA practices in the corporate-sector in the context of a developing economy, like India. Winkler, D. (2010) paper provided an analysis of the Indian scandal that analysts have called “India’s Enron.” It covered the areas of corporate history of Satyam and also provided an insight into how the $2.7 billion scandal evaded regulators, investors, and the board of directors. He also provided a discussion of who was responsible for the fraud, and also explained the scandal's effect in India and the implications for dealing with future obstacles. Finally, the author discussed the regulatory reform following Satyam and the current status of Indian securities markets. In another research study performed by Bhasin (2013), “the main objectives of this study were to: (a) identify the prominent companies involved in fraudulent financial reporting practices, and the nature of accounting irregularities they committed; (b) highlighted the Satyam Computer Limited’s accounting scandal by portraying the sequence of events, the aftermath of events, the key parties involved, and major follow-up actions undertaken in India; and (c) what lesions can be learned from Satyam scam?” To attain the above stated research objectives we applied a “content” analysis to the “press” articles. Niazi and Ali’s (2015) paper unfolds Satyam’s corporate scandal of inflated financial health, the aroused concerns of investors about the effectiveness of CG framework in India, the long-term effects over Indian stock market resulting from Satyam’s scam, and several suggestions from the CG theory and practice that could have helped in preventing this debacle. Thus, an in depth study is conducted to analyze the financial scam from a management’s perspective.

Another descriptive study by Pai and Tolleson (2015) examined the capture of government regulators using the case of Satyam Computer Services Ltd., one of India’s largest software and services companies, which disclosed a $1.47 billion fraud on its balance sheet on January 7, 2009. The authors reviewed the Satyam fraud and PWC’s failure to detect Satyam’s accounting shenanigans, and also discussed the societal implications associated with a “too big to fail” mentality and the moral hazard of such a mindset. In addition, the paper provides suggestions to protect the public interest while citing lessons learned from this scandal. Similarly, Bhasin (2015a) performed another research study by applying a questionnaire-based survey among 345 bank employees to know their perception towards bank frauds and evaluate the factors that influence the degree of their compliance level. The study reveals that “there are poor employment practices and lack of effective employee training; usually over-burdened staff, weak internal control systems, and low compliance levels on the part of Bank Managers, Offices and Clerks.” However, an exploratory research was conducted by Gupta and Gupta (2015) through a combined mode of structured questionnaires from 346 sample companies and 43 interviews with the corporate professionals, management, investors, government offices and authorities having wide experience. They found that the regulatory system is weak, there is dire need to redefine the role of auditors, coordination among different regulatory authorities is poor, and after every scam, there is a blame game.” Recently, Bhasin (2016a) conducted a study using a questionnaire-based survey methodology, wherein14 specific research questions were asked. In all, 120 questionnaires were
distributed to the preparers’ and users’ of the company FS and 85 responses from the participants were collected and analyzed using the percentage and frequencies of respondents. The study revealed that the practice of creative accounting (CA) is always a deliberate attempt to gain undue advantage for accountants, managers and companies. We recommend that “CA practices should be considered as a serious crime, and as such, accounting bodies, law courts and other regulatory authorities need to adopt very strict punitive measures to stop unethical CA practices.” Accordingly, the primary objective of this paper is to examine managers’ unethical behaviors in documented corporate fraud cases, on the basis of press articles, which constitute an ex-post evaluation of alleged or acknowledged fraud cases. Unfortunately, no study has been conducted to examine behavioral aspects of manager’s in the perpetuation of corporate frauds in the context of a developing economy, like India. Hence, the present study seeks to fill this gap and contributes to the literature.

4.0 MATERIALS AND METHODS

The main objective of this study is to highlight the Satyam Computer Services Limited’s manipulative accounting (MA) scandal by portraying the role played by key players involved in the scam process. This study is primarily based on secondary sources of data, and the nature of the study is primarily qualitative, descriptive and analytical. Best possible efforts have made by the author to provide the latest evidence supporting the case. Satyam is certainly a company worth investigating further as a case study and one that will surely be a topic of many business classes in the future to learn some lessons.

4.1 Accounting Manipulation Practices at Satyam Computer Services Limited

“Ironically, Satyam means “truth” in Sanskrit, but Raju’s admission of guilt has given the company, the name ‘Asatym, Scandalam’,” says Bhasin (2015). The scam at Satyam Computer Services Limited, the fourth largest company in India’s much showcased and fiscally pampered IT-industry has had an unusual trajectory. It began with a successful effort on the part of investors to thwart an attempt by the minority-shareholding promoters to use the firm’s cash reserves to buy out two companies owned by them: Maytas Properties and Maytas Infra. That aborted attempt at expansion precipitated a collapse in the price of the company’s stock and a shocking confession of financial manipulations and fraud from its chairman, Mr. B. Ramalinga Raju (henceforth, Raju). Disgraced former chairman of Satyam, Raju has confessed before investigators that he manipulated the balance sheet of the company for the last 7-years to attract more business and avoid any possible ‘hostile’ acquisition. Indeed, recession threw Raju off-guard and closed all his options. “But funny, even Raju, in his wildest of dreams, did not foresee that he could not possibly go undetected for ever for cooking up his balance sheets to the tune of thousands of crores,” stated Bhasin (2013). Parallel investigations were carried out by the Central Bureau of Investigation (CBI), the Enforcement Directorate (ED), the Serious Frauds Investigations Office (SFIO) and market regulator Security and Exchange Board of India (SEBI).

The investigation by SEBI revealed that directors and employees of Satyam, namely; Mr. B Ramalinga Raju (Ex-Chairman), Mr. B Rama Raju (Ex-Managing Director), Mr. Vadlamani Srinivasa (Ex-Chief Financial Officer), Mr. G Ramakrishna (Ex-vice President, Finance) and Mr. V. S. Prabhakara Gupta (Ex-Head Internal Audit) had, since Jan. 2001, connived and collaborated in over-statements, fabrication, falsification and misrepresentation of books of account and FS of Satyam Computers. They had colluded and connived with each other in actively inflating the revenues and understating the liabilities of Satyam by manipulation and fabrication of the books of account and financial statements and falsification of the information presented in the same. As Bhasin (2012) reported, “The FS prepared or caused to be prepared by them did not contain true-and-fair disclosures of the financial position of Satyam. They had deliberately projected a grossly false picture of the financials of Satyam to millions of investors. They also provided false CEO/CFO certification, made various announcements and issued advertisements/ press releases on the basis of falsified and misstated financial position of the company. Being promoters/promoter-group entities of the company, they were fully aware that the books of account of the company were being manipulated over the years. Through multiple routes, involving a large number of related companies and myriad transactions, the promoters of Satyam, led by the company’s Chairman,
are alleged to have siphoned out a huge quantity of money from the firm.” To cover that up, the accounts were manipulated and documents were forged to declare non-existent cash reserves and understate liabilities. “But given the scale of the scam at Satyam, what is surprising is that the transactions did not raise suspicion on the part of Board (including independent directors) and auditors much earlier. This does suggest that the system of corporate governance that has been in place after liberalization does not work. The Satyam scam, which is likened by many to the US’s Enron scam, has brought about many corporate governance, disclosure and audit reforms to plug the holes that were manipulated by the tainted former chairman of Satyam, B. Ramalinga Raju and team,” concluded Bhasin (2016h).

