



There May be a Free Lunch: Increasing Futures Returns by Harnessing the Power of Diversification

Lincoln Fiske, President, TradingVisions, Inc.

A portfolio approach to trading futures may be one of the simplest yet most powerful ways to improve performance. While there is nothing new about the idea that diversification is a key ingredient to investment success, a diversified approach to trading futures for the small- to medium-size account has generally not been strongly advocated in the past. To address this, TradingVisions introduced the Vista Portfolios in November of 2004. These portfolios are combinations of TradingVisions day trading and swing trading systems and their markets. Through them, an investor is able to tap the three important means of diversification: a variety of system logic, time-frames, and markets.

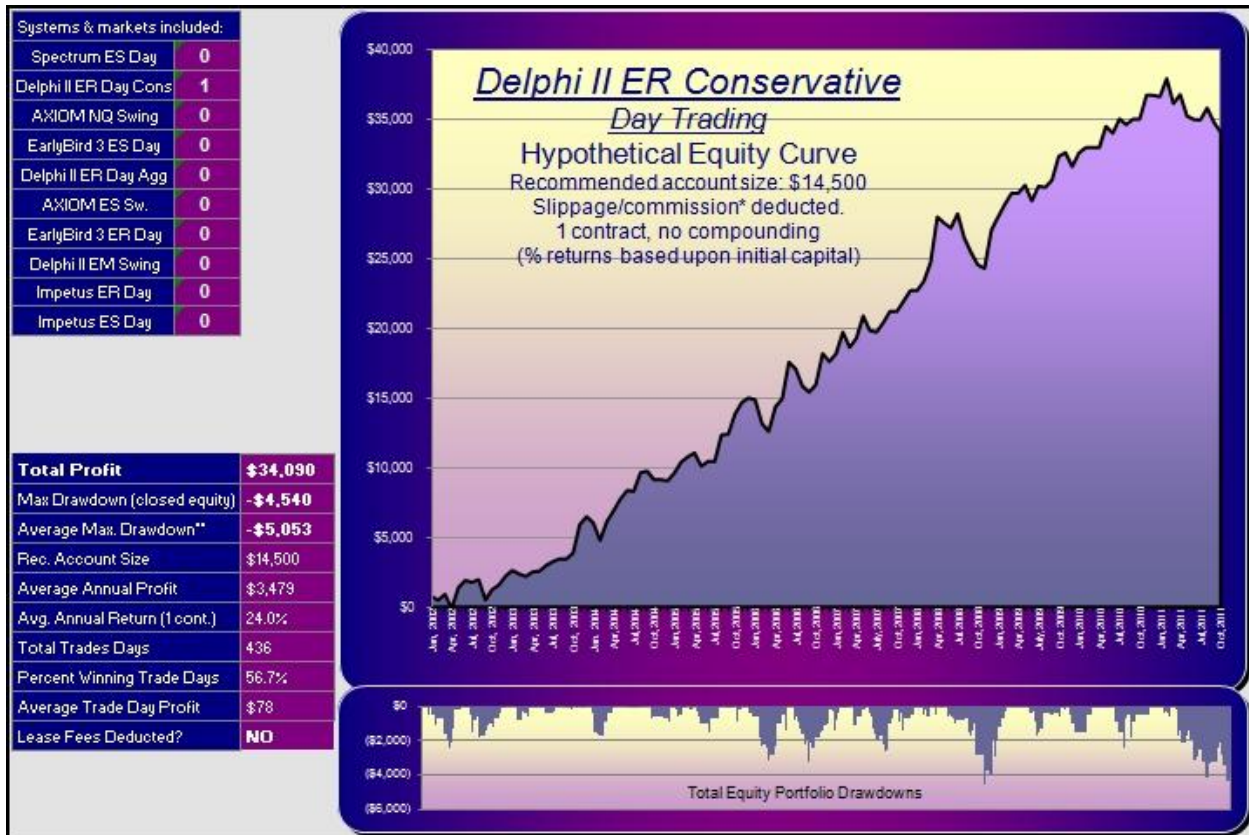
Why diversify? Simply put, diversification allows for the most efficient use of capital, which increases the return. This is because when you combine systems and markets with low equity curve correlations, the investor gets all the profits from the components, but the combined drawdown is less than the cumulative drawdowns of the components, allowing for lower capitalization than required by the individual components, and thus increasing the rate of return.

