Goldman Sachs Trade Pitch Competition

Spring 2019

The objective of this competition is for students to learn how to create and justify a trade idea on behalf of a hedge fund. Students will work in self-selected teams of three to propose a unique trade (buying and/or short-selling specific securities), and create a 5 – 7 page powerpoint presentation with an explanation of the trade thesis. The top 10 teams will ultimately be invited to present their trade idea to a panel of Goldman investment professionals on the afternoon of Thursday, March 28.

Background on Hedge Fund Investment Goals

Imagine that you are a hedge fund manager. Your goal is to return strong, positive portfolio returns to your investors year after year, regardless of market conditions. You charge a considerable amount in fees for your expertise: hedge funds are costly vehicles for their investors. A high net worth individual who wants to invest some of her money with a hedge fund will be charged between 1% - 2% of her invested funds each year (the Management Fee), as well as between 15% - 20% of the hedge fund’s profit that year (Performance Fee). Compare this with Mutual Funds, which may charge as little as 0.25% in management fees and no performance fee.

Why are hedge funds able to charge so much, relative to mutual funds? There are four principal reasons:

▪ Hedge funds are expected to outperform (i.e., generate significantly higher rates of return) relative to mutual funds, to justify these higher expenses.
▪ Hedge funds are expected to produce returns that have low correlation with the US equity markets.
▪ Hedge funds are permitted to take short positions, which increases risk but also has the potential to generate higher returns. Mutual funds cannot sell short, and therefore have more limited investment opportunities.
▪ Unlike mutual funds, hedge funds are largely unregulated, and are therefore not subject to the same limitations on types of asset classes and style of investment.

The first reason is self-evident; as with any purchase, you expect to pay more for better results. Hedge fund managers utilize a broader array of assets, often have superior access to research & company information, as well as the ability to create more sophisticated portfolios than mutual funds. In theory, this greater flexibility should enable them to generate significantly and consistently higher rates of return than mutual funds, as well as limited downside during bear markets (although in practice, this is by no means always the case).

Why do investors also want hedge fund returns to have low correlation with the financial markets? The motivation for this relies on two factors: (1) a well diversified portfolio (i.e., one in which the component assets tend to have low correlation with each other) will typically have higher risk-adjusted returns; and (2) investors are paying a premium so that their investments don’t just replicate the average market indices. The high cost of hedge fund investing is justified by the promise that returns will not only be uncorrelated to markets, but also
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uncorrelated to other investment managers. Sophisticated investors typically spread their hedge fund investment dollars across multiple funds, with the goal of diversifying across hedge fund styles.

Investors measure these two characteristics – the fund’s correlation with the US equity markets, and also the extent to which the fund has positive returns that are not well correlated with US equities – using two Greek letters: \( \text{beta} (\beta) \), and \( \text{alpha} (\alpha) \).

\( \beta \) is estimated by comparing a fund’s returns over time with those of the S&P 500 (or another broad index of US equity returns). A high \( \beta \) reflects both strong correlation with the S&P 500, and also high volatility of the fund’s returns. As noted above, investors would like hedge fund betas to be low. See Appendix 1 for a worked example of why investors don’t want hedge funds to be highly correlated with the S&P.

\( \alpha \) is estimated as the fund’s outperformance relative to a benchmark (usually US equity indices). It’s a hedge fund’s \( \alpha \) that justifies the fund’s high expenses; the best hedge funds provide reasonably stable, positive returns year after year, regardless of what is happening in the financial markets and the overall global economy. See Appendix 2 for an algebraic formula relating a hedge fund’s returns to its \( \alpha \), \( \beta \) and overall market returns.

**Hedge Fund Strategies**

Hedge funds employ a range of possible strategies; we have listed some below. You are not required to propose a trade idea that fits in one of these categories, but you **should** propose a trade that has low \( \beta \) and is expected to generate high \( \alpha \), both of which you should justify in your presentation.

- **Long-Short Equity** This strategy involves purchasing publicly traded companies that the hedge fund believes are undervalued, and short selling other equities that are determined to be overvalued. The portfolio contains long positions in the former, and short positions in the latter. This strategy is hedged against overall market moves, since the longs and the shorts will tend to cancel each other out in response to purely directional moves in the overall equity markets. Often the complementing shorts and longs are in the same industry; particularly where the hedge fund managers have particular expertise in that industry.

