

American Accounting Association
International Accounting Section

Fighting Fraud: Shared Responsibility of Management and Auditors Globally
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I. DETAILED CONSIDERATION OF FINANCIAL FRAUD METHODS

A. Survey of Asset Misappropriation Schemes

Examples of Asset Misappropriation from Commercial Businesses		
Financial Reporting Area	Asset Stolen	Type of Misappropriation
Cash	Cash	<ul style="list-style-type: none"> • Stealing cash funds processed or on hand • Not recording and stealing cash receipts • Under-ringing sales and stealing cash receipts • Altering bank deposits (for example, in “less cash” schemes)
Accounts receivable, sales	Cash	<ul style="list-style-type: none"> • Lapping • Forging checks received • Altering credit card receipts • Granting credit for merchandise not returned and stealing the cash • Writing off receivables as bad debts and stealing the cash received on the accounts written off • Collusion between the buyer and seller to process refunds for goods not returned
Inventory, fixed assets	Inventory, fixed assets	<ul style="list-style-type: none"> • Stealing assets • Selling assets and keeping the proceeds for personal use • Setting up fictitious customers and shipping assets to them • Diverting shipments to a wrong address
Accounts payable, purchases	Cash	<ul style="list-style-type: none"> • Using organization checks to pay personal bills • Setting up fictitious suppliers and “buying” goods or services from them • Collusion between an employee buyer and seller in which the buyer receives a kickback for paying inflated prices, buying unneeded goods, or accepting inferior quality
Accounts payable, purchases	Inventory or other assets	<ul style="list-style-type: none"> • Ordering goods or services for personal use

Examples of Asset Misappropriation from Commercial Businesses		
Financial Reporting Area	Asset Stolen	Type of Misappropriation
Payroll	Cash	<ul style="list-style-type: none"> • Setting up fictitious employees (ghost employees) on the payroll records and taking their pay • Manipulating payroll records to divert wages or payroll taxes • Overstating hours worked • Working unauthorized overtime • Cashing unused payroll checks • Perpetrator writing payroll checks to self • Embezzling payroll withholdings • Keeping terminated employees on the payroll and diverting their pay
Borrowings	Cash	<ul style="list-style-type: none"> • Unauthorized borrowing against organization assets • Diverting loan proceeds for personal use
Equity accounts	Cash	<ul style="list-style-type: none"> • Diverting equity proceeds to personal use • Underpaying dividends to certain investors and diverting the difference to personal use • Selling shares of stock more than once

B. Financial Reporting Fraud Schemes and Methods of Detection

[See matrix on following pages 3 – 10]

Matrix of Financial Statement Manipulation Techniques, Effects, and Detection Methods

<i>General Category of Scheme</i>	<i>Specific Technique</i>	<i>Sub-Category of Technique</i>	<i>Affected Accounts</i>	<i>Residual Effects</i>	<i>Detection Tests</i>
Premature revenue recognition	Shipment of goods before actual sale takes place	Customers induced to take early delivery of possible future orders	Revenue, receivables, inventory, cost of sales - affected but not distorted	Pattern of sales, esp. between interim periods; cash flow distortions	Ratios, incl. cash collections to sales, esp. if over interim periods
		Sending partial shipment while recording full revenue	Revenue, receivables, inventory, cost of sales - may be distorted relationships	Pattern of sales, esp. between interim periods; cash flow distortions	Ratios, incl. cash collections to sales, esp. if over interim periods; also gross profit ratio or other relationships
		In long term construction contracts, deliberate overstatement of percentage of completion	Billings in excess of costs and profits	Pattern of gross profit on construction contracts over time	Audit-like procedures such as communication with customers; engineering estimates vs. revenue recognition
	Recording revenues while material uncertainties remain (e.g., right to return)	Recording sale of merchandise when buyer has right to return, or material uncertainties exist re: payment, etc.	Revenue, receivables, inventory, cost of sales	Pattern of sales, esp. between interim periods	Ratios, incl. cash collections to sales, esp. if between interim periods
	Factoring with recourse misrepresented as sale of receivables without recourse	Gain on sale or financing income, receivables	Retained earnings, receivables	Review of factoring agreement; past practices in industry and for the entity	

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Premature revenue recognition (cont'd)	Offering special deals such as unlimited return rights to customers to generate higher, earlier sales		Revenue, receivables, inventory, cost of sales	Retained earnings, receivables overstated; perhaps also inventory understated	Year to year comparisons, also comparisons of final month to earlier months; also, review of major contracts, customer lists
	Recording revenues while future services remain to be performed	Software revenue recognition	Revenue, receivables, possibly certain costs	Pattern of sales, esp. between interim periods	Ratios, incl. cash collections to sales, esp. if between interim periods
		Other industries' revenue recognition -- e.g., franchising	Revenue, receivables, possibly certain costs	Pattern of sales, esp. between interim periods	Ratios, incl. cash collections to sales, esp. if between interim periods; ratios of store openings vs. existing stores compared to fee income, etc.
	Holding open books (improper cut off for revenue recognition)		Sales, receivables; perhaps also cost of goods sold and inventory	Retained earnings, receivables overstated; perhaps also inventory understated	Year to year comparisons, also comparisons of final month to earlier months
Recording fictitious revenue	Recording income arising from exchanges of assets	Generally involves misapplication of accounting for nonmonetary exchanges	Plant assets, gain or revenue accounts	Stepped up asset carrying value, higher depreciation over useful lives, overstated retained earnings	Analysis of changes in fixed asset accounts, investments, etc.

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Recording fictitious revenue (cont'd)	Recording fictitious (sham) transactions	Typically massive fraud with bogus sales documents, etc.	Sales, receivables will be overstated	Retained earnings; either old receivables remaining uncollected or further fraudulent entries for non cash credits	Gross margins will be distorted unless costs are fictionalized also; aging of receivables, review of non cash credits -- distortion will grow over time (like lapping)
	Misrepresenting purchase discounts or returns to vendors as revenue		Revenue, purchases (net)	None on net income, but ratios distorted	Inter-period comparisons of gross margins, etc. -- especially in industries with high levels of returns
	Using deliberately erroneous estimates		Most often interim financials -- revenue, costs, gross profit, etc.	May be none on annual basis	Ratios and absolute comparisons between interim periods -- especially estimated gross profit ratio, etc.
Misrepresenting unusual income items as being recurring in nature (or vice versa)	Selling undervalued assets	Sales of productive (plant) assets - esp. underutilized, surplus assets	These are "real" transactions, but done opportunistically, mischaracterized -- affect sales, gross profit accounts	Plant assets, retained earnings	Ratios such as gross margin; possibly ratios involving cash flow (investing vs. operating) compared to income statement categories
		"Gains trading" of available for sale securities	Investments, gains (on income statement)	Retained earnings	Pattern of unrealized losses in contra-equity vs. gains in earnings

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Misrepresenting unusual income items as being recurring in nature (or vice versa)	Selling undervalued assets (cont'd)	Deliberate invasion of low cost LIFO layers - facilitated by large number of cost "pools"	Inventory, cost of sales, gross margin	Retained earnings, inventory	Gross margin percentage, esp. between interim periods or between years
	Retirement of debt		"Real" transaction involving tender for low coupon debt in high rate environment, but mischaracterizing gain as operating	Debt, retained earnings; also, if debt is replaced at current market, future levels of interest cost could be distorted	Cash flow from financing vs. extraordinary gain reporting
	Mingling unusual gains with operations		Also "real" transactions but mischaracterized	Investments (equity method) or plant assets, retained earnings	Cash flow from investing vs. extraordinary gain reporting
	Mingling operating losses with nonrecurring income items		Also "real" transactions but mischaracterized	Operating assets, retained earnings	Cash flow from operations vs. extraordinary gain reporting
	Misrepresenting operating losses as belonging to discontinuing operations		Discontinued, continuing operations gains and losses	None after year of misstatement	Review of specifics of items represented as being discontinued operations

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Deferring expenses from current to later periods	Improper capitalization of current period expenses	Development costs	Plant assets and intangibles, amortization, retained earnings	Plant assets and intangibles, amortization, retained earnings	Ratios that measure returns on assets, esp. comparisons across entities in industry group
		Other operating costs	Similar to above	Similar to above	Similar to above
	Using too lengthy lives for depreciation or amortization	"Catch up" write downs of assets needed to offset under-depreciation in prior periods	Accumulated depreciation, operating costs, retained earnings	Accumulated depreciation, retained earnings	Ratio of accumulated depreciation to gross assets, showing below average ages
		Amortization of leasehold improvements over physical life, longer than lease terms	Similar to above	Similar to above	Similar to above, but since amortization directly offset against asset, this is more difficult
		Same, for patents and other intellectual property	Similar to above	Similar to above	Similar to above
		Failure to amortize costs over "estimated units of production" - e.g., for defense contractors	Similar to above	Similar to above	Similar to above

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Deferring expenses from current to later periods (cont'd)	Failing to recognize permanent impairment of assets		Plant assets, operating costs, retained earnings	Plant assets, retained earnings	Possibly rate of return on average assets vs. industry norms
Non-recognition and non-disclosure of liabilities	Improper treatment of revenues received in advance		Deferred revenue (liability), revenue, retained earnings	Deferred revenue, retained earnings	Ratio of cash from customers vs. revenue, esp. vs. industry norms
	Failure to accrue contingent losses		Accrued loss (liability), operating expenses, retained earnings	Accrued loss (liability), retained earnings	Close review of open items such as lawsuits, etc.
	Failure to disclose contingencies and commitments	Examples could include purchase, lease obligations that are "under water," etc. -- difficult to detect contemporaneously	None	None	None, but later period high level of expense might be indicative of earlier failure to accrue
	Engaging in transactions to create "off balance sheet" debt		Generally, assets and liabilities would be understated	Generally, assets and liabilities would be understated; decline over time, typically	Audit-like procedures re: related entities;

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Deferring recognition of revenues to later periods	Using reserves to effectively postpone income recognition		Overstated allowance (reserve) account, lower gross margin or higher operating expenses and lower operating margin, retained earnings	Allowance accounts, retained earnings	Pattern of operating income across periods; ratio of gross or operating margins
	Defer revenues to show better results in later periods to maintain a favorable growth trend		Overstated unearned revenue (liability), understated revenue; possibly also distorted inventory, cost of sales	Unearned revenue (liability), retained earnings; possibly also distorted inventory, cost of sales	Possibly distorted gross and operating margins (if inventory not manipulated also); distortion of period-to-period volume
Accelerating future expenses to current period	Accelerating discretionary expenses		Overstated expenses; perhaps understated assets (prepaids, etc.); if "real" no account errors	Assets (prepaids), retained earnings	Inter period ratios of expenses, etc.
	Deliberate misestimates, including those underlying depreciation and amortization		Overstated accumulated depreciation, operating expenses; understated retained earnings, net profit	Accumulated depreciation, etc.; retained earnings	Inter period ratios of expenses, etc.; also possibly cross-entity estimates of average age of assets, etc.
Improper asset valuation or use of allowance accounts	"Cookie jar" reserves		Estimated liability accounts, operating expenses	Estimated liability accounts, retained earnings	Analysis of changes in estimated liabilities, including subsequent pattern of relief

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Improper asset valuation or use of allowance accounts (cont'd)	Improper bad debt reserves		Allowance for bad debts, loan and lease losses; operating expenses	Allowance accounts, retained earnings	Analysis of changes in allowances, including subsequent pattern of relief
	Improper inventory net realizable value adjustments		Inventory, cost of sales, net income	Inventory, retained earnings	Period-to-period variations in gross margins
	Improper valuation of securities held or available for sale		Investments, operating or non operating costs, net income	Investments, retained earnings	Comparisons to market indices or specific quoted prices; period-to-period comparisons of trading gains/losses
	Improper estimated liabilities and contingencies		Estimated liability accounts, operating or non operating expenses	Estimated liability accounts, retained earnings	Analysis of changes in estimated liabilities, including subsequent pattern of relief
	Improper estimation of losses on uncompleted contracts		Cost and estimated profit on contracts-in-progress (inventory), gross margin, net income	Inventory accounts, retained earnings	Period-to-period comparisons, analysis of specific contracts
	Improper estimation of losses on firm purchase commitments		Inventory, estimated liabilities, net income	Inventory, retained earnings	Review of specific commitments

