Introduction to Derivatives as a Hedging Tool Presentation To CAFRAL Conference

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SOME BASICS

1. Use of derivatives is essential to manage price risks.
2. Too many companies have made huge losses by looking at "hedging" with structured derivatives as an avenue to make money!
3. The term "risk" has been defined in the Reserve Bank's Guidance Note on market risk (October 2002) as follows: "*the possibility of loss … caused by changes in the market variables*". In the case of petroleum refining, the risk is a fall in the difference between the crude price and product prices.

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4. The expression "hedge" has been defined in the Comprehensive Guidelines of RBI as follows: "*reduce or extinguish an existing identified risk on an ongoing basis during the life of the derivative transaction*".
5. Hedging: "An action taken to reduce risk or market exposure. Reduced to its simplest terms, a form of insurance used among traders or dealers in grain, cotton, foreign exchange, or securities, to prevent loss through price fluctiations. It is not speculation, but the avoidance of speculation." (Encyclopedia of Banking and Finance by CHARLES WOELFEL
6. "Hedge" is "a trade designated to reduce risk …. (T)he goal of a hedging program is to reduce the risk, not to increase expected profits" ("Risk Management and Financial Institutions" by John C. Hull)

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7. A hedging instrument is (a) designated derivative… whose fair value or cash flows are expected to offset changes in the fair value or cash flows of a designated hedged item. (IAS 39/AS 30)
8. In commodity markets, cases of losses incurred by Ashanti Gold Mines, Ceylon Petroleum, Sumitomo Metals, China Aviation Oil, etc, while "hedging" price risk are well known.

DERIVATIVES

Instruments whose value is based on, or derived from, the prices of currencies, interest rates, shares and share indices, commodities, etc.

In essence, only two types:

Forwards and Options

Derivative contracts are

-- Traded on Exchange

-- OTC

DERIVATIVES

-- hedging price risk by transferring it to somebody else

-- enable highly leveraged speculative positions to be taken

Two basic forms: forwards and options: when used for hedging, both have costs, opportunity or upfront

FORWARD FAMILY

1. Right and obligation to exchange cash flows on the basis agreed so you cannot gain from a favourable price movement.
2. Types:
   A. Forward contracts;
   B. Futures contracts;
   C. Swaps

SWAPS and FUTURES

Swaps are similar to a series of forward contracts

Futures are Exchange traded version of a forward contract. To facilitate trading, amount and maturity of contract are standardised.

FUTURES IN INDIA

1. Equities and equity indices
2. Interest rates
3. Commodities

OPTIONS

1. Option Contracts: Buyer has the right to buy (call) or sell (put) a currency (or any asset) at a price agreed at inception (exercise/strike price) on payment of an upfront premium.

2. Buyer of Option
   -- pays fees
   -- right but no obligation
   -- potential unlimited profit

3. Writer or Seller of Option
   -- earns fees
   -- obligation to perform contract
   -- potential unlimited loss

Documentation

1. ISDA agreement.
2. Derivatives involve counterparty credit risks.
3. Increasingly, Credit support agreements and two-way margining becoming common.

STRUCTURED PRODUCTS

1. Are complex, structured products really necessary for any genuine hedging of market risks?
2. Derman Emanuel, a very famous quant : *"The salespeople liked tailoring and complexity because not only could you charge more for it, but it was also more difficult for a client to assess the value of its individual features. Complexity was also harder for competitors to copy."*
3. To quote Satyajit Das, "*The complexity of modern derivatives has little to do with risk transfer…Traders invent complex variations to delay competition, prevent clients from unbundling products and generally reducing transparency".*

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4. He argued in an article in the Financial Times (July 8th, 2009), that "*increasingly complex and opaque products are used to raise risk and leverage*", that "*efficiency and transparency are not consistent with high product margins*", and that "*knowledge asymmetry*" is taken advantage of by the seller of complex derivatives. (Satyajit Das, is a globally known expert on derivatives, and author of a standard 4 volume reference work titled " Swaps and Financial Derivatives- Products, Pricing, Applications and Risk Management ", and of "Traders, Guns & Money".)
5. Avoid structured products!