

FinanceCaseStudy

Personal Details

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Year: Second Year (2022-2026)

Q1

(a) Differences between forward and futures are as follows:

Trading Venue:

- Forward contracts are typically over-the-counter, allowing for customized terms, as negotiated by parties.
- Futures contracts are fixed and traded on organized exchanges, providing a central market.

Flexibility:

- Forward contracts offer greater flexibility due to customization possibilities to suit the needs of involved parties.
- Futures contracts are less flexible due to standardization. Eg, Contracts sizes are standardized

Marking to Market:

- Forward contracts do not have a daily marking-to-market process. Profits and losses are settled at the contract's maturity.
- Futures contracts involve daily marking-to-market, where gains or losses are settled daily. This process helps ensure that both parties have sufficient margin to cover potential losses

Counterparty Risk:

- Forward contracts carry higher counterparty risk since they are private agreements, making default a concern.

Q2

Short future: The American company enters a contract, where it will sell 1,40,000 Euros at the rate 1.4910\$.

short put options

The graph illustrates the payoff of short put options. The vertical axis is labeled "pay off" and the horizontal axis is labeled "spot rate". Two horizontal lines represent the payoff of short puts with strike prices of 0.0120 and 0.0055. Two upward-sloping lines represent the payoff of short puts with strike prices of \$1.48 and \$1.50. The graph shows that as the spot rate increases, the payoff of short puts decreases, reaching zero at the strike price.

Q3

Given: Akshita is a trader who expects a rise in the price of an asset,wishes to profit from this increment.

(a)

Call option details:

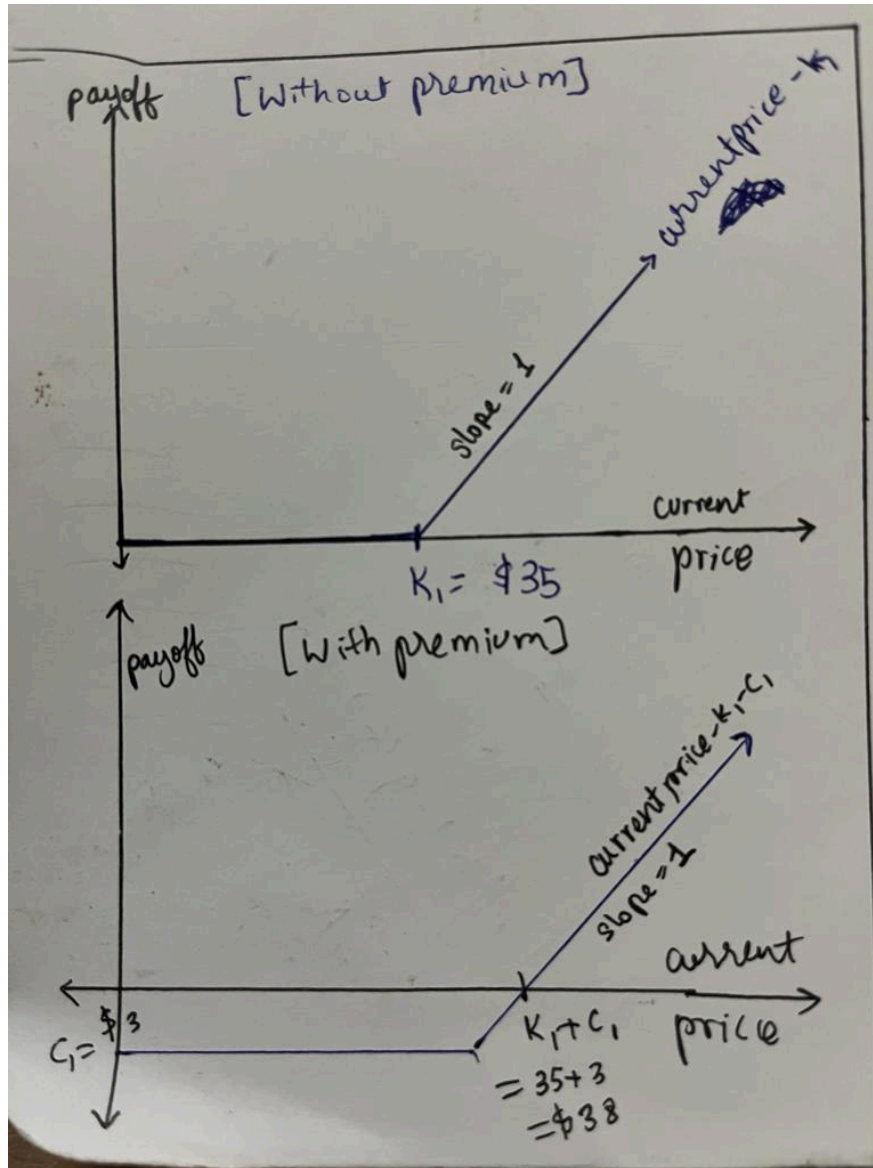
Strike price: \$35

Premium: \$3

She holds the choice to buy the asset at a price of \$35 for a certain period of time.

She can buy the asset at \$35 and sell it instantly at the current market price making a profit of $\text{Market price} - \$35$ (provided that she sells it when the market price is higher, if she predicted rightly).

