



FINANCE & ACCOUNTING

Where Financial Reporting Still Falls Short

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In a perfect world, investors, board members, and executives would have full confidence in companies' financial statements. They could rely on the numbers to make intelligent estimates of the magnitude, timing, and uncertainty of future cash flows and to judge whether the resulting estimate of value was fairly represented in the current stock price. And they could make wise decisions about whether to invest in or acquire a company, thus promoting the efficient allocation of capital.

Unfortunately, that's not what happens in the real world, for several reasons. First, corporate financial statements necessarily depend on estimates and judgment calls that can be widely off the mark, even when made in good faith. Second, standard financial metrics intended to enable comparisons between companies may not be the most accurate way to judge the value of any particular company—this is especially the case for innovative firms in fast-moving economies—

giving rise to unofficial measures that come with their own problems. Finally, managers and executives routinely encounter strong incentives to deliberately inject error into financial statements.

In the summer of 2001, we published an article in these pages (“Tread Lightly Through These Accounting Minefields”) designed to help shareholders recognize the ways in which executives use corporate financial reporting to manipulate results and misrepresent the true value of their companies. Enron imploded the following month, prompting the passage of the Sarbanes-Oxley regulations in the United States. Six years later, the financial world collapsed, leading to the adoption of the Dodd-Frank regulations and a global initiative to reconcile differences between U.S. and international accounting regimes.

Despite the raft of reforms, corporate accounting remains murky. Companies continue to find ways to game the system, while the emergence of online platforms, which has dramatically changed the competitive environment for all businesses, has cast into stark relief the shortcomings of traditional performance indicators. This status report looks at the most important developments of financial reporting in recent years, particularly the impact of the new rules governing revenue recognition, the persistent proliferation of unofficial performance measures, and the challenges of fairly assessing asset values.

We also look at the more insidious—and perhaps more destructive—practice of manipulating not the numbers in financial reports but the operating decisions that affect those numbers in an effort to achieve short-term results. Finding ways to reduce such behavior is a challenge for the accounting profession—but one that new analytic techniques can address. Let’s examine each of these problems in turn.

Problem 1: Universal Standards

Back in 2002, the world seemed to be on the verge of an accounting revolution. An initiative was under way to create a single set of international accounting standards, with the ultimate aim of uniting the U.S. Generally Accepted Accounting Principles (GAAP) and the International Financial Reporting Standards (IFRS) that European countries were in the process of adopting. By 2005, all public companies in the European Union had, in theory, abandoned their local accounting standards in favor of IFRS. Today, at least 110 countries around the world use the system in one form or another.

But in a broad sense, convergence has stalled, and further substantive changes seem unlikely in the near future. To be sure, progress has been made, but understanding the true value of a firm and comparing company accounts across countries continue to be major challenges.

Consider the implications of failing to reconcile GAAP and IFRS. The analysis of investment targets, acquisitions, or competitors will in many cases continue to require comparison of financial statements under two distinct accounting regimes: Pfizer versus GlaxoSmithKline, Exxon versus BP, Walmart versus Carrefour—in each case, one company uses GAAP and the other uses IFRS. The impact on results is hardly trivial. Take the British confectionary company Cadbury. Just before it was acquired by the U.S. firm Kraft, in 2009, it reported IFRS-based profits of \$690 million. Under GAAP those profits totaled only \$594 million—almost 14% lower. Similarly, Cadbury's GAAP-based return on equity was 9%—a full five percentage points lower than it was under IFRS (14%). Such differences are large enough to change an acquisition decision.

To further complicate matters, the way that IFRS regulations are applied varies widely from one country to the next. Each has its own system of regulation and compliance, and in many countries (especially in the fastest-growing emerging regions) compliance and enforcement are weak. The quality and independence of the accounting profession are also often patchy.

Results under GAAP versus IFRS can be different enough to change an acquisition decision.

Just as troubling is the fact that many countries have created their own versions of the IFRS system by imposing “carve outs” (removal of offending passages) and “carve ins” (additions) to the official standard promulgated by the International Accounting Standards Board (IASB). India and China are notable examples. So while several countries, among them Australia and Canada, have adopted the complete, unadulterated version of IFRS, it's always worth checking to see if a company of interest has adopted a truncated or bastardized version.

Problem 2: Revenue Recognition

Revenue recognition is a tricky piece of the regulatory puzzle. Suppose you sell a smartphone or an internet service or a \$30 million software package to an individual or a company. The contract for that product or service often includes future upgrades whose costs cannot be predicted at the

time of the sale. Therefore, it is impossible to determine how much profit the sale will generate.

