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Risk Arbitrage

SECOND EDITION

An Investor's Guide

KEITH M. MOORE

WILEY

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Risk Arbitrage, Second Edition

An Investor's Guide

KEITH M. MOORE

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In memory of James M. Gallagher.

Jim, you gave me my start in this business and continue to help me every day.

God Bless you, Jim.

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About the Author

Keith M. Moore heads up FBN Securities Event-Driven group. Prior to joining FBN Securities, Keith served as Kellner DiLeo & Company's Co-Chief Investment Officer, Portfolio Manager of the KDC Merger Arbitrage Fund and Director of Risk Management. In addition to being the author of *Risk Arbitrage: An Investor's Guide*, he has authored the Mergers & Acquisitions chapter for *Corporate Finance*, published by the CFA Institute as well as a number of academic journal articles. Keith's arbitrage career spans research, trading and portfolio management at Neuberger & Berman (1975–1983 and 1989–1996), Donaldson Lufkin & Jenrette (1983–1989) and Jupiter Capital (1997–2006). A former Assistant Professor of economics and finance at St. John's University and Adjunct Professor at the University of Rhode Island and New York University, Keith has earned numerous academic awards and honors. He holds a B.S. and a Ph.D. from the University of Rhode Island and an MBA from New York University.

Risk Arbitrage, Second Edition

CHAPTER 1

Introduction

Most U.S. corporations are domiciled in the state of Delaware, so I travel there often from my home in New York to cover court cases that can greatly affect the price of securities involved in a merger. The job of the arbitrageur covering a court case is to attempt to analyze the case and estimate which side will prevail before any decision is rendered by the court and also to estimate how the security prices will move given the outcome of the case. Once these factors are determined, the goal is then to set up positions in the securities that should prove profitable should the expected outcome occur and prices react as expected. Many times, it is a difficult job to determine the needed estimates and perform the required analysis.

A few years ago, I traveled to Delaware, because a few months earlier, the Cooper Tire & Rubber Company had agreed to be acquired by Apollo Tyres Ltd. Each Cooper Tire shareholder was to receive $35 cash per share at the closing of the $2.5 billion merger. The merger closing was subject to Cooper Tire shareholder approval as well as various U.S. and foreign government approvals. The $35 price tag represented about a 43% premium over Cooper Tire's existing stock price. After the merger was announced, Cooper Tire's stock price traded up $9.26 per share, closing at $33.82 on the first day after the merger announcement. The $1.18 spread between the $35 merger price and the Cooper Tire stock price did not indicate any of the troubles that the deal and Cooper shareholders would face over the next five or six months.

Exhibit 1.1 shows the price behavior of Cooper Tire both before the deal was announced as well as after the terms of the merger were disclosed.

Shortly after the merger was negotiated and announced, trouble broke out at Cooper Tire's joint-venture in China. The facility in China was 65% owned by Cooper Tire and 35% owned by an entity named Chengshan Group (CCT). The controlling shareholder of the Chengshan Group was Che Hongzhi, and unbeknownst to Cooper Tire shareholders, including arbitrageurs, Che Hongzhi had been planning to acquire the remaining 65%