II. NOTORIOUS FINANCIAL REPORTING FRAUDS: HOW DID THEY DO IT?

A. Adelphia Communications (2002)

1. A cable television provider in semi-rural areas of Pennsylvania and adjacent states (the eastern U.S.), aggressive growth fueled by stock price rise, which in turn depended on impressive, growing record of earnings. In an effort to compete with larger cable television providers, the company went on a debt-fueled acquisition binge, doubling in size after 1999 and adding about \$9 billion in corporate debt for these transactions. These were not fraudulent transactions, but put great financial pressure on the company, and coupled with the controlling family's wrongdoings (below), led to its near-collapse, which in turn led to revelations about the family's fraud.
2. Much of the actual wrongdoing involved the controlling Rigas family's extravagant personal expenditures, including investments, made with company funds, such as using \$252 million of corporate funds to cover margin calls on personal investments and payments on other personal debts, the construction of a luxury golf course, expensive apartments in New York City, and so forth – amounting to some \$2 billion all told.
3. In terms of fraudulent accounting, the controlling family pretended to infuse new capital into the company to ease its financial burden, but over \$400 million of the presumed injection of funds was made with funds actually borrowed from the company itself, but concealed via accounting legerdemain.
4. Among other things, the controlling owners determined the targeted EBITDA and then create back-dated actual transactions or bogus transactions with related (non-consolidated) entities in order to reach the goal. In some instances, to manipulate reportable gross revenue, the company would conspire with counter-parties to inflate revenue and recognize a partially offsetting expense, thus keeping net income correct while exaggerating gross revenue, a key statistic that was thought to be important to investors.
5. When loans to family members became known, the company stock price fell, triggering margin calls on stock owned by those family members, that subsequently caused the entire scheme to unravel.
6. The principals (family members) were criminally indicted, some were convicted of fraud and sentenced to jail terms; the company filed for bankruptcy and assets were later sold, demonstrating once more that being target of fraud is top leading indicator of failure.
7. The auditors (Deloitte) failed to observe the various fraudulent practices, involving, e.g., undisclosed related party transactions, including \$2.3 billion in loans to controlling family. The auditors also did work for the family, making it even less comprehensible that these transactions and obligations were not understood. Deloitte paid \$50 million to settle SEC charges of audit failure regarding Adelphia's 2000 audit, involving failure to report \$1.6 billion of debt and overstating equity by \$375 million, as well as failure to detect illegal acts by the company. Additionally, Deloitte paid \$167.5 million to settle claims with the liquidating trust for the defunct company.

B. Parmalat (2003; settled in late 2015)

1. Perhaps the biggest accounting fraud ever, this involved the concealment, over many years, of some \$18 billion in debt and losses, accumulated over a 15-year period.
2. During the 80s and 90s, Parmalat is hailed as a jewel in Italian commerce as entrepreneur Calisto Tanzi converts his father's ham retailer in the city of Parma into a global dairy and food giant largely on the basis of long-shelf-life milk.
3. The crisis was triggered when the company defaulted on a late-2003 \$185 million bond payment, notwithstanding showing a bank balance ostensibly held in a Bank of America account in the Cayman Islands (West Indies) of an incredible \$4.9 billion. When Bank of America thereafter stated that it held no such account, the character and scope of the fraud became obvious.

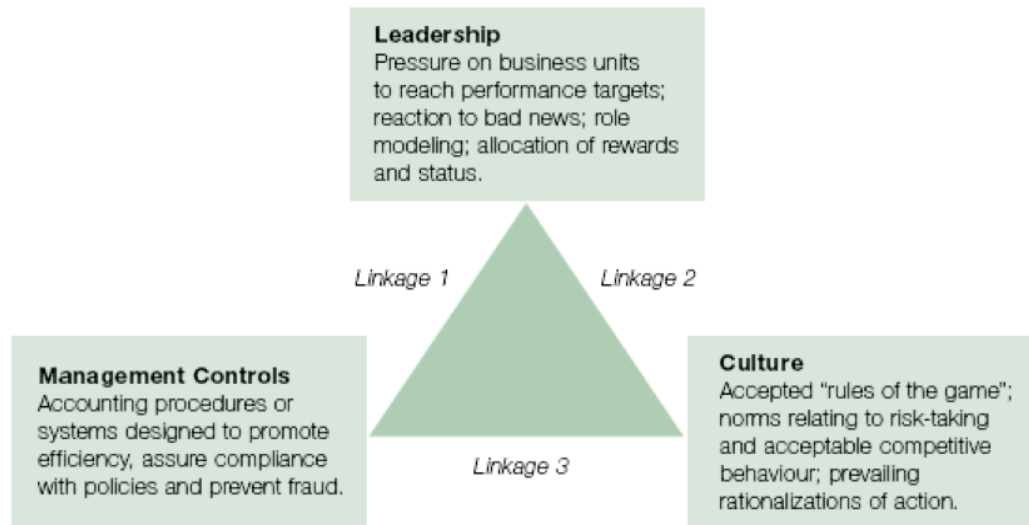
4. When the bank stated that the transfer document was a forgery, trading in Parmalat shares was frozen. Tanzi, various family members and several executives were arrested, including chief financial officer Fausto Tonna. At the firm's offices, investigators find smashed computers and thousands of shredded documents. In Italy, those accused are immediately imprisoned, unlike in some other jurisdictions.
5. In 2004, Parmalat's debts are fixed at €14.3 billion, eight times what the entity had reported in its financial statements. After initial denials, Luca Sala, Bank of America's former chief of corporate finances in Italy, admits to participating in a kickback scheme. Furious U.S. creditors file a \$10 billion class action suit against Parmalat's former auditors and bankers, while Parmalat's administrators under replacement chief executive Enrico Bondi separately sue Bank of America, Citigroup, Deloitte & Touche and Grant Thornton for \$10 billion each. The U.S. SEC calls the affair a "brazen corporate financial fraud."
6. One of the few instances of actual auditor complicity (the Italian member firm of Grant Thornton), the auditors, when superseded because of mandatory auditor rotation rules in Italy, were appointed as continuing auditors for those subsidiaries where the fraud was thereafter concentrated, and supervision by the new group auditors (Deloitte) was inadequate to find these ongoing fraudulent acts which Grant Thornton had previously permitted to occur and with which they continued to be complicit.
7. There were multiple "red flags" missed (or deliberately ignored), including improbably large cash balances putatively held by branch banks in Caribbean island nations (fraudulently confirmed), and outrageously improbable huge purchases of dairy products in Singapore (a city-nation lacking substantial farmlands) then ostensibly resold to the Cuban state-run food agency – in quantities that would have literally drowned the island in milk, were it true.
8. It is difficult to generalize from Parmalat case, inasmuch as corrupt outside accountants deliberately facilitated the fraud, leaving open the question of whether honest auditors would have quickly spotted the schemes being used by management.
9. However, the mere specifics of the fraudulent accounting (e.g., having a \$200 million checking account idle balance in a small bank in the West Indies; buying huge quantities of a product not even produced in the source market, and allegedly selling that product to a customer which could not be confirmed as to existence and activity level) were such "red flags" that this should have been detected by any competent auditors, with requisite levels of skepticism, objective perspective, and demand for sufficient appropriate audit evidence.
10. The corrupt Parma, Italy-based Grant Thornton firm was liquidated and the criminally involved top partners (the office managing partner and the audit partner) went to jail. However, there were no assets to satisfy the claims by the company's extraordinary commissioner (equivalent to bankruptcy trustee). A case against the international umbrella firm, Grant Thornton International, was recently settled.

C. Enron (late 1990s–2001)

1. One of the most infamous cases, which (together with WorldCom) spurred development of the 2002 Sarbanes-Oxley Act in the U.S., stripping the accounting profession (as regards audits of publicly-held entities) of its self-regulatory role.
2. Enron was formed in 1985 by Kenneth Lay, the result of merging Houston Natural Gas and gas pipeline operator InterNorth. Several years later, when former management consultant Jeffrey Skilling was hired, he developed a staff of executives that, by the use of accounting loopholes, special purpose entities, and poor financial reporting, were able to hide billions of dollars in debt from failed deals and projects. Chief Financial Officer Andrew Fastow and other executives not only misled Enron's board of directors and audit committee on high-risk accounting practices, but also pressured auditors Arthur Andersen to ignore the issues – indeed, evidence suggests that Andersen and Enron's outside counsel were instrumental in developing these fraudulent vehicles!
3. Enron became the largest seller of natural gas in North America by 1992, its trading of gas contracts earned \$122 million (before interest and taxes), the second largest contributor to the

company's net income. The November 1999 creation of the EnronOnline trading website allowed the company to better manage its contracts trading business.

4. In an attempt to achieve further growth, Enron pursued a diversification strategy. The company owned and operated a variety of assets including gas pipelines, electricity plants, pulp and paper plants, water plants, and broadband services across the globe. The corporation also gained additional revenue by trading contracts for the same array of products and services with which it was involved.
5. Enron made extensive use of so-called "special purpose entities" (now known as "variable interest entities") to move large amounts of debt off its balance sheet, improperly, and to create bogus transactions with these captive related entities that provided large portions of the profits being reported over a stretch of years.
6. The SPEs (VIEs) were structured with the assistance of outside counsel Vinson & Elkins and auditors Andersen (the former escaped unscathed from the Enron collapse; the latter was indicted and collapsed, although later partially exonerated), which attempted to use narrow exceptions to the rules to create ostensibly independent entities (thus justifying profit recognition from transactions with them), although in truth these were thinly-capitalized shells (some "owned" by minor Enron employees, fully funded indirectly by Enron itself). Hundreds of these so-called "partnerships" were created and used for one-off transactions, to either create imaginary profits or to off-load debt from the Enron balance sheet (or both).
7. Enron grew rapidly, using its over-valued stock to make acquisitions, and was the 7th largest company on the Fortune 500 list right before its collapse.
8. Changes to accounting rules pertaining to VIEs were largely stimulated by the Enron fraud.
9. An "organizational fraud triangle" was proposed to explain how the Enron fraud occurred:
 - a. Enron had in place the usual corporate governance mechanisms including a well-credentialed board of directors, an audit and compliance committee, a Big-5 external auditor (the ill-fated Arthur Andersen), an office of the director of financial disclosure, a chief risk officer's office, a finance committee, and the SEC's normal oversight. In sum, the control infrastructure within Enron was carefully designed, comprehensive and cutting edge.
 - b. Under CEO Jeff Skilling (beginning 1996, after a stint as Enron's chief of energy trading), Enron evolved from a large natural gas pipeline operation to an energy trading business, and the strong controls formerly in place under previous CEO Richard ("Doctor Discipline") Kinder, were systematically destroyed, as Enron became a Wall St.-oriented financial engineering shop.
 - c. Using "dark triad" personality analysis, Skilling was probably *narcissistic*, and worked to create corporate culture in his image (using role playing, coaching, and other tools) celebrating creative deal-making, innovation, entrepreneurship and mercenary practices.
10. The lesson: once employees align themselves with a particular corporate culture – and invest heavy commitment in organizational routines and the wisdom of leaders – they are liable to lose their original sense of identity, and tolerate and rationalize ethical lapses that they would have previously deplored. Once a new and possibly corrosive value system emerges, employees are left vulnerable to manipulation by organizational leaders to whom they have entrusted many of their vital interests. The Enron demise, then, points to numerous risks associated with degenerate cultures: the risk that a culture motivating and rewarding creative entrepreneurial deal making may provide strong incentives to take additional risks, thereby pushing legal and ethical boundaries; resistance to bad news creates an important pressure point of culture; and internal competition for bonuses and promotion can lead to private information and gambles to bolster short-term performance.



