Journal of Economic Perspectives—Volume 17, Number 2—Spring 2003—Pages 27–50

Corporate Earnings: Facts and Fiction

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Investors' confidence in the quality and integrity of corporate financial reports has been seriously shaken of late. The ever-increasing procession of headlines about fraudulent earnings, inflated asset values and understated liabilities reported by erstwhile leading companies—the likes of Enron, Tyco, WorldCom, Xerox and a host of lesser household names, all audited by major accounting firms—suggests systematic deficiencies in the accounting standards and governance systems that generate financial information of public companies, not to mention in the regulatory systems overseeing them.

Both aggregate data and cross-sectional research confirm the anecdotal evidence that the correspondence to reality of reported earnings deteriorated throughout the 1990s. For example, the gap between aggregate earnings and taxable corporate income, which abstracts according to Internal Revenue Service rules from most estimates and provisions often used to manipulate earnings, has been continuously widening throughout the 1990s (Desai, 2002). Also increasing during the 1990s was the gap between earnings and the corporate profits reported in the national income and product accounts, which are based on firms' taxable income adjusted for current values of inventory and depreciation. While part of the difference between earnings and taxable income is probably due to increasing corporate sophistication of tax management, manipulation of earnings played a major role in the widening gap (Lev and Nissim, 2002a).

Firm-specific data corroborate the increasing vulnerability of earnings to manipulation. The number of earnings restatements by public companies, often in the wake of admitted reporting improprieties, has skyrocketed in the last three to four years (Wu, 2002). Also, the frequency of firms beating analysts' forecasts of

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earnings, a highly coveted target, by a penny or two has risen sharply in the 1990s (Matsumoto, 2000)—an a priori suspect phenomenon.

This essay is devoted to corporate reported earnings, which occupy center stage in the web of misstatements and fraudulent information disseminated to capital markets. Earnings are a major input into investors' valuation models, affecting securities prices and, in turn, managers' compensation and wealth. Earnings are also used by corporate boards and institutional investors to gauge enterprise performance and quality of management. Loans and other contractual arrangements often include provisions (covenants) stipulating the fulfillment of certain profitability targets. These crucial resource allocation and monitoring functions of earnings—the bottom line—naturally create strong incentives to manipulate earnings, which is the subject of this study. I analyze below the reasons for the fragility of the accounting measurement of earnings, discuss the incentives to manipulate earnings and the means of manipulation, review the empirical record of earnings misstatements, and propose a procedure aimed at mitigating earnings manipulations.

An Anatomy of Earnings Manipulation

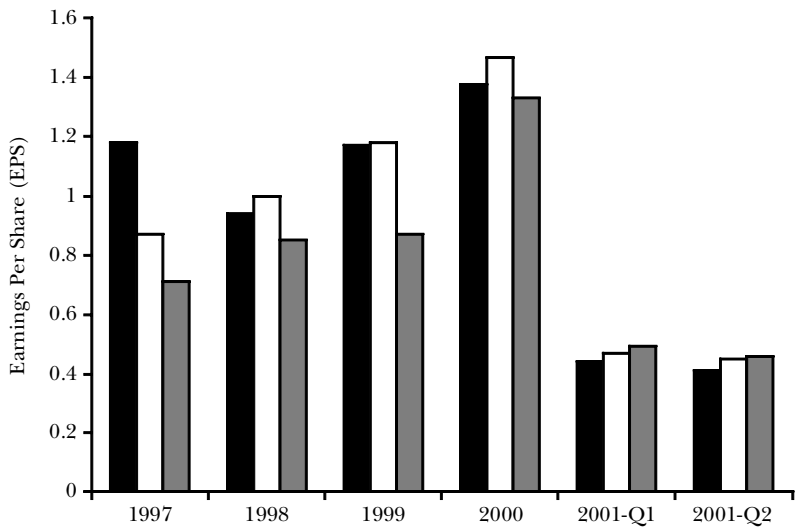
What are manipulated earnings? Let's start with the seemingly straightforward case of Enron, which will turn out to be somewhat muddled.

Figure 1 presents three versions of Enron's earnings for fiscal years 1997–2000, along with the first two quarters of 2001. (Pursuant to its bankruptcy filing in December 2001, Enron did not report quarterly earnings beyond second quarter 2001.) The three bars for each year portray, from the left, financial analysts' consensus forecast of earnings per share (an aggregate of individual forecasts) made before year-end; the corresponding earnings figures publicly reported by Enron shortly after fiscal year (or quarter) end; and the restatement of these earnings filed with the Securities and Exchange Commission on November 8, 2001, in the wake of Enron's collapse. Notably, from 1998 on, Enron's reported earnings beat analysts' forecasts in every time period. An inspection of quarterly earnings similarly shows that, starting with December 1997, Enron beat analysts' forecasts in every quarter but one (the September 1999 quarter). In addition, Enron's annual and quarterly earnings from 1997 to its demise appeared to exhibit a healthy and continuous rate of growth.

But the reality was, of course, different. The right bars in each triplet of Figure 1 present Enron's restated earnings as of November 2001, indicating substantially lower figures than both originally reported and forecasted by analysts. But even the restated earnings are significantly overstated, as Enron's new management withdrew the restatement in April 2002 and has yet to issue an updated version. Some of Enron's fabrications are described in a postmortem report (Report of the Special Investigative Committee, 2002). They include heavy losses hidden in unconsolidated (not reported by Enron) partnerships, known as Special Purpose

Figure 1

Enron Corp. Analyst Forecasts, Originally Reported and Subsequently Restated Earnings per Share (EPS)



Notes: The left bar in each year's triplet indicates analysts' consensus forecast, followed by originally reported and subsequently restated earnings per share (EPS). Analysts forecasts are the latest consensus of individual forecasts made in the preceding year (or quarter) and were obtained from I/B/E/S (a financial service reporting on analysts' forecasts of corporate earnings; I/B/E/S is now part of Thomson Financial's First Call; ⟨http://www.firstcall.com⟩). Reported EPS are "diluted," namely reflecting potential conversion of securities to common stock or exercise of stock options. Restated numbers are from Enron's 8-K report filed on November 8, 2001.

Entities. Furthermore, Enron contributed to partnerships its stock—and then counted the profits from these partnerships due to the company's own stock price increases as "earnings," to the tune of several hundred million dollars during the late 1990s.

Why did Enron do this? Presumably, because had the restated earnings (or the much lower true ones) been released instead of those originally reported, the result would in all likelihood have caused a backlash of investors' disappointment, sharp stock price reversals, heavy losses on managers' stock options, a slew of lawsuits and demand for a management overhaul. As is clear from Figure 1, the analysts that followed Enron—supposedly capital market experts—did not have a clue about Enron's problems up to its bankruptcy or were so beholden to ulterior interests as to fail to warn investors.

