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Accounting for Hedge Transactions

Jennifer E. Nims

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NORTHERN ILLINOIS UNIVERSITY
Accounting for Hedge Transactions
A Thesis submitted to the
University Honors Program
In Partial Fulfillment of the
Requirements of the Baccalaureate Degree
with University Honors
Department of Accountancy
by
Jennifer Ellen Nims
DeKalb, Illinois
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<u>FASB 52</u>	<u>HEDGING</u>
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ABSTRACT (100-200 WORDS): For my capstone project, I have studied the financial act of hedging and the accounting problems related to this topic. Hedging is a fairly new topic ;and I begin my thesis with background information on the act of hedging.

After I explain hedging, I move on to the accounting problems related to hedging. Very little relevant authoritative literature exists that covers this complicated topic. FASB Statement No. 52 covers foreign exchange contracts and FASB Statement No. 80 covers futures contracts (excluding foreign exchange futures contracts).

The profession is currently moving toward a new policy to govern hedge transactions. There are two methods of accounting which are currently being implemented in practice: the deferral method and the mark-to-market method. Neither of these methods has been officially adopted by the FASB, but either would be a step in the right direction.

The Financial Accounting Standards Board began a Financial Instruments Project in 1986 to deal with the two main issues in hedge accounting: disclosure and valuation. Although the Project has not yet resulted in any authoritative literature, some is expected in the near future.

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ACCOUNTING FOR HEDGE TRANSACTIONS

When financial institutions buy any type of financial instrument, the company has one of two goals in mind. The company is either 1) making a speculative investment, where profit is the motive or 2) hedging another investment, where risk-reduction is the motive.

Since interest rates and foreign exchange rates have become more volatile, the use of hedging has increased dramatically. Investors use hedging as a tool to reduce their risk and eliminate some of the uncertainty caused by the ever-changing markets. Barron's Dictionary of Accounting Terms provides two definitions for hedging:

"1. Process of protecting oneself against unfavorable changes in prices. Thus one may enter into an offsetting purchase or sale agreement for the express purpose of balancing out any unfavorable changes in an already consummated agreement due to price fluctuations. Hedge transactions are commonly used to protect a position in (1) foreign currency, (2) commodities, and (3) securities. 2. Financing an asset with a liability of similar maturity."

The History of Hedging

Although hedging has become a hot topic, the practice of hedging actually dates back to the ancient region of Phoenicia. Phoenicia was an ancient region of city-states at the Eastern end of the Mediterranean Sea. It occupied the same area as present day Syria and Lebanon. Pheonician merchants and traders

practiced hedging in their commercial dealings. According to historians, merchants often bought goods before they arrived at port on ship. The merchants and the traders entered into an early futures contract. The merchants would pay a premium to be entitled to the first goods that arrived on shore. The merchants would then barter with these future rights in an early attempt to reduce any risk they may fear. (FASB Research Report, pp.3-4)

These types of futures contracts found a place in American business as well. In the 19th century, agricultural futures markets began in order to stabilize prices for specified quantities and guard against erratic price movements. The first exchanges were between speculators and the farmers themselves. The speculators would agree to pay a farmer a specified price for the next season's harvest. The speculators would buy into the futures contract hoping to make a quick profit. The farmer entered into the contract to guarantee a price and to ensure income. Eventually, the speculators traded the contracts among themselves and the United States futures market was born.

The Chicago Mercantile Exchange

This beginning agricultural futures market grew, and in 1874, the Chicago Produce Exchange was born. This beginning market dealt only in the spot delivery of vegetables, butter, eggs, and other dairy products. This exchange existed until a dispute resulted in the spinoff of the Produce Exchange Butter and Egg Board (commonly known as the Butter and Egg Board). Over twenty-one years, the Butter and Egg Board evolved into the

Chicago Mercantile Exchange that we know today. The official opening of the Chicago Mercantile Exchange under that name occurred in September of 1919. The Chicago Mercantile Exchange (CME) was founded with the purpose to provide an open forum for trading futures and options on futures. The founding fathers of the CME believed in "Free Markets for Free Men". (Greising, 77) The CME is currently the world's leading financial futures and options exchange, with connections in Washington, New York, London, Tokyo, and Singapore.

