

# Foreign Exchange Risk Management Case Study : RJR NABISCO

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## ABSTRACT

This article presents a case analysis of RJR Nabisco Holdings Corporation's foreign exchange management. The strategy pursued by RJR Nabisco, the two headed-hedging strategy succeeded in lowering it's foreign exchange risk. When RJR's domestic affiliate was in the process of buying an equipment from Germany in 1991, and the foreign exchange rate fluctuated, the approach manage to save the company from losing millions of dollars from foreign exchange transactions.

This study offers insights about the two headed-hedging strategy and the advantages and drawbacks of the strategy. An analysis was done to determine how the strategy pursued benefit RJR Nabisco as a total corporation. The result showed that the key element to the success of the approach has evolved around the centralized control and management by the Treasury team.

## I.Introduction

RJR Nabisco Holdings Corporation is among the largest tobacco and food companies in the world. In the United States, the tobacco business is conducted by RJR Tobacco Co., the second largest producer of cigarettes, and the packaged food business is conducted by Nabisco Foods Group, the largest manufacturer and marketer of

cookies and crackers. Tobacco operations outside the United States are conducted by RJR Tobacco International, Inc. and food operations outside the United States are conducted by Nabisco International.

Together, their products are sold under a variety of brand names in the United States and other international markets. Being such an active participant in the international markets, RJR Nabisco is constantly exposed to the risk of fluctuating foreign exchange rates. Its two-headed hedging strategy has certainly contributed to its success in saving the company from the chaotic incident when Deutsche mark fell from 1.75 to 1.84 within a twelve hours period in May, 1991.

## II.Terminologies

### Foreign exchange risk

The likelihood that an unexpected change in exchange rates will alter the home currency value of foreign currency cash payments expected from a foreign source. Also, the likelihood that an unexpected change in exchange rates will alter the amount of home currency needed to repay a debt denominated in a foreign currency. Three types of foreign exchange risk: operating exposure, transaction exposure and accounting exposure.

### Hedge

The purchase of a contract (including for-

ward foreign exchange) or tangible good that will rise in value and offset a drop in value of another contract or tangible good, thus protecting the owner from loss.

#### **Spot transaction**

A foreign exchange transaction to be settled (paid for) on the second following business day.

#### **Forward transaction**

A foreign transaction agreed upon today but to be settled at some specified future date, often one, two or three months after the transaction date.

#### **Option**

In foreign exchange, a contract giving the purchaser the right, but not the obligation, to buy or sell a given amount of foreign exchange at a fixed price per unit for a specified time period. Option to buy are "calls" and option to sell are "put".

### **III. Two-headed hedging approach**

This hedging strategy adopted by RJR Nabisco simply means that the whole process of hedging is operated by two parties. The Treasury team based in New York is comprised of Peter Daytz (director of foreign exchange), Lynn Lane (assistant treasurer-capital markets), and James Scalfaro (manager of foreign exchange and interest rates). Their role is to make good choices that enhance the decision making and the result of the other party of this two-headed approach, the operating unit. Operating units are to determine how and when to hedge.

The Treasury team works with twelve affiliates who are responsible for dollar-based profit performance on a daily basis. It

offers advice on hedging strategies that may help performance. Every two months, the operating unit gives data to the Treasury for evaluation. Operating units then make their own decisions. However, the Treasury has the power to disagree and pursue another strategy if it feels that it would benefit the company.

Managing exposure this way has afforded RJR many key benefits. For one, operating units remain the primary "owners" of exposure. In this sense, they are empowered to make currency decisions that best allow them to meet business unit contribution targets. This is justified by the 41% increase in operating income from 1989 to 1991. On the other hand, if there should be a big disparity in views, of which way foreign exchange rates are going to move, the Treasury still has the power to protect the total corporation. Centralized positions ease credit risk management too. It is always advisable to execute all transactions in one office where highly experienced foreign exchange professionals are staffed. The only drawback of this approach is the need of a highly advanced front-and-back computerized office system. This would cost the company a fortune.

### **IV. Transaction exposure**

Transaction exposure is the degree to which the value of future cash transaction can be affected by exchange rate fluctuations. The home currency value of a firm's cash inflows received in various currencies will be affected by respective exchange rates of these currencies when converted into the currency desired. Similarly, the home currency value of the firm's cash flows in various currencies will depend upon the respective exchange rates of

these currencies.

