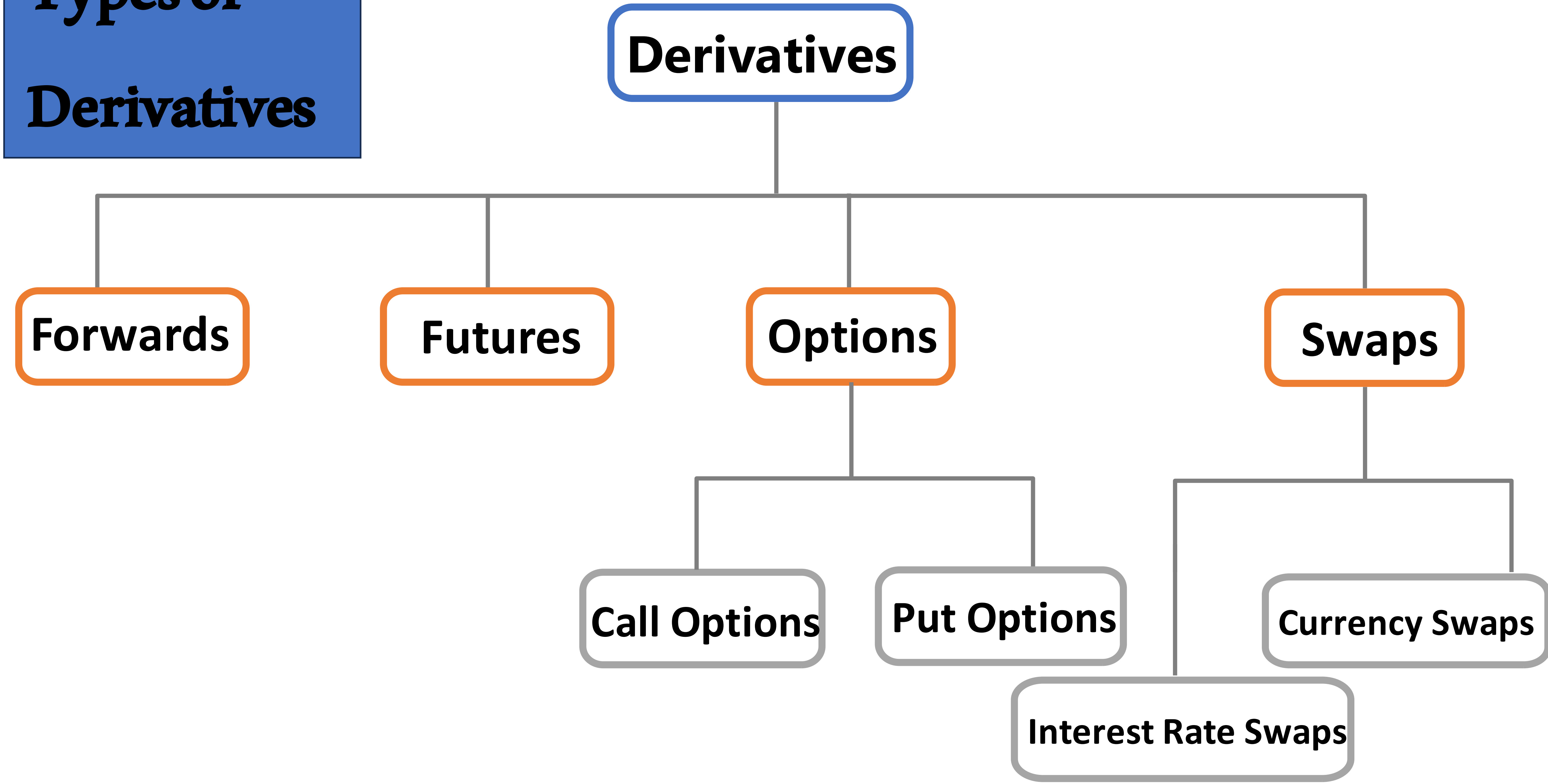
ALL ABOUT DERIVATIVES

Presented By
Gulshan Gupta

What are derivatives?

