

Using Single Stock Futures To Hedge Sector Dividend Risk

Active traders cannot be passive about passive investing, at least not actively, and this has been the case since Burton Malkiel's original *A Random Walk Down Wall Street* in 1973. His premise that market analysis, either technical or fundamental, was incapable of recovering its costs and overcoming its mistakes to a degree sufficient to beat a passive broad market index such as the S&P 500 created a major industry, index funds.

We will not join the debate on the relative merits of active versus passive investing; it is rather like one of those sociopolitical issues such as gun control or drug decriminalization where Churchill's definition of a fanatic, "someone who can't change his mind and won't change the subject," applies. What we will do is note the original concept of broad market indexation has expanded into ever-narrower niches with exchange-traded funds devoted to economic sectors and industry groups. In the old days when a Wall Street strategist opined about buying the energy sector and selling the financial sector, it was difficult to turn that opinion into an actual trade. It is now quite easy, perhaps too easy, to buy or sell an entire economic sector of the market at one time.

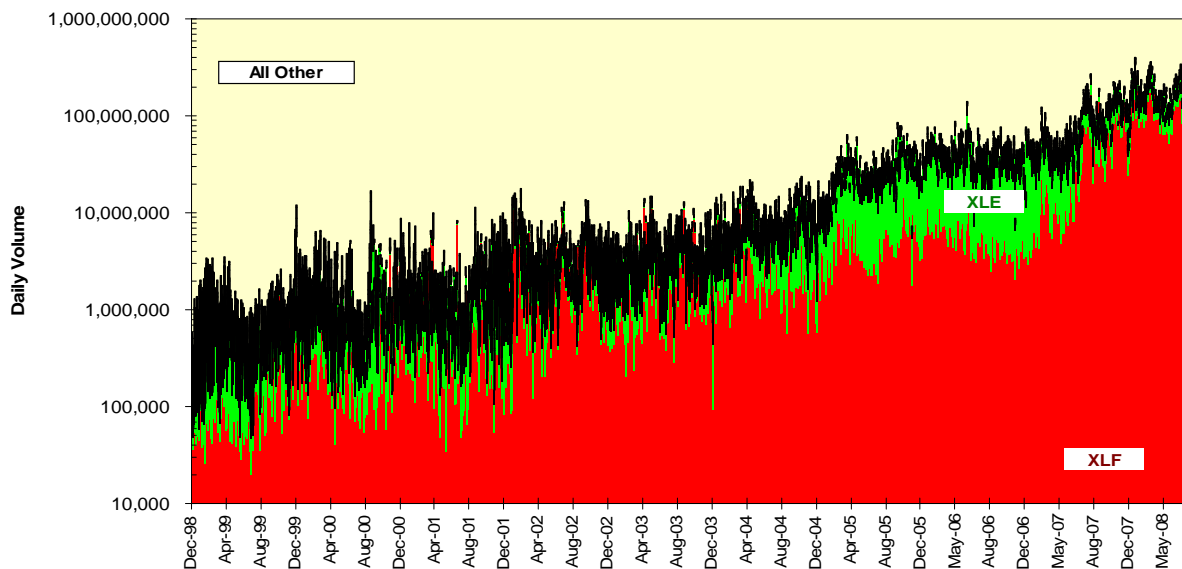
Sector ETFs

Standard & Poor's divides the U.S. stock market into ten broad economic sectors, nine of which support sector ETFs. The sectors and their associated tickers for their Select Sector SPDRs are:

Basic Materials	XLB
Energy Services	XLE
Financials	XLF
Industrials	XLI
Information Technology	XLK
Consumer Staples	XLP
Telecommunications	
Utilities	XLU
Health Care	XLV
Consumer Discretionary	XLY

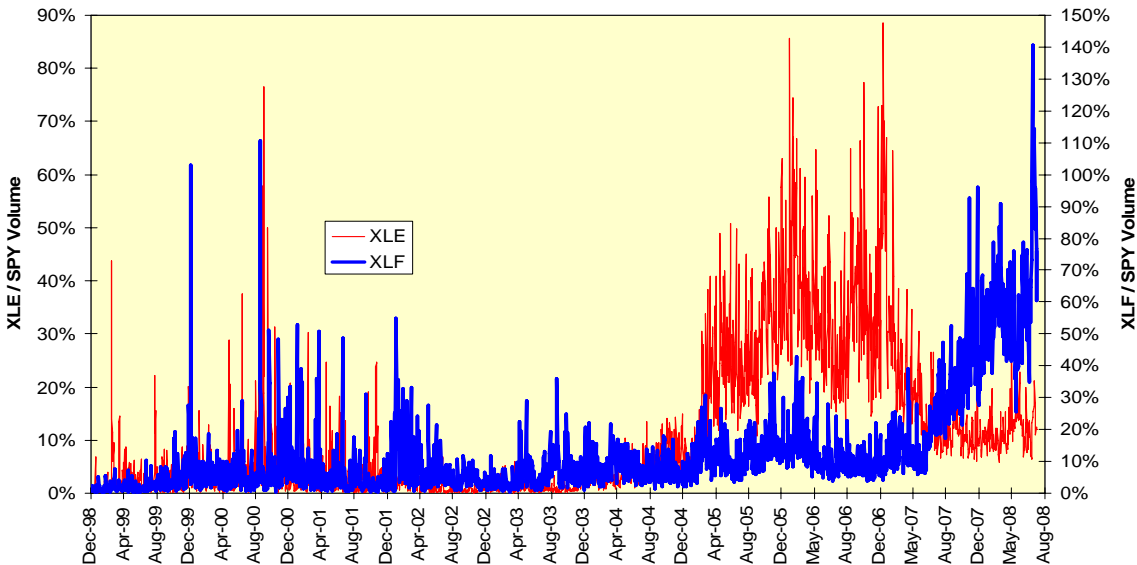
While the growth in these ETFs trading volume has been quite impressive, averaging 64.9% per annum since their December 1998 inception, the aggregate is misleading. The trading activity has been concentrated in two separate sectors, energy and finance. These are the two sectors whose driving factors such as crude oil prices or monetary policy lend themselves to making equity bets applicable to most firms within that sector.

