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Merger (Risk) Arbitrage Strategy

Merger arbitrage represents an opportunity to generate stable returns, with minimal impact from market influences, but does require depth of financial and legal expertise.

What is Merger (Risk) Arbitrage?

Merger arbitrage, or risk arbitrage as it is sometimes referred, is a strategy that attempts to capture a spread between the price at which a company (target) trades after a transaction is announced, and the price at which an acquiring company (the acquirer) has announced it will pay for that target firm upon closing of a transaction (at a date in the future). The spread between these two prices exists due to the uncertainty that the transaction will close on the same economic terms. For successful transactions, the spread narrows to virtually zero by the transaction closing date. The size of the spread itself will depend on the perceived risk of the deal closing, as well as the length of time expected until the deal is completed. In situations where the price of the target stock is higher than the original bid price, this will indicate an expectation among investors of another bid being expected from the same acquirer, or potentially from another bidder.

Merger arbitrage has received much attention in recent years, as global merger volume reached US$3.8 trillion for the twelve months ended December 31, 2006[1], surpassing a previous record of $3.4 trillion set in 2000. This wave of activity has been prompted by a number of factors, including solid economic fundamentals, low interest rates and substantial liquidity, and financial sponsors that have been flush with record amounts of funds raised.

What are the Nuts and Bolts of Merger (Risk) Arbitrage?

A merger arbitrage manager typically executes the following steps to establish and exit a transaction:

1. Transaction Announcement

The first step in a merger arbitrage trade usually follows the announcement of a merger or acquisition. While some managers will take positions prior to transaction announcements (in firms that they believe might represent acquisition targets), the majority of managers will await an actual public announcement of a deal.

2. Identify and Evaluate Risks

The profitability of a merger arbitrage trade is highly contingent on the completion of a transaction. Significant work must be completed to determine the probability

[1] Source: Bloomberg (M&A Analysis)

of the deal being consumated (the risk of the deal "breaking"). Numerous factors determine this deal risk (see page 5). It should be noted that the risk-return profile for these trades is relatively asymmetric. That is, there is typically a far greater downside if the deal breaks, than there is upside if the deal is completed. This risk-return trade-off underscores the importance of careful and detailed analysis.

Due to the considerable impact of legal issues on deal risk, merger arbitrage managers typically employ staff with extensive backgrounds in securities law and investment banking. An analysis of potential regulatory obstacles and anti-trust hurdles is critical, especially when industry players of significant size are involved.

Returns can be influenced not only by deal risk, but also by the length of time before a deal closes. Table 1 shows the differences in annualized returns for a typical deal, based upon the length of time until the deal closes[2].

Table 1: Impact of Time Period on Merger Arbitrage Returns

A: Offer Price Per Share	$ 12.20
B: Stock Price (post-announcement)	$ 12.00
Gross Spread ($): A - B	$ 0.20
Gross Spread (%): (A - B)/B	1.67%
Time Period to Closing (months)	Annualized Returns
1	21.94%
2	10.43%
3	6.84%
6	3.36%

3. Establish Positions in Target and Acquirer

For acquisitions involving a cash offer, the simplest arbitrage trade entails the purchase of the target firm's stock, which would be held until the deal is completed. The manager then tenders the shares to the acquirer for cash, thus locking in the difference between the price purchased at, and the transaction price. In some cases, the manager may purchase puts on the target's stock as a hedge against a drop in value if the deal breaks.

For situations involving a stock offer, the manager will typically buy the target firm's stock and sell short the stock of the acquiring firm. This short position will protect the manager's downside risk, in the event of a drop in the price of the acquirer's stock.

The example in Table 2 below provides an illustration of this hedge. In this situation, Company A offers to purchase Company B through an offer of one Company A share per share of Company B. Prior to the deal, Company A shares trade at $120. Immediately following the announcement of the deal, Company A shares remain at $120 while Company B shares trade at $110, a discount of $10 to the offer. Even though the offer is a 1-for-1 share offer, the spread of $10 that exists in the initial prices represents the potential deal risk (the risk of the deal breaking), as well as the time value of money.