- The term “derivative” is used to refer to financial instruments which derive its value from some underlying assets.
- The underlying assets could be equities (shares), debt(bonds, T-Bills and notes), currencies and even indices of these various assets such as Nifty 50 index.
- Derivative are bought and sold by various institutions and individuals for a variety of purposes.
- When the price of underlying changes, the value of derivative also changes.
- E.g., the value of gold future contract is derived from the value of its underlying asset i.e., ‘gold’

Types of Derivatives

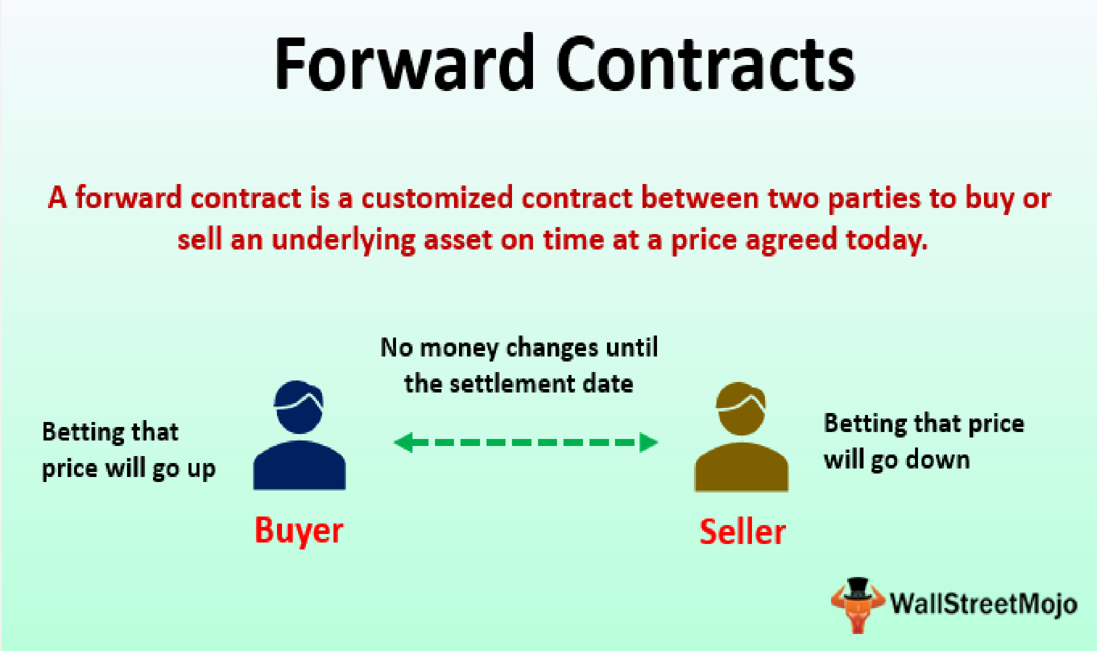


FORWARD CONTRACT

- A forward contract is a contract between two parties to buy or sell an asset at a future date for a certain price that is pre-decided on the date of entering the contract.
- The future date is referred to as expiry date and the pre-decided price is referred to as forward price.
- It is a customized contract, in the sense that the term of the contract are agreed upon by the individual parties.
- Hence it is traded on Over the counter (OTC).
- Default risk, credit risk & counter-party risk is involved in this type of contract.

- Here in this example, the reason to enter in the contract for farmer as he is finding the probability of wheat price to fall in future, while the bread maker is agreed to enter-into contact as he is finding that the price of wheat may rise in future.

- They both are entering into the contract to safeguard themselves as per their probability.



