HEC MONTRÉAL

NATIONAL BANK

Managing currency risk

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Introduction

When you do business in a foreign currency, you have to deal with exchange rate fluctuations: Each change in the foreign exchange rate impacts the amount you receive or have to pay. Sometimes, you come out on top. Other times, you risk losing money. This risk can become a source of uncertainty and stress. Failure to manage financial risk is like speculating on the future by betting that the markets will move in your company's favour.

Some people think that exchange rate fluctuations and the surprises they bring are an impossible risk to prevent. But others see them as an opportunity to put in place strategies to limit their effects.

Currency risk is an important issue to tackle, as it can have a real impact on the profitability of your international operations. Although it may seem complex, there are simple and affordable ways to protect yourself, no matter how small your company.

Entrepreneurs do not have to face currency risk on their own. They can consult their advisers to find out what solutions are available. Being well protected against currency risk strategically reduces a company's exposure to market risks and can become a competitive advantage.

This guide is designed to give you a better understanding of the issue and provide suggestions to help you manage it.

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What is currency risk?

There are several definitions of currency risk. Commit this one to memory: A company is exposed to currency risk when the value of its transactions and investments—even its viability—is affected by exchange rate fluctuations.

DIFFERENT TYPES OF CURRENCY RISK

Currency transaction risk. Currency risk occurs when a company conducts transactions that require the payment or receipt of foreign currencies. When a contract or purchase order is signed, it is impossible to know how much a foreign currency will be worth by the time payments are made.

Economic currency risk. Exchange rate fluctuations can affect the future value of a company and its competitive position in the short, medium and long term. A Canadian firm with U.S. assets, such as a factory, could be vulnerable to foreign-currency depreciation. On the flip side, a Canadian company with financing from a U.S. bank runs the risk of the foreign currency appreciating, causing its liabilities to have a higher value in Canadian dollars.

Translation risk or accounting exposure. Exchange rate fluctuations affect the financial statements of a company that does business internationally when it needs to consolidate the results of its foreign subsidiaries.

In this guide, we will focus primarily on currency transaction risk.

TWO EXAMPLES OF CURRENCY TRANSACTION RISK

To fully understand the concept, let's take a look at two examples: one, a Canadian importer, the other, a Canadian exporter.

1. For an importer

A Canadian company buys equipment in the United States for US$500,000. On billing day, the U.S. dollar (USD) was at $1.3024 Canadian (CAD). The company would have paid C$651,200 at the spot rate. But, when the payment was made three months later, the USD had appreciated and was trading at C$1.3172. In this case, the actual cost of importation was now C$658,600, causing the company to face a foreign-exchange loss of C$7,400.

2. For an exporter

Now consider a Canadian exporter that is making a foreign sale worth US$500,000. The company is billed in U.S. dollars and payment must be made in three months. If the U.S. dollar depreciates during this period, dropping from an exchange rate of 1.3200 to 1.3100, the day the payment is received, the value of the export will be reduced by C$5,000 from what the exporter originally expected. Again, the company will face a foreign-exchange loss.

In both cases, not hedging against currency risk exposes the company to financial losses.

HOW DOES THIS AFFECT EXPORT PROFITABILITY?

Even a small fluctuation in the exchange rate can have a major impact on export profitability. Take, for instance, a Canadian firm that sells its product to a U.S. customer for US$95 and is paid six months later. The day the purchase order was signed, the spot rate was 1.30, making its unit profit margin C$33.50 (or 37.22%). But if, during the six-month period, the American dollar depreciates to 1.26, then the gross margin is only C$29.70, reducing the profit margin by 11.34%.

The following table illustrates the impact of different levels of U.S. dollar depreciation on the profit margin in Canadian dollars six months later.