Let me give an example.

Although I'll illustrate using just one of the TradingVisions systems--Delphi II--the principles hold true for other systems and markets.

First, some assumptions and conditions. Let's agree that we are willing to accept a 35% drawdown in our account. Secondly, we'll use close-trade drawdown numbers, since we would not commence trading in the middle of a trade and would therefore not have any open equity as part of a drawdown. Third, we'll use a Monte Carlo simulation to determine the average maximum drawdown. Monte Carlo is a sampling technique that in effect takes the sequence of trades in an equity curve and re-sorts them. By doing this, we can uncover over-optimized equity curves. Instead of just one historical equity curve, we can create thousands, allowing for a more valid and realistic set of statistics whereby we can measure a system's likely performance. For our purposes here, we'll run 2,000 simulations to derive the average maximum drawdown ("AMDD") for all the runs. With the AMDD and the stipulation that we'll allow a 35% drawdown, we can determine our required account size for a given portfolio. Fourth, we will subtract slippage/commission costs of \$30 roundturn for the e-mini Russell and e-mini S&P and \$50 for the e-mini Midcap. Lease or purchase fees will not be deducted, and we will trade a constant one contract for each system and its market(s). The results are hypothetical, since we are using TradeStation performance report data.

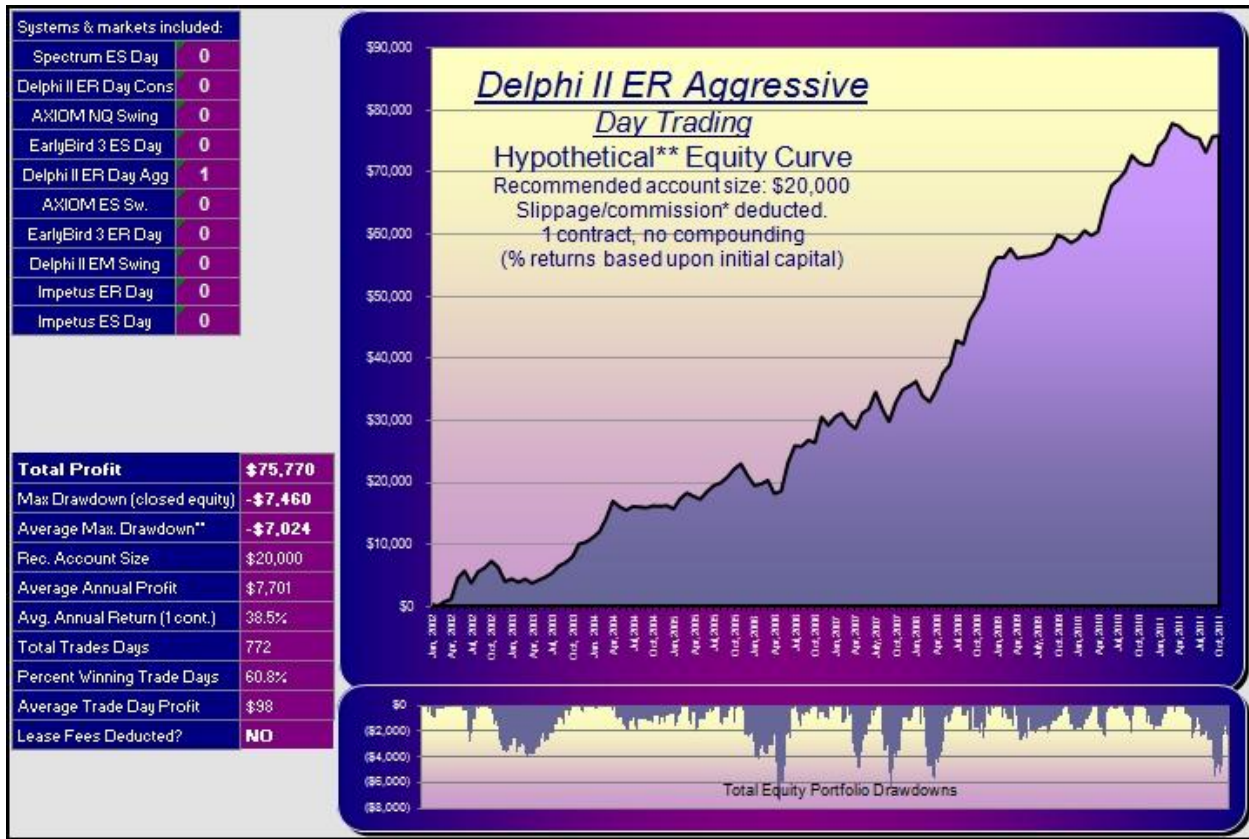
Let's start with Delphi II ER Conservative, a day trading system that trades the e-mini Russell. Because it has a relatively low drawdown profile, it can be traded by smaller accounts.



