SystematicEdge
Systematic Multi-Asset Strategies

Forex Hedging: Protecting your Profit Margin from Currency Volatility

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April 20th, 2020

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SMEs and Currency Risk:

SMEs doing business across different countries are subject to foreign exchange currency risk.

When speaking to SMEs, we receive recurring questions on how to protect profit margins from currency volatility:

- What kinds of firms' profit margins are most at risk?
- What are the main types of currency **risks and costs** that one should be aware of?
- Why should one hedge?
- Can you give us an example using a real case study?
- What instruments can one use to manage currency risk?
- What is your unique value proposition?

WE AIM TO ADDRESS THESE IMPORTANT QUESTIONS, INCLUDING A CASE STUDY, IN THIS WHITEPAPER.

SMEs and Currency Risk: Who is concerned?

SMEs doing business across several countries are subject to foreign exchange currency risk.

SMEs that buy and sell goods and services that are invoiced in different currencies, depending on the location of the customers and the suppliers, must be aware of their currency risks. The largest of these risks is that the fluctuation of currency prices can generate losses superior to the intended profit margin.

For example SMEs can commit to a price in currency X to a client to deliver at a future date a service or manufactured goods where the service or manufacturing cost is in currency Y. During this time, the currency pair rate can fluctuate and generate an operating loss. One example of SMEs that are especially exposed to this risk are manufacturers that outsource their manufacturing off-shore relative to their customer base.

Another example includes SMEs whose borrowing is denominated in different currencies. The borrowing can be used to purchase assets that can be denominated in a currency that is different from the borrowed funds, subsequently creating an "asset – liability currency risk", that can generate losses due to currency price movements. Typically the SMEs concerned are Trading Companies buying on credit.

Another group of SMEs concerned with currency risk, are those entering into a cross border exit or acquisition.

Four Main Currency Risks & Costs to be aware of:

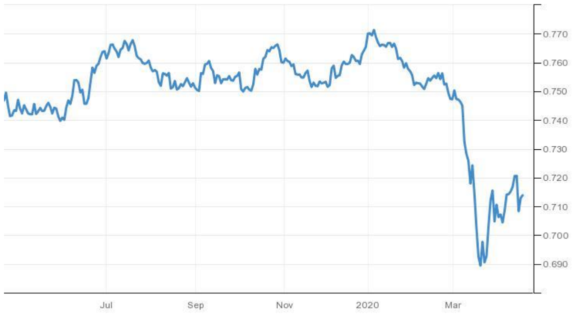
There are Four main risks & costs linked to currency that can generate losses and recurring costs:

01

Currency Volatility:

Currency is volatile and can wipe out the profit margin of SMEs, creating operating losses and increasing liabilities. An extreme example of this was seen in the first quarter of 2020, where major currencies experienced large moves ranging from 10% to 20%. For example:

CANADIAN DOLLAR US DOLLAR



Source TradingEconomics.com

03

Hedging carry costs:

Depending on the currency pair, a hedge can generate recurring profit or loss due to the interest rate differential between the currencies.

02

Currency Conversion recurring costs:

Currency conversion needed while conducting business can in itself generate recurring cost if the currency market is not accessed efficiently. That happens when the company is not using Direct Market Access to convert forex and is going through a forex supplier involving layers of fees that can add up to many percentage points per year. This erodes the company's profit margin.

04

Counterparty risk:

It is the elephant in the room that is too often ignored and that can be fatal to a company using the wrong FX provider. Some Forex providers use currency delivery versus payment (DVP). This means the company will send the full amount to be converted to the FX supplier and therefore bear a 100% counterparty risk on the amount sent.

Why Hedge?

In order to reach its business goal, a company must eliminate the currency risks that can erode profit margins, generate operating losses as well as incur recurring costs.

How to do it and what is the objective of hedging currency risk ?

Currency risks must be analyzed in the company's business context so currency conversion and risk hedging can be planned and implemented using an efficient operational solution with the objective to:

- immunize the company's business and financial revenue from currency volatility
- maximize the company's profit
- minimize the operating costs.