D. WorldCom (late 1990s–2002)

1. Another company that grew by aggressive acquisitions fueled by high stock valuation, which in turn was the result of growing large reported earnings. Indeed, at the date of its demise, one-half of its \$100 billion balance sheet was comprised of goodwill from acquisitions.
2. The company's actual performance was vastly less impressive; over a period of less than a decade, over \$11 billion of imaginary profits had been reported. When the truth emerged, the company collapsed and multiple parties were criminally prosecuted. The auditors, the then-almost-defunct firm Andersen, was not named – according to Dr. Epstein, who advised prosecutors on this matter, although Andersen seemingly was surprisingly negligent in this case, unlike in the Enron matter, it was not complicit in the fraud.
3. The financial reporting fraud sequentially involved three bogus accounting practices, none of which was a complex area of accounting theory. Each contributed over \$3 billion to fraudulently created earnings, totaling about \$11 billion.
 - a. First, expenses that should have been recognized currently were instead charged (debited) against accruals already made on the books for unrelated reasons. This practice depleted these other liability balances, which would have meant that payment of those other obligations in later periods would have created losses.
 - b. Once the available unrelated reserves had been eliminated as a means of concealing current expenses, the fraud orchestrators began a procedure of capitalizing certain operating costs (line connection fees paid to telephone carriers controlling the "last mile" of cable to subscribers' homes) that were in truth current period (sunk) costs, but were handled, fraudulently, as long-lived fixed assets to be amortized over extended periods. This would have had the effect of spreading current costs over many future periods, thereby lessening the impact on any given period.
 - c. In desperation, after the other fraudulent practices had been exploited to the maximum, WorldCom began to accrue subscriber cancellation penalties that, although provided for in the company's contracts with consumers, had never previously been enforced. This created revenues that in fact never came to fruition, and would not have met any threshold recognition standard as revenue until and unless actually realized.
4. The auditors (Andersen), although not shown to be complicit, were grossly negligent in applying auditing procedures and apparently missed finding any of the three large (\$3 – 4 billion each) multi-year frauds being perpetrated by the CEO and the CFO, both of whom were later prosecuted and sent to prison. (Dr. Epstein advised the prosecutors on both matters.)

5. In one remarkable gambit, the already-indicted CFO attempted to exculpate himself by “desktop publishing” an accounting standard that appeared to justify some of the fraudulent accounting practices that had been used at WorldCom. This effort, which temporarily fooled the Federal prosecutors, was uncovered by the Government’s accounting expert, after which the CFO immediately abandoned his attempt at escaping justice, pled guilty, and testified against the CEO, who was convicted. Both received lengthy prison terms.
6. One key lesson: in today’s environment, the creation of good-looking but bogus documents, including invoices, purchase orders, and even accounting standards is entirely possible, and auditors must be alert to this risk and, as situations demand, employ document experts and other specialists to protect against being defrauded by clients using this device.

E. Lehman Brothers (2008)

1. Used the commonly employed financing device known as “repurchase agreements” (“repos”) to periodically borrow funds, collateralizing the loans with marketable securities owned.
 - a. Under U.S. GAAP and IFRS, repos are secured borrowings, not sales (nor later repurchases) of the securities being used as collateral.
 - b. Proper accounting would have shown the repo borrowings as additional debt (and the cash borrowed as additional assets, of course), leaving in place the other assets and liabilities not altered by the repo-based borrowings.
2. Instead, Lehman contrived a rationale for “true sale” accounting (called “Repo 105” and “Repo 108,” so named because the repurchase agreements were over-collateralized by 5% [for debt collateral] or 8% [for equity collateral]) that is successfully sold to its auditors (E&Y) as being tantamount to actual sales, on the dubious theory that the over-collateralized counter-party would presumably not object to a default (i.e., failure to exercise the repurchase commitment), since it could well prove profitable to the lender.
 - a. This accounting gimmick was coupled with using the proceeds from the borrowings (improperly accounted for as proceeds from sales of securities) to pay down unrelated debts.
 - b. The net result of this series of actions and accounting treatments was to materially distort Lehman’s debt/equity ratios.
 - c. This pattern was repeated around each (quarterly) reporting date over several years, thus distorting the key debt/equity ratio statistic multiple times, suggesting the company was less risky than its true debt positions warranted.
3. However, this violated GAAP (and common sense), since the netted items were obligations with unrelated counter-parties, and because defaulting on the “Repo 105s” and “Repo 108s” was never intended nor contractually agreed to. Lehman was considerably more highly-leveraged than its fraudulent financial statements suggested.
4. At its peak, this scheme resulted in concealing \$50 billion in debt obligations that were actually owed by Lehman.
5. When Lehman’s actual financial position was revealed (in conjunction with the credit crisis in 2008), the company collapsed. The auditors (E&Y) have been sued, but matters are still unresolved.
6. The key lessons are that (i) auditors must have in-depth knowledge of proper accounting for its clients’ business transactions and strictly enforce these, and (ii) auditors must be vigilant for surrounding information, such as Lehman’s inability to obtain “true sale” opinions from any reputable U.S.-based law firms, which raise doubts about management integrity.

F. MF Global

1. Another, later fraud, involving MF Global, a financial firm headed by a former U.S. senator and governor, used a variant on the “Repo 105” theme: the so-called “repos-to-maturity.”
2. These violated GAAP for the same reason that Lehman’s repurchase agreements did: they treated certain secured borrowings as actual sales, thus netting down the balance sheet, distorting

key ratios and trends, and concealing real obligations to make payments to counter-parties in the future.

3. A lesson for auditors: must maintain highest level of skepticism, particularly when management attempts to convince auditors of novel accounting for important transactions that will have major impact on key financial statistics (e.g., leverage ratios).
4. Further lesson: auditors need to give more attention to personality characteristics of top management; recent research finds that 20% of top executives suffer from “dark triad” personalities which change the equation in terms of auditors’ ability to detect fraud. The very successful CEO of MF Global (which arose from the ashes of another major fraudulent commodities trading firm, REFCO), former chief of Goldman Sachs, former New Jersey governor and senator, was determined to rapidly create another Goldman, took outsized risks on European sovereign debt issuances, and engaged in accounting fraud in order to conceal the balance sheet effects of his “repos to maturity” hedges.

G. AOL Time Warner (2000–2002)

1. This company had several accounting scandals, but the key one involved recognition of unearned advertising revenues amounting to over \$1 billion.
2. The scheme involved paying advertisers to buy advertising that was unwanted. Since the key metric being evaluated by investors was the amount of sold advertising (not the profitability of the advertising, for example), this pumped up the metric even if it didn’t distort net income overall (although it did result in crediting the wrong periods).
3. Time Warner (after merging with AOL, then de-merging, but retaining exposure for fraud that had previously occurred at the AOL operations) was sued by SEC, paid \$300 million penalty. The SEC complaint against AOL Time Warner detailed a wide array of wrongdoing, including fraudulent round-trip transactions to inflate online advertising revenues, fraudulent inflation of AOL subscriber numbers, misapplication of accounting principles relating to AOL Europe, and participation in frauds against the shareholders of three other companies.
4. Among the lessons for auditors are the need to develop methods of verifying new forms of revenues not clearly observable and not involving tangible products, which will be ever-greater portions of the economy in the future. This will become even more complicated under the new revenue reporting standard (which will be IFRS 15/Singapore FRS 115).

H. Xerox (late 1990s – early 2000s)

1. Long-established, highly-respected company faced with slumping earnings found a way to use creative lessor accounting to boost reported earnings.
2. The company engaged in copier and related leasing programs, offering packages combining machine time, supplies, services, and other features, for single contract price. Under U.S. GAAP, front-end profit recognition was permitted for manufacturers (or dealers) which leased products, as long as profit related to portion of net future rental streams that pertained to the machinery itself, excluding executory fees for services and supplies.
3. Xerox manipulated the portion of the net present value of future rental streams so as to exaggerate the portion attributable to the machine usage, thus justifying booking excessive front-end manufacturer/dealer profit.
4. When this was uncovered, restatements of several years’ financial statements were required in order to eliminate \$3 billion in revenues and \$1.4 billion in profits, and fines and penalties were levied against the company and its auditors (KPMG).
5. Implications of this: auditors must be thoroughly knowledgeable about pertinent accounting principles, particularly regarding complex transactions, such as those involving combined sales and servicing package arrangements as used by Xerox. Determinations of fair value are also increasingly important in financial reporting, and this may involve skills not commonly held by today’s accountants.

I. Global Crossing (2002)

1. One of a number of telecommunications companies that emerged in the early days of fiber optic technology, it intended to build (and did build) a large network of cable, far more than it had demand for in the near term.
2. Employed a bogus theory of accounting (which had been developed for the telecommunications industry by former Big Five firm Arthur Andersen), referred to as indefeasible rights to use, to create instant revenue coupled with deferred costs to be amortized over extended periods, all from “swaps” of excess capacity (“dark cable”) with other similarly-positioned cable network developers.
3. The “indefeasible rights to use” debacle was one of the events that motivated the large scale IASB-FASB project to re-write revenue recognition standard (finalized in Spring 2014, implementation being deferred to 2016 or later).
4. Auditors must be vigilant regarding novel accounting interpretations proposed by clients, and careful to avoid losing objectivity when coping with such suggestions.

J. Phar-Mor (1992)

1. This was a fairly new chain of discount drug and general merchandise stores in the U.S., reporting rapid growth and profitability, specializing in “close outs” of mundane items of merchandise being offered at steep discounts.
2. Concealed \$300 million in losses by creating bogus inventory, spread across many of the chain’s 300+ stores.
3. Management was able to conceal this only because the auditors (Coopers & Lybrand, now PwC) informed management of which locations would be sample-tested by inventory observation audit teams each year, and thus corrupt management could arrange book transfers of bogus inventory to those locations that were not to be observed.
4. The book entries showing purported inventory transfers across stores were “red flags” that were ignored by auditors, even as they appeared implausible.
5. Key lessons are that (i) the element of surprise should never be surrendered by auditors, particularly when client entity is geographically dispersed and thus only to be subjected to small sample testing; (ii) unusual journal entries (typically general journal entries) must be challenged; peculiar putative practices, such as cross-store movements of inventories on large scale at quarter-ends), need to be closely examined as potentially fraudulent in character.
6. Of particular obviousness (albeit not obvious enough to gain the auditors’ attention) was the fact that multiple journal entries for the bogus inventory transfers were for amounts just under the limit permitted by the bookkeeping system without further approvals (say, \$999,999.00 when the cut-off was \$1 million).

K. ZZZZ Best (1986)

1. Ostensibly, a carpet cleaning and fire or water damage restoration service for office buildings (e.g., after a fire) begun and run by a high school student, Barry Minkow, that rapidly grew to become a public company that raised \$100 million based on fraudulent financial reporting.
2. Minkow made use of forged (“desktop published”) documents to support assertions of major projects, rapidly growing revenues, for auditors E&Y.
3. Used corrupt building guard to create impression of project being ongoing, when auditors finally decided to demand visit to at least one project site (in prior years, and during prior auditors’ engagements, Minkow was able to dissuade auditors from site visits entirely).
4. Auditors failed to note anomalous cash shortages versus growing revenue and profits, thus missing opportunity to employ higher-order analytical procedures as audit tool.
5. After a prison term, Minkow showed himself to be a recidivist, again being convicted for fraud.

L. Cendant (1997)

1. Cendant resulted from merger of two diversified consumer services companies, HFS (which itself had been subject to accounting fraud, previously) and CUC International. Shortly after the merger, over \$500 million in accounting fraud was uncovered at predecessor CUC, which had been perpetrated over prior three years. CUC's top officers were convicted of fraud.
2. The examination of the fraud was led by Arthur Andersen, with assistance from Cendant's own auditors, Deloitte. The finding was that pervasive fraud at CUC over several years at 17 of the 22 operating units, with irregularities ordered by the former CFO and comptroller, involving many unauthorized and unsupported accounting entries.
3. Post-scandal, Cendant ultimately was broken up and sold in pieces, never having recovered its market credibility or profitability after the fraud was uncovered.
4. Lessons for auditors included (i) need for careful scrutiny ("due diligence") of acquisition target companies; (ii) sensitivity to risk for fraud during business acquisitions and cost allocation process, particularly using "cookie jar reserves" that later can feed profit reporting; and (iii) need to apply audit procedures to disaggregated data when auditee is comprised of multiple businesses across various lines, rendering high-level analyticals of little use.
5. CUC auditors E&Y had to pay \$298 million to settle litigation following the fraud revelations.

