Example FL.1

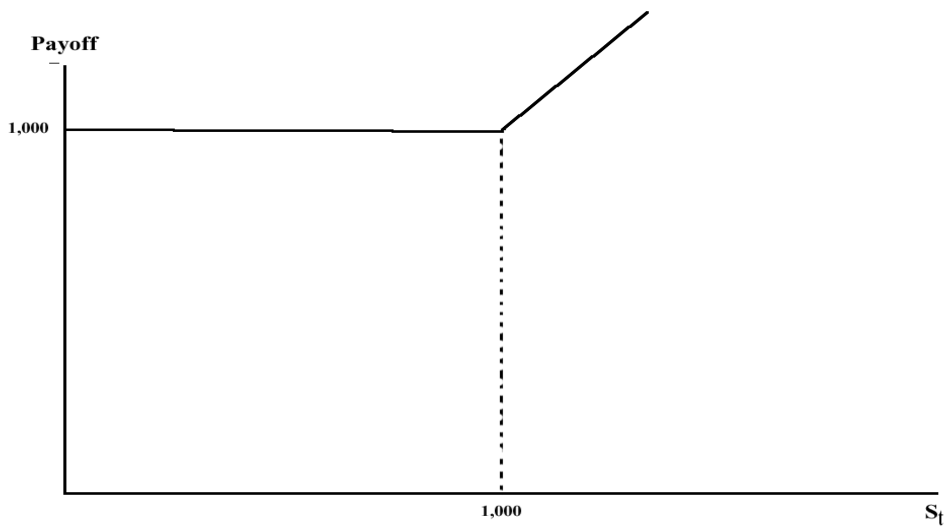
Suppose you buy an asset valued $ 1,000. To insure the asset from value decline you buy a 1,000-strike 6-month put option with risk-free 6-month rate of 2 % and a premium of $ 74.20. Construct the payoff diagram and the profit diagram of this combined position.

Solution

The table looks like this:

Asset's market price in 6 months	Put Option Payoff	Total Payoff	Profit
850	150	1,000	-95.68
900	100	1,000	-95.68
950	50	1,000	-95.68
1,000	0	1,000	-95.68
1,050	0	1,050	-45.68
1,100	0	1,100	4.32
1,150	0	1,150	54.32
1,200	0	1,200	104.32

and the diagrams are:



And