PNC Advisory Series

Managing Currency Risk with Foreign Exchange Options

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Narrator: What is an option and why should you consider an option strategy?

An option is a right, but not an obligation, to transact at a certain price, or, in this case, to exchange currency at a given rate, and that's called the strike rate. There are several reasons that options should be a part of your risk management program, but the key reasons are that they provide protection, upside, flexibility, and they can be customized to suit your needs.

The main reason to consider using options is for protection against adverse moves in exchange rates.

Second, options provide potentially better rates. Options don't lock you into a rate, but they provide protection with the potential for an even-better exchange rate, should the currency move in your favor. Essentially, you're hedging at an at-or-better rate.

Third, options are highly customizable. We can manipulate different option components, like premium or strike rates, or we can even manipulate the amount of upside potential to structure an option strategy that suits hedging needs for any given situation.

For example, you can pay a full premium for a certain strike rate or protection level, or you can create a structure that offsets that premium either partially or completely.

Lastly, options don't necessarily have to be held to maturity. They can be sold back to the bank, and they usually have some residual value for which you will be paid.

So, options provide customizable protection with upside potential and flexibility, and that's why you should consider them.

Everyone loves forecasts. It's always important to have a conversation with the experts or with your FX representation about economic fundamentals and other components that affect currency values.

That being said, economic forecasts are a widely used tool by treasury managers, and they do play a role in pricing and budgeting.

Options are a more appropriate or most appropriate in the following situations.

First. when your exposure is uncertain. You will have to pay an upfront premium, but that cost can be factored into the price you're quoting on the contract.

Second, when you need to hedge, but you recognize that there is potential for a better rate. Perhaps it's a good idea to hedge with some upside potential.

Third, when you're unwilling to lock into a hedge at a rate that's worse than your budget rate.

If you have an exposure, you can quickly find yourself in an unfavorable position before you've had a chance to hedge it. By using an option strategy, you can fulfill your requirement to hedge, stem your loss, but still, potentially, get back to a better rate. Depending on circumstances, you may even be able to accomplish that with little or no premium.

Conversely, if there's a favorable move before you've had a chance to hedge, now you find yourself dealing from a position of strength. This is an ideal opportunity to protect your budgeted rate, and also acquire some upside potential for little or no premium.

And the last is when forward rates are in your favor. As you know, forward contracts are priced on a spot rate and then adjusted for the difference in interest rates between the two currencies. In currencies such as the Indian rupee or the Mexican peso, because their interest rates are higher than U.S. rates, you can buy the currency forward at a discount.

So, this can create an opportunity to structure a zero-premium option that will protect you at or very close to your budgeted rate, but still with some additional upside potential. So, basically, you're being provided the same level of protection as a forward contract, but with free upside.

Options contracts function similar to insurance policies. They require an up front premium, offer you a form of protection, and you're better off if you don't need to use them.

The upfront premium on an option is based upon four factors — notional, tenor, strike and volatility.
The first three pricing factors are set by you, and you're able to tailor that to your particular exposure. The notional, simply defined, is the amount of currency you're hedging. It can match your total exposure or just be a portion of that.
Similar to insurance policies, the higher the level of protection you're looking for, the higher the upfront premium or cost is going to be.

The second factor you choose is tenor, which is just the length of the option contract, or the time until maturity. Here again, the longer the maturity, the higher the upfront premium is going to be, and that's a result of a longer period of time for rates to change or something to happen.

As time increases, the amount of upfront premium may not increase at that same pace.

The third factor that you set in an option is the strike rate, or the level of protection you're looking for. The closer you are to the current market rate or forward rate the strike price is, the more expensive it's going to be.

The fourth and final factor in an option — in an option's upfront premium — is a variable that you're actually not able to set. Currency volatility is just the variability of what that currency has done in the past or in a future period.

Currencies in developing nations, such as Brazil, tend to have higher volatility. With that higher volatility comes an increase in upfront premium.

The most basic forms of options are vanilla calls and puts.

Say you need to buy or sell €1 million in six months' time. You wish to have protection from an adverse rate move, but don't want to have to lock in to the forward rate.

If you're a buyer of euros, you may need to pay a supplier or a service provider overseas, and you want to protect yourself against a depreciating euro. You would buy a call option.

If you actually want your options to expire without having to use them, you buy at a lower market rate, and if you have any additional exposure, you can put on a new hedge or layer on another hedge at this more attractive, lower rate.

The other side of the example would be for someone who generates revenue in euros, and then they have the need to sell. They want to protect themselves against the depreciating euro, so, they would buy a put option.