The payoff v/s current price can be plotted as follows:

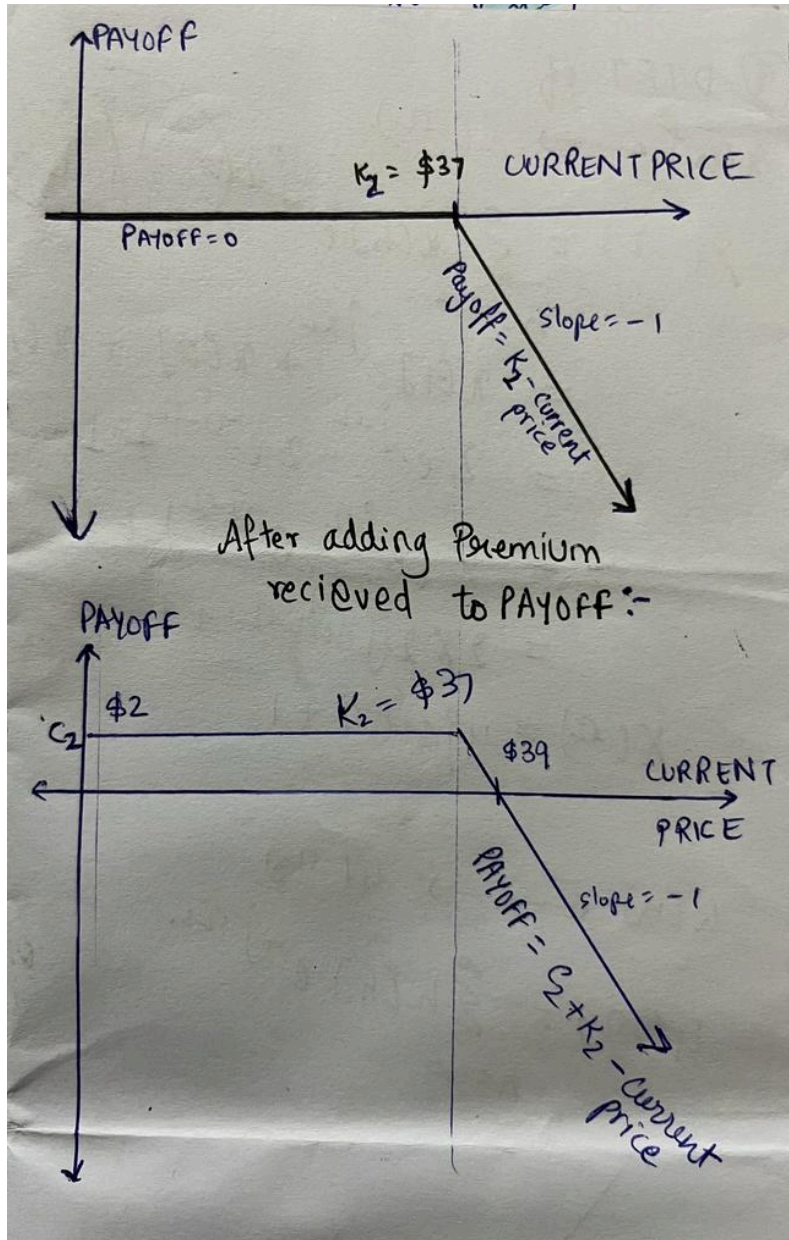


Current trading price = $P_1 = \$35$

Payoff = $\$35 - \$35 - 3 = -\$3$

- This call option is **at-the-money** as the current price (P_1) of the underlying asset is equal to the option's strike price (K_1).

(b) The payoff v/s current price of the second call option alone can be plotted as follows:



Call option details:

Strike price: \$37

Premium: \$2

Payoff from Call Option1:

When Current price $< K_1$

Payoff = $-C_1 = -\$3$

Else

Payoff=current price- K_1 - C_1 =current price-\$38

Payoff from Call option 2:

When Current price < K_2

Payoff= C_2 = \$2

Else

Payoff= K_2+C_2 -current price = \$39 - current price

Combined Payoff:

When Current price < K_1

Payoff= C_2-C_1 =\$ (2-3)= -\$1

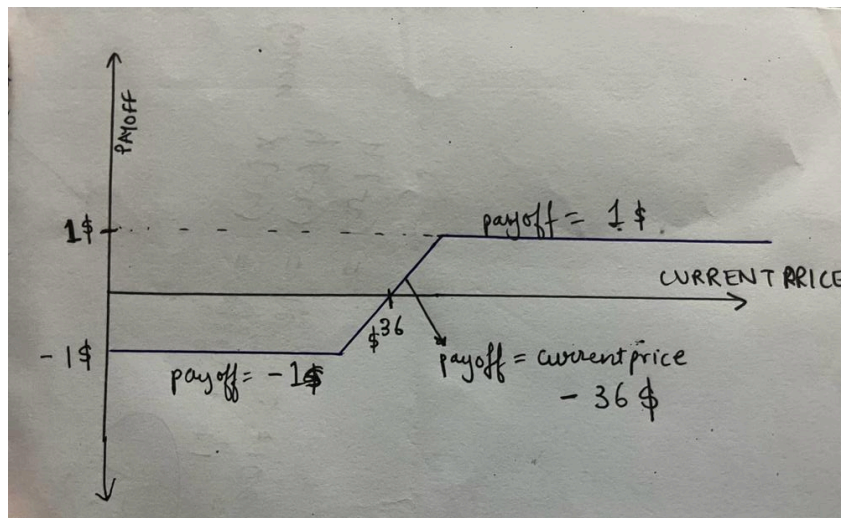
When Current Price < K_2 but > K_1

Payoff= \$2+current price-\$38=current price- \$36

When Current Price > K_2

Payoff=current price-\$38+\$39 - current price= \$1

The combined payoff is graphed below:



(c) The break-even point refers to the point at which total revenue equals total costs. In the above scenario the pay off=0 when current price- \$36=0, Therefore the price at which break even point occurs = \$36