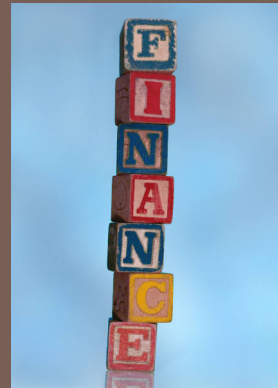




FN 201
BUSINESS FINANCE



Lecture 10

Introduction to Hedging and Financial Derivatives

Agenda

- ▣ Hedging
- ▣ Natural hedging
- ▣ What is financial derivative?
- ▣ Introduction to financial derivatives
- ▣ Protection (hedging) against FX risk

Financial Derivatives

- Financial contract whose value derives from other underlying assets
- They are “derivatives” of other underlying assets
- 4 broad types of derivatives:
 - Forward
 - Future
 - Swap
 - Option

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□ Classification by underlying asset types

- FX, equity
 - Forward / futures
 - Call / put Option
- Interest rate risk
 - Forward rate agreement (FRA) & Interest rate swap (IRS)
 - Option : Cap / floor / collar / swaption
- FX and Interest rate
 - Cross Currency Swap

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Hedging

- ▣ Recall concept of hedging
- ▣ To hedge means you want Loss from one instrument to be off-setted by Gain from another instrument based on same underlying / risk factor

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Natural Hedging

- ▣ Many hedges do not involve exotic financial instruments
- ▣ A natural hedge is an investment that reduces the undesired risk by matching cash flows (i.e. revenues and expenses)
 - E.g. FX
 - 1) exporter with some imported contents
 - 2) exporter who open up production facility abroad
 - 3) company that opens a subsidiary in another country and borrows in the local currency to finance its operations. Matching debt payments to expected revenues in the same currency
 - 4) an oil producer may expect to receive its revenues in U.S. dollars, but faces costs in a different currency; it would be applying a natural hedge if it agreed to, for example, pay bonuses to employees in U.S. dollars

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กรม.ศ.บ.บ.

ข่าววิง | ข่าว | บริการ | ผลิตภัณฑ์ | สาขา | สาขาติดต่อ | สาขาแนะนำ | สาขา | สาขา | สาขา

เศรษฐกิจ-การตลาด

วันที่ 25 ตุลาคม 2553

เศรษฐกิจ > เศรษฐกิจ - การตลาด > ข่าวทั่วไป

**สภาผู้ส่งออกอภกท.ปมบาทแข็งจ้จ่าย
ค่าระวางเรือเป็นดอลลาร์-หวังช่วยลดต้นทุน**

การเงิน - การลงทุน : ถนนนักลงทุน

วันที่ 4 ตุลาคม 2553 02:00

ข่าวใหม่ 'บ้านปู' ปักหมุดบนแผนที่โลก

สื่อ : กรุงเทพธุรกิจออนไลน์



ข่าวดัง | ข่าวเด่น | ข่าวประชาสัมพันธ์ | ข่าวต่างประเทศ | ข่าวบ้านปู

Foreign Currency Deposit Account

The depositors can mitigate their foreign exchange risks as well as minimizing any incurred expenses in converting from one currency to another. With Foreign Currency Deposit Account, customers will be able enjoy competitive rate from UOB.

- Type of Account
- Acceptable Currencies
- Documents required
- Initial Deposit
- Maintenance Fee
- Deposit Commission
- Withdrawal Commission
- Foreign Bills for Collection
- Interest Rate

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What are the FX risks of exporter and importers?

- ❑ Exporter -> will receive USD in the future -> need to sell USD in the future -> risk of USD depreciation / THB appreciation in the future
- ❑ Importer -> will pay USD in the future -> need to buy USD in the future -> risk of USD appreciation / THB appreciation in the future
- ❑ FX future and forward can be used to protect (hedge) against this risk

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Forward & Futures

- Forward: agreement to transfer an asset at some time in the future at a pre-determined price.
 - Forward can be tailored-made to suit customer's need
 - Forward is traded over the counter (trade exclusively between two parties)
 - FX Forward: agreement to buy or sell foreign currency at some time in the futures at a pre-determined exchange rate
- Futures: A forward agreement with certain standards and traded in the exchange and subject to daily settlement.
 - Size of contract
 - Maturity date
 - Margin agreement
 - Settlement
 - Has clearing house as counterparty

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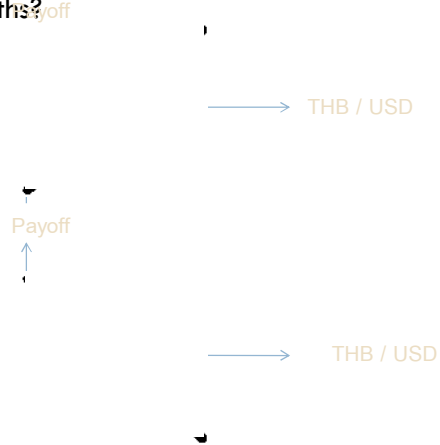
Eg. FX Forward Contract

- Company A will buy 1,000,000 USD at the rate THB 33.10 / USD to Bank Z in the next 3 months.
 - Long USD Forward
- Company B will sell 1,000,000 USD at the rate THB 33.10 / USD to Bank Z in the next 3 months.
 - Short USD Forward
- By entering a forward contract, company A and B are able to lock in exchange rate in the next 3 months.

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Payoff diagram of FX forward

- Who will gain or loss if exchange rate is THB 32 and TH B34 / USD in the next 3 months?



How can we use it in hedging?

FX Options

- Options provide right
- Forward / Futures provide obligation
- Right will come with cost

- FX Call Options
 - ▣ Right to buy at pre-determined price or rate (strike)
- FX Put Options
 - ▣ Right to sell at pre-determined price or rate (strike)

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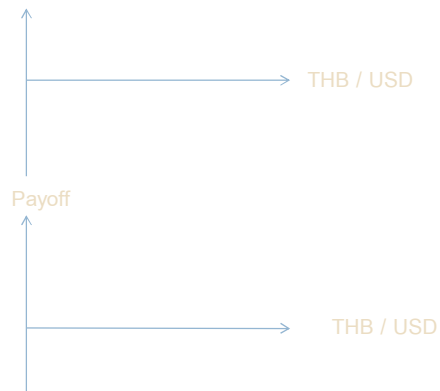
Eg. FX Options

- Company A have a right buy 1,000,000 USD at the strike rate THB 33.10 / USD to Bank Z in the next 3 months.
 - Company A long (buy) USD Call option
- Company B have a right sell 1,000,000 USD at the strike rate THB 33.10 / USD to Bank Z in the next 3 months.
 - Company A long (buy) USD Put option
- By entering an option contract, company A and B have can exercise their right if rate move in their favors.
- However, company A and B have to pay for “options premium” in order to earn that right

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Payoff diagram of FX Options

- Who will exercise if exchange rate is THB 32 and TH B34 / USD in the next 3 months?



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- Types of exercise
 - European option
 - Exercised at maturity
 - American option
 - Exercised anytime
- Value
 - In the money
 - Out of the money
 - At the money

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