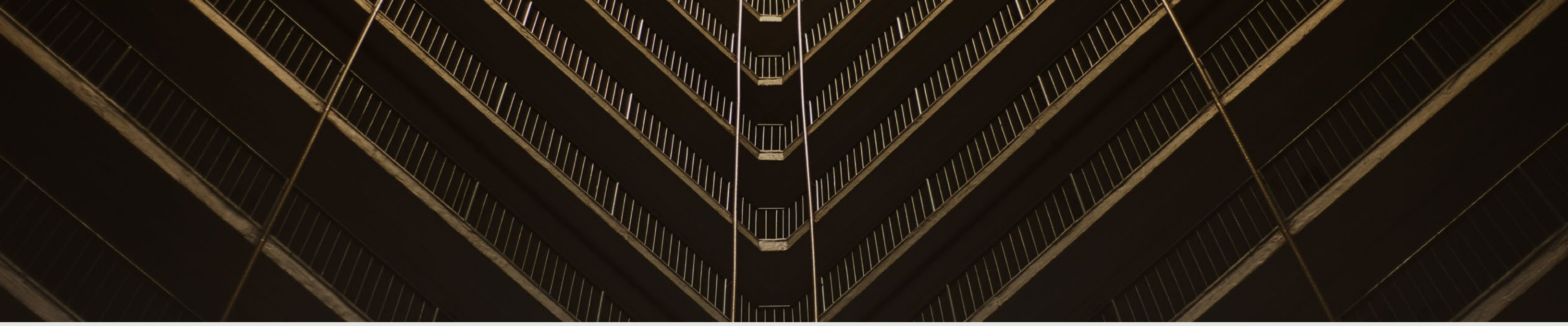
Corpay

VISUALISING CURRENCY RISK



When we talk about currency risk and developing and implementing a hedging programme that allows you to reach a specific business goal, we often use language reminiscent of military campaigns.

Like a military campaign, a sound and well-executed hedging strategy requires advance planning and forethought. This includes clearly articulated objectives, understanding of the landscape, the tools at hand, the personnel required to deploy those tools, the tactical options and approaches, and support and buy-in from your management.

This is a possible path to developing and implementing your strategy.

- First, set your objectives.
- Begin with a thorough analysis of your cashflow: what you know and what you don't know about what's to come.
- Next, examine the risk factors and the amount of risk you might face, weighing these considerations in your analysis.
- Tactical approaches next come into play. Have a look at the tools you have to hand, and determine what you might need to manage the risk.
- Understanding the market conditions, and visualising and mapping cashflows and exposures is a next step, the equivalent of examining the terrain in the Map Room. How much flexibility do you need? Do you have options or fail-safes if conditions change, and how quickly can you implement them?
- You also want to be sure that your tactics and your plan align to the corporate hedging policy, and how the possible outcomes help you reach your strategic objectives.
- Further, you need to gain consensus on your plan, and agreement on what you are doing and how you are doing it.

Our collection uses, as a jumping-off point, an overarching metaphor of battlefield strategies implemented during World War II—some successful and some less so.

Each piece is aligned to a step in the process: from setting objectives, analyzing FX exposure and cashflows, determining risk appetite and hedging policy, to developing a strategy and the tools you need to implement it. These steps are illustrated with hypothetical examples of tactics and strategies.

Together we can draw inspiration from historical tactics to better navigate the complexities of foreign exchange management in today's global marketplace.

Moiz Mujtaba

Director Product Management – Corpay Risk Management

Moiz Mujtaba brings 14 years of B2B, B2C payments tech experience with academic background in Finance as a CPA (Australia) and an ACMA (UK). He currently leads the development of Corpay's FX risk management product line.

NOTE: These pieces were featured on the Corpay Cross-Border blog in 2023 and 2024 and have been edited for this publication.

TABLE OF CONTENTS

Chapter 1

Developing and implementing a hedging policy:

Managing cashflow exposure is key to informed hedging practices

With continuing uncertainty in the global economy, central banks are using interest rates as levers to manage regional inflation. This increases currency volatility.

Thus foreign exchange (FX) risk management increases in complexity for many small and mid-size enterprises (SMEs) because most of their cashflows are subject to changeable exchange rates.

While your organization may be focused on driving a robust FX risk management practice, it is a multi-faceted undertaking, involving a range of analyses, modelling outcomes, and "decision gates." Taking it step by step makes it much less daunting.

In our blog series on developing and implementing your tailored hedging strategy, we take a 'best practices' approach to help you understand the process and outline the steps you may take to analyze exposures, create a hedging policy, implement and manage your hedging strategy.

The first step in risk management is to analyze FX exposure and measure the effects of the movement of rates on the company's liquidity. Monitoring cashflows from distributed windows or different platforms is a time-consuming, painstaking process.

Your liquidity is tied to cashflows, which may help you identify transactional risk that could occur from a specific exposure.

Move past this stage with flying colors and you can execute an informed hedge to mitigate your exposure.

Analysis of the risk profile for each currency in your cashflow forecast takes you far in defining your tailored hedge strategy—one that matches your business profile.

Here are a few best practices that may help you streamline your risk exposure analysis:

- **Structure your analysis.** Analyzing exposures could happen by the entity, business unit, or division, or even on the group level. Whether you are managing FX risk using a spreadsheet such as Excel, or another tool, ensuring you always have all the data available will help you to make the most thorough exposure analysis for your group or smaller entities.

- **Balance opportunities and costs.** Few companies perform a structured risk analysis to identify optimization opportunities in such a way that there is a perfect combination of minimising losses and potentially gaining wins from market fluctuations, whilst keeping the cost of hedging in check.

- **Set your FX Risk Policy.** Do you have an FX Risk policy in place? That can help you to set your medium-term and long-term targets. For a coherent response to FX volatility in cashflow forecasts, hedged positions and business profile, a holistic FX policy will help define thresholds that you can benchmark while managing FX exposure. It is important that your FX risk management policy buys you enough time for the effects of the commercial response to be evident.
  That depends on your business cycle: some businesses plan monthly; others quarterly; stull others annually.

- **Start with a Currency Map.** The challenge of creating your foreign exchange risk management policy may seem a little overwhelming: in practical terms, where do you start? Put simply, if there is any degree of complexity involved, start with a 'Currency Map' to visualise market fluctuations alongside your cashflows.

- Your base currency may not be the transactional currency that is part of your cashflow forecast, and mapping the underlying exposure in your base currency becomes tedious without an automated cashflow mapping tool. Evaluate your options and look for a cashflow risk management tool that can accommodate the elements of your unique FX strategy.

- **Consult an expert**. Engage with subject matter experts like Corpay's analytics team, who have developed tools to help clients perform exposure analysis and reporting as well as hedging, or leverage a self-serve risk management platform to visualise your cashflows.

Also, bear in mind that your hedging tactics may need to adapt to changes in your business and in the markets.

Capturing your exposures and recognising potential sources of risk is a good first step in developing and implementing a policy that helps you achieve your goals.

Read on to explore best practices for setting your goals, developing your policy, and monitoring performance. Understanding the process can help increase your confidence in managing risk no matter where your business takes you.

