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Agribusiness Management of Exchange Rate Risk

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Abstract

This study did structured interviews with senior agribusiness executives to find out how they managed exchange rate risk and especially deep devaluations of a foreign currency. The Mexican peso crisis was the focus of the study, but the results can be informative when anticipating situations for other countries and currencies.

1. Introduction

Many economists view exchange rates as a critical component in the trading relationship between countries. Since quasi-floating exchange rates began in the early 1970s, firms wishing to trade must frequently monitor exchange rates for use in price, cost and valuation decisions. Exchange rate variability generates risk that should be accounted for and managed. The severe devaluation of one currency relative to others creates special adjustment problems.

The purpose of this study was to document actual attitudes about exchange rates and their risks, and the behavior of agribusiness managers in coping with those risks. Case studies of four different size and types of agribusinesses were developed based on interviews with executives from each firm. The sharp devaluation of the

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Mexican peso in December 1994 provided a unique opportunity to study how the four agribusinesses, which trade with Mexico, managed exchange rates. The findings give insights on the relative importance of exchange rate risks compared to the many other risks confronting an agribusiness. The findings are timely because they follow within six to eight months of the initial peso devaluation.

2. Mexico and the Peso Devaluation

Entering into the year 1994, the economy of Mexico appeared relatively stable. Anti-inflationary policies were keeping inflation under 10 percent. Enactment of the North American Free Trade Agreement (NAFTA) in January 1994 led investors to believe that Mexico was the right place to invest. Investments continued to increase, and in early March, the Mexican Trade Secretariat (Secretaria de Comercio y Fomento Industrial, SECOFI) reported that $2.37 billion U.S. in foreign capital was invested in Mexico during January 1994. But the high domestic interest rates implemented to attract foreign investment slowed economic growth and gross domestic product declined by 1 percent.

Since 1989, the trade balance was running a larger and larger deficit. Trade liberalization policies allowed the entrance of imported goods that were under control before this period. With the overvalued peso Mexican products were less attractive and imports were greater than exports. Consequently, the current account deficit was financed by foreign investment, especially portfolio investments because the funds could be withdrawn more easily from Mexico than money directly invested.

With the beginning of 1994 the combination of the economic slowdown and a growing political uncertainty created concerns among some economic analysts and business organizations that a major devaluation of the peso might be inevitable before the end of the year. Economic analysts stopped short of predicting that a devaluation was imminent because the Mexican government had ample foreign exchange reserves, and because the U.S. government was committed to support the peso.

The economic situation deteriorated rapidly. The peso began to slide in value in late February after the Salinas administration reported that GDP growth for 1993 was only 0.4 percent. The value of the peso declined by 8.3 percent in relation to the U.S. dollar during the January-March quarter (Wall Street Journal, 04/07/94). Because of the loss in the value of the peso, stocks listed on the Mexican Stock Exchange were down about 20 percent in dollar terms. The U.S. Federal Reserve Systems decision to increase the federal funds rate in February led to a sharp fall in long-term bond prices and a sharp rise in the value of the yen. Both of these developments caused substantial losses for hedge funds, banks and others who were making large bets on movements of interest rates and currencies. These losses led to a reassessment of the riskiness of existing positions and a desire to reduce portfolio risks (The Economist, 6/24/95). Consequently in Mexico, total foreign investment at the end of March declined 10.4 percent relative to February, and stood at about $50.3 billion U.S.

As investors became more cautious about purchasing peso-denominated Mexican securities, the Salinas administration issued large volumes of short-term treasury certificates called Tesebonos. These were indexed to the dollar so that investors could shift their foreign funds from the peso-denominated securities that were called Cetes. This policy shifted the burden of currency risk from private foreign investors to the Mexican government and temporarily restored foreign investor's confidence in Mexico (Wall Street Journal, 07/06/95).

Political and economic uncertainty affected the Mexican Stock Index throughout 1994. Stocks, which had achieved big gains since the arrival of President Salinas, were more volatile and affected by immediate reactions in 1994. As a result, many foreign shareholders sold their Mexican stock holdings making it more difficult for the government to finance its $25 billion U.S. current account deficit.