RJR Nabisco generates \$1 billion currency exposure annually from more than 160 countries. Therefore, it is very important to minimize the effect of foreign exchange fluctuations on its foreign currency transaction through hedging strategies. This analysis is primarily focused on RJR's transaction exposure. The company's significant exposure to foreign exchange sale and purchase transactions include the U.S. dollar, German mark, Japanese yen, Swiss franc, Hong Kong dollar, Singapore dollar and cross rate exposure between French franc, British pound, Italian lira and the German mark.

In May 1991, the Deutsche mark fell from 1.75 to 1.84 (a 5% Deutsche mark devaluation) within a twelve hour period, following the incident of the Soviet coup attempt against Gorbachev. Many companies in the world with operating units in Europe was affected millions in dollar-based costs and profit margins. However, RJR's two-headed hedging approach had turned this dilemma into a blessing in disguise.

During the same period, RJR's domestic affiliate was in the process of buying \$70 million (DM 123,900,000) worth of equipment from Germany, payable in six months. The project had a budget rate of 1.45 (DM 101,500,000), which the affiliate wanted to protect. But it also wanted to lock in some saving. This operating unit was too concerned over its performance in terms of profits and operating income. However, the Treasury team had a totally different view. Their primary concern was to protect the corporation as a whole. Therefore, they went against the wishes of the operating unit and decided to pursue a

strategy which they thought would benefit RJR as a total corporation. Below is the analysis for the strategy pursued.

### Analysis

There are several alternatives for RJR's domestic affiliate to purchase the equipment. RJR can either remain unhedged, opt for a forward hedge or an option hedge. Each of these alternatives is stated below.

#### 1. Remain unhedged

Wait six months and then buy \$70 million (DM 123,900,000) at the spot rate at that time. If the six months forward rate, DM 1.7778/\$, to be the best predictor of the future spot rate, the expected cost of payment in dollars would be:

$$\text{DM } 123,900,000 / 1.7778 = \$69,692,878.83$$

The actual rate could be higher or lower than the expected rate; so this expected result is risky.

#### 2. Forward hedge

Hedge in the forward market by buying Marks forward now at DM 1.7778/\$. The cost of payment six months hence will be:

$$\text{DM } 123,900,000 / 1.7778 = \$69,692,878.83$$

This is the same as the unhedged result; however, this amount is certain and so less risky. Because the amounts are the same, the forward hedge dominates; remaining unhedged would only pose higher risk.

#### 3. Option hedge

With this alternative, the affiliate is to hedge in the option market by buying a six-month call option of DM

123,900,000 at a premium price of DM 0.02/\$.

The spot rate: DM 1.77/\$

The borrowing interest rate in U.S. is 3.5% per annum.

Cost of the premium:

\$70million/DM 1.77=DM 123,900,000

DM 123,900,000/DM 0.02/\$ = \$790,960.45

Future value cost of option:

\$790,960.45 x 1.0175 = \$804,802.26

RJR forecasted an anticipated range for Deutsche mark to be between 1.50 and 1.90 for 1991 and 1992. They structured a zero-range forward with the worst-case strike price of 1.64 and the best-case strike price of 1.88.

(1) Worst-case scenario

when strike price = DM 1.64/\$, the cost of option:

DM 123,900,000/1.64=\$75,548,789.49

plus future value cost of option:

\$75,548,789.49 + \$804,802.26 =

\$76,353,582.75

The net cost is \$76,353,582.75 and this figure is greater than \$70 million. This means that RJR will lose:

\$76,353,582.75 - \$70,000,000 = \$6,353,582.75

Compared to the forward hedge, this worst-case scenario is \$7,520,249.42 more costly. (Appendix 1)

(2) Best-case scenario

when strike price is DM 1.88/\$, the cost of option:

DM 123,900,000/1.88=\$65,904,255.32

plus future value cost of option:

\$65,904,255.32 + \$804,802.26 =

\$66,709,057.58

In the best-case scenario, the net cost is

\$66,709,057.58, which is less than \$70 million.