Table 2: All-Share Transaction

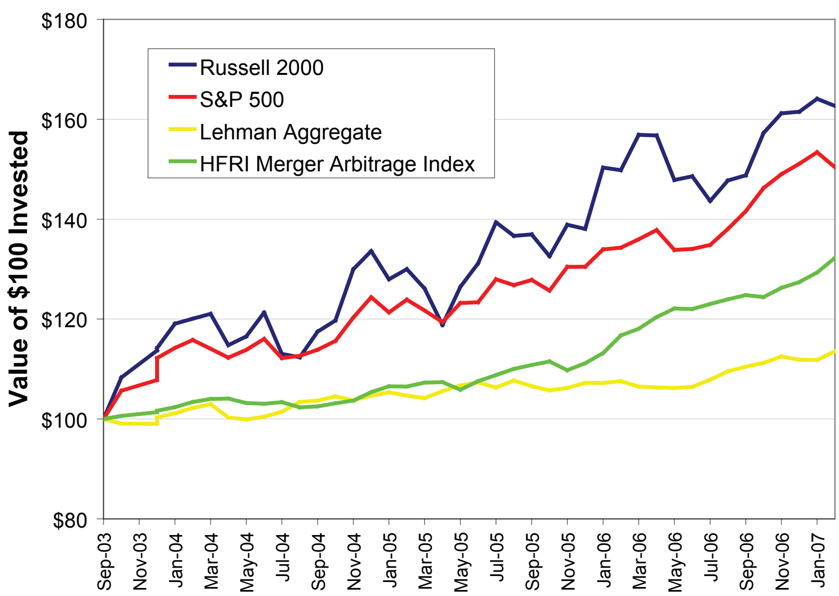
Short: Company A (Acquirer)				Long: Company B (target)			
	Price	Trade	Profit	Price	Trade	Profit	Net Profit
At announcement	$120	Short 1 share		$110	Long 1 Share		
If Company A rises by $20	$140		($20)	$140		$30	$10
If Company A falls by $20	$100		$20	$100		($10)	$10

[2] The impact of time upon investment returns is captured in the concept of 'time value'. In this situation, the shorter the period of time until the closing of the deal, the greater the returns to the investor, as invested capital will have been committed for a shorter period of time.

The amount of the acquirer's stock sold short is based on a "merger ratio." The example in Table 2 assumes a fixed exchange ratio, which is most common. Some investors will utilize options to create a 'collared position' – one which minimizes unexpected losses, but can limit profits. Others will keep the ratio constant, and hold this position until the expiration of the deal. The example above uses a one-for-one share offer. However, most transactions will involve fractional shares due to differences in prices. The hedge ratio may be adjusted regularly, due to the manager's forecast of any number of factors (currency rates, company-specific events, etc.)[3].

In a stock transaction, the short position in the acquiring firm is only viable if the shares offered are liquid and are able to trade easily. However, for deals involving smaller firms with lower levels of market liquidity, managers may encounter difficulty finding enough stock of the acquiring company to sell short. Further, any limitation on a manager's ability to adjust positions can impact the trade's profitability. Often, pressure on the shares of the acquirer caused by short selling will pull down the value of those shares within the first few days of a deal's announcement (and, in turn, the value/price of the target).

Since merger arbitrage trades are established with the goal of locking in a spread, this strategy is generally unaffected by broad stock market fluctuations – provided the market is relatively stable. This typically results in smoother returns than those historically encountered by equity markets (see chart below). However, the spread may be impacted in periods of severe market turmoil.