Under current GAAP rules, if there is no objective way to measure such costs beforehand, a business is not allowed to record any revenue from that sale until all upgrade requirements have been delivered and their costs are known—which could take a few years. This regulation has prompted some software companies to write contracts that carve out and separately price upgrades and other hard-to-value services. In doing so, the companies solve an accounting problem—but compromise their ability to adopt a conceivably more attractive bundling strategy. The result is a perverse system in which accounting rules influence the way business is done, rather than report on companies' performance.

The shortcomings of revenue-recognition practices have also caused companies to increasingly use unofficial measures to report financial performance, especially for businesses operating in the virtual space. The colossal success of social networks such as Facebook, Twitter, and Ren Ren; fantasy sports and game sites such as Changyou and Zynga; and online marketplaces such as Amazon, eBay, and Alibaba quickly demonstrated that traditional guidelines for the recognition and measurement of revenue and expenses were preventing them from truly reflecting their businesses' value in reported accounts. Unsurprisingly, these companies soon began to adopt alternative ways to report on earnings. For example, in 2015 Twitter reported a GAAP net loss of \$521 million; it also offered not one, but two non-GAAP earnings measures that showed positive income: adjusted EBITDA of \$557 million and non-GAAP net income of \$276 million.

A change next year in the rules under both IFRS and GAAP should alleviate the perversities of current revenue recognition practices. The new rules will allow companies that bundle future goods and services into contracts to recognize revenue in the year it is earned by using estimates of future costs and revenues.

How will this work? Consider a company that offers a \$30 million software contract composed of two parts: software and upgrades for five years. The software component, which cost \$4 million to develop, sells for \$20 million. The upgrades, whose costs are unknown, are bundled into the price for an additional \$10 million. Current GAAP rules would have the business recognize no revenue for the upgrades until the end of year five, when full cost information is available. But under the new rules (and under current IFRS rules), the company may estimate the cost of

delivering those upgrades to allow it to recognize revenue. If, say, it estimates the costs at \$5 million, IFRS will allow the company to recognize a profit \$5 million spread out evenly over the five years.

But the change will not completely eliminate problems. After all, estimating costs requires managers to exercise judgment, introducing yet another opportunity to make good-faith errors or to deliberately tilt estimates in such a way that the resulting revenues are closer to meeting financial targets. Therefore, as these new revenue-recognition standards are adopted and implemented under GAAP and IFRS, investors will need to examine closely the assumptions and methods used to estimate costs and report revenues.

Problem 3: Unofficial Earnings Measures

Although unofficial measures of revenue are relatively new for many companies, all types of businesses have been employing non-GAAP and non-IFRS measures of earnings for a long time. Perhaps the most popular is EBITDA (or earnings before interest, taxes, depreciation, and amortization), a particular favorite among private equity investors because it's thought to provide a quick proxy for the amount of cash flow available to service debt. In the tech sector, non-GAAP measures are rife; during the first dot-com wave, companies began using "eyeballs," "page views," and so on to convince analysts and investors that their businesses had value despite the absence of profits (and sometimes even of revenue).

Today, Sarbanes-Oxley requires companies on U.S. exchanges to reconcile GAAP measures of earnings to non-GAAP measures, and IFRS has a similar requirement. In addition, the SEC requires that management be able to support the reasoning behind including an alternative measure in its financial disclosures. For example, a company might justify the use of a non-GAAP measure by noting that it is required by one of its bond covenants.

Although these changes are steps in the right direction, they haven't solved the problem, and huge discrepancies in reporting remain. For example, in 2014, Twitter reported a GAAP loss per share of \$0.96—but a non-GAAP profit of \$0.34 per share. In 2015, Amazon reported GAAP earnings per share of \$0.37 and non-GAAP EPS of \$4.14. The alternative measure yielded a relatively modest price-to-earnings ratio of 106, rather than the mind-boggling 1,192. This suggests that unofficial measures may be a better representation of earnings.

The danger, however, is that alternative measures are usually idiosyncratic. Even commonly used measures such as EBITDA can be noncomparable from business to business—or in the same company from one year to the next—because of differences in what’s included or excluded in the calculation. Investors and analysts should continue to exercise great caution in interpreting unofficial earnings measures and should look closely at corporate explanations that might depend on the use (or abuse) of managerial judgment.

Problem 4: Fair Value Accounting

Executives and investors have two measures at their disposal for determining the value of a firm’s assets: the price originally paid (that is, the acquisition cost or historical cost) and the amount those assets would bring in if sold today (fair value).

Some 25 years ago, before the rise of the internet, corporate financial statements relied on the former, which has the important virtue of being easily verifiable. Today, however, companies use fair value for a growing number of asset classes in the hope that an examination of balance sheets will yield a truer picture of current economic reality. But since not everyone agrees on what “fair value” means, the measure has injected enormous subjectivity into the financial reporting process, creating new challenges for both preparers and users of financial statements.