By using an option structure, you may be able to avoid or minimize premiums. The basic idea is to buy protection while selling some of the upside potential. The result typically leaves you with protection at a predetermined level and a range of rates you can participate in if the currency moves in your favor, up until a predetermined limit.

Now let's look at a real example called a collar. You need to purchase euros. You have the ability to lock into a forward contract at 137.50, but you believe the euro is going to weaken, so you don't want to lock in to that forward rate.

You do have to give up a little something to have the ability to do better. You can fully offset the premium, but keep in mind paying that premium may be able to improve the range or increase your upside potential.

One of the biggest reasons companies may shy away from options is because they just don't want to pay premiums. But sometimes it really does make sense to pay premiums.

First if the exposure you need to hedge is uncertain, buying a vanilla put or a call is really the only thing that's going to allow you to be completely protected but not at all obligated.

However, you may be able to manage your premium in that situation by looking at the probability of the exposure. Take an example of bidding on a Canadian contract. When you submit your initial bid, you're about 50% certain you're going to be awarded that contract. So, you buy a put option to sell Canadian dollars that you'll be paid, should you be awarded the contract, but only on about 50% of what that exposure would be.

As time passes and other bidders are turned away, you may believe the probability of winning this contract is closer to 85%. So, you can buy another option, at which point the tenor will be shorter and the premium will likely be a little bit lower.

The point is, if you want to hedge an uncertain exposure, you are going to have to pay premium.

Second, a premium may be needed if you require protection, but you still want to have the flexibility to react to opportunities that arise with sudden market moves, or if you just feel strongly about the direction that a currency is going.

For example, if you need to hedge a future purchase of euros, but you believe the euro will continue to weaken, you might want to pay premium for a vanilla option. It will allow you to be nimble, while still giving you that safety net you need — when you require being hedged.

Third, if you desire some upside potential, need to make up for lost ground, or believe the market will move in a certain direction, you may have to pay a premium.

If you don't require unlimited upside, but you'd like to have the opportunity to achieve a certain rate and a zero-cost structure just doesn't provide enough upside potential, you may need to pay some premium for that right. Since the upside would be limited to a rate that you determine, not unlimited, the premium you pay will be discounted.

The factor in premium price that we cannot control or manipulate is the implied volatility.

When volatility is low, it makes sense that premiums are less expensive. When premiums are less expensive, there doesn't really have to be much of a move in the currency in order for you to be able to recover your premium cost or get to a break-even point, once you've bought an option.

So, lower premiums make it easier to buy options for protection when you have a strong view on the currency.

The least favorable the situation you find yourself in, the more likely it is that you will have to pay some premium for the opportunity to improve the situation.

Take for example a situation in which the Canadian dollar declines in value against the U.S. dollar by more than 5%. A vendor is being paid in process payments on the sale of a piece of machinery into their Canadian customer. Most of the payments were small, and weren't that big a concern, but there was one payment in six months' time on CAD1 million, that they needed to hedge. And the depreciation in the Canadian dollar had already begun.

We looked at a zero premium option called a participating forward. Like a collar, the company will buy the right to sell their Canadian dollars at a certain strike rate, and then offset the premium on that by selling the right to buy Canadian dollars at the same strike rate, on only half of their exposure.

As transportation costs have increased around the world, manufacturers are shifting some of their production facilities closer to home and Mexico's been a popular destination. As a result, companies need to purchase a predictable amount of pesos on a regular basis. If the peso appreciates it's going to directly increase their cost of goods. And the peso's been one of the most volatile among major currencies.

When interest rates in Mexico are higher than in the United States, purchasing the peso in the forward market is cheaper than the current market or spot rate.

A commonly used zero premium structure for buyers of the peso is the enhanced collar strategy. It incorporates a barrier or a trigger on one of the options, which results in an increase in the upside potential.

The strategy is probably best explained with an example. In the example, you have the need to buy pesos in six months' time with the current market rate of 12.8050. You're uncertain of what the peso will do over the next six months, so you have a couple of choices.

You could lock in the forward rate at 12.95. Then you'll know what your rate will be in six months' time, and you're taking advantage of the cheaper forward rate. Or, you could use an option structure to provide protection but with the possibility of benefiting from a weakening peso.

The result of these options is that at maturity you have protection at 12.5 with upside potential all the way to 13.9999. If the peso depreciates and is at 14 or higher, you're knocked back to the put strike and obligated to then buy pesos at 13.25, but that 13.25 is still actually better than the forward rate.

These are only a few examples that demonstrate the value of incorporating options into your hedging policy. Reach out to your foreign exchange representative to discuss whether options may be suitable for your particular exposures.