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Introduction to Risk Arbitrage: Rainy Day Returns?

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## Arbitrage Opportunities

"..we often have more cash than good ideas. At such times, arbitrage sometimes promises much greater returns than Treasury Bills and, equally important, cools any temptation we may have to relax our standards for long-term investments. (Charlie's signoff after we've talked about an arbitrage commitment is usually: "Okay, at least it will keep you out of bars.")<sup>1</sup> Warren Buffett

Risk Arbitrage is an interesting activity that has the potential to help investors invest a portion of their portfolio, and earn attractive returns, while waiting for more attractive prices on long-term investments to become available. I want to remind the readers that long-term investing using the focused investing principles should always be the primary emphasis surrounding your portfolio management activities.

The objective of this article is to provide an introduction into risk arbitrage activities in the three main areas, spin-offs, liquidations, and announced, friendly, cash only situations. The field of arbitrage activity is much more diverse but these three fields are what I am most comfortable discussing in an introductory primer.

My intention is to keep the material provided in an easy to understand format. The readers will be able to determine for themselves if there are interested enough in risk arbitrage activities to contemplate a much more in-depth review. The article will give an overview of what risk arbitrage activity could be worthwhile, and suggest some additional useful reading material for those who are interested. This article should be used as a foundation for interested readers to learn the basics of this type of activity and build upon this foundation as interested and not as an all-inclusive primer.

These situations can result in excess returns because the investor can lock in a price discrepancy that can appear between a stock's current quote and what the proposed closing price will be at the end of an arbitrage situation. The investor's reward for assuming the risk of the deal not closing is the spread between the price paid to purchase the security and the final price expected at the conclusion of the particular situation. These are not traditional investment situations and thus they may reward the investor with greater expected returns during trying market times for an investor's usual long-term investment philosophy.

If certain situations are right, arbitrage activity can be a fairly safe way to boost returns above and beyond what would normally be expected from Treasury Notes or cash equivalent returns. This possible boost in investment returns may be just the edge needed to beat the returns of the overall market. It can also serve a useful secondary purpose, as Mr. Munger hinted at above, of keeping investors occupied so they won't look at investing in a company that doesn't quite meet their criteria.

Mr. Warren Buffett, of Berkshire Hathaway, and Benjamin Graham both have participated in these types of activities. One such activity in which Mr. Graham was involved in was the purchase of Guggenheim Exploration Company shares, which was a holding company that owned parts of several other companies. The value of these stakes in these other companies was at least \$76 a share, but the holding company's shares were trading for only \$69. So, you could purchase the holding company at a discount to the underlying value of the company holdings.<sup>2</sup>

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<sup>1</sup> Berkshire Hathaway Letter to Shareholders by Warren Buffett (1988) page 33

<sup>2</sup> Value Investing Made Easy by Janet Lowe (1996) pages 147-148

Benjamin Graham mentioned arbitrage activity in the third edition of his classic text, Security Analysis<sup>3</sup>, under the heading of special situations. His definition of the special situation term was one “in which a particular development is counted upon to yield a satisfactory profit in the security even though the general market does not advance.”

Mr. Graham divided special situations into six classes:

1. Standard Arbitrages, based on a reorganization, recapitalization, or merger plan
2. Cash Payouts, in recapitalizations or mergers
3. Cash Payouts on sale or liquidations
4. Litigated Matters
5. Public Utility Breakups
6. Miscellaneous Special Situations

Mr. Graham thoughtfully provided us with a formula to calculate the expected annual return for a particular situation while also taking into consideration the risk that the deal will not be completed as anticipated. This formula gives slightly different results than the spreadsheet I have developed because my spreadsheet uses a continuous compounding formula. Feel free to use whatever formula you feel most comfortable with. His inputs were:

- G: Expected gain in points in the event of success
- L: Expected loss in points in the event of failure
- C: Expected chance of success, in percentage terms
- Y: Expected time of the holding in years
- P: Current price of the security

The formula is:

$$\text{Annual Return} = \frac{G - L(100\% - C)}{Y \cdot P}$$

Mr. Graham’s closing comments capture the spirit of arbitrage situations nicely:

“...they do afford the analyst an opportunity to deal with security values very much as the merchant deals with his inventory, calculating in advance his average profits and his average holding period.”

I would recommend further examination of his writings on arbitrage in Security Analysis while carefully examining the examples he provided in the text.

Mr. Buffett has made these comments in reference to risk arbitrage (or work-outs as he called them):

“..in other words, they are securities with a timetable where we can predict, within reasonable error limits, when we will get how much and what might upset the applecart. Corporate events such as mergers, liquidations, reorganizations, spin-offs, etc., lead to work-outs.”