Original publication date: April 11, 2023

Chapter 2

Key considerations in your foreign exchange exposure analysis:

Proactive or Reactive? General Thomas Blamey’s Tactical Approach

In our previous chapter, we discussed five essential steps to creating and implementing an effective foreign exchange hedging policy. As you work towards benchmarking your organization's FX exposure against a set policy, it's crucial to understand the starting point: determining whether your organization engages in proactive or reactive foreign exchange (FX) management.

Drawing inspiration from Australian General Thomas Blamey's tactics during World War II, we will explore the major differences between proactive and reactive FX management, and provide key considerations for structuring your FX exposure analysis.

Proactive vs. Reactive FX Management: A Lesson from General Blamey's Tactics

Proactive FX Risk Management: The Offensive Approach

General Blamey's decisive tactics during World War II, particularly in the New Guinea Campaign, can be likened to proactive FX Risk management. Just as General Blamey took well-thought out, calculated moves to push back enemy forces and adapted to ever-changing battlefield conditions, organizations that embrace proactive FX Risk management monitor the FX market and make strategic ongoing decisions to hedge their currency exposure.

One example of General Blamey's far-sighted approach is the introduction of periscope rifles during the Gallipoli battle. These rifles allowed his troops to keep watch on potential risks and gain an advantage over the enemy. Similarly, proactive FX Risk management requires a comprehensive understanding of the market and superior tracking tools at disposal for professionals managing FX risk.

Key aspects of active FX management, reflecting General Blamey's offensive approach, include:

- Frequent monitoring and analysis of current market conditions to stay ahead of potential risks (akin to Blamey's use of periscope rifles)
- Implementing FX hedging strategies tailored to the nature of each exposure (keeping the objectives foremost but understanding the unique challenges of each engagement)
- Assessing and adjusting hedging strategies based on market conditions (adapting to changing circumstances)
- Implementing a more detailed and superior plan utilising a combination of financial instruments, such as forwards, structured options, and swaps (applying tactics appropriate to the challenges at hand)
- Tactics around market entry at the right levels, intervals and amounts relevant to the FX exposure (monitoring circumstances to engage at the right time on the field)

Reactive FX Management: The Defensive Approach

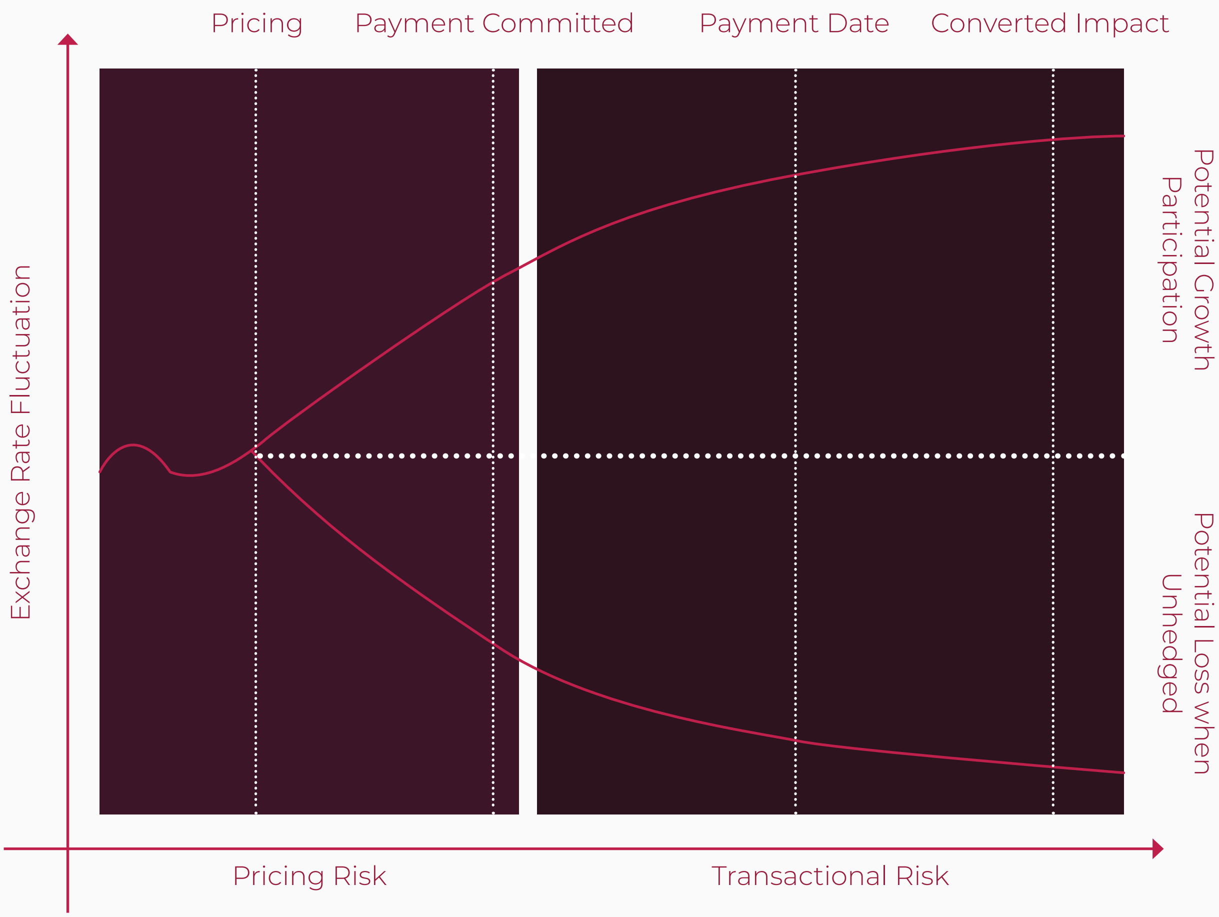
Reactive FX Risk management can be compared to a more conservative, defensive military strategy. One example from Australian military history is the Battle of Papua in 1943, where Blamey's Australian forces, along with American troops, successfully defended against Japanese advances. Instead of engaging in aggressive maneuvers, the Australian forces focused on strengthening their defensive positions and leveraging the difficult terrain to their advantage.

Similarly, organizations opting for Reactive FX Risk management establish a set hedging policy and adhere to it (e.g., protecting the planned gross margins), regardless of market conditions. This approach minimises the need for constant monitoring and decision-making, resulting in reduced time spent, simpler decision making, less involved plan management and requires fewer resources.

Key aspects of Reactive FX Risk management, akin to General Blamey's defensive tactics during the Battle of Papua, include:

- Establishing a budget rate as a target (like the Australian forces' commitment to maintaining a strong defense)
- Limited monitoring of market conditions and more focus on cashflow exposure (as the defenders held their position rather than constantly changing course as the enemy movement changed)
- Reduced time spent and drag on resources (as seen in the more conservative approach taken during the battle)
- Lower potential for profit, but also lower risk of significant losses (much like the strategy of prioritising defense over aggressive counterattacks)

Reactive or Proactive, whichever is suitable for your business needs, it's prudent to keep a keen eye on your cashflow schedule for each forecasted exposure. Over the span of the business cycle, each transaction carries multiple elements of FX exposure which can eventually impact your bottom line on converted FX needs. The diagram below will help explain how a transaction, from its inception and forecast through to settlement, may provide positive participation in FX rate movement, or eventually fall in a high-fluctuation market cycle and thus reduce your net earnings.