For the period 1/1/02-10/31/11, Conservative hypothetically nets \$34,090 with an AMDD of \$5,053. We would therefore capitalize the account at \$14,500, since this is the size we would need in order for \$5,053 to be a 35% drawdown. Our average annual return would be 24%.

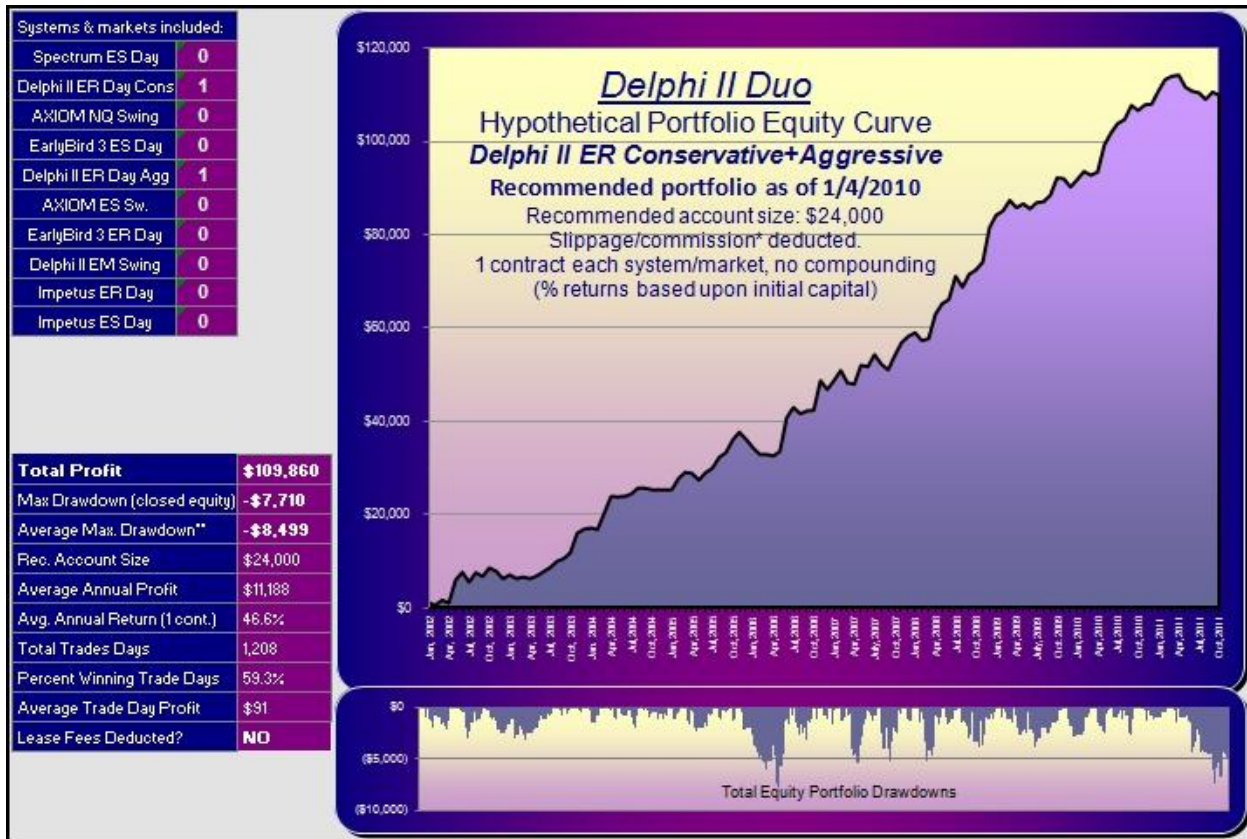
While this is an acceptable return, it's safe to say we'd like a better return, if possible. More importantly, in such a situation we would be at the mercy of one system's performance on one market, which is one of the most common errors of futures traders/investors. This is very risky, and while we might be rewarded with some above average returns, we also are subject to more extreme drawdowns. We want instead to follow the *investor* mentality of looking for reasonable returns over time, using a portfolio approach.

