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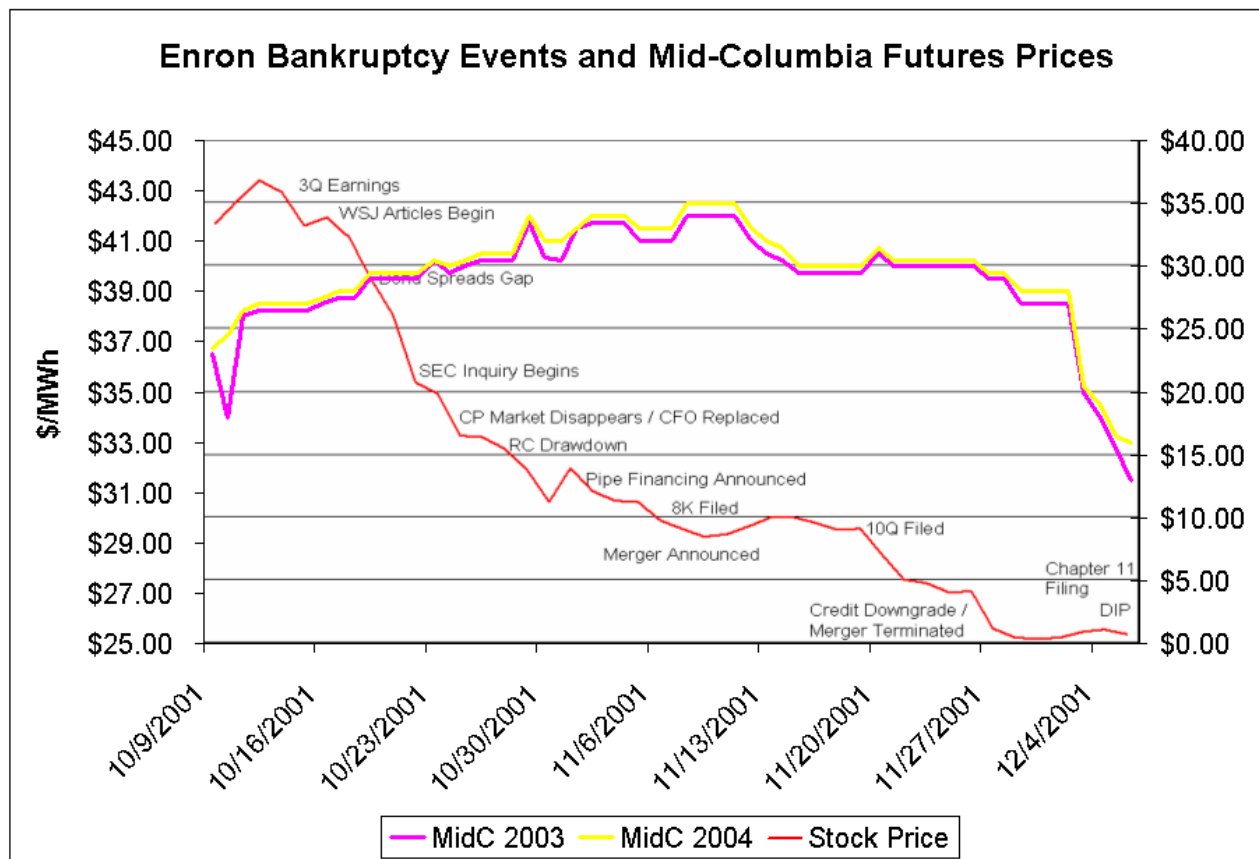
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Deconstructing Enron's Collapse

January 10, 2002

On October 16, 2001 Enron announced its third quarter results. The announcement sent ripples through the investment community. Although the overall news was positive – revenues growth of 132% over the comparable three quarters of 2000 -- Enron's stock prices began a dramatic plunge and Enron was forced into a surprising – and ultimately unsuccessful – merger with Dynegy. On December 3, 2001, Enron declared bankruptcy.



Anyone reading Enron’s financial statements in 2000 would have had no warning that the company would soon be facing bankruptcy. Enron showed increasing sales, increasing earnings, and increasing assets. Even the revelations concerning Enron’s convoluted off-balance sheet financing did not directly affect the central business activities of the company.

What went wrong? Three scenarios have been suggested for Enron’s demise: the Last of the Dot Coms, a Ponzi scheme, and Barings Bank. In practice, these scenarios are not mutually exclusive. Enron’s superficial financial reporting – especially combined with an indulgent financial environment – would provide the opportunity for all three.

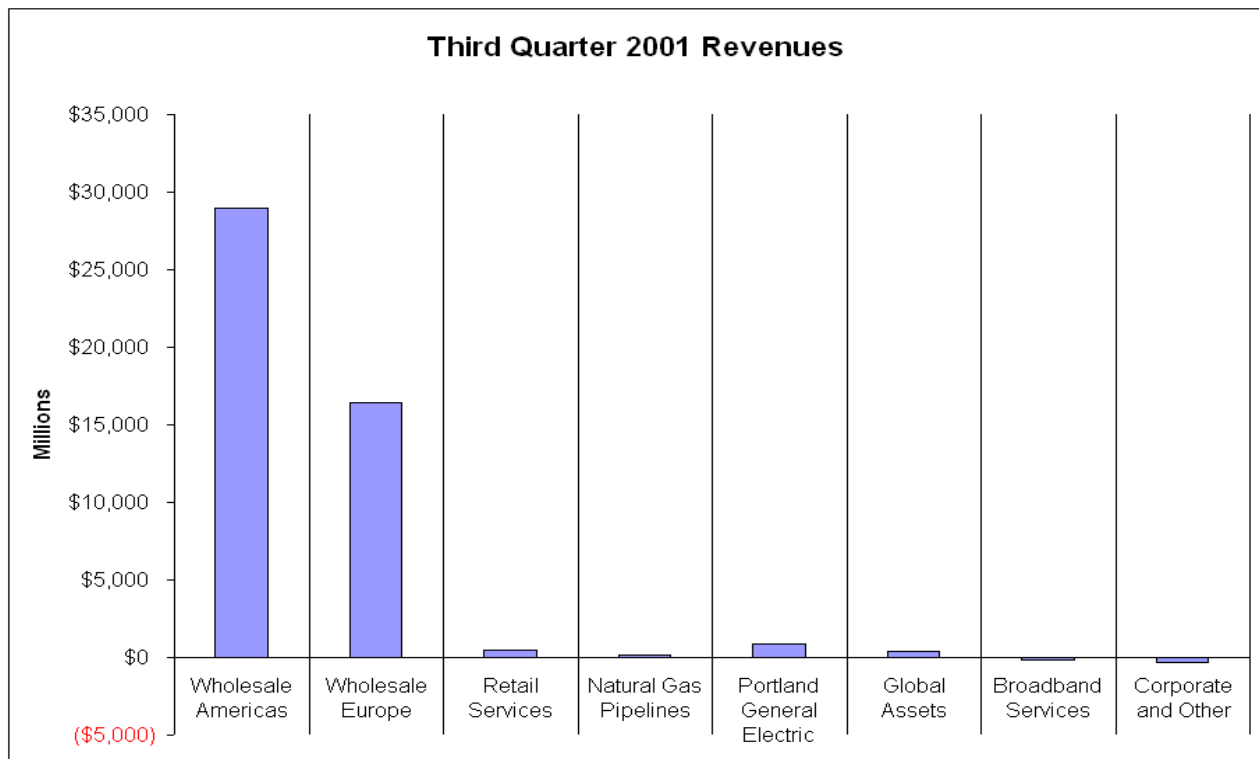
All of the facts and figures developed below are taken from Enron’s financial statements and bankruptcy filings. Enron’s financials are startlingly opaque – massive changes are often dismissed with a few lines of jargon or, as often as not, not explained at all. Enron often changed accounting formats from one quarterly report to the next – again without explanation. Thus, any interpretation of their financial reports exposes the analyst to error. Whenever possible, traditional accounting definitions have been used to analyze Enron terms.

