Ethics, Earnings, and Equity Valuation

A crisis of confidence.

Robert D. Arnott

A healthy capital markets system hinges on trust. Trust hinges on ethical dealing. The recent scandals in business ethics have broad-reaching implications that go far beyond the companies that are directly involved. They decay the very roots of a capitalist system.

Several issues merit some exploration in this regard:

- How profitable is the corporate sector? What are the true earnings of U.S. publicly traded companies?
- What adjustments to earnings have merit, and in what context?
- How pervasive is the corruption we have come to see?
- What does this imply with regard to equity valuation and asset allocation?

The scant good news in all of this is that the impact of a decline in business ethics is easy to spot, and can be profitably incorporated into investment decisions. The bad news is that, if investors cannot trust the numbers, the investment world may well price equities to offer not merely a risk premium but also a credibility premium. Such a credibility premium, not yet reflected in market pricing, could affect equity values for many, many years to come.

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HOW PROFITABLE IS THE CORPORATE SECTOR?

Corporations are less profitable than is popularly believed. There are four principal forms of earnings overstatement in the equity markets today: overt fraud and corruption; underaccrual of pension expense; underaccrual of executive stock options; and a smoke and mirrors focus on operating earnings or EBITDA. Each of these merits exploration.

Overt Corruption and Fraud

Despite the extent of the recent scandals, fraud is the smallest element of the problem. While few of us in the business world have not at some time observed behavior that we would consider unethical or even illegal, on the whole, business is still carried out in a largely ethical fashion.

Restatements of fiscal year 2000 earnings from Enron, Xerox, WorldCom and others amounts to only about $3 of the $52 of peak reported earnings for the S&P 500 index for the year. So, first off, we're down to earnings for the S&P 500 of $49.

Underaccrual of Pension Expense

We have referred to the pension funding problem as the trillion dollar time bomb. In 1981–1982, the average company actuarial return assumption was 6.5%. At that time, U.S. government bonds were yielding 11%-14%, and the earnings yield of U.S. stocks (the reciprocal of the price-earnings ratio) was similarly 10%-13%. In 2000–2001, the average company actuarial return assumption was 9.5%, while bonds were yielding less than 6.0% and stock earnings yields were under 4.0%. This disconnect led to substantial overaccrual of pension expense (with the effect of understating corporate earnings) in 1981–1982, and *underaccrual* of pension expense (overstating corporate earnings) in 2000–2001.

For many companies, this transformed pension expense into pension "earnings." That is, the pension ostensibly earned enough to cover all the increase in the net present value of all the liabilities, including additional years of employee service, with room to spare. If we instead substitute long government bond yields for the actuarial return assumption, the earnings of the S&P 500 fall by approximately $8 per share.

Now we are down to earnings for the S&P 500 of $41.

Underaccrual of Option Expense

Stock options have become *the* crucial component of management compensation, far outstripping salaries and bonuses. The catalysts for this, ironically, were efforts in the early 1990s to rein in management compensation (e.g., federal imposition of a $1 million cap on the tax-deductible portion of management compensation, unless tied to objective success), as well as efforts to draw attention to the disconnect between business success and management rewards. These prompted decisions to issue stock options, as a way to link management rewards to shareholder rewards.

But, stock options *are* compensation, and compensation *is* an expense. By issuing stock options but taking them off the balance sheet and out of the P&L statements, companies are diluting public shareholders' *future* earnings, without reflecting that cost in current earnings. Yet, it is a current cost. Options are awarded today. And Fischer Black and Myron Scholes have demonstrated that options have rigorously quantifiable current value.

Some Wall Street reports several years ago showed that the annual impact of stock options amounts to a value of at least 10% of corporate earnings. If we call that another $5 of S&P 500 earnings, now we're down to $36 of earnings.

And, By the Way . . .

The year 2000 was an economic peak and an earnings peak. What we might call normal earnings for the S&P 500 were probably around $5 lower than this peak. Now we're down to $31 of normalized earnings for the S&P 500 for FY 2000, rising to perhaps $33 for FY 2002.