We need to diversify our one-system logic approach, looking for a system with a correlation of less than .5, i.e. less than a 50% chance of the monthly returns being in the same direction (a zero correlation would be ideal, since it means essentially that the results are randomly related). Let's consider Delphi II ER Aggressive, which, as the name implies, is a version of Delphi II that uses a different set of parameters that generates riskier--but on average more rewarding--trades. Its correlation to Conservative is a low .22.



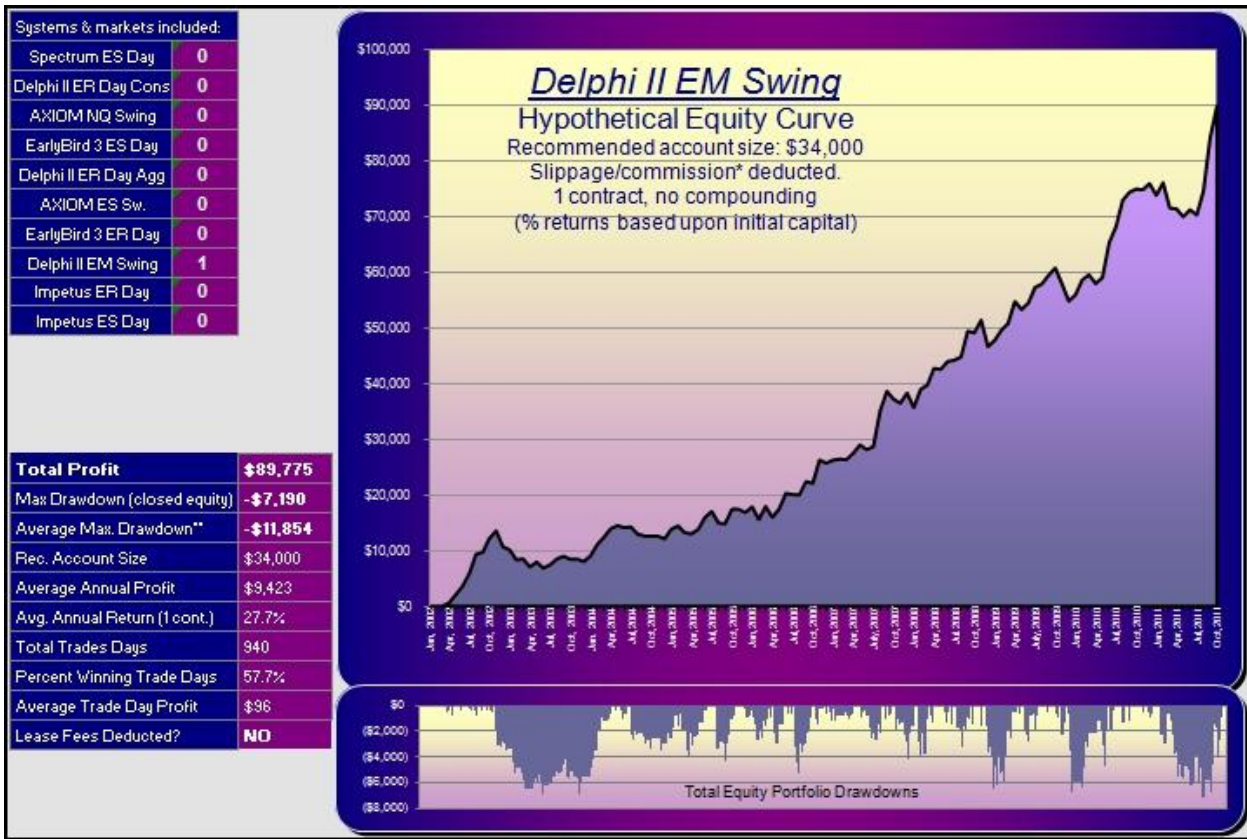
As can be seen in the graphic, trading Aggressive alone nets \$75,770 with an AMDD of \$7,024. We would therefore capitalize the account at \$20,000, and our average annual return would be 38.5%.