When the CME first began operations, financial instruments were virtually unheard of. In fact, financial instruments accounted for less than three percent of total futures trading. Presently, the majority of contracts involve at least one type of financial instrument. In mid-1991, the interest rate swap market alone totaled over \$1.5 trillion. (FASB Research Report, p.4) The number of instruments has exploded within the past decade and the list is endless.

Types of Hedging Instruments

The number of instruments used in hedging are too numerous to count. However, there five main types of instruments that are used. It should also be noted that a majority of the instruments are a modification or combination of these five basic instruments. The most commonly used instruments include forwards, futures, options, interest rate swaps, and currency swaps.

A forward contract is an agreement between two parties whereby both parties agree to trade or exchange specific objects

at some future date at a specified price. For example, two businessmen could agree to trade two machines on January 1, 1993 with each businessman paying the other an agreed upon price.

A futures contract is a contract between two parties whereby one party agrees to deliver a specified quantity of an object to the other at a specified time and at a specified price. For example, a salesman could agree to sell and deliver to a company 50 barrels of a chemical on January 1, 1993 for \$50 a barrel.

An option contract is a contract between two parties whereby one party is allowed to buy or sell a specified object at a specified price either at or within a specified period of time. For example, companies A and B can form an option contract which allows company A to buy from company B 50 bushels of grain for \$2 a bushel within the next year. Within this time period, B cannot raise the price per bushel that it sells to A. It should also be noted that an option contract does not create an obligation.

An interest rate swap is a agreement between two parties whereby both parties agree to exchange interest earnings streams on specified investments. The interest streams exchanged must be different. For example, one interest stream must be calculated on a fixed rate and the other must be calculated on a floating rate.

A currency swap is an agreement between two parties whereby both parties agree to exchange different currencies at a specified rate at a specified period of time in the future. A detailed example is presented later in this paper.

This dramatic jump in the number of financial instruments coupled with an increase in market price volatility has lead to the growth of hedging.

Hedging is "the act of taking a position in a hedging instrument - such as in the futures, forward, options, or swap market - opposite to an actual position that's exposed to risk." (Stewart, p.48) In order to hedge, an entity will invest in a financial instrument that counterbalances any risk that the company is exposed to. The new financial instrument (called the hedging instrument), in order to counterbalance the exposed risk, should move inversely to the risky investment (called the hedged investment). If used in this manner, any gains or losses on the hedged investment will be offset by gains or losses on the hedging instrument. Essentially, hedging transfers risk from those investors who don't want it to those investors who are willing to assume it. The entities who engage in hedging are trying to minimize their risk and stabilize their earnings stream. The investors on the other end of the hedge, who are assuming the risk, are hoping the market will turn and they will make a quick profit.

Example of Hedging

The art of hedging is best described in an example illustrated in Figure 1 and discussed below.

For purposes of this example, assume that on January 1, 1992 the foreign exchange rate for U.S. dollars and Australian dollars is 1:1. Also, for simplicity, assume that no interest is

involved in the transaction. On January 1, 1992, Bank A (a U.S. bank) borrowed 40 million U.S. dollars from Bank B (an Australian bank). The terms of the loan stipulated that on January 1, 1993, Bank A would repay Bank B 40 million Australian dollars. At the current 1:1 exchange rate, the repayment is fair. However, since foreign markets are so volatile, Bank A is afraid that the exchange rate will change by January 1, 1993 - in which case Bank A might have to give up more than the 40 million U.S. dollars originally borrowed. For example, if the U.S. dollar were to weaken, Bank A would receive less than 40 million Australian dollars in a currency exchange. If Bank A does not want to assume this risk, it might decide to hedge the loan. To do this, Bank A enters into an agreement, in this case, a currency swap with Company C. The agreement states that on January 1, 1993, Bank A will give Company C 40 million U.S. dollars and Company C will give Bank A 40 million Australian dollars. Now, Company C must bear the risk for the currency. In this example, Bank A's loan from Bank B is the item being hedged. The currency swap with Company C is the hedging instrument.

Accounting for Hedging Activities

As financial markets become more complex, so does the use of hedging. More hedging products are developed and new ways to use them are found. Through all of this, accounting for hedges has lagged behind.

