

**Special Report**

# **Anatomy of a Torpedo Stock**

**Part I: Exactly What Makes a Stock Blow Up?**

**Part 2: Four Case Studies in Torpedo Stocks**

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## **Part 1: Exactly What Makes a Stock Blow Up?**

**(And How Can You Tell When a Company is About to**

**Get Blown Out of the Water?)**

Every year in this country, over 100 publicly traded companies "blow up." That is, they experience serious problems that become well known, alarming investors who then rush to sell the stock and cause its price to fall, often more than 50%. Dozens of stocks every year fall more than 80%. Needless to say, this deals a harsh blow to many investment portfolios.

Many investors — and some government regulators — have wondered whether it is possible to detect the problems that lead to these disasters early in the game, before the damage is done. The answer is yes. These insights are now available to individual investors, enabling them to sell these stocks if they own them, avoid buying them if they don't, and even short them for speculative gains.

This approach is the result of our history in identifying companies that were expected to *outperform* their universe. Originally these high-quality companies were provided as "buy ideas" to institutional clients. For more than 10 years our results were impressive, regardless of the market capitalization group that the stock belonged to, as we generated an annualized return in excess of 5%.

In this original rating system, the indicators were based primarily on conventional growth measurements: sales, earnings, cash-flow, and income statements, which is the ultimate valuation measure. To determine any fundamental breakdown, a number of "checks" were utilized, including changes in the debt-to-equity ratio, the current debt/equity ratio, and operating margins.

Although these indicators were dependable, they failed to systematically mine and interpret *all* the information available in the cash-flow statement and balance sheet. Additional research was done, and it led to the development of indicators that went much further into the available data,

greatly improving the detection and understanding of potential problems that were not reflected in the available income statement.

As good as this system was, I was still perplexed whenever one of our so-called “quality” stocks blew up after it missed an earnings forecast or had a major negative news announcement. The one that really stays in my mind occurred during Thanksgiving of 1992. A company called Comptronix, which was the subject of several lawsuits, announced a very serious earnings miss which had immediate repercussions. Initially, Comptronix had claimed a massive increase in earnings over three years. When I left my office on the West Coast on the Wednesday before Thanksgiving the stock was acting normally; by the time I arrived on the East Coast, the stock had plummeted 70% and the company was on its way to bankruptcy. When a company torpedoed because of earnings misstatements and other financial shenanigans, it rarely does it gradually.

In this particular case as in others, the company had significant latitude to manipulate its financial results since it received a product from its customers that it then finished into a final product -- most companies merely purchase raw materials and turn it into finished goods. Taking inventory from customers gave them more flexibility to "manufacture" earnings.

The Financial Accounting Standards Board and the Securities and Exchange Commission do attempt to tighten such loopholes from time to time. But companies always manage to stay a few steps ahead of them.

This situation made an indelible impression on me, and also made me curious as to whether such a company, or such a series of dangerous activities by a company, could be systematically identified. This would be an extraordinarily valuable indicator! So I jumped into the project.

### **What did we look for?**

There are several underlying causes that can "torpedo" a company, and each cause has several indicators; thus, identifying the "torpedo companies" requires the analysis of numerous variables in a systematic way. I liken this process to a spider spinning an elaborate web to capture prey. If the spider's web is sufficiently intricate and well-constructed, the spider's meal

will be trapped. If our "web" is sufficiently intricate and well-constructed, the torpedo companies will be "trapped" and identified by us before they blow up.

The key is to find all the indicators that allow identification *before* the company torpedoed.

Before I begin, I want to say that one of my initial concerns in developing my ratings system was whether the market would identify these problems before our indicators did. After our initial pilot studies, I was gratified to learn that about 80% of the time, our indicators identified the potential problems well before the market did.

So to pinpoint what can go wrong with a company, I began by reading all the academic studies, books and articles I could find. I also devoured various SEC reports on companies that had violated reporting standards. For six months I reviewed over two dozen academic articles, over 20 SEC reports, six books, and numerous stories in business publications about companies that torpedoed.

Nearly all my research indicated that the problem companies could be identified in advance by certain indicators and relationships. Since the authors studied different companies, though, they all came up with different indicators and relationships. Nevertheless, when I read and re-read many reports of companies accused of misstating financials, I kept noticing *similarities* among the indicators in the companies that misstated financials and later blew up.

Finally, a predictable pattern of torpedo indicators was becoming obvious to me.

After gathering all the indicators and measures that were suggested by the research, my staff and I painstakingly determined which ones were truly significant. It seemed clear that the indicators tended to group themselves according to certain characteristics, much as a fever, cough, chills and muscle aches occurring together would indicate flu, not a toothache or a broken ankle.

We decided to group our indicators into ten "dimensions." We focused on indicators that were part of the main reported financial statement and did not require the reading of detailed footnotes to provide a warning. While many books and articles suggest that footnotes can

provide some insight into potential problems, our work suggested (*proved*, actually) that these problems could be identified with readily-available financial statement data after proper adjustments and weightings were assigned.

At this point it was clear that there are five fundamental causes of torpedo companies. So we set out to test them.

## **The Proof**

In early 1999, after the initial background reading and in the early stages of assigning the proper variable weightings, we produced a list of torpedo ratings on various companies. In this list I was surprised to see a company I knew from my "long-side" research (different from torpedo research, which is designed essentially to reveal stocks to be short in) that used my "Growth at a Reasonable Price" (GARP) methodology. The company was Safeskin, a manufacturer of latex rubber gloves, whose sales, earnings and cash flow had grown at a compounded rate over 25% for several years, and whose valuation was not excessive.

We had owned the stock several times for our managed accounts; we were considering buying it again when I noticed the torpedo warnings coming up in our new rating system. I decided to wait to buy until the next quarter's results were reported, in deference to the new system. Three weeks later the stock blew up when the company announced it was not going to make its estimated revenue.

The story later unfolded that the company had "stuffed" the inventory channel to make the previous quarter's earnings estimates, since demand for latex rubber gloves had begun to slow and the product was no longer taking market share from other lower-quality gloves.

Our ratings had picked up an accounts-receivable and inventory problem along with a turnover problem (discussed further below) -- exactly where this kind of problem should be picked up! It worked!

## The Five Basic Causes of Torpedoes

It's commonly "understood" that aggressive accounting practices can cause companies to torpedo. But aggressive accounting is only one of the things that can produce a blowup; there are others. These are the five potential causes of a torpedoed stock:

- **overvaluation**
- **aggressive accounting**
- **deteriorating financial condition and the hiding of liabilities**
- **a significant change in operating performance due to industry fundamentals or the company's competitive situation**
- **bad acquisitions**

You may be wondering *why* there is such a high positive correlation between these five potential causes and a precipitous decline in a company's stock. There's no certain answer to that question. But the stock market is only human after all. So when investors run up the price of a stock, and then discover that the company's balance sheet turns out to be built on sand, it's safe, and sensible, to assume that they're going to head for the exits in droves.

### **1. Overvaluation**

A torpedo company will often exhibit a sudden change in valuation. This change can be much greater than any similar change experienced by its competitors, and greater than the growth rate of its cash-flow or earnings. Such a change in valuation is a warning.

This often occurs after a company or a sector has become the "darling" of Wall Street during a period of uninterrupted good news and reported financial results. Usually the company has an outstanding product or service that is positioned with precisely the right features at precisely the right price at precisely the right time. This often leads to an upward spiral in the way analysts value the company and the stock, and an accompanying absence of downgrades.

This period of price levitation often coincides with an analytical "out to lunch" period during which no serious analysis of the real future prospects of the company or its stock price is done, so the price can rise to even higher levels, making serious analysis even less likely. While this is happening, competitors are often stealthily moving in with a similar product or service, especially if the margins and growth rates are high. After all, why should one company have all the profits to itself? Investors saw a lot of this during the Internet boom, when valuations defied all reality.

Generally, a downward spike in valuation can be triggered by a single negative earnings surprise; such surprises often occur when a competitor establishes a foothold with a superior product, service, or technology; or by a slowdown in sales growth rate; or a significant change in margins.

Another important thing to consider is the company's valuation within its industrial sector — that is, we should consider the entire sector's price-earnings ratio as well as just the company's price-earnings ratio. If, say, the medical technology sector is undergoing a change, our favorite med-tech company should be scrutinized too, even if it's doing well.

As the U.S. stock market boomed in the late 1990s due in part to the fast-growing economy, companies came under increasing pressure to make their performance goals. The main driver of this was management's desire to maintain a high stock price, as this had become an important part of executive compensation. (Many people now question whether basing compensation heavily on stock performance is a good idea.) There was, admittedly, some competitive advantage to a high stock price when it came to attracting employees and making acquisitions that would further increase the stock price. This led some companies to become aggressive (or creative) in their earnings reports through a variety of methods that were allowed under the broad guidelines of Generally Accepted Accounting Practices (GAAP).

Overvaluation by itself may not be enough to bring about a stock price correction. We like to see other problems in our indicators that show this high price may be vulnerable, giving us an indication of deteriorating fundamentals that is not yet understood by the market. This is another way of saying that "bubble" or "cult" stocks can fly high for a long time before they correct; that's why we like to look at other problems in the company aside from valuation.

Huge growth successes can lead management to postpone any disappointing announcements and give them the audacity they need to be more aggressive — or creative — with their accounting. At the same time, growth companies require more capital to sustain and continue their growth so the money-raisers on Wall Street (and their sidekicks, the analysts) become cheerleaders and supporters of the stock.

This kind of stock is often called a “momentum” stock. The term “momentum” refers to some combination of either *price momentum* or *earnings momentum*.

Price momentum generally means excess performance as compared to other stocks. So if the average stock appreciates by 15% in a given period, a momentum stock may appreciate by 50% or more. This period of momentum is usually associated with large-volume stock purchases by institutional investors, including both actively-managing investors and passive, or index, investors. In the late and often irrational "herd-instinct" stages of this price cycle, the principal stock buyers are price momentum investors who are buying the stock speculatively, basing their purchase on excess price appreciation rather than on relative valuation or earnings and sales growth, and largely because other people are buying it, not necessarily because the company is solid.

Earnings momentum refers to stocks whose *reported* earnings (note that word "reported") have increased at an accelerating rate. This group often overlaps the price momentum stocks. Unfortunately, this group of stocks often exhibits aggressive accounting and adjusted earnings which are not as strong as those reported. They are prime water for locating torpedoes.

When we see a stock with a significant excess valuation at the same time the company's fundamentals are deteriorating, we know we have a classic torpedo stock.

## **2. Aggressive Accounting**

Investment history is replete with examples of torpedo companies that have utilized aggressive accounting (called "creative accounting" by some) and blew up soon after. Generally, this

aggressiveness involves a *reported* increase in revenues, a reported reduction in expenses, or the hiding of liabilities in a way that overstates the true financial position.

Because of the double entry and balancing nature of accounting statements, the aggressiveness often shows up right in the balance sheet, if you know what to look for. Usually you'll notice a change in accruals or in statements of cash flow, but there are many places that management can use. However, every dollar of earnings consists of one of two items: cash flow or a balance sheet accrual. Ultimately, there's no place to hide, assuming management operates anywhere within the range of prescribed standards of accounting for earnings. (And sometimes it doesn't.)

