

The DESK

Friday, December 10, 2004 Vol 7

SPECIAL REPRINT

Barings Debacle, Chinese-Style

Market, Liquidity and Operational Risks Bring Down China's Largest Jet-Fuel Supplier. Why is Nobody Surprised?

Analysis by Dr. Carlos Blanco and Dr. Robert Mark

China Aviation Oil Singapore (CAO) announced Dec. 3 that it had suffered a speculative derivatives trading loss of \$550 million. The firm is 60 percent owned by China Aviation Oil Holdings Co., a Chinese state-owned firm, and China's largest jet-fuel supplier.

The company was listed in Singapore and had a virtual monopoly on imports of jet fuel into most Chinese airports.

As this story unwinds and details become more apparent, it seems as though we've heard it before – a decade ago. Recall that Nick Leeson lost about \$1.5 billion in Singapore and subsequently brought down Barings bank. Leeson, among other things, manipulated Baring's error accounts in order to hide losses from his unauthorized trading of equity derivatives.

CAO's losses appear to be primarily based on writing put options on the price of oil. CAO joins the list of high-profile commodity derivatives trading fiascos such as Sumitomo Corp., which lost \$2.6 billion trading copper in 1996, and Metallgesellschaft AG, which lost \$1.5 billion trading oil in 1993.

The sad truth is that the CAO news was not particularly surprising to many experienced market participants. Jet fuel is both a volatile substance and one of the most volatile commodities in the world market. Accordingly, several firms trading derivatives on jet fuel have experienced large losses. Chinese firms are known to

be relatively astute takers of large risks. Unfortunately, many of these large risk-taking Chinese firms have not historically invested in building best-practice, risk-management programs and systems. These firms are therefore often not well-equipped to manage the risk of derivatives trading. For example, Chinese companies suffered the largest losses when copper prices declined in October 2004. If these firms continue to fail to invest in building adequate risk programs and systems, it won't be surprising to see more Chinese firms in the headlines.

It is very likely that CAO's traders managed to circumvent their trading limits and hide losses. The *Wall Street Journal* cited a "knowledgeable source" who revealed that "under company policy, trades that produced losses of as much as \$200,000 were to be sent to the company's risk-management committee for assessment, while trades accumulating a loss of \$350,000 or more would have to be approved by the chief executive to remain open. Any trade resulting in a loss of \$500,000 or more would be automatically closed."

The company's directors were most likely aware of the problems faced by the firm, but decided not to disclose them to the markets in order to buy time to put a rescue plan in place. A court affidavit filed last week indicated that CAO officials told investors that the company's earnings would exceed its 2003 results, although it had already been hit by \$232 million in derivatives losses it had not previously disclosed to the market. The Singapore Stock Exchange has ordered that Pricewaterhouse-Coopers conduct a probe to investigate CAO's derivatives trading and financial reporting practices.

Chen Jiulin, CAO chief executive officer and managing director, was one of

China's rising stars. In the last few years, he delivered key speeches at international forums and published a number of articles in newspapers and magazines. He also authored the book, *Leveraging on China, Going Global*. The title of his book became the company's slogan. For example, CAO announced a half-dozen acquisitions over the last year, including large stakes in European jet fuel-related firms. Mr. Jiulin's rise and fall has striking similarities to Enron's Jeff Skilling.

The derivatives losses were more than twice as large as CAO's shareholders equity in 2003. In addition, it is alleged that China Aviation Oil Holding Co. had been informed about CAO's dire financial straits some 10 days before it sold a 15 percent stake in the company to institutional investors on Oct. 20, possibly in an effort to raise cash to meet mounting margin calls.

Top Five Lessons

From the information that has been disclosed up to now, we can extract a series of lessons. These include:

1. Lack of adequate risk disclosure is a serious warning signal.

Firms that do not appropriately disclose risk levels should be a bright warning signal to investors and counterparties. Firms that fail to adequately disclose their risk-management practices beyond terse oblique statements such as "we use VaR to control risk-taking" are not complying with industry best practices. We believe that energy and commodity trading firms should take a proactive stance in disclosing the quantification of market, credit, operational and liquidity risks.

CAO's disclosure of market, credit and liquidity risk in their 2003 annual report was far from optimal. For example, an extract from their 2003 annual report simply indicated that "the Group uses derivative financial instruments to reduce its exposure to market risk. In addition, the Group may take open positions in derivatives at the opportune time." Further, in the segment related to liquidity risk, CAO stated that "the Group is liquid and does not expect to have any liquidity risk." Ironically, despite the lack of comprehen-

(Click to continue on page 2)

(BARINGS DEBACLE, CHINESE-STYLE from page 1)

sive quantification of CAO's risk, the Securities Investors Association of Singapore awarded it the "most transparent company" on the city-state's exchange last year.

The company faced increasing pressure from the banks to pay its outstanding and overdue debts. Between Oct. 26 and Oct. 28, CAO's inability to pay margin calls resulted in a realized loss of \$132 million. On Nov. 8, further closing of contracts caused another \$100 million in losses.

The company sought protection from its creditors in late November after the creditors issued letters demanding a total of \$247.5 million. Trading in CAO shares was immediately halted after the company announced their large losses.

Black Swan Risk Advisors and Black Diamond Enterprises are currently undergoing a survey related to the risk disclosures by energy and commodity trading firms. Our preliminary results indicate that significant work remains to raise the quality of the disclosures to best-practice standards.