Unfortunately, hedge accounting development has been slow and confusing. Very little relevant authoritative literature

exists for hedge accounting. There were no APB Opinions and only two FASB Statements published to address the problems associated with hedge accounting. In the past, companies have often applied FASB Statements No. 52 and 80 to hedging transactions. To complicate the issue even further, this little amount of literature conflicts.

FASB Statment No. 52 "Foreign Currency Translation", issued in 1981, covers foreign exchange contracts. FASB Statement No. 80 "Accounting for Futures Contracts", issued in 1984, covers futures contracts. Those two statements are all that have historically existed to govern hedge accounting. No specific rules exist for hundreds of other financial instruments that can be used for hedging. In practice, accountants are left to analogize as best they can to FAS 52 and FAS 80. Because these two statements conflict in some areas, there are inconsistencies in practice.

1. FASB Statement 52

FASB Statement 52 covers all foreign exchange contracts. In general, foreign exchange exposures are divided into three categories: foreign currency denominated assets or liabilities, foreign currency denominated financial statements of a subsidiary, and foreign currency transactions to occur in the future. Each of the aforementioned topics has its own accounting treatment outlined in FASB Statement 52.

Foreign currency denominated assets and liabilities are translated at the current rate at the end of each period and any

gains or losses are recognized in the current period, unless it is considered a hedge investment. If considered a hedge investment, the hedge is marked to market value and the gain or loss is included in the current period's income. Therefore, when the hedge is marked to market, the gain or loss included currently in income would counterbalance any gain or loss on the hedged investment currently being recorded - resulting in no net gain or loss.

Foreign currency denominated financial statements of a subsidiary are translated each period from the functional currency to the U.S. dollar equivalent using the current exchange rate for all of the assets and liabilities. Any gain or loss should be recorded as a translation adjustment and included as a separate component of stockholders equity. No gain or loss is included in the current period's income. These rules apply unless the investment in the subsidiary is hedged. If the subsidiary investment is hedged, gains or losses on the hedging instrument are used to offset any translation adjustment recorded in equity for that period.

Finally, transactions that will occur in the future are not considered to be complete. Therefore, no gain or loss is recorded until they actually occur. If a firm commitment is hedged, however, the gain or loss from the hedging instrument can be deferred until the transaction actually occurs.

Before a foreign exchange contract can be accounted for as a hedge, the contract must meet three criteria. First, the hedge must be specifically designated. FASB Statement 52 uses the

transaction approach, where each hedge must be specifically assigned to a particular risky agreement. Second, the hedge must be effective. Under FASB Statement 52, effective means that the hedge and the underlying item must be in the same currency. Generally, no cross-hedging is allowed, unless the two currencies move in tandem. And, third, the item being hedged must be a firm commitment. FASB Statement 52 does not allow for hedging of anticipated transactions. If all of the above criteria are met, then the hedge accounting rules mentioned above can be applied. It is important to remember that these rules and criteria apply only to foreign exchange contracts.

2. FASB Statement 80

FASB Statement 80 specifically covers exchange-traded futures contracts other than foreign currency contracts. This Statement requires that any gain or loss resulting from a change in market value on an open futures contract must be recognized as it occurs unless the futures contract can be considered a hedge. In order to be considered a hedge, three criteria must be met. First, the hedge must be designated as a hedge. However, unlike FASB Statement 52, FASB Statement 80 allows for an enterprise approach. A hedge, under FASB Statement 80, must only reduce the enterprise's risk as a whole. It does not need to be matched against nor reduce the risk of one particular transaction. Second, FASB Statement 80 does allow for cross hedging. An item of one currency can be hedged with a different currency if there is a high correlation between the currencies. However,

throughout the duration of the hedge, it must be demonstrated that a high correlation still exists. Third, FASB Statement 80 allows hedging of anticipated transactions if the transaction is probable. If an investment constitutes a hedge, then the change in market value of the hedging instrument should be considered an adjustment of the carrying value of the hedged investment. Figure 2 of this thesis contains a chart which shows some of the differences between FASB Statements 52 and 80.

Progress Towards a New Accounting Policy for Hedging Activities

Since most financial instruments used for hedging are not specifically governed by either FASB Statements 52 or 80, there is plenty of room for disagreement and confusion. Statement 52 is more cautious, which is preferred by some more conservative accountants. Statement 80 is less restrictive, which gives accountants more freedom to use hedging to their advantage. Companies follow FASB Statement 52 for foreign currency exchanges, and analogize to FASB Statement 80 for all other hedge transactions. (And, of course, they would follow the advice of their auditors.)

