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The Real Lesson of Enron's Implosion: Market Makers Are In the Trust Business

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The Real Lesson of Enron's Implosion: Market Makers Are In the Trust Business*

R. Preston McAfee

Summary

How did Enron, a firm worth \$60 billion, collapse over the discovery of a billion or so in hidden debt and fraudulent accounting? It didn't. Or, at least, not directly. Market makers like Enron and Ebay are in the "trust" business, just as banks and insurance companies are. Once trust was lost, the rest of Enron's value quickly disappeared. The maintenance of customer trust is an important, and frequently mismanaged, aspect of business strategy. The legislative response of Sarbanes-Oxley may do some good, but cannot really ensure trust.

KEYWORDS: Enron, signaling, trust, bank run, expectations, eBay

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In 2001, in a matter of months, Enron's revenues went from over \$100 billion per year, to nearly zero.¹ Why?

Most of the news accounts have focused on criminal activities by management. In particular, they focused on the accounting scandal and the hiding of debt through swaps, trusts and partnerships that kept liabilities off Enron's public books.

But that's not the whole story. The real lesson of Enron is that *market makers are in the trust business*. And this lesson indicates that the Sarbanes-Oxley Act, passed to prevent problems like Enron's, will reduce but not eliminate future failures of businesses that like Enron are in the trust business.

Why Did Enron's Profits — and Real Value — Disappear?

At the time of its collapse, Enron's market capitalization exceeded \$60 billion, after growing at over 50% per year for a decade.² The company collapsed after the revelation of \$1.2 billion in hidden debt. This represented the visible portion of something over \$8 billion in total hidden debts, a fraction of the value of the enterprise.

Moreover, the Enron business model provided real value to its customers, permitting them to contract over longer time horizons and to improve risk management. So why did a company that was making a profit and providing real value to customers vanish so abruptly? Why aren't the profitable lines of business operated by Enron thriving today?³

Enron was hardly unique in using dubious accounting practices. AOL, for example, had expensed its ubiquitous free CDs as capital investments, permitting AOL to delay expenses associated with the CDs appearing on its balance sheet. And, to take another example, Xerox changed its accounting practices in 1997 to include future lease payments as part of current income. This is a legal practice, but the company's failure to announce the change made the market perceive a

¹ Enron Corp. 10-K FYE 12/31/2000.

² "In its haste to buy the Houston-based power trader, Dynegy overlooked how Chapter 11 might change its M&A plans," Daily Deal, 12/19/2001.

³ UBS Warburg's attempt to restart EnronOnline under the name UBSWenergy.com has had a rocky start.

jump in income, which increased the price of the stock. (Xerox was later fined for this and other accounting irregularities.⁴)

So why did Enron collapse, when other firms with questionable accounting survive? The answer is that Enron's business-model was hostage to the trust that customers placed in Enron's financial integrity. Once confidence in Enron waned, as I will explain, participants in Enron's innovative markets were unwilling to engage in the purchasing or selling of a long-term contract that might not be fulfilled. Bid-ask spreads diverged, and Enron's markets unraveled.

Classic "Trust Business" Companies: Banks and Life Insurers

There are two major well-known businesses in the trust business: banks and life-insurance companies.

Banks generally take money from depositors on a short-term basis, but loan it on a long-term basis, and only keep a small fraction of their assets available as working capital. Thus, if too many depositors try to withdraw funds from a bank, the bank won't have adequate cash on hand to service them, and customers will be turned away without receiving their cash.

In the absence of trust, the fear of such an outcome will cause all depositors to attempt to be first in line to withdraw their funds -- yielding a bank run. What assuages that fear, and prevents the bank run? Trust. Put bluntly, the bank fails when customers cease to trust the bank.

Banks built beautiful stone offices to visibly advertise their assets, as a means of signaling financial integrity, a behavior that continues to a lesser extent even today. Bank managers are acutely aware of the importance of depositor trust. And the federal government has chosen to cement that trust further through insurance. (Most of the risks of bank runs in the U.S. were eliminated by FDIC insurance providing up to \$100,000 insurance per person against the collapse of insured banks.)

A lack of trust is a self-fulfilling prophecy. When depositors cease to believe in the financial integrity of a bank, the bank will fail even if it is financially sound. A loss of trust *causes* a failure, thus justifying the loss of trust.

⁴ "Xerox agrees to pay \$10-million SEC fine," Providence Journal-Bulletin, 4/2/2002.

Indeed, even a false rumor of financial shenanigans could bring down an uninsured bank.

