FTS Real Time Project: Long Short Strategies

Introduction

In a long short stock strategy, you hold long positions in some stocks and short positions in others. The stocks held long are those expected to go up in value, while those held short are expected to go down in value, so the aim is to benefit on both stocks that gain in value and stocks that decline in value. We illustrate this with the FTS 30 Stock Case.

You may choose which stocks to hold long or short based on a variety of factors. For example, a sector rotation model (described in a separate project) would tell you that some stocks rise in value and others fall in value at different stages of the business cycle. But you don't have to have a very strong view about what will do well to benefit from a long-short strategy. For example, suppose you think the stock of Bank A will do better than the stock of Bank B. If you go long Bank A and short Bank B in equal dollar amounts, then the following outcomes are possible:

- Both rise in value
  - If Bank A gains more than Bank B, you make money on Bank A and lose on Bank B, but make money overall since Bank A outperforms Bank B
  - If Bank B rises by more, you lose, but your loss on Bank B is hedged by the gain on Bank A
- Both fall in value
  - If Bank A falls by less than Bank B, you lose on Bank A and make money on Bank B, but make money overall because your loss on Bank A is more than offset by the gain on Bank B
  - If Bank A falls by more than Bank B, you lose overall, but your loss is hedged by the gain on Bank B
- Bank A rises, Bank B falls
  - This is the best case scenario; you make money on both stocks
- Bank A falls, Bank B rises
  - This is the worst case scenario, you lose money on both

So the strategy does well if Bank A does better than Bank B (either rises while Bank B falls, or rises more than Bank B, or falls less than Bank B). If you are right, the strategy does well. Even if you are wrong, your losses are hedged, except in the case where you are totally wrong.

In summary, a long short strategy lets you benefit from your view on the relative performance of stocks. Unlike a strategy in which you only hold long positions, you can benefit even if the stocks in the portfolio all lose value.

A strategy in which the dollar value of the long and short positions are equal is called a "market neutral" strategy. Other strategies include those where the dollar value of your long position is greater than the dollar value of the short position. A strategy with opposite positions in two stocks, like the strategy in the example above, is called a "paired trade."

Besides the dollar amount, you can also choose the relative positions of the short and long positions based on beta. In a beta neutral long-short strategy, the portfolio beta is zero, so the beta of the long positions equals the beta of the short positions. The strategy is then (at least in principle) insensitive to the direction of the market. Finally, you can also be sector-neutral, which means that you are neutral across sectors in the portfolio; this neutrality can be either dollar-neutral or beta neutral.

Project

- Out of the 30 stocks in the FTS 30 Stock case, select two stocks where you expect the first to outperform the second in the short terms.
    - You can form this opinion in any way: for example, if Company A has come out with a product that you think will do well while Company B has not, you may feel that Company A will outperform Company B. You can also follow analyst recommendations; if a stock is upgraded (say from a "hold" to a "buy" recommendation), you could use that to form your view.
- Buy the stock you think will outperform and short the stock you think will underperform, keeping your portfolio dollar neutral
- Every day, re-balance your portfolio so it remains dollar neutral
    - As prices change, the dollar value of each will change
    - You will have to buy or sell the stocks to make sure you remain dollar neutral
- At the end of the project, total up your gains and losses, and describe
    - Whether your view was correct
    - Whether the strategy let you make money if you were right and hedge your losses unless you were completely wrong

The FTS Real Time Client has an analytic called "Long Short Analysis" to help you with this exercise:

Edit | US Dollar | Stocks: Long Short Analysis

	Value	Beta
Longs	96,128.00	0.9827
Shorts	-16,820.00	-0.7774
Net	79,308.00	0.2053
3M COMPANY	0.00	0.8100
ALCOA	1,123.00	2.1100
AMERICAN EXPRESS	8,138.00	2.1700
AT&T	0.00	0.6600
BANK OF AMERICA	2,700.00	2.4500
BOEING	0.00	1.3100
CATERPILLAR	7,064.00	1.8200
CHEVRON	15,472.00	0.6900
CISCO SYSTEMS	0.00	1.2400
COCA-COLA	0.00	0.6200
E.I DU PONT DE NEMOURS	0.00	1.4900
EXXONMOBIL	6,105.00	0.4000
GENERAL ELECTRIC CO	3,182.00	1.7100
HEWLETT-PACKARD CO	(7,764.00)	1.0000
HOME DEPOT INC	0.00	0.7000
INTEL	1,800.00	1.1300
INTERNATIONAL BUSINESS MACHINE	50,544.00	0.6800
JOHNSON & JOHNSON	(5,982.00)	0.5900
J.P. MORGAN CHASE & CO.	0.00	1.1600
KRAFT FOODS	(3,074.00)	0.5800
MCDONALDS CORP	0.00	0.5400

This analysis shows you the dollar value invested in long positions and the beta of the long position, the dollar value and beta of the short position, as well as the net. You can use this to create dollar-neutral and beta-neutral portfolios.