Although analogies have been made in the past to FASB Statements No. 52 and 80, the industry is now moving toward developing a new "policy" of accounting for hedge transactions. Hedge accounting, a very new topic, is being developed to address all of the complicated issues surrounding these transactions.

As a general rule, the hedged instrument is accounted for on a historical cost basis. The hedging instrument is accounted for

on a market value basis. Under current Generally Accepted Accounting Principles, gains and losses on these two instruments would be recorded in different time periods. The hedged investment, under the historical cost method of accounting, would not recognize gains or losses until maturity. The hedging instrument, under the market value method of accounting, would recognize gains or losses as they occurred over the life of the instrument.

Investors wanted a symmetrical way to record gains or losses on the hedged investment and the hedging instrument in the same time frame. Hedge accounting is developing in order to allow investors to record gains and losses on both instruments within the same time frame. The basic underlying theory of hedge accounting is to account for both the hedged investment and the hedging instrument under the same accounting method. There are currently two methods of hedge accounting: the deferral hedge accounting method and the mark-to-market hedge accounting method.

1. The Deferral Method

Under the deferral hedge accounting method, the investor would account for both the hedged investment and the hedging instrument under the cost method. One would leave the cost method for the hedged investment and change the accounting method for the hedging instrument to the cost method instead of the market value method. Under this method, all gains or losses on the hedging instrument would be deferred and recognized at the same time as the gains or losses on the hedged investment. The

gains and losses from both would offset each other at the maturity of the hedged investment.

Many proponents of the deferral hedge accounting method believe that this method is more consistent with Generally Accepted Accounting Principles. As a general rule, investments are carried on the books at historical cost; and this method would carry both the investment and the instrument at historical cost. This method is also the most widely used method in practice today. Therefore, if adopted, fewer accountants would have to learn a new method and/or try to reconcile their current records under the new method. This method is also more conservative, not allowing for any uncertain gains or losses to be recognized before the maturity of the hedged investment.

2. Mark-to-Market Method

The second method is called the mark-to-market hedge accounting method. Under this method, both the hedged investment and the hedging instrument would be accounted for under the market value method. One would leave the hedging instrument under the market value method of accounting, and convert the hedged investment to the market value method instead of the historical cost basis method. Both would be carried at market value and all gains or losses would be recognized as they occur. The gains or losses would not be deferred and would offset each other immediately.

Proponents of the mark-to-market hedge accounting method claim that this method is far less complex and more easily

understandable. They also argue that this method allows the investor to show a more realistic picture of his/her company's financial position. With gains and losses being recorded all along, the books reflect a more up-to-date record of the company's dealings.

Determining a Hedging Instrument

Along with deciding which method to adopt, investors also face the problem of deciding which investment should qualify as a hedge. I have already provided some accepted definitions for the act of hedging. However, authoritative literature has not provided an official definition. Several pronouncements, including FASB Statements 52 and 80, use several hedging terms, but do so without providing clear definitions for the terms. Since there is no strict guideline, it may be easiest to explain what is not a hedge under current standards.

A speculative investment is not a hedge. When a company makes an investment hoping to take advantage of an expected rise or fall in price, the investment is considered a speculative investment. The intention of the investment is to make a profit. This profit motive is what keeps a speculative investment from being a hedge. A hedge is concerned with risk reduction, not profit increasing.

Portfolio diversification and/or portfolio management is also not considered hedging. Some analysts have claimed, however, that hedging can be considered a subclassification of diversification. Portfolio diversification or management is a

common practice whereby investors invest in several different securities, commodities, etc. in order to spread out into different areas of investment. The purpose of the variety of investments is to increase the chance of making profits. Similarly, hedging involves investment in different securities or commodities, but with risk-reduction as the motive. Once again, the underlying motive for the investment is the distinguishing factor.

It is important to note that some investors may make a profit while involved in a hedging transaction. However, the profit is not the motivation for investing. Through hedging, the investor is hoping to reduce risk and avoid a loss - not make a profit.

