CIBC CAPITAL MARKETS

Hedging Best Practices: Interest Rates, Foreign Exchange & Commodities

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Agenda

Introduction

CIBC Capital Markets is a leading derivative house, providing a wide range of risk management and hedging solutions across an institutional platform covering all major assets.

Our team of professionals works closely with our corporate clients across all market caps and ownership structures. We provide tailored risk management solutions that address risks in foreign exchange, interest rates, commodity prices, and liquidity.

Mr. Ropiequet joined CIBC Capital Markets in September 2008. As an Executive Director on the Global Markets US Commercial Team, he is responsible for implementing tailored risk management strategies for the Bank's middle market clients.

He has extensive experience in marketing and structuring a full range of derivatives-based risk management solutions.

He has worked with Interest Rate Derivatives, Foreign Exchange, and Commodity hedging products, developing cross-departmental expertise and a broad understanding of Capital Markets.

Mr. Ropiequet holds a bachelor's degree in Finance and Marketing from Marquette University and is a CFA® charterholder.

Global Markets

From idea generation to quality execution, in-depth research to market intelligence, we provide comprehensive capabilities to clients in North America and around the world:

- Alternate solutions
- Commodities
- Derivatives solutions
- Equities
- Fixed income
- Foreign exchange
- Growth markets
- Index solutions
- Prime brokerage
- Research
- Securitization
- Structured notes

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Hedging Market Risk: What It Is (and Isn't)

Most companies face some form of **market risk** resulting from changes in interest rates, foreign exchange, or commodity prices. While market risk and price volatility cannot be eliminated, it can be **hedged**

What is Hedging?

- Utilizing derivatives to gain a high level of certainty around unpredictable or uncontrollable expense or income
- Protecting against outsized or unanticipated market movement
- Balancing fixed and variable cash flows

What is NOT Hedging?

- Speculating on pricing / future market movement
- Adapting behavior to a point-in-time forecast, past experiences, or short-term market dynamic
- Entering intro trades to profit from market pricing or mispricing (i.e. timing the market)

Benefits of Hedging:

- Gain certainty around interest expense, foreign cash flows, commodity prices
- Protect cash flows and "lock in" pricing over a longer-term
- Remove unforeseen and unpredictable volatility

Market Forecasting vs. Hedging

“The only function of economic forecasting is to make astrology look respectable” – John Kenneth Galbraith

“An economist is an expert who will know tomorrow why the things he predicted yesterday didn’t happen today” – Evan Esa

Forecasts are a useful tool that can be part of a risk management strategy – but it should never be the sole tool that guides policy.

Forecasts are a point-in-time “guess” at what will happen in the future, based on current data and assumptions. The market is constantly shifting based on new information.

Hedging allows companies to focus on what they need to do best, rather than worry about market noise

Remember: even the best forecasters are right less than half of the time!

Illustration: Professional Forecasters vs. The Fed

In 2021, the Fed held rates at 0.25%. Inflation was considered “transitory,” the economy was stuck in lower gear due to lingering COVID restrictions, and the labor market was still recovering.