Ever-Changing Nature of FX Risk

Understanding the different types of risks associated with foreign exchange is critical for companies doing business internationally. When a company forecasts an FX exposure in its cashflow, it is initially exposed to “pricing” risk, where market pricing may differ from what the company records. This same transaction is constantly exposed to rate fluctuations in FX markets, which can either present opportunities for improved net earnings or require hedging against losses due to FX volatility. As the transaction progresses over time, it may enter a “transactional” risk scenario, where downside market movement can erode or even completely erase the profitability of the whole project if not hedged in time.

NOTE: Thank you for reading! Together, we can draw inspiration from historical tactics to better navigate the complexities of foreign exchange management in today’s global marketplace.

In our next chapter, we dive deeper into tactics to minimise foreign exchange risks and optimise your organization’s financial performance.

Original publication date: May 19, 2023

Chapter 3

Winning the FX Risk Reduction Battle: Eisenhower's WWII Tactics and Modern Hedging Strategies

In the previous chapter, we explored the importance of visualising cashflow and balance-sheet risks as a precursor to better understanding which FX hedging strategy is a tactical fit for a specific financial period in the overall cashflow cycle.

Building on that foundation, we'll now dive into the world of finance where managing risks is akin to leading troops into battle while managing the unknowns. The FX strategies and ongoing decisions made by financial managers can have a significant impact on the profitability of their operations.

Here we will draw some parallels between General Dwight D. Eisenhower's tactics during World War II, and modern foreign exchange (FX) risk management strategies. We will focus on specific hedging tools, namely Futures, Forwards, Swaps and Structured Currency Options, that can deliver desired outcomes. We will also talk about how layering FX hedges and varying certain aspects, such as hedge durations and optimal hedge levels, can be part of overall planning.

Comprehensive FX Hedging: Big picture view and attention to detail. General Dwight D. Eisenhower, Supreme Commander of the Allied Expeditionary Force in Europe during World War II, was a logistics expert who planned his campaign tactics meticulously to implement his big-picture strategy and achieve the objectives. His education and experience gave him a command of military tactics, including the "combined arms" approach, where different military forces worked together in harmony to achieve the common goal.

In the same way, a comprehensive FX hedging strategy may include combining hedging tools to help minimise currency risk. A strategy based on clear objectives and careful planning, coupled with the flexibility to recognise and capitalise on opportunities, can help businesses achieve their goals.

By employing various types of hedges, companies can protect themselves from adverse currency fluctuations and achieve their financial objectives. Broadly speaking, below are main categories of hedging tools available.

- **Futures Hedging:** Currency Futures are exchange-traded hedging tools that provide companies with a guaranteed exchange rate for a multiple of 100k amounts and usually expire once a month on a predetermined date. They are price-efficient but often inflexible and less customizable for real-world underlying business needs. Futures also involve setting up a margin account where money is pulled or pushed, based on the out- or the in-the money levels of outstanding hedges. Thus this also entails monitoring the cash required to keep the margin account funded optimally. In a situation where the domestic currency is forecast as likely to weaken, a firm can enter into a futures contract to sell its foreign currency receivables, and thereby mitigate the negative impact of the foreign currency depreciation.

- **Forward Contract Hedging:** Forwards involve entering into a contract with a financial institution or a broker to buy or sell a specific currency at a predetermined rate on a future date. These are traded 'over-the-counter' (that is, off-exchange), and are highly customizable in terms of amounts booked, expiry dates, and flexibility of drawing down on them.

  Forwards can be booked 'Open-', 'Window-', or 'Fixed-dated' to match the unique cashflow requirements of the hedger. At times a financial institution will not allow fully open forwards, despite the need of the hedger. This could expose the hedger to interest-rate risks associated with the currencies involved if pre-delivered outside the window. Assessing the nature of cashflows and consulting with your dealer to build the right level of flexibility for your business can help reduce this concern.

Example: A company with a major payment in foreign currency can use a forward hedge to lock in the exchange rate and mitigate the risk of the domestic currency depreciating before the payment is due.

- **Non-Deliverable Hedge:** In some cases, a client may be exposed to FX risk even if they do not have the foreign currency to transact. If you are an exporter or importer where your receivables and payments are in local currency, but the amount fluctuates and is determined by the value of foreign currency, you are exposed to FX risk. Non-deliverable Forwards (NDFs) and Options (NDOs) can be used to help reduce that risk.

Example: A hog farmer that prices livestock in USD but receives proceeds in CAD can benefit from using a non-deliverable forward to secure a known guaranteed conversion rate. In this case, the farmer doesn't have deliverable USD to settle the future hedge, but is exposed to FX risk from the time of the sale to the receipt of CAD. The NDF is net-settled on expiry and the known net FX rate is achieved.

- **Swaps:** A Currency Swap usually involves exchange of interest or principal to help achieve cost or market-timing efficiencies. This would involve two transactions, one near-dated and an opposite far-dated transaction. They can be net-settled too. One practical example is below.

Example: A business is deep into its USD line of credit (waiting for USD receivables to come in) but has a large balance in its CAD account. To avoid paying interest on the USD line of credit, the business could consider entering into a Swap. This entails buying USD for the near term to fund the USD line of credit, and selling it back (buying CAD) at a specific future date to match the timing of USD receivables. Often the cost of swaps is less than the interest on the line of credit.

Currency Option Hedge: We will look at two main structures, Vanilla options and FX Structured options.

- **Plain Vanilla Option:** The Vanilla is a “premium” option structure. By paying a premium upfront, a company can purchase a currency option which gives them the right, but not the obligation, to buy or sell a specific amount of a currency at a predetermined rate within a specified time frame. It gives the hedger protection when they need it, but the hedger can also let the option expire if the spot rate is more advantageous spot rate at expiry. Typically, like insurance premiums, the option premium is non-refundable.

  A Vanilla Option gives the hedger full (100%) optionality for the cost of the premium. There are other details in terms of how premiums can change depending on variables like flexibility of early usage, duration of protection, and the level of rates protected relative to spot rates at the time. For this chapter we are keeping it to basics.

- **FX Structured Option:** In certain market conditions and business situations, an Option without full optionality can address the hedging needs of some businesses. This is where structured currency options, which don't require an upfront premium, can make a lot of sense. Most structures protect against unfavorable market movements while allowing for some limited upside.

  With regard to what is achievable, FX structured options usually fall somewhere between a Forward Contract (least flexible in terms of FX rate achievable and amounts dealt; no premium is paid but there is no participation if spot rates become better than the rate specified in the Forward) and a Plain Vanilla (most flexible in terms of FX rate achievable and amounts dealt; premium paid but 100% participation in more favourable movements).