M. Quest Communications (2002)

1. Another telecom company experiencing rapid growth, building out large networks that were excessive in terms of actual near-term demand for services, engaging in dodgy "swap" transactions of capacity ("dark cable") in order to create revenue to be recognized currently.
2. The company was ultimately held accountable for the accounting scandal, and was fined \$250 million by the U.S. Securities and Exchange Commission (SEC). Among the transactions in question were a series of deals from 1999 to 2001 with Enron's broadband division, which may have helped Enron conceal its own losses, as part of its financial reporting frauds.
3. Again, the obvious lesson is that new or novel accounting treatments must be viewed very skeptically by auditors as well as top management, particularly when the effects are to boost current period earnings, defer loss recognition, and/or increase reportable assets.

N. Lernaut & Hauspie (Belgium) (2000)

1. Rapidly growing, newly-public purveyor of voice recognition software committed fraud via fictitious transactions said to be with its Korean distributors, followed by the company's collapse and criminal prosecution after suspicions were voiced by journalists regarding its improbable growth record.
2. The product was technically a good one (it was later incorporated into Microsoft products) but sales were fabricated to create perception of growth and value for the stock. It was the interest by Microsoft that first put a spotlight on the otherwise obscure company, finally leading to revelations of fraud.
3. Lesson for auditors: fraudulent revenue growth fed stock price expansion, used to make multiple acquisitions, underscoring why revenue fraud is recognized as most common fraud.

O. Royal Ahold (Netherlands) (2003)

1. The company's ambitious global expansion was halted by the February 2003 announcement of accounting irregularities at some of Ahold's subsidiaries. The CEO and CFO and a number of senior management resigned as a result, and earnings over 2001 and 2002 had to be restated. The main accounting irregularities occurred at U.S. Foodservice, and, on a smaller scale, Tops Markets, in the United States, where income related to promotional allowances was overstated. In addition, accounting irregularities were found at the company's Argentine subsidiary Disco, and it was determined that the financial results of certain joint ventures had been accounted for improperly. As a result of the announcements, the company's *share price plunged by two-thirds*, and its credit rating was reduced to BB+ by Standard & Poor's

2. Dutch law enforcement authorities filed fraud charges against Ahold, which were settled in September 2004, when Ahold paid a fine of approximately €8 million. Ahold's former CEO, CFO, and the former executive in charge of its European activities were charged with fraud by the Dutch authorities. In May 2006, a Dutch appeals court found Ahold's former CEO and CFO guilty of false authentication of documents.
3. The U.S. Securities and Exchange Commission (SEC) announced in October 2004, that it had completed its investigation and reached a final settlement with Ahold.
4. In January 2006, Ahold announced that it had reached a settlement of US\$1.1 billion (€937 million) in a securities class action lawsuit filed against the company in the United States by shareholders and former shareholders.

P. Olympus (Japan) (1986–2013)

1. The Company was found to have concealed more than 117.7 billion Yen (\$1.5 billion) of investment losses and other dubious fees and other payments dating back to the late 1980s, and subject to suspicion of covert payments to criminal organizations. By 2012 the scandal had developed into one of the biggest and longest-lived loss-concealing financial scandals in the history of corporate Japan; it had wiped 75–80% off the company's stock market valuation, led to the resignation of much of the board, triggered investigations across Japan, the UK and US, the arrest of 11 past or present Japanese directors, senior managers, auditors and bankers of Olympus for alleged criminal activities or cover-up, and raised considerable turmoil and concern over Japan's prevailing corporate governance and transparency.
2. The scandal involved the long-term concealment of investment losses in non-consolidated investees, which was then washed through as investment fees in connection with a new, and wholly unrelated, acquisition. In short, deferred losses became part of cost basis for new acquisition.
3. The fraud came to light in 2011 when a newly hired CEO was quickly fired, for, as it later was revealed, having challenged the logic and support for the accounting for that latest acquisition, with investment bankers' fees being wildly disproportionate to common practice.
4. One lesson: major transactions such as acquisitions must always be given close scrutiny by auditors. These have often been used to facilitate frauds, including creation of "cookie jar" reserves that are later employed to create imaginary profits.

Q. Hewlett-Packard Autonomy (2010–current)

1. British software company Autonomy was acquired by Hewlett-Packard (HP) in October 2011. The deal valued Autonomy at \$11.7 billion (£7.4 billion) with a premium of around 79% over market price that was widely criticized as "absurdly high," a "botched strategy shift," and a "chaotic" attempt to rapidly reposition HP and enhance earnings by expanding the high-margin software services sector.
2. Within a year, major culture clashes became apparent and HP had written off \$8.8 billion of Autonomy's value. HP claim this resulted from "accounting improprieties, misrepresentations and disclosure failures" by the previous management, who in turn accuse HP of a "textbook example of defensive stalling" to conceal evidence of its own prior knowledge and gross mismanagement and undermining of the company, noting public awareness since 2009 of its financial reporting issues and that even HP's CFO disagreed with the price paid.
3. External observers generally state that only a small part of the write-off appears to be due to accounting mis-statements, and that HP had overpaid for businesses previously.
4. Since the actual fraud, if any, is not yet known, the lesson here is merely that business acquisitions are made for varying reasons and the determinations of purchase prices, allocations on the balance sheet, and any ancillary matters (accruals to be made for elimination of redundancies, etc.) are bound to be complex, difficult, and subject to alternative viewpoints.

R. Shanghai Pharmaceuticals (2012)

1. Shares of Shanghai Pharmaceuticals, a leading mainland drug maker and distributor, fell 24 per cent to a record low in Hong Kong after a mainland newspaper reported a fraud investigation into the company.
2. Shanghai Pharmaceuticals Holdings Co Ltd. boosted reported profit by injecting RMB\$100 million capital into Shanghai Pioneer.
 - a. In doing so, it had violated Hong Kong Accounting Standard 18 (revenue recognition), since capital injection is clearly not an ordinary activity of the company.
 - b. Thus, the practice can be seen as manipulating the figures of Shanghai Pharmaceuticals' financial statements.
3. Secondly, Changzhou Kony Pharma Co. earnings were included in Shanghai's consolidated financial statements, although the acquisition had not yet been completed.
 - a. This was not in accordance with HKAS 39 (addressing recognition and measurement of financial instruments).
 - b. Shanghai Pharmaceuticals asserted that it had already settled the dispute and finished the acquisition, and auditors PricewaterhouseCoopers certified that this was legitimate.
4. Reportedly, inflation of profits by means of related party transactions is one of the more common forms of financial reporting frauds among Chinese companies engaging in fraud (this is not to imply it is common among all Chinese companies, of course).
5. Lessons for the auditors.
 - a. Business combinations or acquisitions are commonly found to be an opportunity for accounting fraud, most typically the creation of "cookie jar reserves" that over-estimate post-combination costs (e.g., to rationalize duplicate facilities) and are used later, after found to be excessive, to create post-acquisition earnings.
 - b. Although normally acquisition date for mergers can be objectively established, GAAP does offer some flexibility, including consolidation of entities controlled by contract, rather than ownership, and these need close attention from auditors.
 - c. Disguised or indirect capital infusions may be misreported as revenue, which is a key datum with which investors are commonly concerned, thus requiring auditor vigilance.

S. Reebok India (2013)

1. In March this year, Adidas group had announced that due to the irregularities at Reebok India it had restated its financial statements, which "led to a reduction of net income attributable to shareholders of euro 58 million for 2011. In addition, shareholders' equity of the opening balance sheet for 2011 is negatively impacted by euro 153 million".
2. Apparently, this was done by management to mask the effects of deeply discounted sales and actual operating losses that were being incurred.
 - a. "The impairment loss was mainly caused because of adjusted growth assumptions for the Reebok brand, especially in North America, Latin America and Brazil, and an increase in the country-specific discount rates as a result of the euro crisis," the company said.
 - i) On its face, this explanation is nonsensical, since revenues are not to be booked based on "growth assumptions," but only on actual, consummated sales.
 - ii) Likewise, "country-specific" or any other discounts would have been known at the date of the sales transactions, or should have been reserved for, if negotiable later.
 - b. "Key findings from our internal investigations include inappropriate recognition of sales, a failure to book sales returns and a failure to correctly post credit notes to accounts receivable. This resulted in a significant overstatement of net sales, accounts receivable as well as materially incorrect accounting for inventories and provisions."

3. "During the investigation process, the new management also discovered four previously undisclosed warehouses not declared in the official accounting records. . . . The findings of the investigations suggest that the practice of inflating sales and profits had been going on for several years."
 - a. An audited company had four previously secret warehouses? It is impossible to reconcile this statement with presumption that a standards-compliant audit examination had been conducted.
 - b. Perhaps this means that nominal customers, justifying actual revenue recognition, actually were company owned locations? Raises questions about receivables confirmations, among other matters.
4. A forensic audit of Reebok India had found fake transactions with unauthorized customers, allegedly concocted to exaggerate the company's revenue and possibly aimed at meeting targets.
5. Lessons for auditors.
 - a. Document authenticity is always an issue given current technology.
 - b. Sample sizes (audit scope) must be large enough to provide requisite level of assurance that risk of undiscovered, material financial statement misstatements, whether due to fraud or otherwise, has been reduced to a suitably low level.
 - c. Certain areas, including revenue recognition, use of reserves to manipulate earnings, and a few others, must be seen as high-risk in even the "safest" audit situations.
 - d. Receivables confirmation process is risky, making it imperative that auditors control the process, verify existence of customers, validate confirmation responses, etc.

T. Dixon, Illinois (USA) (2013)

1. Ms. Rita Crundwell began working for small-town Dixon, Illinois (USA) as a high school student, worked her way up to an executive position.
2. The fatal mistake by city administration: it accepted Ms. Crundwell's "efficiency" suggestion that the offices of treasurer (handling cash) and comptroller (handling accounting records) be combined, with her acting in both capacities.
 - a. The cardinal principle of internal control is to segregate access to assets (especially cash) from responsibility for accounting for those assets.
 - b. Once this control was eliminated, there was no effective restraint over the dual-office holder's ability to manipulate the records while stealing the assets.
 - c. The open question: why didn't the outside auditors (required for municipalities in Illinois and most other U.S. jurisdictions) note this glaring internal control breach and expand testing to compensate? (Two successive audit firms, one a very small, local firm, the other a larger regional firm, together with financial institutions, ultimately made restitution for most of the losses, with the balance being recovered from Ms. Crundwell's property holdings.)
3. Over 22 years, Ms. Crundwell embezzled \$53 million from Dixon, a town with an annual budget under \$20 million.
 - a. Ms. Crundwell's process for stealing city funds was not complicated:
 - i) She opened a bank account for herself, named RSCDA (Reserve Sewer Development Account), making it appear as if it were for the city, and she was the only signatory.
 - ii) She would have money deposited into another account called the Capital Development Fund, create false invoices, and then write checks from the fund payable to "Treasurer," which she would deposit into the RSCDA account.
 - b. In just the final 2 ¼ years of the fraud, Ms. Crundwell (allegedly) had taken \$11 million, which must have been a material amount compared to the town's budget over that period.

- c. The fraud was only uncovered during an absence, when a substitute worker noticed something amiss. The auditors did not contribute to this revelation.
 - d. The liquidation of Ms. Crundwell's various extravagantly expensive assets netted only \$10 million, leaving an unrecoverable deficit equal to the two years' worth of town budgetary expenditures.
4. Two accounting firms that audited Dixon in separate years both had to accept responsibility, and collectively repaid almost the entire amount stolen.
5. Lessons for the auditors:
- a. Glaring internal control weaknesses must be seen as matters for attention.
 - i) Bringing critical mistakes or failures, such as combining the treasury and controllership functions, to management (city council and/or town manager) attention was required.
 - ii) Dramatic increase in audit scope, and fees, was called for – this alone might have convinced “economy-seeking” management to reverse combination of positions.
 - iii) In extreme cases (which this might have been), control weaknesses are critical enough as to make an audit impossible to conduct (scope limitation preventing gathering of sufficient competent evidence to support financial statements).
 - b. Suspicion of “super loyal” employees in critical positions (e.g., who never take vacation or won't permit anyone else to have access to their records) is necessary as part of “professional skepticism.”
 - c. Use of analytical procedures must transcend mere “last year vs. this year” mentality commonly observed.
 - d. Auditors have to be aware of “gossip” and “lifestyle observations,” although these are not, alone, probative in most cases. Ms. Crundwell, living in small town and working for small-town administration her entire career, amassed huge holdings of prize race horses, large ranch property, a \$1 million motor home, and other visible assets.