The peso was hanging by a thread. It was overvalued against the dollar by 20% and Mexico had a current account deficit of $25 billion U.S. More pressure on the peso came from a stock market sensitive to the political situation, and the mild recession caused by anti-inflationary policies and NAFTA.

On December 20th, after several days of intense speculation and plunging indexes, the government that had assured investors one week before it would not devalue the peso, cut the value by 15 percent. The peso was previously controlled within a trading band to keep it from falling below 3.46 pesos to the dollar. On December 21st the government dropped efforts to maintain a floor under the peso and allowed it to trade freely. The peso closed at 4.80 to the dollar, down 30 percent compared to the level two days before. When the government no longer supported the peso it lost about 50% of its value against the U.S. dollar over the following days, and sank to a low of more than 6 pesos to the dollar. On Thursday December 29th, the full impact of the Mexican economic emergency was felt beyond its borders. The Canadian dollar reached a new low at 1.40 $CN per U.S. dollar, and the U.S. dollar was valued at a five month low against the German mark.

3.Objectives

- Were U.S. agribusinesses truly harmed by the peso devaluation?
- If so, in what ways were they affected?
- How have U.S. agribusiness firms handled the peso devaluation?

In answering these questions, this article will show how agribusiness managers possibly anticipated macro-economic events such as a devaluation of the currency;

what kind of financial tools those managers used to protect against exchange risks; and how they adjusted their short-run activities and long-run strategies. Four case studies of U.S. companies doing business in the Mexican market serve as the framework for answering the questions.

4. Methodology

Four agribusinesses were identified that do business with Mexico. Executive officers were interviewed who participate in the strategic management of these firms. The companies represented a variety of characteristics including size, range of activities and experience with foreign markets. The names are generic to preserve confidentiality.

Grain Cooperative, a small cooperative selling grain and supplying inputs to farmers
Soy Business, a soybean processor and grain trading firm
Grain Incorporated, an international merchandiser of grain
Midwest Foods, a food manufacturing company

The interview for each company lasted half a day. Information was collected about the firms' dealings with foreign countries, how these firms regularly manage exchange rate risks; and what they did in the case of the Mexican peso devaluation. A questionnaire focused on the following points:

1) The characteristics of the companies
2) The firms' business with foreign countries.
3) The management of exchange rates risks
4) The firms' investments aboard (when appropriate)
5) The firms' business in Mexico
6) The effects of NAFTA
7) The peso devaluation - expectations, consequences and reactions

5. Results

The four companies have very different business structures and management strategies that are summarized in Table 1.

Table 1. Characteristics of Companies Doing Business with Mexico

	Grain Coop	Grain Inc.	Soy Business	Midwest Foods
Annual Sales	$20 million	$1billion	$1.5 billion	$24 billion

Business Structure	Cooperative	Private	Cooperative	Private
Type of Business	Grain sales and farm supplies	Grain trade essentially	Soybeans processing, grain trade, feed for livestock	Produces all kind of foods, grain merchandising, tools retailer
Foreign Market Experience	Mexico only	International trade of grain	Canada and Mexico	30 different countries
Percentage of Export in Total Sales	Mexico irregular	Constant sales to foreign countries	10% of sales to Mexico	15% outside the U.S. market
For How Long?	For 3 years	Mexico for 15 years	For 3 years	For a very long time
Foreign Exchange Management	No	No for Mexico	No for Mexico Yes for Canada	Yes

As shown in the table, size is directly related to having a foreign exchange management plan. Midwest Foods and Soy Business, the two largest companies, maintain a plan to manage currency fluctuations in the foreign exchange market. Grain Cooperative and Grain Inc. do not. The results are presented as four case studies starting with the smallest company and finishing with the largest. The names were changed to preserve confidentiality.

Grain Cooperative

Grain Cooperative (GC) is a small cooperative with total sales of around $20 million. Merchandise sales to farmers (seeds, chemicals, fertilizers...) make up one quarter, while grain sales (corn, wheat, milo, soybean) represent three quarters of these sales.