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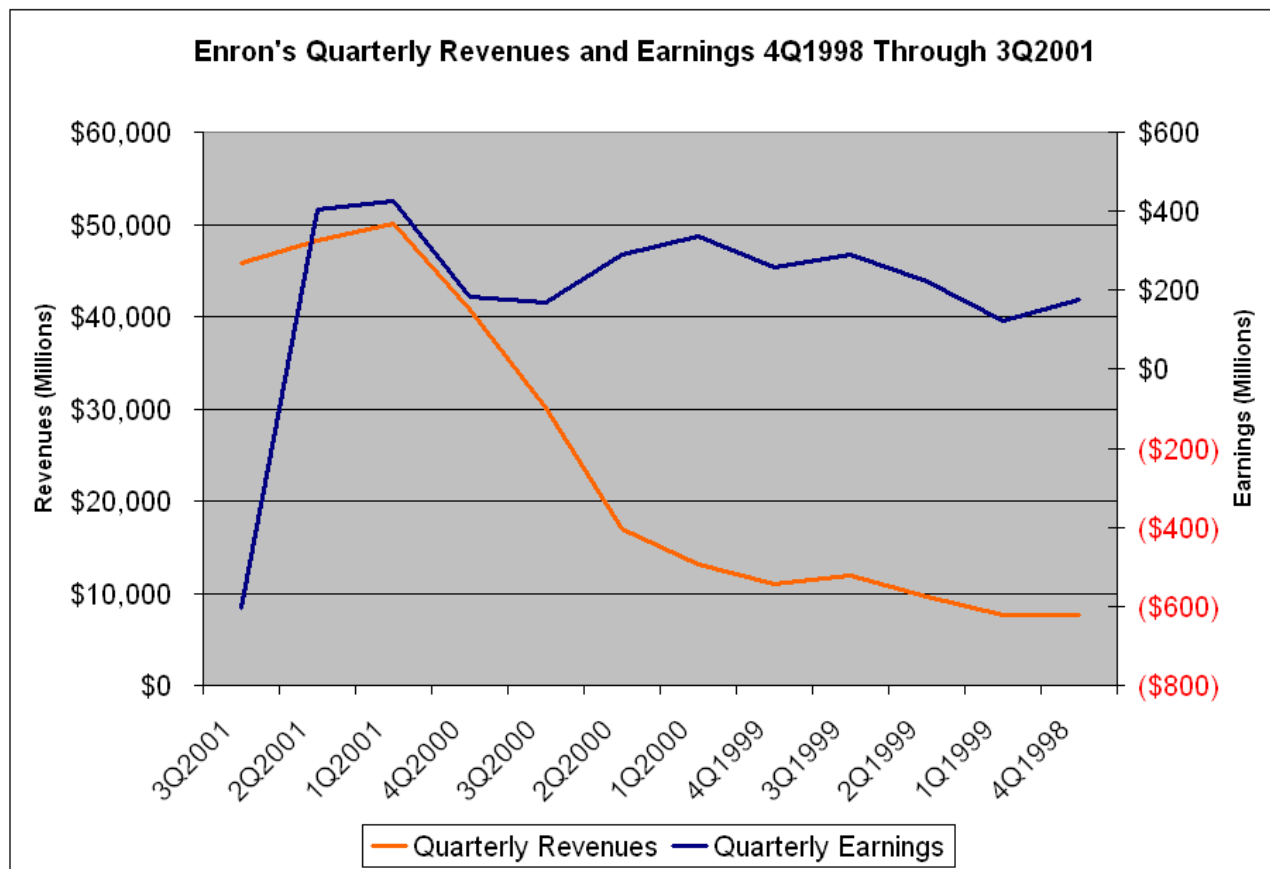
Enron, Inc.

Formed from the merger of two pipeline companies in 1985, Enron breaks logically into two parts – the relatively stodgy pipeline and utility business encompassing Portland General Electric, and the speculative Wholesale and Retail Services divisions including the Broadband trading operation. Other than a ready source of cash for the perennial cash starved speculative enterprises, PGE and the pipelines appear to have participated little in Enron’s meteoric rise and fall.

Wholesale Services, Retail Services, and Broadband are very different than the pipeline and utility business. In recent years, these three entrepreneurial divisions reported quarter after quarter of enormous growth. As of the third quarter 2001, Wholesale Services’ two divisions, Americas and Europe, provided 97% of total revenues.



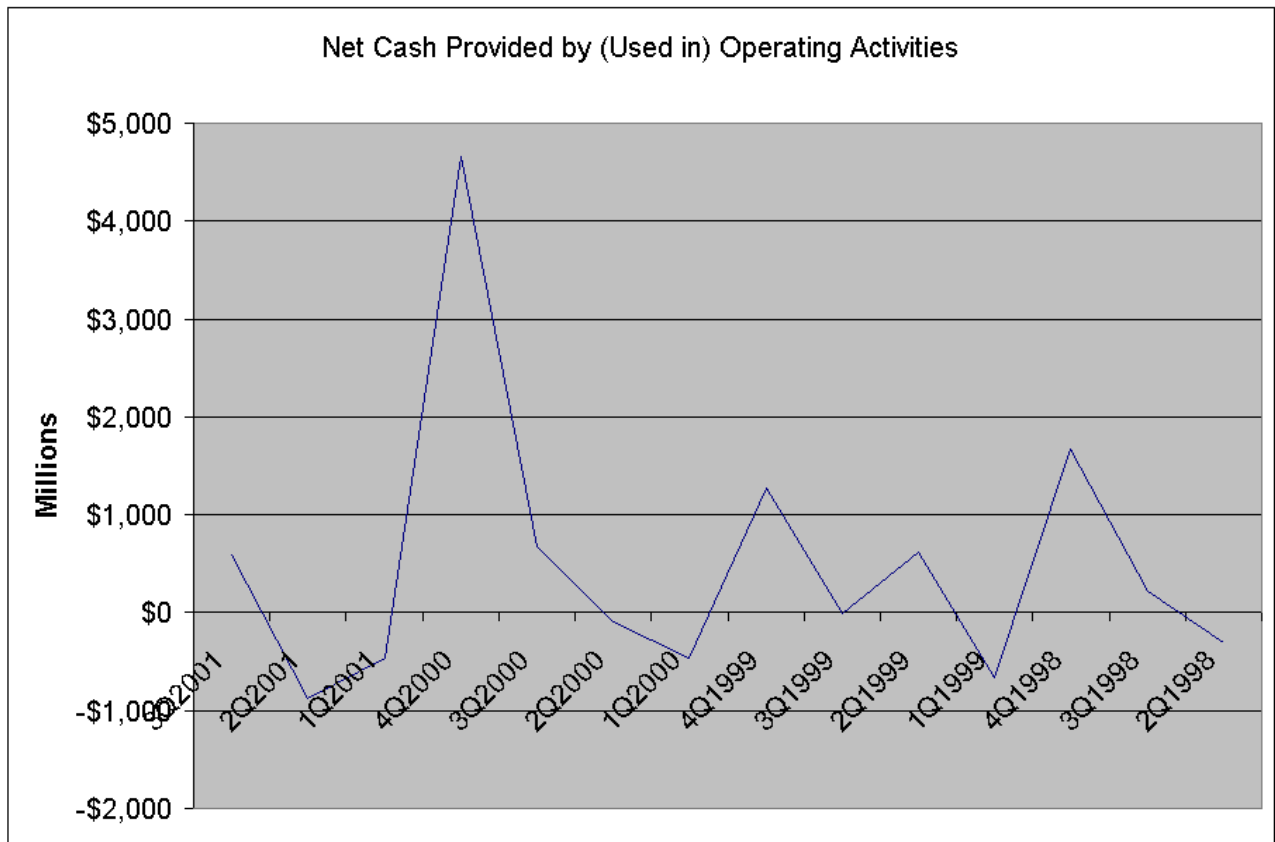
In spite of the rapid growth, net income per dollar of revenue has fallen dramatically over time.