In 2014 Twitter reported a loss of \$0.96 per share using one measure, but a profit of \$0.34 using another.

As the financial crisis took hold in 2008, a myriad of adjustments to the methods of applying fair value were adopted by the U.S. Financial Accounting Standards Board, the SEC, the IASB, and the Public Company Accounting Oversight Board—a nonprofit corporation created by Sarbanes-Oxley to oversee the audits of public companies. The goal was to guide auditors on how to verify fair value, but the result has been more confusion, not less. The measurement process has proved difficult, often highly subjective, and controversial.

Consider the accounting treatment of Greek bonds by European banks in 2011, during one of a seemingly endless stream of crises involving government debt in Greece. Write-downs of the bonds varied from 21% to 51%—a striking discrepancy when one considers that all large European financial institutions have access to the same market data and are audited by the same four accounting firms. The Royal Bank of Scotland, for instance, recognized a charge to earnings

in the second quarter of 2011 of £733 million, after a 51% write-down from the balance sheet value of £1.45 billion for its Greek government bond portfolio. In doing this, RBS followed the IFRS (and GAAP) fair value hierarchy, which states that if observable market prices are available, they must be used. On that basis, RBS noted that market prices had dipped by just over half the price paid for those bonds when they were issued.

Meanwhile, two French financial institutions, BNP Paribas and CNP Assurances, looked at the very same data and chose to write the bonds down by only 21%. They rejected the market prices on the questionable grounds that the market was too illiquid to provide a “fair” valuation. Instead, they resorted to so-called “level 3” fair value estimates in a process known as mark-to-model (in contrast to the mark-to-market valuations used by RBS).

If such difficulties arise with tradable securities, imagine how difficult it is to apply fair value principles consistently to intangibles such as goodwill, patents, earn-out agreements, and research and development projects. Making matters worse, disclosures about how intangible assets are valued must offer only basic information about the assumptions that generated the estimates. It’s hard to see how the situation could improve: One can rarely find an SEC annual report (10K) under 150 pages as it is. If these reports included full disclosure of the assumptions behind fair value estimates—were such a thing even possible—the length of reports would be overwhelming.

Problem 5: Cooking the Decisions, Not the Books

When accountants, analysts, investors, and directors talk about accounting games, they usually focus on how costs are accrued in a company’s reports. Managers may, for instance, choose to overprovision—that is, deliberately overstate expenses or losses, such as bad debts or restructuring costs—to create a hidden cookie-jar reserve that can be released in future periods to artificially inflate profits. Or a company might underprovision, deliberately delaying the recognition of an expense or a loss in the current year. In that case, profit is borrowed from future periods to boost profit in the present.

Recent changes in GAAP and IFRS rules have made such activities less egregious than they once were, although overprovisioning will most likely always be with us. Managers want the accounting flexibility that comes from having hidden reserves, and external auditors will let

them get away with it (within limits) because companies are unlikely to be sued for understating profits. Auditors are much more fearful of their clients' underestimating costs (and thus overstating profits).

In general, regulations have weakened companies' ability to manipulate financial reports—and in response, the gaming of results has moved to a place that accounting rules will struggle to reach: corporate decision making that serves the interest of short-term reporting but undermines long-term performance.

Managers goose the numbers by manipulating operations, not reports.

A study published in the *Journal of Accounting and Economics* surveyed more than 400 senior executives on how their companies managed reported earnings. The researchers asked the executives to imagine a scenario in which their company was on track to miss its earnings target for the quarter. Within the constraints of GAAP, what choices might they make to reach the target?

The study revealed that managers tend to manipulate results not by how they report performance but by how they time their operating decisions. For example, nearly 80% of the respondents said that if they were falling short of earnings targets, they would cut discretionary spending (such as R&D, advertising, maintenance, hiring, and employee training). More than 55% said they would delay the start of a new project even if it entailed a small sacrifice in value. Nearly 40% said that if they were in danger of missing targets, they would provide incentives for customers to buy more in that quarter.

Managers also goose the numbers by manipulating production. If a company has substantial excess capacity, for instance, managers can choose to ramp up output, allowing fixed manufacturing costs to be spread over more units of output. The result is a reduction in unit cost and, therefore, lower costs of sales and higher profits. But this practice also leads to high finished-goods inventories, imposing a heavy burden on a company in return for that short-term improvement in margins, as one study of the automobile industry shows. When huge numbers of unsold cars sit on lots for extended periods, bad (and costly) things can happen to them: Windshields and tires may crack, wipers break, batteries wear down, and so on. The company has

to ramp up marketing spend, slash prices, and offer expensive extras such as 0% financing just to get customers to buy. And the very act of cutting prices can sacrifice an automaker's hard-won brand equity.