Exchange rate	Price billed in USD	Revenue in CAD	Cost in CAD	Profit margin in CAD	Profit margin in %	Depreciation of USD	Reduced profit margin
1.30	95	123.50	90	33.50	37.22%	0%	0%
1.28	95	121.60	90	31.60	35.11%	-1.54%	-5.67%
1.26	95	119.70	90	29.70	33,00%	-3.08 %	-11,34%
1.24	95	117.80	90	27.80	30.88%	- 4.61%	-15.31%
1.22	95	115.90	90	25.90	28.77%	- 6.15%	-22.70%

The table shows that the reduced profit margin far exceeds the percentage change in the exchange rate. The impact on an exporter's profit margin is pretty clear.

DELAYS: CHALLENGING EXTERNAL FACTORS

While companies that do business internationally may try to set realistic deadlines, they often face delays beyond their control, from manufacturing and delivery to billing and payment. As such, it can be difficult to predict what the exchange rate will be at the time of payment—one more reason to take stock of the risks associated with exchange rate fluctuations and protect yourself in advance.

WHEN DOES CURRENCY RISK ARISE?

Currency risk occurs when a company negotiates commercial contracts with commitments (or bids) to supply services or deliver goods purchased with a foreign currency. The anticipated prices are provided for a period of a few weeks or a few months, without really knowing when the purchase will take place. In the meantime, the exchange rate may fluctuate significantly. In this case, there is an exchange rate risk, which is called unconfirmed currency risk.

Generally, currency risk arises when the selling price is set. In rare instances, the currency risk can only be determined when the invoice is issued, which is called confirmed currency risk.

It is therefore important to distinguish between confirmed currency risk and unconfirmed currency risk. Given their distinct degree of certainty, these two types of risk must be managed differently.

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Mitigate or hedge currency risk?

The consequences that currency risk can have on a company are such that it is in the company's best interests to take the necessary steps to either mitigate or hedge this risk.

• Mitigating risk can amount to trying to introduce specific clauses in contracts or optimizing internal cash-flow management elements.

• Hedging risk means implementing financial measures to control, reduce or eliminate currency risk.

INTERNAL SOLUTIONS

Here are four internal (or natural hedging) techniques to try to reduce currency risk.

1. Choosing the invoicing or payment currency

There would be no currency transaction risk for a Canadian exporter or importer if all payments were made in Canadian dollars. Unfortunately, Canadian managers cannot force their suppliers to do business in their currency.

A foreign importer may consider paying in Canadian dollars, but if it makes this concession (and therefore agrees to assume the currency risk), it will want to obtain a consideration on the price or payment period. The treasurer of the Canadian company will have to determine whether this price certainty is worth the concessions on other aspects of the sales contract.

Is it possible to negotiate so that the transaction is made in a less risky currency? It depends, of course, on one company's bargaining power to impose such terms on the other party. But the company must also be certain of the strength of the currency it would like to use.

2. Internal compensation (or natural hedging)

A Canadian company's foreign exchange position, which is the difference between its foreign-currency payables and receivables, can be significantly reduced if cash flows are moving in the opposite direction to those generated by an import or export.

Take, for instance, a Canadian company that imports specialized parts or tools from the United States and exports a finished product to the United States. In this case, only the balance of the two transactions must be hedged. However, there may still be a currency risk if the payment dates on both sides of the border vary significantly, and the net foreign-exchange position does not remain constant over the entire fiscal year. There are, however, simple solutions to rectify this issue.

3. Risk-sharing agreements

In a risk-sharing agreement, parties on both sides of the border agree on a formula, ensuring that each bears some of the negative effects resulting from exchange-rate fluctuations that may occur between the signing date and the payment date. This principle is applied almost exclusively by multinational companies.

4. Leading and lagging)

Leading and lagging is an old technique that is more a form of speculation than currency risk management and is often ineffective. This approach involves expediting or delaying payments based on expected changes in exchange rates. The company aims to pay as quickly as possible any invoices in a currency that should, according to its analysis, appreciate. On the flip side, it will delay payments as much as possible in a currency that it believes should depreciate.