Aggressive accounting can take many forms, such as:

1. Booking revenues before they are earned or even if they are not earned.
2. Failing to record normal expense items as an expense.
3. Understating the obligations of the company by not including them in general disclosures.
4. Failing to maintain sufficient reserves for obsolete inventory or bad debts.
5. Using balance sheet accounts for deferred taxes to boost income.
6. "Expensing" (accounting for the expense of) acquired companies or assets over a very long period of time.
7. Using employee pension plan gains to boost income, including making assumptions about earnings and payouts.

We'll provide more explanation of each of these practices below.

When we see these things happening, we always ask ourselves, "Why does the company find it necessary to be doing this *now*? What is it a sign of?" A company might use an aggressive accounting measure infrequently or in moderation, which may not turn out to be a terrible thing. But when we see one or more aggressive accounting measures used continuously, for several quarters, with a clear intention to hide or deceive, that's a red flag that often leads to a blowup.

Some of these items, by the way, are sometimes referred to as "the cookie jar" because they are accepted under fairly general accounting guidelines as items that management can "reach into" to help boost reported earnings numbers. They commonly include reserves for bad debt, inventory obsolescence accounts, deferred tax accounting, amortization of goodwill from assets and employee pension plan gains or losses.

**Booking revenues before they are actually earned.** In one example of this practice, when a company chooses to boost revenues by pushing an additional amount of product out to customers at the end of a quarter, it may also be booking revenues of future quarters. For example, the customer purchases 1,000 units during the quarter; but the company ships an additional 100 units and records it as revenue. This can be done easily when an intermediary, such as a wholesaler or distributor, is involved by simply shipping the units to the intermediary.

Another example of booking revenues before they're actually earned occurs when a company has a long-term, multi-year contract and chooses to book the revenue and associated income early. As an example, say a company provides a service to its customers under an extended warranty program; but when the customer pays up front, the company records all the revenue in the month when the contract was signed and the advance paid.

Practiced for any length of time, this can lead to the reporting of revenues that not only have not been earned but are unlikely, under standard reporting methods, ever to *be* earned.

**Failing to record expenses** Companies have a number of ways to hide or transform expenses, but generally this requires posting something on the balance sheet. For example, a company might capitalize a marketing expense that would normally be shown as a current operating expense; this is sometimes done for the advertising and promotion of a new product. Once the marketing expense has been capitalized, it will be written off over a period of time instead of during the current period.

The "big bath" write-off is another example, occurring when a company sweeps ongoing expenses into a one-time write-off of expenses tied to some divestiture or restructuring of the company. For example, when Cisco wrote off more than \$1 billion of inventory in 2001, many

analysts wondered whether this was an attempt to reduce inventory costs to zero, which would have allowed the company to show higher profits when the inventory was sold.

***Understating the obligations of the company.*** Companies can use footnotes to hide obligations that should be posted directly on the balance sheet or otherwise given greater visibility.

For example, retailers are not required generally to report lease obligations on their balance sheet as a debt — despite the fact that leases are long-term obligations. Instead, the leases are reported in a footnote which provides limited disclosure. Note that this instance is allowed by GAAP. But it's still worth taking into consideration when doing torpedo research.

Enron is a perfect example of trying to hide rather than even partially disclose liabilities. The details of Enron's financial reporting are still under investigation by the SEC as well as a special team of auditors and probably will be for years, if not decades. Here was a company with an apparent \$100 billion in revenues that was evidently masking its true obligations.

It is now obvious that Enron gravely understated the amount of liabilities and financial responsibilities that were assigned to its many specifically-created corporate entities. These entities were formed to "park" certain assets of the company which turned out to be low-quality assets earning low returns, and to not report those assets according to standard procedures. In essence, if a division of Enron was underperforming, the division was turned into an entity that did not have to be reported on Enron's balance sheet. It doesn't take a genius to figure out that this practice can't go on forever. Shareholders awoke one morning to find that over \$1 billion of shareholder equity had been lost, and began to ask questions. If Enron's underperforming assets had been properly accounted for over the years, those questions would of course have been asked a lot sooner.

One alarming revelation was that the company had placed underperforming assets in entities that were both controlled by some of its officers and had an *undisclosed claim on Enron's money* under certain circumstances. In some cases, Enron had guaranteed the debt of these entities. When some of these investments went bad, Enron *and its shareholders* had to pay up.

Each disclosure seemed to require additional funding by Enron, and eventually the rating agencies had to acknowledge the company's worsening liquidity problems.

My indicators suggested that Enron had problems as early as the fall of 1999, based on the return on capital, adjusted cash flow and margins.

**Not maintaining sufficient reserves.** Occasionally a company won't receive payment from customers who have received their product or service, creating what are called "receivables" on the balance sheet. Or inventory may not be sold for the value shown on the company's books due perhaps to low manufacturing quality, technical obsolescence or a drop in demand.

Both of these events, not getting paid and selling for less than value shown, require the company to take a so-called "write-down" to reflect the reduced value of the product. Under generally accepted accounting practices, a company must state the amount of losses expected and carry those losses as a "reserve item" on its balance sheet. Also, when the reserve is increased or replenished, the amount must be treated as an expense on the income statement.

Companies will sometimes understate their reserve balances; this results in higher reported earnings, since a reported *increase* in the reserves would obviously mean a reduction in reported income. This commonly occurs when the customer default rate increases and the allowance account is unchanged. It is more likely to occur during the middle of the fiscal year rather than at the end of the year, as auditors often require an upward adjustment to be made even if the company doesn't.

As an example, Circuit City had actual write-offs of 3.8% in 2001 after averaging about 1.1% in the previous three years. But it left the allowance account at 1.5% compared to an average 3% in the previous three years. So even though the actual losses increased significantly, the company chose to reduce the allowance by half, thereby increasing the reported, although not the actual, earnings.

**Using deferred tax balance sheet account to boost reported income.** This complicated concept may seem like a contradiction in terms, but companies can in fact use taxes to boost their reported income. The deferred asset account is another "cookie jar" account — an account

that the company can reach into when it gets hungry enough to require higher reported earnings.

In the case of deferred tax balances, the reserve occurs because taxes owed are calculated on a different basis from those reported to shareholders. This asset is then subjected to a “haircut” similar to the allowance for doubtful accounts, which reduces the amount of accounts receivable to the amount that the company expects to eventually collect. Similarly, the deferred tax asset is adjusted by a “valuation allowance” that estimates the likelihood that the deferred taxes will not be realized by the company. Management has some discretion about the valuation assumptions and the resulting balance of the deferred tax asset. We watch to see when they take too much advantage of their discretion.

***Expensing of acquisitions and depreciation of assets.*** Companies are required to treat as an expense their acquisitions on both their reported earnings statements and their tax returns. Again, they are given fairly wide latitude in recording the expense, which is based on the expected life of the asset (e.g., a plant, capital equipment, or a company) which they've acquired.

For example, if a pharmaceutical company acquires the rights to produce a patented drug from another company, it would assign an expected life to the investment. King Pharmaceuticals' average amortization period for drugs acquired appears to be over 20 years, while its hottest product, Altace, has a patent expiration date only seven years out. Several other drugs have even less time before their patents expire; obviously, the value to the company of the patented drugs will be less when the patents expire. Assuming a constant expense depreciation ratio, instead of front-loading it, would in most cases generate higher earnings over time.

Likewise, a company investing in new equipment would record as an expense *each year, rather than all at once*, a certain amount of the cost of the equipment. Again, while accounting standards and tax law specify the number of years based on type of property, there is still some latitude for the company to reduce the reported expense each year by assigning a longer period of useful life. When we see a company expensing a cost over an inordinate number of years, we always check to see whether anything strange is going on.

**Using employee pension plans to boost earnings.** Under current reporting guidelines, companies with so called “defined benefit plans” for retirement can report as company earnings any excess of earnings over some expected amount. For example, if a company expects to earn 6% on its pension money and actually earns 10%, the excess could be reported as income by the company under “other operating income.” The actual calculation is more complicated, but this illustrates the basic concept.

This accounting treatment has received much criticism since *the companies don't actually own the pension assets*, and these excess gains are *not likely to recur* over extended periods of time. Now that the market has undergone significant corrections, we look forward to seeing the results of a few of these companies that have used this practice in recent years, such as IBM, Verizon and others.

Now to return to our next torpedo indicator:

### **3. Deteriorating Financial Condition and the Hiding of Liabilities**

Companies can show strong “top-line” and even good “bottom-line” growth and still be deteriorating as far as their cash and balance sheets are concerned — and companies that run out of cash generally go quickly out of business. This can be a problem for both rapidly growing companies and those that are more obviously struggling.

Companies may demonstrate deteriorating financials in a kind of “second stage” weakening, after some of the problems mentioned above have occurred. For example, the telecommunications equipment downturn of 2000 and 2001 resulted from a slowdown in new equipment orders from customers who were themselves running out of money. In turn, many companies (including Lucent, which we discuss in this report) began extending financing to its customers, many of which were startup telecom companies whose access to IPO and secondary financing was starting to dry up as the Internet craze started weakening.

This lending by providers meant that they were no longer receiving significant amounts of cash in conjunction with their sales and reported earnings.

Financials can also deteriorate — and they did — when companies expand their operations, particularly their fixed costs of items such as personnel, rents or lease payments, at a time when the underlying economy is souring and revenues are falling. This is like running up big household or credit card bills just before you lose the annual bonus that provided 15% of your income.

Corporations can also rely on one-time items to boost their cash flow from, say, the sale of assets, the sale of investments, or gains from the exercise of stock options. The last of those was particularly prevalent in the late 1990s when technology companies issued vast amounts of stock options to their employees who later exercised those options when the market was at its peak.

In one of the great curiosities of financial reporting, companies were *not required to directly treat as an expense the costs of the options, but were allowed to reduce their expenses for taxes when the exercise occurred*. That is, companies could deduct for tax purposes the costs of stock options which then reduced the taxes they paid. To further complicate matters, this benefit to the company was generally reported as an operating item in the cash flow statement, rather than a financing item.

Finally, in extreme cases of aggressiveness and fraud, companies simply hide true liabilities. This can cover a wide range of actions including:

-- *Lease commitments by retailers which are not shown on the balance sheet* but are shown in a footnote disclosure; each year the annual amounts due are shown as a current liability. It should be noted that this is a generally accepted accounting practice. When examining only the actual amount of a retailer's long-term debt, it's not unusual to find small or negligible amounts of debt, since most lenders will understand the true financial position of a retailer, which often entails significant amounts of fixed expenses (just like a debt payment) due to leasing stores. But the practice of footnoted disclosure can nonetheless be deceptive to the average investor who must do a lot of work to determine the actual potential liability.

-- *Failure to disclose potential liabilities from product returns*. A software or electronic game company, for example, may allow retailers to return unsold or obsolete product. But investors

need to note the way the company records its inventory amount: If the company takes the software title out of inventory when it is shipped to a retailer but still allows the retailer to return it, it would need to make some assumption in its inventory allowance account. If that assumption is missing, that could be a dangerous sign.

For instance, Take-Two Interactive Software had to restate seven quarters of earnings for improper revenue recognition. Rather than taking unsold inventory returns, Take-Two was apparently purchasing back the unsold inventory from its own customers. In effect Take-Two was booking the sales for the full amount, removing the sold merchandise from inventory, and if it was not sold they would buy it back rather than count the returns against reported sales and thereby reduce them. In essence they were buying their own product and booking revenues off of it.