U. Peregrine Financial Services (PFS Financial)

1. This widely publicized fraud featured the theft of over \$200 million in customer funds, concealed by the creation of bogus bank statements and bank confirmations.
2. The chief executive, Russell Wasendorf, Sr., insisted that monthly bank statements be delivered directly to him, unopened, then spent several hours closeted, using desktop publishing to create counterfeit statements, complete with fictitious deposits and withdrawals and a false return address. When completed, these were given to the appropriate bookkeeping person.
3. The CEO also directed that the annual auditors' bank confirmation request be mailed to a post office box, not the bank's known physical location. The CEO secretly controlled this post office box, and created a confirmation reply attesting to the bogus balance (as much as \$200 million overstated from the actual \$15 million on hand).
4. Lessons for the auditors:
 - a. Basic principles of internal control cannot be ignored, and weaknesses in controls must trigger expanded audit procedures, or withdrawal from the engagement.
 - i) The CEO was the signatory on the bank account, and therefore should not have been allowed to have access to the accounting records, which his priority receipt of the monthly statements provided to him.
 - ii) Independent corroboration of bank balances must include auditors' determination that the request is being properly directed; this process cannot be controlled by the client.
 - b. Document authenticity cannot be assumed anymore; it must be subject to audit. Desktop publishing has resulted in proliferation of authentic-looking, but fraudulent, documents far beyond the capabilities of fraud perpetrators of only a few years ago.

- c. High-risk areas (such as customer funds held in brokerage, commodities, and other financial services businesses) have to be given the attention they deserve, regardless of the apparent strengths of controls (and, at Peregrine, initial access to bank statements by person having control over the asset was a blatant violation of fundamental control principles that should have been seen as a “red flag” by the auditors).
- d. Never compromise the “little things” auditors are taught to do, such as verifying names and addresses of parties to whom confirmations are being mailed or e-mailed.
- e. Never forget to apply common sense: the bank allegedly holding \$225 million in customer funds was headquartered in a major city (St. Paul, Minnesota, USA), yet the confirm request was sent to a post office box in small Iowa town (a box secretly controlled by the fraud perpetrator), even though confirmation responses are usually handled by a centralized administrative department at the main office. The auditor never questioned this, or took any steps to validate the address to which confirm requests were sent.

V. Toshiba

1. Recent revelation that this major, diversified industrial and electronics company had an organized, large scale, top management-directed financial reporting fraud ongoing for at least seven years.
2. When the news broke, three top officers apologized and resigned; subsequent investigation found that the magnitude (currently estimated at totaling from \$1 to \$3 billion) amounted to about 25% of reported earnings over the multi-year span of the fraud (ongoing examination may yet find a greater extent of this fraud).
3. The fraud’s cause can rather directly be traced to “tone at the top,” in common with many other major frauds (e.g., WorldCom), in which top management demanded specific “bottom line” results from operating units, and left those unit managers with the task of creating the frauds that would result in desired profitability. The fraud began with the Westinghouse nuclear power unit, and involved deliberate failures, *inter alia*, to accrue estimated losses on in-process fixed price contracts (a rather fundamental accounting issue that should have been readily identifiable by auditors and even by audit committee members if financially literate). Later, other divisions were also required to meet financial targets by whatever means necessary, and other accounting rule violations might have also been employed.
6. Although early in the process of flushing out all the details of this fraud, it certainly appears that insufficient skepticism by auditors, failure to challenge management’s estimates and to obtain sufficient appropriate audit evidence, will be identified as being significant contributory failures.
7. One lesson: e-mails have almost infinite life, even if nominally “deleted,” and review of e-mails may have to become standard operating procedure for auditors. In this instance, the *absence* of e-mails from the normally heavy-using CEO led to suspicions of evidence spoliation. Because copies of e-mails almost inevitably exist in recipients’ files, and in files of those who were given ‘next generation’ pass-along copies, diligent search can not only find these “missing” e-mails, but cast enormous suspicion on the motives of those claiming that they never existed.
8. Another lesson: the need for “dark triad” personalities to be explicitly dealt with in risk assessment phase of audits; these are currently absent from standard audit risk models.

III. ADVANCED TECHNIQUES FOR DETECTION OF FINANCIAL FRAUD

A. Basic Financial Statement Analysis

1. The traditional, often standardized or automated, analyses performed to meet “analytical procedures” requirements under ISA §520.
2. Can be powerful diagnostic regarding possible existence of fraudulent financial reporting, but not (generally) if the classic “last year vs. this year” comparisons are simply made without:
 - a. First making adjustments to place last year on comparable footing with current year before

- comparisons are made, to deal with changes in product mix, customer mix, product life cycle effects, etc.
- b. Using disaggregated data to the maximum extent possible.
 - c. Using more than just one prior year, so that longer-term trends (whether expected or not) can be observed more readily.
3. Commonly employed screening ratios computed and compared.
 - a. Operating margin (net margin): net income divided by total sales.
 - i) This will change if, e.g., timing of revenue recognition changes, or if fraudulent (non-existent) sales re recognized but no corresponding fraudulent costs of sales are likewise created.
 - ii) Use disaggregated data to avoid blending that makes it difficult to discern actual distortions created (versus real changes explained by, e.g., product mix changes).
 - b. Gross profit margin: gross profit divided by gross sales.
 - c. Sales return volume: sales returns divided by gross sales.
 - i) Must lag data to get sale and return in same period, to make comparisons apt.
 - ii) Must take into account policy or other changes that could alter relationships.
 - iii) Changes in this ratio could signal collusive fraud, channel stuffing, other frauds.
 - d. Accounts receivables turnover: net sales divided by average carrying amount of receivables.
 - i) Can flag policy changes (loosened credit standards), authorized or otherwise, as well as weakness in controls.
 - ii) Can also flag theft of assets (collection proceeds), coupled with lapping and other accounting gimmicks.
 - iii) Can indicate that receivables are over-valued (credit memos to customers being held for later recordation, etc.).
 - e. Bad debt expense as percentage of sales: bad debts divided by net sales for period.
 - i) Can flag fraudulent, fictitious revenue being recorded, then written off as expense.
 - ii) Unless cost of goods sold was also manipulated, gross margin percentage is going to depart from past norms, also.
 - f. Shipping costs as percentage of sales: freight out divided by net sales for period.
 - i) Can flag fraudulent, fictitious revenue being recorded, having no related shipping costs.
 - ii) Unless cost of goods sold was also manipulated, gross margin percentage is going to depart from past norms, also.
 - g. Current ratio: current assets divided by current liabilities.
 - i) Changes can be a fluke (since given by “snapshot” at year end, ignoring interim behavior).
 - ii) But can also flag major frauds, such as fictitious revenues lodged in receivables.
 - iii) Can also indicate theft of receivables, credit policy issues, cash skimming schemes, unrecorded liabilities, etc.
 4. Initial application of ratio analysis should be expansive (including many additional ratios not discussed here), in order to establish benchmarks for future comparisons. Disaggregation is vitally important – including by location if possible fraud could involve one but not other locations, clerks, products, customers, etc.
 5. Continuous monitoring can then be established, respecting control principles (to protect data integrity, etc.).

6. Consider using industry peer group as reference points for key ratios reported by the client.

B. The Abnormal Accruals Model of Earnings Management

1. Predicated on research showing that discretionary accruals are one of the most popular tools used by management to perpetrate financial reporting fraud, although apart from adjustments to the deferred tax asset allowance, there is little agreement on which reserves are commonly manipulated.
2. "Abnormal" accruals also called "discretionary" or "unexpected" accruals in the research literature.
3. A great deal of academic research has been conducted over the past 25 years attempting to determine whether abnormal accruals are indicative of "earnings management" (that may or may not equate to financial reporting fraud), and separately, whether abnormal accruals have been associated with weaknesses in reporting entities' internal controls over their financial reporting processes.
 - a. In research on this topic, a finding of financial reporting fraud is only leveled if there had been regulatory actions or criminal charges that actually asserted fraud.
 - b. Earnings management is a broader category than financial reporting fraud, but from an auditor's perspective, making *a priori* judgments about the need for modifications to the basic audit plan, it would be reasonable to act as if any indication of earnings management could implicate management fraud.
4. A popular technique uses the so-called "modified Jones model,"¹ which is as follows:

$$\text{Accruals}_t = a (1 / \text{Assets}_{t-1}) + b \Delta \text{Sales}_t + c \text{PPE}_t + d \text{ROA}_t + \mu_t$$

Where,

Accruals_t = income before extraordinary items minus cash flow from operations

Assets_{t-1} = total assets at the beginning of fiscal year t

Δ Sales = change in sales in year t versus prior year t-1

PPE_t = gross property, plant and equipment at the end of fiscal year t

ROA_t = return on assets in year t

a, b, c, and d are regression coefficients, and μ is the error term.

Using this model, computed accruals from the model, based on several years' data history for the company under examination, are compared with the reporting entity's actual accruals, with the deviations from the model prediction being deemed the discretionary or abnormal accruals. From an auditing perspective, it could be argued that any such discretionary accruals would be worthy of closer examination.

5. Another, related approach examines the correlations between changes in discretionary accruals (see foregoing) and changes in pre-discretionary income.
 - a. If correlation is negative and significant in amount, it indicates income smoothing has taken place.
 - b. Based on research, income smoothing was found to be widespread (again noting that not all income smoothing is fraudulent financial reporting).

¹ The original Jones model, named after its creator, Jennifer J. Jones, whose doctoral dissertation research was described in the Journal of Accounting Research, Vol. 29 No. 2 (Autumn 1991), evolved from a study of earnings manipulations by companies in an industry that was seeking import restrictions, on the basis of decreased earnings in the face of "unfair" foreign competition. Her work found that there were income-decreasing discretionary accruals made in the year when import relief was being sought.

- c. Additional analysis (not addressed here) allows for discriminating between companies suffering from weak internal controls from healthy (good controls, no fraud) companies, and differentiating among companies committing frauds of various types.
- 6. Research generally supports the hypothesis that companies (subsequently) found to have committed financial reporting fraud differ from the “control” sample of non-fraud companies in terms of making discretionary accruals, but the implications of the findings are ambiguous.
 - a. Fraudulently reporting companies had significantly greater income-enhancing discretionary accruals than did non-fraud companies. (It is to be noted that the fraudulent companies, such as Enron, once discovered, had very large restatements or adjustments, on average.)
 - b. However, there were a significant number (as many as almost 40%) of fraudulent companies reporting income-*decreasing* discretionary accruals, even though most of the frauds, overall, were of the income-exaggerating variety.
 - c. A number of possible explanations come to mind (e.g., a fraud-perpetrating company might overstate earnings by, e.g., creating fraudulent revenues or recognizing revenues prematurely, while at the same time creating some offsetting income-decreasing accruals, possibly as “cookie jar reserves” for later periods when other income enhancements would be needed).
 - d. The wide variations in findings, however, implies that accrual models might not be useful in detecting more subtle earnings management schemes, at least not in the near term.
 - e. An overall conclusion is that simple discretionary accruals models are not very effective at detecting unreported fraud (but that the Beneish M-score, described below, is effective). The evidence on earnings management, whether for capital raising, regulatory or other objectives, is decidedly mixed; although it is clear that earnings management occurs, the patterns are not really well understood at present.

