



Volume VIII

Number 9

## **Credit Risk and Chaos Theory**

**What Do Today's Headlines Tell Us About the State of the Markets?** "The hip bone's connected to the thigh bone," says Michael Carter, who is Triple Point Technology's director of credit solutions and who has managed credit desks at a variety of companies in his career. "These markets are all highly interconnected. We've seen that if a homeowner in California doesn't pay their mortgage, a hedge fund in London goes bankrupt – there's sort of a chaos theory to it." It's the kind of thing that's frequently seen in the insurance industry, when losses from, say, wind storms in Europe affect the price of other types of coverage because they are drawn from the same pot.

The current market upheaval proves just how heavily integrated markets actually are, and that you need an integrated risk system to manage the breadth and depth of your various exposures, the credit risk experts at TPT tell us. With so much tumult in the marketplace, we called up the risk solutions provider to get their take on the current state of affairs and see how the downturn was affecting marketing of risk management systems. On that second point, the answer remains, as it has for several months now, that troubled times are good times for risk management. Yes, IT spending gets dinged when the markets are topsy-turvy, but that doesn't mean companies aren't looking to bring in some serious technology to manage their risk when the credit markets are seizing up and counterparties are collapsing.

The Enrons and Dynegies of the past weren't necessarily exposed to a mortgage crisis. But those energy companies have been replaced by financial houses with their fingers in a whole range of different pots, so a hiccup in one country can cause a bank computer on the other side of the world to start doing FX trades and wring all the arb out of that distant event in an instant.

"It's the downside of an efficient market," Carter tells The Risk Desk. "That's why a mortgage meltdown can affect somebody's physical energy trading. A boilover in one pot can affect the others."

The current crisis gives the lie to the idea that the other world economies – China, India, etc – can be disconnected from the US economy. But the butterfly flapping its wings in the US is raising tsunamis around the world. "That interconnection is the sweet spot for credit, all those interconnections you have with another entity," says Dan Reid, whose title is VP of credit risk solutions since TPT acquired his firm, credit risk management software leader ROME Corp. But the more interconnected you are, the wider your exposure can be across a set of entities and the wider and larger a tsunami can be if a counterparty goes down.

The "perfect storm" is a good description of today's market events, Carter says. "We're seeing a lot of faith being shaken in a number of different areas at the same time, and it's creating a lot of run-on effects to some otherwise unaffiliated areas." The problem that originated in the mortgage industry has dramatically dried up the amount of liquidity from companies who don't just provide credit to the mortgage industry but also finance energy operations "which in some cases is due to physical trading and in some cases due to simply speculation or actually hedging."

There's another factor: the general rising level of concern in the market for things they can't immediately understand. That's how a company can lose 50 percent of its value overnight. "The market is looking for traction and having trouble finding it," Carter says.

TPT marketing chief Michael Schwartz adds that Constellation Energy seems like the "Enron replacement," figuratively speaking. The company didn't appear over-leveraged. In fact Constellation seemed to be leading the way with good, high-margin

risk management. But if rumors or perceptions of overleveraging are in play, "there's a crisis of confidence," he says. "And then a run on the bank can take down anyone."

And what about Constellation Energy? "We may have crossed the Rubicon," Carter says. A mention buried deep with Constellation's second-quarter report that "by the way" it would recast first quarter estimates based on a triple downgrade, essentially began a run on the bank, calling into question their risk control environment and causing some counterparties to reassess. The \$21 billion in company stock plummeted 60 percent in a week even though its sponsoring banks confirmed that a firm, underwritten commitment for an additional \$2 billion credit facility announced in August remained in effect. The commitment's terms included a material adverse change condition, meaning that any material adverse change in the business, its financial conditions or the financial results of it or its subsidiaries would be reviewed on a consolidated basis. Last week, Constellation further reinforced that its credit exposure to financial institutions was limited.

But it didn't matter; the horses were spooked. "You don't have the luxury of screwing up before they hammer you," Carter says. "The impression you leave in the market now has greater currency than it ever has. You have to do things as perfectly as you can."

The credit crisis has highlighted "just how disconnected the trade floor and the mid- and back office are," Carter says. But it does appear to be making traders and back-office folks more conscious of each others' activities, and the need to manage market risk and credit risk together.

