



# CFO's Guide: Advanced Hedging & Risk Management

# Table of Contents

<b>1. Introduction</b>	<b>3</b>
<b>2. Optimizing Business Forex Operations</b>	<b>3</b>
<b>Identifying hedging needs</b>	<b>3</b>
<b>Executing your strategy</b>	<b>4</b>
<b>Payment &amp; billing methods</b>	<b>4</b>
<b>Compliance &amp; regulation</b>	<b>4</b>
<b>FX Treasury</b>	<b>5</b>
<b>3. Case Study: Proactive Trading, Forward Contracts</b>	<b>5</b>
<b>4. Case Study: Forward &amp; Market Orders</b>	<b>6</b>
<b>5. Advanced Hedging Strategies</b>	<b>6</b>
<b>Rolling Forward Strategy</b>	<b>6</b>
<b>Forward Strategy Using Market Orders</b>	<b>8</b>
<b>6. Case Study: Rolling Forward Strategy &amp; Forward Strategy Using Market Orders</b>	<b>9</b>
<b>7. GAAP Accounting for Derivatives</b>	<b>10</b>

# Introduction

Welcome to a CFO's guide to advanced hedging strategies and risk management. In this white paper, we expand upon basic hedging principles through an exploration of three case studies. While hedging is common practice for many businesses who ship, receive, sell, or buy assets, services, or products in multiple currencies, there is an additional strategic layer beyond the basics that may be overlooked.

It's important to note that foreign exchange hedging is an extremely complex and hands-on process, particularly when your transaction amounts and volumes are especially high. Therefore, it may be advisable to partner with a foreign exchange agency if your finance team is small or inexperienced in the space.

If your company is exposed to foreign exchange risk, a sophisticated risk management strategy is advisable, if not necessary. Here you will find a guide to optimizing your company's forex operations, an overarching hedging workflow, case studies, and an exploration of some of the strategies mentioned in the case studies themselves. Finally, we will explain Generally Accepted Accounting Principles for derivatives for additional learning.

This guide was created by OANDA FX Payments, global leader in FX solutions with over 31 years of industry experience. OANDA FX Payments empowers our global clientele with the gold standard in FX services along with impressive rates and exceptional account management and customer service.

## Optimizing Business Forex Operations

The role of currency management in the business landscape is becoming increasingly essential. Companies are facing significant challenges in regards to foreign exchange management and oftentimes that is a result of poor or lacking foresight during the initial entry into the global marketplace.

Any business with significant international transactions ought to employ a diverse range of strategies to limit their exposure to currency fluctuations and maximize their return on any and all foreign market transactions. While forex risk management is unarguably imperative to your success in preserving your bottom line and protecting your business from currency risk, there are several other things to consider, as well.

### Identify hedging needs

Before employing a roster of hedging strategies and protocols, a careful analysis of a business's hedging needs must be the first step. First and foremost, you must identify if hedging is right for your business. It would be advisable for a business to hedge if they are exposed to a secondary currency and their prices on products or services are fixed. Hedging is appropriate for businesses that regularly deal in foreign currencies in a predictable, consistent fashion.

It would not be advisable for a business to hedge if they are unable to forecast their currency requirements. In addition, if your business behaves spontaneously in their international transactions, you have more flexibility regarding when your payments can be made. Therefore, reacting and locking yourself into a rate for an extended time period may hold you back from taking advantage of future market conditions.

If you've concluded that hedging is the right option for your business, the various solutions will be based upon your needs. Namely, what sort of transactions are involved, if your flows are certain or uncertain, the volume of transactions, the currencies used, and the price fix dates associated with your transactions.

Once you've conducted an in-depth analysis of your exposure, your needs, your potential future exposure and needs, and your past issues with currency fluctuations or FX exposure, you can then begin building a clear forex strategy.

## **Execute Your Hedging Strategy**

Not only must your strategy be clear, but it must be disciplined and adhered to at all times by all relevant stakeholders. While we won't explore the basic hedging strategies themselves in this white paper, we will advise on how to execute your strategy.

