

FINANCIAL DERIVATIVE

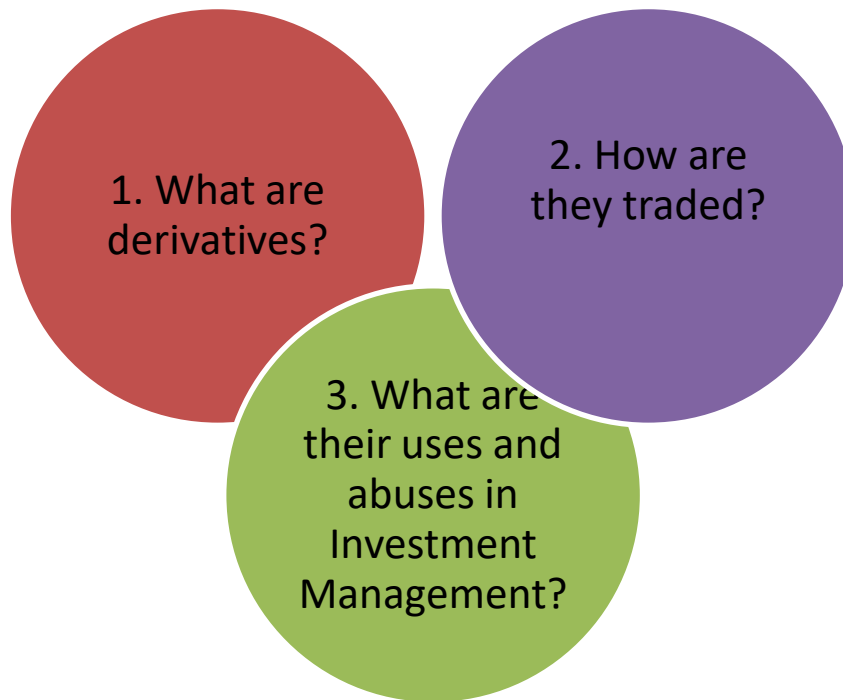
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The Use and Abuse of Derivatives'

[An article](#) by Christopher Culp published in the Economic Times Special edition.

1. Derivatives are viewed as unfathomable and dangerous financial instruments. The concepts of 'Forwards' and 'Options' use derivatives for decisions on investments.

2. Role of derivatives in Investment Management:



3. Most financial instruments are combinations of basic types of derivatives that are called 'Forwards' and 'Options'. Their special forms are 'Futures' and 'Off – On Derivatives'.

1. 'Forwards' are contracts between a buyer and a seller.

1.1 These are unique agreements for long sell or short sell, of numerous 'underlying assets'.

1.2 'Unique' means only for one specific purpose. The underlying Assets may be Financial or Physical commodities.

1.3 Forwards are called 'Futures' when use of 'Margins' is involved. Ref. paragraph 4.6 below.

1.4 'Forwards' may also be settled in cash, at maturity.

1.5 A cash flow is exchanged for an asset. The amount is based on value of an Index or a 'reference rate' indicated in the contract.

1.6 A 'Swap' Forward, is equivalent to a portfolio of forward contracts, that are bundled as a single instrument. It may a fixed cash flow for an asset or a cash flow with varying value over time.

1.7 'Equity swap' is another form of Swap : In this a company may agree to pay every six months for two years , the cash equivalent of 1000 shares of Company A in return for cash equivalent of 1000 shares of Company B. No stock changes hands, but the value of the Forward contract is determined by the prices per share of the two Companies, on each of the swap reset dates. Similarly, shares in Company A as stock and 4 short Forward contracts of Company B, can have maturity dates of forwards as 06 months, 12 months, 18 and 24 months. Equity swaps cannot be used by Financial Institutional Investors.

'Option' is
the 2nd form
of derivatives

- It gives the holder the right to buy or sell an asset before a pre determined date.
- However, the holder is not obliged to either buy or to sell the options.

'Call' option=
to buy.

'Put' Option
= to sell

- When these two options are sold the seller under writes the purchaser's right to buy or sell the options.
- For this writing a premium is charged by the seller.

4. Differences and Similarities between 'Forwards' and 'Options':

4.1 Forward derivatives create unlimited liability, purchased Options give limited liability and serve as assets that act as a price insurance.

4.2 Like Forwards, Options can be based on a variety of assets, reference rates or Index.

- a) European type forwards and options are cashable only after expiry date.
- b) American type can be cashed any time.
- c) Bermuda type can be cashed on any one of the few specified dates before the expiry date.

4.3 Like Forwards, Options can be combined with other products to yield new financial instruments sold as a package. For example, a convertible bond is equal to a debt instrument plus an equity option or warrant. Another example is the capped floating rate which is a rate loan.

