

Hedging Transactions Involving Foreign Exchange Risk – A Primer: Falling in Love with a Puerto Vallarta Condo (Part B)

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CASE STUDY (B): The Mexican Sellers' Perspective

The two case studies presented examine foreign exchange risk from two perspectives:

(Part A) *An American couple has put a down payment on a lovely new condo in Puerto Vallarta, agreeing to pay 5,000,000 Mexican pesos on delivery of the condo in 12 months.*

(Part B) *But the next day, they have second thoughts and offer the Mexican real estate developer \$307,000 instead. The Mexican firm needs to consider the foreign exchange risk from its perspective—while ensuring the sale.*

Guadalajara, Jalisco State: A Bit of Telephone Drama

Late one afternoon, as the shadow of the Cathedral of the Assumption of Our Lady begins to intrude into the usually bright offices of *Construcciones Inspiradores, S.A. de C.V.*, a real estate development company, [✱] the general manager—Dulce Maria (D.M.) Fernandez—is getting ready to pick up her son from his high school when she receives a phone call. On the line is her agent, Arturo Aguilar, calling from Puerto Vallarta, the popular tourist resort. The day before, he had clinched a deal with a couple from New Jersey, who had agreed to buy a condominium apartment under construction by her company. But . . .

“Just yesterday,” Aguilar reports, “this couple signed—in ink, before a notary—a contract agreeing to make a final payment of 5,000,000 pesos, 12 months from now, on delivery of the finished apartment. And today they want to renegotiate!”

Glancing at her watch, Ms. Fernandez is thinking that she has to pick up her son from school and needs to keep the conversation short. Throughout her career, Dulce Maria preferred to be called “D.M.” since she did not like the first name given by her parents and did not wish anybody to think she was a pushover. In fact, at the office she had a reputation of being a *dama de hierro*. Subordinates would often whisper that instead of “D.M.” she should call herself “D.D.”—*Dura Dama* (tough lady). “What does this couple want?” Dulce Maria snaps.

“They are asking if they can pay US dollars 307,000 on delivery of the apartment instead of the 5,000,000 pesos they agreed to pay yesterday,” replies Aguilar, sounding annoyed. “They are saying that the \$307,000 they are offering to pay 12 months from today comes to *more than 5,000,000 pesos.*” He pauses, and getting no reply (yet), he continues. “After talking with them, I called the bank and found out that the current spot exchange rate is .0609 USD/MXN. And so \$307,000 would convert to pesos 5,041,051. Shall we agree to renegotiate, if it clinches the deal?” He held his breath, taking in the beautiful view from his office window to calm himself down.

“*Solo un momento,*” D.M. responds, firmly. “This is today. One year from now, the spot exchange rate will surely be different. You know the peso has been gyrating . . . it has been down recently, but it could also go back up. If the dollar weakens over the next year and crosses .0614 USD/MXN, \$307,000 could mean our company would end up receiving/less than 5,000,000 pesos. These gringos are trying to shift the foreign exchange risk over to us!” Now she is really agitated. “Who the hell do these Norte Americanos think they are? Do they think we Mexicans are stupid? I would say to them ‘¡vete al infierno!’” shouts D.M., slamming down the phone.

A Voice of Reason

As Dulce Maria Fernandez prepares to leave the office, a quiet voice from behind interrupts her. Miguel Cardenas, the finance manager—who stays on top of international economics news—says, “D.M., I could not help overhearing your conversation. I think we should take a closer look at the Americans’ offer. It could actually be to our advantage,” he says softly. “Can we sit down and discuss it before making up our minds?” His manner is tentative, yet subtly insistent.

“But how can our company benefit by taking on foreign exchange risk?” D.M. asks, suspicious of this argument. Yet, while maintaining her usual frosty façade toward one of her subordinates, she also knows that Cardenas is clever with finance. “How long will this take?” she asks. “About 15 minutes,” Cardenas replies, his mood lifting.

Hedging Foreign Exchange Risk – and Benefiting

After phoning her husband to ask him to pick up their son, Dulce Maria settles down to listen to Cardenas. She begins by saying, “Miguel, give me some options.” Cardenas pulls out a calculator and presents three, happy to have a chance to display his knowledge:

Choice 1: Agree to receive \$307,000 and take a chance on the conversion rate in 12 months

Now he begins. “Over the course of the next year, if the dollar strengthens even further above today’s rate of .0609 USD/MXN (or 16.42 MXN/USD), that could mean we get *more* than 5,000,000 pesos next year. But there is no guarantee—and if the dollar devalues against the peso, our company would get less than the target 5,000,000 pesos. *Claro*. This is why you do not like this option—it has too much uncertainty.”

Choice 2: Agree to enter into a 12-month forward contract

Cardenas indicates that he can get a Mexican bank to guarantee a fixed, known-in-advance forward exchange rate today that would convert \$307,000 into pesos 12 months later at .0637 USD/MXN. “You mean that the bank will guarantee a .0637 rate in 12 months, even though the spot rate at that time could be anything?” D.M. asks.

