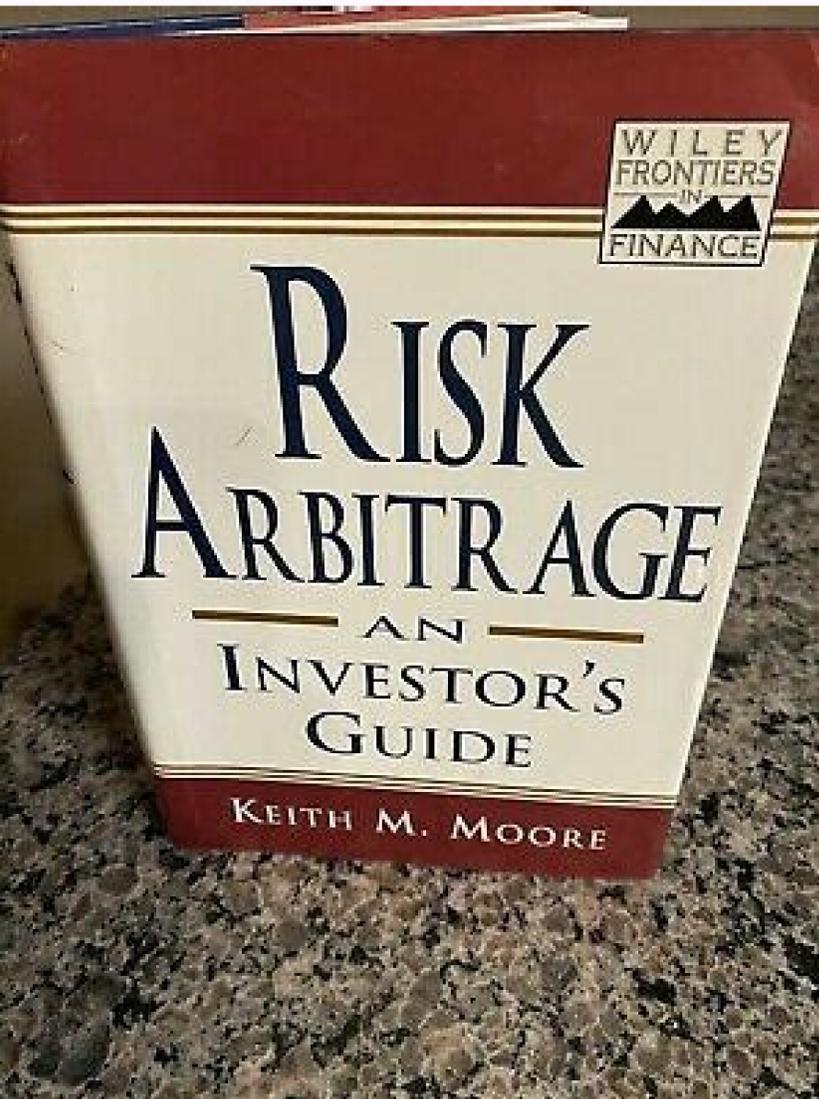
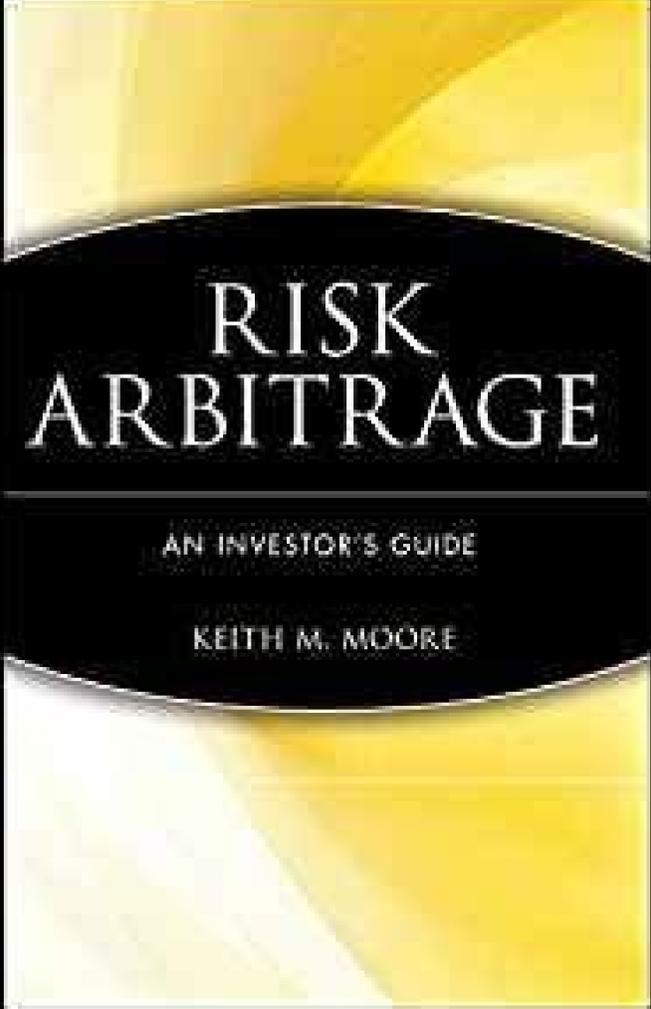


