



The Secret Lives Of Butterflies

A Road Trip With Options Supertraders

Here's a way to trade options that allows you to spend less time managing the trade and more time to go on road trips.

by John A. Sarkett

Nearly a decade ago, a headline in a prominent financial publication named Dan Harvey “the super trader of index condors.” I know—I wrote the piece. Recently, coming across some old notes, I wondered what became of him, and with a little digging, I was able to renew contact.

Turns out, some 10 years later, working with partner and options veteran Tom Nunamaker, Harvey had moved on from condors to a new options trade model that he calls the *road trip trade* (RTT). The partners believe it is more consistently profitable while requiring less hands-on management (in the lingua of the options trade, “adjustment”) and thus affords more time for road trips, hence the name.

The pair trades the SPX, the index that follows the S&P 500, as well as ES futures options and the Russel 2000 index (RUT), using the *broken wing butterfly* (BWB) as the vehicle of choice. To this, they add a sometimes counterintuitive adjustment that has been dubbed (not by him) the *reverse Harvey*. That is the “secret sauce” and a primary and reliable means by which profits are earned.

Goals are straightforward: preserve capital, reduce screen time to one or two looks a day, and earn 7% to 15% per trade.

A LONGER TIMEFRAME Nunamaker and Harvey use weekly options in the SPX or ES futures. They choose expirations 70 to 85 days out. The trades must pass a series of filters, or “entry guidelines,” to be launched. They plan ahead to exit 15 to 20 days before expiration.

They add a new RTT posi-

ROADSCAPE: MICHAEL URMANN/BUTTERFLY WING: ECHO/SHUTTERSSTOCK/COLLAGE: NINKI MORR

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tion every two weeks and typically have four or five on at a time. This is time diversification—another way of spreading risk and this in turn helps create a smooth and highly desirable cumulative equity curve. Another benefit of this approach: low drawdowns and the ability to sleep well at night no matter what’s taking place in the market.

That’s the theory and perspective. Mechanically, here’s how it works:

The traders start the trade with a broken wing butterfly (BWB) with the highest strike placed behind the market (Figure 1). For example, if the SPX was at 2000, the BWB might be placed at 1975/1930/1875. That is: long a 1975 put, short two 1930 puts, and long an 1875 put.

Notice that the distance between the 1975 and 1930 is 45 and the distance between the 1930 and 1875 is 55. Thus, there is more risk to the downside of the short strikes than to the upside. This is what gives the trade model its “broken wing” characteristic: more risk on the left side of the graph (lower wing), less to the right (higher wing).

A typical butterfly that is symmetrical and balanced would have the outer long strikes equidistant from the short strikes in the middle, for example, 1950/2000/2050. The amount of maximum risk, then, would be the same if the SPX went to zero or 10,000.

Note here that they are starting *behind* the market with the butterfly. Most options mentors or authors teach placing the short strikes right *at the market*, and then adjusting from there. There are distinct advantages to the road trip trade placement, as you will soon find out.

The timing of the entry is not critical, but the pair prefers a down day when volatility is up because volatility tends to be mean-reverting over time and because the butterfly will usually be cheaper with a spike in volatility.

PRICE MATTERS

Price is important, too. The entry debit must be less than 5% of the initial margin. For example, if there is \$10,000 risk to the downside, the cost of the broken wing butterfly must be \$500 or less. If it is higher, it will become too difficult to

