Hedging and Risk Management

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Outline of the Seminar

- Objectives of Hedging
- Types of Exposure and Hedging
- Hedging Techniques
- Risk Control
Objectives of Hedging

- What risks are hedgable? Business risk versus market price risk
- Hedging in the current market crisis
- Should companies and banks hedge?
- Hedging based on the theory that market movements are unpredictable
- Advantages and disadvantages of "selective hedging"
- How much to hedge? 0%-50%-100%
- Value creation through risk reduction

Business Risk versus Market Risk

- Types of business risk:
  - Demand for product
  - Cost of production
  - Others, such as earthquake – insurable
- Types of market price risk:
  - Currencies
  - Interest rates
  - Commodity prices
- Companies and banks should manage their business risks, and hedge their market risks (if possible).
Business Risk Should be *Managed*

- 2006, February: Linens ‘n Things bought by Apollo for $1.6 billion, with $1 billion of debt
- What went wrong?

Market Risk Should be *Hedged*

- 2008, January: A Russian upscale supermarket chain, AV, borrows USD 50 million from the EBRD
- 2009, February: Russian rouble falls, AV unable to service its debt
- What went wrong?

Source: oanda.com
Hedging in the Current Market Crisis

Effect on Indonesian Banks?

- **Positive:**
  
  “…our delay in integrating our financial sector with the global financial network is really a blessing in disguise, as it has saved us from more serious crisis fallout.”

- **Negative:**
  
  “A current issue we face today is the waning access of corporations and banks to sources of foreign financing.”

Source: The Governor of Bank Indonesia

Bankers’ Dinner, 30th January 2009
Why Hedge?

- Prevent market fluctuations from interfering with the business
- Secure cash for investments
- Reduce potential costs of financial distress
- Increase debt capacity

*Since currency matching reduces the probability of financial distress, it allows the firm to have more earnings stability and more optimal leverage.*

INDOSAT Hedges to Reduce Currency Risk

- INDOSAT issued USD denominated bonds amounting to USD 550 Million and also had exposure to Export Credit Facility in the amount of USD 34 Million.
- To hedge the position, INDOSAT opened an interest rate swap (pay float/receive fix) and cross currency swap (first leg: sell USD/IDR; second leg: buy USD/IDR).
- The total contract amount on December 2004 was USD400 Million or 68.5% of its total exposure.
Hedging: Measurement and Management of Exposure

- Goal is to prevent market fluctuations from interfering with the business.
- Hedging is only possible if you know your exposure – so the first step is to define and measure exposure.
- Hedging is also only possible if the institution understands how effective are the instruments of hedging – forwards, futures, swaps and options.
- Hedging effectiveness can be measured – but we must look at both sides, the exposed asset/liability and the hedge.

A Hedging Policy?

- INDOSAT was hedging part of its debt by matching swap to debt.
- But independent auditor Ernst & Young had reminded the management of INDOSAT to improve its derivative transaction-related risk management formal policy.
Foodcorp’s Currency Swap

- South African food products company, Foodcorp, issued a Euro 175m bond in 2005
- All the EUR payments were hedged with a currency swap
- When the ZAR fell, the company was protected against the cost of servicing the debt.

“Selective Hedging:”
When to hedge and when not to hedge
“Selective Hedging”

- “Selective hedging” means deciding when to hedge and when not to hedge.
- For example, for an Indonesian company with foreign currency debt, the “ideal” hedge would involve shorting the rupiah when it is weak, but not when it is rising.
- But trying to decide when to hedge means knowing when the forward rate is mispredicting the currency – and this is not the job of the risk manager!

Source: finance.yahoo.com
Unbiased Forward Rate Theory

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<tr>
<th>EXCHANGE RATE</th>
<th>Probability distribution of actual exchange rate</th>
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<tr>
<td>Spot</td>
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<td>Forward</td>
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Today ➔ TIME ➔ In three months

Implications of Random Walk Theory:

- Hedging should not be based on predictions
- Goal of hedging should be to reduce volatility
- Volatility is reduced if hedge matches exposed asset or liability – and both must be measured!

Source: finance.yahoo.com
Hedging is not one-way: the IDR can fall and rise, without any clear direction.

- Volatility can change substantially too.
- So hedging must not be based on expectation of a trend – it should protect the investor whichever way the currency moves.

Source: Bank Indonesia Annual Report 2007

- Adaro coal company has an exposure of USD 20 million from foreign currency sales to China.
- How much should be hedged? 0%-50%-100%?
- Answer: If the exposure can be identified and quantified, all should be hedged. Any unhedged part is exposed to currency risk.

Adaro’s exposure: USD 20 million
Adaro’s hedge?
Objectives of Hedging: Summary

- Goal is to prevent market fluctuations from interfering with the business.
- Hedging is only possible if you know your exposure – so the first step is to define and measure exposure.
- Hedging is also only possible if the institution understands how effective are the instruments of hedging – forwards, futures, swaps and options.
- Hedging should not be based on predictions
- Selective hedging is not really hedging – since you have to decide when to hedge, you are basing your hedge on currency predictions. This is not true hedging.
- Partial hedging is also speculative, although less so. A 50% hedge means that the other 50% is exposed to market risk, so it is unhedged. So partial hedging is not true hedging either.

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