MIT Sloan School of Management

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Finance Theory 15.415
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Assignment 4: Forwards and Futures

(not to be handed in)

1. Kashima Oil

Read the excerpt titled, "Determined Loser," from *The Economist* about Kashima Oil.

(a) What hedging strategy in forward contracts would you recommend for Kashima Oil.

(b) What was the actual trading strategy implemented by Kashima Oil. Draw a payoff profile illustrating the strategy that Kashima Oil was following.

(c) Did Kashima actually lose money? If yes, why? On the other hand, if you think that it did not lose money, explain why?

Determined Loser (Kashima Oil)

The Economist, April 16, 1994

TOKYO – While Japan's exporters were being battered by the yen's decade-long rise, the country's importers should have been rejoicing. A few defiant firms did manage to squander loads of money, all the same. On April 9th Hachiro Obata, boss of Kashima Oil, announced that he would resign to take responsibility for 153 billion yen ($1.5 billion) of unrealized losses in forward foreign-exchange contracts.

Kashima refines imported oil for Japanese market; the strong yen meant cheap inputs, and therefore good profits. But the company's currency dealers entered into binding forward contracts, which resulted by 1988 in unrealized losses of 100 billion yen. More big losses came around the time of the Iraqi invasion of Kuwait in 1990. Like many Japanese commodity importers, Kashima seems to have loaded up on dollars in anticipation of future purchases of oil; when the dollar declined, so did the firm's fortunes.

Kashima's 153 billion yen loss dwarfs the pre-tax profit of 12.5 billion yen that the company had been predicting for the financial year that ended last month. To plug the gap, the firm says it will sell 100 billion yen worth of property and securities. Four parent firms (Kashima is unlisted) will be expected to stump up fresh capital. A cast of 29 banks will have to dig into their pockets, too; the Industrial Bank of Japan, Kashima's main bank, will probably be hit hardest.

This embarrassment, like the trillions lost on all kinds of financial engineering by Japan's firms during the go-go 1980's, may have taught Japan's company treasurers a lesson. Currency hedgers are switching from forward contracts (which carry the risk of great losses if the currency moves the wrong way) to options (which do not lock the buyer into a loss-making position). Company chiefs are beginning to understand the need to keep a closer eye on their firms' traders.

Japan's regulators are encouraging more openness. By rolling over loss-making currency deals, treasurers used to conceal problems for years, both from the investors and their own bosses. In April 1992 the Ministry of Finance banned roll-overs on new forward contracts and said that existing positions were to be unwound "as soon as possible". Until recently, this vague phrase was largely ignored. But a new ministry directive issued last month insists that historic positions must be unwound by March 1995 when the current financial year ends.

Some currency dealers reckon that more mines will explode before then. Last year, Showa Shell, another refiner, owned up to losses of 166 billion yen in unrealized losses from similar forward contracts. Afterwards Japan's Ministry of International Trade and Industry, which regulates the oil industry, interrogated all oil companies about their currency dealings. Kashima kept quiet about its problems then. Other oil companies may have been similarly reticent.