Corporate Uses and Abuses of Currency Options

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Forwards vs Futures vs Options

- Good credit: Forward usually best
- Sometimes, Money Market Hedge better
  - Perfect market: same (covered int. arb.)
  - Imperfect market: MMH may be better
- Credit problem: Futures
  - But: limited and standardized
  - Requires margin and daily settlement
- Uncertain future cash flows:
  - Liquid instrument (futures/forwards to assure flexibility
  - Options sometimes advisable

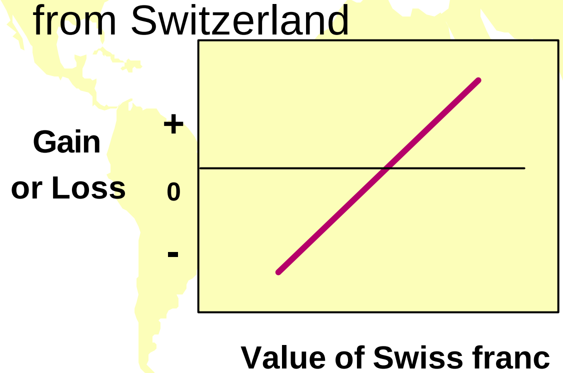
Using Currency Options

Known cash flows + option hedge = naked option

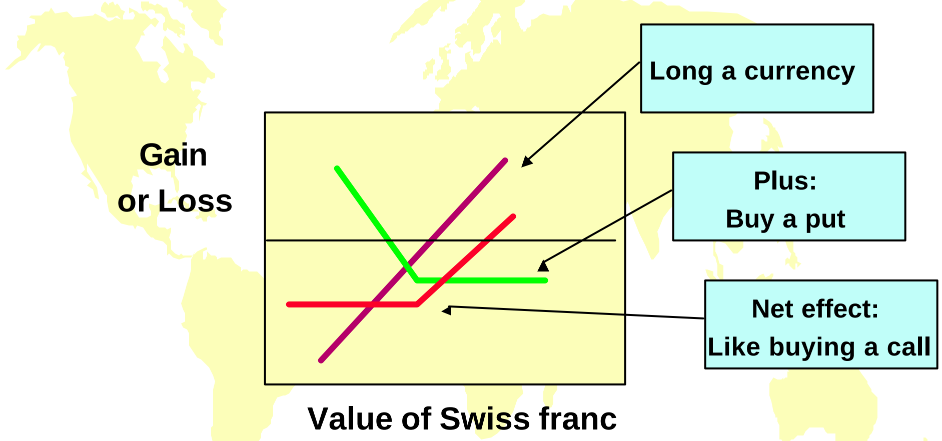
- ◆Hedging a known position
- ◆Covered call writing
- ◆Hedging with “cheap options”
- ◆Hedging with “free options”
- ◆Hedging contingent risk
- ◆Options receive favorable accounting treatment

Using Currency Options: 1. Hedging a Known Position

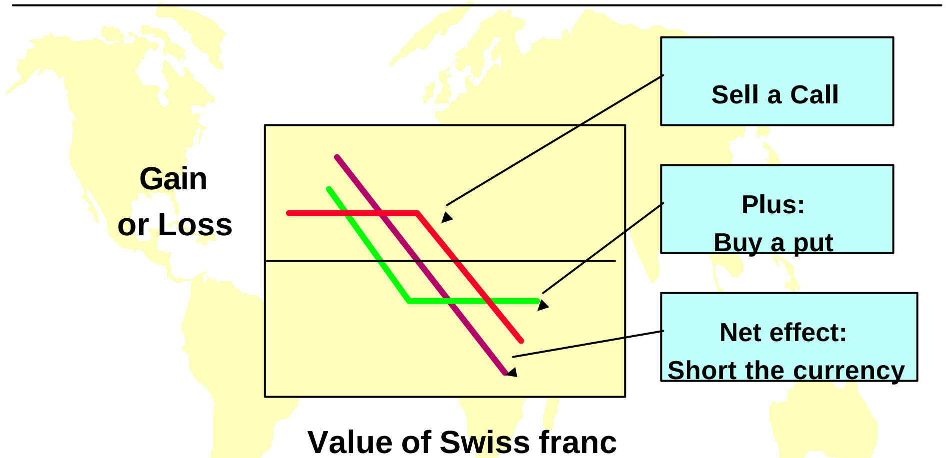
- Example: Buy a Swiss franc put to hedge a royalty payment to be received from Switzerland