2. Counterparty limits and adequate collateral and margining arrangements should be quantified and in place at all times.

If a credit risk manager were analyzing CAO's stand-alone financial health (without taking into account the potential backing by the Chinese government), most would have concluded that the company had a relatively weak credit profile. Accordingly, most credit risk managers would not have approved trading options on large volumes of oil and jet fuel with CAO. Nevertheless, there are rumors that a few well-known banks have relatively large unsecured credit lines with CAO (as well as with other Chinese firms)

Many banks operated under the assumption that the Chinese government would back CAO's debts. In exchange, it is likely that those banks were expecting to use their credit lines as the door to enter into China's growing financial markets. The list of CAO's creditors includes Mitsui & Co Energy Risk Management with \$143.6 million, followed by Fortis Bank (\$33.1 million), Barclays Capital (\$26.5 million), Standard Bank London (\$14.4 million), J. Aron (\$12.4 million), Sumitomo Mitsui Banking Corp. (\$11.1 million) and Macquarie Bank (\$2.6 million).

3. Hire external support to perform periodic independent technical risk audits. Where were the risk managers and internal audit groups?

CAO had a formal risk-management program in place. Stop-loss limits were meant to prevent sizeable trading losses, including automatically shutting down deals when a trader assumed losses of more than \$500,000. For example, the firm had a team of just 10 traders, which meant that losses should have been capped around \$5 million (if they all had been automatically closed).

CAO also appeared to have risk limits and clear policies in place, but apparently traders did not follow them. There was a clear breakdown in the risk governance structure of the firm. For example, risk management apparently did not alert the board to the serious condition of the firm. The audit function appar-

ently also did not alert the board. The board of directors should have given the risk manager the authority to close down those positions, and possibly the whole trading operation, given the irregularities that were taking place.

The risk-management policies, methodologies and infrastructure should have been analyzed by independent, experienced risk professionals. For example, an independent, in-depth risk audit would have analyzed the amount of authority of the risk managers, and uncovered potential conflict of interests. As indicated earlier, similar to the dynamics at Enron before its massive collapse, CAO had won several risk governance awards in the past.

A straightforward analysis of their risks using simple top-down Value at Risk (VaR) and stress-testing models would have exposed CAO's "doubling-up" strategy (in the months prior to the disclosure) in an attempt to recover losses. CAO started selling options during the second half of 2003. The initial transaction involved 2 million barrels. As the firm started losing money on their derivatives portfolio, they started to "double-up" in the hope that oil prices would come down from record highs. CAO was holding positions on trades involving 52 million barrels of oil by October 2004.

4. Watch carefully for warning signals

CAO gave signals that their trading operation was in trouble. In the quarter ended Sept. 30, the company warned of a loss in their trading operations, although they didn't specify the exact amount. On Nov. 16, CAO announced that "in order to respond proactively to conditions arising in the international oil trading business," the company would exit all speculative derivative trading positions and focus solely on physical trading business by the end of November.

In a recent article of *The Risk Desk* on credit risk management¹, we included a panel entitled "derivatives as an option to default." We pointed out that firms selling options either below fair market prices or quoting lower than market-implied volatilities may be attempting to raise cash to cover margin calls. The details of CAO's strategy are not yet known, but it is possible that a similar irregular trading pattern will be uncovered.

5. Develop an integrated approach to manage market, credit, liquidity and operational risks

CAO's losses were mainly caused by unfavorable market price fluctuations, which in turn led to its inability to meet margin and collateral calls. In addition, as pointed out above, trading limits were not followed and the risk governance framework broke down.

CAO's problems highlight the importance of having a well-defined integrated liquidity risk-management framework in place². CAO's assertion in its annual report that the "the Group is liquid and does not expect to have any liquidity risk" was misleading. Specifically, market-related losses prompted a liquidity crisis at the firm, as it failed to post collateral. Growing margin payments were required to offset mounting losses with their counterparties. Metallgesellschaft AG experienced a similar problem in the failure of its hedging program to protect them against the long-dated risk.

(Click to continue on page 3)

(BARINGS DEBACLE, CHINESE-STYLE from page 2)

Creditors naturally became concerned about CAO's ability to pay its debts, and decided to cut down their credit to CAO. As indicated above, several of CAO's counterparties are facing significant credit-related losses as a result of CAO's liquidity problems.

Carlos Blanco, Ph.D. is managing director of Black Swan Risk Advisors, LLC (carlos@blackswanrisk.com).

Robert M. Mark, Ph.D. is the CEO of Black Diamond (bmark.blackdiamond@tmo.blackberry.net)

References.

Blanco, C. and Mark, R. (2004) "A Modern EWRM Framework: Liquidity Risk Management for Energy and Commodity Trading Firms" *The Risk Desk*. September. Volume IV. Number IX.

Blanco, C. and Mark, R. (2004) "A Modern EWRM Framework: Credit Risk Management Framework for Energy and Commodity Trading Firms (I & II)" *The Risk Desk*. October and November. Volume IV. Number X and XI.

Guerrera, F. and Bruton, John. "Affidavit claims CAO knew of losses." December 6 2004. www.ft.com

Stanley, B. and McDermott D, Prystay, C. and Pottinger, M. "Singapore, China Scramble To Save Jet-Fuel Supplier Huge Derivatives Losses" *Wall Street Journal*. December 2, 2004

(Endnotes)

¹ See Blanco and Mark. October and November. 2004.

² See Blanco and Mark. September. 2004.