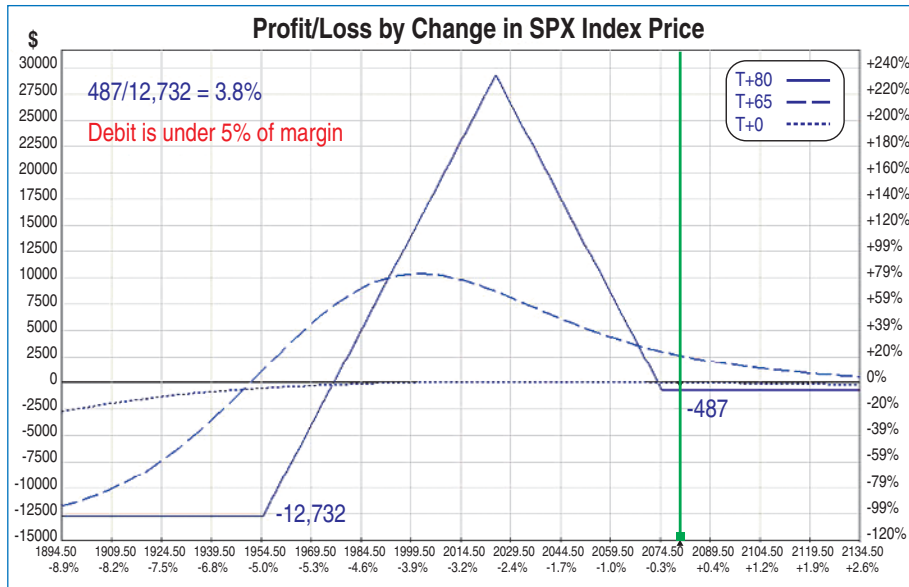


FIGURE 1: BROKEN WING BUTTERFLY (BWB). When placing the BWB the highest strike is placed behind the market. There’s more risk on the left side of the graph (lower wing) and less to the right (higher wing).

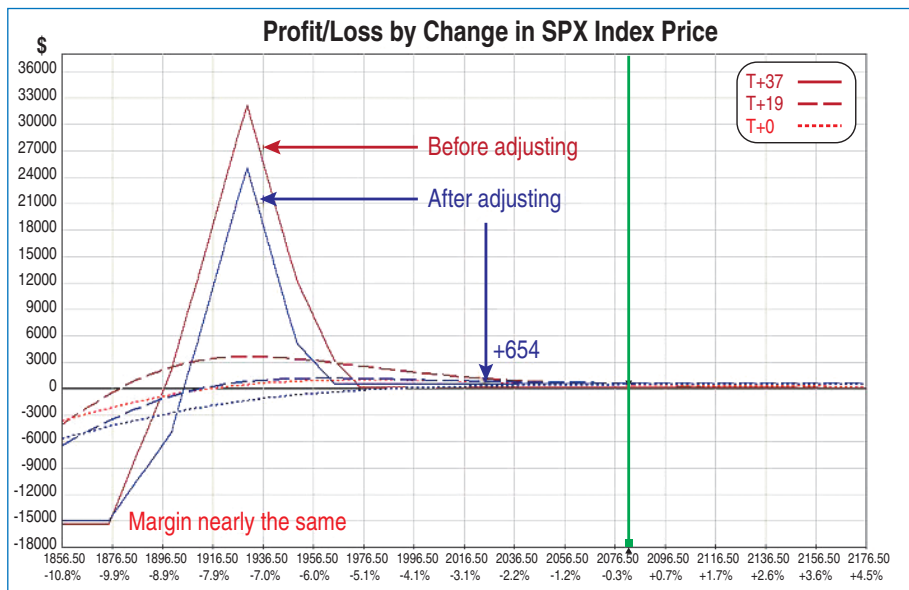


FIGURE 2: BWB AFTER CONCERTED UP MOVE. The reverse Harvey adjustment rolls in the long strikes to create a credit and generate a \$654 profit. Simple, but counterintuitive.

achieve profitability to the upside by adding adjustments that lift the T+0 line down the road. (T+0 means time plus zero, or today’s real-time profit or loss. T+7 is the expected profit/loss in seven days, for example.)

Size is typically 5x10x5 or 6x12x6 contracts, but the strategy is easily scalable to larger sizes. Trading a two or three lot, such as 2x4x2, is also possible, and adjustments tend to be even less frequent.

