



# Collar trade

**Market:** Stocks or ETFs with high-volume options contracts.

**System concept:** This system compares a buy-and-hold strategy in Intel (INTC) and Amgen (AMGN) to a collar trade that protects these stocks when they drop below their 200-day simple moving averages (SMA).

Intel and Amgen were chosen because they are well-known stocks with liquid option markets and they have crossed their 200-day SMAs several times in the past few years.

A collar trade consists of selling one out-of-the-money (OTM) call and buying one at-the-money (ATM) put for each 100 shares of stock owned. The expiration month is the first one available that is at least one year away. As a result, the position consists of a covered call (long stock and short OTM call) to collect income and a long put for protection.

The system places a collar on an underlying position only when the stock closes below its 200-day SMA for two consecutive days. The collar is removed only if the stock closes at or above the short call's strike price.

We first bought Intel and Amgen after they closed above their 200-day SMAs for two consecutive days at the beginning of the test period (Jan. 2, 2001). The system bought up to \$7,000 of each stock without margin. It first bought 100 shares of Amgen at \$67.75 on Jan 23, 2001 (\$6,775) and 200 shares of Intel at \$30.05 on Nov. 13, 2001 (\$6,010).

**Trade rules:**

1. Place a collar on the long stock position if the stock price closes below its 200-day moving average for two consecutive days. When placing the collar:
  - a. sell one call at the first available OTM strike above the 200-day average for each 100 shares of stock;
  - b. buy one put at the closest ATM strike available for each 100 shares of stock;
  - c. both options must be in the nearest expiration month at least one year away.
2. Close the collar (both calls and puts) when:
  - a. the stock price closes above the short call's strike;
  - b. or, on the expiration day of the options, let the

short call expire and exercise the long put to sell the stock at the long puts' strike price.

3. If stock is sold when the collar expires, repurchase it:
  - a. immediately if price is above its 200-day SMA;
  - b. once price closes above its 200-day SMA for two consecutive days; or
  - c. on the first trading day of the next year.

**Test data:** The system was tested using Intel and Amgen stock and option price data.

**Test period:** Jan. 2, 2001 to Dec. 30, 2005.

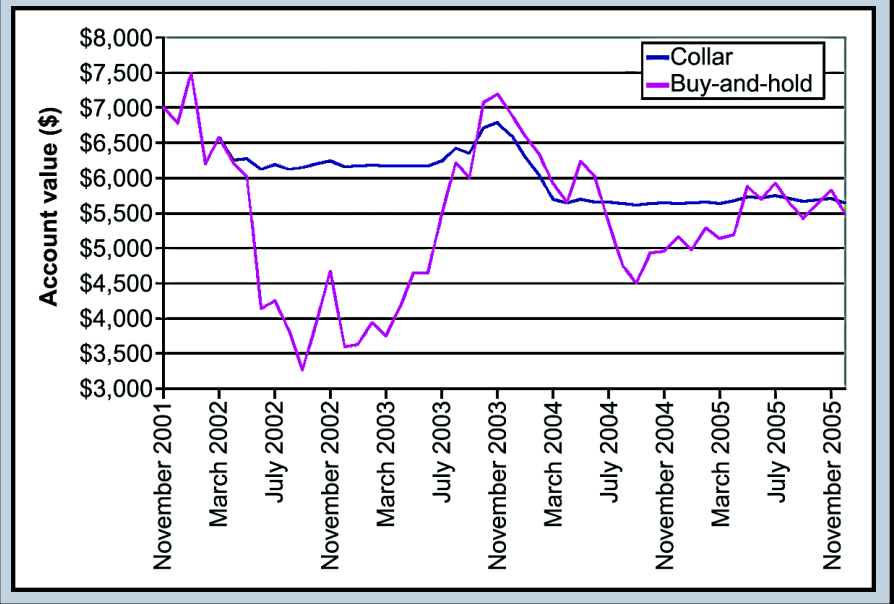
**Test results:** Over the long-term, the protective collar didn't perform much differently than the buy-and-hold approach. Amgen gained \$886 by the end of the test period using buy-and-hold, while Amgen's timed collar climbed \$819 (12.66 vs. 11.7 percent, respectively). The buy-and-hold approach for Intel lost \$1,518, and its timed collar fell \$1,358 (-21.69 vs. -19.4 percent). For such a long time period, these returns are very similar and neither method clearly outperformed the other.

**Bottom line:** The collar trade and buy-and-hold produced similar returns results in INTC and AMGN. That doesn't mean both strategies performed the same during the test; the timed collar was less volatile.