RELIANCE ON OPERATING EARNINGS

Operating earnings are of some limited help in evaluating a company with recent extraordinary gains or losses. Operating earnings measures have absolutely no meaning when we are looking at marketwide aggregates. Think about looking at the earnings for a broad market index, after taking out whatever write-offs some companies in that index may have taken due to disappointing operations. On a broad market index, there are always some companies that have written off some disappointing operations. What is extraordinary for a company is entirely ordinary for the market at large.

The problem is that operating earnings adjust-

ments are almost always upward revisions from reported earnings. Operating earnings are typically a company's earnings on whatever parts of the business have gone well, excluding any discontinued parts of the business that have been disastrous disappointments. The measure thus has some merit if one is evaluating a company that has restructured, paring unsuccessful operations, while concentrating on its successful lines of business. Even in this context, though, operating earnings will overstate results; some of today's successful lines may become tomorrow's disastrous disappointments, headed for the chopping block.

For the market as a whole, the concept of operating earnings is virtually meaningless. An extraordinary item for one individual company is entirely ordinary in the context of the market as a whole; some flow of write-offs, somewhere in the market, is completely normal.

Some Wall Street firms have reported that the operating earnings for the S&P 500 for FY 2000 may have been as high as $68 per share. This is sufficient to bring the peak levels of the S&P down to 23 times earnings. But what does the $68 mean? It means that the S&P 500 companies earned $68 per share on the parts of the business that have been successful, after excluding the parts of the business that were disastrous enough to have been shut down in 2000, 2001, or early 2002.

The absurdity of this metric of S&P earnings is evident when one considers 1) that this measure will *always* exceed reported earnings, and 2) that shareholders owned the disasters as well as the successful parts of the companies.

EBITDA: THE GOOD, THE BAD, AND THE UGLY

Some observers have advanced earnings before interest, taxes, depreciation, and amortization as an even more aggressive way to value stocks. EBITDA provides a very modest multiple of around 14 times today for the S&P 500.

Where did this idea come from? And in what context does it have relevance? Is it useful for evaluating the market at large?

Most of the merger and acquisition industry of the 1980s and 1990s was under the thrall of EBITDA accounting. The M&A revolution was in fact largely fueled by the concept. Why does EBITDA accounting matter?

Earnings before interest expenses, taxes, depreciation, and amortization is a very simple measure of how much money would be available for debt service if all noncore expenses were diverted to service debt. It measures the profits that a company can generate 1) if it doesn't have to pay interest expenses or taxes, and 2) if it chooses to *spend* its depreciation and amortization rather than reinvest for the future. Sometimes the use is expanded to include incentive compensation in industries like investment management, where incentive compensation can be a substantial expense.

EBITDA matters because a company *can* spend its depreciation and amortization. A company saddled with debt doesn't *have* to pay taxes. If management is part of the selling group, a company doesn't *have* to pay future incentives; managers can be prepaid future incentive compensation with stock or options in the newly capitalized company, or management can share in the proceeds from a sale.

EBITDA does some good things, some bad things, and some genuinely ugly things.

First, there's a *valuation gain*. Suppose an out-of-favor company's business is worth 10 times earnings on the stock market. Suppose the amortized cost of junk bond or bank debt for a buyout is 10%. A company with earnings of $100 million and EBITDA of $200 million can see its valuation double. If the amortized cost of bank or junk bond debt is 10%, then a switch from earnings accounting to EBITDA accounting boosts the value of the acquisition by a billion dollars. This is a good thing. M&A fees double, and the transaction goes off without a hitch. For a time, anyway.

Then there's a *tax arbitrage*, transferring payments that were previously going to the government to the bondholders who funded the M&A activities. Lower taxes and more profits to the investors. That's a very good thing, unless you work for the government. To the libertarians of the world, this is one of the really good things that come out of EBITDA-fueled transactions.

There's a *spending arbitrage*, transferring payments that were funding poor internal investments to the bondholders. Anyone skeptical about the wisdom of management spending decisions would certainly applaud this. When Gulf Oil was bought in the 1980s, it had spent years poking holes in the ground in a generally fruitless quest to improve its oil reserves. After an EBITDA-based acquisition at nearly twice the market value of the stock, the new owners stopped poking holes in the ground (part of the basis of the higher valuation), and EBITDA earnings doubled. This increase in profits paid down the debt in remarkably short order. A good thing.