Note that these four "natural" techniques should not be confused with two other practices used by some small companies, such as opening an account in a foreign currency and increasing the price invoiced at export to compensate for possible exchange losses.

MANAGING CURRENCY RISK

Hedging currency risk encompasses all your financial actions designed to control, transform, reduce or eliminate currency risk. Here are the four main categories of hedging strategies:

1. No hedging

For some entrepreneurs, doing business internationally means accepting currency risk. They know that sometimes the exchange rate will move in their favour, and other times it won't. They hope that the positive and negative effects will offset each other in the long run. They are optimistic and adopt a largely speculative attitude.

2. Systematic hedging

Some companies systematically hedge all (100%) of their international operations. In a way, they see hedging as obligatory when they do business abroad.

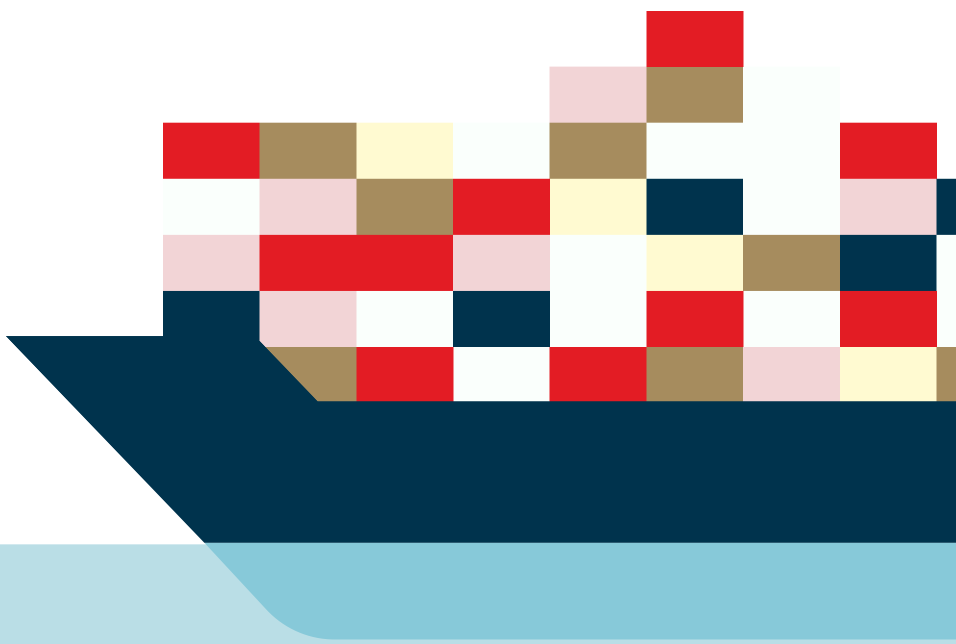
3. Partial hedging

Between these two extremes is another option called partial or proportional hedging. It is more common for companies to cover a certain percentage of their activities abroad, based on their risk tolerance.

4. Selective hedging

Selective hedging is a form of partial hedging: A company only covers the operations that require it, such as transactions in a currency that it uses less frequently.

Note that medium-sized companies often adopt a case-by-case approach to hedging. Managers cite a lack of time or resources to develop a real foreign-exchange policy.



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Products to manage exposure to currency risk

There are many financial products that can be used to hedge currency risk. And, contrary to a long-held myth, they are not hard to use. But before going into the description of these solutions, it is important to understand forwards, as many of these products are based on them, either directly or indirectly.

FINANCIAL PRODUCTS

1. Forward contracts

A forward contract is an agreement to buy or sell foreign currency for delivery at a predetermined future date based on the exchange rate at the time of the transaction, called the forward exchange rate.

With this solution, an importer exposed to currency risk can, at the time of the transaction, set the rate at which it will purchase the foreign currency that it will need at a future date. Conversely, an exporter can set in advance the rate at which it will convert the foreign currency it receives for the commodities it will deliver at a predetermined date in the future.

