



Kansas City AFP Conference

Foreign Currency Hedging
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Agenda

- Foreign Exchange (FX) Volatility
- FX Hedging Terminology
- Hedging Videos
- Hedging Case Studies
- FX Hedge Calculator
- Future Directions



THE NATIONAL
WWI MUSEUM
AND MEMORIAL



Foreign Exchange (FX) Volatility

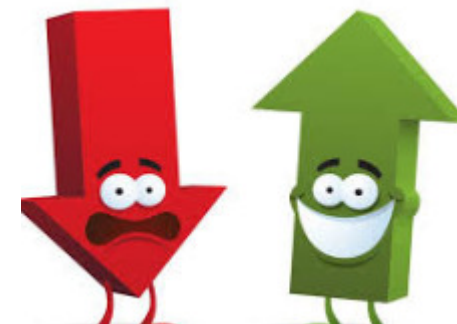
- Foreign currency rates of exchange change ***constantly***
- Currency can easily move ***1% to 2%*** or more in a day or week
- Difficult to predict exact future rates of exchange
- Numerous factors influence FX volatility:
 - Economic indicators, politics, trade policy, fiscal and monetary policy, int'l conflict
- Sudden or unexpected events impact currency volatility too:
 - Swiss Bank abandoned Euro peg - Swiss franc immediately ***strengthened 30%***
 - UK Brexit vote drove the British pound ***down 10% in one day***, a 31 year low



British Pound (GBP) Volatility 2018

2018 Date	Rate (1 GBP = USD)	GBP Percentage Move
January 1 st	1.3503	
April 16 th	1.4340	6.0% gain
June 30 th	1.3207	2.0% loss
August 27 th	1.29	4.5% loss YTD

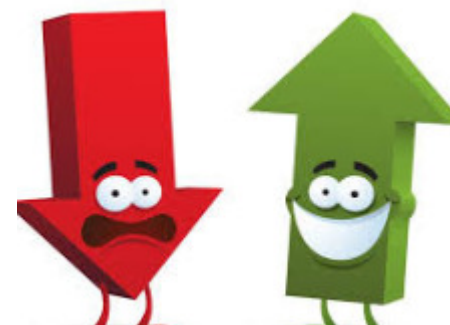
*Range over this period
is a large **13%***



Mexican Peso (MXN) Volatility 2018

2018 Date	Rate (1 USD = MXN)	MXN Percentage Move
January 1 st	19.54	
April 16 th	18.01	8.5% gain
June 14 th	20.88	16.0% loss
August 27 th	18.75	11% gain June

*Range over this period
is an even larger **16%***



Turkish Lira





Foreign Exchange (FX) Volatility

- FX volatility can eat into companies bottom-line profits
- Companies that pay overseas suppliers in USD also have FX exposure – invoice markup 5%



Lego Negatively Impacted by FX Volatility

January to June 2018 Results

“Net profit fell 10% to three billion Danish kroner (\$468 MM), while **Sales declined 4.6%** to 14.2 billion kroner. The company attributed much of that weakness to currency moves. The US dollar weakened significantly against the kroner during the period, reducing Lego’s overseas sales after being converted into its home currency. Excluding foreign exchange moves, revenue was flat for the first six months of the year.”



Wall Street Journal – WED Sept 5, 2018 page B3

FX Hedging

- FX volatility can be mitigated with a mix of *hedging* tools
- FX Hedging = *insurance*, not speculation or risk taking
- Every company is different and a hedging solution should be *tailored* to meet specific needs



Hedging Terminology – Forwards (1 of 3)

Fixed Date Forward

Binding contract to Buy/Sell currency at a rate set today, with added forward points, for future delivery out to 12 months on a specific date. I.e. EUR 100,000 @ 1.1823 Value Date Dec. 18, 2018

Window Forward

Timeframe to draw funds as needed from the forward contract as often as you like, until the end of the window. I.e. EUR 100,000 @ 1.1911 - window Oct 31 & final value Nov 30. Provides flexibility

Par Forward

Series of forwards with different settlement dates but a common exchange rate.

Hedging Terminology – Forwards (2 of 3)

Premium

The amount by which the forward price exceeds the spot price

Value Date

Also referred to as the maturity date. The delivery date of funds traded; for spot trades it is normally two days after the transaction date. Forwards may have value dates out to 12 months. Most forwards are typically up to 6 months.

Forward Deposit (Margin)

Portion of Forward placed on deposit at time forward is booked. Ranges from 4% to 15% depending on forward value date. Credit lines may be used for forward deposits – if company qualifies.