Once the initial trade is on, the SPX is closely monitored. Harvey says, “We measure price movement relative to the launch price of SPX or ES and do an ongoing analysis of the volatility smile curve, specifically with regard to steepening

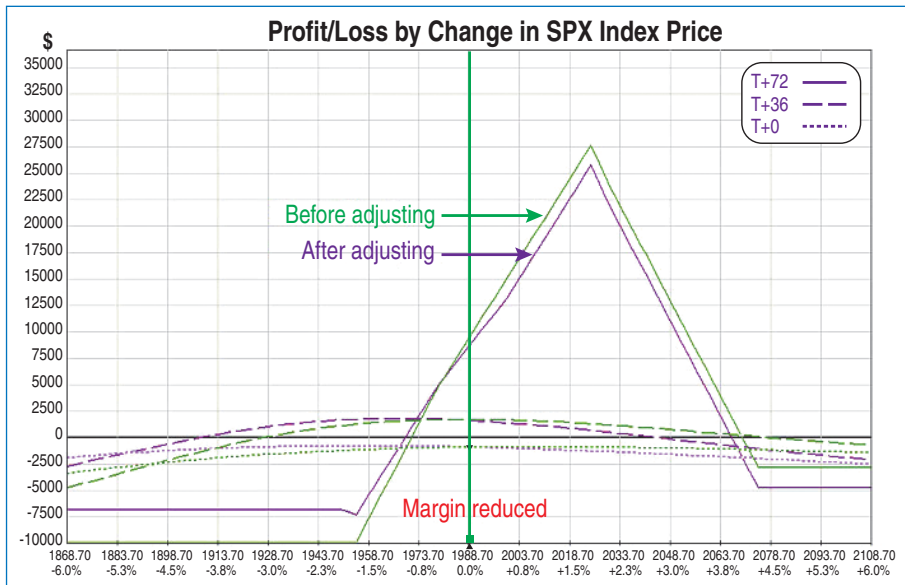


FIGURE 3: MARKET MOVES DOWN. A reverse Harvey put debit spread is added to flatten the T+0 line and “buy time,” hoping the market can recover and stay “under the tent.”

slope or curve irregularities. Also, we monitor other market data including the CBOE Volatility Index (VIX), CBOE VIX of VIX (VVIX), CBOE SKEW Index, historical and implied volatility levels, and VIX futures.”

With a more or less sideways market, the traders are purposely slow to adjust. Typically, this is the “normal” state of affairs. Sans big up or down moves (some market analysts maintain the market tends to move sideways 80% of the time) in the first 21 to 30 days, they will strive to “leave it alone and let theta (options decay) do its job and start accumulating profits.” That is the optimal period for going on a road trip.

In addition, to boost premiums and profits, they layer other, “smaller” trades on top of the basic road trip trade if SPX or ES moves up sharply after the trade is launched (Figure 2). These are generally:

- small butterflies just outside the expiration tent
- put credit spreads (usually with a 10 delta short strike), or
- an iron condor.

It takes a large market move to catalyze further adjustment on the large butterfly. A large down move will typically cause the pair to add a long put debit spread, which is more resilient to whipsaw than a straight long put (Figure 3). Removing emotion from the mix, they don’t decide to do this in real time, by the way. The protective order to add a put debit spread is entered *in advance* as a good-till-canceled (GTC) conditional or “trigger” order at the SPX price point near the short strike where the risk curve starts to turn back down from its high point in the middle of the profit zone. A further move to the downside might prompt the addition of one more debit spread hedge prior to exiting or repositioning the trade.

What if the market makes a whipsaw move back up—and tends to stay up? They manage this by taking off a put debit spread if the price falls to 50% to 75% of the debit paid, from either time elapsed or a market



It’s better to trade on a down day when volatility is up because volatility tends to be mean-reverting over time and the butterfly will usually be cheaper with a spike in volatility.

