FOREIGN EXCHANGE & CURRENCY RISK MANAGEMENT

IMEC

Plan. Implement. Excel.

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October 23, 2025

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AGENDA

- ✓ THE FOREIGN EXCHANGE MARKET
- ✓ WHICH FACTORS DETERMINE FOREIGN EXCHANGE RATES?
- ✓ VOLATILITY & CONVERTIBILITY
- ✓ INVOICING IN FOREIGN CURRENCY
- ✓ CURRENCY RISK MANAGEMENT
- ✓ CLOSING REMARKS

THE FOREIGN EXCHANGE MARKET

- Foreign exchange market is the largest and most liquid market in world
  - Daily turnover is $9.6 trillion as of September 2025 (Reuters)
  - Goods and services $32.2 trillion in 2024 (WTO)

- FX is an international over-the-counter (OTC) market that operates 24/7

- Foreign exchange market is made up of
  - Banks
  - Central Banks
  - Commercial Companies
  - Investment Management Firms
  - Hedge Funds
  - Retail FOREX Brokers and Investors

THE FOREIGN EXCHANGE MARKET (CONT'D)

- FX market has slowly developed into an “interbank” market - 2/3 of transactions are between market-making financial institutions
  - London and New York are largest FX trading centers, USD is the most traded currency
  - Most of the volume is driven by investors speculating in all markets, not just exchange rates
  - Only about 10% of daily FX transactions represent international trade

WHICH FACTORS DETERMINE FOREIGN EXCHANGE RATES?

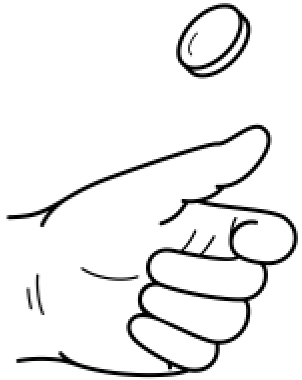
- **Economic Fundamentals**
  - Economic data reports
  - Interest rate levels
  - Monetary policy
  - International trade and investment flows

- **Technical Analysis**
  - Chart analysis
  - Trend line analysis
  - Mathematical studies

- **Political and Geopolitical Factors**
  - Ukraine, Gaza
  - Elections
  - Tariffs

FORECASTING EXCHANGE RATES

Former Federal Reserve Chairman Alan Greenspan observed that while thousands try to forecast exchange rates, "*no model projecting directional* movements in exchange rates *is significantly superior to tossing a coin*."



VOLATILITY EURUSD 1-YEAR CHART

Source: Refinitiv

CURRENCY CONVERTIBILITY

- Major currencies are fully convertible and float against the dollar
  - EUR, GBP, JPY, CHF, AUD, NZD, CAD, MXN, DKK, NOK, SEK, etc.

- Many currencies are not fully convertible or are illiquid (few buyers)

- Some currencies are pegged to others, formally or informally
  - Gulf Arab currencies are pegged to the dollar
  - Several Asian currencies are managed like the Chinese yuan

INVOICING IN THE LOCAL CURRENCY
KEY QUESTIONS

- What currency is involved? Is it convertible? Restricted? Pegged?
- How large is the transaction?
- **What is the time frame from quote to payment?**
- Is it a bidding situation where price must be locked but the outcome is uncertain?
- Are formal hedging tools available for this currency/amount/tenor?

INVOICING IN THE LOCAL CURRENCY

HOW TO DETERMINE THE PRICE

- Be aware of volatility.
  - Consider adding a buffer to protect from rate fluctuations
- We look at how long the customer quote will be valid and determine the payment terms.

Case Study - Selling a machine to a German client	
Payment terms:	Net 60 days
Cost of machine in USD:	$100,000.00
Exchange rate:	EURUSD = 1.16
Converting to EUR:	EUR 86,206.90 (= USD 100,000.00 divided by 1.16)
+5% buffer:	EUR 4,310.35 (= EUR 86,206.90 multiplied by 0.05)
Cost of machine in EUR:	EUR 90,517.25

WHAT DOES THE EXPORTER DO AFTER THE SALE?