Like banks, life-insurance companies are also in the trust business. Customers deposit money with a life-insurance company for decades, building up equity; should the insurance company fail, the investment is lost.

Thus, customers rationally hesitate to use a life-insurance company that isn't financially solid, and insurance companies signal their financial stability by using careful and public accounting, by building enormous skyscrapers and even calling themselves "the Rock."

Regulation and government oversight help companies in the life insurance industry by reducing the likelihood of failure and reducing the fear of hidden financial problems.

Why a Market Maker, Such as Enron, Is in the Trust Business

Enron was in the trust business for precisely the same reason as insurance companies. Enron's largest business was in natural gas contracts, and Enron itself created the long-term natural gas market. It served as a market maker, offering to buy or sell long-term natural gas contracts.

An important attribute of Enron's business was that Enron was a party to every transaction — buyers and sellers didn't contract with each other, but with Enron. Thus every trader has credit exposure to Enron, and the value placed on a contract depends on Enron's creditworthiness. This exposure is larger in long-term contracts, especially for buyers who pre-pay some or all of the contract.

So as Enron began to look shaky, buyers began to bid lower — the value of a contract fell with the risk. Sellers began to ask for more, again because of the risk that the contract might not be fully consummated.

As a consequence Enron's profit margins shrunk or disappeared, disabling the market, and leading to Enron's collapse. Holders of existing contracts attempted to resell their contracts, in order to eliminate the increasing risks that they faced, a process that led to the evaporation of Enron's trading market.⁵

⁵ Former Enron CEO Jeffrey Skilling compared Enron's collapse to a bank run in his Congressional testimony (House Energy and Commerce Committee, February 7, 2002). Skilling described it as a liquidity problem rather than a loss of confidence, however.

This logic extended not just to Enron's natural gas market, but to electricity, plastics, chemicals, metals, oil, fertilizers, coal, freight, tradable emissions (pollution) permits, lumber, steel, and other markets that Enron had pioneered. Indeed, Enron even bought and sold hedges against bad weather, and the buyer of such a hedge depends on Enron's ability to meet its financial obligations.

What Determines How Much a Given Business Relies on Trust?

Of course, every company relies on a good name and customer trust to some extent. But most businesses are not in the trust business to the extent of banks, insurance companies and market-makers like Enron.

When you buy a car or a computer, the long-term survival of the seller is of modest importance. Because third parties manufacture spare parts and offer service, buyers have alternatives to future dealings with the manufacturer. When you buy a seat in a movie theater, the long-term survival of the seller is irrelevant: The chance that it will shut its doors halfway through your film is basically nil.

The companies that produced the goods Enron traded — steel, energy, oil — are generally *not* in the trust business, because the products they sell can be examined for quality, and buyers generally didn't rely on reputation in evaluating the products.

In contrast, because Enron bought and sold contracts for delivery of these products into the distant future, it was more like a bank or insurance company than a seller of physical products. Enron, indeed, was involved in both long-term financial services through its contracts, and in the creation of markets, and both of these require trustworthiness.

Enron's Management Failed to See The Key Role of Trust in Its Business

There is little doubt that Arthur Andersen, Enron's auditor, failed to do the job it was hired to do, which was to ensure the integrity of Enron's accounting system. It strains credulity, however, to think the management of Enron fully appreciated the extent to which their business was the trust business.

Had management appreciated the extent to which their business could evaporate overnight, they likely would have been much more risk averse about the appearance and the fact of accounting impropriety. Too much was risked, for too little gain, in Enron's accounting mischief to be consistent with an understanding of customer confidence and trust.

Other Companies That Fail to See Trust Is Key: Intel and eBay

Enron executives had every incentive to understand that their business model relies on trust, but they did not. They were far from alone in that error. It is all too common for companies to fail to appreciate the importance of customer trust.

Consider computer processor manufacturer Intel. Intel concealed the Pentium bug — the 1994 failure of the processor to correctly compute some floating-point divisions — until it was independently discovered by a mathematician.⁶ That Intel concealed the bug said to the world, 'There might be another bug, and you can't trust us to reveal it.'

To make matters worse, once the bug *was* revealed, Intel initially declined to replace the Pentium unless customers could show a "need" for scientific accuracy. Even when caught, Intel tried to avoid responsibility!

This behavior harmed customer confidence in Intel and provided a major advantage to rivals AMD and IBM (manufacturer of the PowerPC processor). After all, if the Pentium doesn't always work correctly, and Intel doesn't stand behind their product, why not buy from the less expensive competition?