Enron thus appears to offer an open-and-shut case of earnings manipulation. Asset values were substantially overstated and liabilities understated, rendering all or most of Enron's reported earnings during the 1997–2001 period a fabrication. Yet more than a year after Enron's demise, many questions still beg for answers. First and foremost, what were Enron's true earnings during the last decade of its existence? Second, to what extent did Enron's management violate generally

accepted accounting principles (GAAP)—the measurement and reporting rules governing financial statements—in reporting earnings and asset values? Or did Enron mainly take advantage of poor rules and the flexibility allowed by the rules? Finally, why is it so difficult to determine true earnings and whether a company's financial reports properly conform with GAAP?

True Earnings and GAAP Earnings

Fraudulent earnings can be conceptualized and identified only relative to true earnings. But what are true earnings?

Generations of philosophers, scientists and writers have struggled with the concept of truth. To Socrates, truth was a fundamental attribute of God, whereas Descartes believed truth to be an essential way of life. In contrast, Nietzsche declared that truth cannot be recognized and Goethe that truth is contrary to our nature (Campbell, 2001). But to people of worldly affairs, engaged in business and finance, a true statement is simply one that corresponds to reality, or facts. Thus, General Electric's (GE) statement made on its December 31, 2001, balance sheet that its "cash and equivalents" amounted on that day to $9.082 billion is true, if confirmed by bank and custodians' statements.[1]

But is General Electric's statement that it had earned $13.7 billion during 2001 "true"? What facts or reality correspond to these earnings? Consider: GE reports in its 2001 income statement an expense of $2.5 billion for "expected losses on financing receivables" (money owed from customers). As GE says in a footnote, this expense "reflects management's best estimate of probable losses" based on "historical experience." Certainly, this is not a fact. Similarly, GE lists $7.1 billion in depreciation and amortization expenses in 2001, including a uniform (straight-line) amortization of some $30 billion of intangibles (mostly goodwill) over a period of up to 40 years. This amortization assumption is so tenuous that the Financial Accounting Standards Board (FASB) cancelled it altogether in 2001 (Statement No. 142), replacing it with an annual impairment (loss of value) test. Also listed among GE's expenses in 2001 are $2.4 billion of research and development costs. Typically, an item such as wages or interest is expensed since it is not expected to generate future benefits, while an item that is expected to generate benefits is capitalized (treated as an asset) and amortized over time. In expensing all of its R&D, GE follows accounting rules, but the correspondence of its earnings to reality is clearly compromised by ignoring the future benefits beyond 2001 from the products and services under development. Not only expenses, but many revenue items are shaped by judgment, too. Here is GE's footnote description of how it computed revenues from long-term products whose construction or related

[1] Truth can sometimes be stretched a bit, as by the troubled energy company Dynegy, which included gas in storage in its definition of "cash," but correspondence to reality generally works to define truth and identify falsehood.

services extended beyond the current year: "For long-term product services agreements, estimated profit rates are used to record sales as work is performed. Estimates are subject to change. . . ."[2]

The list of estimates, judgments and ad hoc assumptions could easily be extended, affecting many of the revenue and expense items making up GE's 2001 net income of $13.7 billion. Some accounting measurement principles also bear little resemblance to reality. For example, accounting measurements typically assume an unchanging purchasing power of the dollar, thus justifying the subtraction of depreciation at historical cost from current revenues in the process of measuring earnings. Also, accountants typically stick with the value of long-term liabilities at time of issue, irrespective of subsequent value changes.

With all this subjectivity and judgment, can true earnings corresponding to reality be measured? With time, earnings rely less on judgment, and their correspondence to reality increases. In 2011, for example, GE's accountants will know with certainty what were the amounts collected from accounts receivable outstanding 10 years earlier (no need for bad-debts reserve), what were the exact post-2001 profits from long-term contracts executed in 2001, and their knowledge of the actual life spans of assets for depreciation purposes would be much better than in 2001. Thus, GE's 2001 earnings calculated in 2011 will correspond closely to facts, invoking the counterintuitive, yet perceptive statement by the mathematician Raymond Smullyan (as quoted by Ijiri, 1989, chapter 7): "To know the past, one must first know the future." Of course, an income number reported 10 years later may excite historians, but not investors.

In exploring earnings manipulations, it is therefore important to realize that at the time earnings are publicly reported by the corporation, generally during one to three months following year- or quarter-end, what investors and managers have is an imprecise earnings number based on multiple assumptions and subjective estimates, which is a far cry from facts. This observation does not mean that reported earnings are useless. But it raises a fundamental question: What is the standard for useful or high-quality earnings?

A utilitarian answer is that a high-quality earnings number is one which improves the prediction of future earnings or cash flows, thereby facilitating the valuation of assets. Indeed, financial analysts often refer to "quality earnings" as the portion of reported earnings that will be sustained in the future, generally abstracting from extraordinary and one-time items (for example, gains from asset sales). The accounting authorities have adopted this approach of assessing the quality of earnings by their contribution to the prediction of future cash flows (FASB, 1978) and purportedly use this standard to guide their setting of the generally accepted accounting principles (GAAP).

The constantly evolving GAAP framework—promulgated in the United States

[2] The current investigation by the Securities and Exchange Commission of Halliburton Co., whose chief executive officer during the investigated period was the current vice president Dick Cheney, centers around a similar issue of the recognition of expected revenues (refunds of cost overruns).

by the Financial Accounting Standards Board (FASB) under the oversight of the Securities and Exchange Commission (SEC)—is a very detailed set of rules and principles for the measurement, valuation and reporting of assets, liabilities, earnings and cash flows, often with rules for specific industries or circumstances.[3] The extent to which GAAP fulfills its mission—the dissemination of quality financial information, and earnings in particular, to facilitate investors' valuations and the monitoring of management—has frequently been challenged, but never more hotly than in the last couple of years.

For researchers, the definition of quality earnings in terms of facilitating the prediction of future performance provides a testable hypothesis. Researchers have examined whether earnings "generally provides a better indication of an enterprise's present and continuing ability to generate favorable cash flows than information limited to the financial effects of cash receipts and payments," as the Financial Accounting Standards Board (1978) conjectured. Lev and Zarowin (1999), for example, found that reported earnings are indeed more highly correlated with stock prices and returns than are cash flows from operations. This finding is probably due to the fact that earnings, despite their susceptibility to manipulation, reflect managers' estimates about future outcomes, like pension expenses or product warranty obligations, whereas cash flows are strictly backward looking. Moreover, cash flows, not just earnings, can be manipulated by managers (for example, Mulford and Comiskey, 2002, chapter 11). The research program on the quality of earnings can also focus on components of earnings. Recall General Electric's treatment of its R&D outlays as expenses, in accordance with generally accepted accounting principles. However, Lev, Nissim and Thomas (2002) show that a calculation of earnings based on treating R&D as an investment in an asset that is amortized over time, rather than as an expense, predicts future earnings and stock returns better than the current calculation of earnings based on R&D expensing.