As a percentage of revenues, Enron was earning 2% on revenues from 4th quarter 1998 through 1st quarter 2000. From 2nd quarter 2000 to the present, that percentage has fallen to one half of one percent. This is even more surprising when one remembers that the fabulously profitable markets in California started at the end of the 2nd quarter 2000 and lasted through 2nd quarter 2001.

The central issue in this analysis is cash. Where has the cash gone? While Enron was showing year after year of ballooning revenues and steadily climbing earnings (albeit at a much smaller rate), Enron's indebtedness was also increasing. In the context of the traditional asset based industrial, this would hardly be a contradiction – additional sales would require additional capacity to produce the products sold. Enron, on the other hand, made a point in its financial statements that it was not asset based. Recent statements, for example, explained their sale of assets as part of their overall strategy.¹

¹In 2001, Wholesale Services plans to continue to fine-tune its already successful existing energy networks. In North America, Enron expects to complete the sale of five of its peaking power plants located in the Midwest and its intrastate natural gas pipeline. In each case, market conditions, such as increased liquidity, have diminished the need to own physical assets. For energy networks in other geographical areas where liquidity may be



The 2000 Annual Report shows that debt (short term and long term) has tripled since 1996. We now know that this understated total obligations by \$6.9 billion of off balance sheet debt.² Based on the most recent information, short term and long term debt appears to have increased by a factor of five between 1996 and the present.

Analysis of financial statements is always more of an art than a science and Enron is hardly an exception. As a general rule, the balance sheet is the least dependable guide to the health of a company since the breakup value of its assets seldom resembles the accounting data. Moreover, the valuation of some assets reflects “good will” – an accountant’s way of showing the difference between historical and market valuation.

The income statement is more dependable, but it also has problems. Enron has adopted a “mark to

an issue, Enron will evaluate whether its existing network will benefit from additional physical assets.” 2000 Annual Report, page 24.

²Enron Corp Organizational Meeting, December 12, 2001, page 13.

market” methodology that allows them to estimate the value of multi-year transactions. Even audited “mark to market” figures should be taken with a grain of salt. First, future estimates of prices for natural gas and electricity are notoriously fickle – today’s estimates may simply be overwhelmed by tomorrow’s events. Second, such estimates should be taken from liquid futures markets. While a few do exist – NYMEX’s Henry Hub, for example – such markets are hard to find for many of the transactions Enron was apparently making.

The best analytical instrument is the reconciliation to cash flows. This should show the true cash position of the enterprise on a quarterly basis. Not surprisingly, Enron’s version of this analysis is difficult to follow at best, and misleading at worst. Cash from operations over the past twenty-one months is surprising:

On closer inspection, the peak in cash flow in 2000 turns out to be customer deposits related to the California crisis. Enron’s 2000 Annual Report states “At December 31, 2000, Enron held collateral of approximately \$5.5 billion, which consists substantially of cash deposits shown as "Customers' Deposits" on the balance sheet.”³ Attempting to track the deposit activity back to quarters is difficult. We know that the balance sheet records \$4.277 billion in customer deposits as opposed to the previous year when the liability is only \$44 million.

If we were to adjust the net cash flow from operations for \$5.5 billion in customer deposits, cash flow for calendar year 2000 would be approximately minus \$700 million. In 3rd quarter 2001, the consolidated statement of cash flows indicates that \$2.349 billion was repaid to depositors resulting in a net \$1.596 billion cash flow. Adjusting cash flows for sales of assets – a one time act that was not part of the core wholesale business – results in the following cash flow picture:

Calendar Year 2000: -2.559 billion

Three Quarters 2001: .953 billion.⁴

Against cumulative sales of \$100.8 billion in 2000 and \$138.7 billion in the first three quarters of 2001, this is an amazingly small amount of cash. Overall, Enron’s poor showing in the area of cash

³Enron’s 2000 Annual Report, page 39, footnote to the table under Credit Risk.

⁴Less proceeds from sales in Enron’s 3rd Quarter 10Q and the 2000 10K.

generation tends to bring their “mark to market” estimates into some question.

It would be unfair to leave this discussion without addressing Broadband Services. This subsidiary has been identified as a particularly questionable area.⁵ Trading in data transfer capability is highly speculative at best. Recent technological advances have devalued existing assets at a rapid rate, making the valuation of long term deals particularly speculative. Enron’s only large announced deal (later cancelled) with Blockbuster Video seemingly contradicted the trading only business plan that shows up in Enron’s financial statements. Moreover, the deal itself appeared to provide Blockbuster minimal benefits – savings on the production and distribution costs of DVDs.

Broadband Services was a disaster. Can it take the blame for the collapse of the entire enterprise? We now know that the revenues attributed to Broadband were exaggerated. Even assuming that they are zero, total losses at Broadband would only have been \$468 million.⁶ While embarrassing, the problems at Broadband simply do not seem to have the right scale to explain all of Enron’s problems –especially since EnronOnline had reported transactions in the range of \$195 billion in 3rd quarter 2001 alone. Clearly, this is a case of the princess and the pea.

Cash starvation was a hallmark of Enron’s decline after the 3rd quarter 2001 earnings announcements.

December 3, 2001: \$250 million in preliminary Debtor-In-Possession financing

November 21, 2001: \$450 million secured credit line from JP Morgan, \$690 million payable, disclosed on Nov. 19, had been extended to mid-December

November 9, 2001 \$1,500 million equity infusion from Dynegey in exchange for Northern Pipeline preferred equity

November 1, 2001 \$550 million secured credit line from JP Morgan

October 16, 2001: \$3,000 million borrowed on existing lines of credit, repayment of \$1,900

⁵Broadband Got Enron in Trouble, Washington Post, Peter Behr, January 1, 2002.

⁶Broadband showed a \$60 million loss in 2000 on revenues of \$408 million. Even assuming that all revenues were questionable, total losses would only have been \$468 million.

million in commercial paper obligations

The simple sum of these borrowings was almost \$6 billion – all taking place in the 4th quarter of 2001. While some of these borrowings may have reflected “super-recourse” repayments – repayments triggered by early warning signs – this seems unlikely given the revelations in the November 19th 10Q. If the only need for cash was super-recourse repayments, we would have to assume that Enron had only admitted part of the problem on November 19th.

We are left with the central question: Where did all of the cash go?