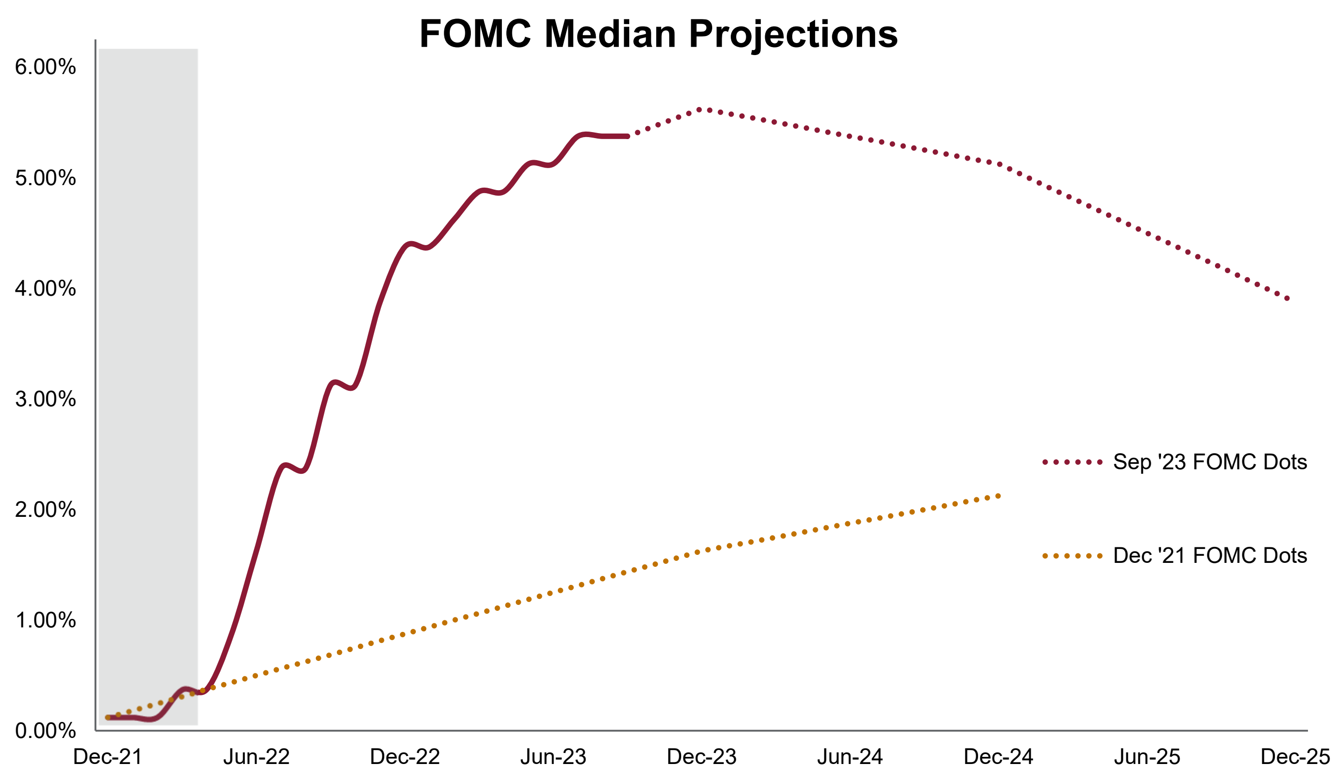
After cutting rates to 0% for the second time in less than a decade, the question wasn’t “how much” the Fed would need to raise rates; it was “if” and “when” the Fed would move. Many market participants expected interest rates to remain subdued.

Let’s compare some quotes from some of the best economic forecasters to the Fed’s own projections:

*“The Fed will likely be on the sidelines for at least the next two years… inflation (should be) stuck in its 2010s range between 1.5% and 2.0%.” – **Michael Feroli**, Chief U.S. Economist, JPMorgan, Jan 14 2021*

*“We now look for the Bank to begin hiking in April we are now calling for… 75 bps in total from the Fed (for 2022).” – **Douglas Porter**, Chief Economist, BMO, Dec 10 2021*

*“We see the median Fed Funds rate at 0.9% at the end of 2022 and 1.6% by the end of 2023” – **Avery Shenfeld**, Chief Economist, CIBC, Dec 15 2021*



Source: Bloomberg, Thomson-Reuters, Federal Open Market Committee (FOMC) Summary of Economic Projections Dec 15 2021 and Sep 20 2023

Identifying Market Risk

Analyzing and Quantifying

Market Risk: Overview and Outlook

In periods of low volatility, market risk may be hard to see. Disciplined risk management requires an active effort to mitigate market-based volatility that could negatively affect a company's bottom line.

Over the past 20 years, the economy has experienced two separate "Black Swan" events that dramatically moved markets, shifted risk distributions, and recalibrated market expectations.

The **Global Financial Crisis** drove rates to the zero-bound for the better part a decade (2008-2015)

- Pronounced Credit Crisis
- Stubbornly Low Inflation, Struggling Labor Market
- Persistently Subdued Demand
- Well Below-Average GDP Growth

The **COVID** outbreak again saw central banks cut rates to 0% to stave off an economic collapse

- Unprecedented Stimulus Spending
- Severe Job Losses followed up by Extremely Tight Labor Market
- Supply Shocks Leading to Demand Shocks = Outsized Inflation

As a result, many businesses have had to shift priorities and their way of thinking around hedging. Most businesses can't afford to take a hands-off approach to risk management.