Encouraged by Dreyfus, a French Grain Company already situated in Mexico, and the railroad company, Union Pacific, GC has been doing business with Mexico for one year. GC sells milo and soybeans (milo 80-90% and soybeans 10-20 %) to the Mexican market. The Mexican market offers good opportunities for the cooperative. It is a premium market; Mexican customers are bidding prices much above the best U.S. customers. They pay 5-10 cents per bushel more for milo than the next best customer in the U.S. market. Usually grain traders realize a nine-cent gross margin per bushel for grain, and probably a 2 or 3-cent net margin. In the Mexican market,

GC may double or triple this net margin, which is excellent in the grain business. Grain Cooperative doesn't trade directly with its Mexican customer. Rather it sells its grain to Mexico through third parties that are bigger grain companies. GC had evaluated the possibility of direct trading with the aid of various banks. If GC wants to negotiate a contract with a Mexican customer, these banks could guarantee that the payment would be collected from the Mexican bank as soon as the shipment arrived in Mexico. But, the company would have to manage, with the help of a bank, the exchange rate risk if the trade is to be done in pesos. Also, direct trade with Mexico, which is not an "everyday market," means more work and a cost for maintaining
contact with Mexican customers. Finally, after the extra 4-5 cents/bushel gain for direct trading shrunk to 1-2 cents/bushel as the volume increased, GC's manager decided that, due to the small size of the company and his limited knowledge of the Mexican market, he didn't want to take any more risks.

GC's business with Mexico is limited to two levels. GC deals with an intermediate grain company for the monetary side of the transaction, and deals with a railroad company such as Union Pacific to ship the grain to Mexico for the physical side of the transaction. According to the GC manager, the third party grain company has big customers in Mexico and uses GC grain to fill big orders going to Mexico. In this process, GC transfers title and certificate of origin to the third party who passes the grain at the Mexican-U.S. border via a border agent. GC receives its payment in U.S. dollars. Consequently for GC, absolutely no exchange rates risks exist.

GC's manager had no forewarning of the Mexican peso's devaluation. He noted that Mexican buyers must have anticipated the devaluation because in December they started to buy more grain 60 to 90 days in advance of the peso's fall. For GC, the devaluation of the peso was not a real problem, with the exception of losing orders offering a large net margin. GC can find a different market in which to sell its grain. Immediate consequences of the peso devaluation were Mexican customers having problems paying for their grain purchases, and hence the cessation of milo trade with Mexico. According to the GC manager, the Mexican market went from "hot" with prices 5-10 cents higher than the U.S. market before the devaluation, to "cold" after December 20 until March of 1995. The trade with Mexico dropped off until March, because the purchasing power of Mexican customers was divided by two, but also because many customers had bought 90 days in advance. Since March, the Mexican market has returned to "lukewarm" with prices 2 to 5 cents higher. U.S. firms are regaining confidence in Mexico as opportunities for sales are returning. Based on past experience, GC will change its approach to the Mexican market because of the lessons learned. For the transportation of grain, it will be less risky because Union Pacific now requires GC to reserve only one or two months in advance. GC will not be as reliant on the Mexican market as it was in the past, but will still try to make a profit there when the situation allows.

Grain Incorporated

Grain Incorporated is an agribusiness firm specializing in grain trading with annual sales of over $1 billion. Grain Incorporated trades around 350 million bushels per year. Additionally, Grain Incorporated buys and sells some agri-products and fertilizers and has some interests in real estate.

Grain Incorporated has been trading with Mexico for fifteen years, and it has gained tremendous knowledge of this market. Like their competitors, Grain Incorporated does all its business with Mexico in U.S. dollars. With Mexican customers, they require a letter of credit with an approved Mexican bank so the company is sure the money will be transferred to a U.S. bank as soon as the sale is made. According to Grain Incorporated, trade with Mexican customers usually occurs within a fairly short time period: only 30-45 days pass between the order from Mexico and the shipment to the country.

Grain Incorporated considered the devaluation of the Mexican peso very surprising, and noticed no indicators of a coming devaluation. While some businesses were harmed by the devaluation, Grain Incorporated was not. Although it had already reserved railcar trains to send grain to Mexico, the company was able to use these trains to deliver grain somewhere else in the United States.

