Thinking In Basis Points: The OneChicago Advantage

"The important thing is not to stop questioning. Curiosity has its own reason for existing." -- Albert Einstein

Einstein was the master of the thought experiment; he is said to have conceived special relativity thus: "I realized if I was riding on a beam of light, time for me would stop." Newton, his predecessor, had a similar curiosity; everyone knew apples fell downward but only he bothered to develop the theory of gravity.

Before we go on, let's remember both geniuses were financial neophytes. Newton was wiped out in the South Sea Bubble, and Einstein lamented, "The hardest thing in the world to understand is the income tax." The connection between being a genius and being a successful trader does not exist, and anyone who believes otherwise is invited to read Roger Lowenstein's classic study of Long Term Capital Management's collapse, *When Genius Failed*.

Stocks And Interest Rates

Too many investors and traders approach each financial market in a vacuum, and indeed we have organized our financial institutions accordingly. We have U.S. small cap value traders, global convertible bond traders, option traders, credit derivative traders, etc. Lost in all of these divisions and specializations is a simple reality both Newton and Einstein would have recognized immediately: All capital markets are linked together so as to provide investors with an identical risk-adjusted rate of return for any given time horizon.

Whether an investor is buying a stock, a bond or providing a loan, that investor expects to make a return relative to the risk-free, or Treasury bill, rate of return. The stock investor may have more upside, but the stock investor has to accept more risk. And lost to too many is another reality Einstein would have recognized, and that is the buyer of a stock always foregoes the risk-free rate of return and as such is borrowing from him- or herself.

Armed with this simple insight, what should a rational stock investor do? Lower the interest rate cost of accepting the risks and returns of the stock market. It is that simple. And how should a rational investor do this? Single stock futures (SSFs); once again, it is that simple.

The Single Stock Futures Advantage

SSFs at OneChicago are contracts to buy or sell 100 shares of an underlying stock or 1,000 shares of many exchange-traded funds. While an SSF contract can be offset any time prior to the contract's expiration, normally the third Friday of the contract month, a contract held through expiration converts into either ownership of the stock for a long position or delivery of the stock for the a short position. The end position of either transaction, either trading the stock or trading the SSF, is the same at expiration; the only question is which one was cheaper and more efficient.

For a short position, there really is no comparison. Instead of going through the normal stock loan procedure of finding someone with the stock to lend, borrowing those shares, posting 150% of the value as margin, possibly but not necessarily receiving some portion of the interest earned on those shares as a rebate and being subject to the recall of those shares – all of which are cumbersome and non-transparent processes – you simply take a short position in the future and post an initial margin or performance bond of 20% of the value of the underlying stock. The procedure is completely transparent and the credit quality is that of the AAA-rated Options Clearing Corporation. OneChicago is regulated by both the Securities & Exchange Commission and the Commodity Futures Trading Commission.

Where Are You Borrowing Or Lending?

Once you make the little mental leap to thinking of stock purchases and sales in terms of interest rates as well as in terms of price, you will find a surprising number of transactions involved. All of these are included in OneChicago Calculator, described in detail **[NOTE: Insert hyperlink to this document]**.

On the stock side purchase side interest rate charges include:

1. The Buy Side Finance Cost, which is the rate at your broker charges for margin lending multiplied by the percentage of the stock purchase you borrowed and the length of the loan; and
2. The Opportunity Cost of Initial Funding, which is the money you borrowed from yourself. This is the amount of cash invested in the stock multiplied by the interest rate you were earning on that cash and the length of the loan; and