No matter the market outlook, hedging will help a business gain certainty

Market Risk Illustrated: Interest Rates

- As the Fed embarked on an aggressive hiking cycle to combat inflation, interest rate volatility jumped
- Expectations for the Fed’s rate path consistently shifted higher throughout 2022
- Yields moved to the highest levels since 2007 as markets have recalibrated for higher short-term rates

Source: Bloomberg

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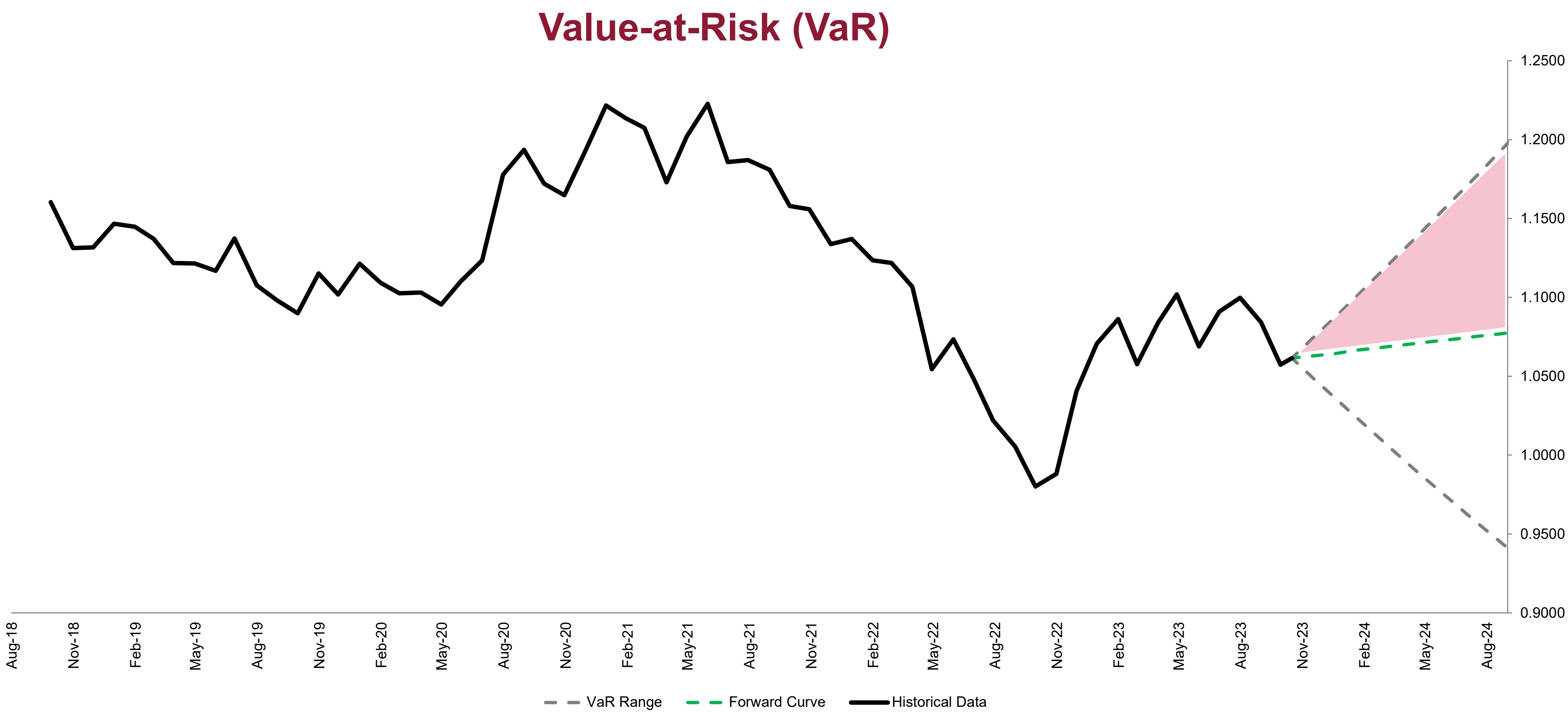
Market Risk Illustrated: Foreign Exchange

- Last year, the dollar strengthened to levels not experienced over the past 15 years
- If your firm was solely US-based or was buying products from overseas, purchasing power was very strong
- If your firm had foreign operations or exported your products, USD strength may be a net negative on the business

Source: Bloomberg

Quantify: What is Foreign Exchange Risk?

- Using a statistical analysis, the Value-at-Risk produces negative (and positive) outcomes with 95% confidence
- The V-a-R returns a dollar-based figure to assign the worst-case costs of choosing not to hedge
- Companies use V-a-R to assess materiality of the risk and how to hedge against the outcome



Source: Bloomberg, CIBC

Market Risk Factors

Changes in Central Bank Policy and Interest Rates

- How does a hiking or cutting cycle impact our budgeted interest expense?
- How does a restrictive US central bank impact EU, UK, BOC, BOJ, PBOC policy guidance & exchange rates?
- Will stubbornly high inflation or a weakening labor market cause policy shifts?