There's an *accounting arbitrage*, transferring depreciation and amortization, which don't really cost any cash

flow, to the bondholders. A good thing. There's a *compensation arbitrage*, transferring future incentive compensation to the bondholder. If managers understand this, they presumably get prepaid for what they're giving up; if they don't, too bad for them. A good thing or a bad thing? Depends on where you sit.

So far, so good. Or is it? Depreciation and amortization is the accounting treatment of past investments. If we use the depreciation and amortization of past investments to meet current debt service, we can't make new investments—a good thing if those investments were going to be a waste of money. But, we live in a fast-changing world. No organization can long survive without reinvestment in its own future.

When an organization stops reinvesting in the future, because it needs the depreciation and amortization of past investments to pay down debt, it is consuming its own seed corn. This is a bad thing, unless management was going to plant that seed corn in a swamp.

Here's an interesting question: How many companies in the big EBITDA-based transactions of the past 20 years have been leaders in their industries since the transaction?

Let's divide the business world into well-managed and badly managed enterprises, into cyclical and stable enterprises, and into growth and steady-state enterprises.

Well-managed companies need to retain some of the EBITDA for reinvestment in the future. How much? The answer depends on how fast-changing and how fast-growing their industry is. Badly managed enterprises do not need to retain earnings; they'll spend the money on bad ideas.

Cyclical enterprises need a cushion to absorb the inevitable downturns in business. Stable companies don't need much of a cushion. The problem is that most companies are less stable than they think they are. Any one single business is more cyclical than its industry; most industries are more cyclical than the market as a whole. This miscalculation led to the failure of Campeau, which paid enough for Federated that there was no room for the pending cyclical slowdown in retail sales.

Growth enterprises (any company that's in a fast-changing or a fast-growing business) need to reinvest, in order to retool their business for a changing world and in order to participate in future growth in their industry. Steady-state companies don't need nearly as much reinvestment. A steady-state company that thinks it's a growth company will waste its reinvestment capital, even if managers are reasonably intelligent about where to spend it. Think Gulf Oil. Think telecom. Here's where EBITDA can actually help refocus management.

What happens to management incentives after an EBITDA-based transaction? How does management behave? Management has a huge incentive to maintain high enough profits to service its debt. It has some incentive to grow the business, but not at the cost of *any* expenditure that will compromise the debt service. For management, the up side of continued growth is dwarfed by the down side of failing to meet the new expense obligation.

This inevitably leads to peculiar behavior, assuming that managers want the firm to grow, rather than merely turn the preexisting profitability into an annuity. Management will compare the rewards for success in any new investment against the consequences if a business downturn depresses immediate profits. Any investment that fails to achieve substantial profitability very quickly will be rejected out of hand. Product quality may be sacrificed in order to maintain short-term EBITDA profit margins.

The inevitable consequence is a trade-off of future EBITDA for current EBITDA. This is fine if reinvestment ideas would be unprofitable. It is a mistake if the rejected reinvestment ideas would have led to future growth.

A final problem of EBITDA-based transactions is that they are most popular in highly profitable businesses. Why? Because highly profitable businesses leave room for high EBITDA as a share of overall revenues, leading to lofty valuations.

And what happens in highly profitable businesses? Profit margins eventually shrink. Competition is attracted into the industry. Customers resent the high margins and press for price concessions. And so forth. An overly rigid debt service schedule then kills the companies that cannot adapt to a changing world.

So, EBITDA-based transactions spend money that might be needed for investment in a company's future (unless managers are sufficiently incompetent that their investments would have been a waste of money); make managers unable to respond sensibly to falling margins or a business downturn; and escalate transaction values beyond what the economics of an uncertain enterprise can sustain. Apart from that, they're a great idea.

So, how good is EBITDA as a valuation metric? It's a bad measure of profitability and a bad basis for valuation, for any purpose other than extracting maximum immediate value in the sale of a company. For evaluating the market as a whole, it's worse than useless.

WHERE DOES THIS LEAVE US FOR EQUITY VALUATION?

Our comparison of earnings now looks like this:

$68	Peak "operating" EPS for the S&P 500, excluding losing operations shut down during and after FY 2000.
$52	Peak reported EPS for the S&P 500, for the year ended December 2000.
($8)	Underaccrual of pension expense.
($5)	Underaccrual of management stock options, on a Black/Scholes valuation basis.
($3)	Overt fraud; subsequent restatement of FY 2000 earnings.
$36	Peak true earnings for the S&P 500, for FY 2000.
$31	Estimated normalized earnings for the S&P 500 for FY 2000.

