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Merger Arbitrage Investing: When Deals Fall Through

The hedge fund world is generally associated with "alpha"—idiosyncratic returns that appear disproportionate to any risk being taken. But over the years, academics and practitioners have argued that many hedge fund strategies are based on a risk premium, or "beta," that can be harvested systematically.

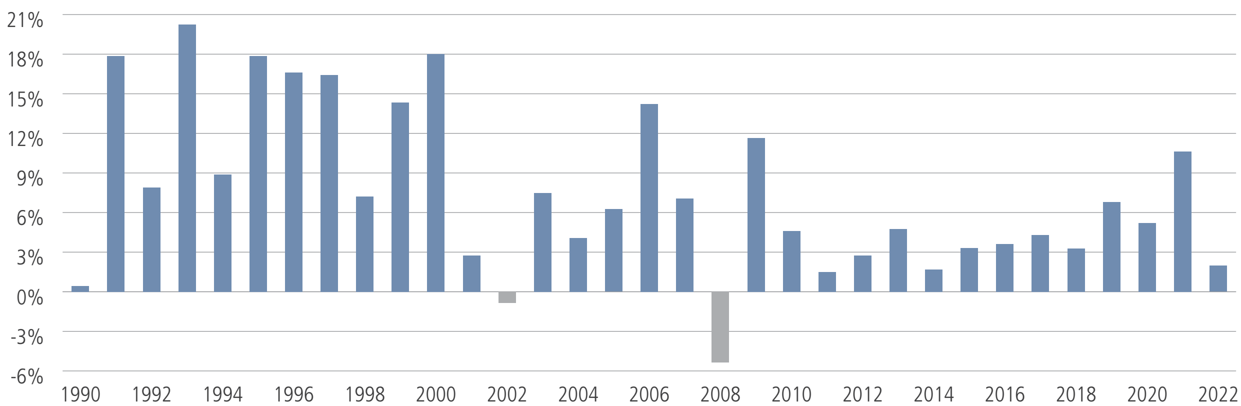
Merger arbitrage has been an important case study. When one company announces an agreement to acquire another, the stock price of the target company tends to jump close to, but not quite as high as, the declared acquisition price. The spread between that new market price and the declared acquisition price compensates investors for the risk that the deal fails, theoretically. Buy the target and hedge the position to crystalize the spread to the announced deal price, and as long as the acquisition goes ahead, you earn that spread. Do the same for all the stocks that are publicly declared acquisition targets and, in theory, you systematically diversify away the idiosyncratic deal-failure risk associated with each acquisition and are left with the merger-risk premium.

That is a cost-effective way to do merger arbitrage, for sure. But is leaving potential alpha on the table a false economy? Can systemic risks emerge to make naïve diversification less effective? And does the "merger-arb risk premium" really compensate investors for the losses that accompany failed acquisitions?

When a major deal fell through in November, it was a timely reminder to address these questions.

Merger arbitrage has an attractive long-term track record. According to HFR data, between January 1990 and November 2022, the HFRI Event Driven: Merger Arbitrage Index of investable merger arbitrage hedge fund strategies realized an annualized return of 7.34% with volatility of 4.3% and correlation with the S&P 500 Index of just 54%, and only two negative calendar years (figure 1).

FIGURE 1. CALENDAR-YEAR RETURNS FOR MERGER ARBITRAGE STRATEGIES



Source: Bloomberg. Calendar-year returns to the HFRI Event Driven: Merger Arbitrage Index of investable merger arbitrage hedge fund strategies, 2016 – December 2022. Data as of February 8, 2023. Nothing herein constitutes a prediction or projection of future events or future market behavior. Due to a variety of factors, actual events or market behavior may differ significantly from any views expressed or any historical results. Indexes are unmanaged and are not available for direct investment. Investing entails risks, including possible loss of principal. **Past performance is no guarantee of future results.**

As we will go on to discuss below, however, that return stream reflects the efforts of many active merger arbitrage managers to avoid some of the biggest pitfalls in the strategy. Most announced acquisitions close as planned, but not all of them—and history's high success rate can cloak the complexity inherent in a subset of announced deals.

It is in this subset of deals where the market's assessment of reward-for-risk can be most askew, and where active fundamental and technical research can seek to add value.

The story of one of those deals—a notably big one—began on November 2, 2021.

Antitrust

DuPont, the $34 billion chemicals and materials giant, announced that it had agreed to acquire the stock of Rogers Corporation, a manufacturer of engineered materials, at a price of $277 per share, or approximately $5.2 billion.

