

Module 7:

Strategy #5: Buying puts for protection



Module overview

- Puts can be used to buy portfolio insurance that protects your wealth against a market crash
- Puts can also protect you against the risk of a large decline in a single stock

Strategy overview

- Puts increase in value when prices fall
- This makes puts a form of investment insurance
 - You can buy puts on index ETFs to protect your portfolio
 - Puts on individual stocks can protect large holdings
 - This can be an ideal strategy for those holding stock in the company they work for

How puts protect wealth

- Assume you have a \$100,000 portfolio that moves in line with the broad market
 - If the market loses 50%, your account would fall to \$50,000
- A put can limit the size of the loss
 - To mirror the broad market we could use puts on the SPDR S&P 500 ETF (NYSE: SPY)
- If your portfolio is more aggressive than the broad market, consider puts on PowerShares QQQ ETF (Nasdaq: QQQ)
- If your portfolio is more conservative than the broad market, it's most likely best to use SPY since volatility increases in bear markets

Example: With SPY at \$208 and one-month options

Size of decline	Level of SPY	Cost of option with that strike price
10%	\$187	\$0.25
20%	\$166	\$0.06
30%	\$145	\$0.05
50%	\$104	\$0.01

Cost of insurance seems inexpensive at first glance

Only options near the current market price offer meaningful protection

Size of decline	Option selected	Cost to buy option	Value of option after decline
20%	\$187	\$0.25	\$21
20%	\$166	\$0.06	\$0
20%	\$145	\$0.05	\$0
20%	\$104	\$0.01	\$0

Only more expensive options provide significant protection

- The \$187 put cost \$25 and returned \$210, offsetting a 2.1% loss at a cost of 0.25%
- To protect against a 20% decline, you would need 10 contracts at \$250, costing 2.5% per month
 - 30% a year for the most comprehensive risk insurance
- To obtain protection, we need to buy longer term puts with strike prices that are near the current market

A realistic insurance plan

- With SPY at \$208, there is a \$208 put expiring in one year trading at \$14.90

Size of decline	Cost of option	Value of option after decline	Profit on option	% protection for \$100,000
10%	\$1,490	\$2,100	\$610	0.6%
20%	\$1,490	\$4,200	\$2,710	2.7%
30%	\$1,490	\$6,300	\$4,810	4.8%
50%	\$1,490	\$10,400	\$8,910	8.9%

Buying 8 contracts offsets a 20% decline. Complete insurance protection costs 11.9% a year but you make money if the market falls more than 20%

To lower costs

- Buy insurance when risk is higher than average
 - After an initial decline of 10%, the probability of a 20% decline are higher so you might want insurance only after a 10% pullback occurs
 - For those comfortable with technical analysis, consider insurance in overbought markets, such as when the price is more than 10% above the 200-day moving average

Good news: insurance for individual stocks is affordable

- Let's say you own 1,000 shares of IBM which is trading at \$150
- A six-month put with a strike price of \$135 is trading at \$4
- Cost of insuring 100 shares is 5.3% a year – the dividend (3.4%) pays 64% of the premium
- You have dollar-for-dollar protection if IBM falls more than 12.7%

Pricing for other individual stocks is similar

- The cost of insurance of an individual stock is generally 4-7% per year
 - You then have dollar-for-dollar protection against losses of 10%, or the level you set
 - Accepting a 20% or 30% loss lowers the cost of insurance

Bottom line

- Puts provide insurance against large losses
- Like home or auto insurance, there is a cost
- The insurance pays off in large market declines which can be expected to occur frequently
 - A 10% decline is expected to happen to at least once a year
 - 20% declines typically happen every few years and insurance would pay off at these times
- Insurance can be especially important if you are near retirement

To implement Strategy #5

- Use put options close to the market price to maximize protection
- Use put options with six months or more to expiration to minimize trading costs
- Ensure you have enough protection to cover your portfolio

Portfolio value (\$) / (Price of SPY(\$) * 100) rounded to next integer

$\$100,000 / (\$200 * 100) = 5 \text{ contracts}$

What's next?

- Bonus strategy: Selling naked puts for income