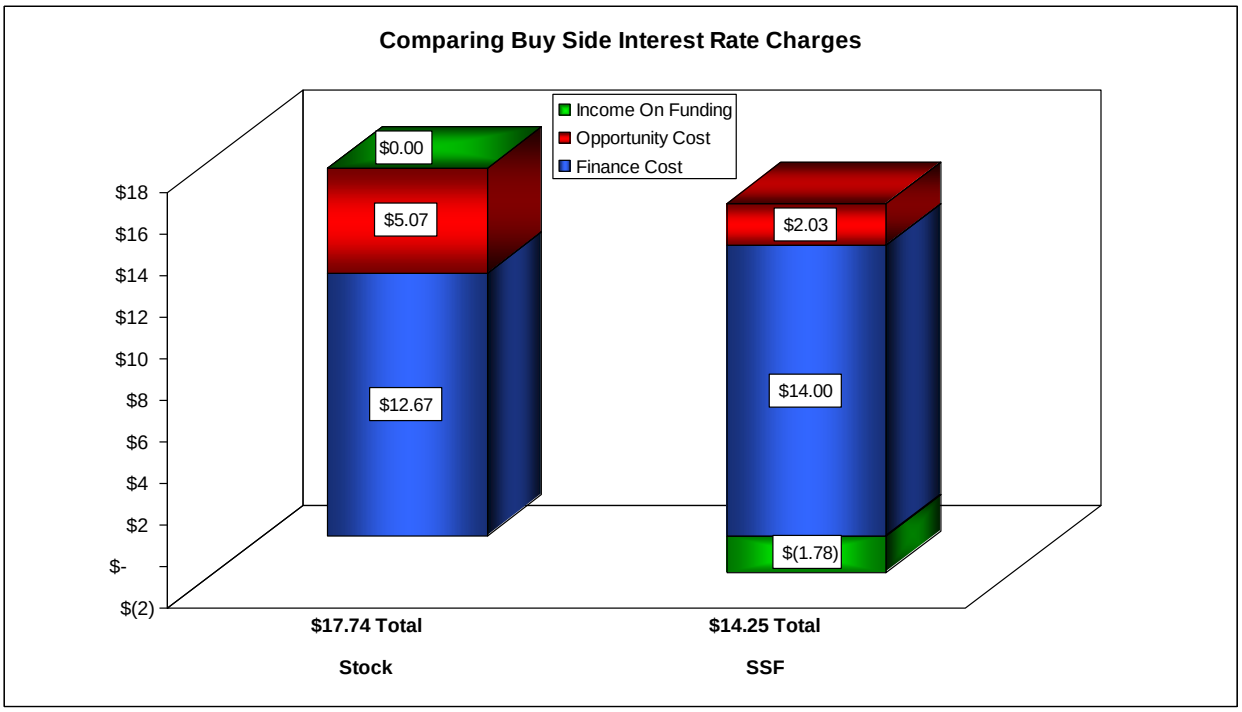
3. Interest income on reinvestment of dividend, if applicable

On the SSF long side interest rate charges include:

1. The Buy Side Finance Cost, which is the spread between the asking price of the SSF and the bid price of the stock minus the dividend, if applicable;
2. The Opportunity Cost of Initial Funding, which is the amount of money you borrowed from yourself. This is the 20% performance bond of the SSF multiplied by the interest rate you were earning on that cash and the length of the loan; and
3. Income on Initial Funding. This is an interest rate offset. As you get to post T-bills as your performance bond, you get interest on those funds

Direct Comparison: Long Side
What do these numbers look like side-by-side for comparing a long SSF to the purchase of a stock? For the example below, we will use a stock trading at $86.87 bid / $86.88 offer with 21 days left to the expiration of a future. The same data are used in the explanation of the OneChicago Calculator in **[NOTE: Insert hyperlink to this document]**. The base case interest rates used are:

Long interest rate (BLR). This is he rate which you will pay on any margin amount financed: 5.00%
Deposit interest rate (DIR). This is the amount you earn on cash invested in a risk-free account: 2.00%
Performance bond interest rate (TBR). This is the amount you earn on T-bills deposited in your margin account and posted against your SSF position: 1.50%
Percent of position financed (MGR). This is the amount borrowed under Regulation T margin: 50%



The Buy Side Total Cost for the SSF is $14.25, significantly less than the Buy Side Total Cost for the stock of $17.74.