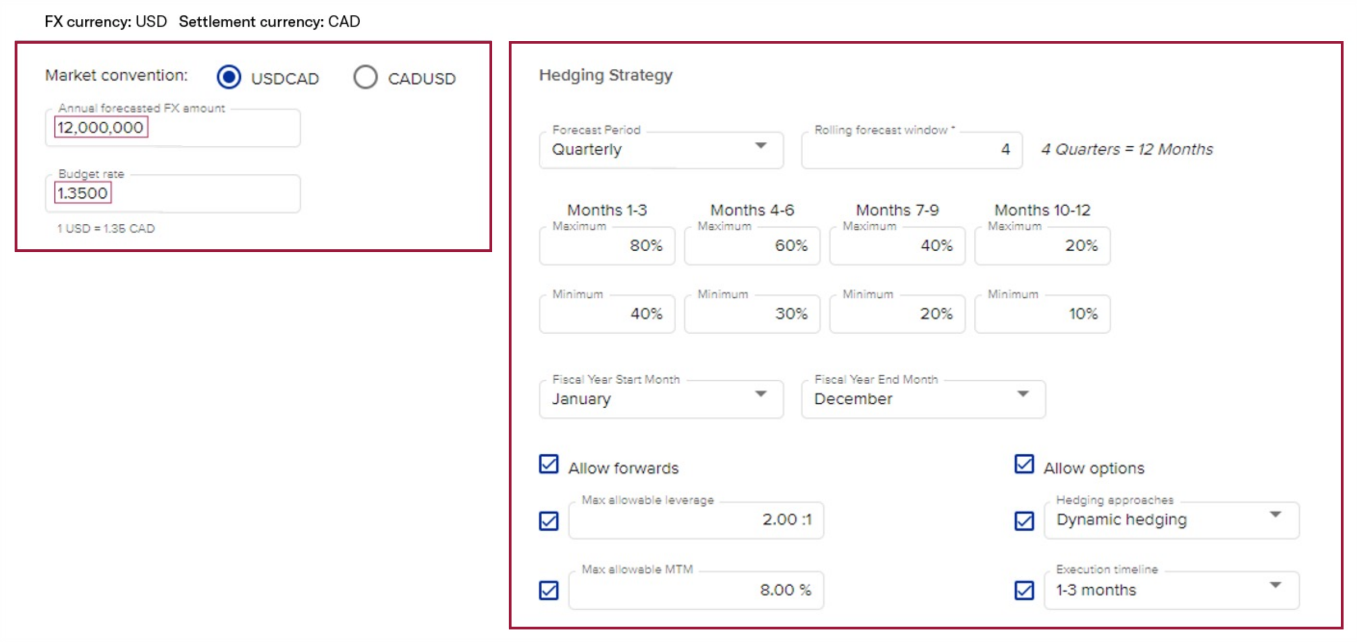
  Structured options can be used to achieve specific FX objectives, and are highly customizable to individual business needs. Many variants exist; a detailed discussion with an FX expert can help you understand how they can be tailored to the unique nature of your FX exposure and desired objectives.

What's next?

After understanding the key hedging tools that are at one's disposal, a business would then consider their unique FX situation and collect vital FX details to learn how these tools can help address potential adverse market movements and achieve overall business goals.

These macro-level details may include factors like these:

- Annual FX requirements (all the currency exposure)
- Budget rate used for sales, pricing, and/or business planning
- Hedging time horizon aligned with business planning, such as monthly or quarterly and for how long
- Products to be used for hedging
- Allowable leverage levels within the hedging approach



In our next chapter, we will dive deeper into other considerations when planning and accommodating one-off FX requirements. We will also introduce Rolling and Layering hedge strategies, and how to create, execute, monitor, and test the effectiveness of the planning.

Eisenhower's WWII tactics, characterised by disciplined thinking, meticulous planning, and full understanding of all the tools and capabilities of the armed forces in his sphere, provide a set of valuable metaphors that can help a business strategise FX risk management.

By employing a layered hedging approach that incorporates futures hedges, forward hedges, money market hedges, and currency option hedges, companies can protect themselves from adverse currency fluctuations and achieve their financial objectives.

Just as Eisenhower led his forces to victory, a well-planned and executed FX risk management strategy can help companies triumph on the financial battlefield.

Original publication date: June 22, 2023

Chapter 4

Setting Risk Management Goals: Determining risk appetite and target risk levels General Douglas MacArthur's Miscalculation in Korea

Once foreign exchange exposure is assessed, the next step is to set risk management goals. This involves determining how much risk the company is willing to take on and what its target risk levels are. Achieving stakeholder agreement on risk appetite, and a strategy designed to achieve business goals, is the foundation of a successful implementation.

In our last chapter, we discussed the value of meticulous planning and understanding all the tools at hand to create a strategy to achieve the business objectives. We cited the example of General Dwight D. Eisenhower's meticulous tactical planning and logistical expertise to achieve his goals on the battlefield.

Our next post takes us from the European Theatre of the Second World War (WWII) in the 1940s to the Korean peninsula in 1950, when General Douglas MacArthur was appointed to lead the newly established UN Command (the UNC) after North Korea's invasion of South Korea. The command included troops from sixteen nations (including South Korea and the United States), with five additional nations providing medical support and supplies.

After WWII, the Korean peninsula was divided into two separate nations along the 38th parallel. North Korea had the backing of the USSR and China, and South Korea was supported by the US and the UN and other allies.

In June of 1950, North Korean troops crossed the 38th parallel into South Korea. The South Korean military was ill-prepared for the attack. Over time, as the UN Command gathered strength and consensus, the North Korean Army pushed southward. US and South Korean troops held the North Korean Army at bay at the Busan Perimeter in South Korea, and the tide of battle seemed to turn.

In September, UN troops landed in Incheon, behind North Korean lines, and recaptured Seoul. Driving the North Koreans back over the 38th parallel awakened hopes of an early ceasefire. General MacArthur pressed on through North Korea; in November 1950, he was met at the Yalu River by 30,000 troops from the Chinese People's Volunteer Army, fighting in support of North Korea. By April of 1951, the Chinese and North Koreans had recaptured Seoul.

To complicate matters, General MacArthur and US President Harry S Truman had different goals: MacArthur aimed for a decisive victory; President Truman was eager to end hostilities and bloodshed.

MacArthur was relieved of his command that same month, and the UNC recovered Seoul in May 1951. Peace talks began in July but the parties could not agree on terms. Talks dragged on for two more years as the opposing armies crisscrossed the 38th parallel, with heavy casualties and no definitive outcome. While Armistice was at last signed in July of 1953, a formal peace agreement was never finalised.

This example illustrates how crucial it is for businesses' stakeholders to reach a consensus on their business goals, margin requirements, and risk appetite in order to develop their hedging strategy.

Gaining consensus

It might help to start with the outcomes of your prior programme. Did you achieve the intended results? Have you made changes to your business and have the objectives changed? How far ahead can you plan?

What is your company's hedging policy (treasury policy) and risk appetite? Are you looking for protection against adverse market movements? Certainty on pricing no matter how the market moves? Participation in favourable market movements? How much flexibility do you need?

Once this is agreed, you can model your strategy and potential outcomes. Creating different scenarios for your board will help make the case for implementation. Regular performance evaluation can help to keep you on track to achieve your goals.