Though the CBI has won accolades for successful investigation and getting conviction in India’s biggest corporate fraud perpetrated by the founders of Satyam, the crucial spade work was done by the Crime Investigation Department (CID) sleuths of united Andhra Pradesh. “The crucial evidence about the fraud came to light only when the CID sleuths analyzed data in the 8th Server (out of the total 9 servers) used at Satyam Computers office in Madhapur. The officers found that in Server No. 8, several invoices were altered by the culprits using a special software tool with exclusive login facility for the Raju brothers. By tracing back the work done through the special software tool, cops stumbled upon forged bank deposits soft copies and hard copies of the same were then seized from the document storage facility,” said Bhasin (2016g). The auditors initially feigned ignorance about the commission of the fraud saying that “it was solely done by the Raju’s family without their knowledge and they had just affixed their signatures on documents furnished with the banks.” However, when CID showed them blunders in the documents, they had to finally agree about their involvement in the fraud. Analysis of the data stored on servers also revealed the fictitious bank accounts and bogus companies floated by the fraudsters, and CBI along with other probe agencies, later gathered further evidence which resulted in conviction of the 10 accused.

When CBI finalized its investigations into falsification of accounts and forgery of documents in the Satyam fraud case, they found that the accounting system was ‘manipulated’ to inflate the company’s sales by Rs. 5,117 crores. Using ‘cyber-forensic’ techniques, the investigating agency said “it had uncovered the modus operandi used by the accused to show inflated sales by Satyam Computer Services Limited.” Further, Bhasin (2016e) added, “Officials at Satyam created a protocol to manipulate software computing man-hours spent on client projects in order to show inflated sales by Satyam to the tune of Rs. 4,746 crores. Through this protocol, the accused bypassed the regular system and created false invoices that were shown only to the company’s finance department and not to clients. However, these invoices were generated for the purpose of inflating sales and the amounts pertaining to these false and fabricated invoices were shown as ‘receivables’ in the books of accounts of Satyam thereby ‘dishonestly inflating the revenues’ of the company.”

### 4.2 Cooked-Up Books of Accounts

Mr. B. Ramalinga Raju would have us believe that all that he did wrong was to get caught up in the corporate rat race. Driven to desperation by a ruthless environment where the slightest slip on a quarterly earnings target would pummel Satyam’s share price, Raju began inflating both revenue and profit figures to meet market expectations. In a dramatic letter released on Jan. 7, 2009, he admitted to non-existent cash balances, fake interest proceeds and grossly overstated revenues that totaled $1.4 billion, amongst other things. In it, he also reported a ‘real’ operating margin of 3.1%t. Keeping in view the media reports, Bhasin (2016f) is of firm opinion that “Satyam’s top management simply cooked-up the company’s books by overstating its revenues, profit margins, operating profits, ghost employees etc. for every single quarter over a period of 5-years, from 2003 to 2008. In his letter, Raju admitted to inflating the cash and bank balances of the company by Rs. 5,040 crore. The company’s total assets as on Sept. 30, 2008, stood at Rs. 8,795 crore. Of this cash and bank balances stood at Rs. 5,313 crore (which was nearly 60% of the total assets). This was overstated by Rs. 5,040 crore. The company basically had cash and bank balances of less than Rs. 300 crore.”

Raju also admitted to fudging the last financial result that the company had declared, for the period of three months ending Sept. 30, 2008. The company had reported revenues of Rs. 2,700 crore, with an
operating margin of 24% of revenues (or Rs. 649 crore). According to Bhasin (2016a), “In fact, these numbers were made-up. The actual revenues were Rs. 2,112 crore, with an operating margin of Rs. 61 crore (or 3% of the total revenues). So, Satyam had made a profit of Rs. 61 crore but was declaring a profit of Rs. 649 crore. The difference was Rs. 588 crore. The operating profit for the quarter was added to the cash and bank balances on the balance sheet. Hence, cash and bank balances went up by an ‘artificial’ Rs. 588 crore, just for the three month period ending Sept. 30, 2008. This was a formula that Raju had been using for a while.” First, Satyam over-declared its operating profit. Once this fudged amount of operating profit was moved to the balance sheet, it ended-up over-declaring its cash and bank balances. And this led to a substantially bigger balance sheet than was actually the case. The company had total assets of Rs. 8,795 crore, as on Sept. 30, 2008. Once the Rs. 5,040 crore of cash and bank balances that were simply not there were removed from this, the ‘real’ total assets fell to a significantly lower level of Rs. 3,755 crore. So, how did Raju manage to boost revenues? Here, Bhasin (2016b) provides an explanation as: “In order to do this, Raju created fictitious clients (to boot sales revenue) with whom Satyam had entered into business deals. In order to record the fake sales, Raju introduced 7,000 fake invoices into the computer system of the company. Since the clients were fictitious, they could not make any real cash payments. Therefore, the company kept on inflating the money due from its fictitious clients (or what Raju called debtors position in his letter).

Further, once fake sales had been recorded fake profits were also made and reported in accounts. Ultimately, the fake profits bought in fake cash, which therefore, needed to be invested somewhere. This led Raju to creating fake bank statements (showing forged fixed deposit receipts), where all the fake (or non-existent) cash that the company was throwing up was being invested. Finally, Raju tried his best to use this “fake cash” to buy out two real-estate companies, called Maytas Properties and Maytas Infra (both promoted by the family members) for a total value of $1.6 billion. The idea was to introduce in company accounts some “real” assets against all the “fake” cash that the company had managed to accumulate, so far. Unfortunately, that did not happen, and after this, Raju had no other way out but to come clean. So, Raju finally confesssed about fudging the accounts in his Letter.” While the Satyam accounting scam, which involved unethical and illegal CA tactics, was to the tune of Rs. 8,000 crore. Shockingly, the scam had caused an estimated notional loss of Rs. 14,000 crore to investors and unlawful gains of Rs. 1,900 crore to Ramalinga Raju and others.

The balance sheet of Satyam (as on Sept. 30, 2008) carried an inflated (non-existent) cash and bank balances of Rs. 5,040 crore, non-existent interest of Rs. 376 crore, and understated liability of Rs. 1,230 crore. In fact, the balance sheet carried an accrued interest of Rs. 376 crore, which was non-existent. Table 4 depicts some parts of the Satyam’s fabricated ‘Balance Sheet and Income Statement’ and shows the ‘difference’ between ‘actual’ and ‘reported’ finances. Keeping in view the modus operandi successfully used by Satyam, Bhasin (2015b) remarked: “To show excess cash, several banks have to be ‘fooled’ (or asked to look the other way). They probably were. To show huge fake revenues, everyone, from sales teams to MIS managers to accountants, had to be kept in the ‘dark’ (or conscripted into the conspiracy). Some probably were. To hide it all from investors and analysts, auditors had to be ‘fooled’ (or roped in as co-conspirators). Some surely were. It is frightening that such large-scale fraud, which is precisely the kind of thing our various ‘watchdogs’ are meant to prevent, can be perpetrated so casually by just a few people at the top!”