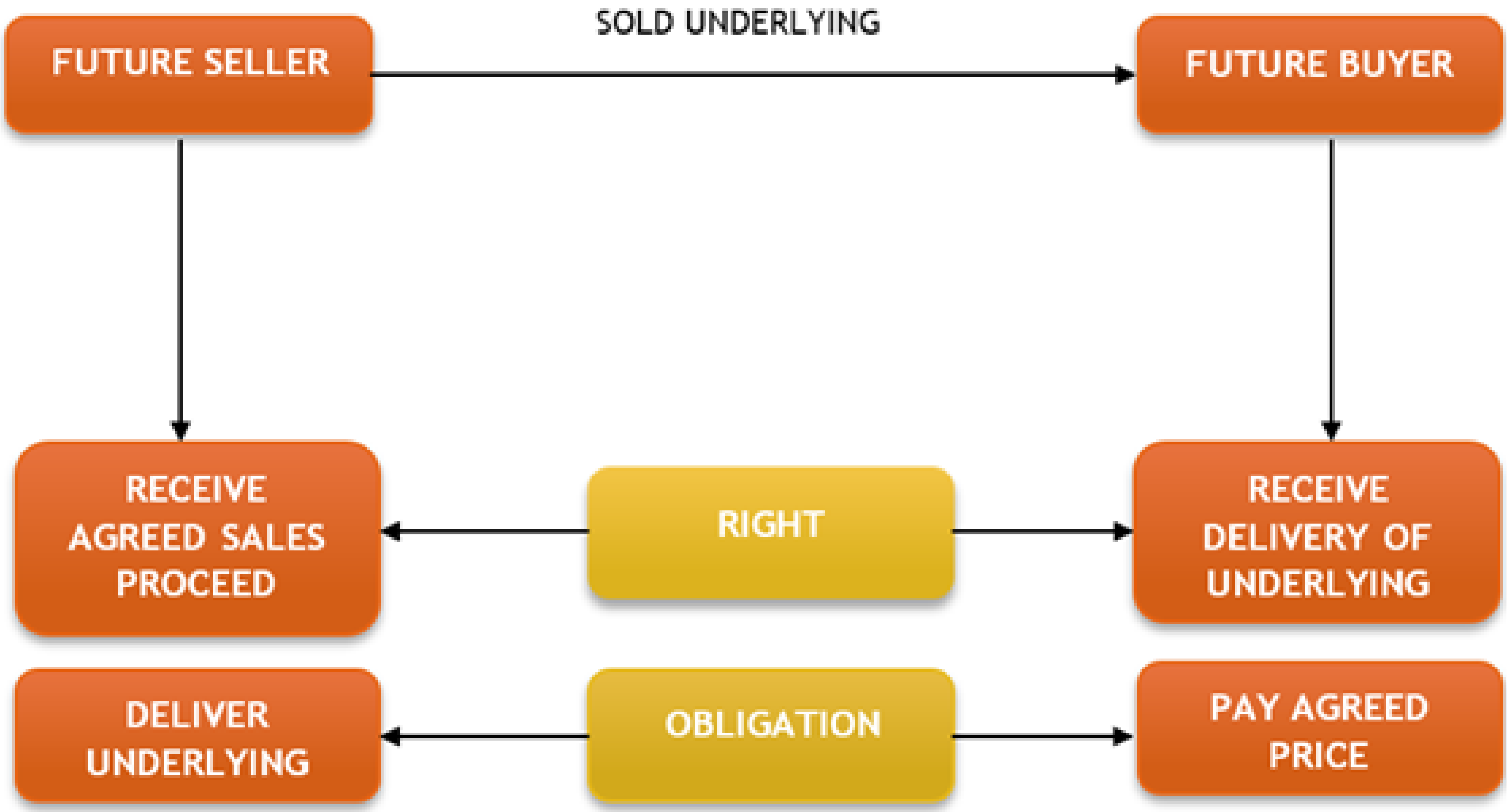
FUTURE CONTRACT

Like a forward contract, a future contract is an agreement between two parties in which the buyer agrees to buy an underlying asset from the seller, at a future date at a pre-decided price.

Unlike forward contract, a future contract is not a private transaction but get traded on recognized stock exchanges.

Both buyer and seller of the future contacts are protected against the counter party risk by an entity called the Clearing Corporation.

FLOW OF FUTURE CONTRACT



Trade & Settlement

- Trade: Futures contracts are traded on organized exchanges, such as the Chicago Mercantile Exchange (CME) or Eurex. They have standardized contract specifications, including the underlying asset, quantity, expiration date, and contract size.

- Settlement: Most futures contracts are cash-settled, meaning that at expiration, the parties settle the contract by exchanging cash based on the difference between the contract price and the market price. Physical delivery may also be possible for certain futures contracts, where the underlying asset is physically delivered.

OPTIONS

- Like forwards and futures, options are derivative instruments that provided opportunity to buy or sell and underlying asset on a future date.
- Options can be divided into two different categories depending upon the primary exercise style associated with options. These categories are American Option & European Option.
- There are two types of options- call options and put options-which are explained later in next slide.

Call Option

Call option gives the buyer the right but not the obligation to buy a given quantity of underlying asset, at a given price on or before a given future date.

- If assets price is higher than strike price- option is in the money(ITM)
- If assets price is exactly or almost at strike price- option is at the money(ATM)
- If assets price is lower than strike price- option is out of the money(OTM)

Put Option

Put option gives the buyer the right but not the obligation to sell a given quantity of underlying asset, at a given price on or before a given future date.