Hedging examples to achieve different objectives

Tactics can be adapted to market conditions, and the predictability of a business's exposures. A business expanding a product line or developing new supplier relationships may need more flexibility in their hedging programme than a business with long-term requirements. A one-off FX requirement is tactically different from a fixed monthly obligation over months or years.

Below we will describe two different kinds of hedges that can be adapted to specific business needs, and how to execute, monitor, and test the effectiveness.

Rolling hedge

A rolling hedge progamme offers flexibility when market conditions are changeable, or requirements are variable. With a rolling hedge, as the expiry date of your existing hedge instrument approaches (be it an option structure or a forward contract), you enter a new option contract with similar terms, or renew the existing contract with a later maturity date.

You might implement this kind of hedge if you are able to predict your needs only a few months ahead, or are able to change pricing in response to changes in the market. As an example, you might hedge at one rate for months one through three, and revisit your needs and renew or renegotiate terms when the initial hedging instrument Is close to its expiry date. This structure allows you to take advantage of favourable movement and lock in some profits by changing the strike price, or protect against adverse movements, by pushing out the expiry date.

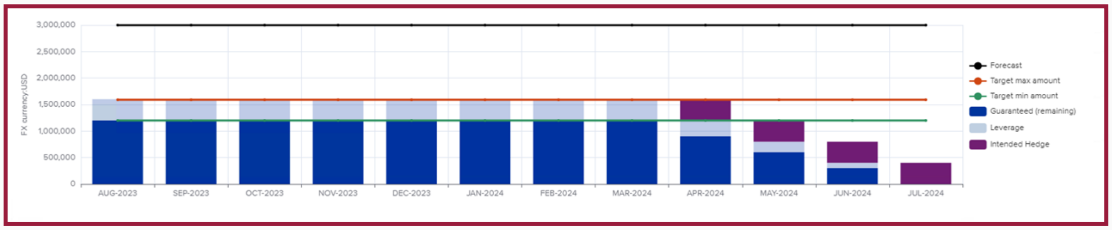
Layered hedge

If your business has more predictable requirements, a layered hedge could allow you to vary the duration and hedging instruments you are using. You could set up a hedge for the first quarter of your year (months one through three), a second hedge for months two through five, a third for months three through six. This allows you to achieve a blended exchange rate and smooth out the effect of fluctuations in the market.

Here's an example of a business that employs a blend of rolling and layering hedging programmes. With an average monthly requirement of US$3.0 million, the business is looking to hedge 40% of forecast needs. With a plan to add leverage-based hedging tools where leverage can only represent up to 15% total monthly FX exposure, total potential hedges may not be more than 55% of US$3.0 mil.

In the example below, the firm is looking to protect up to 12 months in advance. The intention is to add about one month's worth of intended hedges every month, at an opportune market entry point. This monthly hedge amount is spread out across the next four months (25% in each month) for the benefit of 'layering-in', to achieve more normalised average rates every month. Purple portions represent one month's worth of hedges spread out evenly in last 4 months to create what is also known as a 'ladder' approach to hedging.

The example below is for illustration only. Amounts, percentages, product mix, and tenors are completely customizable based on clients' hedging policies and preferences.



DISCLAIMER: This brief example does not disclose all of the risks and other significant aspects of trading in such products. In light of the risks, you should undertake such transactions only if you understand the nature of the contracts (and contractual relationships) into which you are entering and the extent of your exposure to risk. Trading is not suitable for many members of the public. You should carefully consider whether trading is appropriate for you in light of your experience, objectives, financial resources and other relevant circumstances.

The layered hedging approach might incorporate futures hedges, forward hedges, money market hedges, and currency option hedges, protecting you from adverse currency fluctuations and helping to achieve your financial objectives.

Conclusion

General MacArthur's leadership was characterised by a knowledge of his terrain and his troops, often from many different nations.

He had great successes on the battlefield—and off—with daring tactics, and with clear objectives. At times his tactics were less successful.

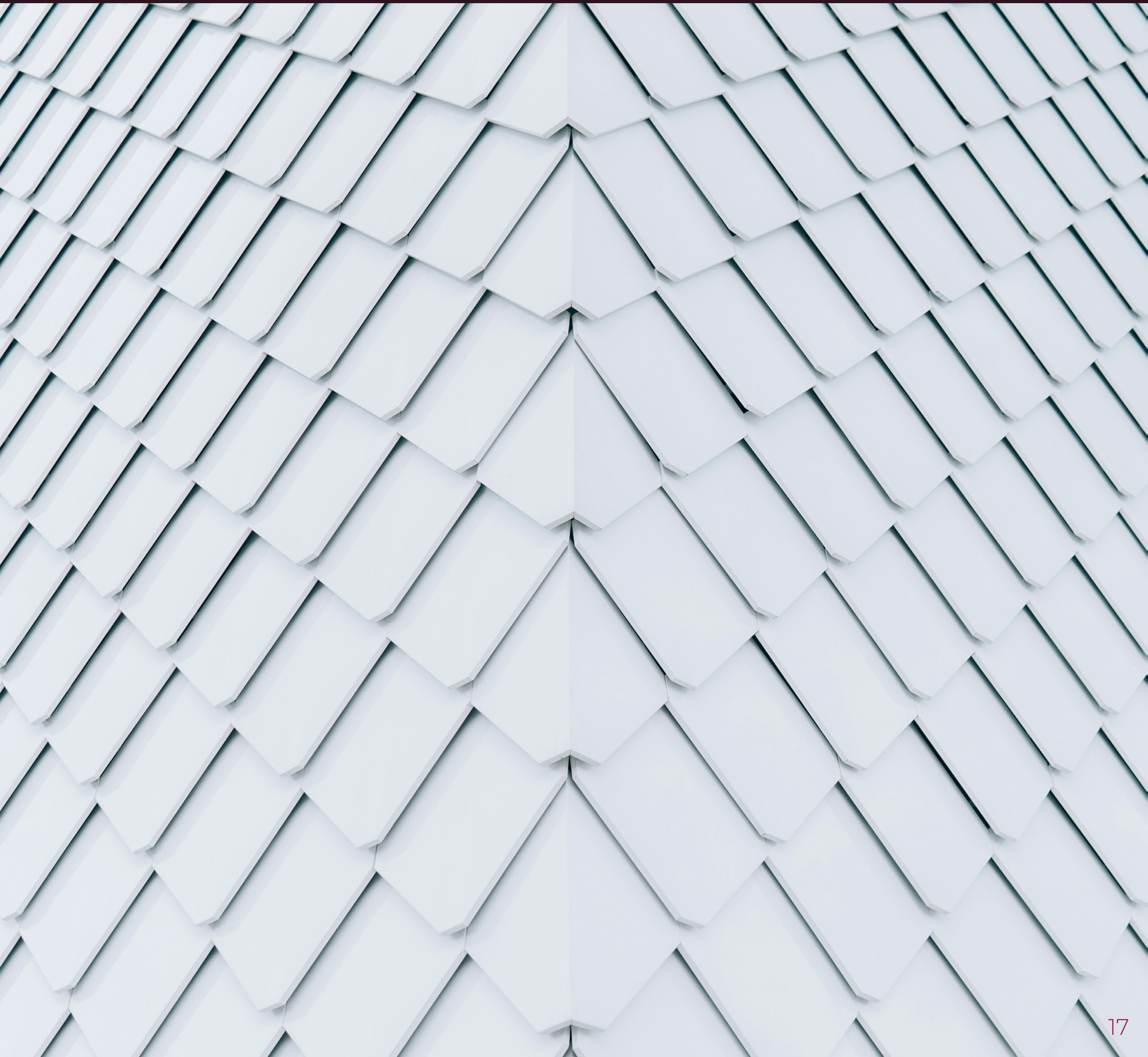
During WWII and in his time in Japan he gained consensus and support for his strategies. Despite the challenges of managing troops from so many nations, his tactics resulted in success in the early days of the Korean conflict. When his objective diverged from that of his Commander-in-Chief, his active military career ended.