Table 4: Fabricated parts of balance sheet and income statement of Satyam

|                        | Actual (Rs.) | Reported (Rs.) | Difference (Rs.) |
|------------------------|--------------|----------------|------------------|
| Cash and Bank Balances | 321          | 5,361          | 5,040            |
| Accrued Interest on bank FDs | Nil     | 376.5          | 376              |
| Understated Liability  | 1,230        | None           | 1,230            |
| Overstated Debtors     | 2,161        | 2,651          | 490              |
| Total                  | Nil          | Nil            | 7,136            |
| Revenues (Q2 FY 2009)  | 2,112        | 2,700          | 588              |
| Operating Profits      | 61           | 649            | 588              |
4.3 Satyam’s Manipulative Accounting Methodology Unveiled

Ramalinga Raju, former chairman of Satyam Computer Services Limited (later merged with Tech Mahindra), had confessed to the Rs. 7,800-crore fraud on Jan. 7, 2009 and accepted he had cooked company’s account books and inflated profits over the last several years. He was arrested by AP police on Jan. 9, 2009. The CBI’s “Multi-Disciplinary Investigation Team” (MDIT) played a crucial role in unraveling the Satyam scam, which was not only massive in scale but also posed challenge to investigators due to web of transactions and other technicalities. It was a complicated case involving digital evidences, computer techniques, audit procedures, accounting standards, revenue records, source codes, and computer network log, etc. On Dec. 8, 2014, Raju, his bother Rama Raju, Vadlamani Srinivas and former director Ram Mynampati were sentenced to 6-month jail term and fined by the Special Court for Economic Offences in connection with complaints filed by Serious Fraud Investigation Office (SFIO) for violation of various provisions of the Companies Act. The Securities and Exchange Board of India (SEBI) in June 2014 barred Raju and four others from markets for 14 years and asked them to return Rs. 1,849 crore worth of unlawful gains with interest.

Shockingly, how did Raju mastermind this maze of Accounting Manipulation (AM) practices at Satyam? Keen to project a perpetually rosy picture of the company to the investors, employees and analysts, Raju & Team manipulated the account books so that it appeared a far bigger enterprise than it actually was. Here, Bhasin (2015) remarked, “The Satyam scam is clearly a case of MA, in which the accounts were ‘cooked-up’ by creating fake invoices for the services not rendered, recognizing revenue on these fake receipts, falsifying the bank balances and interest on fixed deposits to show these fake invoices are converted into cash receipts and are earning interest, and so on.” This type of MA is both illegal and unethical. In its recent indictment of the former promoters and top managers of Satyam, the SEBI and other investigative agencies in India had finally provided minute and fascinating details about how India’s largest corporate scam was committed. An attempt has been made by the author(s), based on the media reports, to provide a description about the methodology used by the Satyam to commit the accounting fraud duly supported by evidence, wherever possible.

Fake Invoices and Tempered Billing System: “By using the IT skills in-house and tampering with the invoice management system (IMS) of the company, a software module that was internally developed,” says Bhasin (2008). The Central Bureau of Investigation (CBI) has revealed details of the fake invoicing system used by Satyam. Documents released by media reports (for example, Verma and Ramana, 2009) to the general public in India showed how the company’s standard billing systems were subverted to generate ‘false’ invoices to show ‘inflated’ sales, before its former boss, Ramalinga Raju, admitted to his role in the India’s largest-ever corporate scandal. The investigators had used cyber forensics to uncover how in-house computer systems were exploited to generate fake invoices. Regular Satyam bills were created by a computer application called ‘Operational Real Time Management (OPTIMA)’, which created and maintained information on all company projects. The ‘Satyam Project Repository (SRP)’ system then generated project IDs; there is also an ‘Ontime’ application for entering the hours worked by Satyam employees; and a ‘Project Bill Management System (PBMS)’ for billing. An ‘Invoice Management System (IMS)’ generated the final invoices.

From the above, an intriguing question that arises here is: “how were the fake invoices created by subverting the IMS?” In the IMS system, there is a mandatory field earmarked ‘Invoice Field Status’. Unless this is filled, processing of the order does not go ahead. So, what Raju & Company did was to use two alphabets ‘H’ (Home) or ‘S’ (Super) in the Invoice Field Status to process the entry. The invoices, thus created were ‘hidden’ from the view of those who ran the finance units. There were about 74,625 invoices generated in the IMS between April 2003 and December 2008. About 7,561 invoices out of 74,625 had ‘S’ marked in their invoice field status. Out of this, 6,603 were also found on the company’s Oracle Financials software system, to make it seem like these were actual sales. Entries into this system get reflected straight in the Profit and Loss Statement. The balance of 958 invoices remained in the invoice state, and therefore, within the IMS system—they were not keyed into the Oracle enterprise-ware. The total revenues shown against these 7,561 fake invoices were Rs. 5,117 crore. Of this, sales through the
\textbf{Satyam’s manipulative accounting methodology unveiled...}

‘reconciled’ 6,603 invoices were about Rs. 4,746 crore \textit{(Ramana, 2009)}. The CBI has also found that “sales were inflated every quarter and the average inflation in sales was about 18%. After generating fake invoices in IMS, a senior manager of the finance department (named Srisailam), entered the 6,603 fake invoices into Oracle Financials with the objective of inflating sales by Rs. 4,746 crore. By reconciling the receipts of these invoices, the cash balances in the company’s account were shown at Rs. 3,983 crore.”

The CBI officers have concluded that “the scandal involved this system structure being bypassed by the abuse of an emergency ‘Excel Porting System’, which allows invoices to be generated directly in IMS... by porting the data into the IMS.” This system was subverted by the creation of a user ID called ‘Super User’ with “the power to hide/unhide the invoices generated in IMS.” By logging in, as Super User, the accused were hiding some of the invoices that were generated through Excel Porting. Once an invoice is hidden the same will not be visible to the other divisions within the company but will only be visible to the company’s finance division sales team. As a result, concerned business circles would not be aware of the invoices, which were also not dispatched to the customers. Investigation revealed that all the invoices that were hidden using the Super User ID in the IMS server were found to be false and fabricated. The face values of these fake invoices were shown as receivables in the books of accounts of Satyam, thereby dishonestly inflating the total revenues of the company.

4.4 Tunneling Strategy Used by Satyam

As part of their ‘tunneling’ strategy, the Satyam promoters had substantially reduced their holdings in company from 25.6\% (in March 2001) to 8.74\% (in March 2008). Furthermore, as the promoters held a very small percentage of equity (mere 2.18\%) on December 2008, as shown in Table 5, the concern was that poor performance would result in a takeover bid, thereby exposing the gap. The aborted Maytas acquisition deal was the final, desperate effort to cover up the accounting fraud by bringing in some real assets into the business. When that failed, Raju confessed the fraud. Given the stake the Raju’s held in Matyas, pursuing the deal would not have been terribly difficult from the perspective of the Raju family.