- **Merger Arbitrage** (also known as event driven): In the event of a proposed merger between two firms, or the acquisition of one firm by another, the values of the two firms tend to change in predictable ways. In particular, the shares of the acquiring firm often go down in value, reflecting the cost of the acquisition and the effort required to assimilate the new employees and infrastructure into the existing operation. Meanwhile the shares of the target firm typically go up, since the acquirer will have to purchase all of their shares in order to take it over, and that level of demand will tend to have a positive effect on its share price. (If multiple potential acquirers enter a “bidding war” for the target, this effect will be magnified, as will the negative impact on the shares of the winning acquirer, since their ultimate purchase price will be higher than if they had been the sole bidder.) The time span between the announcement of a possible acquisition, and the completion of the transaction, may be weeks or months; and not all proposed mergers actually take place. Merger arb hedge funds assign their own probabilities and expectations of the depreciation / appreciation of the corporate players, and take large positions – purchasing the target’s shares, and short-selling the potential acquirer(s) – if their view substantially differs from that implied by current market prices.
**Distressed Securities.** These are either the equity or the debt of firms that are in bad financial condition, or undergoing bankruptcy. Such securities tend to sell at very low prices, since there is considerable concern that they may be worth little or nothing in the event that the firm is dissolved. Investors who purchase distressed securities typically believe that the market has over-estimated the probability of bankruptcy, or underestimated the value of the firm's assets in the event that it enters bankruptcy and the assets are sold off.

**Fixed Income Arbitrage:** [NOTE: Students who have not taken either Econ 372, Econ 514, or another finance course that covers “bond math” are discouraged from creating a pitch that utilizes this strategy.] This strategy involves trading combinations of fixed income instruments (government bonds, corporate bonds, short term interest rates, etc.) to reflect a macroeconomic view. Examples might include: purchasing one particular US bond, and selling another, to reflect a view that the yield curve will steepen or flatten; a spread trade between short term US bonds and LIBOR (known as the TED spread) reflecting corporate credit concerns; or purchasing government bonds issued by one sovereign, and selling those of another, to reflect a view of changing relative economic status of the two countries.

**Global Macro:** With this strategy, the investment reflects a view of the changing relationship between international markets as a result of changes in their political or macroeconomic conditions. The trade may include buying and/or short selling currencies, equities, commodities or fixed income assets based on macro factors such as: political upheaval, business cycles, natural disasters, natural resource pricing (ie oil, gold) changing status of emerging vs developed economies, etc. Note that some global macro trades might also be classified as fixed income arbitrage.

**Sample Trades**

Here are some *sample* trade ideas, from earlier years, none of which fit precisely within any of the above categories. We provide these to show how broad the range of trade ideas can be. Note that your team must create your own trade idea (that is, you must not use any of the examples below).

1. **Tax Inversion M&A in the Pharmaceutical industry.** In 2014, “Tax Inversion” M & A trades have become popular. Companies seek to avoid higher US corporate taxes by acquiring an overseas company in a lower-tax country, and retaining profits in the merged corporation overseas. Recent examples of Inversion Merger attempts among pharmaceutical companies include: AbbVie to acquire Shire, the Medtronic deal to acquire Covidien, and Pfizer’s recently aborted deal to acquire AstraZeneca. All of these scenarios reflect openly planned tax avoidance schemes intended to capitalize on this tax loophole. This would be a good example of a trade idea that can be easily researched online, and is likely to be a relatively short-lived opportunity. There is a market inefficiency, a trade opportunity, a (near-term) catalyst (likely tax reform to repeal the loophole) and some inherent risks.
2. **A Short position on Herbalife.** In December 2012, the nutrition products company Herbalife became high profile in the media when the noted investor Bill Ackman publicly declared his bet against the company, arguing that it was a pyramid scheme, and lobbying the FTC to investigate the firm. Carl Icahn, another famous activist shareholder, took the opposite view and purchased a 13% stake in Herbalife. There are both long and short cases to be made here, with a potential the catalyst being the outcome of the FTC investigation. Background could include FTC’s history in assessing pyramid schemes, and hence a prediction of the likely outcome in the HLF case; as well as both of the activist investors’ arguments pro and against.

_NOTE: this trade is not hedged against market moves – it has a high β. You could remove the market-related risk of this trade by purchasing (or selling) the S&P 500 (via an ETF). The strategy of buying (selling) the S&P 500 to hedge a short (long) position in an individual equity is sometimes called an “equity hedged” strategy. Any losses from Herbalife’s stock price movements that are purely the result of an overall upward trend in the equity markets would be offset by gains on the S&P position (the same tradeoff applies in a negative market). In a trade of this type, your market hedging trade should be β-neutral; that is, if you sell $N million (market value) of an equity whose β is β_H, your offsetting S&P trade should have a market value of $N million x β_H._