“Of course,” replies Cardenas, “That’s a service the bank provides. How they do it, and how the bank makes money on such deals, I can explain later. But for our company, that means \$307,000 would convert into a known-in-advance amount: $(307,000)/.0637 = 4,819,466$ pesos. Again, this is not an attractive option because it is so much below 5,000,000 pesos. But at least we could sleep in peace knowing the outcome in our own currency. If it means that the American couple pays in dollars and keeps to their bargain, it may be something we could live with.”

The lines on Dulce Maria's face tighten. "*Mira*, you have not yet told me how the Americans' offer could be to our advantage," she says, her voice laced with irritation. Cardenas then presents his third option.

Choice 3: Agree to a money market hedge

"OK, now I will show you my third choice—and why it is attractive. Thanks to Janet Yellen & Co., interest rates in the US are still very low. Even for a Mexican company like ours, we can borrow in dollars at only 4.9 percent—whereas if we borrow pesos, our borrowing rate is 6.8 percent per annum."

D.M. responds by asking, "Who the hell is Janet Yellen?" Cardenas explains that Janet Yellen is the Chair of the US Federal Reserve, which had kept dollar interest rates unreasonably low for many years to bolster the American economy.

"Anyway," continues Cardenas, what this means is that if we can show our Mexican bank a US dollar receivable of \$307,000, they could be willing to lend us this amount:

$$\frac{307,000}{1.049} = \$ 292,659.67 \text{ now}$$

Then we could implement these five steps:

Beginning_of period (today):

- Our firm borrows \$292,659.67 for 12 months at a borrowing rate of 4.9 percent per annum. (Incidentally, for the end of the period, that means that the dollar loan repayment obligation, 12 months later, will be $292,659 (1 + .049) = \$307,000$.)
- Convert the \$292,659.67 in the current spot market (at .0609 USD/MXN) into pesos 4,805,578.
- Use pesos 4,805,578 to reduce our current debt balance, which is already high. Reducing our debt balance means that we would save on our much higher peso borrowing cost, which is 6.8 percent per year for our company.

End of period (12 months later):

- Repay the dollar loan from the \$307,000 that the American couple has agreed to pay when the apartment is ready. The dollar loan repayment the bank will expect is {principal + interest} = $\{292,659 (1 + .049)\} = \$307,000$.

- Calculate the value of the so-called money market hedge at the end of 12 months. Its value is not only the 4,805,578 pesos received a year ago, but also the peso borrowing interest saved (i.e., *not incurred* because the company reduced its debt level). So the total value of this deal is:

{principal not borrowed, or peso debt repaid a year back} + {borrowing interest saved} = {4,805,578} + {(4,805,578)(.068)} = {4,805,578 pesos from spot market conversion a year ago} + {326,779 pesos saved by not having to pay borrowing interest} = 5,132,357 pesos as total value 12 months later

“Miguel, I do not understand,” D.M. says. “How can 326,779 pesos be saved? What does ‘saving’ mean? Is it real—or just fancy finance, a chimera?”

To this, Cardenas replies by giving an example: “Suppose you are carrying 100,000 pesos in credit card debt and the credit card company is charging you 15% interest. Then suppose your poor aunt in Chiapas just died, but managed to leave you 10,000 pesos in her will. What could you do with 10,000 pesos? If you have credit card debt, most likely you should reduce your debt level from 100,000 pesos to 90,000 pesos. If you do that from next month onward, your credit card bill will show a reduced interest due, down from $(100,000)(.15) = 15,000$ pesos per month reduced to $(90,000)(.15) = 13,500$ pesos. So for every month you would save $15,000 - 13,500 = 1,500$ pesos per month into the future. This 1,500 monthly saving is not a *quimera*; it is a real value.”

Cardenas adds, “I read a book by Benjamin Franklin, *Poor Richard’s Almanack*, in which someone said, ‘*A Penny Saved is a Penny Earned.*’”

“*¡Andando!*” cries Dulce Maria. “Now you are quoting a long-dead gringo to make your point!” But she allows herself a smile. “Anyway, if you say the total value of this option is 5,132,357 pesos, this is more than the 5,000,000 pesos we contracted for the apartment. Let me call Arturo Aguilar back in Puerto Vallarta and ask him to renegotiate the deal with the Americans. Let’s do it.”

Cardenas sits back, breathes a sigh of satisfaction, and also smiles.

“Besides, since my husband will now get home first, my dinner and a cool drink are waiting for me at home . . . I hope.”