Changes in Market Sentiment

- Does a resilient US consumer increase the odds of a “soft landing” and provide support for higher rates?
- How does global inflation at 40-year highs impact customer demand and orders?
- Will a move higher in input commodity prices hurt our margins?

Changes in Economic Outlook

- Are we prepared for a “higher for longer” rate environment after almost 15 years of low rates?
- Does a strong US dollar positively or negatively impact our foreign operations?
- Will OPEC restrictions and global supply and demand imbalances affect input prices?

Selecting a Hedging Strategy

Key Elements of a Risk Management Decision

Understand the Risk

- What is the risk and how is it generated?
- Is the risk material?
- Are we able to forecast the risk?

Create a Strategy

- What are the goals (risk reduction, participation in favorable moves, enhancing hedge rate)?
- How do we balance Core vs. Opportunistic hedging?
- What is our budget rate?
- How do we determine when to hedge (risk level, passive vs. active approach)?

Evaluate the Strategy

- How has the strategy performed?
- How do we evaluate performance? Benchmark vs budget rate

Build Key Components into Policy

- Materiality/Risk
- Philosophy
- Goals/Objectives
- Controls
- Authorities
- Instruments
- Term
- Counterparty Risk
- Socialize and Evaluate

Components of a Hedging Decision

Identify Market Risk

- Term / Amortization of Debt, FX-denominated cash flows, Commodity-linked expenses or revenues
- Business needs: asset / liability mix, capital structure, projecting future cash flows
- Value-At-Risk (VAR) or Scenario Analysis

Select Appropriate Solution

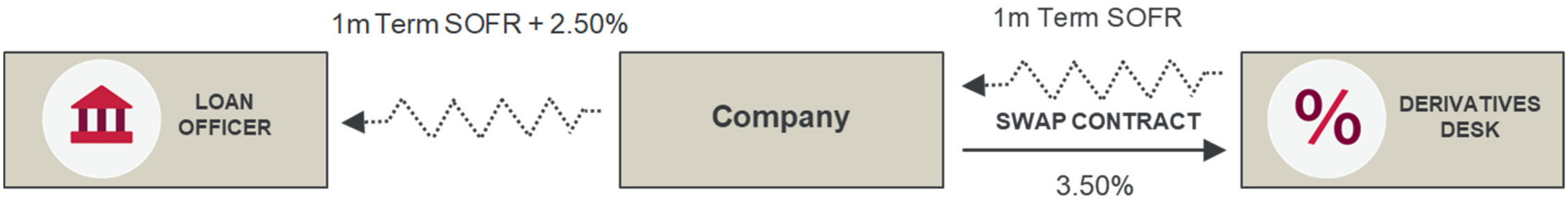
- Manage to **Hedge Ratio**: “all-or-none” is usually not the best strategy
- Core Hedging vs. Opportunistic
- Fixed = Certainty vs. Option-Based = Flexible

Review Hedge Effectiveness

- Did this perform as expected based on market movement and expected gain / loss?
- How have our needs evolved?
- Review on regular basis, adjust hedge / ratio as needed

Post-Trade Example: Swap Payments

When a floating rate loan is combined with an interest rate swap, the borrower nets to a fixed rate. The borrower gains certainty by swapping the variable rate. The borrower is indifferent to where the floating rate sets each month because they have a known fixed rate.



		LOAN INVOICE		SWAP SETTLEMENT				
	CURRENT SOFR = 5.34%	SOFR + Credit Spread (Pay)		Swap Rate (Pay)	-	SOFR Rate (Rec)		**All-In Rate**
SCENARIO	SOFR Moves Down by 1.50%:	6.34%	+	3.50%	-	3.84%	=	**6.00%**
	Current SOFR:	7.84%	+	3.50%	-	5.34%	=	**6.00%**
	SOFR Moves Up by 1.50%:	9.34%	+	3.50%	-	6.84%	=	**6.00%**

	CURRENT SOFR = 5.34%	SOFR + Credit Spread (Pay)		Swap Rate (Pay)	-	SOFR Rate (Rec)		**All-In Payment**
SCENARIO	SOFR Moves Down by 1.50%:	$52,833	+	$29,167	-	$32,000	=	**$50,000**
	Current SOFR:	$65,333	+	$29,167	-	$44,500	=	**$50,000**
	SOFR Moves Up by 1.50%:	$77,833	+	$29,167	-	$57,000	=	**$50,000**

Best Practices

Developing a Policy

Elements of a Hedging Policy

Understand what needs to be hedged:

- How are our cash flows generated? Can we accurately forecast them?
- What risks are we exposed to, and are they material?