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Wiley Finance Series

Risk

Arbitrage

SECOND EDITION

An Investor's Guide

KEITH MOORE

WILEY

What is risk arbitrage trading. Risk arbitrage an investor's guide. Is arbitrage trading risk free. Risk arbitrage opportunities for stock index options. What is arbitrage risk. Risk arbitrage example.

When one hears the term arbitrage it might bring to mind the name of a fancy perfume or perhaps the name of a famous museum (that's the Hermitage in St. Petersburg, Russia). But arbitrage is a whole field of profitable investing that for too many people is quite clandestine. In this installment of the Finance Professor, I will open your eyes to what arbitrage is and explain how you might be able to profit and avoid losses via five core arbitrage techniques. To start off, we need a working definition of arbitrage: Arbitrage is the simultaneous purchase and sale of securities, commodities or assets in order to profit from price discrepancies, with as little risk as possible. Please note that: 1. An arbitrage requires more than one transaction or "leg." 2. The price discrepancy does not necessarily ensure a profit. 3. The risk may be quantified as being low, but it does exist and can lead to significant losses. Now let's look at some very popular forms of arbitrage. 1. Risk Arbitrage The theory: When one company seeks to acquire another company there is a discrepancy between the deal price offered by the acquirer and the market price of the target company. The strategy: In the event of a stock-for-stock deal, the arbitrageur will buy shares of the target company and sell shares of the acquiring company a ratio to equal that of the proposed transaction. In the event of a cash-for-stock deal, the arbitrageur will buy shares of the target company and borrow money to finance the transaction. As a result, when a new M&A (merger and acquisition) deal is announced, the target company shares will rise as the acquirer's share will tend to fall. The risk: The acquirer walks away from the deal. This can occur because of "material adverse changes," such as what happened when the Harman International (HAR) acquisition (by a consortium of buyers) fell apart, or because of the loss of financing as occurred with Blackstone (BX) - Get Blackstone Inc. Report in its attempt to acquire PHH (PHH). Sometimes the deal falls apart for other business reasons, such as what happened with the Tellabs (TLAB) acquisition of Ciena (CIEN) - Get Ciena Corporation Report about a decade ago. That broken deal cost Long-Term Capital Management (the failed hedge fund) a bundle. As you can see, if a deal falls apart, it can result in significant losses for the arbitrageur. To give you a little perspective on the magnitude of the risk/reward tradeoff, typically the arbitrageur will gain (the reward) 3% to 5% on the transaction, but if the deal falls apart, the arbitrageur can stand to lose (the risk) 20% or at times, more. 2. Index Arbitrage The theory: One can buy all the stocks in an index (like the S&P 500) relative to the value that is implied in the market price of the futures contracts underlying that index (see "Five Things Every Investor Should Know About Index Futures"). The strategy: The arbitrageur will buy all of the stocks underlying the index and sell the futures for the index. In the process, the investor will borrow money to buy the stocks, pay interest on the loan and earn dividends on the stocks. As such, the perceived profit is equal to: Cost of stocks plus dividends on stocks minus interest costs minus futures value. Please note that the arbitrage can be reversed, whereby one shorts the stocks in the index and buys the futures contract. The risk: In this example I provided, if interest rates increase or dividends decline from their anticipated rates, then the perceived profit will erode or potentially turn to a loss. 3. Carry Trade The theory: Put simply, you borrow money at a lower interest rate and reinvest it at a higher interest rate, earning the differential in interest rates along the way. The strategy: This can be done in the foreign currency (forex) markets or may also be performed in the bond markets. In the forex markets, the investor would buy a high-interest currency and finance that with the selling of low-interest rate currencies. As an example in the bond markets, one would sell the 2-year Japanese Government Bonds (JGB) at a yield to maturity of 9/16% (or 0.5625%), convert the Japanese Yen Proceeds (JPY) into US Dollars (USD) and then buy an equivalent amount of 2-Year U.S. Treasury Notes (2UST) with a yield to maturity of 2.00%. In doing so, the investor would be able to earn 1.7/16%, (or 1.4375%, less than the costs for a "repo" or reverse "repo" financing). When the bonds mature, the proceeds of the 2UST is converted back to JPY and used to refund the JB maturity. The risk: The USD/JPY exchange rate changes such that the investor has to purchase more expensive JPY when the transaction unwinds. To combat this, one might be inclined to buy a forward forex contract to eliminate that exchange rate risk. However, doing so might eliminate the entire perceived profit. 