In our next chapter, we discuss MacArthur's Island-Hopping Campaign during WWII, and the value of visualization and scenario planning in its success. Applying this approach to your business will help you to understand risk exposures and potential outcomes under different scenarios.

Original publication date: September 8, 2023

Chapter 5

Mapping cashflows and FX needs to better visualise risk and exposure: Island-Hopping in the Pacific with General Douglas MacArthur



In our last chapter we described the value of consensus on risk management goals, the strategy and objectives that would achieve those goals, and on implementing the agreed strategy.

In this piece, we outline how using an array of tools, including sensitivity analysis (examining how levels of uncertainty might affect outcomes), scenario planning (to test different hypotheses), and visualization can help identify potential risks and opportunities so businesses can better plan and implement their risk management strategies. We'll also address how members of a team can contribute their own expertise to the strategy and execution of a plan.

For illustration, we'll look at General Douglas MacArthur's innovative Island-Hopping strategy during the Second World War in the Asia-Pacific theatre, and how it was key to the decisive battle of Okinawa, after which the tide turned in favor of the US-led Allies against Imperial Japan.

Background and strategy

After the First World War (1914-1918), General MacArthur held a number of civilian and military roles before being assigned to the Philippines in 1935. After the Japanese attacked Pearl Harbor in December 1941, the Japanese launched air raids on the Philippines, swiftly conquering the territory and destroying half of the US Air Force on the ground. General MacArthur was recalled to active duty, evacuated to Australia, and was appointed Supreme Commander of the Southwest Pacific.

MacArthur and his Navy counterpart, Admiral Chester Nimitz (Commander of the South Pacific), along with Admiral William Halsey (Air Fleet Commander) devised a strategy they called "triphibious warfare", or island-hopping, which they implemented after the Battle of Midway in 1942. The air, sea and ground forces targeted the less well-defended islands to develop landing areas and keep supply lines open. Leapfrogging across the Pacific allowed the establishment of a second approach, through the central Pacific, another major blow to the Japanese forces.

The "island-hoppers" knew their ultimate objective and devised a step-by-step tactical approach to achieve it. They studied the terrain and deployed all the tools at their disposal (air, sea, and ground forces), leveraging the strengths of each. The tactical approach allowed for flexibility and agility: they could change direction if circumstances warranted. (It helped that they had the Japanese code book which allowed the Americans to decipher many secure messages that the Japanese forces sent one another.)

General Omar Bradley did something similar in the European theatre of the Second World War: targeting smaller islands off Italy's coast to ensure supply lines were secure before advancing.

You may be wondering how this relates to hedging currency risk...

In developing your hedging strategy, you may want to get clarity on your business objectives, your risk tolerance, and the level of flexibility your business needs. These elements are often part of a broader business strategy and typically are fairly well fixed.

Executing the strategy typically requires access to a wealth of information, from cashflows and contracts to supply chains and timelines.

Some questions you might consider:

- What does your hedging policy allow? Are you looking for certainty, or are you comfortable with less certainty so that you can potentially take advantage of upside, should a market move in your favour?
- How far in advance can you predict your currency needs and cashflows? Are you comfortable with a portion of your requirements remaining unhedged, and how much and for how long?
- What about general market conditions? In more volatile markets (or with more volatile currency pairs, such as exotic currencies), you may need either more or less flexibility.

Some businesses have long-term commitments and thus more cashflow visibility, longer-dated contracts, or pricing that can't be easily changed. Others simply need to hop to the next "island" before planning their journey to one after that. If they have flexibility in their deliveries and payment schedules, or can easily change their pricing, they may be comfortable with more flexibility and uncertainty.

Mapping and visualising exposure

For General MacArthur, Admiral Nimitz, and Admiral Halsey in the Pacific in the 1940s, visualising the path to achieving their objectives was crucial. Different tactics suit different conditions, and testing different scenarios can help you make a more informed decision about your hedging.

In the following example, we compared the high, low, and average exchange rates for the CADEUR pair for most of 2023 to illustrate the translational risk for a hypothetical manufacturing company based in Montreal.

First, here is the data set for our illustration:

Canadian dollar / Euro exchange rates: 2023		
Best: Apr 2023	**Worst: Sep 2023**	**Average: Jan-Oct 2023**
1.5196	**1.4177**	**1.4608**

SOURCE: Bloomberg

Assuming that our hypothetical manufacturer can forecast 1 million EUR in revenue for three months, we'll look at the impact of the exchange rate on margins. For our purposes, we'll compare the worst CADEUR exchange to the average, maintaining the desired 20% margin:

ABC Manufacturing Co. Translation Risk Projection over 3 months' projected cashflows

	Cashflow at average exchange rate (1.4608; Jan- Oct 2023)		Cashflows at worst exchange rate (1.4177; Sep 2023)		
	in EURO	**in CAD**	**in EURO**	**in CAD**	**Change: worst vs average**
Q3 2023 revenue	1,000,000 €	CAD 1,460,800	1,000,000 €	CAD 1,417,700	-CAD 43,100
Operating expense	-800,000 €	-CAD 1,168,640	-800,000 €	-CAD 1,134,160	CAD 34,480
Operating cashflow	200,000 €	CAD 292,160	200,000 €	CAD 283,540	-CAD 8,620
Cash margin %	20	20	20	20	3%

Margins unchanged

In this scenario, ABC would post a loss of CAD 8,630, or 3%. The treasurer would then buy a forward contract for CAD 8,630 to protect against loss should the exchange rate underperform the average at the end of the three months. If the rate at the end of the three-month period reaches the average, or if the rate improves versus the average, she can simply let the forward contract expire.

Again, this is a hypothetical situation, but being able to model the scenario can add confidence to the hedging process.

Communication and consensus are keys to success

You might also consider who would contribute to the process, and their roles. Each member of your team has a different role and different expertise. Questions to consider asking yourself include:

- What information and data do we need to understand our projected cashflows, obligations, and risk factors? What do we know, what can we project, and what DON'T we know?
- Who contributes to developing the strategy?
- Who has the authority to approve the strategy, and to direct the team to implement the strategy?
- Who monitors results and measures outcomes, and how often will we report on outcomes?

Many treasury teams manage their analyses and create their scenario modelling on spreadsheets that require manual input. Under that method, though, it can sometimes be more challenging to make changes on the fly and quickly gain consensus across disciplines, especially across locations and with dispersed teams. Thus they need to find ways to collaborate and communicate revisions and adjustments effectively, even across locations and to dispersed teams. This can be as important as knowing your forward supply lines are in place.