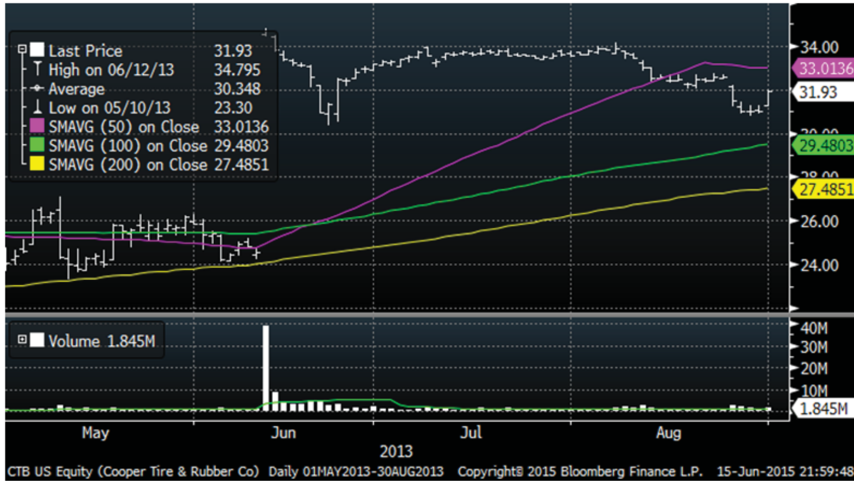

EXHIBIT 1.1 Cooper Tire Stock Price Chart
Source: Used with permission of Bloomberg Finance LP.

ownership of the unit from Cooper Tire. Once the merger was announced, Che Hongzhi proceeded to orchestrate a plan to try to derail the merger.

Only days after the merger announcement, labor unrest at the Chinese plant was initiated. Initially, there were verbal protests. By the end of June, the CCT labor union sent a threatening letter to Cooper Tire employees and the Company. Shortly thereafter, a labor strike occurred, and eventually, Che Hongzhi had the plant stop manufacturing tires under the Cooper name. More amazingly, Che also locked out all Cooper employees from the plant, refused to pay invoices for materials, and would not supply any financial information to its 65% owner. These actions, especially withholding financial data, became a key factor in whether the transaction would be completed.

After the merger was announced, problems at the Chinese joint-venture were not the only issues that Cooper and Apollo had to deal with. Cooper's domestic union, the United Steelworkers, filed grievances against Cooper, claiming the merger would be a transfer of control, which would trigger the need to negotiate a new labor contract. Ultimately, Cooper and Apollo agreed to arbitrate the USW claim; on September 13, 2013, the arbitrator issued an opinion indicating that a new labor contract would need to be negotiated in order for the parties to complete the merger.

The prospect of needing to negotiate a new labor contract complicated the merger process tremendously. Cooper's relationship with the USW had been strained for years and now the USW had an advantage heading into labor talks. In order to close the deal, Cooper needed a new contract and

needed it quickly in order for Apollo to be able to complete the financing to pay for the merger.

As the Chinese joint-venture and USW events unfolded, Cooper became concerned that Apollo was developing "buyer's remorse." After negotiating mergers, in some cases, the buying party may develop second thoughts about its deal and may look for a way to get out from under the merger contract. Since Apollo was not advancing the USW contract talks at the speed that Cooper expected, concern for Apollo's desire to complete the deal grew. Ultimately, Cooper's board of directors decided the best way to protect the interests of Cooper and its shareholders was to bring a lawsuit seeking to force Apollo to complete the transaction. The legal action Cooper was seeking was "specific performance" where the Delaware Court was being asked to force Apollo to take all the steps to complete the transaction.

Cooper's lawsuit was filed on October 4, 2013, after Apollo was unable to come to an agreement with the USW and Cooper became concerned that since the merger pact with Apollo contained a "drop-dead" date of December 31, 2013, that would allow Apollo to walk away from the merger obligation. Time was critical to get the deal closed, and the lawsuit seeking specific performance was a possible path to the merger's completion from Cooper's point of view.

Cooper's move to file the suit added to the uncertainty already created by the problems with the Chinese joint-venture and the UAW contract dispute. News of the lawsuit began to surface in the markets late in the trading day on October 4. However, the full effect of the suit was not reflected in the Cooper stock price until trading began on the following trading day, Monday, October 7. As can be seen in Exhibit 1.2, Cooper's stock declined dramatically. At Monday's closing price of $25.72, the spread between the stock price and the proposed $35 takeover price was a huge $9.28 per Cooper share!

The lawsuit was filed in Delaware's Court of Chancery and was assigned to Vice Chancellor Sam Glasscock III. While I had traveled to Wilmington, Delaware, for several days of expert testimony before Vice Chancellor Glasscock on the case, the final hearing with closing arguments had been scheduled to be heard in Georgetown, Delaware, where Vice Chancellor Glasscock generally heard his assigned proceedings. So I shared a cab with several other arbitrageurs for an additional road trip to Georgetown.

