Different Tools, Different Rules

The principle of indifference is easy to ignore, but it is central to the pricing of all markets, including exchange-traded futures and options. A sound understanding of how futures markets are priced relative to their underlying assets and of how futures and options differ in their risks and returns will be essential for your success when single stock futures (SSFs) launch circa March 2002, so let's take a look at some important concepts.

Basis or Fair Value: If short-term interest rates are 2%, we should be indifferent between $1.00 today and $1.02 a year from now. If we tie up $10,000 in a stock, we are foregoing this rate of return, so we should be indifferent between paying $10,000 today or $10,200 to take delivery on a SSF one year from now. However, let's say this stock pay has a dividend yield of 1%, or $100. The owner of the stock receives the dividend, but the long position in a SSF does not, so the long position in a SSF will reduce the bid by the future value of this $100.

A futures contract trading perfectly in this relationship is said to be in **full carry**. Stock index futures, such as those on the S&P 500 or the Nasdaq 100, typically trade very close to full carry due to the ease of arbitrage. If, for example, the future fell below its fair value, arbitrageurs would buy the undervalued futures and sell the overvalued index in a sell program; the opposite, a buy program, occurs when the futures are trading at greater than fair value.

The Forward Curve: Will SSFs trade in a tight band to their fair value? For the most part, yes, but an interesting exception can arise. In the index arbitrage example, we just sort of assume we can sell a basket of stocks and buy the future, and unless the market closes down or there is a restriction on program trading, this will be the case.

However, there are many cases where an individual stock cannot be sold because none is available to borrow. A short squeeze can arise in this situation, and the stock can surge higher. Selling a SSF in the delivery month against a stock in a short squeeze – some use the bond market term of "special" to describe this situation – is particularly dangerous. Not only will you run the risk of being unable to deliver the stock against your short SSF position, but you will face treble damages for default on this obligation. A bad day all around.

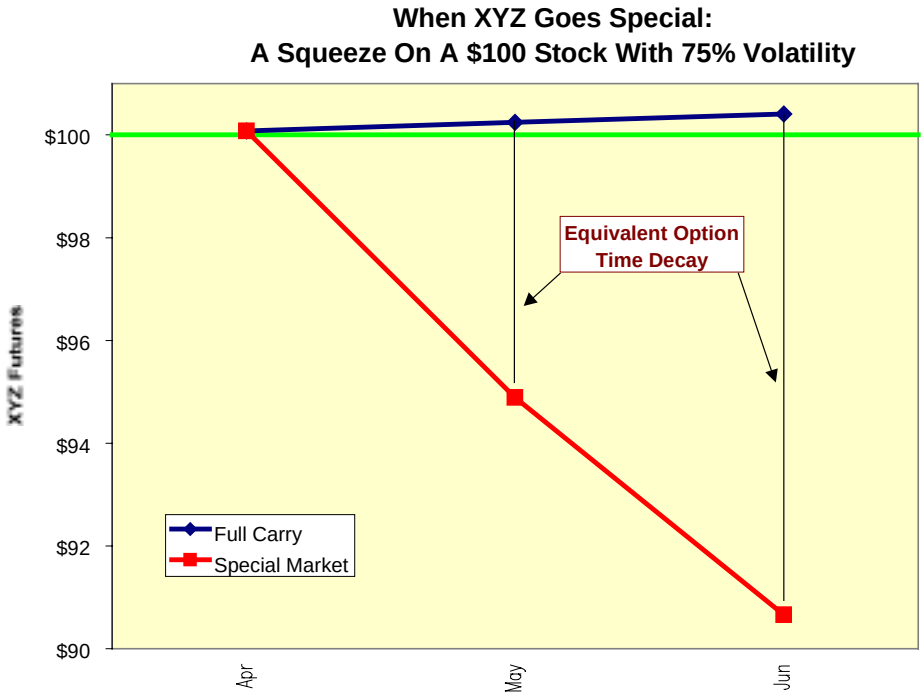
In such instances, we may see our normal basis relationship disappear as no one will be able to sell the overvalued special stock and buy the undervalued SSF in the delivery month. But, grateful owners of the special stock may wish to protect their windfall gains while still leaving the door open to further profits. They can do so by selling the next-month future... but to whom? Buyers are clamoring to cover their needs for the here and now, not for forward delivery. Like a child's seesaw, we'll see the prompt future get pushed higher by lack of selling and panic buying in the special situation and the later-month futures get pushed lower by anxious selling and lack of buying interest. This forward curve condition is called inversion in most markets and backwardation in energy and metals markets.

Hedge Costs: There's no such thing as a free lunch or free insurance, especially when your insurance agent buys you lunch. Many RealMoney readers have asked how SSFs will differ from options. Let's list these differences quickly and then conclude with one more example of indifference, the risk-adjusted equivalence between futures and options.

1. A long option position, whether a put or a call, is a right, but not the obligation. SSFs will always be obligations.
2. A long option position, whether a put or a call, has a limited loss feature. The loss potential of a SSF will be identical to that of the stock itself.
3. Options involve an exchange of premium payments. SSFs will have margin obligations, but have no exchange of funds until delivery.
4. Options exhibit non-linear behavior over time, price, and volatility. SSFs will be vastly simpler and easier to understand.
5. Options can move opposite to their underlying stock. SSFs cannot exhibit this behavior.
6. The bid-ask spread on options can be a significant percentage of the trading costs. SSFs should have very narrow trading spreads.

Once a SSF forward curve moves into inversion, you are faced with selling something for future delivery for less than what it is selling for today. This unpleasant situation means you are paying insurance, or trading a definite loss against the potential for a much greater loss. You will not pay more for this insurance than you will for similar insurance in the options market. The expected loss on an options position is its time decay, a cost that rises with the volatility of the underlying stock. Since special stocks will be highly volatile, say 75% or so, we should expect both

the option insurance cost and the futures insurance cost to be high, as illustrated below. The two insurance markets will be equivalent to one another, as they must be.



Later articles in this series will discuss market analysis and trading strategies based on the information that will be contained in the SSF forward curve. At the risk of shameless self-promotion, I discuss forward curves in Chapter 4 of my book. In addition, I will be giving an Internet-based course on futures markets later this year, contact info@clfm.iit.edu for information. Finally, I am planning an educational tour on SSFs where you can receive academic certification for the training.