Choosing the right tools

In an earlier piece, we discussed hedging tools that you might consider and the roles they can play in a plan. You might be more comfortable with forward contracts, which offer rate certainty but not upside participation. You might be considering more complex FX structured products, such as options, that offer some protection and some upside but less certainty than a forward contract.

The following chart, from a 2022 Duke Financial Economics Center study, illustrates a range of exposures that could lead to a business's decision to hedge, and the instruments used by the survey participants:

Type of exposure	Derivative instrument		
	FX forwards	FX options	FX swaps
AC receivable/payable	70	16	8
Pending contract	48	21	5
Anticipated transactions (< 1 year)	48	21	5
Anticipated transactions (> 1 year)	24	17	3
Competitive exposures	9	5	2
Repatriations	59	4	12
Translation exposure	3	1	3

Forward contracts were used most frequently by the survey participants.

We also presented, in our last chapter (chapter 4), the concept of blending tools and tactics, including layered hedges and 'rolling' hedges, that can offer more flexibility in terms of timelines and amounts hedged. Please bear in mind, though, that while these hedging products can be useful tools, they can also add complexity to the planning process. A careful cost-benefit-analysis of each product's pros and cons is an important first step before implementing any of these products.

Timelines

Determining the right timelines and hedging schedule for your business is another important consideration.

Following is an illustration from the 2016 Deloitte Foreign Exchange Survey. Among the survey participants who hedge, many use lower hedge ratios over longer time horizons. This can help them to protect a portion of their exposures, and adapt or update their tactics to market conditions as they gain more visibility. Of course, your plan will be aligned to your own policies and risk appetite and may not conform to this example.

Exposure type	Firms that hedge (%)	Avg. hedge ratio
Transaction exposures		
Balance sheet	80%	–
Forecast transactions		
0-3 Months	83%	68%
3-6 Months	83%	59%
6-12 Months	77%	50%
12-18 Months	50%	32%
18-24 Months	37%	22%
Beyond 24 Months	29%	18%
Translation consolidation exposures		
Net Investment	11%	–
Foreign Earnings	8%	–

Scenario planning and modeling outcomes ('if this, then that' scenarios) can add visibility and help you make more prudent decisions. Tactics might need to adapt to changing market conditions, but the business objectives and strategy tend to be fairly well fixed.

What's next?

There is no one-size-fits-all, no absolute right or wrong when considering an FX hedging plan and weighing the trade-offs. Be clear on your business objectives, your tolerances for risk, the level of certainty you need, and how the tools at your disposal (each with pros and cons) can help you achieve your goals.

Original publication date: January 29, 2024

Chapter 6

Monitor and Review:

Lessons in Preparation, Observation and Adaptability from General Omar Bradley

In our series, we've taken you through a framework for managing FX risk, from assessing exposures and defining your risk appetite through to developing and implementing a hedging policy. We've covered a lot of ground, both practically and metaphorically, drawing on 20th century military history to provide some illustrations of successful—and less successful—tactics to illustrate our points.

In this, our sixth in this series, we come to the ''reckoning': how did the strategy perform?

Performance could be influenced by any number of factors. You can plan for some of these, but others might be outside your control. Your business may have expanded, or you may have aligned with new suppliers due to shortages or rising prices. A geopolitical issue or natural disaster may have affected expected currency valuations in the currency pairs you need to deal in, or necessitated your trading in unfamiliar markets. High interest rates and inflation may also have had some impact on your profitability or supply networks.

Your evaluation could be as basic as asking yourself this set of questions:

- Have you achieved your goals? And if not, why not?
- Has your business changed? Has the market?
- What could you have done differently?
- What tactics might you adjust for the next few months? For the next year?

It's important – particularly in an era of heightened economic uncertainty and related currency volatility – to consider monitoring and regularly reviewing your hedging performance and adjust as needed to help keep you on track to meet your objectives.

CURRENT EXPOSURE SUMMARY

Limited 03	2024/01/28-2024/02/03	2024/02/04-2024/02/10	2024/02/11-2024/02/17	2024/02/18-2024/02/24	2024/02/25-2024/03/02
SEK NET EXPOSURE	SEK -727,348.00	SEK -1,202,114.50	SEK -1,104,425.00	SEK -1,101,841.50	SEK 0.00
HEDGE RATIOS Edit	100%	100%	100%	100%	60%
TO BE HEDGED	SEK -727,348.00	SEK -1,202,114.50	SEK -1,104,425.00	SEK -1,101,841.50	SEK 0.00

A lesson from U.S. General Omar Bradley's leadership

Preparation, observation, and adaptability characterised the leadership of General Omar Bradley (1893-1981), who led a key military command in Europe in World War II.

Bradley's early career included teaching mathematics at his alma mater, the US Military Academy (General Douglas MacArthur was then Superintendent). Under the guidance of one of his professors, Bradley became a lifelong student of military history. Later, Bradley's infantry training at Fort Benning in Georgia (now Fort Moore), which focused on open warfare, fire, movement and terrain, honed his tactical thinking ability.

At Fort Benning, Bradley's mentor was General George Marshall, who encouraged subordinates to think critically and take unorthodox approaches to problem solving.

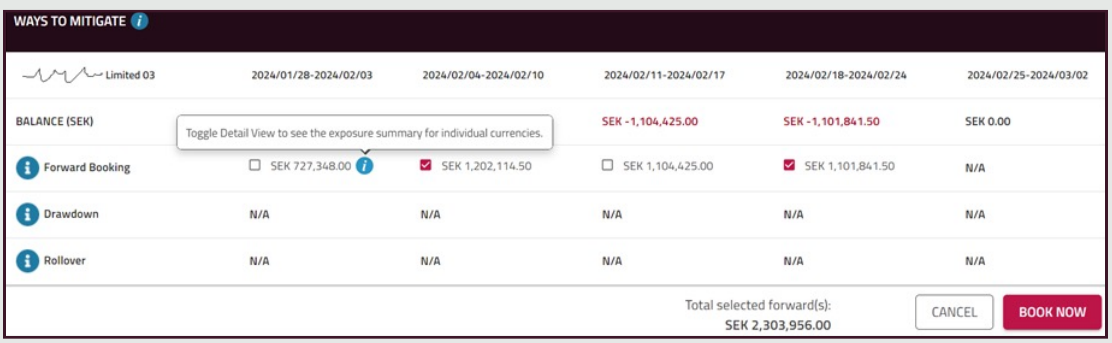
Bradley was later called the 'soldier's general' as he took these lessons from the classroom and training camps to the battlefields of Europe. He gave subordinates a high degree of autonomy in their positions, supporting them, monitoring their actions, and making adjustments as needed.

As with many leaders, not every campaign or tactic was successful. In Normandy after the D-Day landing Bradley miscalculated the strength of the German opposition and the difficulty of moving troops from the beachhead. With his knowledge of military history, he analysed what had gone wrong and was able to develop a new plan that ultimately succeeded.