Companies are traditionally concerned about addressing market risk and trading risk, but by their actions they can convert that market risk into a credit and liquidity risk – even though they've balanced their position and their market position is totally hedged, he says. For the trader, he's done

his job and the position can run its course until the transaction is done, but “the mid- and back-office teams have to say grace over the next year while that position stays its course,” he says. Add in a market bouncing up and down like a yo-yo and your exposure is increased by a growing pool of transactions. If you can’t meet your margin calls, you’re toast. “Over time this can bog down your book with things that no longer accrue value to your income statement. It requires some sophisticated processes to manage these positions that can literally put you out of business tomorrow,” he says. The results are now front-page news.

Reid says the more they present on this topic, the more the value of adding ROME’s credit risk tools to TPT’s Commodity XL solution become apparent. “When you walk through the combined picture, it opens a lot of trader’s eyes who hadn’t thought about having to manage all the margining calls and the risk around a default there, and it opens the credit guy’s eyes, who didn’t realize how traders were thinking and were ignoring those pieces of (the credit team’s) job.”

Reid recalls the massive amount of exposure that the rogue SocGen trader brought to the company, but he says these high-profile defaults have helped improve companies’ awareness that trading and credit aren’t operating in silos. “It’s no longer good enough that Moody’s said (a counterparty) has a good rating, credit told you your available credit and you went and did your deal. When that blows up, they’re going back to the trading group and saying, ‘Why did you do this? You’re bringing the whole company down.’”

As traders are made more accountable for these deals, they are becoming much more interested in learning about the agreement terms, the collateral obligations, netting and so forth – before they put the trade on. “Traders are starting to understand the cost of credit, the liquidity side of these deals and the exposure for the company.

They don’t want to see the whole organization go down because of some trade they did that someone in credit said was OK,” he says.

Carter says we’re also going to see a much stronger link between the mid- and back office and the actual deals in the future, “a more strategic use of mid- and back office” and enhanced systems that will help traders make better decisions. The key is to avoid putting a trade on without paying attention to whether it needs to be collateralized. The awareness of the high cost of financing and liquidity in today’s market has grown rapidly. “Gas trading, for instance, hasn’t been a wildly high-margined activity,” he says. “If you pay a nickel for an MMBtu and give up a third of it or more to collateralize that position, have you really made that much money? Was it worth your effort? The fact traders haven’t given that a lot of thought shows there hasn’t been a great deal of attribution all the way back to the deal level.”

Further troubling is the fact that billions of dollars in these trades are still being managed with a comparatively unsophisticated process: spreadsheets. Says Carter: “I don’t care if the spreadsheet is working perfectly – it makes people nervous.”

With all this going on, the utility of software solutions like TPT’s Commodity XL, which can combine the trading, credit, hedge accounting, governance and regulatory compliance, are increasingly clear to companies that are feeling the pressure to do high-profit deals that also fit their credit position, their liquidity and their ability to account for all this in an auditable way. “They don’t want to spend all their time manually managing this on spreadsheets, they want to go out and get good deals,” Reid says. “We’re focused on how we can provide that integrated solution for companies that are feeling the pressure across the board.”

And by the way, the result has been a boom year for TPT and risk management platforms in general. “Some of our best

## No Sense of Humor

**“Even Profitable Deals Can Run You Out of Business,”** says TPT Credit Risk Solutions Director Michael Carter. Consider a small producer who has \$3 per MMBtu in their gas discovery. If the strip for the coming year is \$10, they want to lock in the price and enjoy those profits. They go to a large counterparty to get a guarantee of \$10 in exchange for 10,000 MMBtus a day for Cal08. “If you had done a deal for Cal08 at the end of August last year, your average price would have been less than \$8 a MMBtu. Now gas is trading in the market for up to \$13 or better.” The small producer is now getting margined – the counterparty wants you to post massive amounts of collateral because they are very highly exposed to your performance. “You could be very self-satisfied going out and drilling your well. You’ve got \$3 per MMBtu invested and you’re making \$10 now, fixed price. But now you’ve got to come up with \$100 million for a collateral call,” he says. With that incredible margin demand, suddenly a profitable deal can push the company out of business if you miss your margin call. And they only have days, not weeks, to put something in place to meet that margin call. “Everyone associated with the deal, from bankers to your counterparties to investors to regulators... has lost their sense of humor,” he says. “If a Morgan, a Bear or Constellation can go down, they’re not taking any chances with anybody.”

customers and best times have been when there are these kind of headlines,” Reid says. “When the Williamses and Dynegies were in or near bankruptcy, they are mandated to fix the problems that we solve.”

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