4.4 Forwards and Options can be mixed and matched to create products.

4.5 Option like contracts, include:

- a) Performance based pay packages.
- b) Option to make part or full pay on a credit card.
- c) Option to delay capital expenditure decisions.
- d) The option to swap inputs with outputs in a production process.
- e) Debt is a 'Short Put Option on a corporate security.
- f) Equity is a Long Call Option written on assets of a company.

5. FUTURES AND MARGINS

5.1 'Futures' are a special variation of 'Forwards'. When 'margins' are used in 'Forwards' or 'Swaps', they are called 'Futures'. **Margin** is a type of **performance bond** that must be posted by traders to help mitigate losses incurred by the clearing house in event of a default. If a trader defaults, he forfeits this performance bond.

5.1.1 In addition, the daily values of all open futures and exchange traded options positions are marked to current market prices. Net winners may withdraw their profits which are financed by deposits of additional margin made by losers.

5.1.2 These daily payments and collections are called 'variation margins'. These variation margins of daily market prices make de facto changes or modifications in the futures contracts.

6. OFF - ON EXCHANGE DERIVATIVES

- 6.1 Stricter Regulation is the distinguishing feature of 'Off-On Derivatives' because Exchange traded derivatives are subject to heavier regulations to prevent frauds and/or manipulation of procedures to get the Regulator's approval for listing a new product. For this reason, exchange traded derivatives can claim to have the benefit of 'public regulation' as distinguished from self-regulation of 'off-exchange' derivatives market.
- 6.2 The standardization of exchange traded derivatives has made the derivative market highly liquid and deep. It is also cheaper than the 'off set' market. The 'off-exchange' or 'off-set' derivative contract can be unwound only if the other party also agrees. This can be time consuming as well as expensive.

EXCHANGE TRADED FUTURES v/s OFF EXCHANGE FORWARDS AND SWAPS

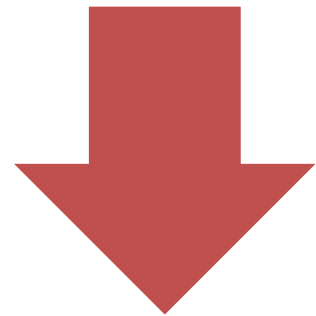


1.Exchange Traded Futures: Benefits include Transparent Pricing depth; Credit risk is protected; Counter party relies on a system of margin and daily resettlement; significant liquidity; ease of unwinding / off setting one's position.

Exchange traded derivatives can be customised, as is done by Mutual Funds.



2.Off Exchange Traded Futures: Expertise and time needed to customise a private deal or contract. It is subject to a collateral requirements. It is governed by performance guarantees that provide credit risk protection similar to the one offered by Stock Exchanges.



7. NEGOTIATING FORWARD AND OPTION DERIVATIVES

Negotiation is done through email, telephones, Fax and other electronic means of communication. A typical 'swap dealer' is an intermediary who enters into virtually any transaction, for long and /or short contracts. Dealers transact with 'end users' as well as provide customized transaction services for their customers. For example, a bank dealer may provide to his derivative customers the following services:

- a) Cash Management
- b) Custodial services
- c) Asset management
- d) Classic commercial banking

7.1 In a highly decentralized market, the derivative dealer's services could be relatively opaque. For Companies 'exchange traded' derivative

deals provide an alternative to off exchange forwards, swaps and options. They only want their deals done quickly and cheaply. Therefore, companies are interested only in reliable performance of a counter party.

7.2 The most popular exchange traded derivatives are the ‘future contracts’ that are equivalent of ‘forward contracts’. Exchange traded derivatives are standardized in many aspects such as date of maturity, settlement method, underlying asset type, quality, delivery location. They can also be ‘offset’ before maturity date.

8. USES OF DERIVATIVES

- 8.1 Derivatives can be useful in fine tuning investments. Many institutional investors cannot short stocks and cannot use unlimited liability instruments such as equity swaps. By using options such as ‘rainbow’ or ‘spread’ options, relative performance of several stocks can be covered by locking in a maximum loss of the option premium paid. Betting on a stock basket is also possible for a price.
- 8.2 With innovative use of credit derivatives, such as total return swaps, it is possible to invest in bank debt.
- 8.3 Derivatives, such as the ART products offered by insurance industry, have also helped promote new asset classes, particularly in catastrophic insurance.
- 8.4 Derivatives can replace cash flow in many financial instruments. Stocks and Bonds are special forms of derivatives.
- 8.5 An institutional Investor may prefer to avoid the exchange rate risks in international equities. For this, the derivatives are used to ‘Hedge’ the exchange rate risk by using forwards and future options. The performance of the investment is then a function of the equity price moves of foreign stock similar to the movement of their stock in their home country. This provides an easy solution in the manner in which the Fund buys foreign stocks.