FASB Projects on Hedging Activities

In May, 1986, FASB began a Financial Instruments Project to address accounting issues related to all of the new financial instruments flooding the market. Since inception, the Financial Instruments Project has undergone two phases.

Phase one focused on disclosure. FASB Statement No. 105, "Disclosure of Information about Financial Instruments with Off-Balance-Sheet Risk and Financial Instruments with Concentrations of Credit Risk", was issued in March 1990. The statement required disclosure of financial instruments which created an off-balance-sheet risk of accounting loss.

Phase two centered on disclosure of market value for any financial instruments that an entity possesses. In December

1990, the FASB issued an Exposure Draft entitled "Disclosures About Market Value of Financial Instruments." The draft also requires all entities to disclose the market value of all financial instruments - as long as they were capable of estimation.

In September 1991, the FASB published a research report entitled "Hedge Accounting: An Explanatory Study of the Underlying Issues." This research report is "a first step in the development of a cohesive framework of concepts underlying hedge accounting". (FASB Research Report, p.iii) The Report was designed to explain the basic issues surrounding hedging and set forth the major concerns that need to be addressed. The Report does not attempt to solve any of the problems that are arising. It encompasses the basic concepts underlying this topic and will serve as a foundation for future work within the scope of the Financial Instruments Project.

Personal Observations

I encountered this topic while completing an internship with a financial institution. The topic seemed complex and challenging, but also very interesting. While at this financial institution, I spoke with several traders who dealt daily with hedging and gained some perspective on the multitude of different types of instruments that can be involved, as well as the technicalities surrounding recognition and disclosure.

I also visited a very large corporation which deals in commodities to gain a closer view of how hedging is accomplished

within a corporation. During this visit, I grasped the "big picture" - the mechanics of how a hedge works. To help clear the picture, I will present an example.

The corporation in this example buys a product from a supplier, refines it, and then sells it to a buyer. The product that the company buys from the supplier is a commodity which is listed on the Chicago Board of Trade (CBOT). The company buys this commodity from the supplier based on the current Chicago Board of Trade price. The company also receives orders from buyers. The selling price to these buyers is the CBOT price plus a mark-up. Since the company has no control over the price of these commodities on the CBOT, the company is exposed to risk. The company could buy from the supplier at a high price and refine it only to have the CBOT price on the commodity fall before the product is sold. Since the selling price is also based on the CBOT price, the selling price would be lower, and the company would have to take a loss.

In order to hedge this risk of loss and to stabilize the company's earnings stream, the company enters into futures contracts. When the company buys the commodity from suppliers, the company automatically sells a futures contract on the CBOT at the same price and for the same amount as the purchase. And when the company receives an order from a buyer, the company buys back the commodities future at the same price and in the same quantity as the order from the buyer. Using this system, the company should make no profit and suffer no losses due to the fluctuating price of the commodity.

I also visited the Chicago Mercantile Exchange (CME) to see the forum in which these instruments are "bought" and "sold". The CME is broken down into several large pits. Each pit is a contained area where only a specific type of investment can be bought or sold. For instance, there are pits which are designated for Japanese yen options, Eurodollar contracts, and pork belly options, just to name a few. I was amazed that anything can be accomplished in such a chaotic place! However, this "open outcry" system provides exactly the type of free market upon which our economy is based. By looking at the amount of discarded trading paper littering the floor of the trading pits, one can imagine the multitude of transactions that take place every day at the CME.

I have found no statistics that state how often hedging is used, or how many companies support a specific accounting treatment. Through my research, however, I have developed some generalities. All companies are required to follow FASB Statement No. 52 for all foreign currency transactions and FASB Statement No. 80 for futures contracts. However, like I mentioned before, the profession is moving toward the new policy of hedge accounting. Under this new policy, I have found that most companies follow the Deferral Method, rather than the Mark-to-Market Method. I personally agree with this decision. I feel that it is important to be conservative when valuing investments. It seems hasty and risky to mark all involved securities to market before maturity. Putting yourself in this "risky" position seems

to counteract the whole idea behind engaging in the hedge to begin with.