Three important aspects of forward contracts:

- There is no advance payment nor delivery of the foreign currency. Both take place at the later date specified in the contract.
- A forward contract, even if it can be modified or postponed based on market conditions, is a firm commitment. Payment and delivery of the sums involved must occur
- A credit facility is required for the transaction.

Two examples of forward contracts

Take, for instance, a Canadian importer that must pay an invoice of US$500,000 in three months, and the forward exchange rate for the three-month period is 1.3152. The company can determine as of today how much it will have to pay, converted into CAD. To do so, the importer will purchase today a forward contract that guarantees the rate at which it will buy its USD in three months. The company will receive the USD from the bank on the specified date. That is when it will pay CAD in exchange for USD. The importer can therefore know right now that its account payable will be C$657,600. This transaction allows the importer to avoid any uncertainty surrounding the amount it will have to pay.

Now consider the case of a Canadian exporter that sells its products in the United States and therefore has an account receivable in a foreign currency. If the goods are invoiced at US$600,000, and the payment period is 90 days, the company will only know the actual value (in CAD) of the transaction when it receives the payment. However, by establishing a contract with the bank, it can sell today the (receivable) USD at the forward rate of 1.3140, corresponding to C$788,400, which it will receive in 90 days. This operation removes the uncertainty surrounding the Canadian value of its exports and profit margins.

2. Currency swaps

A currency swap, or FX swap, simultaneously combines two foreign-exchange transactions in opposite directions, at different transaction dates. In most cases, the swap involves an FX spot transaction and an FX forward transaction in the opposite direction.

As such, a company with a short-term surplus in a currency will, thanks to the swap, temporarily exchange its holdings in that currency for an amount in another currency. It will recover the funds in the original currency at the end of the period. The advantage of a swap is that the rates of the two opposite transactions (e.g., a purchase of US$10,000 at the spot rate and a sale of US$10,000 at the six-month forward rate) are set simultaneously, eliminating any currency risk.

A swap is a good way to match cash flows. It allows the treasurer to effectively manage the company's liquidity using its own funds in another currency, without exposing itself to an adverse movement in the exchange rate (for instance, by avoiding the use of a line of credit).

An FX swap is a custom, over-the-counter operation. A swap may also be combined with a forward contract to accelerate or delay the maturity date of a forward contract.

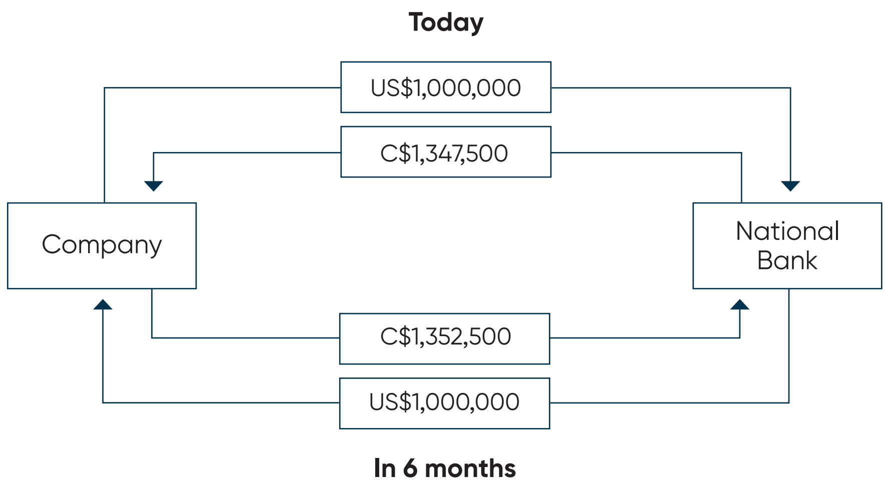
Example of an FX swap

Take, for instance, a treasurer of a Canadian company that has US$1 million. He would like to use this amount to pay the company's immediate expenses in CAD, but he knows he will need this amount in USD in six months.