What makes these findings so disturbing is not just that gaming practices are widespread but that such actions are not violations of GAAP or IFRS. Corporate executives can do as they please in the comforting knowledge that auditors can't challenge them. What's more, such destructive behavior is exceedingly difficult to detect under current disclosure rules.

New Analytical Tools Can Help

Investors and board members understand that manipulating operating decisions in order to report higher earnings in the short term introduces the very real risk of compromising a company's long-term competitiveness. It's also clear that as accounting regulations continue to improve and prevent more accounting fraud—but executives' incentives to hit short-term targets stay strong—companies will be increasingly likely to cook decisions rather than books. So investors and directors will have to demand more disclosure on those operating decisions that are most susceptible to manipulation in order to determine whether they are being made for sound business reasons or to artificially boost financial results.

Of course, that will create practical problems in terms of the sheer volume of information being reported and will still involve hard-to-verify assumptions. In fact, regulatory requirements that produce ever more lengthy reports may be an exercise in diminishing returns. What we need, perhaps, are smarter approaches to analyzing the data available. The good news is that new techniques are increasingly being applied by analysts and investors.

Benford's Law.

One approach to the analysis of company reports that has recently gained favor in financial markets is based on Benford's Law, about the frequency distribution of leading digits in numerical data sets. The law has been around for a long time, but only recently has it been applied in accounting and in the financial sector: Insurance companies have started using it to detect false claims, the IRS to detect tax fraud, and the Big 4 accounting firms to detect accounting irregularities.

Named for an early-20th-century British scientist, the law states that in lists of numbers from any naturally occurring data source—credit card charges, procurement entries, cash receipts—the first digit for each number will be 1 (for example, 1, 157, 1,820) about 30% of the time. The first digit will be 2 about 18% of the time, and each successive number will represent a progressively smaller proportion, to the point where 9 will occur as the first digit less than 5% of the time. This distribution has been found to hold for a practically limitless array of data sets: The length of rivers (in feet *and* in meters), the population of cities and countries, trading volume on stock exchanges, the number of ranking points for tennis pros, the molecular weights of chemicals, the height of the world's tallest buildings, and so on.

Accounting variables should also be distributed in accordance with Benford's Law—and they are, as long as there has been no conscious gaming of the data. In fact, the distribution holds even if the figures are converted from one currency to another. If a set of accounting data deviates from Benford's Law, that can be taken as evidence of manipulation.

Suppose that an accounting firm is reviewing a company's financial statements. If an unusually high number of first digits in the accounting data are 7s, 8s, or 9s, it may indicate a conscious effort by managers to finesse the numbers to achieve desired financial results.

Verbal cues.

Another tool for detecting unscrupulous practices has emerged from the research of two accounting academics who analyzed the transcripts of nearly 30,000 conference calls by U.S. CEOs and CFOs from 2003 to 2007. The researchers drew on psychological studies that show how people's speech patterns change when they lie. They discovered several verbal cues that could have tipped off a listener that something was not quite right with the company's accounts. For example, in companies that were later forced by the SEC to make major restatements of key financials, deceptive bosses displayed the following patterns:

- They referred to shareholder value relatively seldom (perhaps to minimize the risk of a lawsuit).
- They used extremely positive words (for example, instead of describing something as "good," they'd call it "fantastic").
- They avoided use of the word "I" in favor of the third person.
- They used fewer hesitation words, such as "um" and "er" (which might suggest that they were coached in their deceptions).
- They used obscenities more frequently.

Of course, the problem is that managers who intend to deceive can be taught to avoid those markers. But in the meantime, verbal cues can be a useful tool for board members and other interested parties to ferret out dishonest practices.

The first years.

Manipulation of financial results is most prevalent in the early years of a CEO's tenure and decreases over time, a recent study shows. A possible explanation is that the early years are the period of greatest uncertainty about a CEO's ability, so CEOs may distort earnings in an effort to keep their jobs. The lesson for board members and investors is that they should be especially vigilant regarding a company's accounting practices when a new chief executive takes over.

In order for financial statements to fulfill their important social and economic function, they must reveal the underlying economic truth of a business. To the extent that they deviate from that truth, scarce capital will continue to be misallocated and wealth—and jobs—will be destroyed.

Of course, we will never reach a world in which all reports are perfectly and reliably true, but an understanding of their shortcomings and the availability of new tools to detect manipulation can help us continue to strive for that ideal. As companies increasingly use the timing of operating decisions to artificially boost performance numbers—a practice that is harder to detect and regulate—vigilance becomes vital.

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