-- *Failure to disclose off-balance sheet financings that may require the company to make additional funding under certain circumstances.* The best recent example of this is the catastrophic collapse of Enron in 2001. Enron shifted certain low-performing assets to investment entities that were supposedly not under the control of the company, even though officers of Enron were the principals in some of these entities. As part of this arrangement, Enron had certain obligations; when the company announced a write-down of over \$1 billion of shareholder equity, the shareholders — including large institutions and many Wall Street analysts who were recommending the stock at the time and had long accepted murky financial statements from Enron — suddenly woke up in shock.

Part of the arrangement required Enron to invest certain amounts of capital in order to support the financings of these entities. Moreover, Enron had the right to issue additional shares of its stock to make some of these commitments. This was not a problem when the market valued the company at over \$70 billion and the stock was trading at over \$70 per share. It became a very big problem when the stock plunged to \$10 and then \$5, and \$4, and \$2, and the valuation of the company plunged below \$1 billion. This company unbelievably reported \$100 billion in sales in its most recent fiscal year.

## **4. Significant Changes in Operating Performance Due to Industry**

### **Fundamentals or Company's Competitive Situation**

Significant changes and inconsistencies in operating performance measurements, which include margins, turnover ratios, and return on investment, can be a clear indicator of operating problems, or changes in competitive situation, or other external events. They should always be investigated.

Changes in overall economic condition, called "macro" or large-scale economic changes, can have a real impact on an economy's overall demand for certain goods and services. They're unpredictable as well, affecting different industries in different ways at different times; they can even affect different companies in the same industry in different ways. These changes can occur quite suddenly. They can, for example, alter the costs of raw materials and other inputs, which almost always has a ripple effect on costs all the way to the consumer. Consumers may decide they don't feel like paying a new higher cost, and that may eventually cause the company's stock price to torpedo.

Because a change in competitive positioning can show up in margin measurements, it's wise to review these different ways of measuring margins: gross margins, operating income margin (earnings/sales), sales, general and administration expenses (SG&A); and tax rates.

For example, if the costs of the raw material, such as lumber for houses, increase significantly and a homebuilder cannot increase his prices sufficiently to maintain margins, his *gross margin* will decline. If the overall costs of the business are increasing, say, due to increased marketing and advertising expenses, this may well be reflected in smaller *operating income margins*.

Management has a certain degree of latitude; it can record immediate expenses for the current period or capitalize it as an expense on the balance sheet and spread the expense over several quarters or even years. This could be reflected in a decline in SG&A expenses if a company, for example, capitalizes advertising expenses rather than including them in the current period.

All companies face an unavoidable consequence of producing profits — they pay taxes, mostly to federal and state governments, occasionally to city governments. (The deferred tax balance is

discussed elsewhere in this report.) Therefore, any significant *increase in tax rates*, or the *expiration of a special tax provision that previously reduced tax rates*, means a drain on earnings.

## **5. Bad Acquisitions**

In the late 1990s with its booming equity valuations, many companies made acquisitions which they hoped would increase their growth rates; some of them did. Unfortunately, as the boom progressed, these acquisitions became more expensive and eventually hurt the acquiring companies, sometimes badly.

Generally the stories went like this: A company would make an acquisition to increase earnings; this was easy in the early stages of the boom when companies could be purchased at prices low enough to allow additional incremental earnings. When the prices paid for companies increased so much that no immediate increase in earnings could be expected, the acquiring companies touted "increased sales," sometimes in markets barely related to their core markets.

In the latter stages of this acquisition trend, companies touted their acquisitions as important strategic moves into new markets. By this time, acquisitions were so expensive that no argument of near-term earnings or sales impact was believable, even by the exuberant stock pushers of Wall Street, the growth-at-any-cost mutual funds, or previously-easily fooled individual investors.

Here is one of our favorite examples: On March 29, 2001, CIENA acquired optical switch manufacturer Cyras by the issuance of 26.1 million shares of CIENA stock, the assumption of 1.9 million stock options, and the assumption of \$150 million in debt. The main asset acquired was Cyras's K2 optical switch (now called CIENA's MetroDirector K2). Cyras had no sales at the time of the acquisition, and CIENA acquired almost no tangible assets in the transaction. Of the \$2.2 billion purchase price, Ciena recorded \$2.1 billion in goodwill and immediately wrote off \$45.9 million in purchased research and development. Several quarters later, the total revenues from optical products were only \$1.5 million. Meanwhile, about 10% of shareholder value had been given up for the acquisition.

The problem with acquisitions is that the majority don't work as planned, and rarely provide anything other than a nominal return (if that) to shareholders. As a result, they slow down the company's growth and the shareholder's net appreciation, and can lead to loss of shareholder wealth if the acquisition has to be written off. In the worst cases, it can lead to bankruptcy.

Note that a torpedo is often the result of more than one cause. For example, a company may be facing an industry fundamental change *and* be utilizing aggressive accounting to sustain its stock price. Companies may also have incentives to utilize aggressive accounting to make incentive plan payouts, or merely to maintain stock price or sustain growth rates for other valuation-related reasons.

## **Torpedo Warnings**

In addition to the five major *causes* of torpedoes, there are various warning indicators that tell us, sometimes very early on, about fundamental problems with a company's finances. We call these "torpedo warnings."

To make it easier to predict torpedoes, we have organized torpedo warnings into five categories: *investment quality, cash flow quality, earnings quality, balance sheet quality and valuation*. Each category deals with certain financial characteristics of a company and how those characteristics change over time. In each category, we measure between three and 10 sub-indicators, which are the foundation of our ratings system.

First let's define what a company is. A company is nothing more and nothing less than a collection of assets that produce revenues, earnings and cash flow. Now we can explain torpedo warnings in detail:

*Investment quality* is determined by various factors which measure operating efficiency and profitability, which in turn are determined by turnover, margins and returns.

Turnover refers to the ability of the company to convert its assets into revenue. The faster the assets are converted into revenue, the healthier the company.

There is more than one kind of turnover. We look at asset turnover, of course. We look at equity turnover, which is the amount of capital deployed by management. We also look at inventory. And we look at receivables, which basically means the amount the company is owed at any moment.

We look carefully at turnover because a company may be doing things with its financial leverage that would allow it to potentially increase its equity turnover without doing anything to its asset turnover.

The company's ability to earn a profit is a function of how fast it can convert its assets into revenues and after it does that, how much money it actually makes, which is its profit margin.

Margins tell us how well the company is managing to generate profits out of each dollar of revenues. Gross margins can warn of potential problems in the product pricing or the price the company is paying for its raw materials.

Turnover can also be one of the best indicators that a company has made a bad acquisition.

We also investigate the percentage of revenues devoted to selling, general and administrative expenses (SG&A). SG&A is often where companies hide expenses that might otherwise have to be reported on the bottom line.

We look for significant changes in margin which can tell us when a company is cutting costs too deeply or has to devote more and more of its resources to overhead.

Investment returns are the ultimate measure of investment quality. They tell us just how much the company is making on the capital it has. Many investors, including professionals, look at the return they get on their own portfolios. But it's just as important to know what kind of return the companies in their portfolios are getting with *their* money. If a company has been making 20% on its money and suddenly starts to make only 10%, that obviously means the

company isn't deploying its capital as successfully as it was. It's a warning sign, because if it continues, the earnings growth rate and cash flow growth rate will inevitably slow down.

**Cash flow quality** is the second warning. Cash flow quality refers to the amount of cash flow adjusted for non-recurring events, such as acquisitions; or to the adequacy of the cash flow in meeting current needs of the company (liquidity).

Cash flow is an important indicator of a company's financial health. Unlike some financial characteristics, it is hard to "manufacture" for very long. That's why many deep-value investors like it.

**Earnings quality** is the third of our five warnings. It refers to the sustainability of reported earnings, and to the amount of earnings which can be considered "core" earnings; it excludes so-called one-time items and adjustments that are not part of the ongoing operations of the company.

Earnings quality tells us about the solidity of the company and its prospects. This becomes an issue because generally accepted accounting practices allow companies to report the same information in various ways, and also allow them some discretion in how they report their numbers.

Let's assume a company decides to amortize a \$100 million acquisition over 20 years; it will obviously expense \$5 million a year. If it opts for a 10-year life, it will expense \$10 million a year. As you can see, the rate of amortization the company chooses will make a significant difference in its reported earnings every year for quite a while.

It's important to determine whether there are one-time-only items in the reported net income that should be looked at differently from other gains or losses. So we also look at earnings adjustments that are not likely to be repeated, called extraordinary charges. Was there a gain or loss from the sale of an investment? Was there a gain or loss from sale of a plant, property or equipment? A gain or loss from spinning off a part of the company to the public?

***Balance sheet quality*** is warning number four. The balance sheet is important because it contains any difference between company-reported performance and actual performance, and provides recent evidence of any aggressive accounting. It also includes the “cookie jar” accounts we discussed earlier. Of particular significance to balance sheet quality are accounts receivable, inventory, accruals, and liquidity.

Inventory and accounts receivable are the two most-mentioned indicators of corporate financial problems. Inventory is the first thing most people look at because naturally, as soon as a company’s product shipments start to slow down, an inventory buildup will appear on the balance sheet.

Accounts receivable, or A/R, is a kind of "second-layer" effect, but important to understand nevertheless. If the customers who buy the company’s product don’t pay cash, it will show up as A/R. (It’s also a pretty good indication of the financial condition of the company’s customers and the industry they’re in. If your customers aren’t making money, you’re not going to make money either.)

Accruals tell us about one-time items. When a company reports a dollar of earnings there is one of two things happening: either cash flow or a change in a balance sheet item, which is called an accrual.

An accrual is an item on the balance sheet that can generally show up on one of several lines. It could be in inventory, it could be in accounts receivable, or it could be in one of those “cookie jar” accounts like the "allowance account" for uncollectible receivables, deferred taxes or capitalized expensed items. We especially look at what I call excessive accruals. Accruals give us our initial insight into the problem of aggressive accounting, telling us whether a company is trying to increase its reported earnings.

When looking for torpedo warnings, we seek some indication that the accrual rate is out of line with what it was over the last two years, because as a company grows, its accounts receivable should grow, as well as its inventory.

Liquidity is simply the measurement of how liquid, or usable, a company's assets are. When a company gets into liquidity problems it can go out of business or go bankrupt. It's a very serious situation.

We look at a number of standard measures to determine whether the company can meet its near-term financial requirements. These measures include the current ratio, quick ratio and the Altman Z-score, a predictor of bankruptcy. They help us answer the question, "How capable is the company of paying its bills?"

**Valuation** is our fifth and final torpedo warning. In addition to evaluating a company on an absolute basis we also evaluate it on a relative basis; that is, we compare a company to its peers within its sector on earnings, sales and price relative to expected earnings growth rates. To determine whether the company is priced at a higher ratio than its peers, we apply measures such as the share-price-to-sales (p/s) and share-price-to-earnings (P/E) ratios.

The torpedo watch has enormous value because too many investment professionals and individual investors focus primarily on reported earnings and sales and ignore the additional information that can show a completely different picture of a company's financial health. This additional information requires a great deal of analysis and extensive effort, while the traditional "buy" mentality of Wall Street analysts tends to limit the amount of detailed research that can help investors identify torpedo situations.