Uncertain about the movements of the U.S. dollar during this six-month period, the treasurer plans to swap with the bank. This will allow him to convert his U.S. dollars into Canadian dollars and then reverse the transaction in six months without generating any currency risk.

As an FX swap involves two simultaneous currency transactions (one cash, the other a forward), the treasurer obtains from the bank today the two rates that will be used. In our example, the spot rate is 1.3475 and the forward rate is 1.3525.

On the first day, the treasurer gives US$1 million to the bank. In return, he receives C$1,347,500 (the spot rate). Six months later, when he wants to recoup the US$1 million, he reclaims this amount from the bank, which gives him C$1,352,500 in exchange (the forward rate).



3. Currency options

A currency option is a financial instrument that allows you to buy or sell a foreign currency amount at a set exchange rate. For the most common options, called European options, the date is set in advance. For American options, the transaction can be made at any time leading up to and including the expiration date of the option.

A purchase option is known as a call, and a sales option is called a put.

To acquire an option, you have to make a payment, called a premium. Unlike a forward contract, this premium is paid on signing, on the first day.

An option's premium is based on the following parameters:

1. The amount that will be converted if the option is exercised
2. The strike price—that is, the price at which the option holder can carry out their foreign-currency transaction
3. The expected volatility of the currency exchange rate
4. The latest option expiry date

Currency options allow for greater flexibility than other instruments because the buyer has the choice whether to exercise the option or not. The holder can therefore get the same kind of protection as a hedge on the forward market, but can take advantage of favourable currency movements, thereby reducing any hedging-related regrets.

Options, by definition, do not entail any obligations, making them an attractive instrument for a company making a bid in a foreign currency in response to a call for tenders. If the company wins the contract, it can exercise its option to protect its payables or receivables, but will not be obliged to do so if its bid is unsuccessful.

There are, however, some drawbacks to currency options. Their premiums must be paid up front, and they usually cost more than a hedge with a forward contract.

Two examples of currency options

A currency option allows the exchange rate to be set at an acceptable level in the event of an unfavourable movement, while benefiting from a favourable movement in the market.

When an exporter buys a put option on the euro, he is protecting himself from a depreciation of that currency. If the movement of the foreign currency is favourable, he can choose to not exercise the option and sell the funds received in euros at a higher price on the spot market. If the movement of the foreign currency is unfavourable (a decline of the euro against the Canadian dollar), he can exercise his option and avoid a foreign-exchange loss.

By buying a call option on the pound, for example, an importer is protecting himself against the appreciation of that currency. If the foreign currency appreciates, he can exercise his option and avoid a foreign-exchange loss. If it depreciates, he can let his option expire and buy his currency at a lower rate on the spot market, limiting his foreign-exchange risk.

4. A collar

A collar is a combination of options that guarantees the buyer that the exchange rate at which he will trade for a given period of time will remain limited to a cap rate and a floor rate determined on the day the collar is purchased.

A collar is a compromise that makes it possible to reap some of the benefits of a currency option, but at a lower cost. Protection against unfavourable exchange-rate movement is ensured, but the company will only partially benefit from gains due to potentially favourable exchange-rate movements.

5. A combination of tools

These products can be tailored to meet specific company needs, providing an appropriate level of complexity and a degree of risk coverage. Meeting with expert advisers will help you determine which instruments are right for you and combine them as part of an effective strategy.