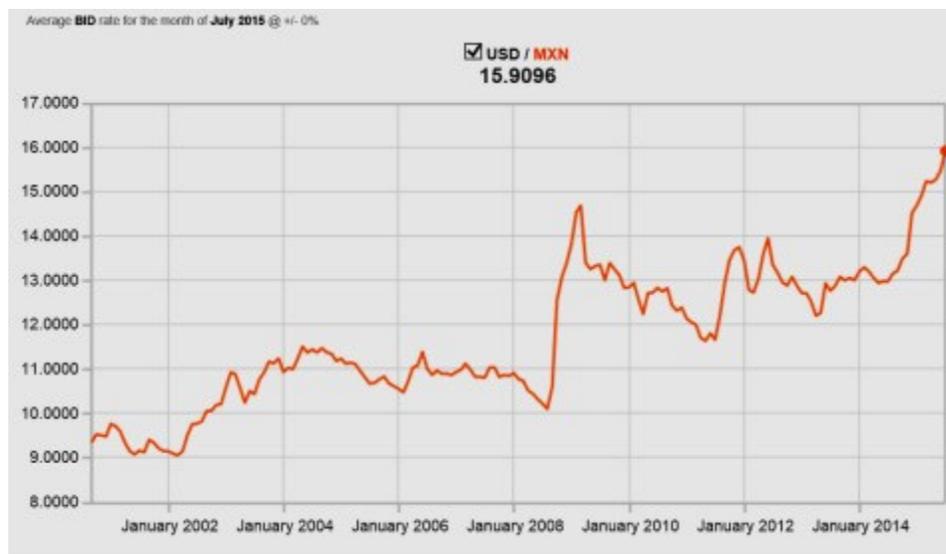
PART A: THE AMERICAN BUYERS’ PERSPECTIVE

In Part A, we look at the financial risk from the perspective of the American couple that initially agreed to pay for their Mexican condo in pesos.

Table 1B: Foreign Exchange and Interest Rates Available to Mexican Firm
(Four Variables)

Spot Rate	12-Month Forward Rate	Peso 12-Month Borrowing Rate	12-Month Dollar Borrowing Rate
.0609 USD/MXN	.0637 USD/MXN	6.8 % per annum	4.9 % per annum

Figure 1: Recent History of the Mexican Peso



Source: Oanda.com

Conclusions and “Takeaways” from This Case – Part B

- Foreign exchange rates fluctuate constantly; a calculation is valid only for that day or even that hour.

- Foreign exchange risk (and “risk” in finance is either an upside or downside movement) occurs when you, or your company, has to pay (or be paid) in a foreign currency at a future date.
- By “hedge” we here mean getting rid of any fluctuation and nailing down the final outcome in one’s own currency (i.e., knowing the outcome in one’s own currency in advance).
- The simplest hedge, as a generalization, is to try to get the other party to agree to receive payment in your currency or to pay you in your currency. This is what the American couple in Part (A) is trying to do. But the counter-party—the Mexican real-estate developer—may not agree, as seen in the initial refusal by their general manager. Even if the other party does agree, that does not get rid of foreign exchange risk. One or the other party has to bear that risk. In [Part A](#), by agreeing to pay pesos 12 months later, the Americans were carrying the foreign currency risk. In [Part B](#), if the Mexican company agrees to accept US dollars 12 months later, they carry the risk. In general, the currency of the contract (the payable or the receivable) is a matter for negotiation between the parties.
- [Doing nothing and waiting to see what the spot rate on the maturity date turns out to be \(Choice 1 above\)](#) means the outcome is not known until the end. In any event, this is not an option comparable to the forward market or money market hedges, where the end result is known in advance.
- Banks provide a service to their clients called [the forward market transaction \(Choice 2 above\)](#), whereby the bank agrees, in advance, to take/give foreign currency at a predetermined rate of exchange at the maturity date. Of course, at the maturity date (12 months, 6 months, 30 days, or whatever), the spot rate is almost sure to be different from the previously contracted forward rate. The bank assumes that risk. The client or company has no foreign exchange risk in the sense that, having committed to a forward rate at the beginning of the period, the outcome for them, in their own currency, is known in advance from the outset.
- The [money market hedge \(Choice 3 above\)](#) is more complicated (involving more action steps), but it can work out better than the forward market hedge, as in the above example—especially when the borrowing or deposit rates available to a particular party deviate from the average or when the amounts involved fall well below \$1 million.

Ultimately, [the decision boils down to four variables known at the beginning of the period](#): the [spot rate](#) at the beginning of the time period, the [forward rate](#) at that time (but applicable at the end), and the [two interest rates](#). Depending on these four variables available to a client or company, sometimes the forward market hedge

works out better; other times, the money market hedge does. But a quick calculation is needed to choose between them. **[**]**

REFERENCES

Hernández, J.R. (2014). *Peso-Dollar Forward Market Analysis: Explaining Arbitrage Opportunities during the Financial Crisis*. Working Paper No. 2014-09 (May), Banco de México (Documentos de Investigación). *[For academic reference]*

Shapiro, A. (2013). *Multinational Financial Management* 10th ed. Wiley. *[For interested students]*

[*] The company and personnel described are fictitious.

[]** See further discussion in [Part C](#).