“Over the years, work-outs have provided our second largest category. I believe in using borrowed money to offset a portion of our work-out portfolio since there is a high degree of

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<sup>3</sup> Security Analysis, 3<sup>rd</sup> Edition, by Benjamin Graham, pages 729-734.

safety in this category in terms of both eventual results and intermediate market behavior. My self-imposed limit regarding borrowing is 25% of partnership net worth. ...when we do borrow, it is only as an offset against work-outs."<sup>4</sup>

These words are still appropriate today for the individual investor. I believe that everyone reading this article could profit by performing a close examination of opportunities that occur in this field. Before we continue our discussion, I would like to make one caution in reference to borrowing money for these types of situations. This course of action should only be done with situations that are almost 100% certain to be completed under the terms of the original agreement and, even then, the amount of leverage used should be closely scrutinized.

With this in mind, the investor will want to only participate in arbitrage activities that will maximize their annual returns, while employing a large margin of safety. What factors need to be considered?

1. What are the spreads between the price being paid and the closing price of the expected event?
2. What are the time frames involved between when the money is invested and the final payment received?
3. How likely is it that the deal will close under the original conditions (price and time period) of the event in question?
4. What are the odds of a better bid being received before the event is finalized?
5. If the event does not occur, what's next? How much will the stock price drop as a result?

Keep these factors in mind while we explore three classes of arbitrage activity: merger arbitrage, spin-offs, and liquidations.

### Merger Arbitrage

The simultaneous purchase of stock in a company, which is being acquired, and the sale of stock in the acquiring company is what most people think of when they hear the term merger arbitrage. Profits are made under this method on the expected rise of price in the shares of the acquired company, and the decrease in price of the acquiring company's shares.

The activity of risk arbitrage detailed in this report is focused on capturing the spread between the current quote on the stock exchange, and the price that the final completion of the arbitrage activity will bring to the investor.

To sum up this is a very competitive investment field with strong downside risk possibilities so investors should be extremely selective in your picks. Joel Greenblatt in Chapter 4 of his book, You Can be a Stock Market Genius (Even if you're not too smart), recommends that individual investors not participate in the merger arbitrage area due to the huge time commitment to closely follow all the necessary details of any particular situation. He also provides examples of two

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<sup>4</sup> Buffett Partnership Ltd. Letter by Warren Buffett (1963) page 6-7

convincing case studies of actual deal that went bad for him. Keep these cases in mind if you decide to go ahead and investigate investment possibilities in this area.

### Spin-Offs

Spin-offs are usually a result of a parent company wanted to take a business division or a part of its overall business and separate it into a new independent operating company. Sometimes when this occurs the parent company will keep a large equity stake in the spun-off entity.

Management may have several reasons for spinning of part of a company. They may believe Wall Street will reward them for spinning off a portion of their business by giving a higher value to the two separate entities than when they were combined. This could be because one of the businesses is out of favor on the street or investors don't see any benefits to having one company in two separate lines of business.

On page 56 of his book, You Can be a Stock Market Genius, Mr. Greenblatt references a study by Penn State that covered a twenty-five year period ending in 1988. The report found that the both stocks of the spinoff companies and the parent companies outperformed their industry peers during a three-year period after the spin-off. The spinoff companies beat the S&P 500 by about 10 percent per year in their first three years of operation.<sup>5</sup>

### Liquidations

Liquidation situations should be examined to determine if they are trading at a high enough discount to the liquidation value of the company to make the investment of funds worthwhile. In liquidations you should very carefully consider the time frames involved as the longer time frames common in these arbitrage situations need to be carefully considered. Another consideration is that the distributions of cash in these deals are often split into several amounts and sent to the shareholders over various time frames.

### Spreadsheet

I have created a Microsoft Excel spreadsheet which can be found on my website (<http://www.focusinvestor.com>) which will allow the readers to take all of the above considerations into account and calculate the expected annualized return from the following viewpoints. The spreadsheet will also allow the reader to take into account margin expense and/or any commission costs that may be involved in the transaction:

- Best Time Frame/Best Price
- Best Time Frame/Mid-Range Price
- Best Time Frame/Worst Price
- Worst Time Frame/Best Price
- Worst Time Frame/Mid-Range Price
- Worst Time Frame/Worst Price

Once these calculations have been performed, you should have enough information available to make an intelligent decision. Your decision should be based on your analysis of the expected annual return you will achieve if your calculations prove to be correct and the arbitrage situation closes as planned (even if the arbitrage is not completed as planned the spreadsheet will help you see how different conditions will affect your annualized return).

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<sup>5</sup> Restructuring Through Spinoffs (1993) by Patrick Cusatis, James Miles, and J. Randall Woolridge in the Journal of Financial Economics 33.

Let's use a simple example of a merger arbitrage situation to demonstrate how my spreadsheet can assist your decision to invest, or not, in a particular situation. While you are performing your daily ritual of reading the Wall Street Journal, you happen to read an article advising that XYZ Corporation is going to be purchased by ABCD Inc. for \$10 a share.