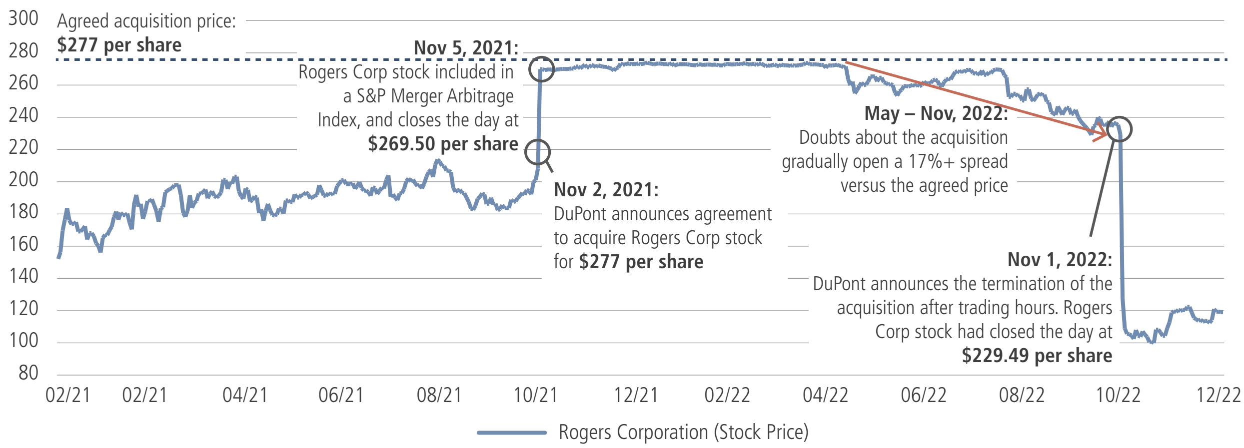
The synergies were clear: Rogers' leading expertise in electronic and elastomeric materials would enable DuPont's electronics and industrial business to address growing demand for advanced materials from manufacturers of electric and hybrid vehicles. The acquisition was part of a long-running reorganization of DuPont's business to focus on higher-margin, faster-growing markets.

Rogers stock soared by 30% when the deal was announced, hitting a November 2 close of $269.90. By November 5, the stock was included in the closely followed S&P Merger Arbitrage Index, with a weight of 3.75%.

By the end of January 2022, Rogers' shareholders had approved the deal and U.S. regulators had given the go-ahead. The transaction was expected to close in the first half of the year, following further non-U.S. regulatory approvals. Between the announcement of the deal in November 2021 and May 2022, the stock traded at an average spread of just 1.75% below the agreed acquisition price of $277 (figure 2).

FIGURE 2. THE DUPONT-ROGERS DEAL: CRASHING IN SLOW MOTION

Rogers Corporation stock price



Source: FactSet, Standard & Poor's, DuPont.

Over the summer, however, it became increasingly clear that Rogers' business fundamentals were deteriorating as one of its core end markets, semiconductors, weakened. That, combined with the general collapse in equity markets through the first half of the year, fueled speculation that DuPont would demand to renegotiate the acquisition price. The stock began to slide.

In September, DuPont said that all regulatory approvals had been received apart from China's. This regulatory delay stretched beyond the contractual "outside date"—the date after which either party can terminate the deal—and DuPont took the opportunity.

One year after the announcement of the deal, on November 1, 2022, Rogers' stock was trading with a 17% spread below $277. DuPont withdrew from the transaction after trading hours. The deal was off. The next day, Rogers stock plunged by more than 40% to $128 per share. It would eventually bottom out at $100 per share, a cumulative loss of 63% from the price at which it was included in the S&P Merger Arbitrage Index.