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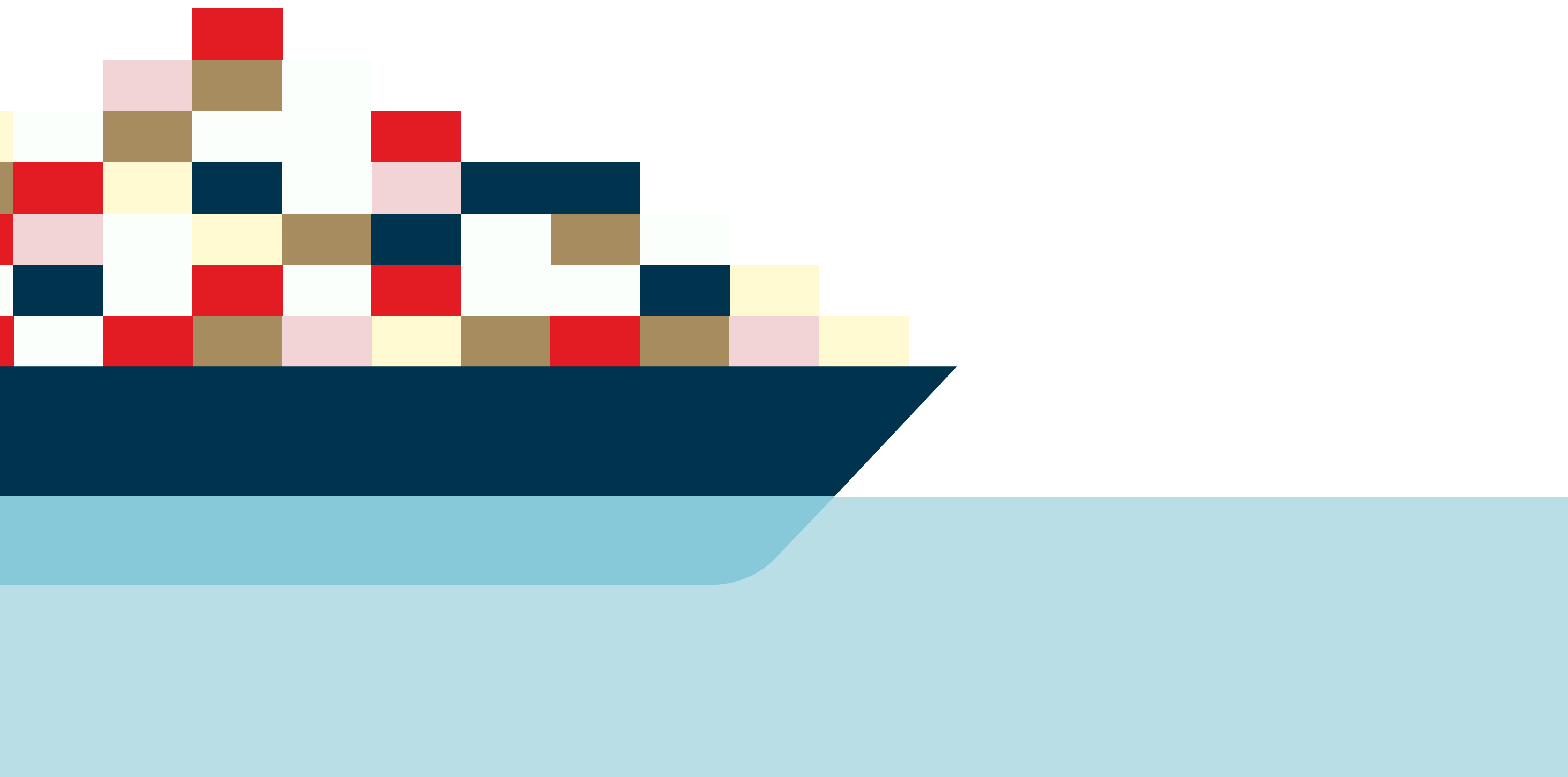
Currency risk management policy

It’s important to understand currency risk and be familiar with the instruments available to make the right decisions and use hedging techniques correctly. Likewise, it is important to plan and equip your company with a currency risk management policy.

1. Advantages to the company

A currency risk management policy lets a company:

- minimize the effects of exchange-rate fluctuations on its profit margins;
- stabilize its profit margins;
- develop a budget more easily;
- establish a comfort zone when setting fixed-price contracts;
- increase predictability of future cash flows;
- maintain price stability of products sold in export markets;
- temporarily protect the company’s competitive edge;
- maximize the company’s economic value;
- maintain a good credit rating with the banks.