Once your strategy is in place, be it forward contracts, spot contracts, options contracts, a combination of the three, or a set of more sophisticated strategies, the workflow is the same.

The first step is, as we mentioned, understanding the business's needs and identifying critical currency exposures. Next, you will develop a risk management strategy through setting your margins and general principles in the space. Next, you will select your ideal outcomes, taking into account budgeted rates, variances, and currency level goals. This will help you choose your strategies that will help you achieve your goals in the long term. Once you've locked in your all-encompassing strategy, you can begin to execute from top to bottom.

The next part is key: constant re-evaluation and adjustment. Adjustment can come about if you see vulnerabilities in your current strategy or in the face of unforeseen market conditions. Another stage of analysis may be required to compare your goals to your market achievements and identify any potential areas for improvement. You will want to ensure you are constantly looking ahead and adjusting where necessary.

## **Alternative Payment & Billing Methods**

Beyond hedging, your payments procedures may need analysis as well if you are dealing with multiple currencies. When you cross borders, there are several differences to take into account beyond the varying currencies. You may want to consider offering your clients, suppliers, or international partners with alternative payment methods, i.e. the methods that are most convenient to them based upon their geographical location. Limiting your payment methods can not only complicate your transactions for the person on the other end and ultimately yourself, but it can also deter potential clients or partners on account of inconvenience.

Similarly, your customer and/or supplier preferences come into play during the billing or invoicing process as well. Looking into providing options in the language, currency, and format that they are used to or equipped to understand is certainly a best practice.

## **Meet Compliance and Regulatory Requirements**

A huge part of the foreign exchange landscape that is necessary to adhere to is compliance and regulation. Many countries, states, and regions fall under different regulatory and compliance requirements that are necessary to follow for legal reasons.

Foreign exchange companies face a wide range of Anti-Money Laundering (AML) and Anti-Terrorist Financing requirements due to the simple fact that money is being traded across borders. Strict compliance procedures and regimes are mandatory. Requirements differ for every company as the rules and laws are different in each jurisdiction and industry segment. Regardless, things like carefully crafted processes for account creation, reporting, security, and operations are key. Appropriate licencing and insurance must be obtained and ongoing procedures for audits and reviews must be set in place.

Forex compliance regulations work to protect the user (or client) as well as the organization itself. In a grander sense, they are also necessary to minimize suspicious activity such as money laundering. When building a compliance regime, it's important for a company to first understand the compliance risks they are facing while transacting on a global scale.

## Implement FX Treasury Management

You may want to carry centralized multi-FX treasury management. This involves managing a business's financial holdings with the goal of managing the liquidity and mitigating risk. Building a centralized cash management protocol or system allows in-depth knowledge of your cash requirements and movements as you transact in the global marketplace. If you are intimately aware of your business's holdings, it reduces your risk for loss as well as mistakes and oversights.

The optimization of business forex practices requires a mindfulness of any and all transactions and interactions that are carried out on an international level. From who you are marketing to all the way to the exchange of goods, you must analyze your entire workflow to ensure each step is optimized, regulated, and protected with a clear and efficient risk management strategy.

# Case Study: Proactive Trading, Forward Contracts

## Company A

### Overview of Company A . USD Purchases

Company A works in the oil industry in Canada and it purchases chemicals for its worksite from a US Company. Company A's annual purchase requirement is estimated at eight to nine million USD. Company A has a portion of its USD internally hedged through USD receivables. They currently deal with the bank that offers little service or hedging advice.

### Services

OANDA FX Payments began by reviewing the Company A credit report and furnishing the client with deposit and margin terms. Now, the full deliverables include direct access to a trader, proactive trading for Company A, and a Forward Contract facility to remove the risk in an uncertain market. OANDA FX Payments offers superior pricing and constant point spreads, coupled with reduced wire fees based upon the volume being traded.

### Strategy Goals

A key element of OANDA FX Payments' strategy is to maximize the purchase value of the Canadian dollar delivering USD to Company A. OANDA FX Payments set up Company A with two to six-month contracts locking below the company's annual forecast rate. The forward contracts allow Company A to price the resale of goods with a fixed margin while maximizing the return on the sale through a strong Canadian Dollar.