[3] Adjusting hedge ratios based upon currency rates is important in cross-border acquisitions. In the event that a U.S.-based firm bids for a Canadian company in US$ terms, the investor could have position exposure in U.S. and Canadian dollars. As the cross-rate between the two currencies fluctuates, the potential profit/loss of the trade will be impacted, and the position should either be hedged accordingly, or the ratio adjusted to accommodate these fluctuations.

4. Tender Shares and Unwind Short Positions

In a successful all-cash deal, the target firm's stock is usually tendered by the deadline for cash consideration.

For a stock offer, the investor will receive shares of the acquirer as payment for their holdings of the target stock upon the completion of the merger. These shares are delivered against the short position to close out the trade.

The introduction of a competing bid prior to the completion of a deal would require repositioning of trades, unwinding the previous short position in the original acquirer and establishing a new short position in the shares of the new bidding firm.

What are the Different Approaches to Merger (Risk) Arbitrage?

The exact approach taken by a merger arbitrage manager will depend on the timing of the trade (pre-announcement or post-announcement), and whether the offer is a cash offer or includes other variables (e.g. fixed share offer vs. floating, pricing periods, or collar structures, whereby the amount of stock offered may vary).

Some merger arbitrage managers will attempt to short the shares of the target company if they expect the deal to break. In this case, the price of the target would fall to its pre-announcement level. Many things can cause a deal to break, including the financial instability of the potential acquirer, poor financial results for the target, or a decision by regulators to block a deal for anti-trust reasons. Other reasons for a deal to break might include a material adverse change, bad due diligence review, or simply a merger that has conditions that can not be met. Shareholders may also block a transaction or vote it down. Market liquidity can also have an impact on the probability of a deal closing. Private equity firms, for instance, are active acquirors when debt capital is easily accessible. However, if liquidity in the debt markets were to decrease considerably (ie. interest rates increase significantly), the ability of these financial buyers to access debt capital would be constrained and the success of their deals might be negatively impacted.

Finally, some managers will exploit situations involving acquisitions of bankrupt companies. Typically, these trades involve purchasing the bonds of the target firm, and exchanging them for cash or shares of the acquiring firm. This approach will generally see more activity during recessionary periods with higher bankruptcy rates.

What are the Sources of Return for Merger (Risk) Arbitrage?

In a simple cash transaction where the manager takes a long position in the target firm, all of the returns will be attributed to the increase in the long position (less any borrowing costs, if leverage is used to finance the position).

In situations involving a stock deal, the manager aims to generate returns from both the long position in the target firm, and the short position in the acquiring firm. The sources of return become identical to those of a long-short equity trade, specifically[4]:

Return generated from long position (in target firm)
+ return generated from short position (in acquiring firm)
+ dividend income received from long position
- dividend payments made on short position
+ interest earned on cash
- short interest rebate
- cost of borrowing shares
- margin costs on short position
- cost of leverage on long position
= Total Return (ie. Gross return before fees)

Since much of the market risk is hedged away, leading to a lower level of market exposure, leverage may be higher than most other hedge fund strategies[5].

[4] For a more detailed explanation of the sources of return, please refer to the Long/Short Equity Strategy Paper, "Notes to Figure 1", page 5.

[5] Any measurement of returns for a merger arbitrage strategy should incorporate the impact of taxation. The investor will typically generate negative income on the short position (since they will have to make the dividend payment to the original holder of the shorted shares), while they will earn capital gains on the long position.

What are the Risk Factors for Merger (Risk) Arbitrage?

The main risk factors for a merger arbitrage strategy are: deal risk and portfolio risk. Deal risk includes all the factors that could prevent or delay the closing of the deal, while portfolio risk includes factors that arise in the assembly and management of the merger arbitrage fund or portfolio.

Deal Risk

- **Market Risk:** Large shifts in market conditions may make it difficult to secure financing for acquisitions, and may also lead a board of directors to revisit the potential synergies identified at the outset of a deal. Huge swings in the broad equity market may also cause the stability of the merger spread to break down. In these cases, some managers may utilize puts on an equity index in order to provide some downside protection to their long target position.