Fat Left-Tail Risk

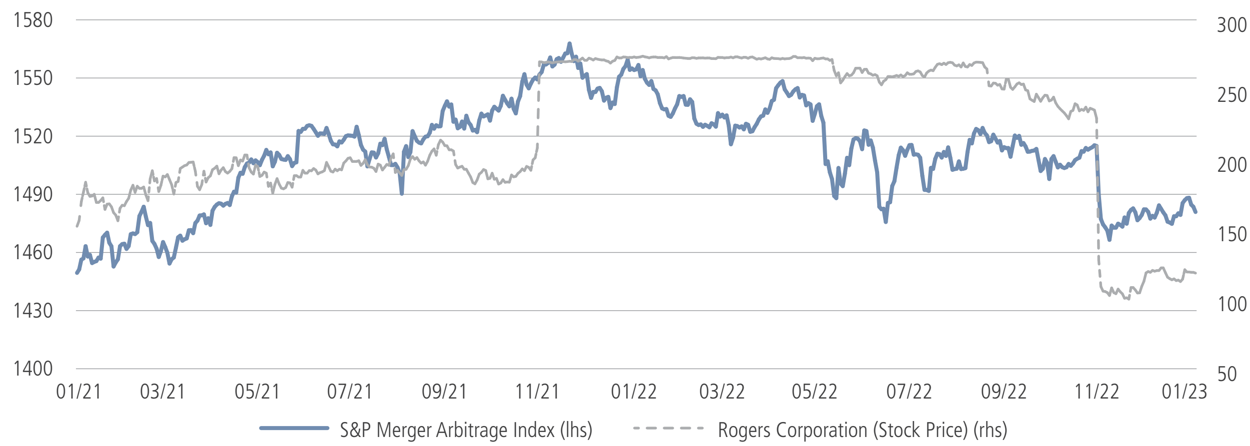
By the time the deal was called off on November 1, the weighting of Rogers Corporation in the S&P Merger Arbitrage Index was 3.96%. The Index continued to include the stock until November 4, by which time it had dropped to $105.62. For the full holding period, Rogers stock cost the S&P Merger Arbitrage Index 2.25%.

That might not sound like a lot—but this is an index that generally grinds out a relatively steady, incremental return of 1 – 3% a year.

For context, when the index included Rogers stock, it did so at a merger-risk spread of approximately 2.75%, representing a potential return to the index of just 10 basis points, assuming the DuPont acquisition went ahead at $277 per share. To put it another way, the downside loss was more than 20 times as big as the highest possible upside outcome. Or you could say that the index needs 20 or more transactions to go smoothly just to make up that one loss.

It's this fat left-tail risk that enables the failure of a single deal to make a clearly visible hit to a merger arbitrage index, even in the midst of elevated general market volatility (figure 3). A systematic, index-led approach to the strategy simply doesn't quantify the sheer magnitude of this downside risk.

FIGURE 3. THE DUPONT-ROGERS DEAL: BIG ENOUGH TO HIT THE INDEX
Rogers Corporation stock price, S&P Merger Arbitrage Index



Source: FactSet, Standard & Poor's. Data as of January 5, 2022. Indexes are unmanaged and are not available for direct investment. Nothing herein constitutes a prediction or projection of future events or future market behavior. Due to a variety of factors, actual events or market behavior may differ significantly from any views expressed or any historical results. Indexes are unmanaged and are not available for direct investment. Investing entails risks, including possible loss of principal. **Past performance is no guarantee of future results.**

Contagion

Left-tail risk in merger arbitrage indices can be amplified when several transactions fail around the same time. This is not an insubstantial risk, as different companies can be incentivized to pursue acquisitions by the same aspect of the business environment, such as a regulatory incentive. Should that incentive change, several transactions can be called off at the same time for essentially the same reason. This is an example of systemic risk which, if not recognized by the market, can result in spread margins that do not adequately compensate investors.

The classic example of this is the collapse of several "tax-inversion" acquisitions around October 2014. These were acquisitions by U.S. companies of businesses in non-U.S. tax jurisdictions designed primarily to avoid having to repatriate profits and incur high tax liabilities.

In 2014, the biggest of these announced deals was a plan by AbbVie, the U.S. biopharmaceutical company, to acquire a Jersey-registered competitor, Shire, for $55 billion. When the U.S. government changed the rules on taxing overseas profits, much of the incentive for this deal evaporated. By mid-October, AbbVie confirmed that the deal was off, knocking more than a quarter from Shire's share price.

The AbbVie-Shire transaction was big enough in its own right to send a shock through the merger-arbitrage universe. But it was not alone, and contagion was felt not only in the dozen or so other tax inversion-focused deals that had yet to close, but across the merger arbitrage universe as a whole (figure 4).

FIGURE 4. THE TAX INVERSION REVERSAL, OCTOBER 2014

S&P Merger Arbitrage Index

Source: Standard & Poor's. Data as of January 5, 2022. Indexes are unmanaged and are not available for direct investment. Nothing herein constitutes a prediction or projection of future events or future market behavior. Due to a variety of factors, actual events or market behavior may differ significantly from any views expressed or any historical results. Indexes are unmanaged and are not available for direct investment. Investing entails risks, including possible loss of principal. **Past performance is no guarantee of future results.**

Active

As the history outlined at the top of this article suggests, we think merger arbitrage can be a source of attractive, efficient returns that exhibit very low correlation with the broader equity market.