Moving forward, in the busy fall months, an operational decision can be made to draw down the contracts. If there is no current operational need for the contracts, a positive position can be taken selling overages back to the market. The key strategy is protecting the positive position against a reverse trend wherein the USD strengthens and increases the price of goods purchased from across the border.

OANDA FX Payments advised Company A to purchase three contracts for a total of 50% on the notional value for the year, a further 25% will be purchased upon fulfillment of the first contract. The remaining 25% was purchased in the SPOT market where OANDA FX Payments was able to take advantage of downward trends of the USD.

# Case Study: Forward Contracts & Forward Contracts with Market Orders

## Company B

### Overview of Company B Current Hedges and USD Payables

Company B has a Canadian Dollar surplus from the sale of equipment and services made in Canada. Company B's hedging mandate includes the booking of forward contracts and placing market orders when the Canadian dollar is outperforming the U.S. dollar.

Company B's USD/CAD Spot Market contracts with OANDA FX Payments have surpassed \$9m in the past 12 months. OANDA FX Payments made the move to introduce a more comprehensive product offering including Forward and bidding the market using Market Orders.

### Strategy Goals

Key elements of OANDA FX Payments strategy are to optimize the sale and value of a strong Canadian dollar. With market orders straddled down OANDA FX Payments can anticipate the monthly Canadian dollar sale requirement. To mitigate the risk on future FX forward contracts, OANDA has suggested that Company B assume a worst-case rate allowing OANDA FX Payments to protect that rate while maintaining a hedging cap.

## Advanced Hedging Strategies

Above we've illustrated some tangible examples of some basic hedging strategies employed in situations of more complex needs. Though, there are some additional strategies that are more advanced and are worthwhile to be aware of.

### Rolling Forward Strategy

A Rolling Par Forward is a modification of the Par Forward. The standard Par Forward has a defined maturity. When entering into a Rolling Par Forward, one party has the right to extend the maturity of the transaction. Any extension is transacted at the then market rate, therefore no optionality exists.

At the time of extension, the contracted Par Forward rate is adjusted to reflect the extended maturity. A Rolling Par Forward where the maturity automatically extends each period in perpetuity is known as a Perpetual Par Forward.

**EXAMPLE:** An Australian company receives USD 10,000,000 in dividends per year. Traditionally the company has entered into forward agreements to sell the USD and buy AUD for three years. Given the interest rate differential (AUD rates higher than USD rates); the forward rates improve with tenor. For example, while the current spot rate is 1USD = 0.80AUD, the exchange rate for delivery in one year is 0.75, 2yrs 0.70 and 3yrs 0.67. The company would normally enter into three separate contracts as follows:

Time	Company Sells	Fwd Rate	Company Buys
Year 1	USD 10,000,000	0.7500 AUD	13,333,333
Year 2	USD 10,000,000	0.7000 AUD	14,285,714
Year 3	USD 10,000,000	0.6700 AUD	14,925,373

Alternatively, the company could utilise a 3 yr. Par Forward at say 0.7075 with the following cash flows:

Time	Company Sells	Fwd Rate	Company Buys
Year 1	USD 10,000,000	0.7075 AUD	14,134,275
Year 2	USD 10,000,000	0.7075 AUD	14,134,275
Year 3	USD 10,000,000	0.7075 AUD	14,134,275

By entering into a Rolling Par Forward, the company has the right at the end of each year to extend the maturity of the transaction. At the end of year 1, the AUD has moved in the company's favour and is trading at 0.7800 and the interest rate differential remains in the company's favour. The original Par Forward rate of 0.7075 is still attractive.