In the final analysis, even the best accounting principles cannot legislate unbiased, reliable estimates, and Nelson, Elliott and Tarpley (2002), among others, reported that earnings manipulations frequently involve estimates. The difficulties of distinguishing after the fact between intentional and honest misestimates underlying earnings enhances incentives for manipulation. Yet, common sense can often be applied to assess the integrity of estimates. A case in point: The burden of fulfilling pension obligations—a major expense of labor-intensive companies—depends, among other things, on the estimate of the future return (yield) on pension assets that have been previously set aside. The higher the expected return, the lower the pension expense and the higher reported earnings. In 2001, three large financial services companies—Merrill Lynch, Bank of New York and Charles Schwab Corp.—had the following respective estimates of expected returns on

[3] There is an ongoing endeavor to harmonize accounting principles on an international basis, as pursued by the International Accounting Standards Board (IASB). For background on the IASB, see ⟨http://www.iasc.org.uk⟩.

pension assets: 6.60, 10.50 and 9.00 percent. The actual return on pension assets of the three enterprises in 2001 was, respectively, 7.90 percent, –31.63 percent and –21.13 percent (Zion, 2002). It seems justified to question the reasonableness of the expected return estimates of 10.5 percent and 9.00 percent (Bank of New York and Charles Schwab) during a period of depressed capital markets, and when a major competitor—Merrill Lynch—expects an asset return of only 6.60 percent. Below, I propose a system of rolling earnings revisions that is intended to mitigate the incentives of managers to manipulate earnings by focusing on the realization of estimates underlying earnings.

Classifying Manipulated Earnings

Manipulated earnings can be defined as those that provide a poor or deceptive guide to future earnings and cash flows due to an intentional intervention by management. Earnings manipulations can be classified into two (not mutually exclusive) categories: committed by accounting means versus real means. The former—accounting means—can be further classified into GAAP-consistent versus GAAP-violating manipulations.

Accounting versus Real Manipulation

Reported earnings can be manipulated by the stroke of the pen—an accounting record—without any effect on cash flows or on the real dimensions of the enterprise like investing, manufacturing and marketing activities. A recent example: WorldCom Corp. disclosed during July–August 2002 that during the preceding two years it had recorded approximately $7 billion of expenses as capital expenditures (assets), thereby inflating earnings by the same amount.

In contrast, a manipulation by real means involves a change in the firm's level of investment or operating activities, or the altered timing of sales or other transactions with an intention to affect reported earnings. For example, in mid-2002 the Securities and Exchange Commission opened an inquiry into whether the pharmaceutical company Bristol-Myers Squibb improperly inflated revenues by as much as $1 billion by offering unusually large price discounts to its wholesalers in 2001, thereby encouraging them to load up on its products. Such "channel-stuffing" procedures are quite popular among companies attempting to achieve demanding sales and income targets. Bristol-Myers Squibb initially refuted the allegations, yet subsequently announced that it will restate its earnings to offset these sales (Harris, 2002). Additional examples of earnings manipulations by real activities are the timing of asset sales to affect reported earnings (Bartov, 1993) and cutting R&D expenditures to enhance current earnings (Dechow and Sloan, 1991).

It is often difficult to ascertain whether a specific real (in contrast with accounting) action was aimed at manipulating earnings or dictated by strategic considerations. After all, are the deep discounts offered by Bristol-Myers Squibb to its wholesalers significantly different from the zero percent loans or other incentives frequently offered by car manufacturers to customers? Because of these

difficulties, plaintiffs alleging manipulation must often provide additional evidence of managerial wrongdoing, such as that managers sold shares at inflated prices during the manipulation period.

GAAP-Consistent versus GAAP-Violating Manipulations

A GAAP-consistent earnings manipulation will attempt to affect investors' perceptions by using the considerable flexibility allowed by the generally accepted accounting system. Some GAAP-consistent manipulations are sufficiently obvious that they are unlikely to deceive experienced investors. For example, during periods of input-price increases, earnings based on the first-in-first-out inventory valuation method will be higher than those based on the last-in-first-out method; both inventory valuation procedures are allowed by GAAP. However, more subtle GAAP-consistent manipulations may be difficult to unravel. It can be particularly tricky to decide whether certain expenditures on intangibles should be treated as expenses in the current year or as investments that amortize over time. For example, GAAP calls for software development costs to be treated as assets that are amortized over time, but only after the project under development passes a technological feasibility test (Financial Accounting Standards Board, 1985). Under this rule, IBM and Computer Associates, two major software producers, routinely capitalize development costs, while Microsoft treats all development costs as current expenses. Since it is unlikely that Microsoft never had a product that successfully passed a feasibility test (!), the firm is apparently using GAAP's flexibility in what constitutes a feasibility test to understate its earnings—perhaps to make the firm a less attractive target for antitrust lawsuits. Indeed, in June 2002, Microsoft was sanctioned by the Securities and Exchange Commission for "setting aside reserves that in some cases understate quarterly income, rather than inflating it" (Buckman, 2002).

GAAP-violating manipulations include clear deviations from accepted rules, such as WorldCom's capitalization of expenses mentioned above, as well as outright fabrications. A particularly egregious example is Miniscribe Corp., a disk drive manufacturer, which fell on hard times in the mid-1980s and engaged in a massive reporting fraud. At one point, Miniscribe "packaged bricks and shipped them to distributors as disk drives in 1987, recording $4.3 million in sales. When the shipments were returned, Miniscribe inflated its inventory by the purported costs of the bricks" (Zipser, 1989).

While the means of manipulations can be categorized, identifying and proving specific manipulation of earnings remains difficult, particularly when they relate to the multitude of estimates and provisions underlying the computation of earnings. Consider the recent experience of Lucent Technologies (Sender, 2002). In the quarter ending March 2002, Lucent posted $192 million as a bad-debt expense, anticipating future defaults of current accounts receivable. However, the bad-debt expense in the same quarter a year earlier had been $705 million. Since the economy and the outlook for telecommunications firms continued to slide in 2001 and early 2002, shouldn't Lucent's bad-debt expenses rise rather than fall? Was

Lucent manipulating its earnings by underestimating expected losses? Not according to Lucent, whose spokesman said, "We review our receivables portfolio regularly and very carefully, and record reserves that are fully compliant with generally accepted accounting principles." So there.

Producing solid evidence on earnings manipulation is relatively easy in cases of totally fabricated revenues or clear deviations from GAAP, such as the Miniscribe or WorldCom cases. It is much more difficult to nail down the culprits when the manipulation was perpetrated by a real business activity like channel-stuffing or asset sales, or by biased estimates of future revenues or expenses.