Table 5: Promoter’s shareholding pattern in Satyam

| Particulars | March 2001 | March 2002 | March 2003 | March 2004 | March 2005 | March 2006 | March 2007 | March 2008 | Dec. 2008 |
|-------------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|
| Promoter’s holding (in %-age) | 25.6 | 22.26 | 20.74 | 17.35 | 15.67 | 14.02 | 8.79 | 8.74 | 2.18 |

As pointed out by Shirur (2011), “Unlike Enron, which sank due to agency problem, Satyam was brought to its knee due to tunneling. The company with a huge cash pile, with promoters still controlling it with a small per cent of shares (less than 3\%), and trying to absorb a real-estate company in which they have a majority stake is a deadly combination pointing prima facie to tunneling.” The reason why Ramalinga Raju claims that he did it was because every year he was fudging revenue figures and since expenditure figures could not be fudged so easily, the gap between ‘actual’ profit and ‘book’ profit got widened every year. In order to close this gap, he had to buy Maytas Infrastructure and Maytas Properties. In this way, ‘fictitious’ profits could be absorbed through a ‘self-dealing’ process. Bhasin (2013a) concludes, “The auditors, bankers, and SEBI, the market watchdog, were all blamed for their role in the accounting fraud.”

5.0 INSIDER TRADING ACTIVITIES AT SATYAM

Investigations into Satyam scam by the CID of the State Police and Central agencies have established that “the promoters indulged in nastiest kind of insider trading of the company’s shares to raise money for building a large land bank.” According to the SFIO Report (2009) findings, “promoters of Satyam and their family members during April 2000 to January 7, 2009 sold almost 3.90 crore number of shares thereby collecting in the process Rs. 3029.67 crore. During this course, the founder ex-chairman Ramalinga Raju sold 98 lakh shares collecting in Rs. 773.42 crores, whereas, his brother Rama Raju, sold 1.1 crore shares pocketing Rs. 894.32 crores.” Finding these top managers guilty of unfair manipulation...
of stock prices and insider trading, SEBI has asked them to deposit their ‘unlawful gains’ of Rs. 1850 crore, with 12% interest, with the regulator within 45 days. They have also been barred from associating with the securities markets in any manner for the next 14 years.

5.1 GAPS IN SATYAM’S EARNINGS AND CASH FLOWS

Through long and bitter past experience, some investors have developed a set of early warning signs of financial reporting fraud. Bhasin (2007) described it as: “One of the strongest is the difference between income and cash flow. Because overstated revenues cannot be collected and understated expenses still must be paid, companies that misreport income often show a much stronger trend in earnings than they do in cash flow from operations.” But now, we can see there is no real difference in the trends in Satyam’s net income and its cash flow from operations during 2004 and 2005, as shown in Figure 1 below.

Both net income and cash flow lines were almost overlapping each other for 2004 and 2005. That is not because the earnings were genuine; it is because the cash flows were manipulated too. To do that, Raju had to forge several big amount accounts receivables, and simultaneously falsify about their cash collections. Thus, the fake cash flows had led to the bogus bank balances. If cash flow from operating activities of a company is consistently less than the reported net income, it is a warning sign. The investor must ask why operating earnings are not turning into cash. To keep from tripping the income-cash flow alarms, Raju had to manipulate almost every account related to operations. However, wide gaps can be noticed in net income and cash flow from operation during 2006, 2007 and 2008, respectively. “During 2006 to 2008, cash flows were far less than net income due to accounting manipulations. What is even more boggling is that the statement of cash flows seems to be clean as well. This obviously means that not only was the income inflated, but the cash numbers were massaged by a master masseur. Indeed, Satyam fraud was a stunningly and very cleverly articulated comprehensive fraud, likely to be far more extensive than what happened at Enron,” said Bhasin (2015a). The independent board members of Satyam, the institutional investor community, the SEBI, retail investors, and the external auditor—none of them, including professional investors with detailed information and models available to them, detected the malfeasance.

5.2 FAKE AUDIT AND DUBIOUS ROLE PLAYED BY AUDITOR’S

Many experts cast partial blame for the MA scandal on Satyam’s auditor ‘Price Waterhouse (PwC)’ India, because the fraud went undetected for so many years. In fact, global auditing firm used Lovelock and Lewis as their agent, who audited the Satyam’s books of accounts from June 2000 until the discovery of the fraud in 2009. Several commentators criticized PwC harshly for failing to detect the fraud (Winkler, 2010). As Bhasin (2012) stated, “The PwC India signed Satyam’s financial statements and hence it, was responsible for the numbers under the Indian law. The fraudulent role played by the PwC in the failure of Satyam matches the role played by Arthur Anderson in the collapse of Enron.” However, Mr. S. Gopalakrishnan and Mr. S. Talluri, partners of PwC had admitted they did not come across any case or instance of fraud by the company. However, Raju’s admission of having fudged the accounts for several years put the role of these statutory auditors on the dock.
The SFIO Report stated that “the statutory auditors instead of using an independent testing mechanism used Satyam’s investigative tools and thereby compromised on reporting standards.” PwC did not check even 1% of the invoices; neither did they pay enough attention to verification of sundry debtors, which (according to Raju’s confession) was overstated by 23% (SFIO report says it was overstated by almost 50%). The Statutory auditors also failed in discharging their duty when it came to independently verifying cash and bank balances, both current account and fixed deposits. Hence, it was required that the auditors (PwC) independently checked with the banks on the existence of fixed deposits, but this was not done for as large as a sum of Rs. 5,040 crore. “The statutory auditors on whom the general public relied on for accurate information not only failed in their job but themselves played a part in perpetrating fraud by preparing a clean audit report for fudged, manipulated and cooked books,” concluded Bhasin (2012a). It is shocking to know that “PwC outsourced the audit function to some audit firm, Lovelock and Lewis, without the approval of Satyam.”

To be fair, there were probably thousands of Satyam cash accounts that had to be confirmed by the auditor, as the outsourcer has nearly 700 customers (including 185 Fortune 500 companies) in 65 countries. The audits for a company of that size would have been staggered, with millions of dollars of outstanding receivables pouring in to different locations at any given time. As Veena et al., (2014) commented, “The Satyam case focuses on auditors’ responsibilities related to obtaining and evaluating audit evidence, particularly as it relates to confirming cash and receivables. It also explores the quality control responsibilities related to audit procedures performed by foreign affiliates of a large international audit firm.” One particularly troubling item concerned the $1.04 billion that Satyam claimed to have on its balance sheet in “non-interest-bearing” deposits. Recently, Bhasin (2016d) pointed out, “The large amount of cash should have been a ‘red-flag’ for the auditors that further verification and testing were necessary. While verifying bank balances, they relied wholly on the (forged) fixed deposit receipts and bank statements provided by the ‘Chairman’s office’. As to the external auditors, who are supposed to look out for investors, they seem to have been quite a trusting lot. “The forensic audit reveals differences running into hundreds of crores of Rs. between the fake and real statements, as captured by the computerized accounting systems. But for some strange reason, everyone, from the internal auditor to the statutory auditors, chose to place their faith in the ‘Chairman’s office’ rather than the company’s information systems,” stated Bhasin (2015b). Furthermore, it appears that the auditors did not independently verify with the banks in which Satyam claimed to have deposits. Unfortunately, the PwC audited the company for nearly 9 years and did not uncover the fraud, whereas Merrill Lynch discovered the fraud as part of its due diligence in merely 10 days. Missing these “red-flags” implied either that the auditors were grossly inept or in collusion with the company in committing the fraud.