The company can save: (Appendix 2)

\$70,000,000 - \$66,709,057.58 = \$3,290,942.42

The break-even exchange rate that equalizes the cost of the option and the forward hedge is:

(DM 123,900,000/x) + \$804,802.26 = \$69,692,878.83

Therefore, x = DM 1.7986/\$

When the dollar topped 1.80, the treasury team advised the affiliate to buy calls. (Appendix 3)

The net cost is:

(DM 123,900,000/1.80) + \$804,802.26 = \$68,833,333.33

Compared to the worst-case scenario, it had cut about 10% off the total cost of the equipment. Calculation for this 10% savings is illustrated below:

\$76,353,582.75 - \$68,833,333.33

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=0.0985=10%

\$76,353,582.75

## Outcome

The two-headed hedging approach had certainly paid off. The key element to the success of this approach has evolved around the centralized control and management by the Treasury team. Central control and direction of foreign exchange are prerequisites if there is to be a rational, consistent approach to controlling exposure for the consolidated group. The consolidated exposure of a multinational company like RJR, is the sum total of the exposures of all its subsidiaries and operating units.

As illustrated in the analysis, central control can prevent an operating unit from

speculating on foreign exchange movements on its own initiative, whether in hopes of turning a profit to cover up operating problems or in expectation that there will be further exchange movement. Should the decision be wrong, the impact on consolidated earnings of such speculative activities could produce disaster.

## V. Conclusion

Foreign exchange has been added to the growing list of items with which top operating management must deal. Like other elements of the business, the foreign

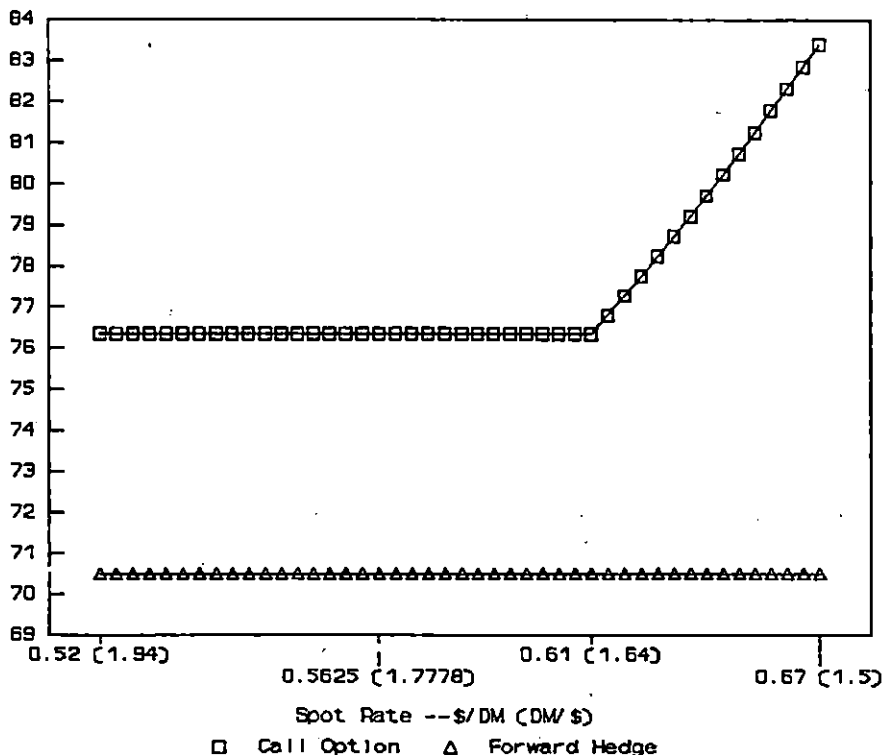
exchange position must now be subject to active management and review. Management needs to realize that it can lose more money by neglecting the foreign exchange aspect of international business than it can make by pushing for a marginal increase in international market penetration and sales.

For a multinational company to manage foreign exchange risk efficiently, its top management needs to be fully aware of the risks and costs involved in dealing with foreign exchange exposure, and even then only if it is organized enough to manage the exposure.