The company now has the opportunity to extend the Par Forward for say one year by adjusting the rate to say 0.6980, or to extend for two years at say 0.6835. The company elects to extend for one year. While the first purchase of AUD occurs at the original contract rate of 0.7075, the contract is rewritten as follows:

Time	Company Sells	Fwd Rate	Company Buys
Year 1	USD 10,000,000	0.7075 AUD	14,134,275
Year 2	USD 10,000,000	0.6980 AUD	14,326,647
Year 3	USD 10,000,000	0.6980 AUD	14,326,647
Year 4	USD 10,000,000	0.6980 AUD	14,326,647

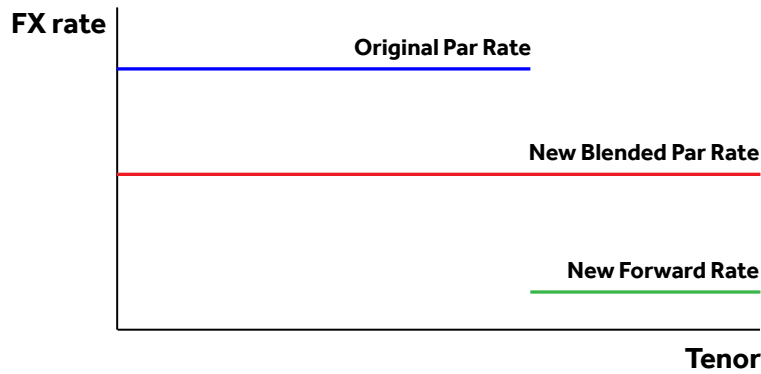
The extension has made the effective rate more attractive and so increased the amount of AUD to be purchased. The company can continue to extend the agreement at its discretion. When the currency and/or interest rate differential has moved in favour of the user, the Rolling Par Forward can be used to achieve improved forward rates.

In our example, should rates continue to move in the same direction, the company can continue to extend the contract, each time achieving better and better effective rates. When the market moves against the company, they may elect not to extend. In the same way, when rates are beneficial, the company may elect to extend for a longer period.

**PRICING:** The Rolling Par Forward is initially priced the same way as the Par Forward and the initial contract rate is the same. At the time of extension, the standard forward rate for the new cash flows is calculated. The new standard forward is added to the existing contract.

The present value of the new stream of cash flows is calculated and the new Rolling Par Forward rate is that rate which when applied to all the now agreed forward cash flows, produces the same present value amount. In this way, the new Rolling Par Forward rate is the blended rate (taking into account size and timing) of the existing Par rate and the new standard forward rate.

Over longer periods the company will see the rates “blending”:



By continually extending the maturity, the Par rate will be continually changing in the direction of the market, albeit at a slower and less volatile pace. By adding a new market rate forward to the existing transaction, the mark-to-market of the structure must remain at the same level. This means that the mark-to-market on the Rolling Par Forward will be less volatile as with each extension, the inherent profit or loss on the original structure will be spread over a longer period and more cash flows. Due to the blending process, the effective rates will also be less volatile than standard forwards.

## Forward Contracts with Market Orders

Businesses often use budgeted rates in order to set pricing and to formulate and monitor their hedging strategy. Sometimes achieving those budgeted rates is reliant on the timing of execution of the forward contract. Due to market volatility, the date/time a business books a forward contract can make a big difference to the rate of exchange due to normal currency market fluctuations.

What is a market order?

A market order is an agreement to buy or sell currency when a certain rate is achieved. Most businesses do not have the time or resources to watch the currency market 24/7, so this offers a way of catching peaks and/or troughs during times of higher currency market volatility such as overnight markets.

Typically there are two common types of market order:

**Limit order:** this is where an order is placed to automatically buy or sell currency when an exchange rate more preferable than the current market rate is reached. This type of order is used if businesses are hoping to catch a sharp peak in the currency market.

**Stop loss:** this is where an order is placed to automatically buy or sell currency when an exchange rate less favourable than the current market is reached. These are normally used as a way of protecting a business against losses if the currency market moves adversely.

Businesses can use market orders to execute forward contracts as part of their hedging strategy. If the market is declining, for example, then using a stop loss to book a forward contract may provide a business with longer-term protection against further adverse currency market movements.

When you consider all the ways forward contracts can be used within a hedging strategy, it's clear why they are so popular among businesses. Figuring out how to manage your FX exposure can be challenging, so it's good to know there are experts available to help you develop the right strategy for your business.