Once in court, we all had to go through what have become standard court procedures. One of the more annoying procedures is forfeiting our cell phones to the court's guards. Unlike other members of the public, attorneys generally do not have to give up their phones since they are subject to court rules and can be disciplined for improper behavior. However, the system, like most, is not perfect. During the days of testimony in the Wilmington courthouse, a number of us in the court (who were observers to the testimony)

EXHIBIT 1.2 Cooper Tire Stock Price Reaction after Lawsuits
Source: Used with permission of Bloomberg Finance LP.

noticed that reports of the proceeding seemed to be seeping back to the financial markets through subtle price changes in Cooper's stock price prior to court-ordered breaks. Once a recess took place, all observers would try to get their phones returned in order to report on the recent developments in the courtroom.

After a day or so, it became clear that someone in attendance was not playing by the rules. Just before a courtroom session was supposed to reconvene, I heard a commotion a few rows away from me. As the confrontation continued, I realized that a representative of a hedge fund that owned shares in Cooper had witnessed another observer using his cell phone to communicate court developments to his office. His phone had not been commandeered because he was an attorney who was licensed to practice in Delaware and was on retainer to another hedge fund to report the proceedings of the trial. Ultimately, the violator was told if he touched his phone during the proceedings one more time, the party who noticed the behavior would immediately stand up and notify the Vice Chancellor of the violation. Needless to say, there didn't seem to be any more violations. Now everyone could concentrate on what the Vice Chancellor might ultimately decide in the case.

Once admitted to the court, there is usually a scramble for what are perceived to be the "choice" seats. I generally try to position myself at the end of a row to allow for easy exit in case I want to report back to the office on an important development in the proceedings. In Georgetown, I followed my normal habits by finding an end seat in the second row. If need

be, I would leave the courtroom, retrieve my phone from the court guards, exit the building, and make the call. I had followed that procedure a number of times in the Wilmington hearings and was getting a mini-workout since the cell phones in Wilmington had to be housed in mini-lockers in a parking garage a building away from the courthouse.

However, in this final hearing in Georgetown, it was a more difficult decision to leave the proceeding to make a call for fear that I might miss something that could be even more important than the item I was reporting in the call. As in other cases, I tried to avoid this dilemma by partnering with a friend in the business. One of us would leave to make a call, and the other would take detailed notes and fill in the other partner upon his return to the courtroom. During the hours of testimony and arguments that day in the Georgetown Courthouse, we used the procedure numerous times to keep our respective offices up to speed.

During that day's proceedings, the Vice Chancellor directed both sides to address a number of issues including how the definitive merger agreement should be interpreted in regard to the financing commitment. Additionally, the Vice Chancellor also wanted the parties to discuss the requirements for a comfort letter and the likelihood that Cooper would be able to file its third-quarter earnings report on a timely basis. Before the Vice Chancellor could decide whether Cooper was entitled to specific performance, which would force Apollo to complete the merger, he had to decide the critical issues as to what level of effort Apollo was required to execute to solve the contract situation with the United Steel Workers.

All through the hearing, my main focus was on trying to determine how Vice Chancellor Glasscock would rule. I was using all the facts, my interpretation of the court filings, and the testimony in the case to help determine how the Vice Chancellor would rule. What was different in this case compared to many others I followed in my career was that until recently, my function consisted of managing the investment portfolio, and in doing so, the main function was deciding which situations were included in the portfolio. I was actually making all the buying and selling decisions. However, shortly before the Cooper/Apollo situation developed, I had changed functions in the business. I had moved to what is known as the "sell-side," where my job was to *advise* hedge funds and institutions as opposed to actually committing capital. I was analyzing the Cooper/Apollo hearings to advise my clients what I thought would happen and how they should set up their positions. All the other arbitrageurs, attorneys, and observers in the courtroom were trying to perform the same analysis for their firms or clients.