*In Part 2 we discuss four companies that blew up after exhibiting Torpedo characteristics.*

## **Part 2: Four Case Studies in Torpedo Companies**

As we stated in Part 1:

*The five major causes of a company blowup — that is, the five factors that can and often do "torpedo" the price of a company's stock — are overvaluation of its stock price relative to its earnings, aggressive accounting, deteriorating financial condition and the hiding of liabilities, bad acquisitions, or a change in operating performance (due to industry fundamentals or company competitive situation).*

There are five financial characteristics, or "Torpedo Watch warnings" as we call them, that indicate these types of problems. They very often signal a company's blowup and stock plunge well in advance. These warnings are *investment quality (efficiency of operations, including capital returns, margin and turnover of assets); cash flow quality; earnings quality; balance sheet quality; and valuation*. Each of these warnings is calculated by looking at multiple variables, which are then combined using our proprietary methodology into a set of warnings.

Note that with most companies, a brief period reflecting one or two indicator warnings won't necessarily result in a torpedoed stock. But several indicators occurring together over a period of time comprise a severe warning and are a good predictor of a steep drop in the stock price.

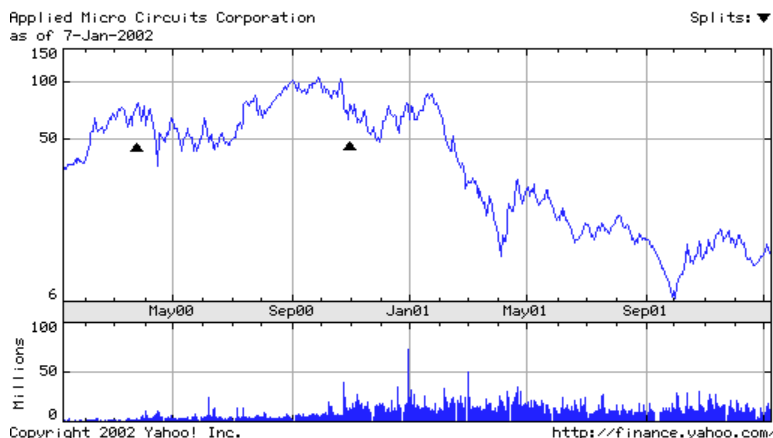
### **1. Applied Micro Circuits Corporation: A Hypervalue Classic**

Every now and then — and in the 1990s it seemed like every two weeks — a "superstock" is born that every analyst, portfolio manager and individual absolutely has to own, and sometimes keep for life. These superstocks are often in the technology sector and usually have new products or services that dominate a particular niche.

**Applied Micro Circuits Corporation (Nasdaq: AMCC)** was surely one of the highest flyers of the Internet/telecommunications bubble. The company developed, manufactured and

marketed high-performance and high-bandwidth silicon solutions for the communications markets.

Eventually, this super-company gave shareholders a super-negative return of anywhere from 50% to 90% depending on when they sold. The first 50% drop came in late 2000 after torpedo



characteristics showed up in the company's financials, and long before the ultimate collapse in 2001 to under \$10 a share.

AMCC peaked around \$100 per share in September 2000, up from just \$1.30 in December 1997. It fell to about \$6 a year

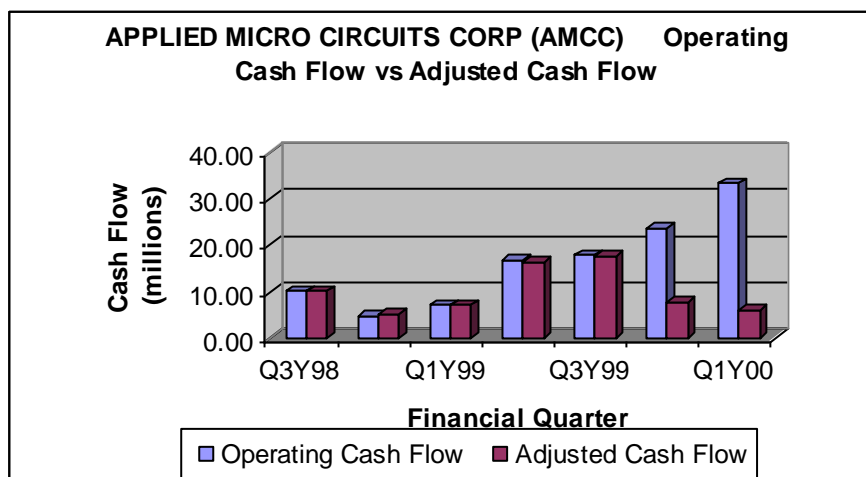
later — down 94%. There were significant torpedo warnings from the company beginning in mid-2000, just as the stock was peaking. This was a classic example of a company that was hugely overvalued and whose competitive situation changed significantly while no one seemed to catch on. Meanwhile, Wall Street continued to push the stock, even making a secondary public offering in January 2000 that raised \$827 million.

AMCC showed its earliest warnings in July, 1999, in the valuation indicator. Warnings later spread to cash flow and investment quality so that by the first quarter of 2000 (July, 2000) major warnings were in place in three of our five indicators, with minor warnings in the other two.

APPLIED MICRO CIRCUITS CORP (AMCC)		Torpedo Watch Indicators							
Quarter	Q4Y00	Q3Y00	Q2Y00	Q1Y00	Q4Y99	Q3Y99	Q2Y99	Q1Y99	Q4Y98
Earnings Quality	•	•	●	●	●				
Investment Quality	☒	☒	☒	☒	●	•	•	•	●
Cash Flow Quality	☒	☒	☒	☒	•				
Valuation	•	•	☒	☒	☒	☒	•	●	•
Balance Sheet Quality	☒	☒	•	•	•	•	•	•	•
	☒ = Strong Alert		● = Alert		• = Warning		= No Alert		

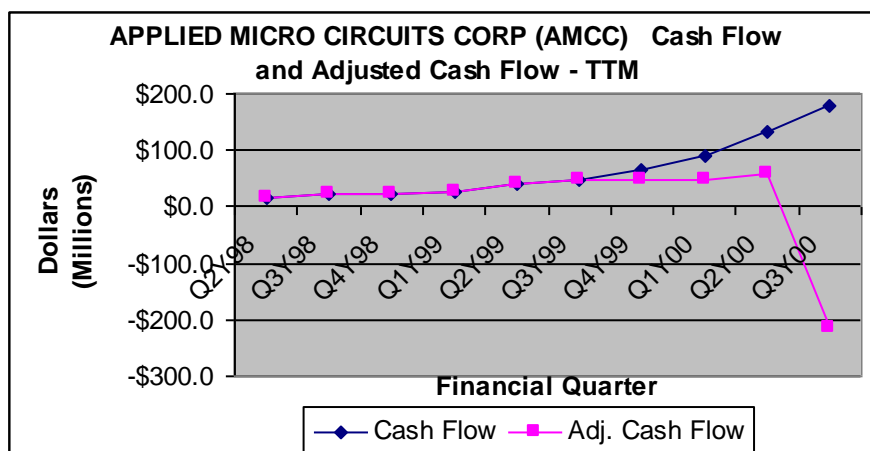
## Cash flow quality slides: Where's the money?

AMCC's cash flow quality began to deteriorate in the fourth quarter of 1999 (as reported in April 2000): Its reported operating cash flow increased while its adjusted operating cash flow (a truer reading, taking into account various non-sales-related factors) declined; this was due to the significant impact of acquired in-process research and development (a write-off from an acquired company), and tax benefits from the exercise of stock options).



Those two items accounted for approximately \$55 million of the \$90 million in reported operating cash flow in the first half of 2000; in other words, about 60% of “operating cash flow” came from a decision to write off part of an acquisition and from tax benefits from selling employees stock at below market prices. We don't consider that part of normal operations — when we estimate adjusted cash flow we exclude cash that is not generated from ongoing operations — and the company's decision was a warning.

The situation worsened in early 2000 and thereafter.



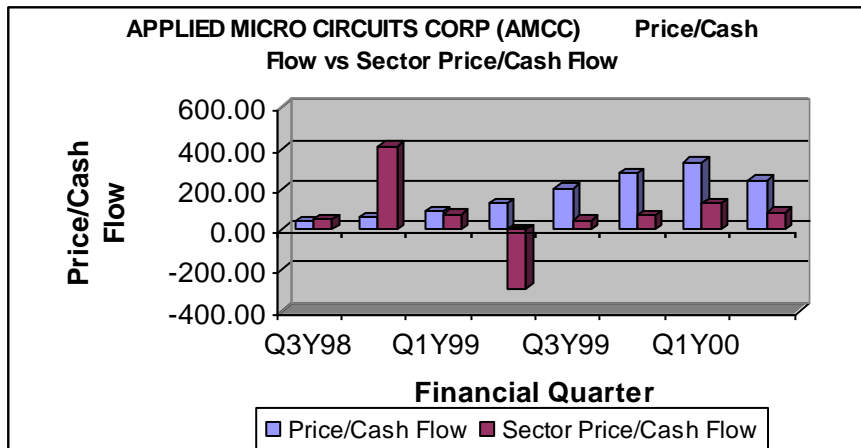
Another way to look at a company's cash flow is on an annualized basis. The chart here shows that once the one-time adjustments were taken out, the company actually generated a *negative*

amount of adjusted operating cash flow (about negative \$200 million) for the entire previous year although its market valuation was close to \$20 billion.

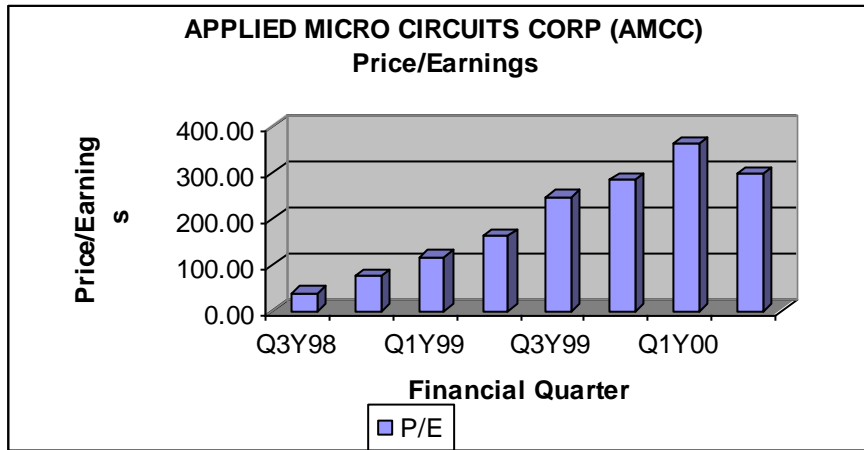
When market valuation (the value of a company's outstanding stock) is extremely high while (true) operating cash flow is declining, that is a screaming warning of a blowup, if only investors would hear it. Like our other indicators, it is very often correlated with a severe decline in the stock price.

### Valuation in the stars

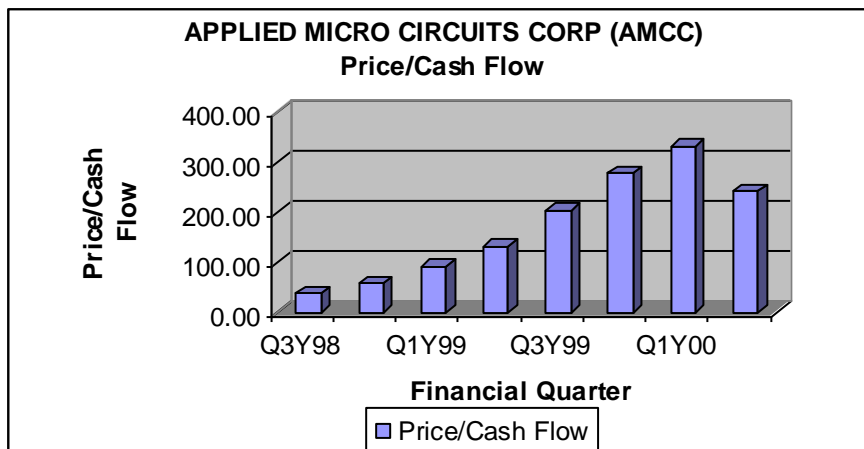
AMCC's valuation at this time was increasing significantly compared to other companies in the same sector; but no one seemed to be pointing to the deterioration of its cash flows. AMCC's stock did, in fact, have one of the highest valuations in a sector overflowing with highly-valued stocks.