Why Manipulate Earnings?

Every case of earnings manipulation has a distinctive texture created by the specific circumstances of the case and the personalities involved; for a range of examples, see Fraudulent Financial Reporting (1999) or the Panel on Audit Effectiveness (2002). Nevertheless, the motives for earnings manipulation can be broadly classified into three somewhat overlapping categories: personal gain, continuation of investor/supplier support, and satisfying contractual arrangements.

In some cases, managers manipulate earnings for personal gain. A very large portion of executive compensation is typically determined by incentives, linked directly or indirectly to earnings. For example, General Electric's annual appropriation for managerial bonuses is, according to the 2001 GE Proxy Statement, computed as 10 percent of the amount by which earnings exceed 5 percent of invested capital. Compensation components in the form of stocks and stock options are indirectly related to profitability via the effect of the latter on stock prices. Since bonuses are often bounded by caps and floors, earnings manipulation to maximize multiyear bonuses can be complex. Healy (1985) documented an upward manipulation of earnings when premanipulated numbers fell within the bonus bounds and a downward manipulation of earnings when premanipulated earnings fell outside the bounds, presumably to shift the "saved" earnings to future periods when they would affect the bonus. More recently, Leuz, Nanda and Wysocki (2002) reported from a sample of 31 countries that earnings manipulation is positively associated with managers' benefits. Fields, Lys and Vincent (2001, section 4.2) presents additional evidence on this point.

Earnings manipulation for personal gain is often alleged in shareholders' litigations and SEC actions. In April 2002, the Securities and Exchange Commission accused Xerox Corp. of a massive multiyear manipulation: "The SEC said the accounting scheme helped keep Xerox's stock price artificially high in the late 1990s, so that executives could cash in $5 million in performance-based compensation and more than $30 million from stock sales. Xerox's stock rose to more than $60 in mid-1999, the heart of the period in which the SEC says executives manufactured profits, before tumbling to less than $4 a share in late 2000" (Bandler and Hechinger, 2002). Self-serving manipulation is also a frequent conjecture in

academic research, especially for high-growth firms whose stock prices are particularly sensitive to earnings disappointments (for example, Skinner and Sloan, 2000).

While the image of managers who feather their own nests attracts an understandably large share of attention—particularly in the wake of Enron, WorldCom, Tyco and Adelphia, where managers' take ran into the tens and even hundreds of millions of dollars—my sense is that the more common reason for earnings manipulation is that managers, forever the optimists, are trying to "weather out the storm"—that is, to continue operations with adequate funding and customer/supplier support until better times come. Thus, earnings manipulation is often perpetrated to portray business as normal and facilitate fundraising by enterprises that are experiencing declining sales or operating losses, for which the continuation of support by capital markets and suppliers is critical to survival (for example, Feroz, Park and Pastena, 1991). The Panel on Audit Effectiveness (2002), examining the 1997–1999 SEC actions record, similarly noted two issues—the raising of capital and the reporting of favorable results to assure the success of initial public offerings—as ranking high among reasons for earnings manipulations.

Earnings are sometimes manipulated to satisfy contractual arrangements. Bonds, loans and customer-supplier agreements often stipulate restrictions on the borrower activities (debt covenants), such as a minimum ratio of earnings before interest-to-interest (the "interest coverage ratio") or a maximum debt/equity ratio. Violation of loan restrictions often leads to adverse revisions in loan terms or even a loan recall, which could result in bankruptcy. Indeed, Dechow, Sloan and Sweeney (1996) reported that firms sanctioned by the SEC for accounting violations had a higher debt/equity ratio, on average, and a higher frequency of technical debt covenant violations than did control firms. Fields, Lys and Vincent (2001, section 4.2.2) survey the evidence on manipulations aimed at satisfying loan covenants.

Each of the above reasons for earnings manipulation rests on the somewhat uncomfortable assumption that sophisticated parties are being duped. For example, shouldn't the compensation committee board members be aware of the manipulation possibilities and set conditions on managers' bonuses accordingly? Indeed, Dechow, Huson and Sloan (1994) provided evidence that corporate compensation committees sometimes change managerial incentive plans to mitigate opportunistic behavior; but how widespread is this? Similarly, shouldn't lenders design contracts that are immune or resistant to the ability of managers to rig the numbers?[4] Where in the web of contractual arrangements lies the essential failure that manipulators exploit? The empirical evidence is largely silent on these fundamental questions.

[4] Similar questions can be raised about studies that examine earnings manipulations purportedly aimed at affecting industry-specific regulations (Fields, Lys and Vincent, 2001, section 4.4.2).

How Much Earnings Manipulation Actually Occurs?

My discussion of the empirical evidence concerning the prevalence of earnings manipulation begins with three categories of direct, case-specific evidence: fraud litigation, corporate earnings restatements and the SEC enforcement actions. Given the difficulties of substantiating manipulations, this direct evidence probably understates the actual frequency of manipulation. I, therefore, proceed to discuss three types of indirect, large-sample evidence aimed at suggesting below-the-radar manipulation: discontinuities in earnings distributions, deviations from expected accruals and earnings patterns around suspicious circumstances. In each category, I offer only representative examples. For surveys of recent empirical research on earnings manipulation, see Healy and Wahlen (1999), Dechow and Skinner (2000) and the references in Degeorge, Patel and Zeckhauser (1999).

Securities Fraud Litigation

The direct evidence on earnings manipulation begins with class action lawsuits brought on behalf of shareholders against corporate executives, board members and auditors. These lawsuits generally allege that shareholders were damaged because a financial reporting fraud encouraged them to buy shares at inflated prices that they subsequently sold at substantial losses after the public disclosure of the fraud. These class action suits are often termed "10b-5 cases," after the section in the 1934 Securities Exchange Act that prohibits the public dissemination of fraudulent financial information. In 1995, Congress passed the Private Securities Litigation Reform Act, aimed at curtailing frivolous lawsuits believed at the time to be rampant.[5] Thus, a recent report by PricewaterhouseCoopers examines securities litigation since the passage of the 1995 Act (PricewaterhouseCoopers, 2001). Table 1 presents some of the results.

As seen in the table, the total number of lawsuits filed increased during 1996–1998 and decreased thereafter. The spike in 2001 is due to a surge of 308 lawsuits alleging improprieties in the process of initial public offerings. These cases, however, are not typically about earnings, as most initial public offerings are not sold on the basis of their earnings record. Leaving aside the initial public offering cases, the other federal lawsuits (left column of table) have declined since 1998. This trend seems certain to reverse in the next few years, at least temporarily, in wake of the unprecedented public scrutiny of accounting and financial reporting issues. Indeed, in the first half of 2002, 123 federal securities class action lawsuits were filed, only one of which was related to an initial public offering, according to the PricewaterhouseCoopers Securities Litigation website at ⟨http://www.10b5.com⟩.