Our comparison of relative valuation now looks like this:

$1518, the highest month-end close for the S&P 500, on August 31, 2000, is:

22×	Peak operating earnings per share.
29×	Peak reported EPS.
42×	Peak true EPS, net of adjustments for pension expense, option awards, and actual fraud.
49×	Estimated normalized EPS for FY 2000.

$848, the March 31, 2003 close for the S&P 500, is:

12×	Peak FY 2000 operating EPS.
16×	Peak FY 2000 reported EPS.
21×	Peak true FY 2000 EPS, net of adjustments for pension expense, option awards, and actual fraud.
26×	Estimated normalized EPS of $33 for FY 2003.

One startling aspect of this analysis is that fraud is the smallest part of the problem. Out of an estimated $37 spread between operating earnings and normalized earnings, less than 10% is attributable to fraud. $13 of the spread, or 35%, is attributable to aggressive accounting in ways that are entirely permissible. And $17, or 46%, of the spread is due to the smoke and mirrors of diverting attention away from true earnings, in favor of measures of operating earnings that are an illusion at best, when applied to market aggregates.

HOW PERVASIVE IS CORRUPTION?

Business and politics are mirrors on society. Just as we elect leaders who reflect our own values (or pander to them), the business world tends to reflect the best of current values. The business world punishes the most egregious of ethical lapses, and punishes them severely. Accordingly, the business world tends to reflect ethics that are (ironically, in light of recent developments) *better* than the ethics of society at large. This basically means we need to improve the ethics of society at large before we can expect to improve the ethics of the business world.

Which leads to a broader question. How pervasive is corruption in society at large, and when does it start? Some evidence is worrisome.

- A Josephson Institute study shows that 40% of elementary school children admitted to stealing something they wanted in the past year. 24% admit they have stolen from a close friend.
- How about high school students, after their parents had more time to teach them the difference between right and wrong? This same study shows that 40% of the young men and 30% of the young women admitted to shoplifting in the prior year.
- Surely, in college, the situation must have improved? A Rutgers University study shows that 70% of university students admitted they had cheated on an exam in the past year, and 87% admitted to cheating on written assignments.
- This same study shows that, among graduate students, over 60% admitted to cheating in order to improve their chances of gaining admission to graduate school. This figure rose to 75% for *MBA students*.
- Many business schools no longer require ethics courses in their MBA programs. At least one has introduced the concept of situational ethics, an oxymoron if I ever heard one.
- What are our universities teaching us about ethics? For the past century, among the Ivy League schools, if a student accepted early admission to one school, committing in writing to attend in

the fall, other schools would drop the student from consideration. In a reversal last year that I found shocking, Harvard announced that it would no longer follow this practice. In effect, it is saying that it's fine for an entering student to abrogate a binding written agreement, so long as it hurts only a competing school.

- And once people have made it into the work force? A KPMG study shows that 76% of employees observed a high level of illegal or unethical conduct at work in the past 12 months; 45% of employees admitted they had lied to their supervisors within the prior year; and 36% have lied on or falsified a written report.
- The most ethically vulnerable area appeared to be information technology, where 100% of employees in the KPMG study admitted that they had lied to their supervisors within the prior year. Or, perhaps, in other areas, the other 55% were lying to the survey team.
- And, of course, only 1% of all employees felt that their own ethical standards were lower than the standards their peers observed.

To put forth a personal observation, I believe that ethical lapses become *less* common, not more, at higher levels in the business world. This may be because behavior is more scrutinized at management levels than at lower levels in an organization, in something of a fishbowl effect. Ethical lapses in senior management are more damaging and more visible, and have more lasting consequences, than lapses at staff levels. The head of Pfizer advises his management team that, within his organization, "If you can see the line between right and wrong, you're too close to it."

In many organizations, an unwritten rule for career advancement is that executives cannot rise to levels where their perceived ethical standards might cause problems for the company. Yet, as evidenced by recent scandals, far too many organizations fall prey to an ethics equivalent of "The Peter Principle": Managers in fact *do* rise to the point where their ethical standards can cause problems.