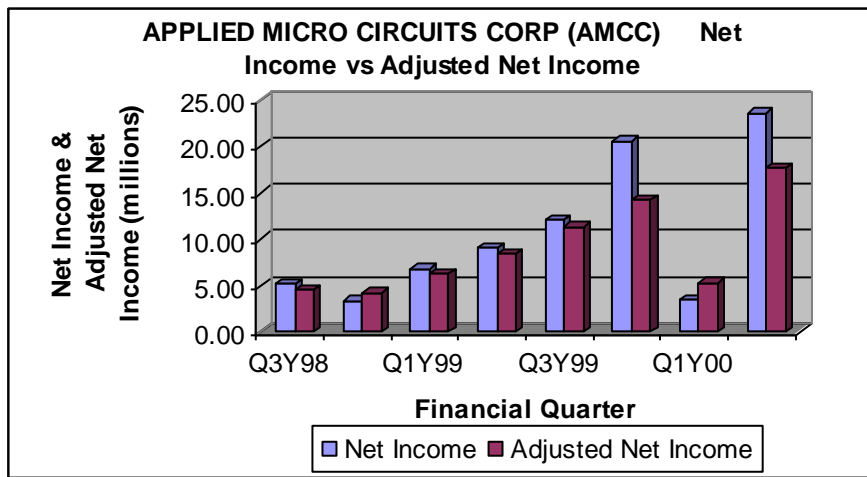
On a price-to-reported earnings basis, AMCC's valuation soared to over 300 times earnings — an alarm bell all by itself for any investor who was paying attention. Even compared to the hot technology sector, AMCC was overvalued.



And remember, the company's valuation calculation was based on *reported* operating cash flow; so our adjusted numbers would have shown an even greater valuation warning. Such high absolute valuation was clear evidence of the market mania that had so many investors in its grip.

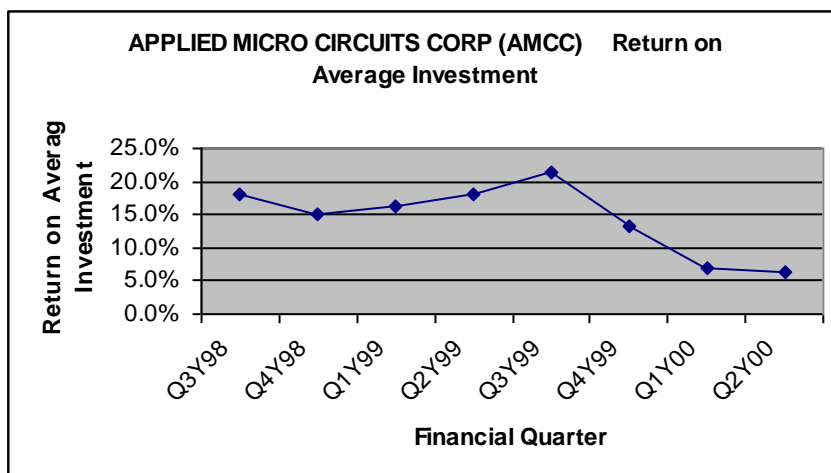


Similarly, earnings quality began to deteriorate at about this time, since a larger percentage of the company's earnings were not coming solidly from operations but from one-time items, in this case investment and interest income. Even a stock like AMCC couldn't avoid a downturn in the first quarter of 2000, when the company reported significantly reduced net income compared to previous quarters.



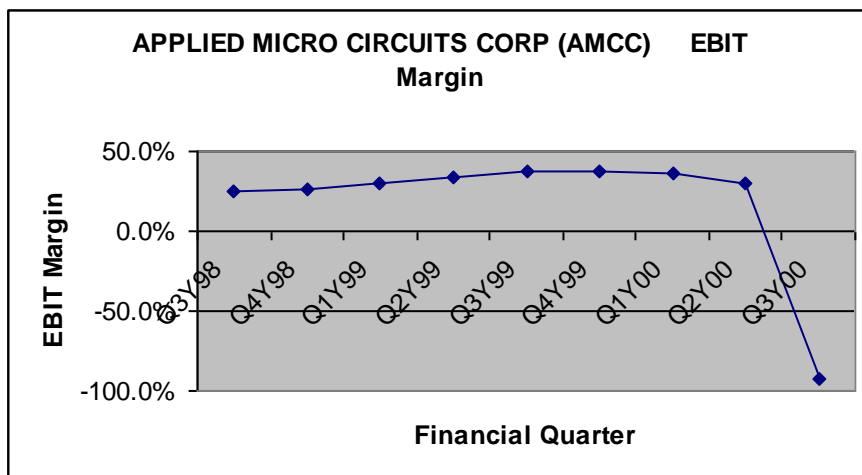
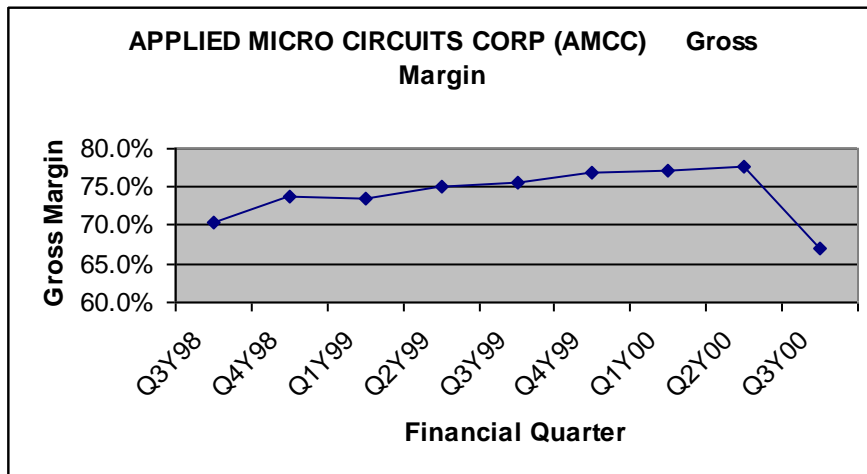
### The last straw: Returns and margins warn on investment quality

AMCC's returns were falling rapidly. Instead of returns in the high 'teens, the company's investments were earning single digits — hardly the sign of a richly-valued company.



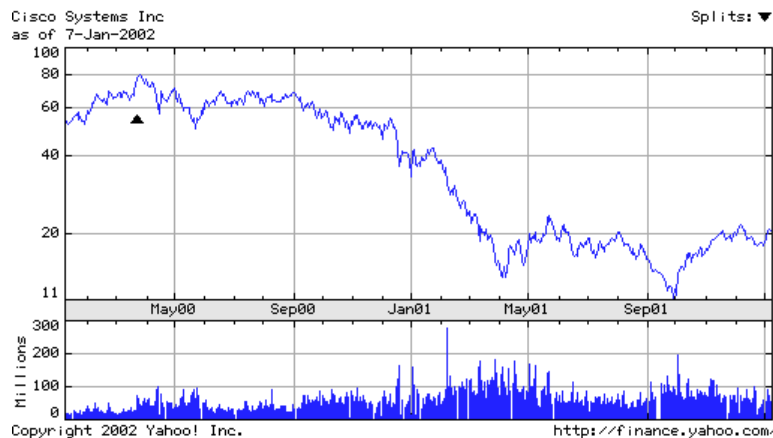
Eventually, AMCC's margins went straight south as the final sign of fundamental deterioration. In the third quarter of fiscal 2000 the stock was still trading between \$60 and \$80 a share with a full complement of torpedo warnings in place. Even so, the really big price collapse *still* hadn't occurred.

But within another quarter, margins were collapsing significantly, which further hurt earnings growth as competitive pressures forced the company to lower prices. This is the kind of situation no company can hide from, and it was at this point that the stock really began its downtrend. It traded recently around \$3.50 a share.



## 2. Cisco Systems: *The Superstock of the 1990s*

**Cisco Systems (Nasdaq: CSCO)** was the top performing stock of the 1990s. It made more individuals rich and portfolio managers successful than any other stock. It was a classic "buy-to-hold-forever" stock. Cisco was pretty much the kingpin of networking, which grew exponentially during the 1990s as computer and telecommunications applications increasingly demanded it.



Our research showed a significant deterioration in the company beginning around May 2000, in the company's third quarter. This was soon after the stock peaked at \$80.06 on March 27, 2000, after numerous splits.

A Harvard professor named Michael Porter conducted a study on the financial distortions of the technology bubble. According to the Jan. 21, 2001 issue of *Business Week*, "[Porter] and his colleagues can't figure out how much money Cisco really made in the 1990s." This was partly because of considerable acquisition charges. *Business Week* notes: "Cisco routinely wrote off massive amounts of acquisition-related charges — \$5.4 billion in the past five years alone — making it impossible to determine how much it earned on its capital." When this occurs with a superstock company, we're never surprised to see the stock torpedoed.

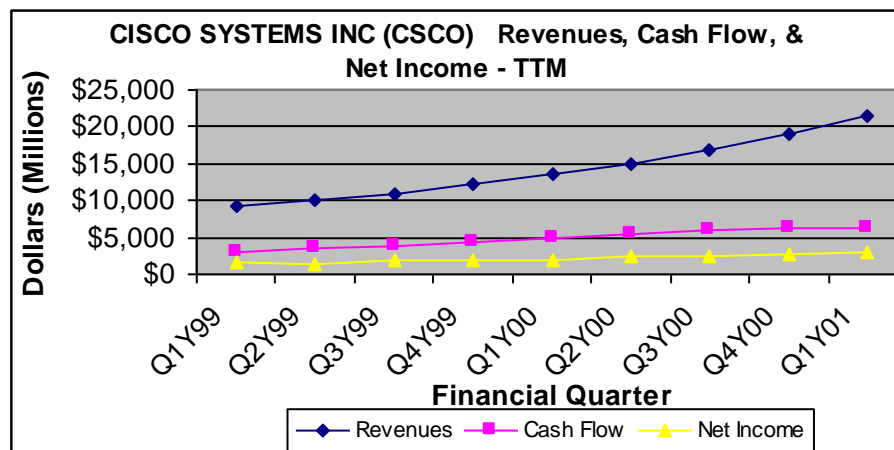
## First warnings: Cash flow and investment quality

Our first indicators of deterioration were cash flow and investment quality reported in May 2000 when the stock was trading around \$60. We issued a "watch warning" in the next (fourth) quarter, when the stock was still trading in the \$60-to-\$70 range.