We know that the combined profit of the two versions has to be \$109,860. With average maximum drawdowns of \$5,053 and \$7,024, we might think the AMDD when we combine them will be \$12,077. But here's where the advantage of diversification becomes clear, as we can see in the next graphic.



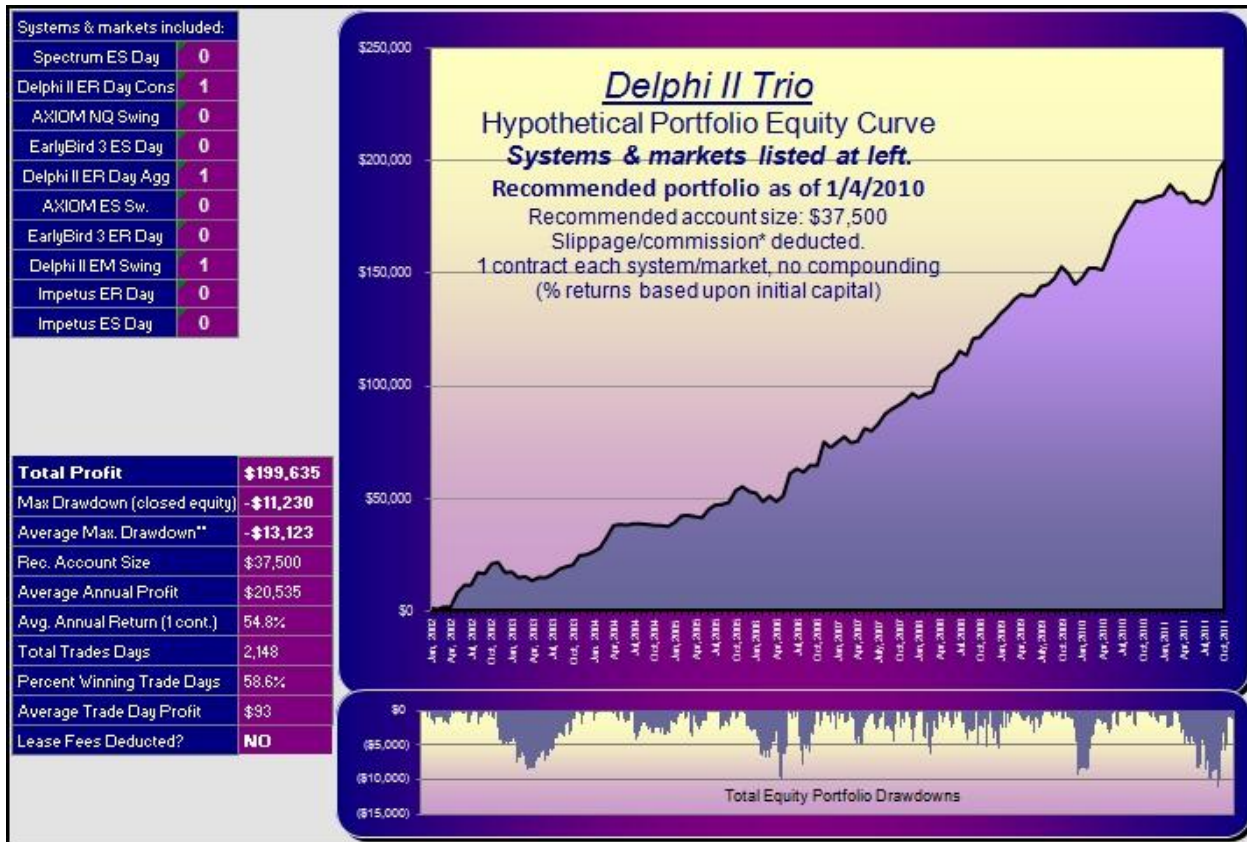
In fact, the combined AMDD is \$8,499, 30% lower than the cumulative individual system drawdowns. This occurs because often enough, when one system is down, the other is up, tending to reduce drawdowns and risk. Rather than capitalizing this account by adding together the two separate account sizes of \$14,500 and \$20,000, we can do it for \$24,000 (\$8,499 divided by .35). Our risk as defined by the average maximum drawdown is still exactly the same as the component systems, 35%, but we get all the profits from both systems. In other words, we get to add all the profits together, but we've reduced the risk. As a result, our annual return rises to 46.6%. We've increased our investment efficiency, getting more profit per dollar. Generally, diversification helps smooth the equity curve by spreading the risk among low-correlation components, and this is what happens here.