The PricewaterhouseCoopers (2001) study also found that roughly 50–60 percent

[5] In 2002, the Private Securities Litigation Reform Act came under criticism in the wake of Enron and other corporate scandals as having gone too far in immunizing managers and auditors from litigation. Indeed, the Sarbanes-Oxley Act passed in July 2002 lengthens the statute of limitations on securities fraud from three to five years after occurrence and from one to two years after discovery.

Table 1
Number of Securities Class Action Lawsuits Filed by Year

Year Filed	*No. Federal Cases*	*IPO Laddering Cases*	*State-Only Cases*	*Total*
1996	122	—	25	147
1997	167	—	11	178
1998	245	—	13	258
1999	207	—	—	207
2000	201	—	—	201
2001	175	308	—	483

Source: PricewaterhouseCoopers (2001).

of the federal class action lawsuits filed since 1996 alleged violations of generally accepted accounting principles, often leading to earnings manipulation. However, the total number of lawsuits alleging accounting violations decreased from 134 in 1998 to 100 in 2001. Of the 123 lawsuits filed in the first six months of 2002, 72 were related to accounting issues—a mild increase. The majority of securities litigations settle rather than proceed through trial. The median settlement of the cases with accounting allegations was $7.0 million during 1996–2000 and $7.5 million for the 2001 cases. (The mean settlement was considerably higher, at $18.3 million for cases with accounting allegations during 1996–2000 and $23.7 million for such cases in 2001.) The median settlement size of cases alleging accounting violations was double the median settlement size of securities lawsuits without accounting violations.

Reviewing the litigation data, one is struck by the relatively small number of cases involved: Roughly 100 federal lawsuits per year allege accounting improprieties—from a universe of over 15,000 companies listed on U.S. stock exchanges. It stands to reason that a certain number of relatively small—or particularly clever—manipulations fly under the radar screen. Egregious cases, however, will tend to surface eventually and trigger lawsuits, but their frequency, judged from the securities litigation record, was not particularly high. However, while the number of lawsuits is relatively small, their economic impact is increasing. In previous years, most litigation targets were relatively small firms. In the current environment, many defendant firms were leaders in their respective sectors, like Enron, WorldCom, Xerox, Tyco and Global Crossing.

Earnings Restatements

Public companies are required to restate previously disclosed earnings and other financial information when that information contained "[e]rrors [resulting] from mathematical mistakes, mistakes in application of accounting principles, or oversight or misuse of facts that existed at the time the financial statements were prepared" (Accounting Principles Board, 1971, paragraph 13). The "misuse of facts" generally stands for manipulations.

Wu (2002) identified 1,068 cases of earnings restatements over the 24-year period 1977–2000 and wrote (pp. 12–13): "In the late 1970s and early 1980s, the number of [per year] restatements stays in the single digits. From the mid-1980s until the mid-1990s, the number stays basically stable at less than 50 each year. It suddenly soars to 96 in 1998 and keeps the momentum thereafter." The number of restatements in 2001 and 2002 kept rising: 270 and 330, respectively (Bryan-Low, 2003). Roughly 40–50 percent of the restatements in the late 1990s were made by high-tech firms (computer, electronics, software, telecommunications), and over 90 percent of the restatements revised earnings downward. Investors' reaction to the restatement announcements suggests that they came as a surprise, since from the day before through day of the announcement the mean risk-adjusted change of the stock price according to Wu was –11.2 percent. The restatements were not a total surprise, however. The returns on restating companies' stocks prior to the announcement were generally negative, at 4–5 percent during the month preceding the restatement—and kept drifting downward, though slowly, after the restatement.

Of course, not all earnings restatements reflect manipulations. However, the sharp increase in the frequency of restatements since 1998 does coincide with a major move by the Securities and Exchange Commission to curb earnings manipulations, as well as with the bursting of the high-tech bubble, which flushed out many reporting improprieties. Wu (2002, p. 13) also pointed out that of the 1,068 cases of restatements, 232 firms faced securities class action lawsuits in the wake of the restatement, 193 firms had their management replaced, and 108 companies replaced their auditors. These results suggest that many of the earnings restatements involved more than technical accounting issues.

SEC Enforcement Releases

The Securities and Exchange Commission undertakes a broad range of enforcement actions against companies, managers and auditors, often leading to injunctions and administrative proceedings. The subset of actions related to accounting and financial reporting violations (in contrast with, say, actions concerning insider trading) are articulated in the SEC's Accounting and Auditing Enforcement Releases (AAER), which describe investigations of accounting and disclosure violations of the securities laws, including auditing negligence.

Feroz, Park and Pastena (1991) analyzed the 224 AAERs issued during 1982–1989, and Dechow, Sloan and Sweeney (1996) extended the AAERs examination to 1992, analyzing the 92 SEC enforcement actions during 1982–1992 that focused on earnings manipulation. These studies documented a sharp investor reaction to the disclosure of SEC enforcement action—an immediate market-adjusted price drop in the range of 9–13 percent—suggesting that most investors were unable to see through the veil of deceit. The studies also found that enforcement targets had tended to underperform the market in the years before the AAER release, which suggests a common pattern of earnings manipulation being committed during distress periods. The SEC enforcement data also provide insight into how long

managers can get away with manipulations. We don't know, of course, how many undetected manipulations took place; but the evidence from the Accounting and Auditing Enforcement Releases indicates that approximately two-thirds of the recorded manipulations lasted for one to two years.

Overall, the direct, case-specific evidence on the extent of earnings manipulation from fraud litigation, earnings restatements and SEC enforcement actions suggests that such occurrences are relatively few in normal years, spiking in the previous two years, and that they increasingly deal with major corporations. Most of these manipulations are perpetrated by frontloading or outright fabrication of revenues. One example is Qwest Communications, which disclosed July 28, 2002, that it improperly counted as revenues more than $1.1 billion during the past three years. Among the improprieties was the booking of revenues on fiber optic sales before the products were delivered to customers. Recent examples of fictitious revenues are abundant. Many energy and telecommunications companies engaged in fabricated "swap" trades that both sides recorded as revenue: In spring 2002, such sham trades were disclosed by Dynegy Inc., Reliant Resources Inc. and CMS Energy Corp., as well as by telecommunications companies such as Global Crossing and Qwest Communications (Pulliam, 2002). Many manipulations are perpetrated by misestimating reserves and provisions—the "soft belly" of earnings measurement. A large number of manipulations occur in the volatile high-tech and science-based sectors and are often committed when a company falls on hard times or during periods of economic downturn. The record further shows that investors react sharply to the public disclosure of manipulations, indicating that the deception worked for a while.