C. The Beneish M-Score Model for Fraud Detection

1. The M-Score, modeled by Professor Messod Beneish, is a mathematical model that adopts some financial metrics to identify the extent of a company’s earnings affected by earnings management.
 - a. The M-Score is similar to the Altman Z-Score, but the M-Score concentrates on estimating the extent of earnings manipulation instead of determining when a company is about to become bankrupt.
 - b. The M-Score is composed of eight ratios that capture either financial statement distortions that can result from earnings manipulation or indicate a predisposition to engage in earnings manipulation.
 - c. Research indicates that companies with higher M-scores are more likely to be manipulators. Thus, the M-score model is recommended as a tool to detect unreported financial statement fraud.
 - d. One advantage of the M-score is that the sample from which the model was derived consisted of entities that have indeed managed earnings, and that determination was independent of abnormal accrual models.
 - e. The updated Beneish M-score model is presented mathematically as follows:

$$M = - 4.84 + 0.920 \text{ DSR} + 0.528 \text{ GMI} + 0.404 \text{ AQI} + 0.892 \text{ SGI} + 0.115 \text{ DEPI} - 0.172 \text{ SGAI} + 4.679 \text{ TATA} - 0.327 \text{ LEVI}$$

Where,

DSR (= change in days’ sales in receivables) =

$$\left[\frac{\text{Receivables current period} / \text{sales current period}}{\text{Receivables last period} / \text{sales last period}} \right]$$

GMI (= change in gross margin on sales) =

$$\left[\frac{\text{Sales less cost of sales last period}}{\text{sales last period}} \div \frac{\text{Sales less cost of sales this period}}{\text{sales this period}} \right]$$

AQI (= change in asset quality index) =

$$\left[\frac{1 - \text{current assets plus plant property and equipment this period}}{\text{total assets this period}} \div \frac{1 - \text{current assets plus plant property and equipment last period}}{\text{total assets last period}} \right]$$

SGI (= sales growth index) = [sales in current period ÷ sales last period]

DEPI (= change in depreciation rate index) =

$$\left[\frac{\text{depreciation taken last period}}{\text{depreciation taken last period plus property plant and equipment last period}} \div \frac{\text{depreciation taken current period}}{\text{depreciation taken current period plus property plant and equipment current period}} \right]$$

SGAI (= change in selling, general and administrative costs index) =

$$\left[\frac{\text{selling, general and administrative expenses current period}}{\text{sales current period}} \div \frac{\text{selling, general and administrative expenses prior period}}{\text{sales prior period}} \right]$$

TATA (= change total accruals to total assets index) =

$$\left[\frac{\text{change in working capital less changes in cash and income taxes payable, and depreciation and amortization in current period}}{\text{total assets}} \right]$$

LEVI (= change in leverage index) =

$$\left[\frac{\text{long term debt plus current liabilities current period}}{\text{total assets current period}} \div \frac{\text{long term debt plus current liabilities prior period}}{\text{total assets prior period}} \right]$$

- f. The Beneish M-score model factors capture distortions that can result from earnings manipulations (DSR, AQI, DEPI, TATA) or that indicate a predisposition to engage in earnings manipulations (GMI, SGI, SGAI, LEVI).
- g. Interpretation of the Beneish M-score is: a computed score of *greater* than - 2.22 is an indicator that the financial statements may have been manipulated. Research supports the accuracy of the M-score as a tool to identify financial reporting fraud, and it is probably the best tool to use of those being given attention in this presentation.
- h. The original Beneish model had twelve variables, but two years after its release the eight variable M-score model above was introduced, and it is this version that is in very wide use today.
- i. More recent research suggests that, perhaps for structural (macro) economic reasons over the past decades, the discrimination power of the M-score seems to have declined. It still is useful in identifying manipulators, but seemingly less so than when it was first developed. It is superior to the accruals models, however.

D. The Altman Z-Score Model for Insolvency Prediction

1. Developed in the late 1960s by Professor Edward Altman as a predictor of insolvency (not necessarily related to financial reporting fraud), using multiple discriminant analysis (a variation on linear regression technique).

- a. Insolvency is a risk for auditors if a reporting entity fails shortly after receiving a “clean” opinion (without a “going concern uncertainty” disclosure).
 - b. Inasmuch as fraud is a significant leading indicator of business failure (insolvency being a common aspect of failure), a Z-score suggesting insolvency may also reasonably trigger concern over financial reporting fraud, which is another risk for auditors.
2. After well over thirty years’ usage, the Z-score model is the “gold standard” for anticipating business failures at least two years in advance.
- a. The Z-score has been shown to be about 80 to 90% accurate in predicting insolvency one year in advance of insolvency or bankruptcy, and about 72% accurate in predicting it two years in advance, with a low false positives error incidence (that is, if a company is flagged as being headed toward insolvency, it almost certainly is).

- b. The mathematical representation of the Z-score model (for publicly-held entities) is as follows:

$$Z = 1.2 X_1 + 1.4 X_2 + 3.3 X_3 + 0.6 X_4 + 0.999 X_5$$

Where,

$$X_1 (= \text{working capital index}) = (\text{working capital} \div \text{total assets})$$

$$X_2 (= \text{retained earnings index}) = (\text{retained earnings} \div \text{total assets})$$

$$X_3 (= \text{earnings index}) = (\text{earnings before interest and taxes} \div \text{total assets})$$

$$X_4 (= \text{leverage index}) = (\text{equity at market value} \div \text{total debt})$$

$$X_5 (= \text{asset turnover index}) = (\text{net sales} \div \text{total assets})$$

- c. Interpretation of the Altman public company Z-score: a computed score of *greater* than 2.99 is an indicator that the entity is not in near-term risk of insolvency; a score *lower* 1.81 indicates that the entity is or will become bankrupt.
- d. Because one (of five) factor in the principal Altman model uses market value data, it cannot be used for privately-held businesses. A modified version was therefore developed by Altman, substituting a factor based on equity book value, as follows:

$$Z = 0.717 X_1 + 0.847 X_2 + 3.107 X_3 + 0.420 X_4 + 0.999 X_5$$

Where,

$$X_1 (= \text{working capital index}) = (\text{working capital} \div \text{total assets})$$

$$X_2 (= \text{retained earnings index}) = (\text{retained earnings} \div \text{total assets})$$

$$X_3 (= \text{earnings index}) = (\text{earnings before interest and taxes} \div \text{total assets})$$

$$X_4 (= \text{leverage index}) = (\text{equity at book value} \div \text{total debt})$$

$$X_5 (= \text{asset turnover index}) = (\text{net sales} \div \text{total assets})$$

- e. Interpretation of the Altman private company Z-score: a computed score of *greater* than 2.90 is an indicator that the entity is not in near-term risk of insolvency; a score *lower* 1.23 indicates that the entity is or will become insolvent.
- f. Altman further developed Z-score models for financial institutions (not addressed here), which have very different characteristics than do manufacturing or retail/distribution businesses, which were the basis for his original work.

- g. Notwithstanding the popularity of the Z-score (it is used in many standard audit programs, for example), it has been criticized because of certain flaws in the underlying methodology (multiple discriminant analysis), being based on hypotheses that are not actually supportable. These are complex statistical matters that are not being addressed in this material, however.

E. The Zmijewski Probit Model of Financial Distress

1. The Zmijewski Score is a bankruptcy model used to predict a firm's bankruptcy in two years.²
 - a. The ratios used in the Zmijewski score were determined by probit analysis, a technique that gives a binary result (e.g., will become bankrupt vs. won't become bankrupt).
 - b. Financial distress defined by Zmijewski as filing a petition for bankruptcy (compare to insolvency definition under Altman model).
 - c. The Zmijewski model uses only three explanatory variables, compared to five in the Altman Z-score model, and nine in the Ohlson O-score model.
 - d. In this model, scores greater than 0.5 represent a higher probability of default (in probit and logit models, the dependent variable is always binary – e.g., is or is not becoming insolvent).
2. The mathematical formulation is as follows:

$$\text{Zmijewski Score} = -4.336 - 4.513 * (\text{Net Income} \div \text{Total Assets}) + 5.679 * (\text{Total Liabilities} \div \text{Total Assets}) + 0.004 * (\text{Current Assets} \div \text{Current Liabilities})$$

F. The Ohlson Logit Model of Financial Distress

1. The Ohlson O-Score for predicting bankruptcy is a multi-factor financial formula postulated in 1980 by Dr. James Ohlson of New York University.³
 - a. This is among a category of models referred to as “logit models” which are binary outcome models and transform values to derive probabilities; it is related to the probit model used by Zmijewski, described above.
 - b. The Ohlson O-Score is the result of a 9-factor linear combination of coefficient-weighted business ratios that are readily obtained or derived from the standard periodic financial disclosure statements provided by publicly traded corporations.
 - i) Two of the factors utilized are widely considered to be dummies, inasmuch as their value and thus their impact upon the formula typically is 0.
 - ii) When using an O-Score to evaluate the probability of company's failure, then $\exp(\text{O-Score})$ is divided by $1 + \exp(\text{O-score})$.
 - iii) Although nine variables are specified, these pertain to the four presumed underlying causes of financial distress: the size of the company, its performance, its liquidity, and its financial structure.
2. The mathematical formulation for Ohlson's O-Score is as follows:

$$\text{O-score} = -1.32 - 0.407 * \text{AS} + 6.03 * \text{LM} - 1.43 * \text{WCM} + 0.757 * \text{ICR} - 2.37 * \text{ROA} - 1.83 * \text{FTDR} - 1.72 * \text{DCLM} + 0.285 * \text{DCRA} - 0.521 * \text{CINI}$$

Where,

$$\text{AS} = \text{adjusted size} = \log(\text{Total assets} \div \text{GNP price-level index})$$

² The model was set forth by Mark E. Zmijewski in the Journal of Accounting Research, Vol. 22 Supplement (1984).

³ The original Ohlson model, named after its creator, James A. Ohlson, was described in the Journal of Accounting Research, Vol. 18 No. 1 (Spring 1980).

Where GNP price-level index = (Nominal GNP ÷ Real GNP)*100

LM = leverage measure = total liabilities ÷ total assets)

WCM = working capital measure = working capital ÷ total assets

ICR = inverse current ratio = current liabilities ÷ current assets

ROA = return on assets = net income ÷ total assets

FTDR = funds to debt ratio = funds from operations ÷ total liabilities

Where funds from operations is defined as net income plus depreciation

DCLM = discontinuity correction for leverage measure = a so-called dummy variable equaling one if total liabilities exceeds total assets, zero otherwise. Negative book value in a corporation is a very special case and hence Ohlson felt the extreme leverage position needed to be corrected through this additional variable.

DCRA = discontinuity correction for return on assets = a dummy variable equaling one if income was negative for the last two years, zero otherwise.

CINI = change in net income = (net income current period *minus* net income prior period) ÷ (net income current period *plus* net income prior period)

3. Once the O-score has been computed, the probability of failure, P, must be computed.

$$\text{Probability of Failure} = P = [\exp(\text{O-score})] \div [1 + \exp(\text{O-score})]$$

4. There are three different versions of the Ohlson model. The first, most accurate one is used to predict bankruptcy within one year, and this has been found to be 96% accurate. A second predicts bankruptcy in the second year out, conditioned on not becoming bankrupt in year one. The third is used to predict bankruptcy sometime over the following two years.
5. The Ohlson model has been shown to be significantly more accurate than the Altman Z-score model, successfully predicting impending insolvency over 96% of the time (one year horizon model).
6. Current research suggests that the logistic regression approach of Ohlson, coupled with his subjective but valid selection of independent variables, may actually be the most defensible approach.

G. Distress Analysis Using Dynamic Event History Method

1. Developed to overcome perceived limitations of models, including those of Altman, Zmijewski, and Ohlson, that are essentially static, measuring financial indicators (ratios, etc.) at points in time so that they may serve as the basis for predicting insolvency.
2. In contrast, the approach called distress analysis, using the event history method, incorporates conditional probabilities of status changing from financially viable to insolvent or troubled.
3. Using this methodology, the objective is to study the time elapsing (say, from when a company's current ratio falls below 2:1) until the "event" of interest (say, becoming functionally insolvent) occurs, so that a model of time to insolvency given the state of defined independent variables can be constructed.
 - a. The technique addresses two matters that traditional insolvency models do not:
 - i) The time-variance (i.e., trajectory of change over time) of explanatory variables (key financial ratios, etc.) used to predict likelihood of the event of interest.

- ii) Controlling of so-called censored observations (which are an issue given that the study used to develop the model truncates observations as of the conclusion of the research, such that sample items (e.g., companies included that have increasingly troublesome pattern of financial indicators but which, at the terminus point, have not yet become insolvent, but which subsequently do become insolvent after that point in time, but would be included in no-insolvency statistics, possibly contributing to misleading implications).
- b. The methodology is a form of “survival analysis,” and not performed by regression analysis, as are most common modeling exercises.
 - i) In effect, it is asking the question, “given the pattern of changes in key financial or other measures, can it be reasonably predicted that the company will become insolvent, and if so, how soon, on average?”
 - ii) The conditional probabilities will be of the form, “given declining current ratios, say, for six consecutive years, the odds are 4:1 that insolvency will occur within two years.”