The poster child for the failure of management to appreciate the trust business is trading giant eBay. There are an increasing number of fraudulent transactions on eBay — and eBay has not realized that its business hinges on stamping them out.

Buyers rely on the eBay-provided transaction history of sellers, where previous buyers report that sellers provided the goods as described. And that opens up the possibility of several frauds.

⁶ "How to drive a chipmaker buggy: A math maven says the laws of flaws make it tough for Intel to avoid Pentium's woes," Washington Post, 2/9/1995.

For instance, good reputations can be hijacked (by a criminal cracking a legitimate seller's password and promising but not delivering goods). Deceptively good reputations can also be created with the sale of a few low-priced items — with the buyer intending all along to defraud subsequent customers.

eBay could easily prevent this latter fraud by calculating reputation by dollar amount sold, not number of sales — but it does not. Seemingly, eBay has missed the point that trust is a matter of money risked, not just number of deals.

Some groups of items, such as large kitchen appliances, appear to have continuing fraudulent sellers and little reaction from eBay. eBay appears to take the view that it creates the market, and *caveat emptor*: Let the buyer beware.

But as with Enron, a loss in confidence in eBay will make the market evaporate, and lost confidence will not easily be restored. One large, public scandal involving eBay's failure to police the marketplace could sink the entire company.⁷

Some consumers might substitute to alternative auction hosts such as Yahoo! and Amazon. But many might stop using online auctions altogether — going back to the offline options of flea markets, consignment shops, and so on. A collapse of eBay could disintermediate the market, a major loss for consumers.

The True Lesson Of Enron: The Loss of Trust Can Be Disastrous

What are the lessons of Enron's collapse? It turns out that they're only partially about accounting. It's far more effective to behave with integrity, because you realized your business depends on it, than to hire someone to ensure you have the minimal integrity necessary to satisfy regulators.

For many businesses, customer trust is an important part of the value of their business. Trust is especially important in long-term contracting (banking), when the quality of products is difficult to observe in the near term (medicine, law, or estate planning), and when the value of the product increases when many participate (network goods like operating systems and markets). The less easily

⁷ "Making Losers of Auction Winners," The New York Times, 3/7/2002, "Hot Wheels now hot commodity," Desert Morning News, 7/1/2003, "eBay tops Wall Street expectations, improves outlook for 2004," The Associated Press State & Local Wire, 1/21/2004.

customers can see the quality of the product or service and the more they care about this quality, the more important trust will be to the company.

Enron's hedging and options trading required trust in the creditworthiness of the company, and when that trust was destroyed, the lack of it became a fatal Achilles' heel for the company.

An important element of the trust business is that a loss of trust cannot be contained; it will spill over into all aspects of a company's operations. Enron's hidden debts destroyed all of its businesses, including the ones that were profitable. When customers believe a company behaved poorly about one product, customers' beliefs will tend to transfer to that company's other products.

Sarbanes-Oxley Is Not the Whole Solution

The Sarbanes-Oxley Act was specifically designed to prevent the kind of violation of trust committed by Enron and Arthur Andersen. Had the Act been passed earlier, would Enron's collapse have been averted? Probably not.

The Act will likely reduce complicity in accounting mischief by accounting firms, and increase the reliability and thoroughness of accounting data, and hence enhances trust. The Act also improves and clarifies reporting standards, again enhancing trust. The Act would have, for example, made Enron's prepaid swaps (which hide debts) transparent to investors. Had the Act been passed in 1992, it would have been harder for Enron to hide debts and it likely would have hidden less.

However, the problem with trust is that it is difficult to legislate trustworthiness. The discovery of even small hidden liabilities may translate into a large loss in confidence. So unless Enron's accountants perfectly policed the company, a lesser but still significant deceptive behavior could still have taken Enron down.

It doesn't seem likely that Sarbanes-Oxley will mitigate the threat to the trust in eBay, since the problems are with eBay's policing of fraudulent sellers rather than with eBay's accounting practices. So if eBay itself doesn't start taking trust seriously, another titan may fall — and Sarbanes-Oxley won't have made much difference.

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Further Reading:

Fox, Loren, *Enron: The Rise and Fall*, Wiley, 2002.

McAfee, R. Preston, *Competitive Solutions: The Strategist's Toolkit*, Princeton University Press, 2002, Chapter 13.

McLean, Bethany and Peter Elkind, *Smartest Guys in the Room: The Amazing Rise and Scandalous Fall of Enron*, Portfolio Press, 2003.

Spence, Michael "Job Market Signaling," *The Quarterly Journal of Economics*, Vol. 87, No. 3. (Aug., 1973), pp. 355-374.