

When managing risk, overconfident managers don't always follow the fundamentals

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Why and how firms hedge has been an area of interest in corporate finance for a long time. The traditional notion of hedging is matching one risk with an opposing risk. Gains on the hedge offset the losses on the position otherwise exposed to price uncertainty, making the resulting cash flow volatility lower. The traditional theories of corporate risk management have generated numerous explanations for why reducing cash flow volatility may be beneficial to the firm, e.g., by reducing expected taxes, bankruptcy costs, agency costs, or costly information asymmetries between managers and investors.

But consider a commodity producer. Suppose its fundamental characteristics (taxes, debt, growth opportunities, size, managerial compensation etc.) call for putting on a large hedge position to shield a significant portion of expected future production from price uncertainty. However, the management thinks that prices are on their way up and unwinds its hedges. In other words, the *managerial price view* gets incorporated into their hedging policies over and above the theoretically identified fundamentals. In that case the hedge position may be *more volatile over time* as the managerial price outlook shifts from bearish to bullish and back.

Several surveys and empirical studies have shown that managers do hedge selectively based on their price view and that hedge ratios of many firms are in fact rather volatile over time; but that this selective hedging strategy meets with little success in terms of generating positive cash flow. Why then do firms continue to do it? One explanation that seems plausible is that managers are *overconfident* regarding their ability to predict future prices. To test whether managerial overconfidence plays a role in the choice of hedging strategy was the goal of my paper.

Several papers in corporate finance use various measures in the cross-section to tell overconfident managers from the rest. For example, one could look at whether a manager holds on to their vested options for a long time, suggesting they are optimistic about the future stock price. In this paper, I have used an alternative route, which is a novel approach in measuring overconfidence: a *time-series* approach.

Suppose the manager of a commodity producing firm is very confident about her ability to forecast future commodity prices, and hedges selectively: more when prices are believed to fall and less otherwise. Her hedge percentage, or delta, will vary over time accordingly. Sometimes her forecast will be right and the hedges will generate positive cash flow. I will call this outcome a “success” of selective hedging. Sometimes the opposite will occur, which I call a “failure.”

The main idea used in my paper is borrowed from the literature that suggests that overconfidence tends to come together with a *self-attribution bias*: following successes, our overconfidence gets stronger because we tend to attribute successes to our ability; but following failures, our overconfidence *does not symmetrically decrease* because we tend to attribute failures to exogenous circumstances and not to our poor choices.

For each quarter in a large sample of North American gold mining producers over 1990 -1999, I measure their hedge positions. From those and also from observing other firm characteristics I can calculate the predicted hedge percentage, i.e., the hedge warranted by the fundamental hedging needs of the firm, managerial price view notwithstanding. I can then calculate what the cash flow from the hedge positions would have been if the firm had followed, quarter after quarter, the hedge policy prescribed by the fundamentals. The difference between the cash flow from the firm's actual hedge and the hypothetical cash flow from the predicted hedge is what I refer to as “selective cash flow.” Positive selective cash flow is a success, negative is a failure.

The hypothesis is simple. If managers are overconfident they are likely to show self-attribution bias. If selective

hedging resulted in success one quarter the manager will get even more overconfident about her ability and her hedging will get even more volatile next quarter. On the other hand, a failure of selective hedging to generate positive cash flow will be interpreted as bad luck and the volatility of hedging will not symmetrically decrease following the failure. In other words, the relationship between selective cash flow and future hedge volatility is asymmetrical: more positive for successes than for failures. Using a regression with indicator variables for selective hedging successes and failures, and controlling for various alternative explanations, I document strong evidence consistent with my hypothesis. Managers do appear to be overconfident.

The practical relevance of the finding is that it suggests an important determinant of hedging choices which perhaps has always been incorporated in managerial behaviour but has never been highlighted until now. It is important for investors to understand how managers make risk management decisions, and my paper helps to shed new light on this important attribute of corporate decision making.

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Notes:

- This article is based on the paper [Managerial overconfidence and corporate risk management](#), co-written by the author and her colleagues Tim R. Adam and Chitru S. Fernando, in the *Journal of Banking and Finance* [Volume 60](#), November 2015, Pages 195–208.
- This post gives the views of the reviewer, and not the position of LSE Business Review or the London School of Economics.
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