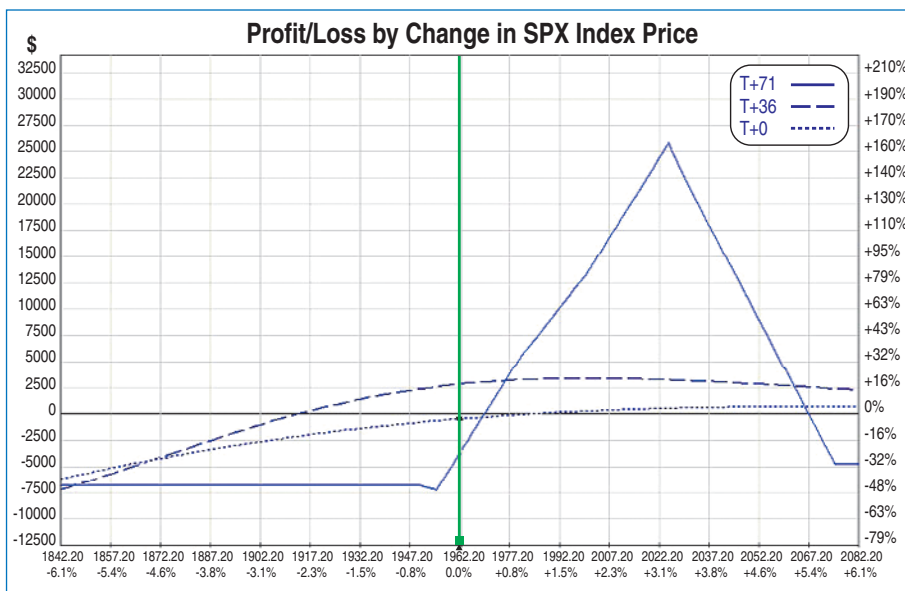


FIGURE 4: SOMETIMES YOU JUST HAVE TO TAKE A LOSS. The trade is exited as it is “behind the tent” for a \$200 loss, against a string of \$1,000 winners, and so the mathematical expectancy of the model is maintained.

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move higher. For example, if a put debit spread costs \$2 they would consider selling it when it declines \$1.50 to \$1.00.

The current P/L is monitored constantly. The traders will exit a position if the loss exceeds 4% to 5% of utilized capital (Figure 4). They consider a situation like this “one of the best trades” even though a loss. Consistent gains combined with very small and infrequent losses increase the mathematical expectancy, the point being to stay in the process, week after week, and not get obliterated. This is a key to their relative longevity and successful track record.

THE REVERSE HARVEY

What if the market makes a large up move after the 21–30 days? Harvey will use a move that was named in his honor (by options trader Mark Sebastian)—the *reverse Harvey*, a nifty and counterintuitive piece of market jiu-jitsu. Here’s how it works.

The long wings are rolled in toward the short strike in order to generate a credit, and “lift” the T+0 curve to the right of the “tent” (the profitability zone in the risk curve). The reverse Harvey (RH) process is continued gradually, if necessary, until the right side of the expiration curve is lifted above zero as in Figure 2. This technique serves to generate at least a small profit even in the event of a sustained and unrelenting rally. Many other butterfly strategies lose money in sustained rallies, but the RH process seeks to preserve positive expectancy by generating a profit even in strong upside markets. In addition, it avoids the labor-intensive and expensive process of completely repositioning trades during these markets.

“We are not really *making money* on the spot when we are doing a reverse Harvey, even though we are receiving a credit,” Harvey notes. “We want to ‘let the butterfly be the butterfly’ for as long as possible, but if the market is going to grind higher, we can extract profits along the way, and even achieve a state where there is no longer any risk to the upside. That is the impetus behind the reverse Harvey.”

