

DUAL FOCUS

Hedging programs need to focus on both sides of the income statement

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KEY TAKEAWAYS:

- A hedging program that focuses on only one side of the income statement may actually add to overall economic risk, as opposed to mitigating it.
- Control input costs through the hedge horizon that revenues are controlled, and vice versa.
- Just as banks manage their net interest margin using derivatives, so too, can nonfinancial businesses use derivatives to manage their profitability.

A mix of analytics and judgment is required when devising a hedging program to manage financial risk.

To frame the issue, we start with an appreciation that virtually all companies are in a spread business, where profit (i.e., the spread) equals the difference between revenues and costs, and the economic objective would be to maximize that spread, possibly subject to a variety of constraints. More pointedly, a hedging program that focuses on only one side of the income statement may actually add to overall economic risk, as opposed to mitigating it.

Maximizing the spread

To illustrate our concern, we start by considering two distinct extreme situations. For simplicity, we assume the costs are dominated by a particular good or commodity, and similarly, revenues are associated with a particular finished good.

In the first instance, we assume that the inputs and outputs are closely related, where the costs of the inputs are immediately passed through to the customer. In this case, the company essentially bears no market risk, and thus the need for any derivatives-related hedging activity is obviated. Moreover, if the firm chooses to hedge either costs or revenues but not both, those hedges would serve to *introduce* market risk where none preexisted. For example, profitability would be adversely affected if the expense outflow is stabilized via a hedging strategy but then revenues end up declining.

In the second instance, we assume prices of inputs and outputs to be distinct. Changes in input prices would have an inverse effect on the spread (i.e., profits), while changes in output prices would have a direct effect. But in this instance, we assume revenues and expenses to be largely independent of each other. Assuming the availability of hedging derivatives relating to the major components of both revenues and expenses, the firm could protect profitability by hedging both revenues and expenses, independently.

With these two extremes understood, we now consider somewhat of a middle ground. In this case, we do not have viable derivative markets relating to inputs and outputs, respectively, but instead, a common underlying commodity applies to both expenses and revenues. To hedge overall profitability, we would need to protect against price increases for the inputs, while simultaneously protecting against price decreases for the final sales. If both hedges involve the same derivative contract, the appropriate hedge position would be the net of these two component hedges.

In the general case, some analytics would be required to measure the respective price sensitivities of inputs and outputs to the underlying commodity associated with the derivative; and we shouldn't necessarily expect those sensitivities to be the same. In the vernacular of the market place, the input hedges and the output hedges would have distinct hedge ratios.

If we lock up input prices for an extended term, but we do nothing to control finished goods prices, we would be introducing considerable risk to the enterprise.

Hedge horizon

With this orientation, the next concern is the length of the hedge horizon. How far out should the hedges extend? Practically speaking, we are likely to be constrained by the durations of viable hedging instruments. But more significantly, we would want to assure that we are operating on income and expenses in parallel. That is, we would like to control input costs through the horizon that our revenues are controlled, and vice versa. Put another way if we lock up input prices for an extended term, but we do nothing to control finished goods prices, we would be introducing considerable risk to the enterprise. Thus, it should be clear that the risk-averse firm with contracted revenues over, say, a three-year horizon, would seek to hedge its input costs over that same three years. Alternatively, the firm with a fixed price contract for inputs would seek to hedge its associated final sales, again, for a common term.

In thinking about the business in this way, it's important to recognize that some "fixed" prices are fixed by convention, as opposed to being contractually fixed. That is, the institutional nature of the market may be such that, in some cases, prices are sticky and hence should be thought of as fixed, or alternatively, companies may voluntarily offer their goods or services at a given price for some time horizon. In effect, these companies have committed to fixed prices for some segment of their exposures, for some term. Thus, to operate in a manner consistent with this discussion, they would reduce their overall enterprise risk by hedging a commensurate portion of their exposure(s) on the other side of their income statement.

Clearly, firms may enter smaller hedge positions, but in so doing, those firms should realize that they're effectively transitioning

from an orientation that seeks to manage their overall profitability to some alternative business objective that bears greater risk. In so doing, they may end up enhancing their profits, but perhaps not. In an ideal world, the management discussion and analysis (MD&A) presented in financial disclosures should offer clues (if not clarity) about where the firm in question stands on this spectrum of how they manage profitability risk—i.e., how much or how little parallelism the company imposes on their income and expense exposures. Unfortunately, discerning that information remains a challenge.

Implications for corporates

The orientation suggested above is one that is generally embraced by financial intermediaries— institutions like banks and insurance companies that carry both financial assets and financial liabilities on their balance sheets, where their spread is widely referred to as their "net interest margin." The concept is equally valid, however, for myriad nonfinancial companies. In particular, any company that is heavily reliant on commodities can (should?) be thinking about their profits as the spread between their revenues and their costs. And just as banks manage their net interest margin using derivatives, so too can nonfinancial businesses use derivatives to manage their profitability.

Especially good candidates for this way of thinking are companies tied to agricultural markets, mining companies, energy producers, and even some companies where the costs and revenue streams seem less obvious—like airlines or clothing manufacturers. If your company is actively using derivatives to manage market price risk on only one side of the income statement, those hedges may actually be introducing risk, as opposed to mitigating it—a situation that may be more common than you might think; but one that may be relatively easy to address.

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