Hedging Terminology – Forwards (3 of 3)

Drawdown

To pull funds from a total amount either in part or in full

Exposure

Amount a company stands to lose in a FX position

Forward Points

$$F = S \frac{(1 + i_f)}{(1 + i_d)}$$

F is the forward exchange rate where
S is the current spot exchange rate
 i_d is the interest rate in domestic currency (base currency)
 i_f is the interest rate in foreign currency (quoted currency)

Pips, based on interest rate differentials, added to or subtracted from the current exchange rate in order to calculate a forward price

Hedge Ratio

Value of a position protected through the use of a hedge compared with the size of the entire position itself. I.e. 50%, 75% or 100%

Hedging Terminology – Market Order

Market Order (Standing Order)

FX risk management tool used to place a buy or sell order once the spot rate reaches a pre-defined level. Valid 24 x 7

Stop Loss

Order to buy / sell at a pre-defined level in order to limit a loss

EUR at 1.17....Set a Stop Loss Market order for 1.19

Take Profit

Order to buy / sell at a pre-defined level in order to secure a profit

EUR at 1.17....Set a Take Profit Market order for 1.15

One Cancels Other (OCO)

Combination of both a Stop Loss and Take Profit order. If either rate is achieved the other market order is automatically cancelled

Hedging Video Resources

- Forward Video

<https://www.youtube.com/watch?v=A7Raw6TMNo8>

- Window Forward Video

<https://www.youtube.com/watch?v=kMqiJv2Nt4g>

- Market Order Video

<https://www.youtube.com/watch?v=tMfJ5thvUvs>

Case Study #1:

Machinery Purchase, Limited Liquidity

A steel wire manufacturer based in Texas purchased a large piece of machinery from Germany for 1,600,000 Euro. The vendor gave the client flexible payment terms over the course of one-year: an initial deposit of 10% was due, 30% was due between 4-6 months, and the final 60% was due between 10-12 months.



Challenge

The rate of exchange was extremely favorable to the client at that point in time, but this was an especially large purchase for the client and they did not have the funds to purchase the machine outright. The client also wanted to figure out if there was any cost advantage to paying the invoice in foreign currency versus USD.



Strategy

After performing a cost comparison (USD v. EUR invoice amount) it was determined that the USD invoice was padded with an extra 4% - common practice used to protect against currency risk. Client bought Spot for initial deposit and phased the other two payments with Window Forwards

- **160,000 EUR (10%) Spot** transaction
- **480,000 EUR (30%) Window forward** opening in 3 months and closing 6 months out
- **960,000 EUR (60%) Window forward** opening in 10 months and closing 12 months out



Outcome

- The client locked in the favorable Spot & took advantage of Forward rates now for future delivery
- Preserved cash flow to pay throughout the year vs. buying all at Spot
- Saved an additional 4.0% by paying in EUR vs USD

Case Study #2: Optimistic Outlook

An antiques dealer based in Georgia has followed news surrounding the Brexit referendum election in Britain.

Through Tempus' insights, the client came to understand that the British pound (GBP), and by extension the company's budget, was poised to be strongly impacted by the results of the election.



Challenge

The client estimated their currency exposure for the year. The client believed the rate would move in their favor and wanted to capitalize on a positive market move, but did not want to tie up the company's cash flow in purchasing the funds in full.



Strategy

After evaluating the company's risk tolerance it was decided to use a combination of take-profit and stop-loss market orders.

- **55,000 GBP (100%) Take-profit and Stop-loss market orders**
- **55,000 GBP (100%) Window forward** opening after the market order hits and closing 12 months out

To avoid tying up the company's cash flow once the market order hit, the order was rolled into a window forward for future delivery. This allows the client to drawdown the funds at the amount and time needed throughout the year.



Outcome

- Combined strategy enabled the client to take advantage of their ideal rate saving money when the Take Profit market order hit
- Preserved cash flow by rolling the Take Profit market order into a Window Forward for future delivery
- Avoided massive market volatility ahead of the Brexit election

Case Study #3: Pre-Priced Parts, Dollar Weakening

An automotive parts supplier based in Illinois placed an order for parts from their vendor in Mexico. The client negotiated the price for 8,900,000 Mexican peso (MXN) then priced the parts in US dollar (USD) for resale. Through our proactive monitoring of the situation and Tempus' own forecasts, the client realized that the MXN showed little sign of reversing its strengthening trend against the USD.



Challenge

The full amount owed was due at a pre-specified date 2 months out and the MXN had consistently strengthened against the USD, eating away at the client's expected profit margins. The client didn't have the cash on hand to buy the full 8,900,000 MXN outright.



Strategy

In order to protect the company's remaining profit margin it was decided to use a fixed-date forward, to avoid any potential further losses to the company's profits that would arise from the MXN continuing its appreciation against the USD.