Create a strategy:

- What are the overall goals? (certainty, flexibility, disaster protection, etc)
- What's the budget rate and how flexible is it?
- Do we want to incorporate market views and/or conditions?
- What restrictions do we have (approved products, tenor limits, credit or counterparty limits)?

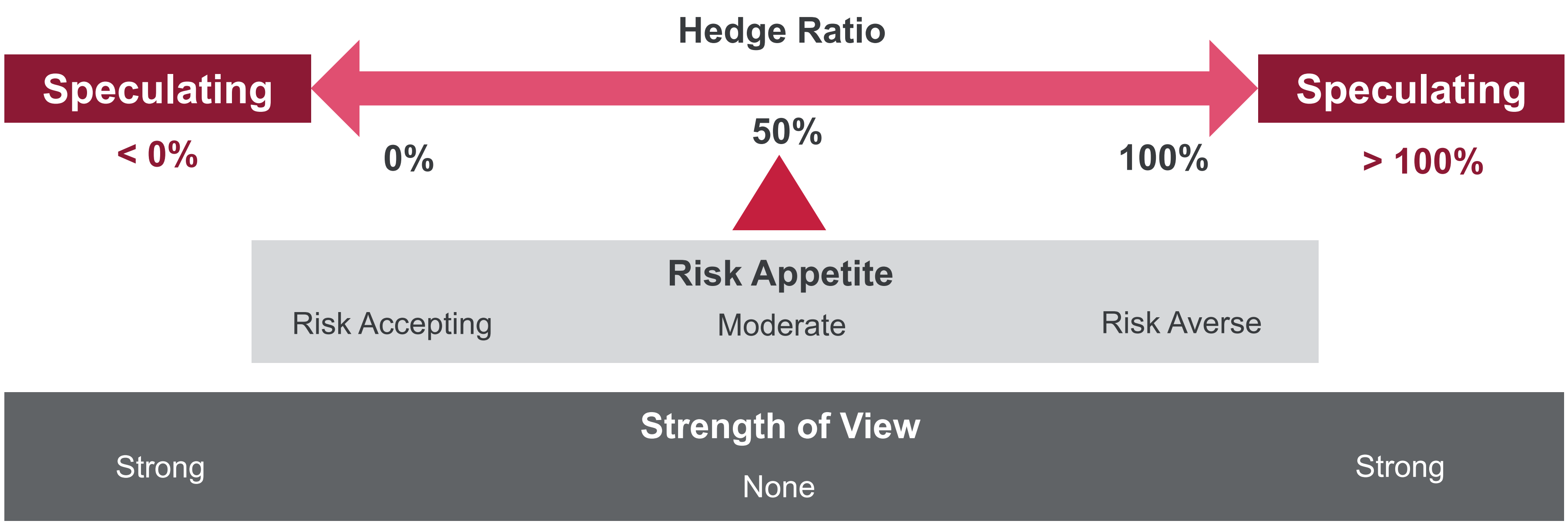
Measure the effectiveness of your strategy:

- How has your existing strategy performed/evolved?
- How do you quantify success?

Selecting a Hedge Ratio

Hedge Ratio reflects risk appetite. A specific % or band of discretion are common:

- Band of discretion used to:
  - Keep risk within tolerance level
  - Allow taking of a market view
  - Allow for rebalancing/adjustment



Designing a Hedging Policy

Four key steps to establishing a robust risk management strategy for market risk and hedging policy:

Step 1: **Risk Analysis:**
Identify and Measure

Step 2: **Strategic Business Decisions:**
Risk Appetite, Objectives, Constraints

Step 3: **Hedge Program Parameters:**
Products, Time Horizon, Hedge Ratios

Step 4: **Monitoring Requirements:**
Reporting and performance measure

Reflected in Policy

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Summary and Questions

Risk Isn't Always Obvious

- Market risk isn't always easy to see, may have far-reaching consequences
- Correctly forecasting market risk is extremely hard

Breakdown Market Risk Components, Develop a Plan

- Use V-a-R to quantify the "costs" of market risk
- Weigh the outcomes of not hedging under normal course of business

Risk Policy Can Help No Matter The Outlook

- Let policy guide decisions, don't rely on market forecasts or "expert" opinions
- Gain certainty and bring balance to your core business needs