CISCO SYSTEMS INC (CSCO)		Torpedo Watch Indicators							
Quarter	Q1Y01	Q4Y00	Q3Y00	Q2Y00	Q1Y00	Q4Y99	Q3Y99	Q2Y99	Q1Y99
Earnings Quality									
Investment Quality	☒	☒	●	●	●	●	●	●	●
Cash Flow Quality	☒	☒	●	●	☒	●	☒	●	●
Valuation	☒	●	●	●	●	●	●	●	☒
Balance Sheet Quality	☒	●							

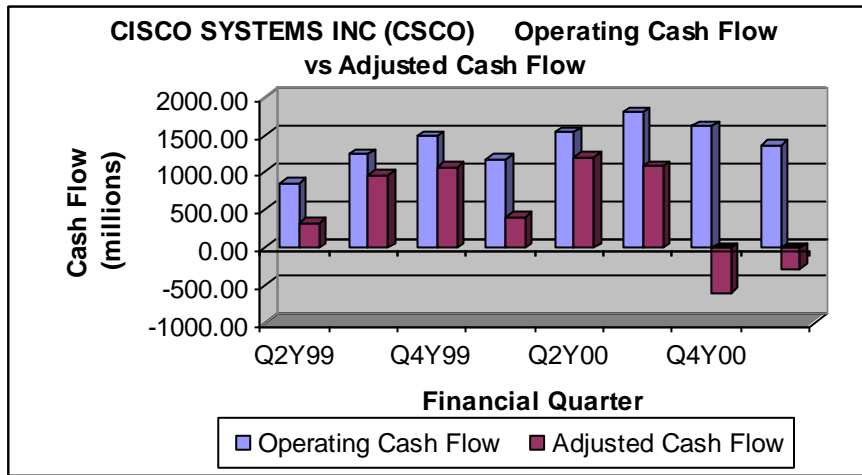
☒ = Strong Alert      ● = Alert      ● = Warning      = No Alert

Still, the observant investor might have noticed a disjuncture between cash flow quality and growth at that time. While the company was still reporting good growth for sales and earnings, the quality of its cash flow quality was deteriorating.



This is a simplification of matters, but the highest-quality cash flow is operating cash flow derived from actually shipping a product or providing a service to customers, and getting paid for it in a timely manner. After all, that's why a company is in business. The less the cash flow has to do with actual sales — if it's coming instead from write-offs or tax benefits or other non-operating sources — the "lower-quality" we call it. Every company takes write-offs, every company takes tax benefits, but no company, and no company's stock, can sustain quarter after quarter after quarter of excessive low-quality cash flow.

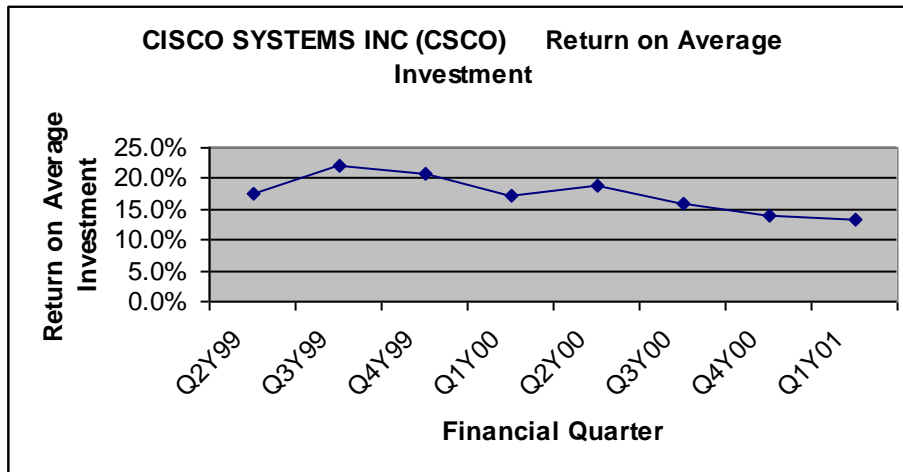
Adjusted cash flow began to lag reported operating cash flow and revenue growth significantly in early 2000 as shown here. In the first two quarters, adjusted cash flow was about \$1.612 billion compared to the \$2.715 billion reported; that is because we've excluded two low-quality sources of cash: tax benefits from the exercise of stock options and in-process research and development (a write-off from an acquired company). In the fourth quarter, adjusted cash flow actually went negative.



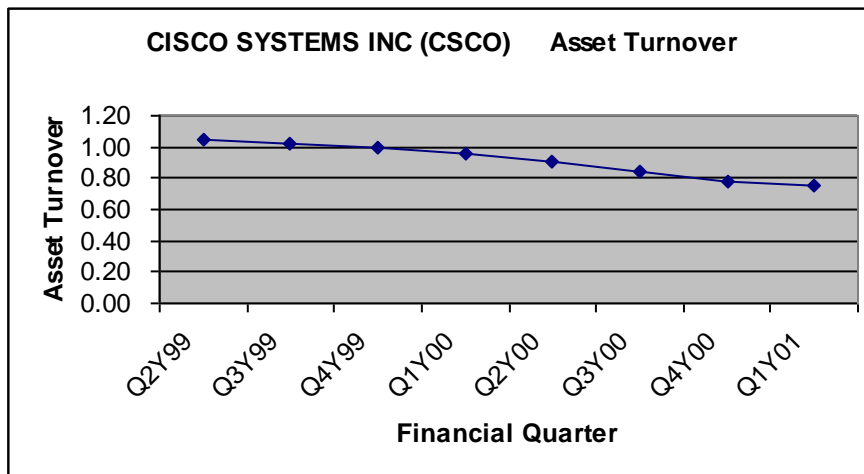
### And then shipments drop

Through the second quarter of 2000, Cisco earned between 17% and 22% on its invested capital, a very good return, which enhanced its price-to-earnings ratio. That return started to fall in the third quarter of 2000 prompting us to issue a warning. The next quarter we sounded a full Alert.

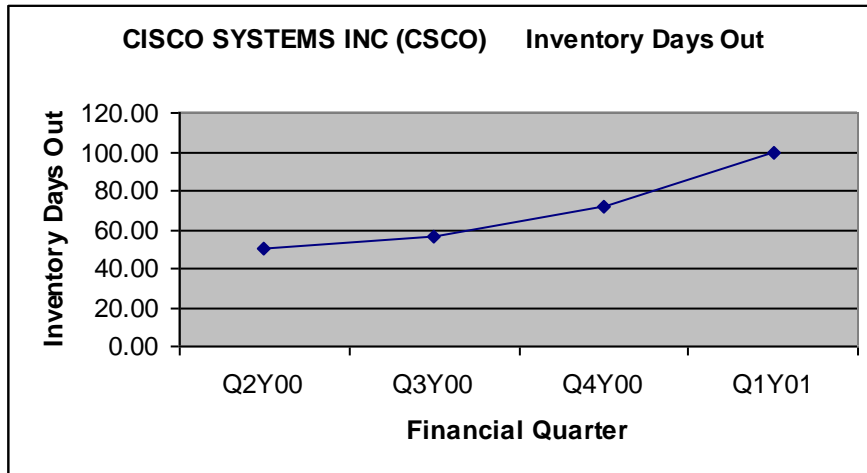
Cisco's returns were now in the 13% range, down 22% from the same period a year before, and still the stock price did not reflect this reality. You may recall that this was about the time the Nasdaq was reaching its all-time high.



At the same time, turnover began to decline, which indicated that the company was less able to convert its assets into revenue. Therefore, the company's assets were less valuable as far as revenue generation was concerned. Over a year, revenue fell by more than 20%.



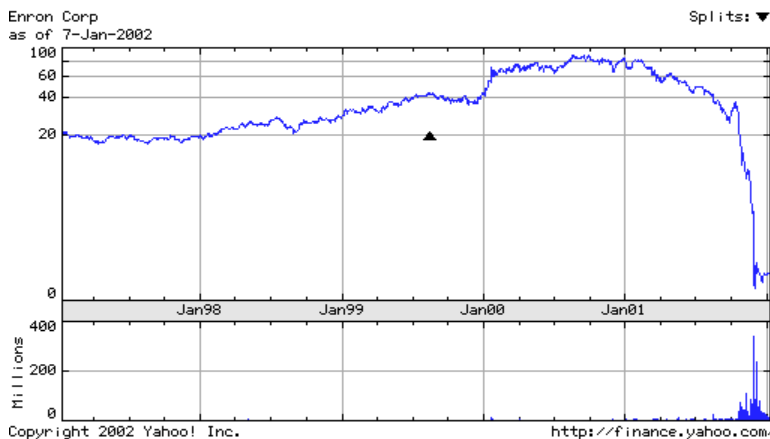
The balance sheet warning lagged the others but eventually it showed a significant buildup in inventory. This suggested that Cisco's customers were less willing to buy product or that the company's sales and production plans were not being followed by actual deliveries to customers.



Cisco traded recently around \$13.

### 3. Enron Corporation: A Classic Torpedo Warning

**Enron Corp. (Pink Sheets: ENRNQ)** seems destined to become a classic and perhaps the defining "mega-capitalization" torpedo company of modern times for its lack of disclosure in financial statements, its corporate (and political) intrigue, the role of its auditor, and the role of Wall Street analysts and bankers who generally accepted Enron's opaque financial statements without serious questioning.

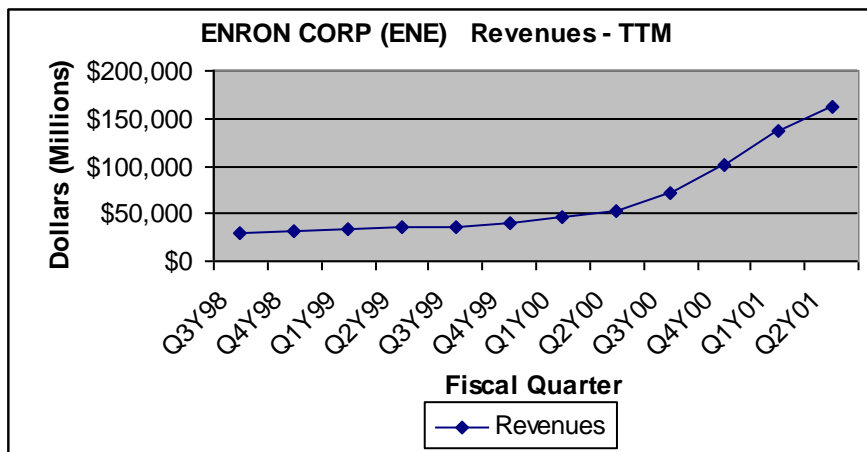


Nonetheless, problems at Enron were evident long before the stock's sickening plunge starting in the fall of 2001. From its early-2001 peak of about \$90, Enron went steadily down all last year, starting a steep drop in October to around 50 cents by year-end, a

*negative 99% return* for shareholders over that period.

We can characterize Enron as a high-revenue growth company with low investment, earnings *and* cash flow quality. Eventually the company's problems spilled over into other areas of balance sheet and valuation. The company had low margins and required a great deal of cash to keep revenues growing; eventually, this led the company to the "off-balance sheet" financings that propelled its collapse when they were discovered.

The price chart on Enron was spectacular, with the stock quadrupling over a three-year period. One of the reasons for the valuation change was the huge increase in reported revenues, which grew from \$35 billion to over \$150 billion in just three years — a threefold growth in revenue dollars that had never been equaled by any U.S. company.