When scams break out in the private sector auditors too end up on the firing line. The CBI, which investigated the Satyam fraud case, also charged the two auditors with complicity in the commission of the fraud by consciously overlooking the accounting irregularities. On April 22, 2014 “The Institute of Chartered Accountants of India (ICAI)” has imposed a life-time ban on four auditors (Mr. S. Gopalakrishna, Mr. Talluri Srinivas, Mr. V. Srinivasa and Mr. V.S. Prabhakara Rao) involved in the Satyam CA fraud. All of them had been found guilty of gross negligence in discharge of their duties by the Disciplinary Committee of ICAI and they were barred from practicing as a Chartered Accountant. A penalty of Rs. 5 lakh each was also levied on them. Strangely, Satyam’s auditor, PwC, got away with a rap on its knuckles.

**5.3 ABNORMAL AUDIT FEES PAID TO PWC INDIA AGENT**

A point has also been raised about the unjustified increase in audit fees. A reference to the figures of audit fee in comparison with total income over a period of time may be pertinent. Table 6 shows that over a period of four years, 2004-05 to 2007-08, the audit fee increased by 5.7 times, whereas total income increased by 2.47 times during the same period. Here, Bhasin (2013) remarked, “Nevertheless, it is difficult to draw any conclusion as to whether the increase in audit fee was justified or not. Suspiciously, Satyam also paid PwC twice what other firms would charge for the audit, which raises questions about
whether PwC was complicit in the fraud.” Another development that came under investigators’ lens was that between 2003-2008, audit fee from Satyam had increased three times. For instance, Satyam’s auditor’s fee jumped from Rs. 92 lakhs in 2004-05 fiscal to Rs. 1.69 crore the next year. But it was the financial year 2006-07 when PwC’s auditing fees shot phenomenally to Rs. 4.31 crores. The Chairman of the AC’s in the relevant years should have been interrogated by the investigators as to what justification did the AC have for recommending such a hike?

Table 6: Satyam’s total income and audit fees (Rs. in Millions)

| Year     | 2004-05 | 2005-06 | 2006-07 | 2007-08 |
|----------|---------|---------|---------|---------|
| Total Income (A) | 35,468  | 50,122  | 64,100.8| 83,944.8|
| Audit Fees (B)   | 6.537   | 11.5    | 36.7    | 37.3    |
| % of B to A      | 0.0184  | 0.0229  | 0.0573  | 0.0444  |

(Source: Annual Reports of Satyam, Percentage computed)

The Price Waterhouse received an annual fee of Rs. 37.3 million (or Rs. 4.31 crore) for financial year 2007-2008, which is almost twice, as what Satyam peers (i.e., TCS, Infosys, Wipro), on an average, pay their auditors. Bhasin (2015) stated, “This shows that the auditors were being lured by the monetary incentive to certify the cooked and manipulated financial statements. Events of such nature raise doubts about statutory auditors’ discharging their duty independently.” Consequently, on 24th Jan. 2009, two senior partners of PwC, Mr. S. Gopalakrishna (was due for retirement by March 09) and Mr. Srinivas Talluri were booked by Andhra Pradesh CID police on charges of fraud and criminal conspiracy. The PwC has suspended the two partners, who signed on Satyam’s balance sheet and are currently in prison. The SFIO report also states that “PwC outsourced the audit function to some audit firm, Lovelock and Lewis, without the approval of Satyam.”

5.4 WEB OF COMPANIES

A web of 356 investment companies was used to allegedly divert funds from Satyam. Under Ramalinga Raju, Satyam floated 327 companies and published inflated financials. “Through multiple routes involving a large number of related companies and myriad transactions, the promoters of Satyam Computer Services, led by the company’s Chairman Ramalinga Raju, are alleged to have siphoned out a huge quantity of money from the firm. To cover that up, the accounts were manipulated and documents were forged to declare non-existent cash reserves and understate liabilities. These front companies purchased 6,000 acres of land, taken loans of Rs. 1,230 crore from these companies, which were not even accounted in books,” says Bhasin (2016h).

The CID investigation also revealed that Satyam had executed projects in the name of 7 non-existent companies: Mobitel, Cellnet, E Care, Synony, Northsea, Autotech and Hargreaves. All these companies had several transactions in the form of inter-corporate investments, advances and loans within and among them. One such ‘sister’ company, with a paid-up capital of Rs. 5 lakh, had made an investment of Rs. 90.25 crore, and received unsecured loans of Rs. 600 crore.

According to reports, the Registrar of Companies has found that “Satyam’s annual report reveals several transactions with subsidiaries and other group companies by way of investments, purchase of assets and other receivables” that point to the concealed transfer of funds out of the company. Bhasin (2016a) remarked, “About Rs. 1,425 crore, out of Rs 1,744 crore loans obtained from non-banking finance companies were transferred to the bank accounts of Satyam by 37 entities as loans between November 17, 2006, and October 30, 2008, to meet the expenses of the company. Of this amount Rs. 194 crore was returned by the company between October and November 2008 to 15 out of the 37 companies. That left an outstanding liability of Rs. 1,231 crore—the sum Raju says He infused into the company.” The key puzzle the CBI was trying to solve was also about the claims of Raju, as per Jan.7, 2009 letter, infusing Rs. 1,230 crore into the company.

5.5 FALSIFICATION OF BANK’S FIXED DEPOSITS
The promoters of Satyam regularly used to generate monthly bank statements to be fed into the bank books. Similarly, they also used to generate confirmations of bank balances, at the end of every quarter, against non-existent fixed deposit receipt (FDRs) and interest earned/due thereon. As Bhasin (2013b) commented, “From the records of Satyam, as well as, the books held with the auditors, it was noted that two sets of letters of confirmation of balances of FDRs were available with the auditors. These two sets included confirmations actually sent by banks directly to the auditors (the genuine ones) in the prescribed format, and confirmations through forged letters purportedly sent from various bank branches, but forged.” Thus, as on 30 Sept. 2008, while the actual FDs balances with various banks was just under Rs. 10 crore, fake FD receipts shown to the auditors totaled over Rs. 3,300 crore. At HDFC Bank, for example, Satyam claimed Rs. 704 crore in deposits without having a single rupee parked with the bank branch concerned. With Citi Bank, it reported Rs. 613.32 crore of FDs when it actually had just Rs. 1.32 crore. And so on. Providing an explanation, Bhasin (2016c), described the motto and rationale for the process as, “Fake FDs had to be generated since fake business had to be shown to the stock markets, which meant the creation of fake customers and fake invoices from these businesses. Fake businesses generated fake revenues which, in turn, created the illusion of fake profit margins, and, finally, fake cash in the bank. Satyam apparently was very poor on its business fundamentals—with margins being low in many quarters, including negative margins in some quarters.”

Indeed, falsification with regards to fixed deposit have been done since 2001-02 till 2007-08 and also for the quarter ended June 2008 and Sept. 2008. Further, Bhasin (2016f) observed, “All the misleading actions of window-dressing and camouflaging created a larger than life picturesque image year-after-year in the minds of millions of gullible investors whose fate underwent a depressive spin.” Satyam’s balance sheet (as on Sept. 7, 2008) carried an accrued interest of Rs. 376 crore, which was non-existent. These figures of accrued interest were shown in balance sheets in order to suppress the detection of such non-existent fixed deposits on account of inflated profits. The company had created a false impression about its fixed deposits summing to be about Rs. 3,318.37 crores, while they actually held FDRs of just about Rs. 9.96 crores. Many experts cast partial blame for the scandal on Satyam’s auditor Price Waterhouse (PwC) India, because the fraud went undetected for so many years.