4. International Arbitrage The theory: When foreign-based companies issue stock in their country, these are referred to as ordinary shares (ORDs). In order to allow investors in other markets, such as in the United States, to have ownership in one of these companies, the company will issue American Depository Receipts (ADRs) or Global Depository Receipts (GDRs) (see "A Guide to International Investing"). As a result, from time to time, a "spread" or differential in pricing will occur. This spread allows investors to earn arbitrage profits. The strategy: The arbitrageur will buy the ORDs shares and short-sell the ADRs or vice versa, depending on their relative valuations. In order to determine which is rich and which is cheap, you need to recall the pricing formula for ADRs: ADR theoretical share price equals ORD share price multiplied by the conversion ratio of ORD share price to ADR shares multiplied by the foreign currency exchange rate. For example, shares of BHP Billiton ORD (BHP.AX) shares closed at AUD 36.91 on Tuesday, Feb. 12 in trading on the Sydney exchange. The forex rate was 1 AUD = 0.9035 USD. There are two ORD shares for every BHP Billiton ADR (BHP) - Get BHP Group Limited American Depository Shares (Each representing two) Report. So the theoretical value of the ADRs, going into the U.S. trading day, was \$66.70 per share. BHP closed at \$65.84 the day before. Thus, if you owned BHP.AX shares then you would seek to short-sell BHP in the U.S., if the shares rose above \$66.70. The risk: Once again, there is inherent risk in forex rates. Since you have to execute different legs of the strategy in two geographically different markets, which might not be open simultaneously, then you have face market risks that result from the time differential. Furthermore, since there are operational costs for converting ADRs to ORDs, sometimes ADRs will trade at a normal discount to the ORDs and the perceived profit is actually a permanent discount. Finally, a successful short-sale may be difficult to achieve. Either the local markets severely restrict the shorting of ORDs or the availability of ORDs (or ADRs) for stock-borrowing may be limited or so costly as to further impact the perceived profit. 5. Convertible Arbitrage The theory: From time to time, corporations will issue debt that is convertible into shares of the issuing company. By doing so, the company will pay an interest rate that is lower than that which would be paid on non-convertible or "straight" debt. Convertible debt is a hybrid security that is comprised of a straight debt instrument plus an embedded call option. Convertible arbitrage seeks to exploit the pricing anomalies that are associated with the embedded option in the convertible bond. The strategy: The usual convertible arbitrage is comprised of the investor purchasing the convertible security and then selling a series of hedges. The primary hedges are intended to extract pricing imperfections in the embedded option and are typically achieved by selling call options and/or common stock. Secondly, the arbitrageur may elect to deconstruct the fixed income elements of the convertible bonds and hedge those risks with fixed income derivatives, including swaps, options and futures. All of these techniques are quite complex and to execute properly, they require a more in-depth knowledge of options and other derivatives. The risk: There are many moving parts to the convertible arbitrage that not only create opportunities, but can also create risks. Losses can be generated by unexpected changes in the underlying stock price, interest rates or credit rating of the issuer. Furthermore, default on the part of the issuer would be devastating. Arbitrage Homework On paper, execute your own arbitrage. Calculate the potential profits and identify the risks that are associated with the transaction. Also, seek to understand why some M&A transactions fall apart and determine the losses that risk arbitrageurs would have incurred on those broken deals. At the time of publication, Rothbort was long BHP, although positions can change at any time. Scott Rothbort has over 20 years of experience in the financial services industry. In 2002, Rothbort founded LakeView Asset Management, LLC, a registered investment advisor based in Millburn, N.J., which offers customized individually managed separate accounts, including proprietary long/short strategies to its high net worth clientele. Immediately prior to that, Rothbort worked at Merrill Lynch for 10 years, where he was instrumental in building the global equity derivative business and managed the global equity swap business from its inception. Rothbort previously held international assignments in Tokyo, Hong Kong and London while working for Morgan Stanley and County NatWest Securities. Rothbort holds an MBA in finance and international business from the Stern School of Business of New York University and a BS in economics and accounting from the Wharton School of Business of the University of Pennsylvania. He is a Professor of Finance and the Chief Market Strategist for the Stillman School of Business of Seton Hall University. For more information about Scott Rothbort and LakeView Asset Management, LLC, visit the company's Web site at www.lakeviewasset.com. Scott appreciates your feedback; click here to send him an email.