After several hours of testimony, at about 3:30 P.M., the Vice Chancellor called for a short recess and stated he would return with an initial ruling on the case. Everyone left the courtroom, reclaimed their cell phones, and called into their respective offices to report the situation and their opinion

on the court's ruling. During the break, I was asked by several clients about my prediction of the outcome. Since I did not hear anything in the day's proceedings that caused me to change my prior opinion, I advised them that I believed the Vice Chancellor would rule against Cooper and would not force Apollo to complete the merger.

Almost everyone assumed that the court would not reconvene the proceeding for the ruling until after 4 P.M. when the financial markets closed. It is common in these cases for courts to wait for the markets to close before issuing a decision that could have a dramatic effect on securities prices. However, the Cooper case had not been typical in many ways, and it continued as the Vice Chancellor reconvened at 3:45 P.M. to read his oral decision and stated a full written decision would follow shortly.

Within minutes, he indicated he was ruling against Cooper's requests and was not forcing Apollo to complete the merger. Numerous court observers rushed out of the courtroom to reclaim their phones and call the result into their respective offices. As can be seen in Exhibit 1.3, Cooper's stock moved down substantially as holders of the stock rushed to sell, fearing the stock could fall even further. After trading as low as \$22.34, Cooper's stock closed at \$23.82 down \$0.95 on the day.

After the excitement calmed down, it was an interesting sight just outside the Georgetown Courthouse, with many court observers continuing to talk on their cell phones to their offices. Many appeared happy, as they had anticipated the decision properly. However, others were clearly not happy

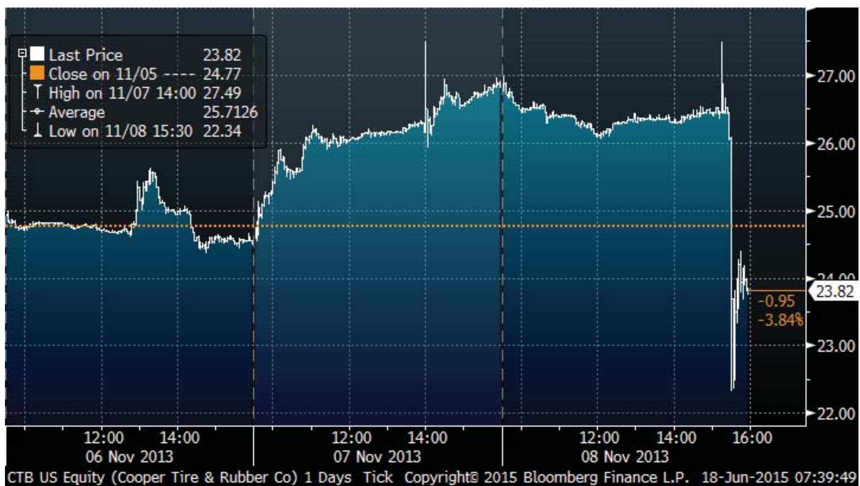

EXHIBIT 1.3 Cooper Tire Price Movements Two Days before Court Ruling and One Day after Ruling
Source: Used with permission of Bloomberg Finance LP.

campers. Presumably, they had expected Apollo to be forced to complete the $35 deal and learned why the process is called *risk* arbitrage.

At this point, my job was to call my clients to discuss the decision as well as how the saga might play out from this point. The question for arbitrageurs at this time became what might happen next in the Cooper saga. There were several possible outcomes. Cooper could appeal the Vice Chancellor's decision, walk away from the transaction, or possibly renegotiate the terms to compensate Apollo for the changed fundamentals in Cooper's business.

Anyone who owned shares of Cooper stock had seen their shares decline substantially from the levels reached when the merger was initially announced due to the developments with Cooper's Chinese-based joint venture and the United Steel Workers situation.

Arbitrage situations like the proposed Cooper Tire/Apollo Tyre deal create complex and potentially lucrative investment opportunities. This book describes the process of risk arbitrage investment, to help readers understand the critical elements in the analysis process, and to aid in the decision-making in risk arbitrage opportunities. The book describes what risk arbitrage entails and explores how it is done.

