

To Delete Is Sweet

Who wants to be the first financial archaeologist? Before you say, "Me!" consider what the job description entails. You will have to sift through mountains of trade records, account statements, Web site archives and CNBC videotapes to answer the burning question, "What were they thinking?"

Try to explain index funds to some eager young student in the 23rd century: "Well you see, little Zol-Dan, they had these things called mutual funds and a long bull market that lasted from 1982 to 2000. At the end of this period, during which any random selection would have made money, the largest stock fund didn't try to pick stocks at all. No, they simply owned all of the stocks in an index whose weights were a lagging function of previous market movements. This fund had to buy ever-increasing portions of ever-more overvalued stocks, and then they sold them as they fell. It had a lot of imitators, and they all did the same thing at the same time. What do you think of that, little Zol-Dan?"

"That doesn't make any sense. How'd those funds do?"

"Over time, much better than most."

Take A Chance And Enhance

On the surface the term "enhanced index fund" is an oxymoron: You're either an active or a passive trader, and that's that. But the temptation to stay close to the index and then add value through some incremental strategy must be overwhelming. Open up a newspaper, and you'll see the tiny agate type used in two places, the sports pages and the mutual fund tables. Only athletes are measured more intensely and rewarded more lavishly for minor differences in performance than fund managers.

Contrary to the spam e-mail you get suggesting otherwise, there are only two proven routes to enhancement, deleting losers and adding winners. The former is more satisfying and is definitely the road less traveled: As noted above, the ability of professionals to pick winners is less than their self-image would indicate.

How would you go about deleting a stock from an index using single stock futures, effectively converting the NASDAQ 100 (NDX) into the NASDAQ 99? The answer is a lot simpler than you might think. Intel provides a particularly useful example because of its high weight, 5.759%, in the index, and because it has underperformed the NDX 100 so far in 2002, a loss of 42.29% compared to a loss of 36.055% on the NDX. All of the steps below are embedded in a spreadsheet you can download; this sheet will contain the weights and prices at close of business on November 8, 2002.

1. Calculate the number of shares the stock represents in the index by using the following formula; the QQQ will be used as the trading instrument for the NDX:

$$\text{No. Shares} = [\text{Futures size} * \text{Intel weight} * \text{QQQ price}] / [\text{Intel price}]$$

This calculates to 7.955 shares of Intel in a 100-share QQQ future and 79.547 shares of Intel in a 1,000-share QQQ future.

2. Calculate the dollar value of a 100-share Intel future:

$$100 * \$18.15 = \$1,815$$

3. Divide this dollar value by Intel's weight in the NDX, and then divide this number by the QQQ price, to obtain the number of QQQ shares needed so that a 100-share Intel future constitutes 5.759% of the total:

$$(\$1,815 / .05759) / \$25.07 = 1,257.12 \text{ QQQ shares}$$

4. The resulting number of shares frequently is odd; I recommend multiplying to get to a multiple of 100 or 1,000 shares, depending on which QQQ future size you want to use. A factor of 4 will produce on a rounded basis 5,000 QQQ shares, which corresponds to 50 100-share QQQ futures or 5 1,000-share QQQ futures.

Margin

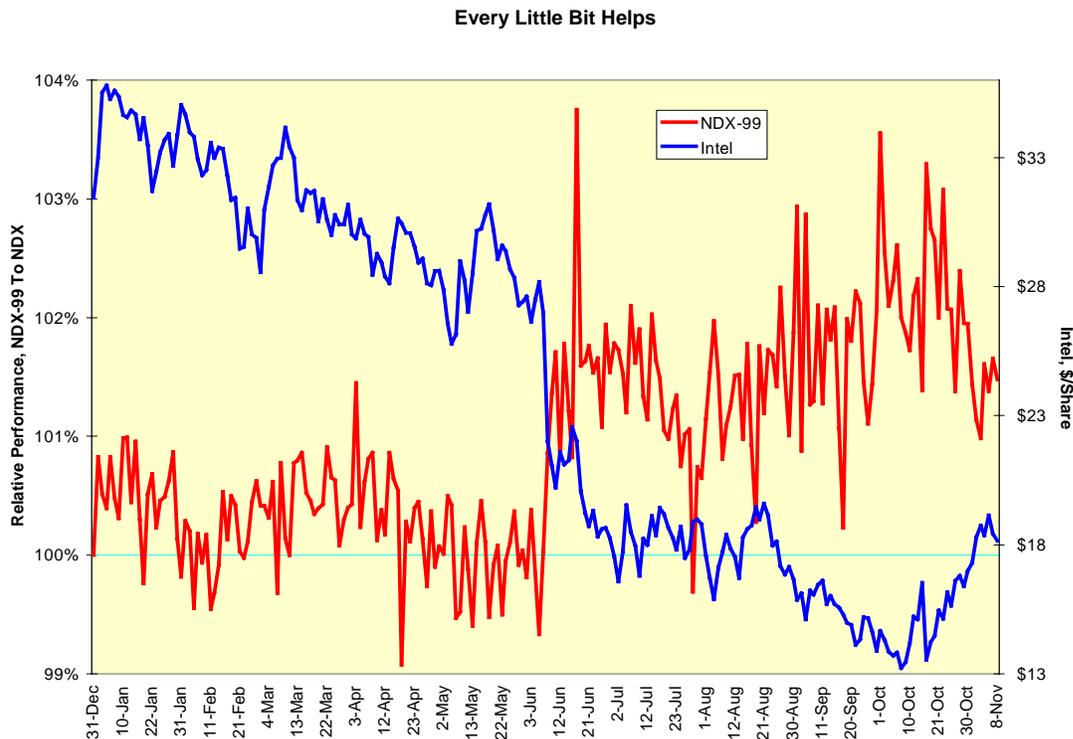
The margin on single stock futures is 20% of the current market value, and there are no offsets for trading an individual future against an ETF future. The margin on the above "NASDAQ 99" trade, long the QQQ futures and short the Intel futures in the quantities shown, is:

$20\% * (400 * \$18.15 + 5,000 * \$25.07)$, or \$26,522

As is the case for all single stock futures, this margin level will fluctuate daily with the prices of the underlying stocks. There are no costs associated with stock lending because you can go short with single stock futures without borrowing the stock. More importantly for institutions, there is no risk of a buy-in by the stock lender; futures effectively are a European-exercise instrument.

The Results

Performance measurement falls into two categories, absolute and relative. Chances are you measure your own trading performance on an absolute basis: Do you ever answer the question, "How did you do?" with "I got killed, but the good news is that I beat the S&P!" No, that is the yelp of a beaten cur, or what is known as relative performance measurement. Most active fund managers consider it the mark of success to beat their benchmark on a relative basis even if they have lost your money on an absolute basis. With that, let's compare how our NASDAQ 99 would have fared since the start of 2002 against its NDX benchmark.



On an absolute scale, our NASDAQ 99 lost 35.11% on both a price and a total return basis. Our NDX benchmark lost 36.06% on a price basis and 36.01% on a total return basis (thank heavens for dividends!). The 90 basis-point difference is significant to institutional fund managers, and as they will be adopting this index deletion strategy using single stock futures heavily as a result.

The trade is symmetric for index addition. Bearish funds could buy the futures of expected strong performers to enhance their downside performance.