One can see why by looking at the Rogers stock price in figure 2. Between the announcement of the DuPont acquisition in November 2021 until May 2022 it barely moved—at a time when the Russell 2000 Index fell by more than 25%. It began to re-correlate with the market as the transaction started to break down, but had it gone ahead, as the majority do, merger arbitrageurs who invested when the stock entered the S&P Merger Arbitrage Index would have made a 2.75% return with virtually no volatility while the underlying market went through a bruising sell-off.

Hindsight is 20:20, but we believe it's reasonable to expect an active merger arbitrageur to avoid many of the worst losses from broken deals like these.

Back in 2014, a case could be made for investing in one or two of the tax-inversion mergers with the most attractive risk-adjusted spreads. But why would an active manager choose to invest in eight, nine or more, when a change in the rules might cause all of them to fail? Most systematic strategies, by contrast, don't have that choice.

The DuPont-Rogers deal was arguably mispriced from the start. Rogers is a mid-cap with very little analyst coverage in an industry experiencing substantial downward earnings revisions, presenting considerable downside risk in the event of a deal break. More importantly, for many weeks there were signs that the risk of a deal break was building. Active managers had time to abandon the trade in favor of more attractively priced opportunities, whereas many systematic and less active discretionary strategies had no option but to stand in front of this runaway train—as their published fund disclosures and performance data for the period indicate.

Trading in and out of merger-risk spreads as they oscillate with news flow around a deal; avoiding risks that correlate across several deals; and, most of all, being selective to avoid trades where the upside doesn't compensate for the potential downside. This kind of robust fundamental analysis and active inveting can help to avoid deal-break pitfalls, and we could describe many other examples. We believe this is why the HFRI Event Driven: Merger Arbitrage Index, which tracks the performance of both active and systematic strategies, has managed to maintain the consistent calendar-year performance shown in figure 1.

Catalysts

It's worth adding that investors that are not wedded to systematically holding all announced merger deals until they close or break might also consider trading corporate events that are not mergers. After all, a merger is just a specific type of corporate event. Others include a change of management or strategy, a balance-sheet restructure, a plan to spin-off a slow-growing division, a resolution of a long-running litigation or regulatory issue, or the presence of an activist investor looking to shake things up. In our view, with proper risk management and hedging, these also present uncorrelated, non-market directional investment opportunities.

We believe this can not only broaden and diversify the opportunity set for event-driven investors, but also provide more attractive entry points for merger arbitrage trades themselves. Event-driven investors try to identify these catalysts ahead of the crowd, anticipating that they will make the stock more attractive to other capital-markets investors. But as they become more attractive to capital-markets investors, they also become more attractive to corporate investors. That's how catalyst investors often find themselves holding merger-arbitrage stocks long before the stock price jumps on the announcement of the deal.

That said, for investors who want to focus on merger arbitrage alone, we still believe an active approach can meaningfully improve risk-and-return profiles, relative to more systematic approaches.

Cutting as much of the left-tail downside risk as possible is, in our view, the key to maintaining positive alpha in this strategy, and the collapse of the DuPont-Rogers acquisition in November last year was a timely reminder of the nature and potential size of that left-tail risk.

Index Definitions

The **S&P Merger Arbitrage Index** measures the performance of stocks from developed countries that are in active pending merger deals based on a risk arbitrage strategy that exploits commonly observed price changes associated with publicly announced mergers, acquisitions, or other corporate reorganizations. The index is comprised of a maximum of 80 companies, including up to 40 companies that are currently targets in merger deals, which are represented by long positions in the index, and up to 40 companies that are currently acquirers for the same stock merger deals, which are represented by short positions in the index. The index includes a cash component, which earns the three-month U.S. Treasury Bill rate.

The **Russell 2000 Index** consists of the 2,000 smallest stocks by market capitalization in the Russell 3000 Index, which is a market value-weighted index of the 3,000 largest listed U.S. stocks by market capitalization.

The **HFRI Event Driven: Merger Arbitrage Index** is an equal-weighted index of the performance of merger arbitrage hedge fund strategies reporting into the HFR Database, defined as those strategies that typically have more than 75% of their positions in announced merger transactions over a given market cycle. Strategies must report monthly, U.S. dollar, net of all fees performance and assets under management, and have either (a) $50 million assets under management or (b) at least $10 Million assets under management on the last reported =month prior to the index rebalance, and have been actively trading for at least 12 months.

The **S&P 500 Index** consists of 500 U.S. stocks chosen for market size, liquidity and industry group representation. It is a market value-weighted index (stock price times number of shares outstanding), with each stock's weight in the Index proportionate to its market value.

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