Combining Options



Put-Call Parity

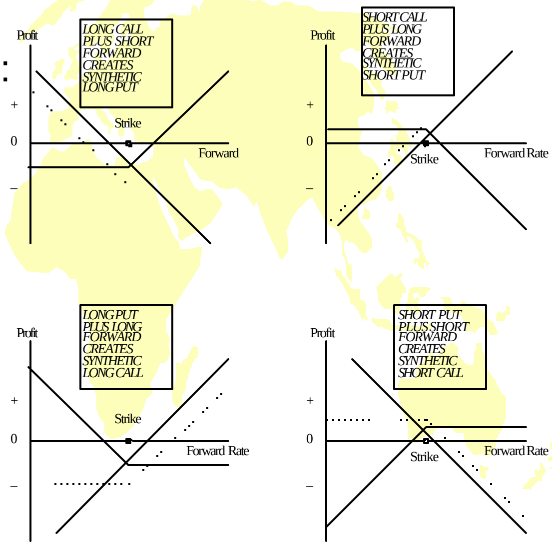


Don't Kid Yourself

Option combinations:

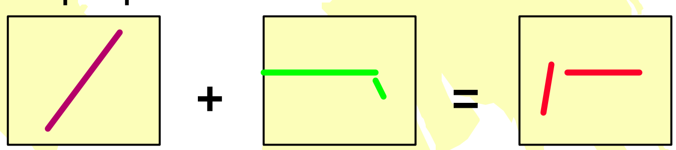
Owe currency
+ buy call
= Buy put

Own currency
+ buy put
= Buy call



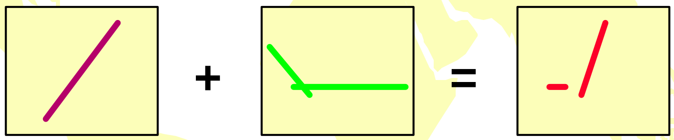
Using Currency Options: 2. Covered Call Writing

- ICI proposes...



Using Currency Options:
3. Hedging with "Cheap Options"

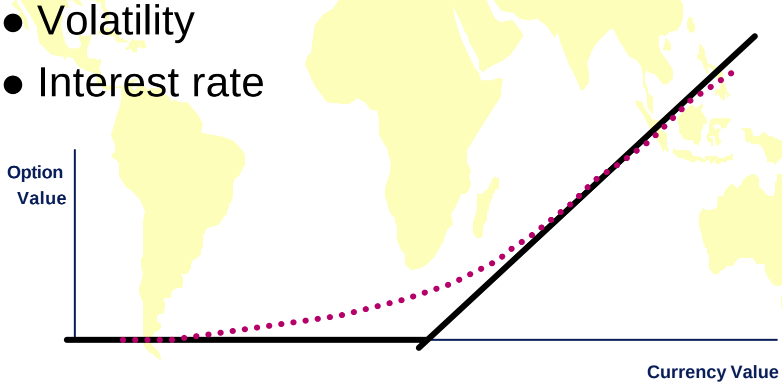
- Example: Buy an out-of-the-money put to hedge a Swiss franc receivable



- Question: When should a firm buy ATM options?
- Answer: When the firm's view of volatility exceds that of the market

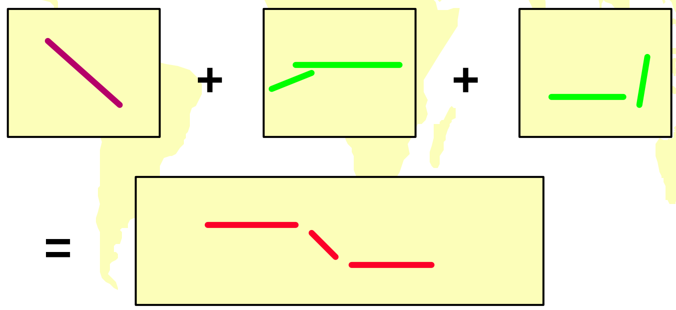
What Influences Option Prices?