OANDA FX Payments, for example, would take orders for a strip of forwards one expiring June 1st and the second Aug 1st with price bids for better than market rates utilising the overnight volatility index. Renewing each market order and forward price targeting below the current market price and averaging annually below the companies budgeted rates.



# Case Study: Rolling Forward Strategy & Forward Market Orders

## Company C

Company C came to OANDA FX Payments in a position where they have no particular frequency of transactions but will sell enough USD to cover 3-5 months of Canadian dollar requirements. Over 90% of their revenue is in US dollars, is very cash strong in USD and will trade \$500k-\$2M at a time. Their last trade was in Oct, near 1.32s. Total volumes per year range from \$8-15M/annum.

OANDA FX Payments set up Company C to execute an exchange within the next month. Company C has considered options in the past but reporting requirements have deterred them. Company C has considered a “rolling-forward” hedging strategy, and selling on spot when rates are in favour. Company C and OANDA FX Payments went over reporting issues; the biggest concern is being able to keep a P/L on current positions at month-end. Company C was willing to consider options but felt the President would be hesitant to change their current strategy.

## Strategy Goals

Key elements of OANDA FX Payments strategy are to enable Company C to maximize their USD cash position and protect against a reverse trend towards a strengthening CAD. The current use of Spot or Forward Contracts restrict Company C from maximizing positive US movement, especially where the rate is range bound slightly above and below par. Company C has the time to wait for a stronger USD but cannot afford that the trend is against them and therefore it is paramount to hedge.

OANDA FX Payments as part of the service agreement opted to furnish Company C with daily valuations using the BOC noon rate in compliance with accounting methodology using GAAP guidelines.

## Strategy A

A combination strategy using SPOT 20%, FORWARDS 40%, FORWARDS UTILISING MARKET ORDERS 50%.

## Strategy B

A combination of SPOT 35% and Rolling Forward 65% hedge maintains an initial position where the USD is in positive territory to the CAD.

## Current Market Conditions

The USD/CAD is currently range bound with varying 1% overnight movements. The market in the last month has moved within 1.2550 to 1.2750 with blips pushing against the resistance levels. Taking advantage of the peaks and troughs are paramount to a strategy. Capitalizing on a strong USD to protect the current booked overages and protecting a worst case scenario when the USD is weak.

With all of this in mind, OANDA FX Payments has employed a Rolling Forward Strategy and the Forward Contract Market Order Strategy noted above.

# GAAP Accounting for Derivatives

Guidelines for accounting for financial derivatives are given under IFRS 7. Under this standard, “an entity shall group financial instruments into classes that are appropriate to the nature of the information disclosed and that take into account the characteristics of those financial instruments. An entity shall provide sufficient information to permit reconciliation to the line items presented in the balance sheet”.

[1] Derivatives should be grouped together on the balance sheet and valuation information should be disclosed in the footnotes. This seems fairly straightforward, but IASB has issued two standards to help further explain this procedure. The International Accounting Standards IAS 32 and 39 help to give further direction for the proper accounting of derivative financial instruments. IAS 32 defines a “financial instrument” as “any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity”.

[2] Therefore, a forward contract or option would create a financial asset for one entity and a financial liability for another. The entity required to pay the contract holds a liability, while the entity receiving the contract payment holds an asset. These would be recorded under the appropriate headings on the balance sheet of the respective companies. IAS 39 gives further instruction, stating that the financial derivatives be recorded at fair value on the balance sheet. IAS 39 defines two major types of hedges. The first is a cash flow hedge, defined as: “a hedge of the exposure to variability in cash flows that (i) is attributable to a particular risk associated with a recognized asset or liability or a highly probable forecast transaction, and (ii) could affect profit or loss”.

[3] In other words, a cash flow hedge is designed to eliminate the risk associated with cash transactions that can affect the amounts recorded in net income. Below is an example of a cash flow hedge for a company purchasing Inventory items in year 1 and making the payment for them in year 2, after the exchange rate has changed.