5.6 SHOWING FAKE AND UNDERUTILIZED EMPLOYEES

To quote Bhasin (2012), “One of the biggest sources of defalcation at Satyam was the inflation of the number of employees. Founder chairman of Satyam, Raju claimed that the company had 53,000 employees on its payroll. But according to investigators, the real number was around 43,000. The fictitious/ghost number of employees could be fabricated because payment to the remaining 13,000 employees was faked year-after-year: an operation that evidently involved the creation of bogus companies with a large number of employees.” The money, in the form of salaries paid to ghost employees, came to around $4 million a month, which was diverted through front companies and through accounts belonging to one of Mr. Raju’s brothers and his mother to buy thousands of acres of land. Making up ghost employees might sound complicated, but investigators said it was not that difficult. “Employees are just code numbers saved in Satyam computer system; anyone can create any amount of them by creating bogus employee IDs, with false address, time-sheets, opening bogus salary accounts with banks, and collecting payments through a local known accomplice,” Bhasin (2012a) sums up the process.

Interestingly, the charge-sheet filed by the investigators is of the view that Satyam employees remained underutilized. For instance, the utilization level shown in the latest investor update by the company is about 74.88% for offshore employees. However, the actual utilization was 62.02%. This clearly shows that the bench strength was as high as 40% in the offshore category. Further, as a result of underutilization, the company was forced to pay salaries to associates without jobs on hand, which increased the burden on company’s finances. Even in the onshore category, the bench strength was around 5% (of total staff).

5.7 LAX BOARD OF DIRECTORS
The Satyam Board was composed of “chairman-friendly” directors, who failed to question the management’s strategy and use of leverage in recasting the company. Moreover, they were also extremely slow to act when it was already clear that the company was in financial distress. Here, Bhasin (2011) observed, “The directors acted as mere rubber stamps and the promoters were always present to influence the decision. The glue that held the board members together was Mr. Ramalinga Raju (Chairman). Each of the board members were there on his personal invitation and that made them ineffective. The Board ignored, or failed to act on, critical information related to financial wrongdoings before the company ultimately collapsed.” It was only when Raju in the Dec. 2008 announced a $1.6 billion bid for two Maytas companies (Maytas Infra and Maytas Properties) and while the share market reacted very strongly against the bid and prices plunged by 55% on concerns about Satyam’s CG, that some of the independent directors came into action by announcing their withdrawal from the Board, by than it was too late.

Satyam board’s investment decision to invest 1.6 billion dollars to acquire a 100% stake in Maytas Properties and in 51% stake in Maytas Infrastructure (the two real estate firms promoted by Raju’s sons) was in gross violation of the Companies Act 1956, under which no company is allowed, without shareholder’s approval to acquire directly or indirectly any other corporate entity that is valued at over 60% of its paid-up capital. “Yet, Satyam’s directors went along with the decision, raising only technical and procedural questions about SEBI’s guidelines and the valuation of the Maytas companies. They did not even refer to the conflict of interest in buying companies in a completely unrelated business, floated by the chairman’s relatives,” remarked Bhasin (2016f). Indeed, one of the independent directors, Krishna Palepu, praised the merits of real-estate investment on Satyam’s part.

**Unconvincing Role of Independent Directors:** With regard to the role of the ‘independent’ directors (IDs) at Satyam, we should understand: how ‘independent’ they actually were? It was seen that all the non-executive directors (NEDs) at Satyam have been allotted significant stock options at an unbelievable low strike price of Rs. 2 per share, and apart from this, all the NEDs have also earned handsome commissions during 2007-08, as reflected by Satyam’s audited results. Table 7 shows the details of number of Stock options and commission given to different NEDs, as per Satyam’s audited results for 2007-08.

Table 7: Satyam’s sumptuous gift to its non-executive directors

| No. of Options | Commission (in Rs.) |
|----------------|---------------------|
| Krishna Palepu | 10,000              |
| Mangalam Srinivasan | 10,000              |
| T R Prasad | 10,000              |
| V P Rama Rao | 10,000              |
| M Ram Mohan Rao | 10,000              |
| V S Raju | 10,000              |
| Vinod Dham | 10,000              |

Source: Satyam’s Balance Sheet for 2007-08, Satyam Computer Services Limited, Hyderabad.

Naturally, a basic question that arises here is: “how can directors who had enjoyed such a huge largesse from the Company’s promoters, had been beneficiaries of stock options given at an unbelievable strike price of Rs. 2 per share (against the ruling price of Rs. 500 per share in 2007-08) and who had received such high commissions could be expected to be ‘independent’? According to Bhasin (2016), “The idea of giving stock options to the independent directors, was perhaps, an intelligent ploy by Raju to successfully implement his plot at Satyam, with little resistance from the so-called independent directors, to whom, he was supposed to report to. It sounds ridiculous to listen to some of the independent directors at the Press interviews post-scandal that they were not aware of what was going on at Satyam.” Furthermore, it is very disturbing that highly respected persons like T. R. Prasad and Dr. Rammohan Rao, both received stock options and commissions from Satyam, without wondering how this was acceptable to their status of independent directors. Take the case of another independent director, the well-known Prof. Krishna Palepu. Prof. Palepu accepted more than $200,000 in total compensation along with 10,000 stocks (equivalent to 5000 ADR) and getting paid a fabulous fee of Rs. 9.2 million for conducting training
programs for Satyam employees on CG principles and their compliance, even if not expressly forbidden statutorily, will still place him as one having a vested interest in accepting the unethical policy of the management as a quid pro quo. As an ‘independent’ director, he should not have accepted any consulting assignment from Satyam. “Satyam scam is one more proof that the mere compliance of SEBI’s rule of the minimum number of independent directors does not guarantee ethical practices. Corporate history of the past decade has more than clearly shown that independent directors have not served their purpose,” stated Bhasin (2013a).

Notwithstanding Raju’s confession, the Satyam episode has brought into sharp focus the role and efficacy of “independent” directors. The SEBI requires the Indian publicly held companies to ensure that independent directors make up at least half of their board strength. The knowledge available to independent directors and even audit committee members was inherently limited to prevent willful withholding of crucial information. The reality was, at the end of the day, even as an audit committee member or as an independent director, I would have to rely on what the management was presenting to me, drawing upon his experience as an independent director and audit committee member. As Bhasin (2010) pointed out, “It is the auditors’ job to see if the numbers presented are accurate. That is what the directors should have been asking... Like the dog that did not bark in the Sherlock Holmes story, the matter was allowed to slide. Even if outside directors were unaware of the true state of Satyam’s finances, some ‘red’ flags should have been obvious.” The closely-held structure of many Indian companies suggests a need for improved transparency and accountability for independent directors. Apart from improving disclosure standards, re-auditing norms, and greater shareholder activism, there is also a need to counter corruption.