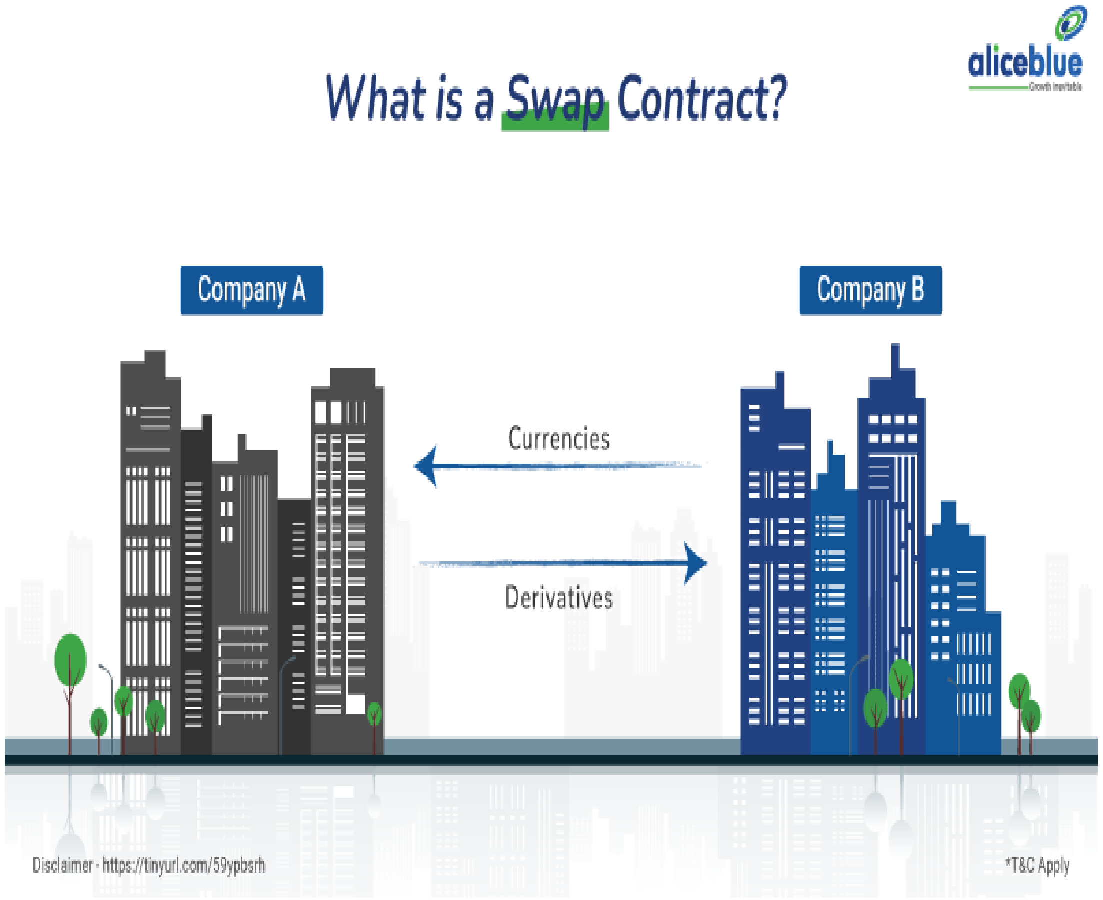
- If assets price is lower than strike price- option is in the money(ITM)
- If assets price is exactly or almost at strike price- option is at the money(ATM)
- If assets price is higher than strike price- option is out of the money(OTM)

Trade & Settlement

- Trade: Options contracts can be traded on organized exchanges or in the OTC market. They provide the holder with the right, but not the obligation, to buy (call option) or sell (put option) the underlying asset at a predetermined price (strike price) within a specified period.

- Settlement: Option contracts can be settled in one of two ways: through physical delivery or cash settlement. Physical delivery occurs if the option is exercised, and the underlying asset is exchanged. Cash settlement happens if the option is not exercised, and the parties settle the contract based on the difference between the strike price and the market price.

SWAPS



- Swaps are private agreement between two parties to exchange cash flows in the future according to pre-arranged formula. They can be regarded as portfolio's of forward contract.
- The two commonly used swaps are:

a) Interest Rate Swap: This entail swapping only the interest related cash flows between two parties in the same currency.

b) Currency Swap: This entails swapping both principal and interest between the parties with the cash flows in one direction being a different currency than those in the opposite direction.

Trade & Settlement

Trade: Swaps are mostly traded in the OTC market between two parties. they involve the exchange of cash flows based on predetermined terms, such as interest rates, currencies, or commodities.

Settlement: Swaps typically have periodic settlement dates throughout the life of the contract, where the parties exchange the agreed-upon cash flows based on the terms of the swap. At the maturity date, a final settlement may occur to settle any remaining obligations.

THANK YOU

Created By
Gulshan Gupta