Grain Incorporated describes this currency devaluation as a "speed bump" for the Mexican market, but does not see any long-lasting effects for U.S. businesses. The marketplace is evolving rapidly, and the volume of trade with Mexico has already increased.

Grain Incorporated, which has been doing business with Mexico for a long time, didn't see major changes in their dealings with Mexico once NAFTA was implemented. Grain Incorporated did not wait until the first of January 1994 because opportunities were already showing up. Prior to NAFTA, Conasupo, the Mexican state organization responsible for the management of the grain market, would remove border regulations whenever the country needed grain. NAFTA's main advantage for Grain Incorporated is the lessening of Conasupo's interference, which allows for less bureaucracy and faster processing of trade documents.

Soy Business

Soy Business is a company with total sales of almost $1.5 billion. Numerous stockholders are spread throughout the Midwest. Soy Business operates mostly in the United States, but also in Canada.

The main activity of Soy Business is to purchase and process soybeans in their different plants. Soy Business also purchases, stores and markets many types of grain. It owns a large transportation division that allows the company to better serve both its domestic and international customers. Recently, Soy Business delved into the manufacturing and distribution of feed for livestock in the United States and Canada. Soy Business operates a hatchery, turkey and broiler facilities, and manufactures and packages pet foods under private label contracts.

Soy Business started doing business with Mexico in 1992 because customers wanted to buy their products, and called them at headquarters. Now Soy Business has 10% of its total sales of soybean meal, oil, grains (wheat, corn, milo) and soybeans going to Mexico. According to Soy Business, Mexico is a huge market for the company's products, because the consumption of oil based products in Mexico is high.

NAFTA changed the strategy of Soy Business. Before the Unites States and Mexico started to talk about a free trade area, Soy Business ignored Mexico. However after NAFTA's implementation, Soy Business realized the importance of the Mexican market. While NAFTA didn't erase all trade tariffs, many were reduced or will be reduced. In a couple of years, Soy Business expects trade to be totally open.

The company could have bought corn in Mexico for a good price, but they didn't because of political risks. Soy Business is still afraid that the Mexican government may embargo shipments because its country needs corn. Currently it is difficult to sell a lot of corn or wheat because of the tariffs, but it is easy to sell milo or soybean meal that is used in big feed lots.

Soy Business did not have any forewarning of the Mexican peso devaluation. The company was not harmed by the crisis because they took measures to make sure it would be paid.

Midwest Foods

Midwest Foods (MF) is a large agribusiness firm that operates across the food chain around the world. It does business in about 30 countries. MF's products range from convenience foods for consumers, to supplies farmers need to grow their crops. Most of the business they do is in prepared foods but they also trade and process commodities, and sell farm inputs. MF has major businesses in branded grocery products, including shelf-stable foods, processed meats and frozen foods. It distributes agricultural chemicals, fertilizer and animal feeds all over the United States. Additionally, MF has grain-merchandising operations with commodity trading offices around the world.

Net sales exceed $10 billion annually with 15 percent of sales being outside the United States. MF employs 100,000 people and has $11 billion in total assets.

In Midwest Foods, the finance division for business units is centralized. Each unit coordinates daily with the finance division to meet its needs for funds. The finance division has different desks. One is dedicated to each region of the world where MF does business, such as the United States, Europe, Asia and Latin America. Early every morning, the different desks ask the units working in their regions how much money they need to run their business for the current day. When headquarters knows what each region needs, it sells commercial paper to banks or brokers to obtain money at the cheapest interest rate.

Since MF operates around the world the financial division has to deal with many different currencies. For example, MF owns a food processing company in Australia that exports 87% of its sales and receives orders in 11 different currencies. Because this Australian company's orders are denominated in so many different currencies, the company is exposed to a number of exchange rate risks. The company hedges all large transactions and aggregates smaller transactions until they represent a significant amount of money before hedging. Hedging is done at least once a day, either by the headquarters or the individual company. The headquarters requires each company to have strict policies and procedures about hedging. Within the policy guidelines, each company may aggregate during the day and hedge, or may hedge each transaction. Headquarters must approve their hedging policies so that no risk is taken on currency fluctuations.