3. **A long position in Sugar Futures:** Recently, a spike in perceived value of sugar has led to a rise in agricultural commodity prices across the board. Prior to this recent move, there was a bearish positioning in raw sugar, dating as far back to 2006. This is a classic story of supply & demand, where an anticipated shortage in sugar supply causes a rise in prices. In the case of sugar, the new-found long-biased can be attributed to concerns over sugar output in both Brazil in India, two of the world’s largest producers. In Brazil, the top sugar producing country, industry group Unica has repeatedly warned that a persistent drought will hurt the 2014-15 cane harvest and production. Similarly, weather concerns in India, the second-ranked sugar producer and biggest consumer, has spurred concerns over output as well, with a weak start to the high-rain producing monsoon season. Specifically, these heavy rains normally shower the southern tip of the sub-continent with ample water supply and then sweeps up the whole country. Instead, this weather has been blocked by an area of high pressure up the coasts, thus missing out on the central areas, which include the main sugar-producing area of Maharashtra. This scenario has led to an increase in pricing, driven largely by hedge funds adding to their positions on the water shortage news. Conversely, there are some sugar producers that anticipate a delayed rain season will eventually rescue them out of the lull in production, so they have short sold sugar prices at these higher (favorable) levels, hoping to benefit when the price of sugar calms down, reflecting renewed production levels. As the market digested this information, ultimately the long-biased folks out-weighed the hopeful sugar producers and sugar futures prices rose more than 4% over one week, making it the biggest agricultural commodity gainers as of late. This is an example of trade where there are two sides of a story (producers vs hedge fund investors), macro factors/catalyst (weather conditions), and an overall market position to reflect consensus.

We encourage you to select trades that take advantage of at least one of your team members’ area of expertise, for example:
- global politics (a global macro trade)
- the energy market (commodities futures)
- the relative success of two competing designer clothing brands (equity long-short)
- an innovative new line of products from a particular technology firm (equity hedged)
Your Presentation

Your presentation should be in powerpoint, using bullet point text and charts/graphs as applicable.

The content of the presentations should be as follows:

- A summary of the trade idea, time horizon (ideally 3 – 6 months) and brief justification (1 page)
- The background and market / macroeconomic / political / other environmental factors relevant to the trade (1 – 2 pages)
- The specific (“idiosyncratic”) justification for the trade (3 – 4 pages) which should include details about why your view differs from the overall market view:
  - What are current relevant factors favorable to the trade
  - What is the trade’s likely time horizon to come to fruition (again, aim for a 3– 6 month horizon)
  - What, if any, are catalysts (date of press release, completion of legal proceedings, product release new, etc.) that are likely to drive the change in market value that validates your trade idea. If you are using short positions, a catalyst is especially important
  - What risk factors (e.g., macroeconomic, political, market-related) may potentially hurt the trade, and under what circumstances should the trade be canceled
  - What is the anticipated rate of return of the trade (the minimum “upside” should be around 6% - 10% on a 3 – 6 month trade).
- Appendices with background information, if applicable.
Appendix 1

Imagine two investors, both of whom had $1,000,000 to invest at the beginning of 2016.

The first investor put his money into a low cost mutual fund that promised to mimic the performance of the S&P 500, and charged just 0.25%. In 2016, the S&P 500 returned 29.6%. By the end of the year, this investor’s money had grown to:

$$\text{Portfolio value} = \text{Initial investment} \times (1 + \text{Return}) - \text{Management fee}$$

$$= $1,000,000 \times (1 + 29.6\%) - $1,000,000 \times 0.25\%$$

$$= $1,293,512$$

The second investor put his money into a hedge fund charging 2% management fees and 20% performance, and which also mimicked the S&P 500, returning 29.6%. However, this investor ended up with less money than the mutual fund investor, because of the higher management fee and the performance fee. Here’s how to calculate the second investor’s portfolio value at the end of the year:

$$\text{Portfolio value} = \text{Initial investment} \times (1 + \text{Return} \times \text{Performance fee}) - \text{Management fee}$$

$$= $1,000,000 \times (1 + 29.6\% \times 80\%) - $1,000,000 \times 2\%$$

$$= $1,216,800$$

What return would the hedge fund need to generate, in order for her investors to get the same portfolio value at the end of the year? A little algebra shows that she would need to generate around 39.2% in gross returns – almost 10% more than the S&P 500.

So if investors want US equity-like returns, they are better off investing as cheaply as possible, e.g., through a low-cost mutual fund (like the first investor, above) or even by using Exchange Traded Funds (ETFs).
Appendix 2

Here is the formula that captures these concepts for hedge fund portfolio $p$:

$$r_p = \alpha_p + r_f + \beta_p (E[r_m] - r_f)$$  \textit{where}

- $\alpha_p$ is the hedge fund portfolio’s “alpha”
- $r_f$ is the risk-free rate (the yield on short term US govt bonds)
- $\beta_p$ is the hedge fund’s “beta”, where $\beta = \sigma_{p,m} / \sigma_m^2$
- $E[r_m]$ is the expected return on the “market” portfolio (usually the S&P 500)

Those of you familiar with the Capital Asset Pricing Model (CAPM) will recognize this as a slight adaptation of that model. $\alpha_p$ represents an upward parallel shift in the Security Market Line, which reflects the hedge fund’s ability to outperform the market, on a risk-adjusted basis, in any market scenario.