2. Six questions to ask yourself

To build your currency risk management policy, you'll need to answer these six questions:

1. What are my currency risk objectives?
2. What kind of exposure should be covered?
3. How accurately do I want to measure my currency risk exposure?
4. What percentage of my currency risk exposure should be covered?
5. Which techniques should or should not be used?
6. Who will be in charge of implementing the policy?

Implicitly, most companies that deal with exchange-rate fluctuations figure out the answers to these questions as they go. But having a currency risk management policy means trying to think about these fundamental points beforehand and establishing a strategy based on the company's objectives.

While these general principles apply to most cases, it is important to remember that each company is unique.

Implementing a formal policy doesn't happen overnight. For many medium-sized businesses, it will be a gradual process.

Currency risk and the competitive environment

If exchange-rate fluctuations persist over a long period of time, a company's competitiveness may be put at risk. In this case, it's a good idea to ask yourself the following questions:

- What percentage of my accounts receivable and payable is in foreign currency?
- What is my tolerance for exchange-rate fluctuation?
- At what point is the company's profitability in jeopardy?
- Can I get a match between the expiry dates and my payable and receivable amounts when they are denominated in the same currency?
- Can I bill my clients for losses incurred due to exchange-rate fluctuation by raising my prices?
- Do I intend to make any major foreign investments or liquidate foreign assets in the near future?
- Does currency risk impact my current competitors in the same way as it does me?
- Can foreign-exchange fluctuation lead to new competitors?
- Could persistent currency fluctuation open new markets?

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Summary

1. Currency risk is an inherent part of doing business internationally.

Selling or buying internationally involves doing transactions in a foreign currency, but foreign exchange rates can fluctuate rapidly. Depending on the rise or fall in the rate, the cost can be substantial: When the rate goes up, the amount owed to a supplier increases; when the rate drops, the sale brings in less than expected. Yet the price and quality of the product or service have not changed. In light of these issues, it can be difficult for an entrepreneur to ensure the company turns a profit.

2. The consequences of currency risk can affect a company's growth.

Currency fluctuations can have an impact on a company's future value and its competitiveness in the medium or long term. This is what we call currency transaction risk. Failure to hedge against currency transaction risk can expose a company to substantial losses. It can suffer a dead loss if the price has changed to its disadvantage between when it makes a sale or accepts a bid, and when it processes the payment or pays its supplier. Even a minor fluctuation can have a major impact on profitability.

3. There are several easy ways to protect yourself from currency risk.

Internal and contractual techniques can sometimes do the trick. Financial solutions are also available to entrepreneurs. They cover the risk, in part or in full at the discretion of the entrepreneur, usually dictated by their tolerance for risk and their analysis of the company's financial health. Partial hedging—that is, covering only a portion of potential currency risk—is the most common solution.

4. There are several hedging solutions available to entrepreneurs, all quite different from one another.

While they often require advice from an expert, risk-management solutions—forward contracts, swaps, options, collars and more—are easy to use and highly effective in hedging against currency risk. Most are based, directly or indirectly, on the forward exchange rate, which is the current exchange rate provided by a financial institution for a transaction to buy or sell a certain amount of foreign currency at a predetermined future date. The best solution is often a combination of several products.

5. The best option is to have a currency risk management policy.

Rather than making decisions on a case-by-case basis as they arise, it is better for a company that regularly does business in foreign currencies to establish guidelines to manage its currency risk. Drafting a currency risk management policy requires in-depth analysis and planning of future operations. Of course, it should be reviewed regularly and is often implemented gradually. But a policy can help you ask the right questions and choose the most appropriate solutions beforehand, rather than react urgently to a delicate situation that could have been prevented.

Our experts are here to help you achieve your international ambitions.

Please contact us at **1-844-990-5655**