1. Trust that the 5% buffer suffices between now and receipt of euro funds, i.e. do nothing.
2. Protect themselves against currency fluctuations between now and receipt of funds, known as hedging. The most common hedging product is a forward contract.

FX RISK MANAGEMENT: FORWARD CONTRACTS

- Most common hedging product is a forward contract
  - Lock in your exchange rate today for future use
  - Forwards can often be done for as little as $10k
- Must have a credit line or pay collateral to hedge

Outright Forward

- Fixed delivery date
- "I need to receive a payment on a specified date"
- Client locks in 100,000 EUR today at 1.1621 for a payment that needs to be received on 12/26/2025

Window Forward

- Flexible delivery period, usually within a timespan up to 90 days
- "I need to receive a payment some time by the end of the year"
- "I will receive multiple payments by the end of the year"
- Client locks in 100,000 EUR today at 1.16 for a payment(s) that needs to be received between 10/27/2025 and 12/26/2025 (60-day window)

Pros: protects fully against unfavorable movements in the exchange rate

***Cons*:** no benefit of favorable rate changes but you have protected your bottom line

FORWARD CONTRACTS - EXAMPLE

Case Study - Selling a machine to a German client

- Payment terms: net 60 days
- Cost of machine in EUR: EUR 90,517.25

Enter into a Forward Contract with a 60-day window (flexible delivery period)

- Current market (spot) rate 1.16
- Forward rate for a 60-day window forward contract 1.16 (**forward rate would be 1.1621 for 60-day outright contract as market adjusts for interest rate differentials between the two currencies)
- Forward Contract Value:

  EUR 90,517.25 x 1.16 = USD 105,000.01

FORWARD CONTRACTS – EXAMPLE (CONT'D)

- **What does this mean?**
  - **Forward Contract Value 90,517.25 x 1.16 = USD 105,000.01**
  - Machine seller protected against currency fluctuations between two business days up to 60 days out
  - No more worrying about the exchange rate
  - When EUR 90,517.25 arrive from Germany, between two business days to two months from now, the proceeds of USD 105,000.01 will be provided to the exporter
  - Ultimately, we needed to protect our machine cost of USD 100,000

- **What if the Forward Contract is no longer needed?**
  - Forward Contract can be extended to a new maturity date or time frame

  OR

  - Contract can be liquidated at current market rate – a gain or loss may occur

CURRENCY OPTIONS

- Options convey the right, but not the obligation, to buy/sell at an agreed rate (strike price)
  - Protect against adverse rate movements
  - Allow for benefit from favorable movements
- Transactions must be relatively large, often at least $1 million

Two types of options:

Vanilla

- Offers 100% of the benefit of favorable rate movements in exchange for a non-refundable upfront premium
  - Premium amount depends on the option amount, the strike price/rate, volatility of the currency pair and length of time involved
  - If at maturity the spot price is better than the strike price, the option can be allowed to expire unused

Structured

- Option arrangements use two option contracts to reduce or eliminate the upfront premium
  - Customer must give up some of the potential benefit of a favorable rate movement as well as the flexibility afforded by a vanilla option

BENEFITS OF
BILLING IN FOREIGN CURRENCY

Exporter more competitive

Easier for the foreign buyer

Higher profit margin

Better business relationship

No costly foreign currency account

Minimize volatility

Increased orders

CLOSING REMARKS

- Selling in foreign currencies can make you more competitive
- Management, Sales, Purchasing and Finance all should have some understanding of FX
- Consult your FX provider before quoting prices in a foreign currency, and discuss potential benefits of being invoiced in local currency or both local currency and U.S. dollars
- Put policies in place around FX pricing / hedging decisions

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