Discontinuities in Earnings Distributions

The indirect, cross-sectional evidence on earnings manipulations begins by examining the distributions of earnings with reference to certain targets, such as past earnings or analysts' forecasts. Such distributions for a large number of firms should be fairly smooth, presumably with a hump in the center. Thus, earnings manipulations can be suggested by discontinuities at strategic points in the distribution (Burgstahler and Dichev, 1997).

For example, Degeorge, Patel and Zeckhauser (1999) hypothesized that managers aim to meet (or exceed) three earnings thresholds: avoid reporting losses, report stable or growing earnings and meet analyst's expectations. Using quarterly earnings reported by 5,387 U.S. companies over the 1974–1996 period, the authors reported distinct discontinuities in the distributions of earnings around these thresholds. In describing a histogram of quarterly changes in earnings per share, the authors wrote (p. 19): "In the region of small negative changes [decreases in earnings per share], the distribution appears to have been 'shaved' with some density mass transferred to zero or slightly above." Similar statistically significant discontinuities were observed by the authors for the other two thresholds. Brown and Higgins (2001) extended the threshold methodology to the international

arena and reported a higher frequency of U.S. managers appearing to beat analysts' forecasts than managers in twelve other countries.

The threshold evidence, while illuminating, raises several questions. For example, given multiple plausible thresholds, not all achievable with a single misstatement of earnings, which threshold will managers strive to meet? But the most fundamental challenge to the threshold research is embedded in Degeorge, Patel and Zeckhauser's (1999, p. 30, emphasis mine) conclusion "that executives manage earnings in *predictable ways* to exceed thresholds." If indeed earnings are managed in predictable ways to meet such obvious targets as analysts' forecasts, won't investors and other users of financial reports adjust—at least partially—for the manipulations? So what is gained by a manipulation that is at least semitransparent? One possibility is that sophisticated investors are aware of earnings manipulations, but due to constraints on short sales or other reasons they are unable to offset the reaction of unsophisticated investors to the manipulated numbers (Lev and Nissim, 2002b). Another, somewhat speculative explanation is that investors in fact reward some manipulations of earnings because they perceive a modest degree of earnings management as a sign of competent executives (Bartov, Givoly and Hayn, 2002). For example, General Electric's management was credited for years for, among other things, continually beating analysts' forecasts, despite widespread suspicion that this was partially achieved by managing earnings.

Deviation from Expected Accruals

Accounting accruals constitute the difference between earnings and cash flows. Examples of accruals are depreciation and amortization charges and the provisions for bad debts and future expenses on product warranties. Many accruals require estimates, which makes them candidates for manipulation by managers.

Evidence suggesting earnings manipulation through accruals can be found by first estimating expected accruals and then comparing these estimates with actual accruals reported by the firm. For example, Jones (1991) estimated a firm's expected accruals in a given year as a function of the change in sales and the level of fixed assets. The logic is that sales increases will generally lead to increases in several accruals, such as the bad debt and warranties provisions, and that larger assets increase other accruals, primarily depreciation charges. Jones reported that her sample firms tended to decrease actual accruals relative to those that were expected (and thereby report lower earnings) during years when they were investigated by the International Trade Commission for import relief, consistent with a desire to demonstrate a need for such a relief.

This approach, which treats the gap between expected and actual accruals as evidence of earnings manipulation, needs to be handled with care, particularly when the variable used to predict accruals (say, sales growth) is also correlated with the means of earnings manipulation (Dechow, Sloan and Sweeney, 1995). As noted above, a majority of documented earnings manipulations are perpetrated by inflating revenues (Panel on Audit Effectiveness, 2002). So when revenues are inflated by management, and then used by the researcher as a predictor in a model of

accruals expectations, this inflation will tend to boost expected accruals—and consequently lead to an underestimation of manipulated earnings.

Suspicious Circumstances

When a firm is involved in a proxy contest where managers' performance is challenged, or prior to a stock offering, managers may be especially tempted to inflate reported earnings. A researcher can use these or other suspicious circumstances to examine the pattern of reported earnings around the circumstances and search for evidence of manipulation. For example, Teoh, Welch and Wong (1998) investigated the patterns of earnings around the time of stock offerings and reported an abnormal frequency of manipulated earnings before the offering.[6]

On the whole, the indirect, large sample evidence from discontinuities in the earnings distributions, deviations from expected accruals and the patterns of earnings around suspicious circumstances suggests systematic irregularities consistent with earnings manipulations. Moreover, this evidence suggests that the frequency of manipulations is substantially higher than the roughly 100–150 litigated or SEC-enforced cases per year. For example, the number of companies that exactly meet or beat by a penny analysts' forecasts—an a priori suspicious behavior—was in the 1990s roughly 400–500 a year (of a sample of about 2,250 companies in Dechow, Richardson and Tuna, 2000). Even more intriguing, First Call data indicate that for the S&P 500 companies—supposedly stable and trustworthy enterprises—the phenomenon of exactly meeting analysts consensus forecasts is both prevalent and increasing: The percentage of firms "on target" with analysts' quarterly forecasts was 17–19 percent during 1995, 20–24 percent during 1999, increasing presently to 24–27 percent at the peak of public concern with accounting malfeasance. This evidence leads me to believe that earnings manipulation is widespread even now. Although egregious cases triggering SEC and legal actions are relatively scarce, a large number of managers regularly fine-tune their reported earnings to meet external targets. These subtle, hard to detect manipulations are quite prevalent.

The Social Costs of Earnings Manipulations

What social harm is caused by earnings manipulations? Since I am not familiar with anyone who seriously tackles this important issue, let me provide some preliminary thoughts about the social costs of financial reporting manipulations, and how to estimate them, with the hope of inducing researchers to pursue this issue.

[6] Sometimes earnings manipulation is inferred from the time series variability of earnings (Leuz, Nanda and Wysocki, 2002; Desai, 2002.) This approach relates to shifting earnings across periods to decrease their serial volatility, often termed earnings smoothing, since stable earnings are widely assumed to be preferred by investors.

In recent years, investors lost close to $7 trillion in the stock market, particularly in the technology sector meltdown since spring 2000 (Browning and Dugan, 2002). The tech market collapsed primarily because the profitability prospects of many new technologies like Internet and broadband turned out to be disappointing. However, earnings manipulations fueled investors' expectations and thereby contributed to subsequent investors' losses. Separating the effect of manipulation from the failure of the new technologies to live up to expectations is far from trivial. Moreover, a certain part of the market collapse was a wealth transfer from unsuspecting investors to corporate insiders and investment bankers—a sorry affair, but not a social cost. The bursting of the bubble, however, brought to the surface social costs that perhaps can be estimated.