He also took advantage of opportunities as he saw them. In the Ardennes Forest (the Battle of the Bulge), Bradley made a quick tactical decision to reinforce the American troops on the ground. Both sides experienced heavy losses, but the battle turned the tide of the war in the Allies' favour.

It's fitting that Bradley, tenacious and resilient, is our exemplar for the final chapter of this publication. He was collegial and collaborative, keeping the broad mission in mind and adapting to changing circumstances.

Similarly, in volatile markets, it can be prudent for financial professionals to consider a proactive approach for their hedging implementation. It may help you to build in flexibility, so when opportunities arise you can take advantage of them.



We've examined layered and rolling hedges as a tools that can help temper effects of volatility on your financial outcomes. These are examples of approaches that may give you an opportunity to adjust your tactics should circumstances warrant.

In keeping with the World War II theme of this series: It takes hard work and planning to get to a D-Day that accomplishes its mission. Modelling different scenarios, hedging levels, and durations could provide insights and approaches that suit current conditions, yet still help you achieve your business goals. You may even find areas where you can be a little more creative or unorthodox—if your commanding officer agrees.

Original publication date: January 29, 2024

Please note: Opinions expressed in this publication are those of the author. Please consider contacting an independent advisor of your choosing – an advisor completely independent of Corpay – to help you ensure that solutions discussed here are right for your business' needs.

Afterword

Thank you for reading our series! We hope you have found it informative and useful.

The series was inspired by the development of Corpay's Risk Visualizer tool, developed by Moiz Mujtaba, Director, Product Management of Corpay Risk Management Solutions and built by Corpay Cross Border's Product team.

Integrated within Corpay's Cross-Border online platform.
Risk Visualizer provides a range of analytical and visualization tools that can help businesses capture and map their currency exposures and cashflow expectations, model risk under different FX market conditions, and support scenario planning exercises so they can more confidently and proactively develop and implement their hedging strategy.

Series Author

Moiz Mujtaba

Director Product Management – Corpay Risk Management

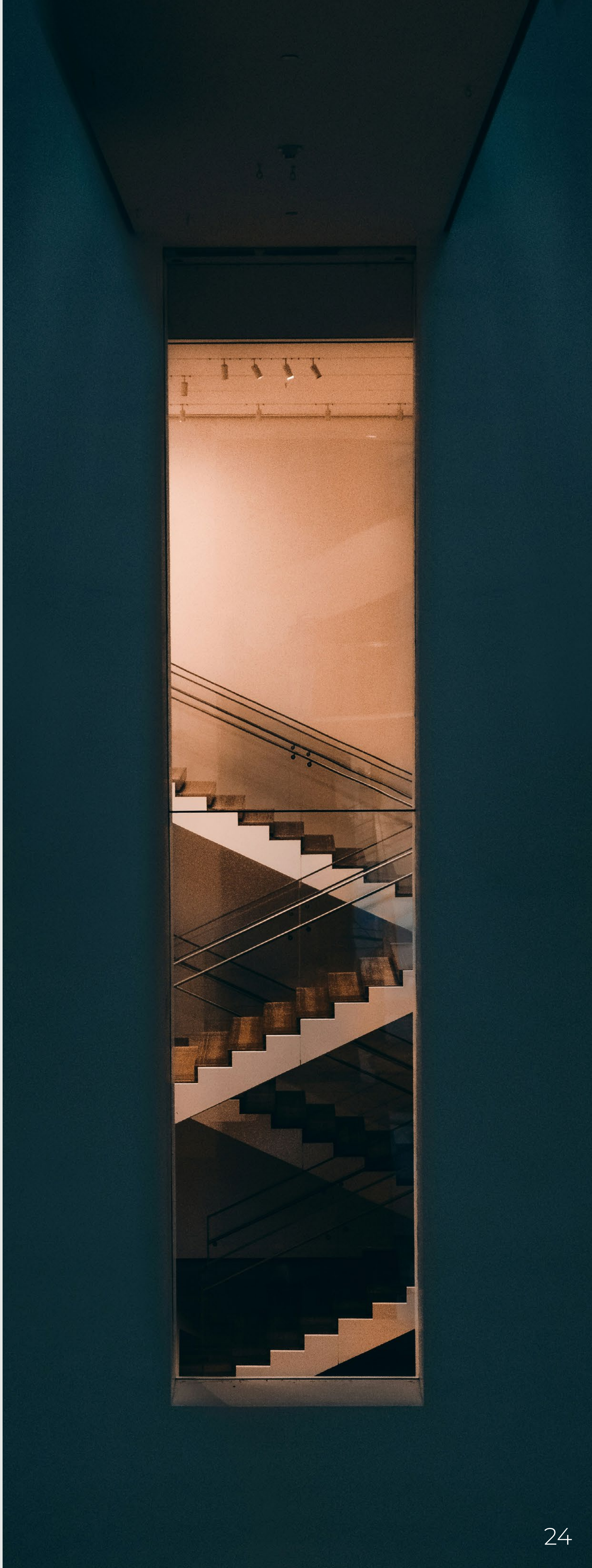
Moiz Mujtaba brings 14 years of B2B, B2C payments tech experience with academic background in Finance as a CPA (Australia) and an ACMA (UK). He currently leads the development of Corpay's FX risk management product line.

Guest Contributor

Dev Dabas

SVP, Winnipeg Branch Manager

With over 20 years of FX experience, Dev specialises in designing and implementing risk management strategies that are tailored to clients' needs. He holds an MBA and is certified in Foreign Exchange, Capital and Derivatives Markets in Canada and India.



About Corpay Cross-Border

Corpay Cross-Border Solutions provides customised strategies that help organisations move money across borders efficiently, manage currency exposures, and capitalise on market opportunities. Our solutions accommodate clients' varied business needs and risk appetites, providing them with the flexibility to maintain operational controls, monitor position valuations, and streamline reconciliation and reporting.

Corpay Cross-Border Solutions combines the capabilities of a large financial institution and agility of a fintech, with the expertise of a traditional broker. Our technology offering streamline clients' access to our global payments infrastructure and banking network, and secure, efficient payment rails. Customisable hedging solutions complete a global payments ecosystem designed for today's dynamic economy—and tomorrow's.

Corpay also provides personalised support: Our Currency Research and Market Commentary can help you better understand market movements, and our risk management team can help you execute your strategy.

If you have any questions or would like to learn more about Risk Visualizer, our payments technologies, our global payment and currency risk management solutions. please visit Corpay.com/Cross-Border or request a call-back.

About Risk Visualizer

Corpay is a global leader in business payments, helping companies of all sizes better track, manage and pay their expenses. Corpay's Business Payments division provides a comprehensive suite of online payment solutions including Bill Payment, AP Automation, Cross-Border Payments, Currency Risk Management, and Commercial Card Programs. Corpay (NYSE: CPAY; formerly FLEETCOR Technologies, Inc.) is a Fortune 1000 and S&P 500 firm with a market capitalization of more than USD $20.4B, and revenues over USD $3.76B (as of 31 December 2023).

This publication was edited by Elizabeth Parella and designed by Veerasak Chansaisakhon of Corpay Cross-Border.

Corpay^

Corpay.com