- **Interest Rates:** A rise in interest rates will increase the cost of debt financing, which may affect the financial viability of a merger or acquisition. Rate increases may also impact earnings of rate-sensitive industries that rely on spread revenues or low financing rates (banks, insurance companies and auto companies). These rate changes may jeopardize deals involving companies in these sectors. Finally, financial buyers (e.g. private equity firms) may have difficulty securing debt capital. Therefore, deals that are financed with new debt represent a higher risk in times of reduced liquidity in the debt markets.

- **Target Firm's Financial Situation:** Material changes to the financial or economic condition of the target firm (e.g., a large increase in debt on the balance sheet, or a significant drop in earnings) may cause the acquiring firm to terminate its offer. Significant changes to the target company's strategy may also lead to termination of the deal.

- **Legal Issues:** A multitude of legal issues can affect the completion of a deal, including the introduction of potential litigation against the target firm by a third party, as well as potential anti-trust issues which may affect firms holding considerable market share in their respective sectors.

- **Agreement:** The terms of the merger agreement should be reviewed to ensure that there are limited opportunities for one – or both – parties to terminate the deal. The terms of the agreement will typically contain conditions relating to financing, debt levels, and the signing of a definitive agreement. The support agreement outlines general terms of the deal and conditions under which the deal would go away (including representations, warranties and conditions, along with break fees and circumstances under which a target company could entertain another bidder). A high number of conditions can increase the risk of a deal breaking, especially if there are any material adverse changes with the target company. Such changes may actually result in the waiving of the break fee which is typically paid in the event a merger deal fails to materialize.

- **Acquirer Becomes a Target:** If the acquiring firm itself becomes a target, there is a risk of the original deal terminating. If payment in the original deal was in the form of shares, and the manager had established a short position in the acquirer's shares, a subsequent takeover offer for the acquirer will cause the shorted shares to rise in value, leading to significant losses. Also, the long position in the original target will see its value fall as the deal breaks.

Portfolio Risk

- **Use of Leverage:** As with many other hedge fund strategies, the use of leverage can both enhance gains and exacerbate losses. Given the relatively tight spread that exists in many acquisition scenarios, there may be a natural temptation to leverage-up trades to increase returns. These higher levels of leverage will increase the risk of the positions. (This increased risk results from deal risk, not market risk, as the positions are typically fully hedged.)

- **Diversification:** Return distributions for the merger arbitrage strategy typically exhibit a large degree of kurtosis, which suggests an excessive exposure to event risk. As a result, many managers will set position limits within their funds to avoid a concentration of assets in any one deal. A failure to adequately diversify a portfolio of merger arbitrage deals may expose the investor to undue event risk.

What is the Historical Performance for Merger (Risk) Arbitrage?

Merger arbitrage has produced comparable returns to the major U.S. equity indices since 1990, with significantly lower volatility (see Table 3). Merger Arbitrage also compares favourably with international equities and U.S. fixed income indices.

Table 3: Merger Arbitrage Performance Comparison Jan-1990 to Oct-2005 (US Dollars)

Index	Annualized Compound Return	Annualized Standard Deviation	1-month Maximum Gain	1-Month Maximum Loss
HFRI Merger Arbitrage Index	10.04%	4.90%	2.90%	-6.46%
S&P Total Return	10.40%	16.50%	11.43%	-14.46%
Russell 2000 TR	10.49%	21.46%	16.51%	-19.42%
MSCI World TR	6.97%	16.48%	10.54%	-13.32%
Lehman Aggregate Bond TR	7.35%	4.48%	3.87%	-3.36%

Source: HFR, Ibbotson EnCorr

What is a Practical Example of Merger (Risk) Arbitrage?

On November 8, 2005, Agrium (a Canadian producer and marketer of agricultural products and fertilizers) made an all-cash offer of $10 per unit for all of the outstanding units of Royster-Clark (a U.S. agricultural retail chain). The deal was made at a premium of approximately 27% over the previous day's closing price of $7.85[6].