First, the post-Enron heightened concerns of investors with the credibility of financial reports has probably led to increases in firms' cost of capital, related to higher uncertainty and cost of monitoring firms. The increased cost of capital and the generally adverse attitude of capital markets toward companies and their executives appear to play an important role in the timid growth of business investment and the consequent product loss during the last two to three years. These links between the recent spat of earnings manipulations and cost of capital increases, leading to stunted growth and national product loss, could be examined and estimated, similarly to Botosan (1997), who linked empirically quality of financial information to cost of capital.

Regarding the wealth transfer from unsuspecting investors to corporate insiders and financial intermediaries mentioned above, it is not a perfect washout. The losses caused to pension funds, university endowments and insurance companies certainly impose heavy costs on society. These costs, too, can be analyzed and estimated.

One might also focus on the social costs of unwise investments made by companies that manipulated their financial reports. For example, during the last three years of its existence, Enron spent close to $1 billion on information technology—primarily software for its trading activities. These investments by Enron and other energy traders are virtually worthless now. If the true losses from energy trading were reported on time to investors, these investments would not have been made. The case is similar with the considerable expenditures, now close to worthless, on R&D, customer acquisition costs, broadband and information technology made by other prominent manipulators, such as WorldCom, Tyco, Winstar and Global Crossing. Furthermore, there were many cases where manipulation-inflated stock was used to acquire other firms during the late 1990s wave of mergers and acquisitions, and many of these enterprises were then run into the ground due to the managerial incompetence of the acquirers (easy come, easy go). This waste, probably running into the hundreds of billions of dollars, is a direct consequence of accounting manipulations and could be estimated by a detailed study of the activities of firms that manipulated their financial reports.

Another dimension of social costs relates to society's safeguards against managerial improprieties, including the auditing of corporate reports and the activities of corporate boards. The direct cost of auditing is known. The revenues of the ten largest U.S. accounting firms from auditing services (not including consulting) were $10.2 billion in the year 2001/2002 (Public Accounting Report, 2002). The benefits of auditing are hard to estimate reliably, since the avoided manipulations due to auditors' vigilance are not known, although several attempts have been made to document the effectiveness of auditors (for example, Nelson, Elliott and Tarpley, 2002; Kinney and Martin, 1994). Regarding boards of directors, I am not familiar with a cost estimate of board activities that includes both compensation of board members, time spent by corporate executives in board meetings and other costs. As to benefits, it may be hard to believe in the current environment, but boards do seem to play a role in curbing manipulations. For example, Dechow, Sloan and Sweeney (1996) reported that firms that were sanctioned by the SEC for accounting improprieties had significantly fewer independent (nonexecutive) board members, were less likely to have an audit committee and were more likely to have a chief executive also serving as board chair when compared to a control group. Similarly, Klein (2002) reported a negative association between the number of independent board members (or independent board members on the audit committee) and the size of abnormal accounting accruals—a possible indication of earnings manipulation. Weaknesses in corporate governance are surely related to financial reporting manipulations.

A growing literature in finance and accounting investigates the broad relationship between institutional factors—like the nature of a nation's legal system or the effectiveness of rules and regulations protecting investors—and the performance of capital markets and accounting systems (for example, Shleifer and Vishny, 1997; La Porta, Lopez-de-Silanes, Shleifer and Vishny, 2000). In this context, Leuz, Nanda and Wysocki (2002, p. 1) advanced the proposition, based on evidence from a sample of 31 countries, that "strong and well-enforced outsider [investors'] rights" mitigate earnings manipulations because insiders have a lower ability and fewer incentives to conceal and manipulate information. Similarly, Guenther and Young (2000) and Ball, Kothari and Robin (2000) reported that in countries where the legal system effectively protects investors, reported earnings reflect underlying economic events better and in a more timely manner, relative to countries where investors are less protected by the legal system against exploitation by corporate insiders. The cost of legal systems and public institutions—currently highlighted by the significant increase, apparently permanent, of the SEC's budget and the costs imposed by the Sarbanes-Oxley Act of 2002—should be considered as part of the social costs, too.

We have scant hard information about the social costs of earnings manipulations. But this discussion of the different categories of social costs suggests that earnings manipulations are undoubtedly very consequential.

A Proposed Procedure to Curb Earnings Manipulations

A common reaction to earnings manipulation is to blame them on the flexibility of generally accepted accounting principles: "Much of the collapse of investor confidence has to do with a lack of confidence in prevailing accounting principles themselves, given the extreme flexibility they give corporate executives to create rosy pictures where none are warranted. Many critics have noted, for instance, that the real scandal at Enron Corp. was how much of the now-collapsed energy company's accounting shenanigans were legal" (*Wall Street Journal*, August 13, 2002, p. C3). The prescription presumably is to tighten accounting rules; perhaps making them more specific and uniform.

I have doubts about this remedy. For example, the major problems with Enron's financial reports did not result from imprecise accounting rules, rather, they were caused by the poor quality of these rules. In accounting for the infamous "special purpose entities," used by Enron to hide losses and fabricate earnings, Enron followed a very precise and uniform rule: When the outside (non-Enron) investment in the special purpose entity is at least 3 percent, then the entity need not be consolidated into the reports of the parent corporation. Enron generally abided by the 3 percent rule across its special purpose entities (albeit sometimes in a questionable manner), hiding massive losses from investors. But what is the logic of an accounting rule that considers entities in which the parent company invests 97 percent of the capital as economically distinct and exempt from consolidation? In many manipulation and misreporting cases, the main problem is not that existing accounting rules are too flexible, or not uniform, but that too many of the rules fail to reflect economic reality.

Recently, the debate about accounting principles focuses on the detailed nature of the rules, intended to fit every specific transaction and economic circumstance. Here the prescription is to shift from a "rules-based" set of accounting standards to a "principles-based" system founded on a few broad concepts, leaving the specific application of the principles to the judgment of managers and auditors. The major argument in favor of a principles-based approach is that the exceedingly detailed U.S. accounting rules, subject to a multitude of exceptions and interpretations, make it easier for companies to portray a distorted picture of their economic situation, just as in Enron's application of the 3 percent rule.[7]

While current U.S. accounting rules are undoubtedly excessively detailed, I admit to misgivings about the usefulness of the principles versus rules debate. Where do principles end and rules begin? I also believe that a case can be made against giving managers too wide an accounting latitude, since this will increase investors' uncertainty about future reported earnings. Empirical evidence, though

[7] See Financial Accounting Standards Board (2002) for elaboration on principles- versus rules-based approaches. The Sarbanes-Oxley Act of 2002 requires the Securities and Exchange Commission to conduct a study on the adoption of a principles-based accounting system in the United States and to report to Congress on the results of the study within a year of enactment.

limited, is not fully supportive of wide discretion. Nelson, Elliott and Tarpley (2002), analyzing a large survey sample of earnings manipulations along with auditors' reaction to the manipulations, concluded that imprecise accounting rules (leaving room for discretion) motivate managers to manipulate earnings and stimulate auditors not to challenge the manipulations. On the other hand, the authors also concluded that precise accounting rules can lead manipulating managers to restructure the nature of transactions—for example, changing the economic terms of leases to manipulate earnings.