5.8 QUESTIONABLE ROLE OF THE AUDIT COMMITTEE

As Bhasin (2016d) strongly observed, “Surprisingly, the failure to detect the Satyam fraud is ‘unimaginable’ because it involves violating basic audit procedures. Auditing cash is so basic that people do not think twice about accepting the number, never thinking to ask questions about it.” Still, a basic question arises: “Where was the Audit Committee (AC)?” As an AC member, we understand that board members are not responsible for re-auditing financial statements. However, the directors have access to the auditors and the right and responsibility to question the audit. For instance, in the case of seeing an accumulated $1 billion on the books, the AC should have raised questions about what the company planned to do with the cash, or how much it was earning on the money, and so on. It also has been suggested that the Public Committee on Accounting Oversight Board (PCAOB)—the U.S. entity charged with auditing firm oversight—bears some responsibility for the alleged poor performance of Price Waterhouse India. Unfortunately, one possible culprit that escaped blame for the Satyam scandal is the accounting rules used by the company. Satyam used both U.S. GAAP and IFRS to report its financial results, which means that one set of accounting standards did not trump the other with respect to shedding light on the fraud. Moreover, Bhasin (2016f) observed that “the timely action on the information supplied by a whistleblower to the chairman and members of the AC (an e-mail dated December 18, 2008 by Jose Abraham), could serve as an SOS to the company, but, they chose to keep silent and did not report the matter to the shareholders or the regulatory authorities.”

6.0 CONCLUSION

Mr. B. Ramalinga Raju (Chairman of Satyam) had been fudging and cooking up the books of accounts of Satyam quietly from 2001 to 2008 by planting electronically created fictitious order receipts and sales invoices. Then, Raju and his accomplices forged letters from banks to external auditors. As Bhasin (2016) added, “Raju would have us believe that all that he did wrong was to get caught up in the corporate rat race. Driven to desperation by a ruthless environment where the slightest slip on a quarterly earnings target would pummel Satyam’s share price, Raju began inflating both revenue and profit figures to meet market expectations. In fact, shareholders are beguiled by high stock prices, since they buy into the idea that high and rising stock prices are a sign of both good performance and good management. When
accounts are manipulated and revenues and profits inflated, the stock market performance of the company improves, and that improvement serves to conceal the fraud that is under way.”

The CBI has termed Satyam case as one of the biggest corporate frauds in independent India, having international ramifications. It was a complicated case involving digital evidences, computer techniques, audit procedures, accounting standards, revenue records, source codes, and computer network log etc. It raised a number of questions about the survival of Satyam, CG compliance, government’s ability to handle corporate fraud, and possible failure among others. In many ways, it was a test for India Inc. and the regulators. “The conviction of Raju and nine of his associates on charges of criminal conspiracy, cheating, forgery and breach of trust by a special CBI court brings closure to India’s biggest corporate MA fraud case. However, the sentence of 7-years imprisonment and fine of Rs.5 crores imposed on each of the convicts is light, considering the hefty punishments imposed by the US, which places a high premium on honesty in CG,” says Bhasin (2016d). Earlier, market regulator SEBI had found the top management of Satyam guilty of unfairly manipulating stock prices and insider trading and imposed a fine of Rs. 1,850 crores.

Satyam, a global IT-company based in India, has just been added to a notorious list of companies involved in fraudulent financial reporting practices. Satyam CEO & Chairman, Mr. B. Ramalingam Raju, took responsibility for all the accounting improprieties. “This leads one to ask a simple question: How does this keep on happening for five years, without any suspicions? So, while Raju ran his fraud, the auditor slept, the analysts slept, and so did the media. To be fair, finally, the media and a whistle-blower did an excellent job of exposing Raju and his many other “shenanigans” after he had confessed” asked Bhasin (2016g). In his letter (of Jan.7, 2009) addressed to board of directors of Satyam, Raju showed the markers in his letter (of Jan.7, 2009) addressed to board of directors of Satyam, Raju showed the markers of this fraud ‘pathology’. Now, more than six years later, the final decision in the Satyam scam has been made and all accused charge-sheeted in the case have been awarded punishment by the Court.

The Satyam fraudulent financial reporting scam is a glaring example of ‘abuse’ of accounting, in which the account books were cooked up. Recently, Bhasin (2016h) lucidly pointed out that “the culture at Satyam (especially dominated by the board) symbolized an unethical culture.” This scam brought to light the role of CG in shaping the protocols related to the working of Audit Committee and duties of Board members. Now, it is amply clear that the Satyam scam was plotted at the top and driven by Ramalinga Raju and his brother. They were the key players in the plot to falsify the accounts and hide the bottom-line truth from everyone. It is also clear that all the culprits—from Raju down to the finance guys—did everything possible to give SEBI and other investigative agencies a run-around and delay the verdict. This is what explains, why it took more than five-and-a-half years to close an open-and-shut-case. It took nearly 2 years, involvement of multitude of investigation agencies, and over 200 experts to assess the total damage of the scam perpetrated by Raju. Now, the final figure is a shade under Rs. 8,000 crore. A special CBI Court in Hyderabad on April 9, 2015 finally, sentenced all the 10 people involved in the multi-crore accounting scam found guilty of cheating, forgery, destruction of evidence and criminal breach of trust. At last, almost the six-year-old case has reached its logical conclusion. Undoubtedly, the Indian government took quick actions to protect the interest of the investors, safeguard the credibility of India, and the nation’s image across the world.

According to Mr. Chopra (2011), President of ICAI, “The Satyam scam was not an accounting or auditing failure, but one of CG. This apex body found the two PwC auditors ‘prima-facie’ guilty of professional misconduct.” The CBI also charged the two auditors with complicity in the commission of the fraud by consciously overlooking the accounting irregularities. As Krishnan (2014) pointed out, “Yet both Satyam’s internal as well as statutory auditors did not bring it to anyone’s notice. Well, the internal auditor hauled up by SEBI has frankly admitted that he did notice differences in the amounts billed to big clients, such as Citigroup and Agilent, when he scoured Satyam’s computerized accounts. But when he flagged this with Satyam’s finance team, he was fobbed off with the assurance that the accounts would be ‘reconciled’. Later, he was ‘assured’ that the problem had been fixed.” Thus, the Satyam episode is not just the result of individual greed. It is also the product of the celebration of profit making irrespective of magnitude, of the belief in markets and the discipline they impose, and of regulatory dilution and
regulatory failure. It is this which raises the possibility that Satyam may not be an isolated bad apple, but an instance of something that could recur. “As corporate India absorbs the implications of Raju’s actions, business leaders need to push for stricter—yet sensible—accounting practices and CG regulations that keeps an effective checks and balances on companies. Thank God, lot of change has been made, more specifically about CG, corporate disclosure norms, audit committees, independent directors, etc.” suggests Bhasin (2016e). Raju in his letter confessed that doctoring the books over the years was akin to riding a tiger, not knowing how to get off without being eaten. If effective prescriptions are not found, it is more than just Raju and Satyam, who will be consumed in the following year. Finally, we recommend that “Fraudulent FR practices should be considered as a serious crime, and as such, accounting bodies, law courts and other regulatory authorities in India need to adopt very strict punitive measures to stop such unethical practices.”