What if the market continues to grind higher, as has often been the case since 2008? Harvey will layer

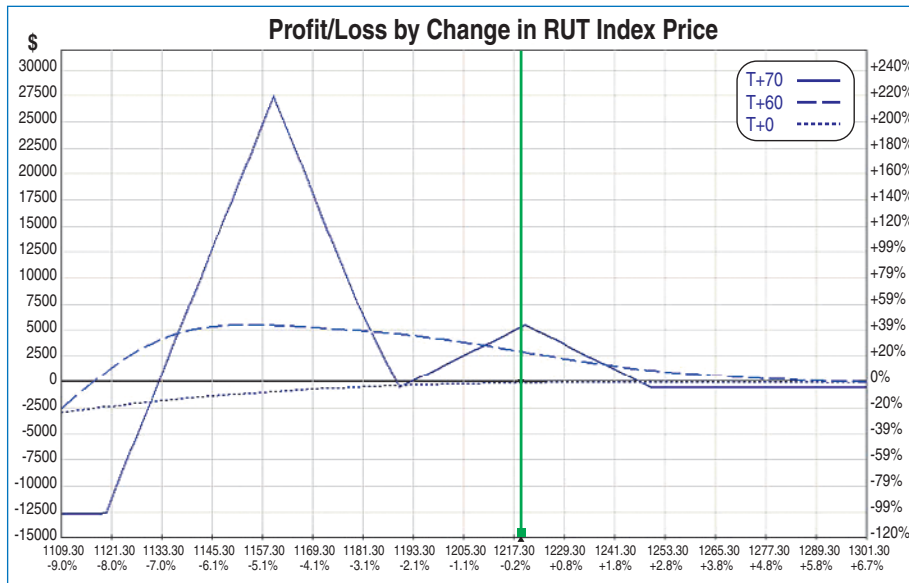


FIGURE 5: BABY BUTTERFLY. As the market moves higher, you add a “baby butterfly” to the right of the initial broken wing butterfly. Over time, it raises the T+0 line and position profitability.

The reverse Harvey can be employed to cut risk and margin requirement not just with butterflies, but also with other options spreads such as iron condors.

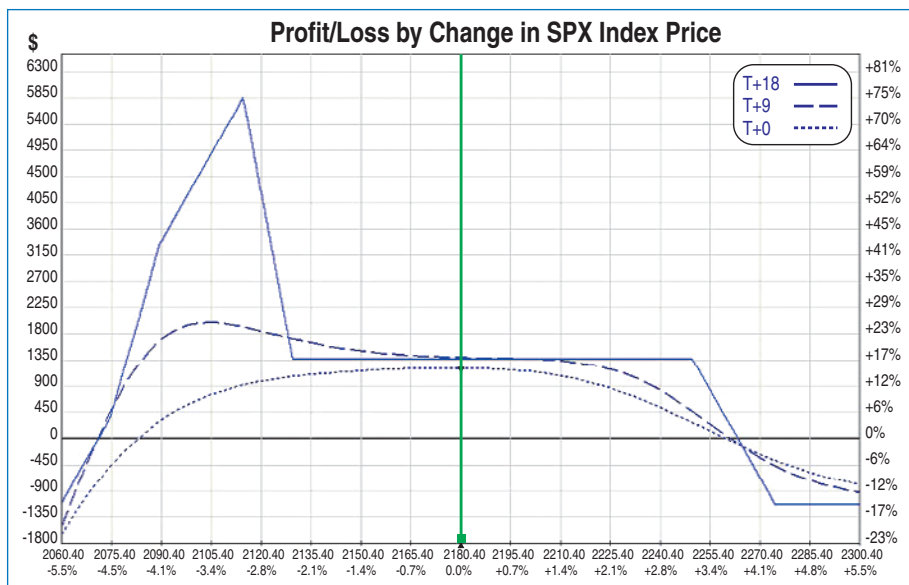
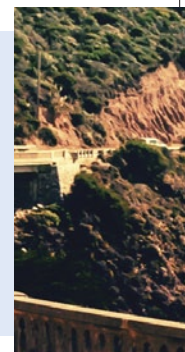


FIGURE 6: IRON CONDOR. A long iron condor can also be layered in to increase profitability.

in smaller trades at a higher level. For example, he will add a so-called “baby butter,” a smaller-size butterfly to the right of the main position on the risk curve (Figure 5). For example, if the main position is 6-12-6 contracts, the “baby butter” would be perhaps a 1-2-1, a total of four contracts. Over time, this can boost returns with a very little increase in margin.