However, neither increased specificity of accounting rules nor a move toward a principles-based approach address the major weakness in the computation of earnings—the heavy reliance on subjective estimates. Unbiased, reliable managerial estimates cannot be legislated or regulated. The following proposal to mitigate manipulation of earnings tackles this problem head on.

I propose a mandatory revision of companies' annual earnings at two points in time: once at the end of the following year, and again after three years.[8] Thus, for example, a firm's 2001 earnings, published in early 2002, will be revised after the end of 2002 and again in 2004. In steady state, say from 2005 on, investors will have a record of at least four years of revised earnings: 2001 earnings (revised in 2004, based on three years' information); 2002 earnings (revised in 2005, based on three years' information); 2003 earnings (revised in 2004, based on one year information); and 2004 earnings (revised in 2005, based on one year information).

These earnings revisions will be based on the *realizations* of estimates underlying the originally reported earnings. Thus, for example, the 2002 revision of the earnings originally reported for 2001 will substitute the actual default record during 2002 of accounts receivable outstanding at the end of 2001, for the earnings-embedded estimate of bad-debt expense made at the end of 2001. The second revision, made three years after earnings publication, is aimed to capture realizations of longer-term estimates, such as for product warranties, expected return on pension assets, or expenses related to the restructuring of operations. Note the fundamental difference between the proposed revisions and the earnings restatements currently mandated by generally accepted accounting principles: The proposed revisions reflect new information revealed between the original disclosure of earnings and their revision, whereas the existing restatements are aimed at correcting inappropriate information that was available at the time earnings were originally reported. Under current accounting rules, realizations of estimates—for example, the actual records of customer default or warranty payments—are not

[8] An early version of this proposal was advanced in Lev and Zarowin (1999). This proposal shares common elements with Lundholm's (1999) suggestion to require disclosure of the accuracy of the firm's estimates after earnings publication. It is also similar in spirit to Ijiri's (2002) proposal to separate in the income statement facts from estimates, to alert the reader to the vulnerability of earnings. This suggestion is worthwhile, but my proposal goes a step further, calling for earnings revision based on the realization of estimates.

required to be publicly disclosed, preventing investors from performing the earnings revisions proposed here.

To prevent the reader from envisioning a nightmare of endless revisions and excessive costs, let me hasten to add some procedural details. The proposed revisions will not entail a complete recomputation of earnings, rather, they would be restricted to perhaps six to eight key estimates and assumptions that underlied the original earnings. The earnings revision would be subject to a straightforward independent audit: a comparison of original estimates with observed realizations (or improved and updated estimates, such as for depreciation). To mitigate further the costs involved, the annual revision may be subject to a materiality rule: If the aggregate discrepancy between original estimates and subsequent realizations is less than a certain threshold, perhaps 10 percent, no revision would be required. With such a focus on key estimates and a threshold for earnings revision, this proposal would increase reporting and auditing costs only modestly.

The requirement to revise earnings routinely would bring several benefits. It will provide strong disincentives to manipulate earnings in the first place. Knowledge that reported earnings will be subsequently revised to reflect significant discrepancies between original estimates and their realizations will do wonders for the incentives of managers and auditors. True, it is difficult to distinguish after the fact between honest and intentional misestimates, but the need to explain to board members and investors significant discrepancies between, say, expected return on pension assets or estimated progress on long-term projects and the subsequent realizations of these estimates will give considerable pause to anyone contemplating their manipulation. Auditors reviewing managerial estimates will face similar incentives. Even if a clear distinction between intentional and innocent misestimates is difficult to draw, systematic patterns of revisions—such as when actual customer defaults were higher than provided for in earnings in each of the previous three years—will look particularly bad.

Equally important, the systematic revision of earnings will enhance the contextual role of financial information. Financial reports not only convey new information to investors; they also provide a rich context for interpreting information items and events. Consider, for example, the finding of Barth, Elliott and Finn (1999) that investors' reaction to an earnings surprise is conditioned on the sequence of past surprises, namely the earnings context. An earnings increase following past increases is associated with a stronger stock price boost than an earnings increase following a series of decreases. The reason is clear: A series of past earnings growth suggests a continuous, sustainable improvement in the firm's operations, whereas a spotty growth record, even if the most recent number is positive, raises doubt about the sustainability of the current good news on earnings. Petroni, Ryan and Wahlen (2000) and Beaver and McNichols (1998) reported that revisions of reserve estimates of insurance companies—a major expense item in this sector, reflecting expected future payments to policyholders—extending as far back as 10 years are significantly associated with investors' reaction to current earnings information. History counts.

Similarly, the routine revisions of earnings proposed here will considerably improve the earnings context by bringing new information to bear. For example, if an originally reported three-year earnings growth turns out, upon revision, to be a one-year growth followed by two declines, the interpretation of a newly observed earnings increase will be considerably more tentative than if the originally reported earnings had not been changed.

Certain elements of the rolling revisions proposed here are already required. For example, firms reporting restructuring charges and asset write-offs are required to report in subsequent periods reversals of the charges that enhance earnings, thereby indicating whether the original restructuring costs were exaggerated. This paper is not the place for a comprehensive and operational workout of the proposal for mandated revisions of earnings. I hope, however, that the outline provided above will trigger a debate on the merits of such a proposal.

Conclusion

Earnings manipulation is prevalent; but, except for egregious cases, it is hard to detect and prosecute. Most of these manipulations are perpetrated by misestimating the multitude of provisions and reserves underlying earnings computations and by exploiting the vulnerabilities inherent in the accepted accounting framework. While the adverse social consequences of manipulations are difficult to measure, they may well be substantial. Trying to regulate earnings manipulation out of existence with ever-more-detailed rules seems unlikely either to produce more informative financial reporting or, ultimately, to reduce the extent of earnings manipulation, which actually thrives in a thicket of rules. Thus, we must think seriously about reforms that will change the incentives for earnings manipulations and will make corporate financial reports more truthful and revealing.

■ *I am grateful to Eli Bartov, Jason Cummins, Joel Demski, John Hand, Chuck Hill, Robert Kaplan, Shai Levi, Joshua Livnat, Leonard Nakamura, James Ohlson, Stephen Ryan, Dan Sichel, Theodore Sougiannis, Leon Taub, Shyam Vallabhajoshyula, Hal Varian and Lawrence White for valuable comments and guidance.*

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