Figure 1 compares the account value for Intel's buy-and-

**FIGURE 1 — INTC — COLLAR VS. BUY-AND-HOLD**

*Although placing a collar on a long position in Intel didn't affect its overall loss by much over the five-year test period, the collar was much less volatile than a buy-and-hold approach.*



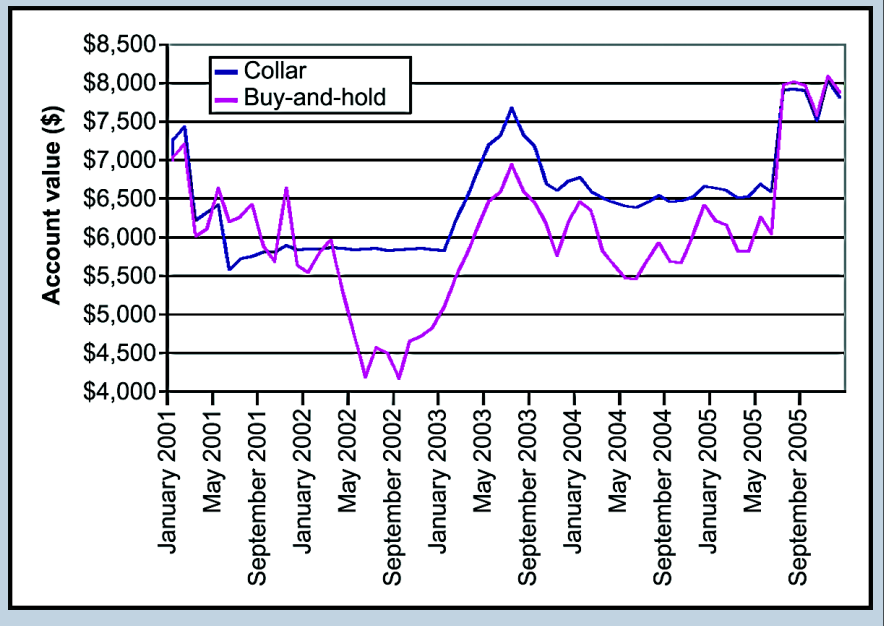
hold method and the collar trade during the test period. Figure 2 compares Amgen's buy-and-hold approach to its collar. In both cases, the timed collar clearly had less-volatile returns, delivering higher risk-adjusted returns than the traditional buy-and-hold strategy.

We did not test other stocks or ETFs, but we'd expect similar results. Commissions and slippage will likely affect this strategy's performance, so you should always include accurate brokerage fees and consider the effect of bad fills before actually trading any idea.

- Steve Lentz and Jim Graham  
of OptionVue

**FIGURE 2 — AMGN — COLLAR VS. BUY-AND-HOLD**

Both the collar and a buy-and-hold approach gained around 12 percent by December 2005, but the collar reduced the position's volatility quite a bit.



**STRATEGY SUMMARY – INTEL**

	Timed collar	Buy-and-hold
<b>Net gain/loss (\$):</b>	(1,358)	(1,518)
<b>Percentage return (%):</b>	-19.40	-21.69
<b>Highest up month (%):</b>	10.59	20.87
<b>Lowest down month (%):</b>	-17.31	-17.31
<b>Standard deviation — up months (%):</b>	2.50	6.20
<b>Standard deviation — down months (%):</b>	3.63	7.01
<b>Standard deviation — all months (%):</b>	3.62	10.60

**STRATEGY SUMMARY – AMGEN**

	Timed collar	Buy-and-hold
<b>Net gain/loss (\$):</b>	819	886
<b>Percentage return (%):</b>	11.70	12.66
<b>Highest up month (%):</b>	19.98	31.96
<b>Lowest down month (%):</b>	-16.31	-16.47
<b>Standard deviation — up months (%):</b>	3.65	6.01
<b>Standard deviation — down months (%):</b>	3.97	4.35
<b>Standard deviation — all months (%):</b>	4.50	7.69

**Legend:**

Net gain/loss — Performance at the end of test period • Percentage return — Percentage performance at the end of test period • Highest up month — Largest monthly % gain • Lowest down month — Largest monthly % loss • Standard deviation up months — Standard deviation of all monthly gains • Standard deviation down months — Standard deviation of all monthly losses • Standard deviation all months — Standard deviation of all monthly returns.

Option System Analysis strategies are tested using OptionVue's BackTrader module (unless otherwise noted).

If you have a trading idea or strategy that you'd like to see tested, please send the trading and money-management rules to [Advisor@OptionVue.com](mailto:Advisor@OptionVue.com).