Harvey notes the reverse Harvey can be employed to cut risk and margin requirement not just with butterflies, but also with other options spreads such as iron condors (Figure 6).

Interestingly, especially when the trader is long in the trade, the reverse Harvey can often be achieved for a relative few dollars. For example, a lower long put price might have collapsed to 0.10–0.20, say, and the trader can roll up to higher strikes for not much more, thus cutting the risk and margin on the trade substantially, often as much as 50%. Again, this does dampen maximum profit potential (the high point of the butterfly triangle), but only slightly.

To summarize, the *up market reverse Harvey* rolls in the wings toward the short strike and generates a credit. The *down market reverse Harvey* adds a put debit spread. Both flatten the T+0 line. They are done as partials of the main position as the market moves.

LOW RISK, HIGH REWARDS

Complexity increases, too, in the sense that you wind up with more strikes than the original three, and each of those with

a varying number of contracts. This is by design, remember, and Harvey calls it “inventory.” As such, it is imperative that you not do it too quickly, or too big vis-à-vis the original position.

Next time, I’ll discuss a method that trader and educator Jim Riggio, who currently specializes in options butterflies, uses for covered calls.

John A. Sarkett is the author of Option Wizards: Real Life Success Stories From The Financial Markets And Market Mentors (<http://option-wizard.com>). More on Tom Nunamaker and Dan Harvey can be found at capitaldiscussions.com and roadtriptrade.com.

FURTHER READING

Sarkett, John [2012]. “The Queen Of The Iron Condors,” *Technical Analysis of STOCKS & COMMODITIES*, Volume 30: July.

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RISK/REWARD DEFINITIONS

Calmar ratio—The Calmar ratio is a comparison of the average annual compounded rate of return and the maximum drawdown risk of commodity trading advisors and hedge funds. The lower the Calmar ratio, the worse the investment performed on a risk-adjusted basis over the specified time period; the higher the Calmar ratio, the better it performed. Generally speaking, the time period used is three years, but this can be higher or lower based on the investment in question.

Sortino ratio—The Sortino ratio is a variation of the Sharpe ratio that differentiates harmful volatility from total overall volatility by using the asset’s standard deviation of negative asset returns, called downside deviation. The Sortino ratio takes the asset’s return and subtracts the risk-free rate, and then divides that amount by the asset’s downside deviation. The ratio was named after Frank A. Sortino.

Profit factor—The profit factor is defined as the gross profit divided by the gross loss (including commissions) for the entire trading period. This performance metric relates the amount of profit per unit of risk, with values greater than 1 indicating a profitable system. As an example, the strategy performance report shown in Figure 1 indicates the tested trading system has a profit factor of 1.98. This is calculated

by dividing gross profit by gross loss.

Probability or risk of ruin—The probability of an individual losing sufficient trading or gambling money (known as capital base) to the point at which continuing on is no longer considered an option to recover losses.

The risk of ruin is calculated by taking into account the probability of winning (or making money on a trade), the probability of incurring losses, and the portion of an individual’s capital base that is in play or at risk. It’s also known as the “probability of ruin.”

Mathematical expectancy—The return on an investment as estimated by an asset pricing model. It is calculated by taking the average of the probability distribution of all possible returns. For example, a model might state that an investment has a 10% chance of a 100% return and a 90% chance of a 50% return. The expected return is calculated as:

$$\text{Expected return} = 0.1(1) + 0.9(0.5) = 0.55 = 55\%$$

It is important to note that there is no guarantee that the expected rate of return and the actual return will be the same.

—John Sarkett