The article also advises that the deal is expected to close in six months, that both companies believe the buyout would be in both of their interests, and no regulatory hurdles seem to be in the way of a smooth completion of their transaction. You check a recent quote and discover that XYZ Corp is selling for \$7.50 a share, \$2.5 dollars a share below the announced cash offer by ABCD Inc (I wish spreads were this large in the deals I have examined).

The investor performs his due diligence on the deal and determines that ABCD Inc. has more than enough cash on its balance sheet to pay for the deal. You also determine that XYZ Corporation is a decent company and it is worth at least the price offered by ABCD. However, ABCD's float is small and if the deal was not consummated you determine the resulting sell-off could drop the stock price (not its value) by \$2 a share. You finally determine the deal has a 95% chance of being completed under the original terms of the buyout offer.

You then plug all the numbers into the spreadsheet and discover that, if you were able to purchase 5,000 shares at \$7.50 with an eight dollar commission, your best possible annualized return under ideal situations would be an astonishing 77.7%.

To take into account the 5% possibility of losing \$2.00 a share from the purchase price, if the stock declines, you can determine what the weighted average expected spread would be:

$$[(.95 * \$2.5) - (.05 * \$2)] = \$2.275$$

This number is the weighted expected spread on the merger arbitrage if your expectations concerning the merger completing on time, and the resulting lose in share price if it does not, are correct. Place all the above inputs into the spreadsheet model and it will automatically calculate what the expected mid-range closing\* price would be under your assumptions:

$$[\$10 - (\$2.50 - 2.275)] = \$9.775$$

The new annualized return figure is 69.8% after taking into consideration the probabilities of the buyout not being completed under the original terms of the deal and the decline in the stock price that will result from the deal not being completed as originally put forth.

The last thing to do, if you so desire, is to calculate the worst possible expected closing price of the merger arbitrage situation in order to determine what the annual return would be. You can also determine how the annualized returns would be effected if the holding period was extended under all three price scenarios. All these pieces of information should help you make a determination on whether you should go ahead and invest part of your capital in the particular merger arbitrage situation being examined.

### Cautions

Keep a close eye on the price of the target's stock for even small fluctuations can make big differences in annualized returns. Remember the price paid will reflect on your final annualized return at the conclusion of the situation, good or bad. You control the entry price and this point is vital to keep in mind when participating in these situations.

Remember that your returns will probably be reduced by having to pay short-term capital gains in any taxable account. Also keep in mind that you should consider diversifying your arbitrage positions so if one situation, despite your efforts, does not work out properly your account would not be extremely adversely damaged.

I would suggest watching several deals play out before you invest because some industries take longer to close mergers due to regulatory restrictions, etc. For instance, utility mergers seem to take about a year and a half to close on average.

Play close attention to the bid/ask price on smaller deals. Smaller companies will usually have less float and have bigger spreads, so any positions may have to be built up over time (but they also attract less professional player interest). This increases your commission cost and your risk if the deal is not completed; as you may encounter some difficulty unwinding a position with a wide bid/ask spread and a small float of tradable shares.

When examining arbitrage situations make sure you examine the recent behavior of the credit markets. By this I mean make sure that credit is not tight for companies, because if it is, the chances of a deal not being completed due to financing difficulties increase greatly.

### Closing Comments

Since many focused portfolios accumulate large cash positions while they are waiting for valuations to become attractive, I believe focus investors will realize higher returns if they practice conservative merger arbitrage conservatively. Investing using a long-term horizon and the focused principles should always be your primary emphasis though.

It could also help those investors who have difficulty being inactive since it is a fairly safe way, when done correctly with a careful eye on the risks being assumed, to achieve higher returns while waiting for the long-term pitches to hit out of the ball park.

One book that is a must read if your interested in this area of investing is, You Can be a Stock Market Genius (Even if you're not too smart) by Joel Greenblatt which was mentioned earlier in the article. He has written a book that covers almost anything you might need to know about risk arbitrage, spin-offs, and liquidation activities (and investing in general). He also seems to be a true believer in focus investing and his insights are worth studying.

I would also recommend a thorough reading of Chapter 18, Warren's Secret Weapon, in the book, How to Pick Stocks Like Warren Buffett by Timothy Vick to see some examples of merger arbitrages undertaken by Berkshire Hathaway and a more detailed look at risk arbitrage in general.

Last, but certainly not least, I would finally recommend reading the 1988 Berkshire Hathaway Letter to Shareholders for additional insights concerning risk arbitrage. Please feel free to write me at [focusinvestor@yahoo.com](mailto:focusinvestor@yahoo.com) to share your thoughts (or concerns) in reference to this article.

\* I have elected to have the decline in the spread accounted for by decreasing the closing price. It would be just as appropriate if you had the purchase cost increase to reflect the spread decline as opposed to my method.