H. Contextual Analysis

1. Meant to address the perceived flaw that many models of insolvency are based on statistical techniques whose implicit assumptions are not valid regarding accounting data.
2. Accordingly, contextual analysis is meant to deal with *qualitative* factors such as organizational dynamics, strategic situations, and business compositions as elements that can be used to predict business insolvency or other major events.
3. To the extent that independent variables are financial ratios or similar quantitative items, they are normalized by comparison with the corresponding industry-wide or other relevant comparative data.
4. In other variations, context analysis refers to weighing significant events (mergers, etc.) or patterns (frequent acquisitions facilitated by increasingly valuable stock of the acquirer) in order to make certain assumptions or assessments (riskiness of acquisitions-oriented management) that can be used to create or modify models for prediction of insolvency, et al.

IV. MANAGEMENT OVERRIDE AND FRAUD RISK

A. Management override is always a fraud risk, regardless of control environment.

1. According to ISA 240, “When obtaining reasonable assurance, the auditor is responsible for maintaining professional skepticism throughout the audit, considering the potential for management override of controls and recognizing the fact that audit procedures that are effective for detecting error may not be effective in detecting fraud.”
2. Even though internal control over financial reporting may appear to be well-designed and effective, controls that are otherwise effective can be overridden by management in every entity.
3. Many financial statement frauds have been perpetrated by intentional override by senior management of what might otherwise appear to be effective internal controls.
4. Audit committees, if present, or the full board of directors, may reduce the risk of material misstatement in the financial statements due to fraud by addressing the risk of management override of internal controls as part of their oversight of the financial reporting process.
5. Because management is primarily responsible for the design, implementation, and maintenance of internal controls, the entity is always exposed to the danger of management override of controls, whether the entity is publicly-held, private, not-for-profit, or governmental.
6. Management may override controls to intentionally misstate the nature and timing of revenue or other transactions by (1) recording fictitious business events or transactions or changing the timing of recognition of legitimate transactions, particularly those recorded close to the end of an

accounting period; (2) establishing or reversing reserves to manipulate results, including intentionally biasing assumptions and judgments used to estimate account balances; and (3) altering records and terms related to significant or unusual transactions.

B. Considerations in controlling the risk of management override of controls

1. Maintaining skepticism (discussed later in this module).
2. Strengthening board and audit committee understanding of the business.
 - a. Committee members need a solid knowledge of the industry and business to form the foundation for effective oversight, including understanding of key drivers and performance indicators relevant to operating results and financial position.
 - b. Must understand legitimate management options when planned performance results are not achieved (as will often occur), in order to be able to recognize when other, fraudulent responses are instead invoked by override of controls.
 - c. Must develop an understanding of what may threaten management's ability to accomplish its objectives and strategies, which commonly include threats or risks that include competition, capital constraints, major customer or vendor loss, production issues, economic downturn, or regulatory change.
3. Brainstorming to identify fraud risks.
 - a. Brainstorming is highly effective technique to elicit insights, in both audit setting and for bodies responsible for corporate governance.
 - b. Best when varied levels of experience and skills are included.
 - c. Should be conducted by board or audit committee without any management members present.
 - d. Facilitation by a fraud specialist can increase the effectiveness of the session by educating about schemes used to perpetrate management fraud at other entities and the degrees to which such schemes might occur at this entity.
4. Using a code of conduct to assess financial reporting culture.
 - a. Many, perhaps most, companies now routinely have codes of conduct. However, monitoring behavior for non-compliance is less universally observed.
 - b. The audit committee should be routinely furnished with the results of any surveys of employees regarding corporate behavior and similar information received from external parties, such as customers and vendors, to assess the culture or "tone at the top."
 - c. Perceptions of management's commitment to uphold the code influence the degree to which employees and other parties follow the code and/or report violations of the code.
 - d. The extent to which management is perceived to be committed to conduct sanctioned by the code will influence the audit committee's ability to deter, prevent, or detect management override of internal controls.
 - e. Equally important, an evaluation by the audit committee of how management communicates information about the code and motivates employees to comply with the code also provides information reflecting the culture or attitudes about ethical behavior within the organization.
 - f. Employee awareness and training about the code may signal information about management's commitment to the code and indicate the likelihood that employees will report management code violations. Conversely, a lack of awareness by employees may signal management's lack of commitment to ethical conduct.
5. Cultivating a vigorous whistleblower program.
 - a. Reports by whistleblowers are leading source of financial fraud discoveries.
 - b. Audit committees (or full boards, in absence of an audit committee) can assist in creating strong antifraud controls by encouraging the development of a culture in which employees

- view whistle-blowing as a valuable contribution to an attractive workplace of integrity and their own futures.
- i. The reporting mechanisms must demonstrate confidentiality so potential whistleblowers are assured that their concerns will be properly considered and that they will not be subjected to retribution.
 - ii. Successful whistle-blowing procedures require strong leadership from the audit committee, the board of directors, and management.
- c. For the audit committee to effectively monitor the risk of management override of internal controls, the automatic and direct submission to the audit committee of all complaints involving senior management (without filtering by management or other entity personnel) is essential.
 - d. The audit committee's primary interest is complaints related to accounting, internal controls, and auditing.
6. Developing a broad information and feedback network.
- a. Identifying situations where management has overridden internal controls is difficult because those actions are not obvious and are not expected of a trusted management team.
 - b. To cope with this challenge, the development of an extensive information network that extends beyond senior management may significantly increase the audit committee's ability to detect management override of internal controls.
 - c. In addition to the financial reporting process, the network often includes:
 - i) Internal auditors
 - ii) Independent auditors
 - iii) Compensation committee
 - iv) Key employees
 - d. The audit committee may consider meeting periodically with representatives from each of the above groups to discuss matters affecting the financial reporting process, including significant estimates, fraud risks, key internal controls, and any other items of concern.
 - e. Inconsistencies in information obtained from these sources may signal that management override of internal controls is present. The information obtained from these sources may be useful to the audit committee in its brainstorming session about the risk of management override of internal controls.

V. AUDITOR SKEPTICISM: INSUFFICIENT AND IN NEED OF RESEARCH

A. The Application of Auditor Skepticism is Currently Inadequate.

1. Skepticism defined.
 - a. With respect to fraud deterrence and detection, skepticism involves the validation of information through probing questions, the critical assessment of evidence, and attention to inconsistencies.
 - b. Skepticism increases not only the likelihood that fraud will be detected, but also the perception that it will be detected. In turn, this reduces the risk that fraud will be attempted.
 - c. The CAQ Fraud Report noted that management exercises skepticism by periodically testing assumptions about financial reporting processes and controls and always remaining aware of the potential for fraud within the organization. To that end, boards of directors and audit committee members should employ a skeptical approach in discharging their oversight responsibilities. For both internal and external auditors, skepticism is important as they

conduct their professional duties and should include consideration of the risk of management override of controls.

B. Promising Academic Research on Skepticism and Independence

1. With independence and skepticism being unique attributes of effective and standards-compliant auditors, it is not surprising that academic researchers are devoting considerable time and resources to researching these characteristics.
2. Three studies hold particular promise to assist in improving performance in these areas.
 - a. Research on defining professional skepticism and training auditors to be more skeptical.
 - i) An encouraging research paper, *Training Auditors to Think Skeptically* (by Plumlee, Rixon, and Rosman), supported by a grant from the Center for Audit Quality (CAQ), was exposed in April 2012.⁴
 - ii) From the research reported in this paper, *Training Auditors to Think Skeptically*, the authors concluded that it was possible to develop training materials that could successfully train auditors to improve their use of these skills.
 - iii) The authors represented professional skepticism as a diagnostic reasoning process that incorporates both *divergent* and *convergent* thinking. The authors found that training in divergent and convergent thinking can provide a structure for auditors to be more professionally skeptical.
 - a) Specifically, auditors who were trained in using both divergent and convergent thinking increased both the number and quality of explanations in response to evidence not consistent with their expectations.
 - b) The auditors who completed the training demonstrated a greater ability to generate and ultimately choose the correct explanation.
 - iv) The application of divergent and convergent thinking should somewhat parallel that which occurs in the well-regarding “brainstorming” to assess fraud risks on audits.
 - v) Exhibit I on the following pages (p. 35-6) illustrates how the thinking process might be demonstrated in performing planning analytical procedures.
 - b. Toward the measurement of professional skepticism.
 - i) In her 2001 paper,⁵ *Development of an Instrument to Measure Professional Skepticism*, R. Kathy Hurtt of the University of Wisconsin – Madison developed a 30-item instrument for measuring whether a person possesses the characteristics of a skeptic. The instrument is derived from a model that identifies both the characteristics of skeptics and their behaviors, as presented in Exhibit II, on page 36:
 - ii) An instrument such as that developed by Professor Hurtt could provide a good starting point for measuring a baseline of a firm’s audit personnel to determine the extent to which they presently possess the characteristics of skeptics to examine whether there is any correlation between skepticism and the firm’s perception of person’s skills as an auditor.
 - a) This can serve as a needs analysis for developing targeted training as well as for identifying individuals that possess the characteristics that can serve as mentors to those who require development in this area.
 - b) It also could potentially be used in the recruiting and hiring process to identify individuals who are more likely to be skeptical auditors.

⁴ This is an as-yet-unpublished draft paper, but can be obtained at: http://web.ku.edu/~audsymp/myssi/_pdf/Plumlee%20et%20al.%202012%20Training%20Auditors%20to%20Think%20Skeptically%20-%20April%202012%20KU%20Symposium.pdf

⁵ <http://aaajournals.org/doi/abs/10.2308/aud.2010.29.1.149>.

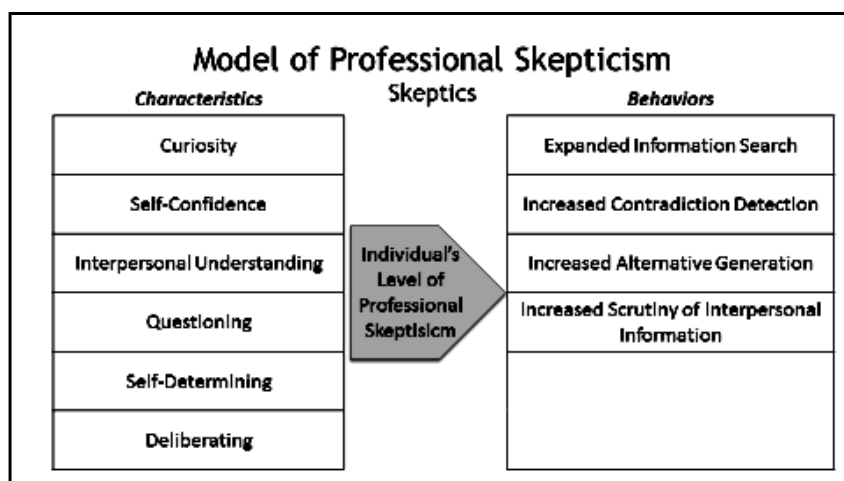
- c. Forensic accounting training for all auditors increases skepticism attitudes.
- i) Another academic research effort demonstrated that exposure to a forensic accounting class results in students carrying forward heightened skepticism.⁶
 - ii) The researchers found that when confronted with a non-conforming account, trained students provide significantly higher initial risk assessments post-training:
 - a) Than they did *pre*-training, and
 - b) Than did the untrained students.
 - iii) The researchers also found, in general, that post-training students assigned somewhat higher relevancy ratings to fraud risk factors than did a panel of experts, but that the untrained students ascribed significantly *less* relevance than the experts did to these same facts.
 - iv) In addition, after exposure to fraud risk factors, trained students provided higher revised risk assessments post-training than they did pre-training.
 - v) Finally, the researchers found that seven months after the course, the trained students' performance is sustained, suggesting that the effects produced by taking a fraud-specific forensic accounting course persist.