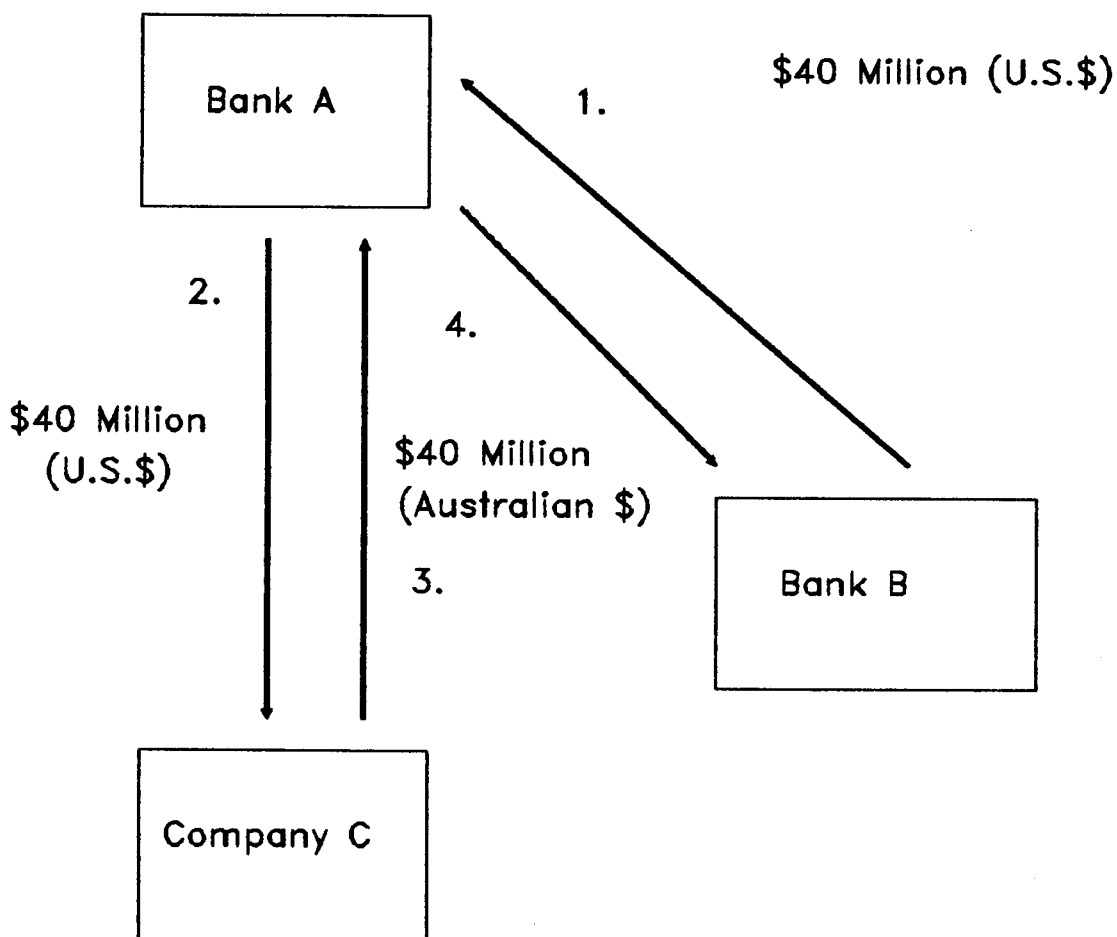
Regardless of the type of accounting treatment supported or used, disclosure must be made in the notes to the financial statements about the type of accounting policies used within a company. I have enclosed in Figure 3 a couple of footnote disclosures I found in Accounting Trends & Techniques to show the types of disclosures used in practice. In general, I have found the notes to be quite extensive, including information on why a company hedges as well as how. Hedging is new and confusing, and the companies want to be clear as to the purpose of the investments and the effect of these investments on the financial statements.

The use of hedging is spreading very fast and has already become an integral part of the financial picture of many companies. I expect, in the very near future, some relevant authoritative literature will be released to guide investors in this area. Hopefully, the Financial Instruments Project will tackle head-on some of the concerns I have set forth in this thesis and some of the questions will be answered.