But let's try to improve our return even more. We'll look at adding Delphi II EM Swing, to give ourselves further diversification in logic, market, and time-frame, since we hold positions overnight with the e-mini Midcap. Its correlation to Conservative is a near perfect .05, which means virtually no correlation. With Aggressive, the correlation is also a very low .08. Let's look first at EM Swing's performance alone.



EM Swing nets \$89,775 with an AMDD of \$11,854. We would therefore capitalize the account at \$34,000, and our average annual return is 27.7%.

The next graphic reveals the results of trading all three systems together as a portfolio.



With the combination of three systems, the total profits expand to \$199,635. Even though the individual maximum drawdowns are \$5,053, \$7,024, and \$11,854--for a total of \$23,931--the AMDD of the combined portfolio is \$13,123. In other words, we've reduced our dollar risk by 45%. Once again, because the individual component drawdowns are often occurring at different times, the portfolio drawdowns are reduced substantially and the equity curve is smoothed, as you can visually observe. Rather than capitalizing this account by adding together the three separate account sizes of \$14,500, \$20,000, and \$34,000--a total of \$68,500--we can do it for \$37,500 (\$13,123 divided by .35). Our annual return now increases to 54.8%. Our investment efficiency or return has more than doubled, when compared to trading Conservative alone. Note also how much more sense it makes, for example, to trade a trio of systems with an account that's just \$3,500 larger than trading EM Swing alone, more than doubling the profits over time.

By combining systems, timeframes, and markets, we afford ourselves an improved opportunity to survive the futures markets. Not only have we theoretically moderated the day-to-day swings of our account equity, but we have also allowed ourselves to capitalize more efficiently, capturing more profit per account dollar. Diversification naturally leads to a focus on the big picture, rather than the day-to-day wiggles of one system trading one market. This makes the business of investing a smoother journey.

In a world where a small edge can yield a big advantage, a diversified portfolio approach to trading futures can help turn a losing year into a winner and a trader into an investor. It may well be the only free lunch investing has to offer.

For information on the TradingVisions systems and portfolios, visit www.TradingVisions.com.