Investment Strategy - By Thomas Peterffy

With a Bit of Work You Can Beat an Index Fund
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The S&P 500® Index is a capitalization weighted index of 500 large US corporations. The value of the index is determined by calculating the market value of each corporation by multiplying the share price by the number of shares outstanding, summing the 500 market values and dividing by the divisor (a constant recalculated by Standard and Poor's so that when a change is made in the list of the 500 stocks, the index value remains unchanged).

The E-Mini S&P 500 futures contract is a cash settled contract. The buyer of the contract will receive and the seller will pay 50 times the amount by which the settlement price exceeds the trade price at settlement time. If the settlement price is lower than the trade price the buyer pays and the seller receives 50 times the difference. At the time of settlement, on the morning of the third Friday of the quarterly contract month, the opening stock price of each stock is used to determine the index value to be used for the settlement price.

Buying a futures contract is the economic equivalent of buying an S&P 500 index fund or a basket of the 500 stocks in appropriate quantities with two exceptions.

• The buyer of the basket or fund has to pay full value whereas the buyer of the futures contract only pays a good faith deposit called the margin on which the broker generally pays interest.

• The buyer of the fund or basket receives the dividend on the stocks while the holder of the futures does not.

For this reason the "fair value" of the futures contract at any time is the value of the index plus interest less dividends.

When the futures price deviates from the fair value professional traders will quickly bring it back into line. Those wanting to go long the market will buy either the stocks or the futures depending upon which is lower relative to fair value and those wanting to sell will do the opposite. Occasionally the deviation from fair value becomes so large that it pays for arbitrageurs to buy or sell the S&P 500 basket of stocks against the futures. Futures tend to go to a premium or discount to fair value just before sudden movements in the market. We suspect that this is because traders are front running "program trades" in which institutions are buying or selling entire lists of stocks at the same time. Accordingly, a wide premium or discount on the futures is generally a good indication of the immediate direction of the stock market. Your Interactive Brokers Trader Workstation shows the "arbitrage bar" next to the cash index price. The green or magenta color and the length of the bar indicate the extent of the premium or discount over fair value. Many traders find this a useful indicator of when to enter or close positions.

Historically, the large majority of mutual funds have under performed the S&P 500 index. This has given rise to the popularity of index funds in which managers assemble a portfolio that replicates an index. The S&P 500 index funds are the most popular of passively managed index funds. With the use of futures, a sophisticated investor can outperform an index fund by eliminating the management fee and enhancing yield. Instead of buying the index fund, the investor buys S&P 500 E-mini index futures in the same amount. (Each contract contains 50 shares of the index and, accordingly, covers an investment of $50,000 when the index price is 1000). The commission is about $5 per $50,000 investment, but that's not all. Unlike the fund, the futures mature and settle for cash once every three months. Accordingly, the investor has to roll the futures forward by selling the maturing future and simultaneously buying a
forward future. This would be a difficult trade were it not for what is known as a **spread** order. The investor gives the broker a spread order in which the price difference between the further out, say six months forward, and the nearby contract is stated. The commission on a spread trade is about $10 per rolled contract. The price at which the forward contract is bought is more than the price at which the nearby is sold. This difference represents interest and the rate on this interest is the key feature of this strategy. S&P 500 index futures tend to trade even with **Eurodollar deposit rates** of equal maturity, less the dividends which the holders of the stock or index fund get and holders of futures do not get. The investor does not pay for the futures contract but puts up margin only and the broker carrying the account will pay interest to the investor at near T-bill rates on this margin. Thus, **80% to 90% of the money** that would have gone into the index fund is still available for investment. A high capitalization **corporate bond fund** is a logical place for this money. It can be invested in the bonds of the same companies that constitute the index at a yield usually 1 to 2 percent higher than the sum of the dividends and the rate at which the futures contracts will have to be rolled forward. There is one more factor that needs to be considered when choosing to follow this strategy. As the stock market and price of the index fluctuate, margin is paid and received by the investor. When the index price rises, the appreciation in the value of the contracts is received by the account and conversely, when it falls, the loss has to be paid by the account. Thus, it is a good idea to choose a bond fund that is easy to transfer money in and out of.

It does take a bit of work, but **an extra 2% per annum may be worth it.**