

Foreign Exchange Losses at JAL

One of the world's largest airlines, Japan Air lines (JAL), is also one of the best customers of Boeing, the world's biggest manufacturer of commercial airplanes. Every year JAL needs to raise about \$800 million to purchase aircraft from Boeing. Boeing aircraft are priced in U.S. dollars, with prices ranging from about \$35 million for a 737 to \$160 million for a top-of-the-line 747-400. JAL orders an aircraft two to six-years before the plane is actually needed and normally pays Boeing a 10 percent deposit when ordering. The bulk of the payment is made when the aircraft is delivered. The long lag between placing an order and making a final payment presents a conundrum for JAL. Most of JAL's revenues are in Japanese yen, not U.S. dollars (which is not surprising for a Japanese airline). When purchasing Boeing aircraft, JAL must change its yen into dollars to pay Boeing. In the interval between placing an order and making final payment, the value of the yen against the dollar may change. This can increase or decrease the cost of an aircraft. Consider an order placed for a 747 aircraft that was to be delivered in five years. The dollar value of this order was \$100 million. Suppose the prevailing exchange rate at the time of ordering was $\$1 = \text{¥} 240$ (i.e., one dollar was worth 240 yen), making the price of the 747 $\text{¥} 2.4$ billion. When final payment is due, however, the dollar/yen exchange rate might have changed. The yen might have declined in value against the dollar. For example, the dollar/ yen exchange rate might be $\$1 = \text{¥} 300$. If this occurs, the price of the 747 would go from $\text{¥} 2.4$ billion to $\text{¥} 3.0$ billion, a 25 percent increase: Another (more favorable) scenario is that the yen might rise in value against the dollar to $\$1 = \text{¥} 200$. If this occurs, the yen price of the 747 would fall 16.7 percent to $\text{¥} 2.0$ billion.

JAL has no way of knowing what the value of the yen will be against the dollar in five years. However, JAL can enter into a contract with foreign exchange traders to purchase dollars five years hence based on the assessment of those traders as to what they think the dollar/ yen exchange rate will be then. This is called entering into a forward exchange contract. The advantage of entering into a forward exchange

contract is that JAL knows now what it will have to pay for the 747 in five years. For example, if the value of the yen is expected to increase against the dollar, foreign exchange traders might offer a forward exchange contract that allows JAL to purchase dollars at a rate of \$1 = ¥ 185 in five years, instead of the \$1 = ¥ 240 rate that prevailed at the time of ordering. At this forward exchange rate, the 747 would only cost ¥ 1.85 billion, a 23 percent saving over the yen price implied at time of ordering.

JAL was confronted with just this scenario in 1985 when it entered into a 10-year forward exchange contract with a total value of about \$3.6 billion. This contract gave JAL the right to buy, U.S. dollars from a consortium of foreign exchange traders at various points during the next 10 years for an average exchange rate of \$1 = ¥ 185. This looked like a great deal to JAL given the 1985 exchange rate of \$1 = ¥ 240. However, by September 1994 when the bulk of the contract had been executed; it no longer looked like a good deal. To everyone's surprise, the value of the yen had surged against the dollar. 'By 1992, the exchange rate stood at \$1 = ¥ 120, and by 1994, it was \$1 = ¥ 99. Unfortunately, JAL could not take advantage of this more favorable exchange rate. Instead, JAL was bound by the terms of the contract to purchase dollars at the contract rate of \$1 = ¥ 185, a rate that by 1994 looked outrageously expensive. This misjudgment cost JAL dearly. In 1994, JAL was paying 86 percent more than it needed to for each Boeing aircraft bought with dollars purchased via the forward exchange -contract! In October 1994, JAL admitted publicly that the loss in its most recent financial year from this misjudgment amounted to \$450 million, or ¥ 45 billion. Furthermore, foreign exchange traders speculated that JAL had probably lost ¥ 155 billion (\$1.5 billion) on this contract since 1988.

Sources: Hill, C. (2002): Global Business, McGrawHill, P. 258.