



Meet the Expert

Diversified Arbitrage



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Q How did you get started in the business of arbitrage investing? What led you to establish CNH Partners?

A The idea for CNH started when I was a professor at Northwestern University's Kellogg School of Management. I wanted to shed some light on merger arbitrage, but there was very little existing academic research on it. I reached out to Mark Mitchell, who at the time was a University of Chicago professor and is now one of my partners at CNH. He had been building a comprehensive dataset of all announced U.S. mergers, and we began an academic project to try to decipher the risks and returns to merger arbitrage.

Eventually we published our findings in the *Journal of Finance* and then decided to manage an efficient merger arbitrage strategy. In 2001, we launched our joint venture with AQR and named it CNH, which stands for Chicago, Northwestern, Harvard—the institutions where the founders either did their graduate work or taught.

Q Why should someone invest in Diversified Arbitrage strategies? How have they generated returns in the past?

A As a general rule in portfolio construction, you want to add assets that have the potential for positive expected returns, especially if those returns are uncorrelated with returns from other assets in your portfolio. Diversified Arbitrage strategies aim to capture returns by using many types of corporate strategies, including merger arbitrage, convertible arbitrage, and event-driven investments. Corporate arbitrage strategies have the potential to deliver uncorrelated excess returns over time in part due to what's called a liquidity risk premium.

I'll use merger arbitrage as an example to help explain. Suppose you manage a mutual fund and you find out on a Monday morning that one of your stock holdings is subject of a \$20-per-share takeover offer. At the close on Friday, the stock was trading at \$15, and now it's trading at \$19.50. Many investors sell at this point, as they don't want to take the risk that the merger fails, sending the stock back down to \$15. If many fund managers decide to sell, there is a large liquidity demand placed on the market. Who supplies the liquidity? Arbitrageurs do, for a price—the liquidity risk premium. The excess return that these arbitrage strategies have historically generated is linked to supplying liquidity in a market with excess demand for liquidity.



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Q How is AQR's approach to arbitrage investing different from others?

A We learned early on that being diversified across strategies is important. We launched with a stand-alone merger arbitrage strategy just 10 days before the tragedy of September 11, 2001. During the recession that followed, there were very few mergers announced. This motivated us to develop other arbitrage strategies, namely convertible arbitrage and event-driven.

Another difference is our focus on the downside and the resulting implications for portfolio construction. While others may look at the expected profit and build portfolios that overweight potentially big winners, we limit portfolio weights such that in the worst case (e.g., merger failure or convertible bond bankruptcy), the loss to the portfolio is within preestablished limits.

The final difference is related to equity market exposure. In all our strategies, we target zero exposure to traditional equity markets with full hedges. Others maintain partial hedges, which can diminish the correlation benefits of arbitrage investments.

Q How does an arbitrage strategy perform during different economic cycles?

A While individual arbitrage strategies can be affected by economic cycles, a diversified mix of arbitrage strategies will largely be immune to economic cycles. The area where we see this most is deal flow. Arbitrage investments are typically focused on corporate events—mergers, capital raises, spin-offs, bankruptcies. In a strong economy, merger deal flow will typically be strong, and growth companies will issue convertible bonds. In a weak economy, merger deal flow will slow, but distressed workouts and convertible issuance by credit-constrained issuers will increase. Every cycle is different, but if you are investing across a diversified set of arbitrage strategies, the composition of your portfolio will change, but the overall opportunity set will remain largely constant.

Q How have arbitrage markets and our strategies changed over the years? What have you learned over the past nearly two decades of arbitrage investing?

A I think the core of what we learned from our original academic research still holds today. Arbitrage-type investments are less about “deal picking” and more about capturing a liquidity risk premium. But we've learned a couple of big lessons over the years. First, counterparties are very important. We understood that investors would flee if we had negative performance, but we underestimated the fragility of our debt providers during the Global Financial Crisis. As a result, we manage our strategies with greater cash cushions than in the past, and we try to diversify counterparty risk as best we can.

Second, we learned that although we are trading positions that have a high probability of converging, the long and short sides of the trade are not identical. Some trades will have a bumpy ride towards convergence—a reality that has led us to manage some investments with tighter downside constraints. But, again, the core liquidity risk premium has remained intact, and we don't see any indications that it is going away.



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About the Expert: Todd Pulvino is a Principal and co-founder of CNH Partners, an affiliate of AQR that trades merger arbitrage, convertible arbitrage and other strategies related to corporate events. Prior to co-founding CNH in 2001, Todd was a tenured Associate Professor of Finance at Northwestern University's Kellogg School of Management, where his research focused on the risks and returns in event arbitrage. Earlier, he was a consultant at two fund-of-fund firms, Collins Associates and Grosvenor Capital Management, and a visiting professor at Harvard Business School. He began his career as an aerospace engineer. He has published in finance journals, winning two Smith Breeden awards for his research, and teaches at the Kellogg School. Todd earned a B.Sc. in mechanical engineering from the University of Wisconsin-Madison, an M.S. in mechanical engineering at the California Institute of Technology, and an A.M. and a Ph.D. in business economics from Harvard University.

For more on Diversified Arbitrage, visit our Learning Center at aqr.com/LearningCenter.

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