Case Study: Company ABC based in Canada manufacturing in China

Company ABC is an equipment designer based in Canada and works with a manufacturer based in China. ABC sells equipment in Canada in CAD$ and pays the Chinese manufacturer in CNY.

OUTLINE OF A TRANSACTION: 01

- ABC agrees with its Canadian client to deliver a piece of equipment at T0+6months.
- 1 CAD = 5.40 CNY. The manufacturing price in China is 6,000,000 CNY, which is equivalent to 1,111,111 CAD$.
- ABC takes 5% profit margin: 55,555 CAD$ calculated at the time that the deal is struck.
- The client agrees on the total price of 1,166,666 CAD$. 50% will be paid at T0+1 month and 50% at T0+6months.
- The Chinese manufacturer agrees to take on the order and must be paid 50% (3 Million CNY) at T0 + 1 month to start the manufacturing and the rest on delivery at T0+6months.

CADCNY prevailing rate at T0:		**5.40**
Equipment manufacturing price:	CNY	6,000,000
Equipment value in CAD:	CAD$	1,111,111
Profit margin (5%):	CAD$	55,555
Selling price to the client:	CAD$	1,166,667

Case Study cont'd: Company ABC based in Canada manufacturing in China

CURRENCY RISK ANALYSIS: 02

During T0 and T0+6months, if CADCNY depreciates 5%, i.e. from 5.40 down to 5.14, then ABC's entire profit margin will be wiped out. If the CADCNY depreciates more than 5%, ABC will suffer a hard accounting loss or may not be able to honor its order contract with both the Chinese manufacturer and the Canadian end client.

Dates:	To	To + 1 month		To + 6 months	
CADCNY prevailing currency rate:	5.40	5.10		4.90	
Cumulated currency move:	0.00%	-5.56%		-9.26%	
		CAD$	CNY	CAD$	CNY
	CAD$ received from the client:	583,333		583,333	
Case A: No Hedge	Currency conversion at the prevailing currency rate				
	Buy CNY		3,000,000		3,000,000
	Sell CAD$	(588,235)		(612,245)	
	Payment to the Chinese manufacturer		(3,000,000)		(3,000,000)
	Total CNY$ cash		**0**		**0**
	Total CAD$ cash	**(4,902)**		**(33,814)**	

THE CURRENCY MOVE WIPED OUT THE PROFIT MARGIN AND GENERATED A LOSS OF CAD$ -33,814

Dates:	To	To + 1 month		To + 6 months	
Case B: With Futures Hedge	Currency conversion at the initial currency rate (5.40)				
	Buy CNY		3,000,000		3,000,000
	Sell CAD$	(555,556)		(555,556)	
	Payment to the Chinese manufacturer		(3,000,000)		(3,000,000)
	Total CNY$ cash		**0**		**0**
	Total CAD$ cash	**27,778**		**55,556**	