- **8,900,000M MXN** (100% hedge) **Fixed date forward** valued at a pre-determined date 2 months out
- Additionally, a reasonable and competitive product pricing strategy for future orders was implemented so that the client could maximize profitability for each unit sold while taking into account potential market rate fluctuations



Outcome

- Protected remaining profit margin
- Preserved cash flow until value date two months out
- Established better pricing strategy for future business

Case Study #4:

Recurring Monthly Payments

A medical equipment supplier based in Nevada had to make structured payments of 11,500,000 Japanese yen (JPY) every month to fund a new office in Japan. The client previously used a well-known bank to manage their international wires, but found the bank to be reactive, as opposed to proactive, with little understanding of how their business actually operated.



Challenge

For accounting purposes, it was important for the client to pay the same US dollar (USD) amount for the 11,500,000 JPY they needed to send each month. However, the client did not have the liquidity available to purchase the entire year's worth of JPY into their holding account.



Strategy

In order to help better manage the company's budgets the client decided to hedge their annual exposure with Par forwards.

- **11,500,000 JPY** (100%) **12 Par forwards** closing at the beginning of each month for 12 months out
- Locked in total of 138,000,000



Outcome

- Simplified accounting records
- Took proactive control of budget
- Locked in good rate now for future delivery throughout the year saving money
- Preserved cash flow

Case Study #5: Receiving Foreign Funds

A seafood distributor based in New York was contracted to supply a few chain restaurants in Canada with fresh seafood. The contract was negotiated in Canadian dollar (CAD), meaning the US-based client would receive 264,000 CAD over the course of 9 months. The client expected to receive 25% within 4 months and the remaining 75% no later than 10 months.



Challenge

The client had surplus capital and did not anticipate needing to use the funds until 2 months after receiving them. Therefore, the client wanted to ensure that they received the most value for their CAD before converting it to USD.



Strategy

In order to help the company maximize their return, a strategy was drawn up which involved using 2 window forwards with a delayed open date to repatriate the funds back to USD.

- **66,000 CAD (25%) Window forward** opening in 3 months and closing 5 months out
- **198,000 CAD (75%) Window forward** opening in 9 months and closing 11 months out



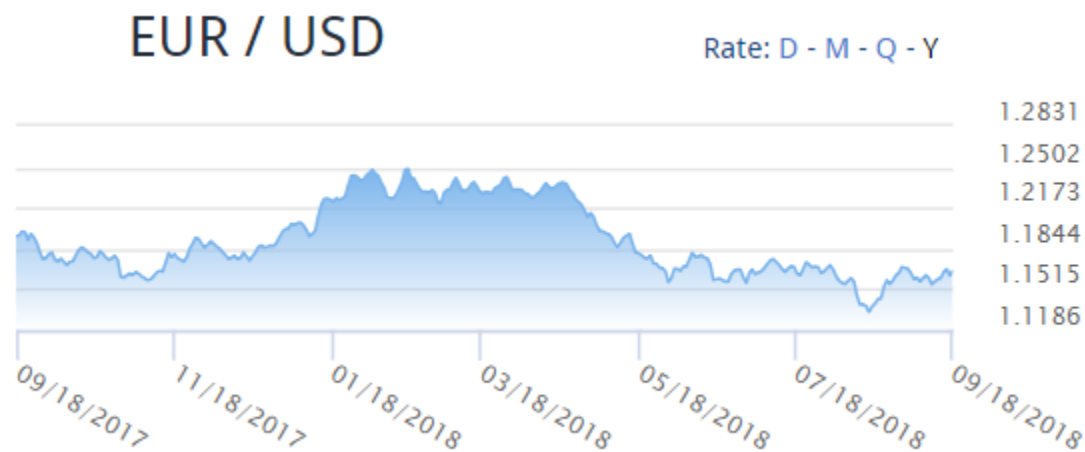
Outcome

- Pushing back the open date on the Window forwards allowed the client was able to take advantage of the interest rate differentials between USD and CAD and to gain a better exchange rate
- The client maximized their USD receivables versus converting at the current bid-side Spot price

FX Hedge Calculator

Dynamic web-based educational tool to help model different FX hedging scenarios real-time.

<https://fxhedge.tempusfx.com/>



International Trade – Future Directions

- **Change** - Block chain, Smart contracts (IoC), Artificial Intelligence (AI), Machine Learning, Crypto Currencies, Open APIs, Internet of Things (IoT), and Real Time Payments
- **International Trade Evolving** - Commonwealth Bank of Australia [recent experiment shipping 17 tons of Almonds](#) from Australia to Germany tracked on the platform including IoT, Smart contracts, and block chain
- **FinTech Disruptors** - [Tango Trade](#) “Leverages block chain and smart contracts to enable SMEs to import and export with confidence” – Challenger to Bank LC services.
- **Bank Consortium Partnerships** - [We.Trade](#) A consortium of 9 European Banks offering “Block chain based international trade platform and smart contracts” to facilitate European trade . Digital “one stop” shop for trade, finance, and payment based out of Dublin

Ultimate GOALS:

				
SPEED	SECURITY/TRUST	TRANSPARENCY	COST	FRICTION



Questions?

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