Energy & Financial ETFs Have Proven Most Popular



If we break these two sectors out of the pack and normalize their trading volumes to the original SPDR, the one for the S&P 500 itself trading under the ticker SPY, we can see where and when traders shifted their bets. The XLE was the trading favorite in 2005-2007; interestingly, its normalized volume fell after crude oil began its run from \$70 to \$145 per barrel at the end of August 2007. This was when the XLF began its surge in trading popularity; by July 2008, it had several days where its trading volume exceeded that of the SPY.

Financial & Energy ETF Volume As Percentage of SPDR Volume



The market environments of these two sectors during their respective trading volume bursts could not have been more different. The XLE became a popular trading vehicle for people trying to get in on a bull market; the XLF became a popular trading vehicle during a credit crunch and a period of both higher volatility and declining price for the financial sector.

Price Risk, Dividends And Single Stock Futures

If stock prices represent the discounted stream of future dividends, a widely accepted financial theory truly believed by precisely no one, then the rise and fall of price should be associated with a rise and fall of dividend payout expectations. Can those dividend expectations of an entire economic sector be hedged and traded?

Yes; this is where single stock futures (SSFs), enter the picture. We will use the XLF for the case study below. A SSF is a contract to make or take delivery of 1,000 shares of an ETF such as the XLF or XLE at the contract's expiration, typically the third Friday of the month. This conversion into the ETF unless the contract is offset keeps the SSF in line with the ETF. As the interest rate carrying cost of a SSF is less than that of the ETF, the long position in a SSF reflects that saving. However, as the holder of the ETF receives the dividend and can reinvest it, the long position must reflect that penalty. If we combine the two costs, the fair value of the SSF becomes the stock or ETF price plus the interest rate cost of carry minus the future value of the expected dividend, or

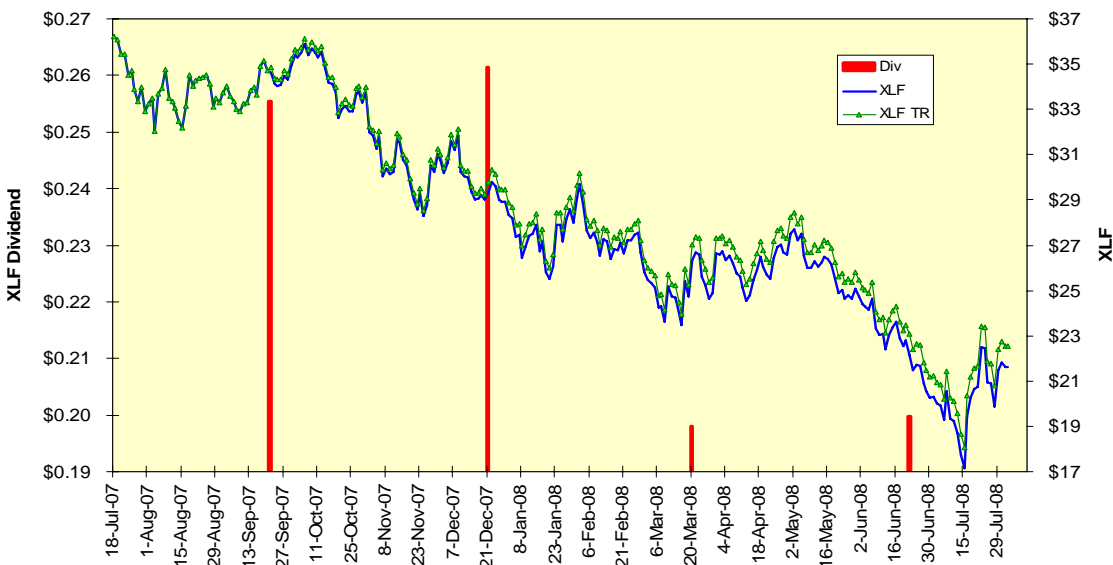
$$SSF = ETF * e^{r*((t_x - t_0) / 360)} - Div * e^{r*((t_x - t_d) / 360)},$$

where r is the effective federal funds rate, t_x is the expiration date of the future, t₀ is the date of evaluation and t_d is the ex-dividend date.