Super Recourse Debt

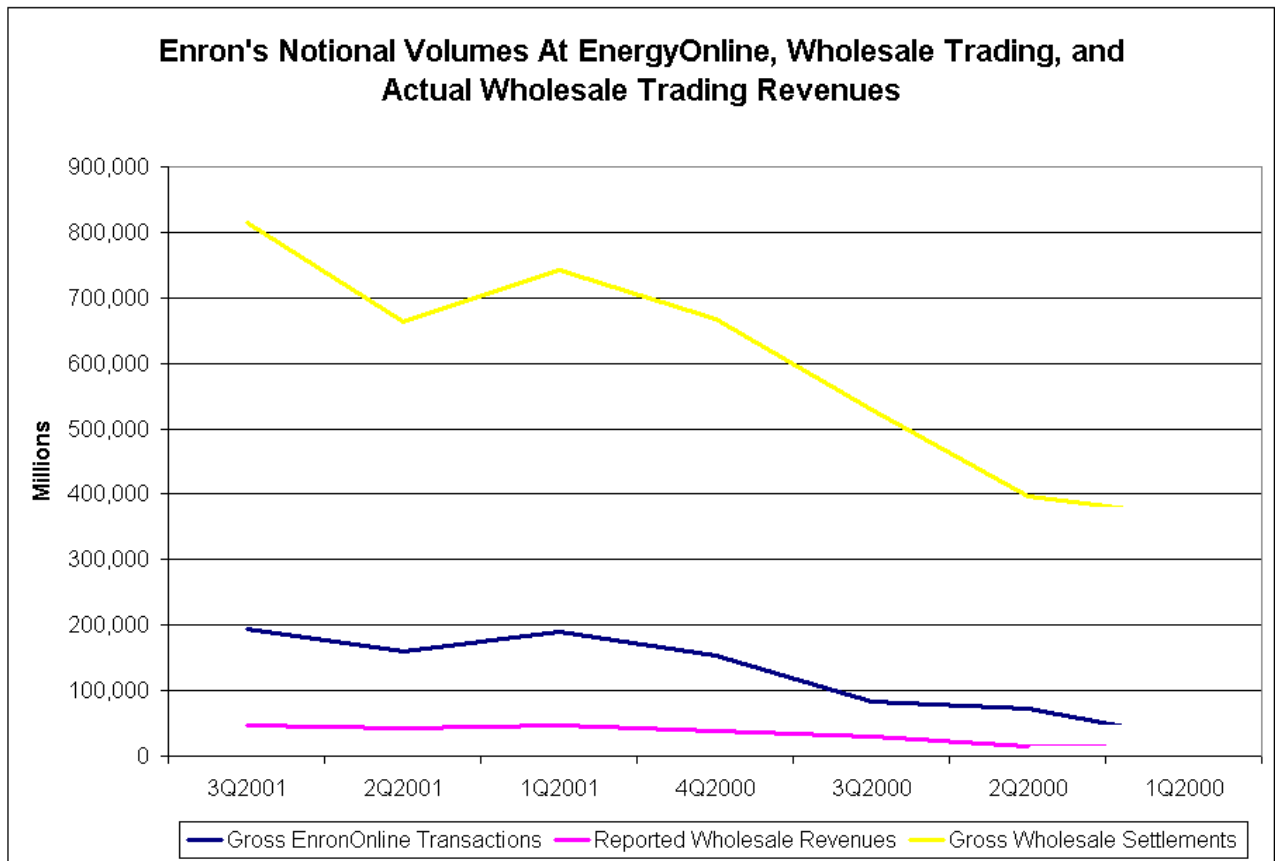
Most eastern cities have a financial mechanism that allows small firms to borrow significant amounts off the balance sheet. The local shylock will agree to not inform other lenders of his prior lien on the firm’s assets – even if they have already been promised to the bank. Instead, the lender practices a form of super-recourse lending – leg breaking – to assure that these debts are always paid first.

We now know that Enron had a number of similar financial arrangements. These super-recourse loans were more orderly – no gross physical trauma was necessary – but they were still very unusual. The Osprey Trust, for example, had recall procedures tied to stock price and bond ratings.⁷ This also applied to the similar “Marlin” investment. In effect, this means that any threat to Enron’s assets would trigger a payout to the Osprey and Marlin investors long before payouts to traditional bond holders would even be considered.

On November 19, Enron detailed a series of revelations concerning “triggers” that had led to an early repayment of a \$690 million dollar note owed by Enron. This trigger event was caused by the bond downrating – another example of super-recourse financing.⁸

⁷Many of Enron's Murky Financial Dealings Were for the Birds - Literally, Dow Jones Newswires, December 14, 2001.

⁸See Note 9 to the Consolidated Financial Statements in the 3rd Quarter 2001 10Q.



These super recourse financings are now a matter of record, but it still remains to be explained why the “most innovative company in the world” required such unusual financing mechanisms.

Hypothesis One: Last of the Dot Coms

In mid-1994 Mosaic Communications (later renamed Netscape) was formed to market a consumer browser for the world wide web. By 1995, Netscape had captured 80% of the browser market. Netscape’s IPO set a market valuation for the company of \$3 billion. By 1997, Netscape reached its apogee with a market capitalization of \$16 billion. As Netscape’s market share declined to 41%, AOL finally purchased the company for a mere \$4.2 billion in 1998. As with many other dot coms, Netscape was able to report enormous market penetration without making a profit.

Over the past year Enron’s success has been increasingly tied to the commercial popularity of its web site, EnronOnline. As of the 3rd quarter of 2001, EnronOnline notional revenues were approximately 500 times those of Amazon.com. Unlike Amazon.com and other dot coms, EnronOnline has

continued to grow at the rate of 12% per month over the past eighteen months.

Given the traditions in the electric business, the extraordinary growth of the site has been suspicious. Most electric transactions have always been arranged by phone and confirmed by fax. While it is possible that a major part of the total business in the industry had switched to the web, it feels like the success proclamations of a new mall built on a hard to find side road.

The chart below shows three sets of “revenues.” The lowest revenues are those actually declared by Enron for their wholesale trading unit. Next are the “notional” revenues reported by EnronOnline. The last and highest are the “notional” revenues arrived at by multiplying total physical and financial settlements (in MMBTU) by an assumed \$2.00/mmbtu.

The significance of the comparison is that EnronOnline’s growth is well within the envelope of Enron’s already declared notional transactions. Enron’s already announced trades funneled through EnergyOnline would explain much of the enormous growth in the value of on-line transactions.

Wholesale Americas’ growth had fallen off in the first three quarters of 2001, bringing into question the relationship between EnronOnline and actual results – in 4th quarter 2000, 20% of every dollar of reported EnergyOnline revenues appeared as revenues at Wholesale Americas, but in the 3rd quarter of 2001, this ratio had fallen to 15%.

Another way of looking at this paradox is that EnronOnline seemingly added \$544 billion dollars of notional revenues during calendar 2001 without adding significantly to Wholesale Americas’ income or revenues.⁹

⁹Our reconstruction of quarterly income before interest and taxes (IBIT) for Wholesale Americas is:

1st Quarter 2000: \$223 million
2nd Quarter 2000: \$227
3rd Quarter 2000: \$549
4th Quarter 2000: \$600
1st Quarter 2001: \$661
2nd Quarter 2001: \$582
3rd Quarter 2001: \$717

Third quarter values are taken from the 3rd Quarter 2001 10Q. First and second quarters are prorated by revenues. Fourth quarter 2000, is the difference between year end results and previous quarters, prorated between Americas and Europe by revenues. No adjustment has been made for deposits.

Enron has provided very little information on the cost and benefits of their on-line trading operation. One number cited to the press was a minimal \$15 million.¹⁰ The web site itself cites simple off the shelf software which would not require substantial investment.

Overall, while the numbers cited by Enron are suspicious, it would not seem that there was sufficient cost in this subsidiary to have foundered the entire enterprise. On balance, it appears that EnronOnline was a case of revenues and valuation unsuccessfully pursuing earnings.

Hypothesis Two: Ponzi Scheme

In 1919 an Italian immigrant named Charles Ponzi began the Securities Exchange Company. Like all good pyramid schemes, his company was based on the exploitation of a little understood mechanism – the International Postal Reply Coupon. The Postal Reply Coupon was an international stamp that could be exchanged for the local stamp in every participating country. Since exchange rates varied greatly after the First World War, an opportunity existed to arbitrage such coupons by buying them in countries with devalued currency and redeeming them in a country with a strong currency.

The Securities Exchange Company accepted \$1,000 investments, purportedly invested the money in the arbitrage of Postal Reply Coupons, and returned a 50% profit within three months. In practice, early investors were simply paid from the investments of later victims. As long as the growth rate of the firm exceeded 512% per year, enough income existed to repay existing commitments. If the growth rate falls below that rate, not enough cash can be raised to repay the current investors and the scheme collapses. Charles Ponzi was able to sustain that rate of growth until a law suit filed by an

EnronOnline Transaction Revenues:

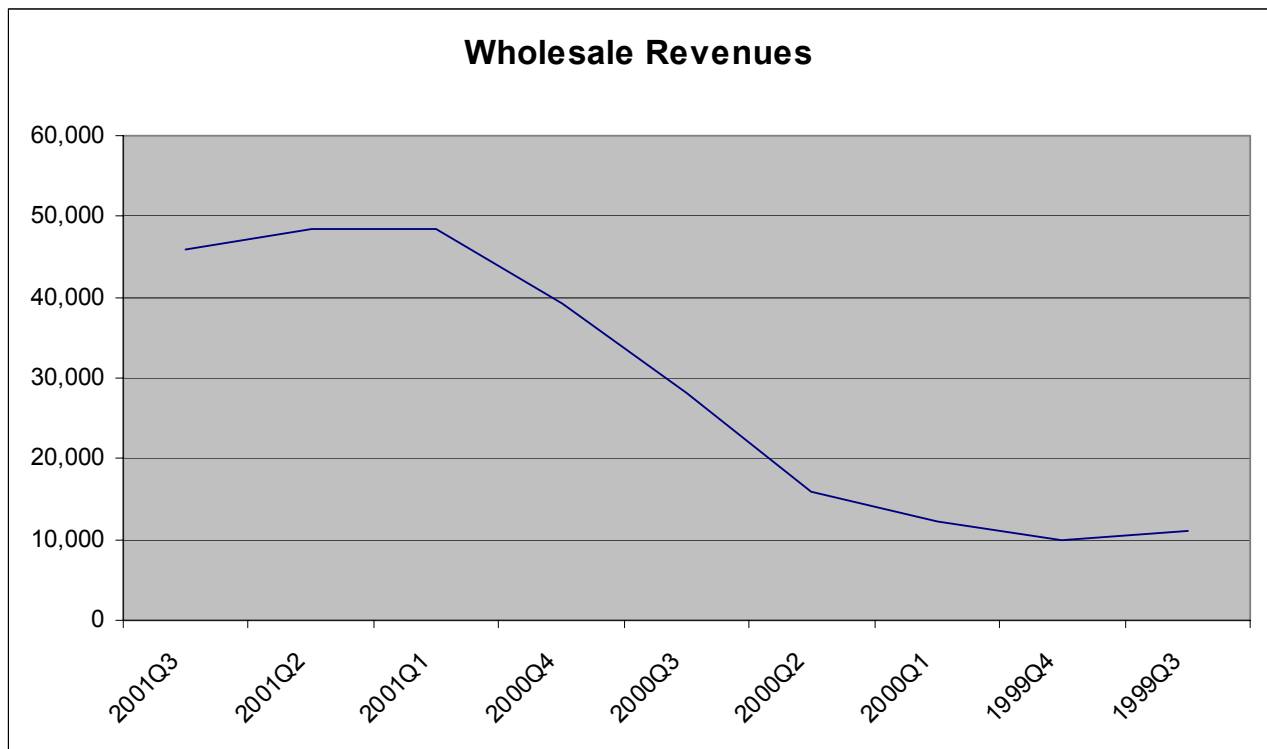
- 1st Quarter 2000: \$27 billion
- 2nd Quarter 2000: \$73
- 3rd Quarter 2000: \$83
- 4th Quarter 2000: \$153
- 1st Quarter 2001: \$189
- 2nd Quarter 2001: \$160
- 3rd Quarter 2001: \$195

All values are taken from Enron press releases.

¹⁰Power the Web, Darwin, October 1, 2001.

early partner froze much of his assets and started a run on the company. Interestingly, Ponzi stayed to the bitter end – maintaining that his company had substantial assets and a real source of profits.

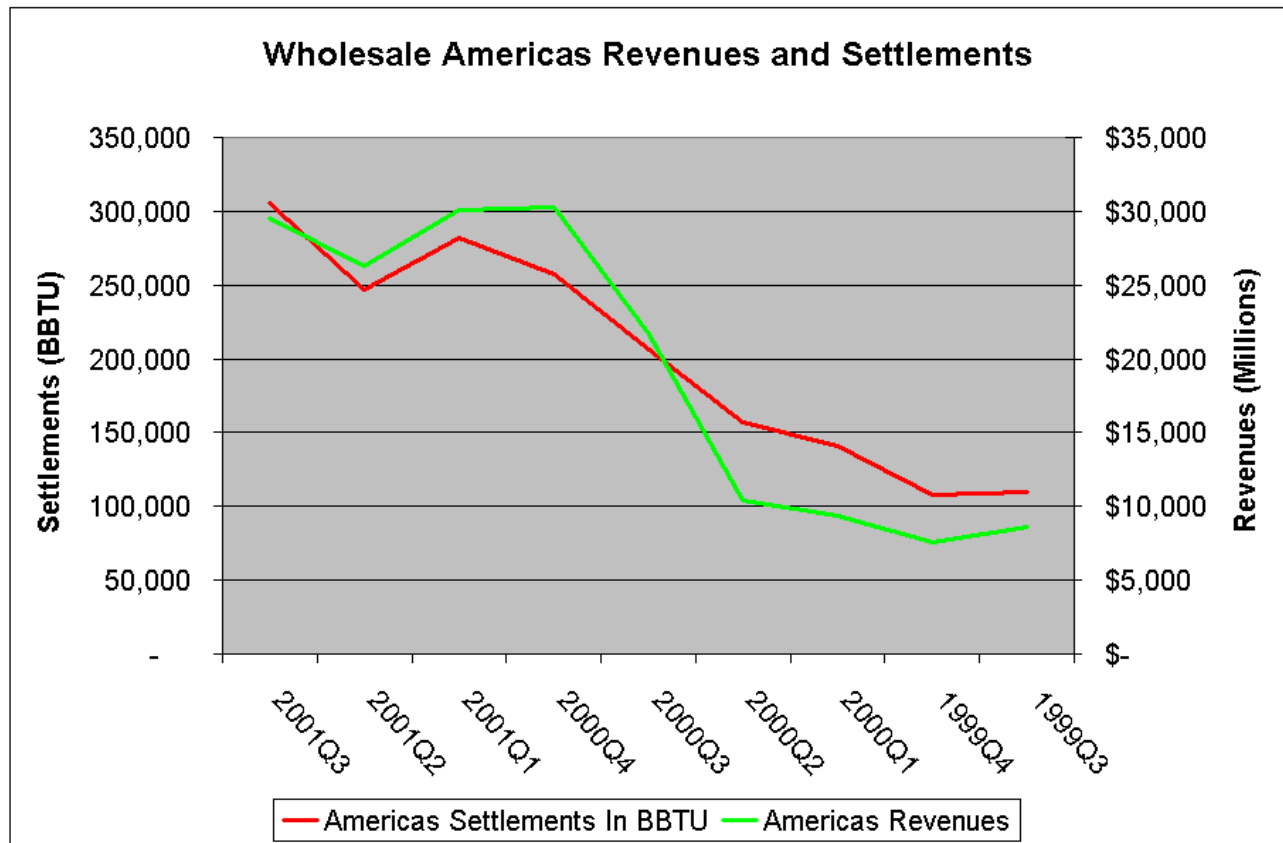
The central characteristic of a Ponzi scheme is that it is cash poor – financial reports may well show vast profits, but actual cash flows will be minimal, Ponzi’s Securities Exchange Company was profitable on paper, for example. Enron’s collapse certainly meets this standard. Other characteristics of Enron’s collapse also have the appearance of a Ponzi scheme as well.



Enron’s collapse this fall clearly should not have occurred. Enron’s revenues in 2001 had increased 132% over the previous three quarters in 2000. In any normal business the cash flow from this immense growth should have dwarfed any temporary problems. The hypothesis of a growth shortfall in revenues – the preface of a Ponzi style collapse – is supported by the abrupt leveling off of revenue growth in the second and third quarters of 2001. Revenues in the third quarter were \$2.5 billion less than the previous quarter’s.

The situation in Wholesale Americas, Enron’s primary engine of growth, is even more accentuated.

The following graph shows revenues by quarter and transactions in billions of BTUs.¹¹



The increasing growth in the quantity of BTUs transacted implies a significant – 10% in 3rd quarter 2001 -- fall in revenues per BTU.

The role of deposits in Enron revenues is particularly interesting. As mentioned above, Enron collected \$5.5 billion dollars in deposits in 2000. Over the first three quarters of 2001, they apparently returned \$2.349 billion to their customers.¹² If the lack of revenue growth in 2000 put pressure on cash, the return of the cash collected in 2000 would have accentuated the pressure considerably.