## APPENDIX 1

### CALL OPTION vs. FORWARD HEDGE

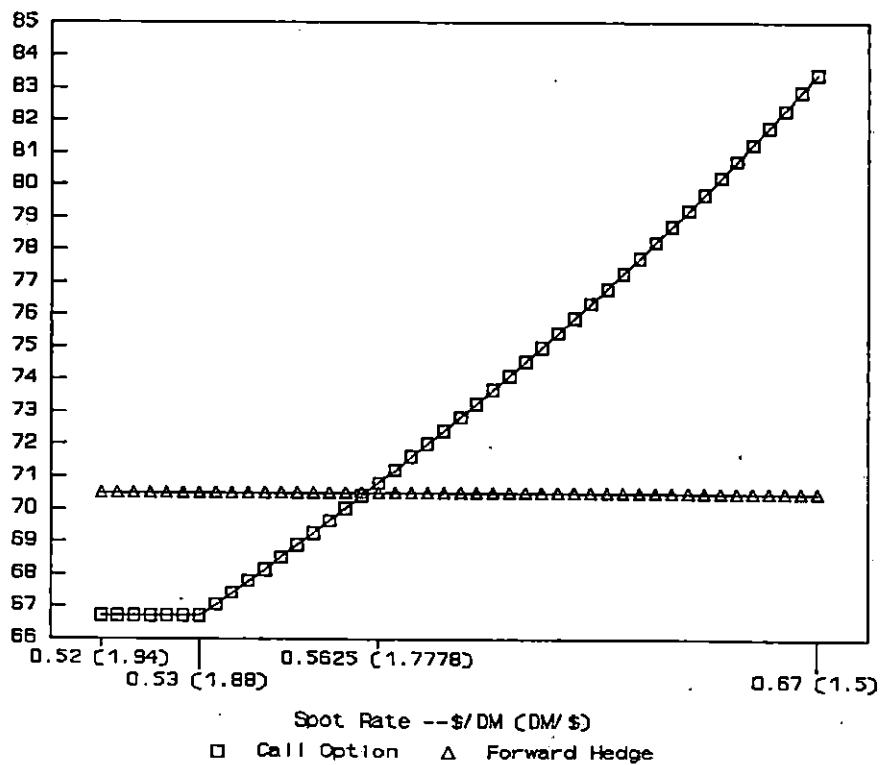
Worst Case Scenario



## APPENDIX 2

### CALL OPTION vs FORWARD HEDGE

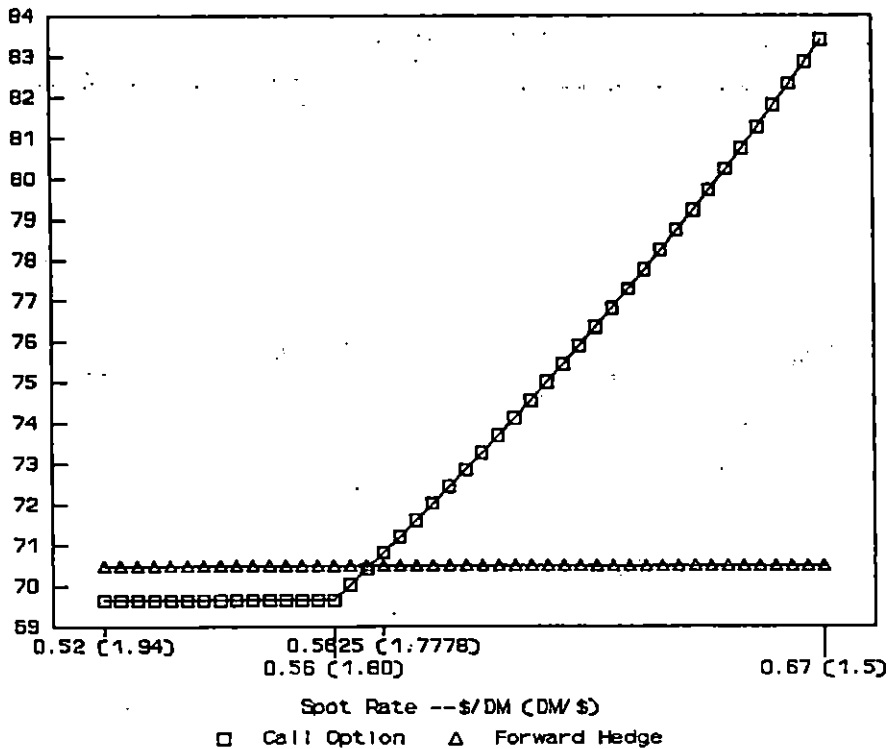
Best Case Scenario



## APPENDIX 3

### CALL OPTION vs. FORWARD HEDGE

Actual Case Scenario



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