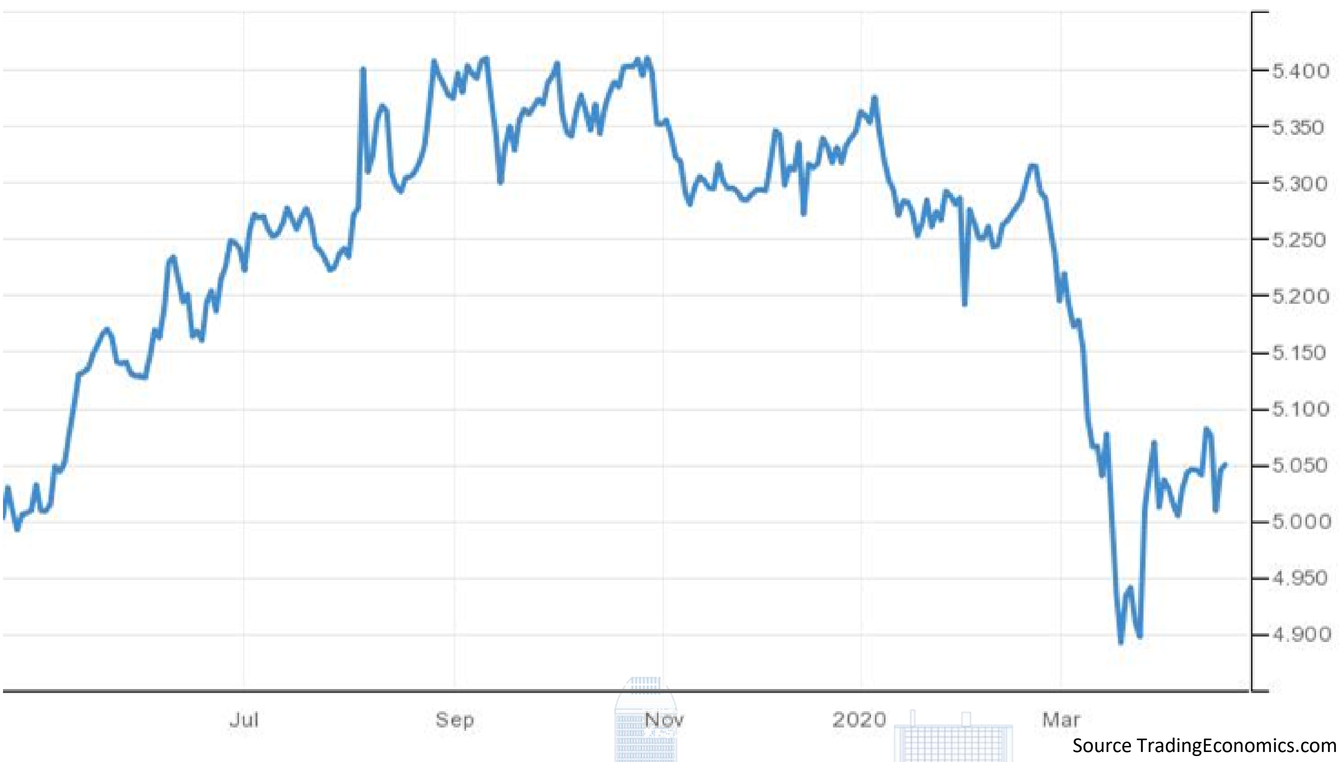
THE REMAINING CASH IS THE FULL PROFIT MARGIN OF CAD$ +55,556

Case Study cont'd: Company ABC based in Canada manufacturing in China

FOREX CONVERSION AND HEDGING PROGRAM: 03

As soon as the deal has been struck with the client and the manufacturer using the prevailing CADCNY rate of 5.40, there is a currency risk. In order to lock in the prevailing market currency rate, we will buy a future at the rate of 5.40, 3 Million CNY at date T0+1month and 3 Million CNY at date T0+6months.