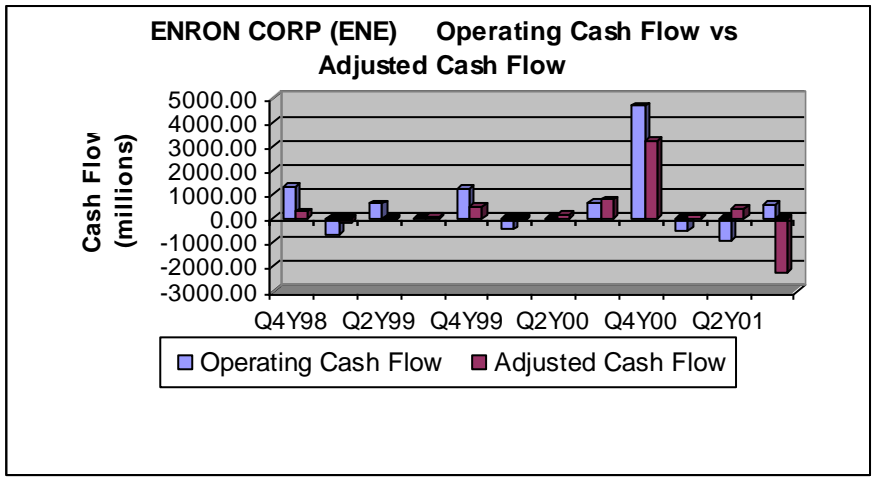
## Warning signs — including the cash flow of a pauper

Enron began to show problems as early as 1998 in earnings quality and investment quality. By the second quarter of 1999, the warnings had worsened and expanded to include cash flow — the necessary lubricant that enables a low-margin, low-return company to keep revenues rolling. By the first quarter of 2000, when the stock price was still on its way to its all-time high, *every one of our indicators* was flashing some kind of warning.

ENRON CORP (3ENRNQ) Torpedo Watch Indicators											
Quarter	Q3Y01	Q2Y01	Q1Y01	Q4Y00	Q3Y00	Q2Y00	Q1Y00	Q4Y99	Q3Y99	Q2Y99	Q1Y99
Earnings Quality	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	•
Investment Quality	☒	•	•	•	•	•	•	•	•	☒	•
Cash Flow Quality	•	•	•	•	•	•	•	☒	•	☒	•
Valuation		•	•	•	•	•	•	•	•	•	•
Balance Sheet Quality	•	•	•	•	☒	☒	•				
Torpedo Watch Rating	☒	•	•	☒	☒	☒	☒	☒	☒	☒	•
	☒ = Strong Alert			• = Alert			• = Warning			= No Alert	

While the stock reached a valuation worthy of royalty, Enron's cash flow in 1999 began to look like that of a pauper, giving us an early sign of potential problems. Starting with the second quarter of 1999, cash flow quality sounded a loud warning, which continued through the fourth quarter and throughout 2001. The company did manage to report a huge spike in operating cash flow in the fourth quarter of 2000 which was due primarily to three sources: proceeds from sale of merchant assets, receipt of cash associated with the assumption of a contractual obligation, and a big change in current assets, primarily “assets from price risk management.” Not precisely what we call high-quality operating cash flow.

We consider the first two of these to be non-recurring or non-core cash-flow sources. And selling merchant assets, actually, is more like selling an asset or investment and should typically be reported as an “investment” source of cash flow, not as an "operating" source.



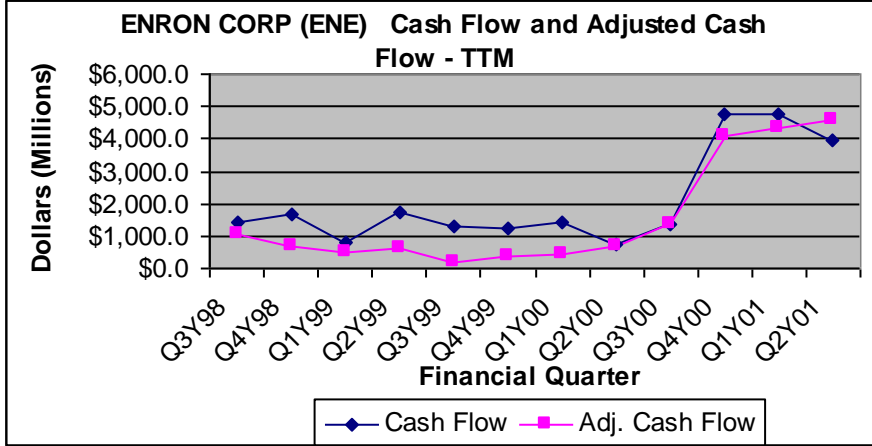
Enron was in fact using these proceeds from merchant activities as a huge source of reported operating cash flow from 1998 to 2000 when it accounted for 71.8 % of the reported operating cash flow, as shown below:

	2000	1999	1998	Total
<b>Operating Cash Flow</b>	<b>4.779</b>	<b>1.228</b>	<b>1.640</b>	<b>7.647</b>
<b>Merchant Activities</b>	<b>1.838</b>	<b>2.217</b>	<b>1.434</b>	<b>5.489</b>

(Note: Billions of dollars)

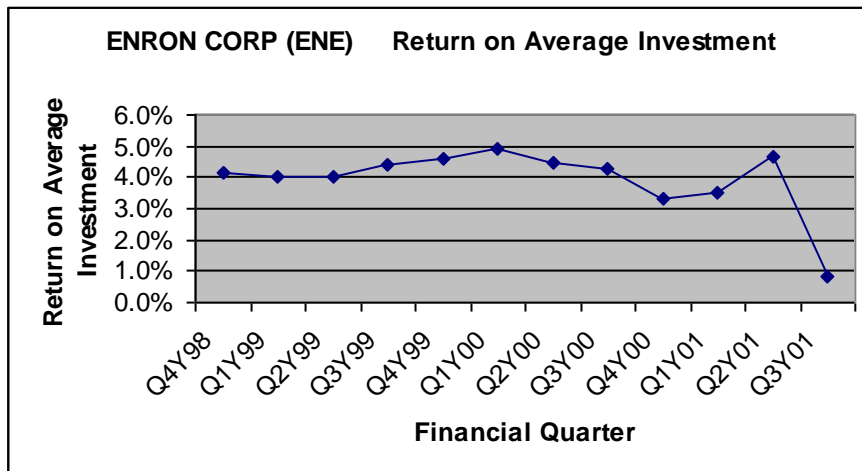
Source: Enron 2000 10K as filed

Looking at the company on a rolling 12-month basis rather than a quarterly basis, we again see a significant deterioration in income quality after the second quarter of 1999. Without these non-recurring items, adjusted cash flow was significantly lower until the third quarter of 2000 as shown below:

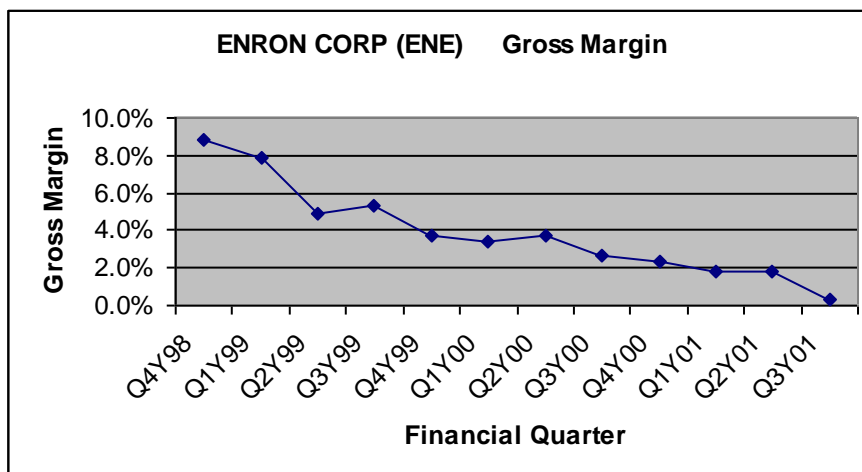


## Stock goes up while returns, margins and earnings quality go down

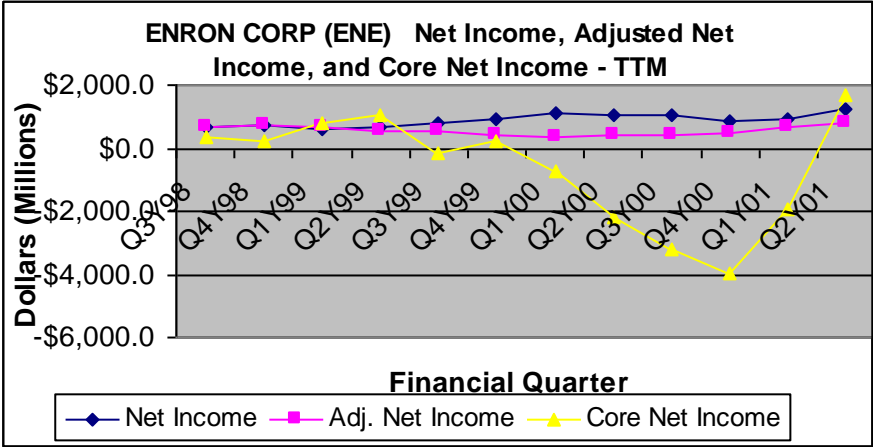
Investment quality provided another early warning beginning in the second quarter of 1999. It is interesting to note that Enron never had a high return on its invested capital; that return hovered between 4% and 5% in 1999 and 2000.



Not surprisingly, *the further the company moved into energy trading and away from its traditional core business of oil and gas, the lower were the resulting margins.* The gross margin fell from about 8% to about 5%, and then began a sustained decline to eventually settle around 2% in 2001. In order to continue to grow, the company needed to expand revenue rapidly, in part by borrowing more in several ways that were not disclosed to shareholders.



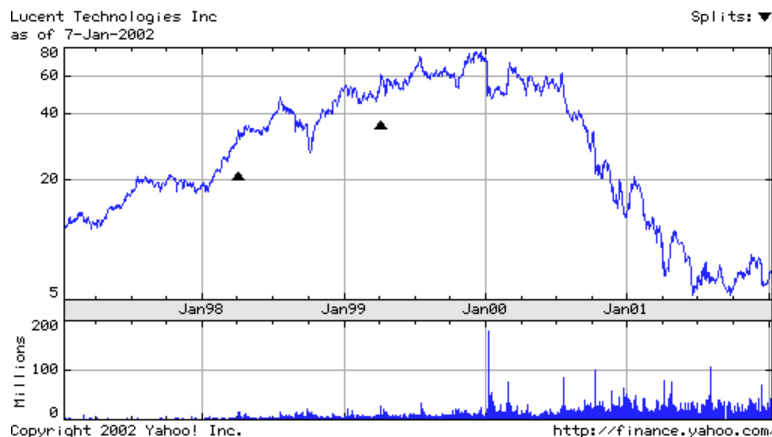
At the same time, earnings quality was becoming a problem beginning with the second quarter of 1999 and continuing throughout 2001. As with cash flow, when a significant percentage of earnings are derived from non-core-business activities, that's not a good sign. Starting with the second quarter of 1999, Enron's *core* net income was never even close to its reported earnings on average (this changed in the most recent quarter). The main items we excluded from reported earnings over this period of time included among others the gain on sale of assets, gain on the issuance of stock, and interest income. In 1999, these three items alone amounted to some \$700 million, or 35%, of the total \$2.0 billion of earnings.



At press time, a share of Enron's stock was worth 15 cents.