Midwest Foods does business with Mexico, but they do so cautiously. The finance and treasury division considers the peso or other soft currencies as high-risk currencies. If MF does business with a Mexican customer, it will protect itself to minimize the risks associated with all transactions. According to MF, the most significant element is not the exchange rate risk but credit risk. Headquarters requires the individual companies to have strict terms of sale with their foreign customers. To avoid the non-payment risk most foreign customers buying from an individual company must have a letter of credit with a bank that is on MF's approval list.

MF frequently denominates sales in U.S. dollars. Or if the sale is made in pesos, MF immediately hedges the currency exchange. However, hedging pesos will be expensive, much more than hedging French francs for instance, because the differential in interest rate and price levels between the United States and Mexico is very large. While the interest rate is around 6% a year in the United States, it is at least 18% a year in Mexico, so the cost of hedging is extremely high because the bank will charge at least 12% a year of interest rate differential. MF had some indication of an upcoming devaluation of the Mexican peso when, in December 1994, the cost of hedging pesos was increasing (mostly because of the rise of interest rates to avoid foreign assets leaving the country).

Although Midwest Foods expected there was going to be a Mexican peso devaluation, it didn't know exactly when it was going to happen. Four months before the devaluation, MF's financial director had a meeting with economists and money center bankers who noted Mexico's current account deficit was increasing and the possibility of a devaluation was getting closer and closer. MF's financial director remembered these economists and bankers showing him the Mexican trade and current account balance.

However Midwest Foods, which has more than 11 billion dollars in assets, still has assets in Mexico. Even if it doesn't have any exchange rate risks on the sales it makes, it has to face a translation risk. Translation risk is the risk one runs when one owns assets in a foreign country. For instance, if MF bought 20 % of a Mexican company, then MF would lose around 50% of the value of this asset because of the 50% peso plunge. For financial statement purposes, MF must convert any foreign assets into U.S. dollars and has to declare the value on the balance sheet as a gain or a loss based on the current exchange rate.

In the long-term, the company doesn't consider exchange rate fluctuations critical because short-term losses would be balanced with gains in the long run. In the long run, the company would be more competitive and more able to increase its sales with cheaper products. So, for MF, exchange rate variability is not a factor that would make it change its long-term strategy in any nation if that country is an attractive market where they want to be in ten years.

6. Conclusions

Table 2 summarizes the key findings for each of the four agribusinesses. The left hand column lists the survey questions asked of each agribusiness with their responses given in the rest of the table. The devaluation had almost no real negative consequences for these agribusinesses and their strategic decisions. The smaller ones were only dealing in U.S. dollars and obtained government credit to guarantee the payment of the sales. Only the biggest one would eventually take pesos for payment, but would immediately hedge it on the foreign exchange market. Technically, none of these companies suffered from exchange rate risks. Despite all the warning signs, these agribusinesses, except the biggest one, had no forewarning of a coming devaluation. Only Midwest Foods was aware that a devaluation was probably going to happen.

The strategic decisions of these firms concerning the Mexican market remained almost unchanged despite the devaluation. Even if they act more cautiously, they all want to serve the Mexican market in the future.

Table 2. Effects of Devaluation on Companies Doing Business with Mexico

	Grain Coop	**Grain Inc.**	**Soy Business**	**Midwest Foods**
Strategy for Mexico Before the Devaluation	Making better margins on grain sales	Making better margins on grain sales	Increasing market shares for oil products	Increasing market shares on the long-term
NAFTA's Effects	New opportunities	Reduction of bureaucracy	Increased trade	Reduction of bureaucracy
Anticipated Devaluation?	No	No	No	Yes
Major Risks of Doing Business with Mexico	Transportation	Payment risks	Political risks	Payment risks and political risks
Trade Response after the Devaluation	Low during six months but now recovering	Low during six months but now recovering	Low during six months but now recovering	Low during six months but now recovering
Strategy for Mexico after the Devaluation	Be more cautious but trade when viable	Making better margins on grain sales	Be cautious but definitively serve the Mexican market in the future	Stay in Mexico and serve the Mexican market in the future

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