CANADIAN DOLLAR CHINESE YUAN

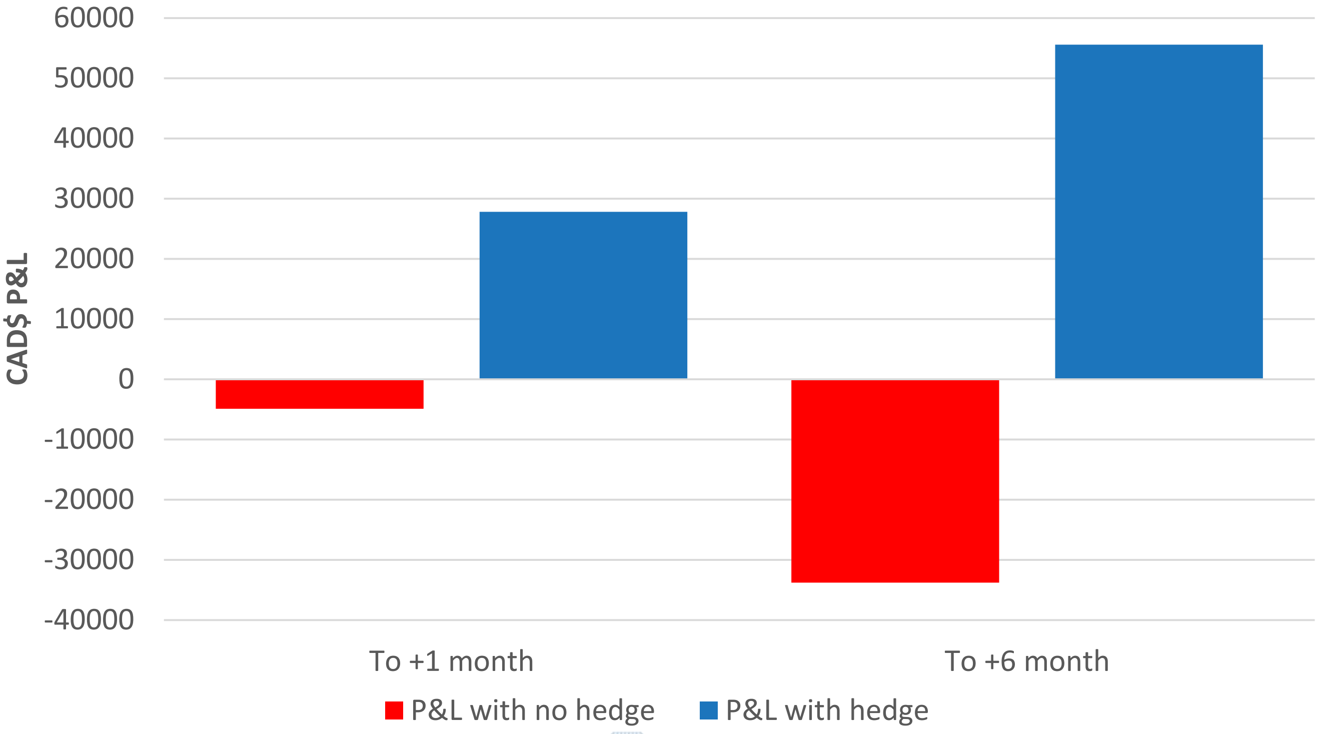


Source TradingEconomics.com

Case Study cont'd: Company ABC based in Canada manufacturing in China

RESULTS: 04

If the transaction is hedged, regardless of the variation of CADCNY, the accounting result at the end of transaction will be CAD$ 55,556 corresponding exactly to the profit margin. If the transaction is not hedged, there will be a loss of CAD$ -33,814.



Instruments & Programs to manage currency risk

There are many instruments and methods used to manage currency risk, and below we will look at the most common including our own hedging process. Following that we have explained in a table the mechanisms, the risks and the costs for each instrument and process.

FUTURES AND FORWARDS: LOCK IN A CURRENCY EXCHANGE RATE TO USE AT A SET DATE IN THE FUTURE.

- **Futures** are listed on an exchange, such as Globex, that guarantees liquidity and provides valuation. Futures have no counterparty risk.
- **Forwards** are bilateral contracts with banks, they have counterparty risk, and the bank is the valuation agent.

OPTIONS:

- Preserves the ability to get a better FX rate at expiry.
- They can be bought directly on an exchange or bought from a bank as a bilateral contract.

FOREX HEDGING PROGRAM:

Systematic hedging of all cash flows bearing foreign exchange risk.

FOREX DYNAMIC HEDGING PROCESS:

Systematic hedging based on cash flow as well as **business contract terms that** involve currency risks. The hedging process takes into account the sensitivity of the company's revenue with respect to different currency scenarios, favourable and adverse.

FOREX OVERLAY:

Specific strategy based on the company's decision to hedge part of its currency risk in order to retain a currency position corresponding to the company's currency view within its business context.