Chapters 1–3 provide a detailed description of the risk arbitrage process. Chapters 4–6 explore in depth the key elements of the risk arbitrage process. Chapter 7 melds the elements together to demonstrate how to make decisions on risk arbitrage opportunities. Chapters 8 and 9 discuss hostile takeovers and trading tactics. Chapter 10 discusses portfolio management in depth. Chapter 11 goes through a recent merger, which is a prime example of why the risk arbitrage business can be both exciting and profitable. Throughout the book, numerous real-life cases are examined. And the final section of the book offers information on and insight into the areas of trade execution, hedging, and portfolio management, which are critically important for an arbitrageur's success.

Like most things in life and the world of investing, conditions and strategies change over time. Since the original version of the book was published 17 years ago, the risk arbitrage business has changed substantially in a number of ways, including much lower spreads and expected returns as interest rates have declined to record-low levels. Additionally, due to regulatory changes most large institutions and banks can no longer commit capital to risk positions, leaving a void that has been filled by hedge funds and other investors.

In this version we attempt to address many of the changes in the risk arbitrage business and look to update the techniques needed to be a successful arbitrageur.

CHAPTER 2

What Is Risk Arbitrage?

Webster's New World Dictionary offers this definition of arbitrage:

> *A simultaneous purchase and sale in two separate markets in order to profit from a price difference existing between them.*

This definition accurately describes what is known as "classic" arbitrage, where the investor is purchasing and selling the same security in different markets.

An example would be: Rio Tinto PLC is an International Mining company that trades on both the London and New York Stock Exchanges.

- On a recent day, RIO traded at 2750 pence in London and traded at $43.66 in New York.
- If an arbitrageur bought RIO in London and simultaneously sold RIO on the New York Stock Exchange, assuming that the proper currency hedges could be executed between British pounds and American dollars, a guaranteed profit could be locked in.
- The relevant calculations are as follows: 2750/100 = 27.50 British pounds.
- £27.50 GBP × $1.58 (U.S./GBP conversion rate) = $43.45 (U.S. dollar equivalent purchase price).
- Gross profit = $43.66 (U.S. sales price) – $43.45 (Purchase price in U.S. dollars) = $0.21 profit per share.
- While the profit per share may seem small to some people, it would essentially be a riskless or guaranteed trade.

However, in *risk* arbitrage, profits are anything but guaranteed. *Webster's* goes on to describe *risk arbitrage* as follows:

> *A buying of a large number of shares in a corporation in anticipation of and with the expectation of making a profit from a merger or takeover.*

Do you really have to buy a large number of shares to achieve risk arbitrage? Does risk arbitrage require the arbitrageur to anticipate the announcement of a merger or takeover? The *Webster's* definitions are helpful, but we need to add more depth if we are to understand the investment process of risk arbitrage.

It is always interesting, when reading financial publications, to see the misunderstandings that surround the process of risk arbitrage. An article in the *Wall Street Journal* or the *New York Times* might describe a transaction involving a merger of two companies and then include a misleading reference to risk arbitrage. For example:

> *Arbitrageurs realized large gains on the announcement of the merger between Company A and Company T. The price of Company T's stock rose $8 to $32 on the announcement that Company A will be purchasing the company for $35 per share.*

This quite typical comment leaves the reader with the impression that the arbitrageurs held shares of Company T prior to the announcement of the transaction and realized a large gain as a result. The newspaper has given a very good description of sheer speculation, but it has certainly missed the mark in describing the process of risk arbitrage. Institutional and individual investors generally benefit from the initial merger announcement. The announcement, however, generally marks the beginning of the process known as risk arbitrage.