In short, the problem is not a problem of business ethics. It's a problem of social ethics, trickling up to the executive suites. The problem is simple: If even 10% of business leaders are not ethical, then 100% of the business world will be on alert in their business dealings. This adds immense costs to the business world, consuming resources that could be invested in the future, or that could be distributed to shareholders. The costs are very real.

The bad news in this conclusion is that business ethics cannot improve until society demands personal ethics at a higher level. If we reach a point where people are scorned by their peers for taking so much as a pencil or a stamp from the office, we can safely assume that the ethical standards of senior management will cease to be an issue. This will not likely happen during the careers of today's newly minted graduate students. In other words, we should brace ourselves for the fact that ethical scandals will be commonplace for the balance of our careers.

In the meantime, we should start teaching our own children that a promise is a promise, a lie is a lie, and honesty is not a matter of subjective interpretation.

WHAT ARE THE INVESTMENT IMPLICATIONS OF ETHICAL LAPSES?

The scant good news in the recent flurry of scandals relating to managed earnings, outright fraud, aggressive accounting, and puffed-up valuations is that the investment implications are rather straightforward. There are many.

- First, if earnings cannot be trusted, they will be discounted. If they are discounted, then the risk premium has an added component; the risk premium should compensate an investor not only for equity risk, but also for the risk that the foundations of equity value (earnings and book values) may be inflated. A higher risk premium is bad news.
- Second, if public investors lack confidence in management ethics, they will demand more return for their investment. Investors may require a credibility premium on top of the old established risk premium. The money that has begun to flee equities will not come back in the next rally.
- Third, our internal research suggests that there are early warnings for aggressive accounting, which we are beginning to incorporate into our current models. The conventional view is that only a careful analysis by a trained financial analyst can identify these risk factors. The fact that the vice chairman of Alliance Capital also served on Enron's board, and did not detect its frauds, offers little comfort to the quants-can't-do-this crowd. Simple measures of inventory accumulation, differential growth rates in sales and earnings, rising receivables, and so forth, can do a remarkable job in screening out the ne'er-do-wells, if at a cost of screening out some good companies too.

CONCLUSION

Once we look at some of the accounting games of recent years, it is clear that the core earnings of the U.S. economy are considerably lower than we might have thought. Once we strip away the understatement of pension expense, due to overly optimistic pension return assumptions, and the understatement of compensation expense, due to a failure to expense stock options, and the overstatement of revenues through overt fraud, the true earnings of the broad market averages never reached the levels reported in 1999 and 2000. Those sustainable earnings are probably not higher than $35 per share for the S&P 500 index.

It is also clear that some of the focus on operating earnings or EBITDA for the broad market is misguided at best, and likely inherently deceptive at its base. EBITDA quantifies how much cash flow a company could divert to service debt, so long as reinvestment in the future of the company grinds to a standstill and the business does not suffer a downturn. This is not a useful concept for the broad market, and is dubious even for individual companies.

Operating earnings strips away non-recurring extraordinary items from the earnings statement. But, even when the concept is not abused or not used for deceptive valuation, what is extraordinary for a single company is entirely ordinary for the market as a whole. Write-offs are a natural part of the evolution of the broad markets, and should not be stripped out of the earnings of broad market indexes.

It is probable that our society is overly tolerant of dishonesty and corrupt behavior. It is too easy to get away with unethical behavior. It is too easy to resume one's career even after getting caught in the act. Laws and rules exist to control the problem, but they are not well enforced and can be defeated in court. Until society views this behavior as genuinely unacceptable, more laws and more rules will not make a difference.

The evidence about children and young people in school is disturbing. These are our business leaders of tomorrow—who are too sanguine about cheating, and who are not being taught ethics. This should give us pause in expecting the recent scandals to quickly become a problem of the past.

All of this said, the impact of the current crisis of confidence on asset allocation and stock selection is also straightforward, and can be evaluated. While the impact of ethics on the capital markets cannot be quantified with any precision, one can see the direction. And, after all, is there any real precision in any of the valuation measures we like to rely upon?

Getting the valuation impact of ethics right, in its direction even if its extent is not precise, can be an important source of value-added for investors. And, of course, there is nothing unethical in seeking profit by avoiding investments where an ethical cloud may compromise the investment opportunities.