The next day's closing price was $9.98, leaving relatively little room for arbitrage profits to the offering price (0.02%). The narrow spread and heavy trading volume on November 9th (10 million shares versus a daily average of 70,000 over the preceding 20 days) suggests that arbitrageurs were assuming a higher future bid from either Agrium or a competitor. The merger arbitrageur would have entered their long position somewhere within the November 9th trading range.

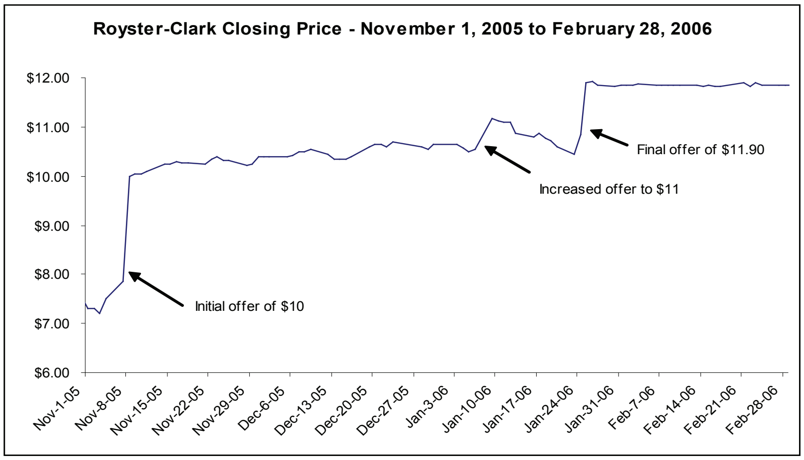
On January 9, 2006, Agrium increased its offer to $11 per unit of Royster-Clark. The return to the original long position of $9.98 increased to 10.22%.

On January 25, 2006, Agrium made a final offer of $11.90 per unit, after significant discussions with major shareholders of Royster-Clark. The offer was dependent on the tender of 66 2/3% of all outstanding units of the target. The return on the long position increased further to 19.24%.

6 It should be noted that the Agrium takeover of Royster-Clark was deemed hostile, with Royster attempting to use a shareholder rights plan to delay the bidding process.

On February 9, 2006, 98.6% of all outstanding units of Royster-Clark were tendered to the Agrium bid.

The chart below highlights the prices of both Agrium and Royster-Clark over the period. Note the milestones and the effect on the price of the target firm.



Conclusion

Merger arbitrage represents an opportunity to generate stable returns, with minimal impact from market influences. Implementation of a successful strategy, however, requires depth of financial and legal expertise as well as the ability to diversify and manage a portfolio at reasonable levels of leverage. Risk controls are important for success, as one deal can have a significant impact on the returns of an overall portfolio. For most investors, any exposure to a merger arbitrage fund is often through a fund of hedge funds program, where the merger arbitrage strategy represents one of several hedge fund strategies utilized.

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Glossary of Terms

Arbitrage: To take advantage of disparate pricing between two similar instruments in the same or different markets.

Collar Structure: A trade where the exchange ratio changes with the price of the acquirer

Kurtosis: A statistical measure used to describe the distribution of observed data around the mean. A high kurtosis leads to a probability distribution with "fat tails".

Long Position: Holding (buying) a positive amount of an asset.

Merger Ratio: In an acquisition involving a share offer, the ratio of the acquiring company's shares that are offered for each share of the target company.

Short Position: Holding a "negative amount" of an asset caused by borrowing assets and selling them (a.k.a. selling short an asset).

Standard Deviation: A statistical measure of the variability of investment returns. Most commonly used measure of the volatility of returns or investment risk.

Volatility: The degree of price fluctuation for a given asset, rate, or index. The variability of investment returns is one form of investment risk and is measured by the standard deviation of the returns.

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