Here is perhaps the best definition of risk arbitrage:

> *The risk arbitrage investment process is the investment in securities involved in and affected by mergers, tender offers, liquidations, spinoffs, and corporate reorganizations. The securities involved in the risk arbitrage process can be common stocks, preferred stocks, bonds, or options. Once a transaction is announced, arbitrageurs try to assemble as much information as possible to help estimate each transaction's risk, reward, and probability of occurrence. Annual reports, 10-K reports, quarterly reports, and reports generated by Wall Street analysts are gathered and evaluated by the arbitrageur as quickly as possible. As can be expected, much of this is done with the aid of computers and various online services.*

The arbitrageur sets out to analyze all aspects of the transaction. He or she seeks to make various estimates that will help evaluate when a monetary commitment should be made to a particular transaction. Generally, the arbitrageur focuses on three keys to each prospective transaction: return, risk, and the probability of the transaction's being completed. Armed with

these estimates, the arbitrageur will determine which, if any, securities will be purchased or sold, and what strategies must be used to hedge a particular transaction.

Risk arbitrage is an exciting and challenging process. Stocks involved in these transactions may become volatile. If the deal works out, the arbitrageur may realize a large gain, depending on the arbitrageur's market position. On the other hand, if the transaction is called off, the securities may drop precipitously and the arbitrageur may suffer large losses. The intensity may be further heightened because these developments may occur very quickly. The arbitrageur comes to work each day not knowing what type of industry he or she will have to be working with, or what companies will be at the center of an analysis. An arbitrageur may spend a morning analyzing a domestic oil deal, and, by the end of the day, will need to present a complete analysis of a transaction involving computer hardware manufacturers.

In addition to the need to be a generalist (as opposed to a specialized industry analyst), the arbitrageur must be able to use various analytical tools. The most frequently used tool is financial analysis, but the arbitrageur must also be able to use various computer and legal skills. Many deals need specific legal analysis centering on antitrust or securities law. Frequently, the arbitrageur will consult with outside advisers on specific important issues related to a particular transaction. These advisers may be attorneys, accountants, or financial analysts. All analyses have one main emphasis: to predict whether an announced transaction will occur and, if so, to decide what securities position to take in order to profit from the transaction. Risk arbitrage is an event-driven investment process.

The arbitrage investment may involve various types of securities. Typically, the arbitrageur is investing in the common stocks of the companies involved in the merger or takeover transaction. If shareholders of the company being taken over are receiving shares of the acquiring company, the arbitrageur will also sell short an equivalent amount of the issuer's shares to hedge the market risk of the transaction.

For example, in December 2014, Spansion Incorporated (CODE) agreed to merge with Cypress Semiconductor (CY).

- CODE was a manufacturer of flash memory products, and the strategy of the proposed combination was to create a leading global provider of microcontrollers and specialized memory.
- Each CODE shareholder was to receive 2.457 shares of CY in exchange for their shares at the closing of the merger.
- In order to lock in a spread, in this case, the arbitrageur would buy shares of CODE and sell short 2.457 shares of CY for each share of CODE purchased.

- As long as the merger closed as planned on the proposed terms, which it did on March 13, 2015, the arbitrageur would have locked in a spread and earned the return upon closing. (This assumes that CODE traded at a discount to its implied value based on the exchange terms.)

The hedging process will be explained in depth in Chapter 10.

Common stock is not the only type of security involved in the arbitrageur's analysis and investment process. Convertible securities, bonds, and options will also be evaluated to determine whether they offer the arbitrageur an optimal choice of investment. Put and call options will frequently be evaluated once the arbitrageur has determined how to set up a position. The options may be used as a standalone strategy or combined with the purchase or sale of common stock to alter the risk/reward framework of the transaction.

In setting up the arbitrage position in the overall portfolio, the arbitrageur is generally trying to profit from the spread between the deal value or takeover price and the price of the securities that are subject to the transaction. The spread or discount from the deal value generally exists for two reasons:

1. The time value of money
2. A risk premium

Many transactions may be announced, but not all are completed. A termination of a proposed deal is generally accompanied by a drop in the target's security's price, which may cause the arbitrageur to suffer a loss in portfolio value. Therefore, the arbitrageur's overall portfolio management strategy must include various risk parameters and disciplines to ensure an ability to weather individual deal losses or overall general equity market moves over various investment cycles.