Exhibit I: Aspects of Behavior Consistent with Skepticism		
Cognitive Processing Activity	Description	Example of Application to a Financial Statement Audit
Problem Identification and Construction	Recognize items or situations that should be considered unusual	The auditor develops expectations and compares those expectations to the amounts recorded in the financial statements. The auditor would consider it unusual if there was a significant difference between the amount expected and the recorded amount.
Divergent Thinking	Generate potential solutions to the problem by recognizing cues and links between available information to find explanations that might not otherwise be discovered. Consider plausible, multiple explanations for the unusual item encountered without an explicit, stringent effort to ensure that each explanation is logically valid in light of other knowledge and evidence. Similar to brainstorming, except that brainstorming is a group activity whereas divergent thinking occurs at the individual level.	The auditor considers the various factors that potentially could cause the identified difference (including reconsideration of whether the auditor identified all of the relevant factors that influence the recorded amount). To comply with ISA 240, the auditor ensures that explanations considered include both intentional and unintentional misstatements.
Convergent Thinking	Focusing the search for a solution. In problem solving, convergent thinking facilitates recognition of weaknesses and limitations in the generated explanations for the purpose of eliminating those explanations that should not be pursued. Convergent thinking enables decision makers to recognize potential areas in which to concentrate their effort and to arrive at a satisfactory solution.	Auditors use convergent thinking to test the plausible explanations they generated during divergent thinking. The auditor makes additional inquiries, gathers additional evidence that either supports or contradicts the various explanations. In light of the evidence gathered, the auditors' knowledge of the business and industry, and considering knowledge gained in performing other segments of the audit, the auditor considers the plausibility of the various alternative explanations generated during the divergent thinking process.

⁶ This can be accessed at: <http://aaajournals.org/doi/abs/10.2308/iace.2011.26.1.1>

Exhibit I: Aspects of Behavior Consistent with Skepticism		
Cognitive Processing Activity	Description	Example of Application to a Financial Statement Audit
Solution Development	Conclude whether the unusual items or situations warrant additional consideration or if additional evidence needs to be obtained.	The auditor concludes as to whether or not there are any material misstatements in the audit assertions relevant to the account balance or class of transactions being tested. If a misstatement is detected, the auditor proposes an adjusting journal entry to correct the misstatement, and considers whether the failure of the reporting entity to detect and correct the misstatement represents an internal control deficiency.

Exhibit II



B. Actions That Could Potentially Mitigate the Problem of Inadequate Skepticism

1. Actions for consideration by audit firms.

- a. Actions to transform firm culture and the "tone at the top."**
 - i)** Use unambiguous language and refer to the company whose financial statements are being audited as "the auditee." When the words "client" or "customer" or "consumer" are used, limit the discussion to third-party financial statement readers.
 - ii)** Ensure that there is alignment of rewards systems with desired audit behaviors. As required by the International Quality Control Standards (ISQC 1.A5), firm management is responsible for assigning management responsibilities so that commercial considerations do not override the quality of work performed.
 - iii)** Administer an anonymous survey of staff and partner attitudes and perceptions. Include in the survey a question such as⁷:

⁷ Unless it would compromise anonymity, the author recommends asking respondents for their job title. In pilot testing this questionnaire with personnel of several firms, it was found that the less experienced personnel were more likely to score "time" as the most important factor as a number less than 4 and that the more senior the person answering the question (in terms of job title, not firm tenure), the more likely the answer was in the range of 4 or

In your experience, what is the level of importance placed on meeting time budgets versus delivering quality (circle one)?

<i>Time is the most important factor</i>			<i>Time and quality are equally important</i>			<i>Quality is the most important factor</i>
1	2	3	4	5	6	7

b. Matters involving human capital management.

- i)** Consider using an assessment instrument to measure auditors' individual skepticism, to develop individualized learning and mentoring plans, and to evaluate potential new employees.
- ii)** Review the firm's compensation and employee evaluation programs and protocols to ensure that the firm is not rewarding sales more lucratively than technical skills.
- iii)** Ensure that all audit-related training emphasizes the attributes of skepticism necessary for a quality audit.

c. Audit engagement performance.

- i)** Despite the aforementioned challenges presented by the current audit environment, the tools, techniques, and methodologies used by auditors have largely remained static.
- ii)** Many if not most firms have automated the methods they use to document their audit processes, without changing the fundamental methods that those processes entail.
- iii)** At a minimum, firms should be using templates for documenting key audit decisions that include appropriately captioned sections that prompt the auditor to document such matters as:
 - a)** The rationale for selecting the alternative course of action that was ultimately concluded to be the most suitable.
 - b)** The counter-arguments that were rejected: the alternative courses of action or conclusions that were considered and rejected and the reasons for rejecting them.
 - c)** Counter-evidence that was examined, that contradicted management's assertions or supported opposing arguments, and the reasons why such evidence was not given greater weight.
- iv)** Consider holding "challenge meetings" where:
 - a)** Key audit decisions are discussed and specific individuals are expected to make sound counterarguments to those decisions; and
 - b)** Minutes should be taken and included in the engagement documentation to memorialize the fact that alternative viewpoints were expressed, considered and rejected.
- v)** Individuals performing engagement reviews should be encouraged (and rewarded) for:
 - a)** Being thorough,
 - b)** Asking probing questions and challenge staff to develop alternatives,
 - c)** Thinking critically, to obtain credible, high-quality corroborative evidence, *and*

over. This could indicate that more senior personnel are conveying intended or unintended messages in their interactions with those whom they supervise.

- d) Obtaining from engagement staff well-crafted narratives describing the work performed, evidence examined, and conclusions reached.
 - vi) Explicit documentation should be created on each audit that accumulates the results of performing retrospective audit procedures on significant prior year estimates, as required by ISA 240.32.
 - a) This enables the auditors to review the variations between the prior year estimates and actual experience summarized by the member of management that originated the estimates.
 - b) This is a critically important step in applying professional standards to evaluate whether management's estimates are consciously or unconsciously biased towards desired results.
2. Actions for consideration by legislators, regulators, standard-setters, and stock exchanges.

a. Funding of significant research and development into:

- i) New audit methods,
 - ii) Electronic evidence,
 - iii) Data analytic tools,
 - iv) Fraud detection methods,
 - v) Ways of minimizing bias,
 - vi) Audit decision-making frameworks,
 - vii) Effective training on skepticism and critical thinking processes, etc.
- b. Individual firms or networks cannot be relied upon to do this due to commercial considerations, so this needs to be a partnership between academic researchers and those government and private organizations that serve the public interest.
- c. Accounting standards-setters and regulators must engage with their auditing counterparts and develop action plans by which accounting standards are amended to make them more objective and less subjective and to consider auditability as a fundamental requirement when considering potential new standards.
- d. Consider changes to the auditors' unqualified report that emphasize that financial statements are likely, prior to audit, to contain misstatements and that the audit is designed to detect and correct those misstatements:

*Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance ~~about whether~~ **that misstatements contained in the financial statements are free from material misstatement have been detected and corrected in a timely manner.***

- e. Amend auditing standards to refer to the company being audited as the auditee rather than the "client" with explicit language explaining the rationale for this and emphasizing the auditors' duty to the public.
- f. Identify and resolve inconsistencies in auditing standards between those passages that imply the auditor should be neutral regarding the honesty and forthrightness of management and those that require the auditor to plan and perform the audit with management override of controls as a significant risk.
- g. Consider requiring every audit to include forensic audit procedures directed towards the areas that, based on the auditors' fraud risk assessment, pose the highest risk of material misstatement.

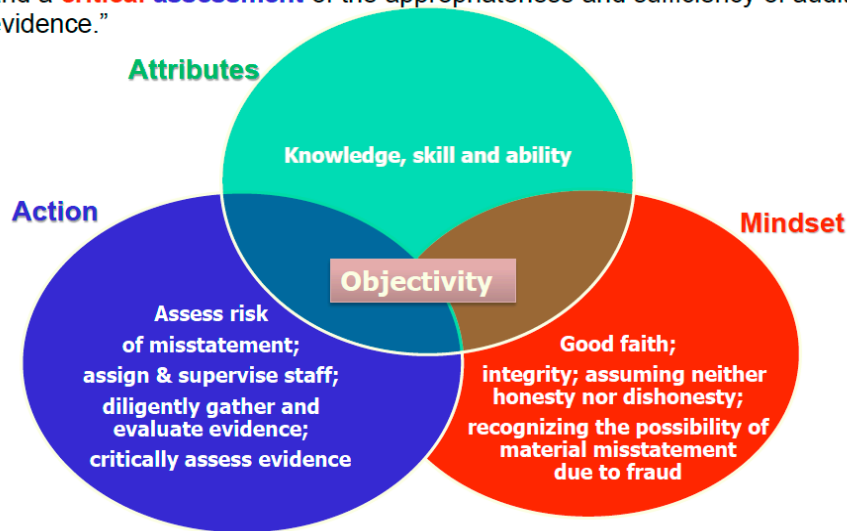
- h. Prohibit the use of “client satisfaction surveys” to avoid independence problems and conflicts of interest.
 - i) This would guard against the threat of audit personnel succumbing to implicit or explicit pressure by the auditee to achieve their desired accounting results.
 - ii) If firms wish to obtain feedback from customers, surveys should be taken regarding the esteem in which third-party users hold the firm’s audit opinions.
- i. Consider prohibiting an audit firm from performing any services for an auditee that would put the auditor in a role of being an advocate on behalf of the auditee or its board members or members of management.
- j. In tandem with the academic community and professional associations, perform research on implementing an international audit quality framework accompanied by transparent reporting of audit quality indicators with the eventual goal of developing best practices for matters such as:
 - i) Partner to staff ratio;
 - ii) Partner and staff utilization percentages/workloads;
 - iii) Average experience level of firm staff on individual engagements;
 - iv) Expected charge hours per professional;
 - v) Staff retention rate;
 - vi) Industry experience;
 - vii) Training hours per audit professional and curricula that support enhancing of professional skepticism;
 - viii) FTEs devoted to technical resources; and
 - ix) Specialist hours as a percentage of overall engagement hours.
- k. Consideration should be given to pilot testing, initially on a voluntary basis, structural changes to the audit model, many of which have been suggested in the past:
 - i) In the public company environment, strengthening audit committee oversight of the audit process including augmenting the accounting expertise on audit committees by requiring that one or more members possess audit expertise.
 - ii) Consideration of creating a quasi-public organization that would appoint auditors of public companies and would adjudicate disputes between auditors and auditees.
 - iii) Conducting research into a model for private company assurance whereby the party needing assurance (in most cases, banks or sureties) decides on the scope of the work sufficient for their decision-making purposes (agreed-upon procedures) and contracts with the firm to perform the work.
 - a) This type of model can be analogized to the purchase of insurance and would align the interests of the auditor with the interests of the party seeking assurance.
 - b) Presumably, under a model of this nature, auditors who were thorough and found errors and fraud more frequently would be rewarded by obtaining more work at higher fees than those auditors that failed to find misstatements that resulted in the bank or surety incurring credit losses.⁸

⁸ A great deal of excellent academic work has been done in this area by Professor Joshua Ronen of the Stern School of Business at New York University.

C. Operationalizing Skepticism (Guidance from the PCAOB).⁹

1. Results from the appropriate relationship of three elements – attributes, mindset, and actions.
2. Attributes
 - a. Audits performed by persons having adequate technical training and proficiency
 - b. Auditors should be assigned to tasks and supervised commensurate with their levels of knowledge, skill and ability.
3. Mindset
 - a. Not assuming that management is honest or dishonest, but not being satisfied by evidence is less than persuasive because of a belief in management honesty or integrity.
 - b. Conducting the engagement with a mindset that recognizes the possibility that a material misstatement due to fraud could be present, regardless of any past experience with the auditee, and regardless of the auditors’ belief about management integrity and honesty.
4. Actions
 - a. Gathering and objectively evaluating audit evidence by considering the competency and sufficiency of the evidence, throughout the entire audit process.

“Professional skepticism is an **attitude** that includes a **questioning mind** and a **critical assessment** of the appropriateness and sufficiency of audit evidence.”



D. Concluding Observations

1. It is clear that the status quo is not acceptable and that the perceived value and very existence of the audit are threatened should actions not be taken in a timely manner to greatly improve performance in this vital area. Global capital markets require credible and reliable financial reporting.
2. It is commercially devastating to stakeholders when financial statements containing fraudulent representations, or material inadvertent errors or omissions, are issued and relied upon. Consequently the audit profession owes a duty to the public to do everything in its power to reduce the incidences of this occurring.

⁹ For the full PCAOB presentation and a related staff bulletin, see http://pcaobus.org/News/Speech/Documents/08052013_Presentation.pdf and http://pcaobus.org/standards/qanda/12-04-2012_sapa_10.pdf