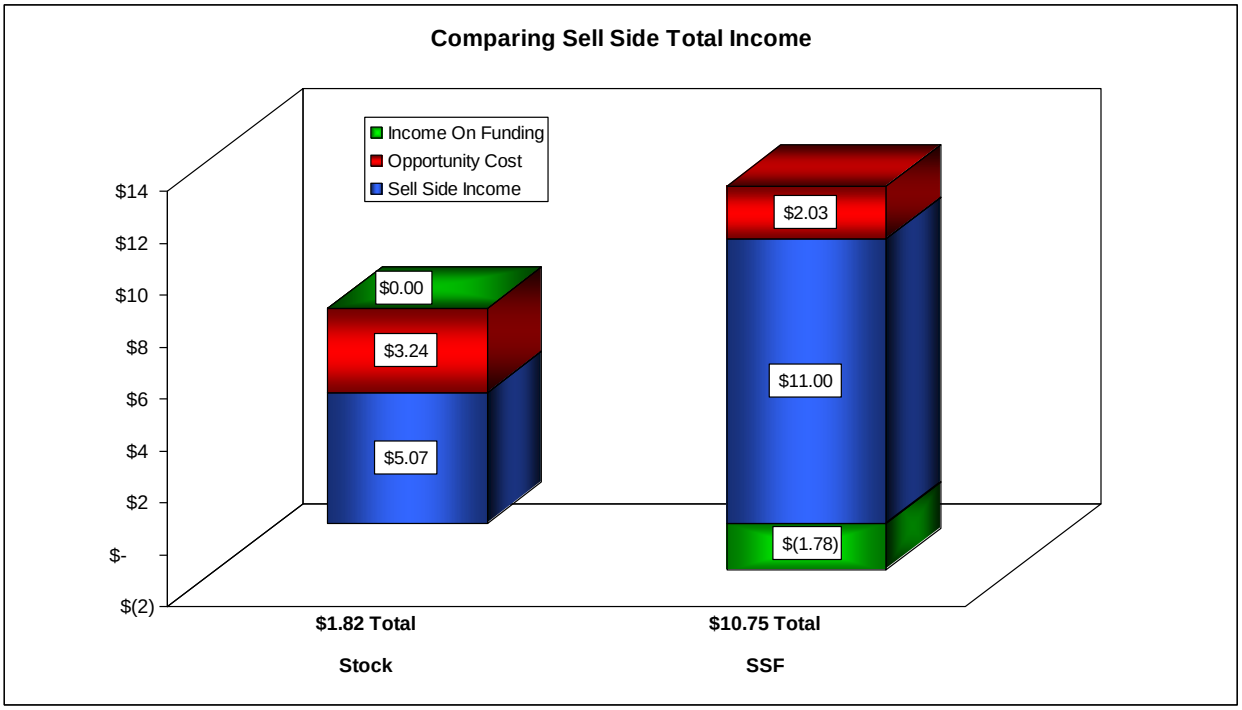
Direct Comparison: Short Side
We can construct a similar comparison for the short sale of a stock versus a short SSF. On the short stock side, interest charges include:

1. Sell Side Income, which is the amount you may earn from your broker in a "short stock rebate" over the period the stock is outstanding; and

2. Opportunity Cost of Initial Funding, which is the amount of money you have borrowed from yourself. This is the amount of cash posted as margin against the short stock multiplied by the interest rate you were earning on that cash and the length of the loan

On the SSF short side interest rate charges include:

1. Sell Side Income, which is the interest rate carrying cost of the future over the period of the trade, and is described by $SSF = Stock * e^{r*((t_x - t_0)/360)}$, where r is the effective federal funds rate, t_x is the expiration date of the future and t_0 is the date of evaluation. This is the federal funds rate multiplied by the price of the stock;
2. Income on Initial Funding. This is an interest rate offset. As you get to post T-bills as your performance bond, you get interest on those funds; and
3. Opportunity Cost of Initial Funding, which is the amount of money you borrowed from yourself. This is the 20% performance bond of the SSF multiplied by the interest rate you were earning on that cash and the length of the loan



The OneChicago Advantage

Once you start thinking about stock trading in basis points, it is easy to see how and why SSFs have a significant interest rate advantage for both purchases and short sales of stocks, and that is over and above the mechanical difficulties involved with going short on a stock.

We cannot claim to know what Einstein would have thought, but he might have wondered where all of these interest rate savings were his whole life.