There have been a few exceptions, but returns earned in the risk arbitrage business tend to be unrelated to overall equity market returns. This could be an advantage for investors in periods when the stock market declines or has negligible returns. However, arbitrageurs are hard pressed to compete with equity returns in periods of dramatic bull markets such as we have experienced over the past 30 years. The reason lies in the fact that the arbitrageur is generally trying to earn small increments of return (spread) with a high degree of certainty. The arbitrageur invests in a particular transaction, typically holds it to the deal's completion, and then seeks to redeploy the capital involved in the transaction. By turning over the investment and earning the incremental returns over a forecasted period of time, the arbitrageur hopes to generate meaningful returns that are unrelated to overall equity returns. This low overall correlation to

the equity market exists because the individual transaction's occurrence is generally not related to the direction of the equity market. The deal's return is more a function of the merging companies' plans and the passage of time.

In the past 30 years, however, there have been several periods in which arbitrage returns were related to the equity market. For instance, during the Crash of 1987, the Mini-Crash of 1989, and the Credit Crisis of 2008, many announced merger transactions were reevaluated by the acquiring companies' boards of directors. Whenever the transactions were then terminated, the arbitrage community suffered huge losses. The reevaluations were generally done because of the large decline in stock prices. The transactions had been structured in an earlier period, and the higher equity prices at that time had been used as a guideline to determine the price to be paid for a particular company. When stock prices declined dramatically, many board members felt they were overpaying for the assets they were trying to acquire.

Furthermore, in this earlier period, a tremendous number of transactions were being driven by entrepreneurs who were trying to buy companies as part of a plan to sell off their assets in a short period of time. Many of these buyers were highly leveraged, and their strategies depended on the stock market remaining healthy. When the market declined, their strategies were flawed, and the sources of their financing began to pull their financing commitments.

Barring these periods of market dislocation, risk arbitrage can provide investors with a profitable strategy to generate returns that will not be dependent on equity market moves.

TYPES OF TRANSACTIONS

Mergers

Mergers are the most common type of transaction that arbitrageurs analyze. Mergers may not always start out to be consensual transactions, but the structure of a merger transaction requires the involved parties to enter into an agreed-on transaction to combine their respective businesses.

Mergers are generally announced through a joint press release. Two forms of the initial announcement are possible. The two companies may announce what is known as an *agreement in principle* or they may enter into a *definitive agreement* to merge. Years ago, it was common for companies to enter into an agreement in principle and then proceed to do due diligence on each other's business. When the due diligence was completed to their satisfaction, the respective firms would have their attorneys draft a contract known as a definitive agreement. The boards of directors of the companies would then approve and execute the definitive agreement.

Today, companies rarely announce a merger with an agreement in principle. Most deals are announced when a definitive agreement is already in place. The merging firms try to perform their due diligence procedures in secrecy, and they make their public announcement after they have a definitive agreement. In fact, a deal announced today with only an agreement in principle should be a warning signal for arbitrageurs.

NOTES FROM THE FILE*

An agreement in principle may indicate that the companies felt pressure to release prematurely the news of a pending merger. A leak in the private negotiations may have occurred, and changes in the underlying stock prices of the two merging firms may have been the market's reaction. Rising prices in the target company's stock may serve as a warning to the companies that their negotiations were filtering into public domain.

For example, on April 28, 2015, Iron Mountain (IRM) and Recall Holdings (REC) announced an agreement in principle to merge.

- The agreement in principle was designed to provide each Recall share with 0.1722 shares of IRM upon the closing of the merger.
- However, the agreement in principle was subject to the companies performing due diligence and negotiating an acceptable definitive merger agreement.
- After the agreement in principle was announced, shares of IRM declined substantially.
- Due to the decline in IRM's price, the value of the 0.1722 IRM shares was no longer worth what the REC board thought.
- The REC board sought an improvement in the merger terms to compensate for the decline in IRM.
- After the due diligence process was completed, the companies entered into a definitive merger agreement on June 8, 2015, which provided that each REC shareholder would receive the original 0.1722 shares of IRM and would additionally receive $0.50 per share in cash to compensate them for the decline in IRM's stock price.

*"Notes from the File" are particular lessons the author has learned during his years in the risk arbitrage business.