¹¹Enron often reports BBTU figures (billions of BTUs) for gas, oil, and electricity. In addition, they include both physical and financial settlements. In practice, these numbers are very subjective. Translating electricity into BTUs is subjective. Enron’s calculations supporting this transformation appear to have changed every quarter.

¹²3rd Quarter 2001 10Q, Consolidated Statement of Cash Flows.

The Prima Facie Case Against Enron

Enron's similarities to the Security Exchange Company are suspicious, but clearly aren't ironclad proof.

The basic similarities are:

1. Enron had a superficially plausible business plan that quickly lost credibility on deeper review. When Bethany McLean of Fortune Magazine attempted to probe Enron's business plan this spring, Enron's CEO, Jeff Skilling, quickly became agitated and hung up on the reporter.¹³ Each Enron financial report announced a new and more exotic reason for their success. In 1999, for example, they reported:

Enron operates networks throughout the world to develop and enhance energy and broadband communication services. Networks, unlike vertically integrated business structures, facilitate the flow of information and expertise. We can spot market signals faster and respond more quickly. Networks empower individuals, freeing them to craft innovative and substantive solutions to customer problems. Networks are the foundation of our knowledge-based businesses, and they provide exceptional returns and value for our shareholders.¹⁴

The 2000 Annual Report added:

Our business has flourished with EnronOnline. Launched in November 1999, EnronOnline handled 548,000 transactions in 2000 with a gross notional value of \$336 billion. EnronOnline is unquestionably the largest web-based eCommerce site in the world and dwarfs all other energy marketing web sites combined. By the fourth quarter of 2000, it accounted for almost half of

¹³Why Enron Went Bust ; Start with arrogance. Add greed, deceit, and financial chicanery. What do you get? A company that wasn't what it was cracked up to be, by Bethany McLean; Additional Reporting by Nicholas Varchaver, John Helyar, Janice Revell, and Jessica Sung, 12/24/2001, Fortune Magazine.

¹⁴1999 Enron Annual Report, page 2.

Enron's transactions over all business units. EnronOnline has pushed productivity through the roof: Transactions per commercial person rose to 3,084 in 2000 from 672 in 1999. EnronOnline Version 2.0, launched in September 2000, has attracted more users with its additional functionality.¹⁵

In sum, a careful reading of Enron's business plan yields little substance.

2. Enron has averaged a quarterly revenue growth of 39% per quarter over 2000. This growth rate compounds to 371% per annum. This rate of growth isn't impossible, but it is remarkable considering that Enron main products were neither new to the industry, nor terribly well implemented. Although any review of their business skills is necessarily anecdotal, doing business with Enron was often very difficult. Rapid staff turnover meant low levels of experience and training. Enron frequently abandoned markets entirely. When Enron could be contacted, the staff was minimally competent, and if the company was eager to do business, Enron often was simply too slow to respond in a real market environment.¹⁶
3. Financial reporting was minimal and often contradictory. It isn't difficult to find obvious errors in their financial statements. For example, in their Third Quarter 2001 earnings announcement, Enron reported that their three month physical transactions were greater than their transactions for the nine month period.¹⁷ Enron's discussion of risk was especially questionable. At the end of 2000, Enron's 10K reported that value at risk for the company averaged \$50 million over the year.¹⁸

¹⁵2000 Enron Annual Report, page 11.

¹⁶Our experience with Enron included several cases where Enron staff simply couldn't understand the transaction (Pacific Northwest), two cases where Enron staff attempted to discourage the customer from doing business (Washington and Illinois), abandonment of the market (California), inability to quote prices (Texas), and an inability to keep up with the market in a timely fashion (Oregon.)

¹⁷Page 2 of the summary tables supporting the press release indicates that year to date physical volumes in electricity are 25,642 BBTU while the current quarter was 31,507.

¹⁸Enron 2000 Annual Report, page 28. Many of Enron's comments in this section are particularly worrisome. The narrative reports that they were using simple financial tools taught in any undergraduate curriculum to evaluate risk. On the other hand, one large power contract in 2000 would have vastly more risk than the \$60 million reported for the entire company – as any one of the three utilities in California would now acknowledge. Taken at face value, this section clearly states that almost all Enron transactions were fully hedged.

4. Enron’s central business – trading in the U.S. and Canada – stopped growing after the first quarter of 2001. This is the central indication that without the rapid rate of growth that Enron would not be able to continue – a critical feature of Ponzi schemes. Since the third quarter, Enron has desperately sought additional cash in huge amounts – another sign of a decaying pyramid scheme.

Where is the Cash?

Accounting standards recognize the difference between earnings and cash. The most common example of the difference between earnings and cash is provided by firms with significant time lags in receivables. For example, firms that sell cars may not see the actual cash involved in the purchase until late in the life of the transaction. Clearly, this would give a biased view of the health of the business. Accounting on a cash basis would always show the firm to be losing money during good years because of the delay in receivables.

In Enron’s case, a mechanism known as “mark to market” was adopted. This approach allowed the company to recognize the forecasted earnings of any deal in the current quarter even if the actual costs and revenues might be stretched out as far as twenty years in the future. There are two reasons why such a practice is worrisome. First, forecasts of the revenues and costs rely on the existence of liquid futures markets for electricity and natural gas. Even the most liquid of such markets is seldom very liquid for future years. Second, the actual structure of the deal itself is subject to a variety of risks that cannot be smoothly forecasted – bankruptcy risk, for example. Market to book might provide high earnings, but little if any cash in the early years of a multi-year transaction.

We have very little evidence on the average duration of Enron transactions. Almost all electric transactions are of longer term than a month. Transactions greater than five years have traditionally been the rule. Theoreticians at FERC and the California energy agencies have tended to prefer to force utilities into short term purchases. Since short term contracts have little capacity value, they tend to be low value compared to longer term transactions.

Enron’s discussion of market risk and footnote 3 to their 2000 Annual Report would appear to indicate that they have a considerable book of longer term transactions.¹⁹ If so, the difference between

¹⁹Enron 2000 Annual Report, page 38.

earnings and cash can easily become very significant.

As discussed above, Enron's net cash flow from operations – deposits and asset sales held constant – was an enormous -\$2.559 billion in 2000. This brings into question the quality of Enron's earnings and its utility for evaluating corporate performance.

What Would Be The Likely Mechanics?

With sufficient growth in long term contracts, long term booked earnings could continuously offset short term losses.

The following example demonstrates one possible technique for maintaining earnings in the face of negative cash flows:

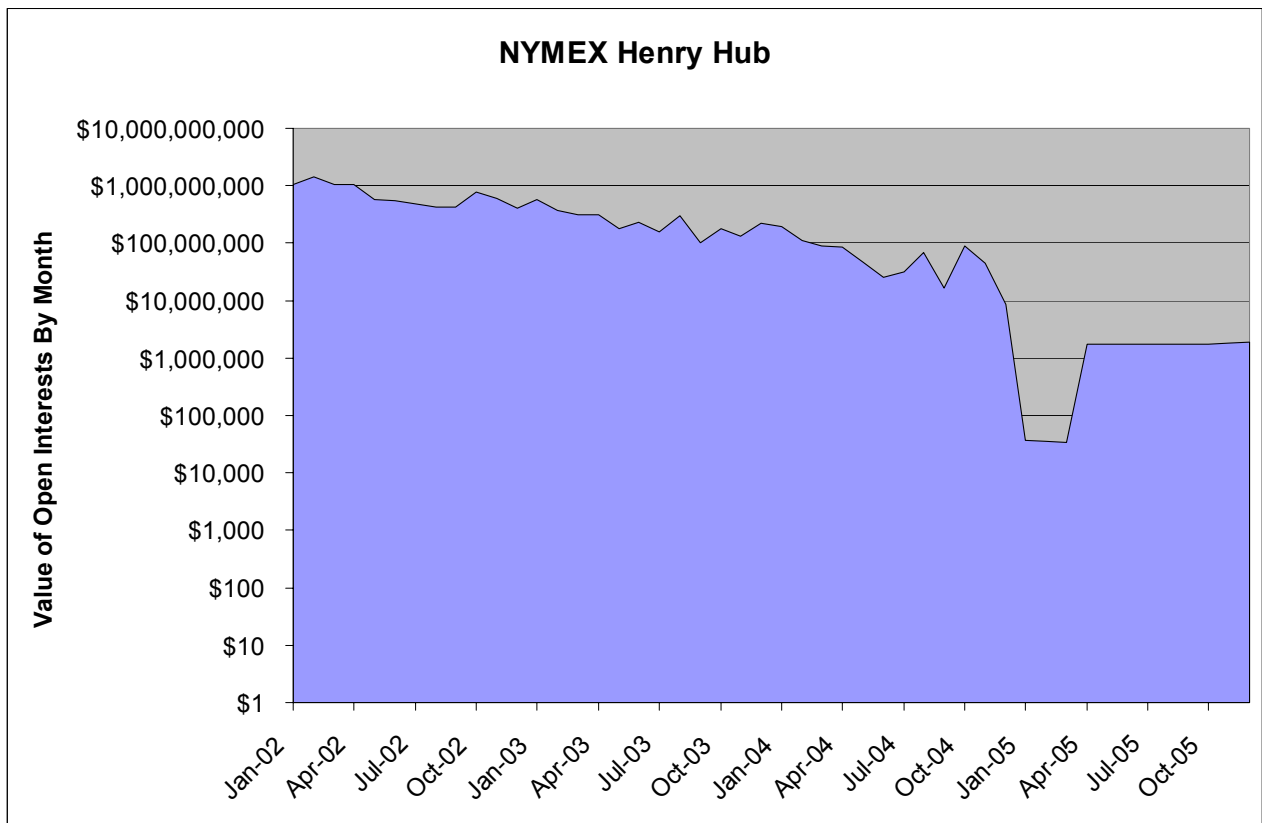
1. Assume a transaction where five years of electricity was purchased at a fixed price for resale in future spot markets. Since a five year supply is more valuable than a spot supply, such a contract would lose cash in the first year. If the contract was valued with a future curve that forecasted the spot price of electricity approaching the fully allocated cost of a new power plant, the contract would be cash flow positive in later years.
2. Using Enron's mark to market approach, the present value of such a contract would be positive, even if it lost money in the first year.
3. Since there is no independent market in long term electric futures, the future curve used in the evaluation is based on bilateral trades between different parties in the market. While such future curves are easy to derive, the liquidity of the market after the current year is very thin.
4. If, as has been the case in competitive power markets for the past twenty years, the price of power in the following year was less than the fully allocated cost of a new power plant, last year's contract would lead to a loss in the second year.
5. A second power contract, 50% larger than the first, would provide enough mark to market earnings in the second year to offset the realized loss on the contract from the first year. Cash flow would now be worse than in the first year – since a loss in the first year of the new

contract would be increased by the unanticipated loss in the second year of the first contract.

6. With sufficient growth in volume, earnings can be positive in each year, while cash flows continue to deteriorate.
7. Like any other pyramid scheme, such an approach will fail when sales growth cannot be sustained.

How Liquid Are Forward Curves?

This graph shows the value of the open interests by month at Henry Hub outside of New Orleans. Henry Hub is generally accepted as the energy industry's most liquid market. NYMEX quotes bid and asked prices at NYMEX for years in advance.



The vertical axis is logarithmic – each step up the graph reflects a 1000% increase in the value of open

interests at Henry Hub. The value of open interests in December for January was over one billion dollars. The value of open interests at Henry Hub from April 2005 on is only one million dollars.

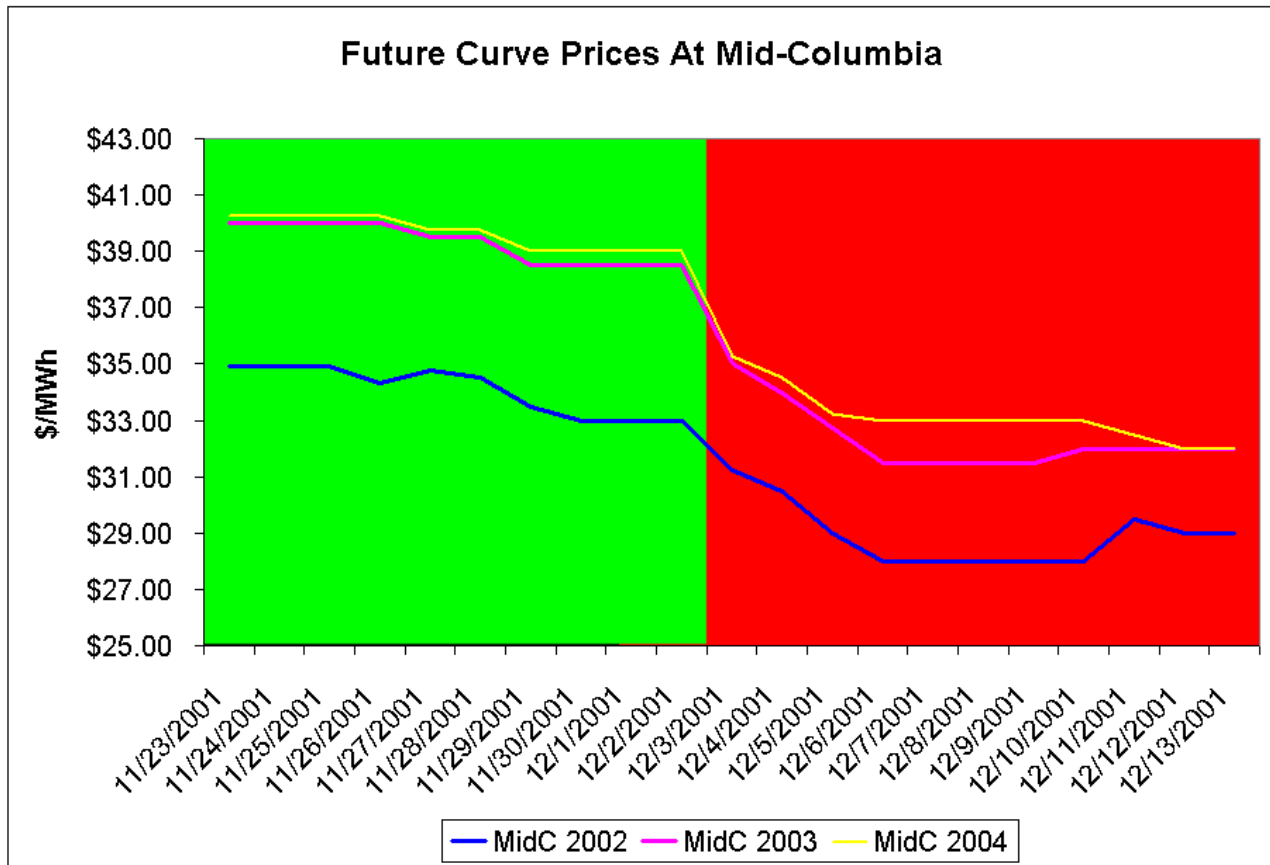
In January 2002, any attempt to affect the forward price would require an enormous investment. Influencing the price for spring 2005, on the other hand, is not a challenge. An investment of \$50,000 could easily set the market for these months.

There is some anecdotal evidence that the sheer scale of the transactions reported at EnergyOnline had a potent effect on the expectations of other traders.²⁰

If Enron was managing the forward curves in order to validate their mark to market accounting, we would expect to see an impact now that they have ceased active trading. As a matter of fact, such an anomalous result did occur the week that Enron declared Chapter 11.

The following chart shows forward prices from Platts' Energy Trader for several weeks before Enron's Chapter 11 announcement (marked in green) and several weeks afterwards (marked in red). The forward curve declined 30% on Enron's announcement. No other long term events took place during this period. Estimates of snow pack occur at the end of the month of December – not at the beginning. Moreover, snow pack changes would not affect prices for 2003 and 2004.