If the market starts to bet dividends will be cut in a sector, the future value of the expected dividends will fall and the SSF will rise relative to the ETF price. This makes a calendar spread around a dividend payout date of being long the distant SSF and short the near SSF a bet on dividend reduction.

The XLF receives the dividends from its component stocks continuously and accumulates those dividends in the interest-bearing cash accounts used for creating and redeeming the units. The accumulated dividends are distributed on a quarterly basis. We can see from the history of the XLF since the onset of the credit crunch the dividend payout was in fact cut significantly between the fourth quarter of 2007 and the first quarter of 2008.

XLF Dividends And Total Return During Credit Crunch



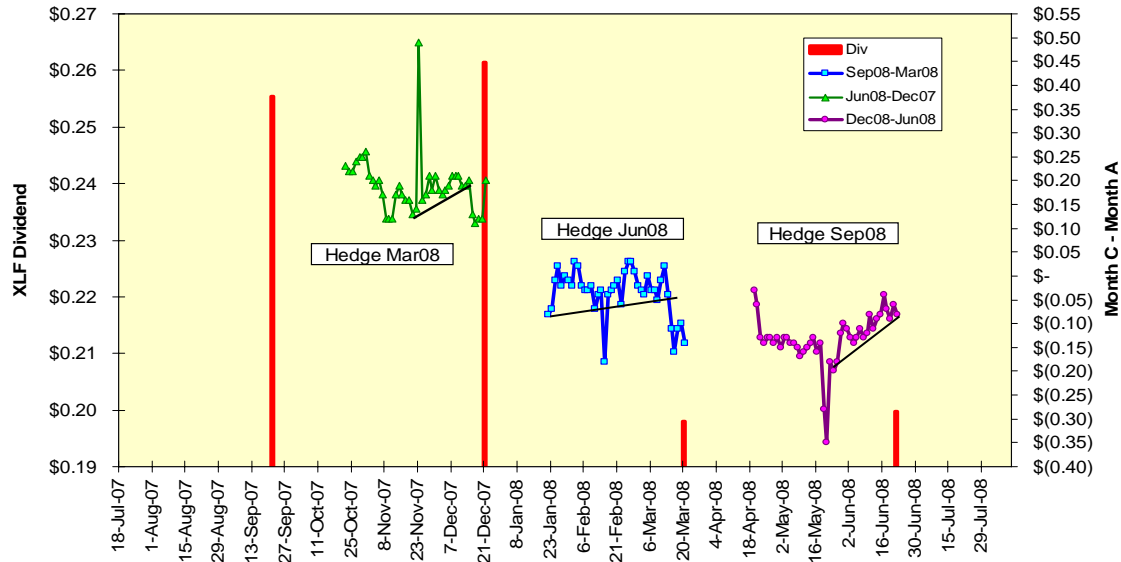
The Spread Trade

As fate would have it, the XLF has gone ex-dividend on the very days when the quarterly SSFs expire. This means that hedging dividend risk with SSFs involves not a consecutive-quarter spread trade, but rather a split-quarter trade. For example, a trader standing in December 2007 and worried about the March 2008 dividend would not buy the March 2008 SSF and sell the December 2007 SSF but rather buy the June 2008 SSF and sell the December 2007 SSF.

As the short front-month SSF converts to a short position in the ETF upon expiration, you have to decide if you want to offset the trade by unwinding both legs of the spread, taking a short position in the ETF hedged with a long position in the SSF (“buying the exchange of futures for physicals,” or EFP) or rolling the position forward by replacing the short December 2007 SSF with a short January 2007 SSF. The first choice eliminates all dividend risk; the second and third choices maintain your bet on further decreases in the ETF dividend.

How have these quarter-to-quarter trades performed since the onset of the credit crunch (including rolls to the serial month futures would clutter the illustration)? If we overlay the two-quarter calendar spreads over the dividend payouts, the answer seems to be you have an opportunity to make somewhere between \$0.05 and \$0.10 per trade fairly consistently at no ordinal price risk. As there is no such thing as a free lunch, your risk here is the financial sector would increase its dividend payouts unexpectedly.

XLF Dividends And Inter-Quarter Spreads During Credit Crunch



A final note should appeal to those interested in this trade, and that is the performance bond or margin involved: The margin for SSF calendar spreads is 5% of the current market value of the more expensive future, and you can post interest-bearing securities in your brokerage account to satisfy this margin.

At this point it does not require much of an imagination to see how a low-risk bet on the dividend payout of a sector can generate a high level of cash-on-cash returns. As the liquidity of the SSF is bounded in theory only by the volume in the underlying ETF, and in practicality by the ability of market makers to keep the opposite trades in the form of the ETF, ETF options or SSFs on their books, you have the potential to take a large position. Think of it as an active trade on a passive investment instrument. And if you do not have a view on where that sector and its dividend payouts are headed, why are you trading it at all?