APPENDIX

Figure 1

Hedging Example – Currency Swap



1. Bank A borrows \$40 Million (U.S. \$) from Bank B
2. Bank A gives Company C \$40 Million (U.S.\$)
3. Company C gives Bank A \$40 Million (Australian \$)
4. Bank A repays Bank B \$40 Million (Australian \$)

Figure 2

Hedge Investment Criteria FASB Statements 52 and 80

	<u>FASB 52</u>	<u>FASB 80</u>
1. Must be designated as hedge	Yes	Yes
2. Hedge of anticipated transaction	No	Yes
3. Approach to risk reduction	Transaction	Enterprise
4. Cross hedges	No	Yes
5. Degree of correlation	N/A	High
6. Ongoing assessment of correlation	N/A	Yes

Figure 3

FORD MOTOR COMPANY (DEC)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 19. Financial Instruments With Off-Balance-Sheet Risk

Interest Rate Instruments.

The company and many of its subsidiaries have entered into arrangements to manage exposure to fluctuations in interest rates. These arrangements include primarily interest rate swap agreements and, to a lesser extent, interest rate futures contracts.

Interest rate swap agreements involve the exchange of interest obligations on fixed and floating interest rate debt without the exchange of the underlying principal amounts. The agreements generally mature at the time the related debt matures. The differential paid or received on interest rate swap agreements is recognized as an adjustment to interest expense.

Interest rate futures contracts are exchange-traded contracts to buy or sell a financial instrument at a specified future date and price. Realized and unrealized gains and losses on interest rate futures contracts are deferred and recognized as adjustments to interest income or expense.

Notional amounts are used to express the volume of interest rate swap agreements and interest rate futures contracts. The notional amounts do not represent cash flows and are not subject to risk of loss. In the unlikely event that a counterpart fails to meet the terms of an interest rate swap agreement, the company's exposure is limited to the interest rate differential. At December 31, 1990, the notional amounts on which the company had interest rate swap agreements and futures contracts outstanding aggregated \$17 billion.

Foreign Exchange Instruments.

The company and many of its subsidiaries also have entered into foreign exchange agreements to manage exposure to foreign exchange rate fluctuations. These exchange agreements hedge primarily debt, firm commitments, dividends that are denominated in foreign currencies and net investments in foreign subsidiaries. Agreements entered into to manage these exposures include foreign currency forward contracts, currency swaps and foreign currency options.

Foreign currency forward contracts and currency swaps involve agreements to purchase or sell specified amounts of foreign currencies at specified rates on specific future dates. Foreign currency options provide the company with the right, but not the obligation, to buy or sell a specified amount of foreign currency at a fixed price on a specified future date. Any resulting gains or losses on the various contracts are either recognized during the period or offset against the underlying exposure.

Principal amounts are used to express the volume of foreign currency forward contracts, currency swaps and foreign currency options. Should the counterpart fail to meet the terms of the contract, the company's market risk is limited to the currency rate differential. At December 31,

1990, the total amount of the company's foreign currency forward contracts, option contracts and currency swaps outstanding was \$19 billion, maturing primarily through 1993.

Other.

Certain Financial Services subsidiaries make credit lines available to holders of their credit cards. At December 31, 1990, the unused portion of available credit was approximately \$6 billion and is revocable under specified conditions. The potential risk of loss associated with the unused credit lines is not considered to be significant.

In addition, the company and its subsidiaries have entered into a variety of other financial agreements which contain potential risk of loss. These agreements include limited guarantees under sales of receivables agreements, financial guarantees, letters of credit, interest rate caps and floors and government security repurchase agreements. Neither the amounts of these agreements, nor the potential risk of loss, was considered to be significant at December 31, 1990.

APPLE COMPUTER, INC. (SEP)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Summary of Significant Accounting Policies (In Part):

Off-Balance-Sheet Risk and Concentrations of Credit Risk.

The Company hedges certain portions of its exposure to foreign currency fluctuations through a variety of strategies and foreign exchange instruments, including the use of forward exchange contracts (forward contracts). Gains and losses associated with currency rate changes on forward contracts are recorded currently in income unless the contract hedges a firm commitment, in which case any gains and losses are deferred and included as a component of the related transaction. Generally, the interest element of the forward contract is recognized over the life of the contract. As of September 28, 1990, the Company had approximately \$300 million in net forward contracts outstanding.

Apple distributes its products principally through third-party computer resellers. Concentration of credit risk with respect to trade receivables are limited because of flooring arrangements with third-party financing companies, and because a large number of geographically diverse customers make up the Company's customer base.

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