- Forward relative to strike
- Time to expiration
- Volatility
- Interest rate

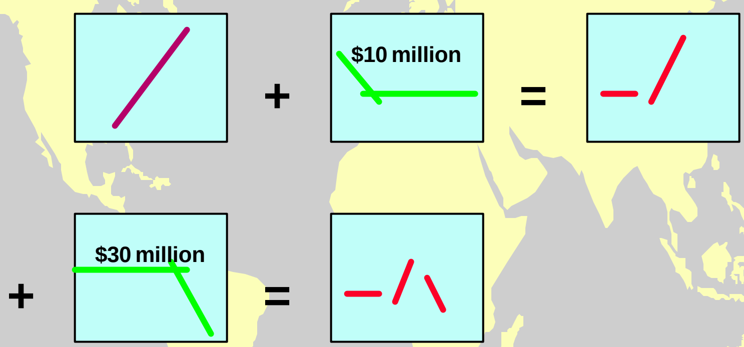


Using Currency Options:
4. Hedging with “Free Options”

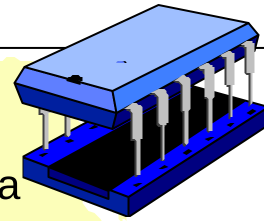
- Currency collar or range forward
  - Eg Exposure is obligation to pay for Japanese imports in 60 days



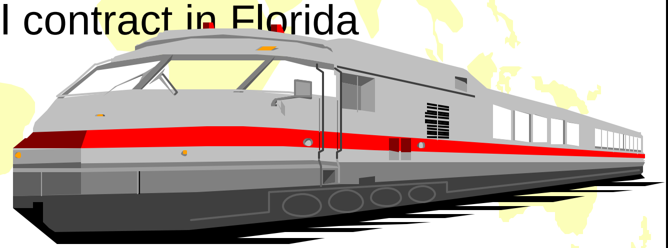
Case Study: “Options Trip”



Using Currency Options: 5. Hedging Contingent Risk



- Example 1: T.I bidding to supply chips to Saudi Arabia
- Example 2: ABB lobbying to win high-speed rail contract in Florida



- *Problem: Wrong contingency*
- *Solution: Event-contingent options*

6. Using Options to get Hedge Accounting Treatment

- Pfizer, the US drug company, uses forwards to hedge short-term foreign-currency payables and receivables
- Pfizer uses long-dated options, as far out as 2 years, to hedge anticipated sales. This gets expensive!
- *Reason: GAAP would treat forwards used to hedge future, uncertain, sales as speculative, to be marked-to-market.*

When Should Companies use Options to Hedge?

- Hedge *natural exposure*
  - Example: Reeves sells printing blankets with fixed local-currency prices in Europe
- Hedge against *extreme events that threaten the company's business.*
  - Example: GE could buy deep out-of-the-money options on yen.

When Use Options to Take a View?

- View on *direction*
- View on *volatility*

Direction: / Volatility	**Currency rising**	**Currency falling**	**No trend**
Volatility increasing	*Buy call*	*Buy put*	*Buy straddle*
Volatility falling	*Sell put*	*Sell call*	*Sell straddle*
No trend in volatility	*Buy forward*	*Sell forward*	*Arbitrage*

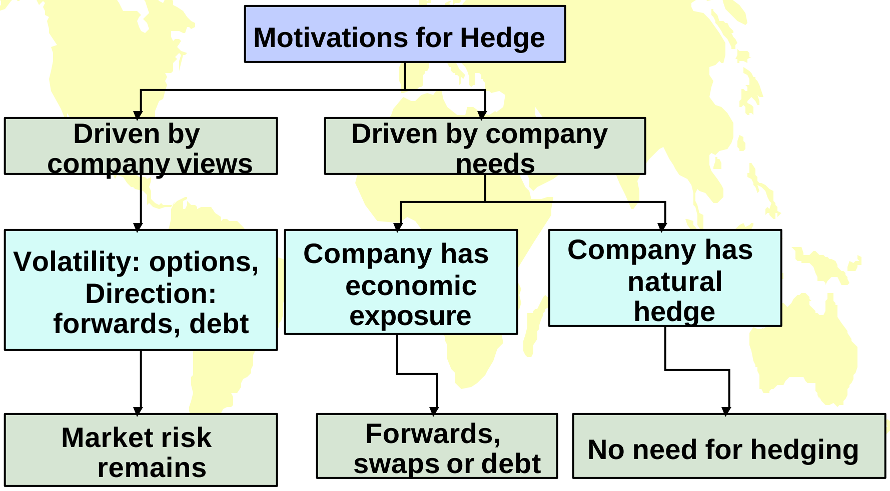
Why Use Currency Options?

- Protect against downside risk
- Earn income from covered option writing
- Buy “cheap options”
- Buy “free options”
- Hedge event-contingent risk
- View on both volatility and direction
- Hedge against financial distress

Which Instrument?

Identifiable exposure	Debt, swaps, forward contracts
Uncertain exposure	Instruments with flexibility, such as forwards and futures
Exposure that threatens financial distress	Deep-out-of-the-money options

A Hedging Roadmap



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