²⁰“Traders relied on EOL to set prices for virtually any deal they struck, regardless of whether the trade was executed at EOL, ICE or over the phone with an energy broker or another power company, said Peter Garratt, trading portfolio manager at Minnesota Power Inc. subsidiary MPEX.”, InternetWeek, December 6, 2001.



Again, this is simply corroborative – it does not prove that Enron was managing outyear future curves in order to affect their mark to market earnings. If they were, however, this is exactly the pattern we would expect to see once they had withdrawn from the market.

Hypothesis Three: Barings Bank

In 1995, unauthorized trading by Nick Leeson, a trader at the venerable Barings Bank, bankrupted the entire enterprise. Mr. Leeson had run up outstanding futures obligations of \$27 billion in Japanese equity and bond markets. Immediately before Barings bankruptcy, Barings was forced to transfer \$835 million to meet margin obligations. Interestingly, Leeson’s activities were viewed as profitable until the full impact of his trading activities became known.

Enron’s financial reporting indicates that the risk of such a problem at Enron is very small. The risk

management section of the 2000 Annual Report includes the following very reassuring table:²¹

(In millions)	December 31,		Year ended December 31, 2000		
	2000	1999	Average ^(a)	High Valuation ^(a)	Low Valuation ^(a)
Trading Market Risk:					
Commodity price ^(b)	\$66	\$21	\$50	\$81	\$23
Interest rate	-	-	-	-	-
Foreign currency exchange rate	-	-	-	-	-
Equity ^(c)	59	26	45	59	36
Non-Trading Market Risk^(d):					
Commodity price	2	1	2	5	2
Interest rate	-	2	1	2	-
Foreign currency exchange rate	8	4	8	10	4
Equity	7	3	6	7	5

(a) The average value presents a twelve month average of the month-end values. The high and low valuations for each market risk component represent the highest and lowest month-end value during 2000.

(b) In 2000, increased natural gas prices combined with increased price volatility in power and gas markets caused Enron's value at risk to increase significantly.

(c) Enron's equity trading market risk primarily relates to merchant investments (see Note 4 to the Consolidated Financial Statements). In 2000, the value at risk model utilized for equity trading market risk was refined to more closely correlate with the valuation methodologies used for merchant activities.

(d) Includes only the risk related to the financial instruments that serve as hedges and does not include the related underlying hedged item.

Clearly, these values are no longer credible. Given Enron's discussions in Note 3 in the Annual Report, the exposures were likely to be far greater than those reported in this table.²² The contradiction becomes even more obvious as EnronOnline reached quarterly trades of \$195 billion. Recent press coverage on EnronOnline indicates that individual traders had recently been allowed to set the buy and sell prices on the web site – another practice that makes the very low value at risk estimates doubtful.²³

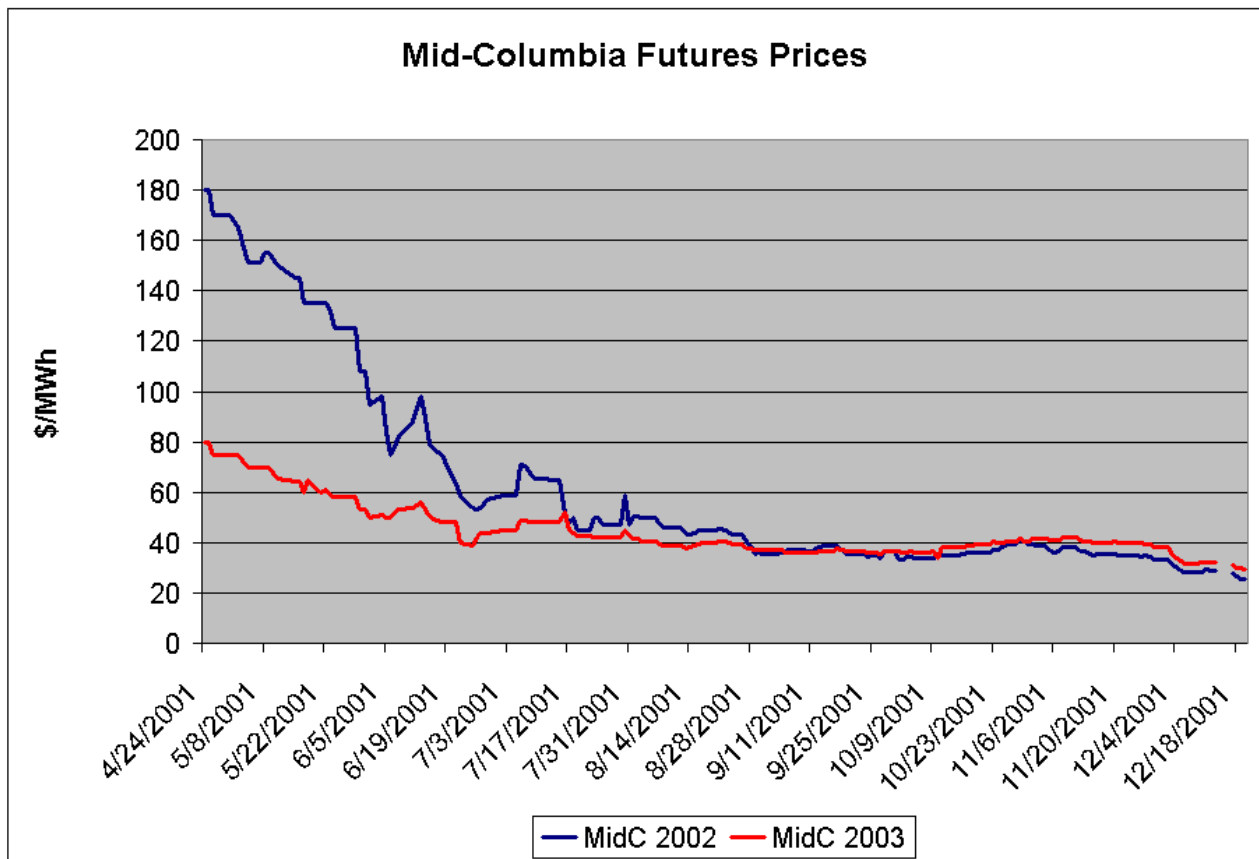
Enron has used more than \$5.75 billion in cash since it announced its 3rd quarter results. Enron

²¹2000 Annual Report, page 28.

²²Page 38 of the Annual Report identifies financial swaps in gas, oil, and electricity of \$13.1 billion with terms that extend as far out as 24 years. To make the statements on page 28 consistent with the values on page 38, Enron would have to have been completely covered on almost all future transactions.

²³December 6, 2001, Life After EnronOnline, Jade Boyd.

management has not provided any explanation why the company has had such high net cash requirements.



What is the possibility that Enron has lost a substantial portion of this \$5.75 billion in trading setbacks? Electric and gas futures have declined significantly in 2001. Enron, like any other player, faces market risks for major price shifts. The west coast markets, in particular, have been almost impossible to forecast.

The sudden decline in 2002 and 2003 futures prices in the 2nd quarter of 2001 surprised almost all market participants. A significant outstanding position could easily have led to the drain on cash described above.

There are reasons why this scenario seems unlikely, however. Enron’s bankruptcy filings do not show major amounts owed to other traders. The largest exposures appear to be to Enron’s lenders. While it is possible that Enron made sure to settle its trading losses before it declared bankruptcy, it seems very unlikely that its secured debt holders would have tolerated an arrangement where other creditors

were paid first.

Conclusion

The causes of Enron’s collapse will remain unknown until a detailed post mortem can be conducted. The sense from a detailed review of Enron’s financials is of a firm whose announced income seldom matched its cash flows. While Enron was able to maintain high rates of growth, it was able to disguise its chronic lack of cash through super recourse financings and the collection of deposits. Once Enron’s sales leveled off after 4th quarter 2000, maintaining the illusion of prosperity proved impossible.

The suspicion the facts leaves is that strong revenue growth – even at the expense of declining margins – was used to create the illusion of manifest destiny. The use of mark to market accounting in an environment where the prices of future energy supplies is highly subjective is an incentive to abuse.