REFERENCES

AICPA (2002), Consideration of fraud in a financial statement audit. Statement on Auditing Standards No.99, NY.
Adkins, T. (2016), Financial Statement Manipulation: An Ever-Present Problem for Investors. Available at http://www.investopedia.com.
Asif, M.K., Rehana, F. and Mamunur, R. (2011), Cosmetic Accounting Practices in Developing Countries: Bangladesh Perspectives, World Journal of Social Sciences, 1(3), July, 1-15.
Bhasin, M.L. (2007). Forensic Accounting: A New Paradigm for Niche Consulting. The Chartered Accountant, Jan., 1000-1010.
Bhasin, M.L. (2008). Corporate Governance and Role of the Forensic Accountant. The Chartered Secretary. 38(10), Oct., 1361-1368.
Bhasin, M.L. (2010). Corporate Governance Disclosure Practices: The Portrait of a Developing Country. International Journal of Business and Management. 5(4), April, 150-167.
Bhasin, M.L. (2011). Corporate Governance Disclosure Practices: The Portrait of a Developing Country. International Review of Business Research Papers. 7(1), Jan., 393-419.
Bhasin, M.L. (2012). Corporate Accounting Frauds: A Case Study of Satyam Computers Limited. International Journal of Contemporary Business Studies. Oct., 3(10), 16-42.
Bhasin, M.L. (2012a). Audit Committee Mechanism to Improve Corporate Governance: Evidence from a Developing Country. Modern Economy. 3(11), Nov. 856-72.
Bhasin, M.L. (2013). Corporate Accounting Scandal at Satyam: A Case Study of India’s Enron. European Journal of Business and Social Sciences. 1(12), March, 25-47.
Bhasin, M.L. (2013a). Corporate Accounting Fraud: A Case Study of Satyam Computer Limited. Open Journal of Accounting. April, 2(2), 26-38.
Bhasin, M.L. (2013b). Corporate Governance and Role of the Forensic Accountant: An Exploratory Study of an Asian Country. Amity Business Review. 14(1), Jan-June, 48-71.
Bhasin, M.L. (2015). Forensic Accounting: Perspectives and Prospects. Pakistan Accountant. Oct.-Dec., pp. 44-48.
Bhasin, M.L. (2015a). Menace of Frauds in Banking Industry: Experience of a Developing Country. Australian Journal of Business and Management Research. 4(12), April, 21-33.
Bhasin, M.L. (2015b). Creative Accounting Practices in the Indian Corporate Sector: An Empirical Study. International Journal of Management Science and Business Research. 4(10), 35-52.
Bhasin, M.L. (2016). Debacle of Satyam Computers Limited: A Case Study of India’s Enron. Wulfenia Journal KLAGENFURT. 23(3), March, 124-162.
Bhasin, M. L. (2016a). Survey of Creative Accounting Practices: An Empirical Study. Wulfenia Journal KLAGENFURT. 23(1), Jan., 143-162.
Bhasin, M.L. (2016b). Unethical Creative Accounting Culture at Satyam Computers Limited: A Case Study of India’s Enron. International Journal of Business and Social Research. 6(7), 24-48.
Bhasin, M.L. (2016c). Strengthening Corporate Governance through an Audit Committee: An Empirical Study. Wulfenia Journal. 23(2), Feb., 2-27.
Bhasin, M.L. (2016d). Contribution of Forensic Accounting to Corporate Governance: An Exploratory Study of an Asian Country. *International Business Management*. 10(4), 479-492.

Bhasin, M.L. (2016e), The Challenge of Improving Corporate Governance by Creating Effective Audit Committees, *International Journal of Management Sciences and Business Research*, 5(8), 25-46.

Bhasin, M.L. (2016f), Perspectives and Prospects of An Audit Committee in An Asian Economy: An Empirical Study, *International Journal of Management Sciences and Business Research*, 5(8), 1-14.

Bhasin, M.L. (2016g), Creative Accounting Scam at Satyam Computer Limited: How the Fraud Story Unfolded?, *Open Journal of Accounting*, 5(4), 57-81.

Bhasin, M.L. (2016h), Unethical Accounting Practices in Connivance with Top Management: A Case Study of Satyam, *International Journal of Management Sciences and Business Research*, 5(8), 5-19.

Caskey, J. and Laux, V. (2015), Corporate Governance, Accounting Conservatism, and Manipulation. Available at SSRN: http://ssrn.com/abstract=2251378.

Chopra, A. (2011). Satyam fraud, not an accounting failure. *Business Standard*. 25 January. Available at http://www.business-standard.com.

Gupta, P.K. & Gupta, S. (2015) Corporate frauds in India: Perceptions and emerging issues. *Journal of Financial Crime*, 22(1):79-103.

Grant Thornton and ASSOCHAM (2006), Financial and Corporate Frauds, July. Available at www.grantthornton.in.

Hayat, U. (2014), The Sherlock Holmes of Accounting: Howard Schilit Explains the Mystery of His Art, 4 March. Available at https://blogs.cfainstitute.org.

ICAI (2009). ICAI finds ex Satyam CFO, Price Waterhouse auditors guilty. www.outlookIndia.com.

ICAI (2014). The Institute of Chartered Accountants of India has imposed a life-time ban on four auditors, April 22.

Jones, M. (2011). Creative accounting, fraud and international accounting scandals, John Wiley & Sons Ltd. London.

Kaul, V. (2015). Satyam scam: Ramalinga Raju, the man who knew too much, gets 7 years in jail, April 10.

Krishnan, A. (2014). Finally, the truth about Satyam, *The Hindu Business Line*, July 18.

Mamo, J. and Aliaz, A. (2014), Accounting Manipulation and its Effects in the Financial Statements of Albanian Entities, Interdisciplinary Journal of Research and Development, 1(2), 55-60.

Niazi, A. and Ali, M. (2015), The Debacle of Satyam Computers Ltd.: A Case Study from Management’s Perspective, Universal Journal of Industrial and Business Management, 3(2), 58-65.

Pai, K. & Tolleson, T.D. (2015). India’s Satyam Scandal: Evidence too Large to Indict Mindset of Accounting Regulators is a Global Phenomenon. *Review of Business and Finance Studies*. 6(2), 35-43.

Ramana, K.V. (2009). 7,561 fake invoices=Rs.5,117 crore Sales. April 15, Daily News Analysis. Available at http://www.dnaindia.com.

SEC (2016), Business and Financial Disclosure Required by Regulation S-K, available at https://www.sec.gov/rules/concept/2016/33-10064.pdf

Schilit, H.M. and Perler, J. (2010), Financial Shenanigans, Third Edition, Tata McGraw-Hill Education Limited, New Delhi.

SFIO (2009). Special Fraud Investigation Office Report published in the Pioneer. New Delhi, May 4, 1-10.

Sherman, H.D. & Young, S.D. (2016), Where Financial Reporting Still Falls Short, *Harvard Business Review*, July–August.

Shirur, S. (2011). Tunneling vs. Agency Effect: A Case Study of Enron and Satyam. *Vikalpa*. 36(3), 9-20.

Veena L. Brown, Brian E. Daugherty, & Julie S. Persellin (2014). Satyam Fraud: A Case Study of India’s Enron. *Issues in Accounting Education*. August, 29(3), 419-442.

Winkler, D. (2010). India’s Satyam Accounting Scandal. Feb 1. Available online at http://blogs.law.uiowa.edu.

Wharton (2009). Scandal at Satyam: Truth, Lies and Corporate Governance. Available at knowledge@wharton website.