> By outsourcing the management of your currency conversion and hedging solution to SystematicEdge, you can focus on your core business.
>
> Alain Groshens – Founder SystematicEdge

Instruments to manage currency risk: cont'd

Hedging Instruments and process	Forward with a bank	Futures on the exchange	Option with a bank	Options on the exchange	FX Hedging Program	FX Dynamic Hedging process	FX Overlay strategy
MECHANISM:							
Guaranteed FX rate	Yes	Yes	Yes	Yes	Yes	Yes	No
Set usage at a specific date	Yes	Yes	Yes	Yes	Yes	No	No
Set usage within a specific date range	No	No	Yes	Yes	Yes	Yes	Yes
Better FX rate could be applied at expiry	No	No	Yes	Yes	No	No	No
Initial premium payment	No	No	Yes	Yes	No	No	No
Is the contract standardized and regulated ?	No	Yes	No	Yes	n/a	n/a	n/a
RISKS:							
100% adverse currency fluctuation hedged	Yes	Yes	Yes	Yes	Yes	Yes	No
Counterparty risk	Yes	No	Yes	No	n/a	n/a	n/a
Valuation depends on the intermediary	Yes	No	Yes	No	n/a	n/a	n/a
COSTS:							
FX hedging service and brokerage fees	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intermediary execution fees	Yes	No	Yes	No	n/a	n/a	n/a
FX trader bid - ask spread execution cost	Yes	No	Yes	No	n/a	n/a	n/a

SystematicEdge
Systematic Multi-Asset Strategies

SystematicEdge Currency Risk Hedging Value Proposition

Cost Savings

- **Mid market currency conversion**
- **Positive carry hedging transactions**
- **Direct Market Access (DMA)** to the world's main exchanges, by-passing intermediaries in order to minimize fees and execution costs: trades are executed at the best price on regulated exchanges.
- **One service management fee** and no execution commission (no matter how many trades executed)

Safety

- **No counterparty risk from the hedging transaction:**
  - Hedging trades are only executed directly with exchanges in the client's managed account. SystematicEdge does not trade with banks or any other counterparties.
  - SystematicEdge does not hold client money as opposed to other hedging solution providers. We partner with Interactive Brokers ("IB") to open a managed account in the client's name.
- **Fully regulated at all levels**: The client's managed account is maintained by IB that is regulated, trades are only transacted with the exchanges that are regulated and SystematicEdge portfolio managers are regulated.
- **100% STP (Straight Through Processing)** with real time account valuation and risk management reports available and accessible via a secured internet portal: The client organization is in complete control of its funds.

Turn-key Solution

- **Currency Risk Analysis**
- **Customized Hedging Program design, execution & follow up**
- **Service:**
  - mid market currency conversion
  - hedging execution (best price execution)
  - risk management

SystematicEdge Forex Hedging Process

Our customized turn key solution has 4 steps:

01

FOREX RISK ANALYSIS WITHIN THE COMPANY'S BUSINESS CONTEXT:

- Identify certain and uncertain future cash flows in foreign currencies and their schedule.
- Measure the sensitivity of the company's revenue with respect to currency fluctuations.

02

CUSTOMIZED FOREX HEDGING PROGRAM DESIGN

The goals are to:

- Immunize the company's profit margin from currency fluctuations.
- Optimize the hedging positive carry (profit) if applicable or minimize the hedging negative carry if applicable.
- Maximize the profit enhancement from the currency hedge based on favorable and adverse currency scenarios for the company's business revenue.

03

IMPLEMENTATION OF THE CURRENCY CONVERSION AND HEDGING PROGRAM

- Use the most efficient currency instruments: We favor exchange listed currency instruments such as Futures and Options (if applicable) rather than bank forwards. Listed currency instruments have no counterparty risk, no valuation uncertainty and minimize cash consumption.
- Optimize the net P&L from the hedging program by executing the currency conversion at mid market and the hedging instrument at the best price offered on the exchange.
- Minimize costs: minimize the number of transactions and use the most liquid currency instruments.

04

RISK MANAGEMENT

- Continuous follow up of forex risk and hedging program execution

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