#### 4. Lucent Technologies: A Great Pedigree — But It Still Blew Up

I remember Bell Labs as the great American success story, a paragon of technological and manufacturing leadership. Unfortunately, once it was spun off from AT&T in 1996, it showed the dulling of competitive sharpness that comes from dealing largely with just one customer, in this case their own parent company.



Similarly, **Lucent Technologies (NYSE: LU)** crested on the telecom tsunami of the 1990s, its shares peaking in late 1999 (after several splits) at nearly \$80 before plummeting to about \$6 per share by the fall of 2001. Lucent was one of the greatest beneficiaries of the telecom boom and one of the greatest busts when that boom ended.

Lucent's torpedo warnings actually came in two stages, both of which preceded and warned of a fall in the stock price. The first warning came in February 1999, when our indicators picked up what became a steady deterioration. The second warning came in February 2001.

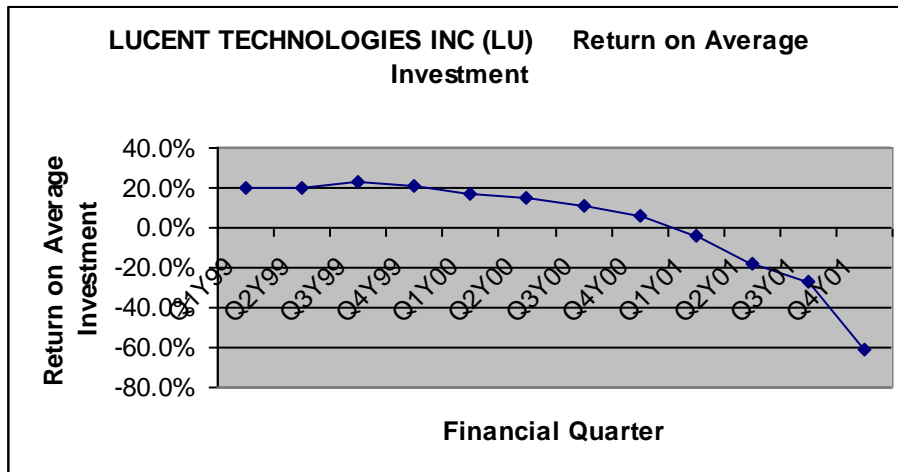
Lucent was showing deterioration in early 1999, as we judged from its first-quarter results (in January); the stock was then trading at over \$50 per share. The deterioration worsened over the next quarter, but the stock kept moving up.

The earliest warnings were in earnings quality, investment quality and balance sheet quality. At the time, the company was also fairly highly valued, trading at 4.1 times sales and 92.8 times earnings. After a brief flash of improvement, signs worsened just before the stock started its second downward spiral in early 2001.

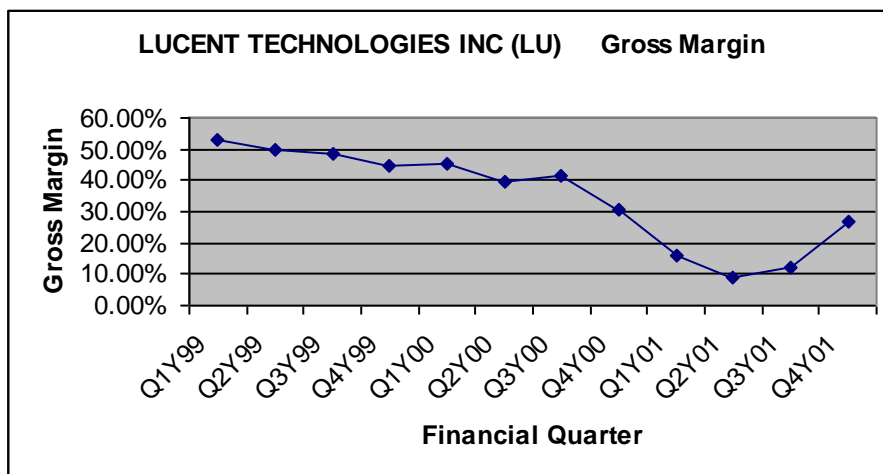
LUCENT TECHNOLOGIES INC (LU) Torpedo Watch Indicators								
Quarter	Q3Y00	Q2Y00	Q1Y00	Q4Y99	Q3Y99	Q2Y99	Q1Y99	Q4Y98
Earnings Quality	●	☒	☒	☒	●	●	☒	●
Investment Quality	●	☒	☒	☒	☒	☒	☒	●
Cash Flow Quality	☒	☒	●	●	●	●	●	☒
Valuation						●	●	●
Balance Sheet Quality	●	●	●	●	●	●	●	●
	☒ = Strong Alert	● = Alert	● = Warning				= No Alert	

## Investment quality warns

The return on investor's equity started falling badly in late 1998; by the first quarter of 2000 it was about 60% less than it had been 12 months previously. This severely reduced the return on investment as shown below. Instead of earning more than 20% on its money, Lucent's earnings were falling to the low single-digit range. This trend continued into 2001, when Lucent's returns went negative.

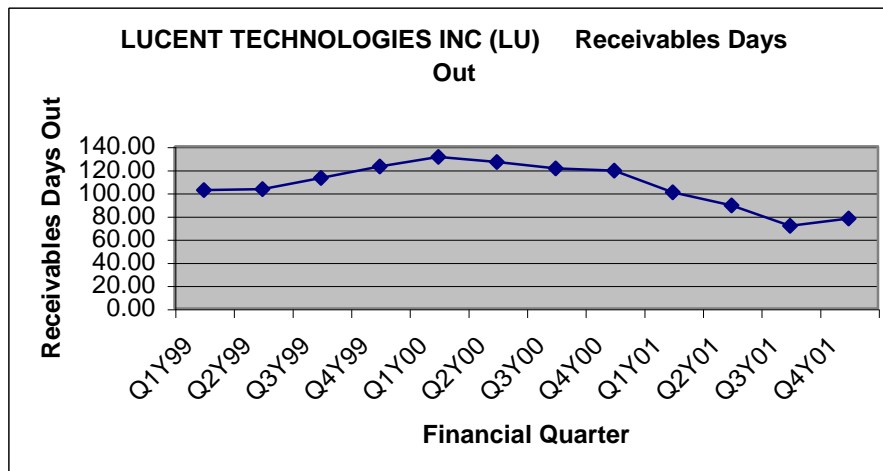
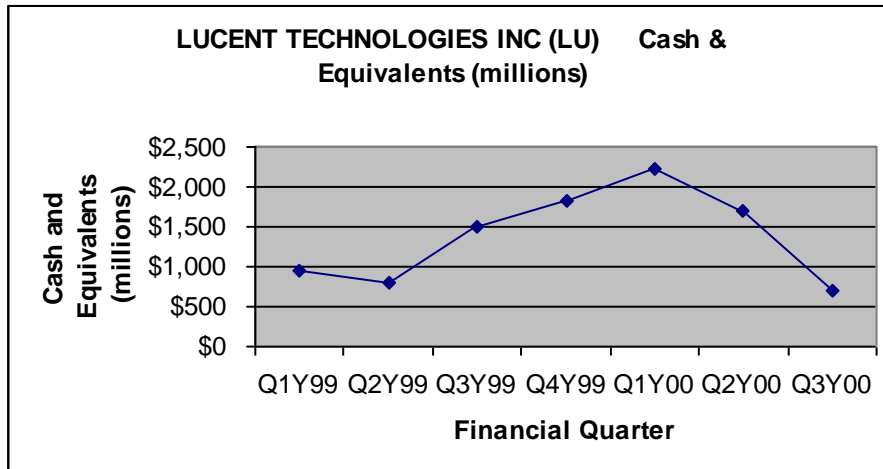


Margins were falling rapidly at the same time — by over a third in a two-quarter period — providing a sure sign that things were changing for the worse. Gross margins were in a downturn for a sustained period as well

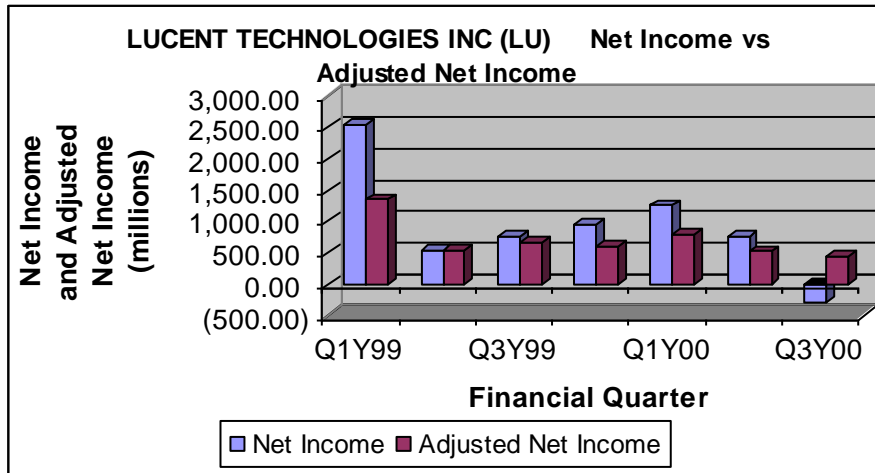


## Balance sheet, cash flow, and earnings quality send warnings

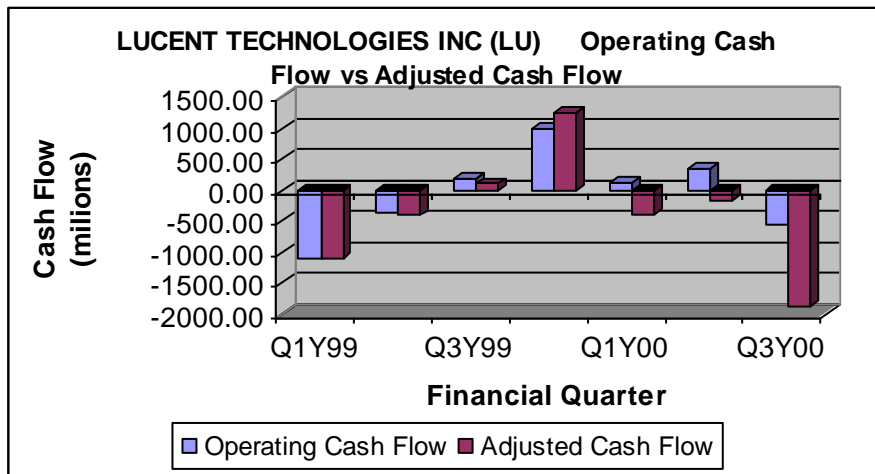
Also at this time the cash position of the company, which had actually been growing, began to decline. Receivables were increasing fairly significantly, about 30% over three quarters and taking more of the company's cash. Lucent was increasingly lending money to its customers partly because its competitors were lending money; at the same time its customers were spending money faster than it came in.



In the first quarter of 1999, less than half of the reported income had come from core sources. For example, in 1999, Lucent reported \$4.77 billion of which \$1.3 billion came from the cumulative effect of an accounting change (A one-time non-cash gain from changing the way they value their pension plan), which we exclude from our measurement of earnings.



Beginning in the first quarter of 2000, Lucent’s adjusted operating cash flow began to deviate markedly from reported operating cash flow due primarily to tax benefits from stock options. The company was extending increasing amounts of credit to its customers who were increasingly less able to pay for their products. This is not a trend that can be sustained.



Lucent was recently trading at about \$1.12 a share.