A Survey of Corporate Risk Management: Too hot to handle? - To hedge or not to hedge (part 4 of 9)

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The case for the hedging of risks by non-financial companies is not as obvious as it might seem

MATTHEW BISHOP MOST value-maximising firms do not hedge.' Thus Merton Miller and Christopher Culp, two economists at the University of Chicago, in a recent article* about Metallgesellschaft, a firm that saw its value plunge after its oil-price hedging strategy came a cropper. Yet the vast majority of firms that use derivatives do so to hedge. Last year's survey of big American non-financial companies by the Wharton School and Chase Manhattan bank found that, of those firms that used derivatives (about one-third of the sample), some 75% said they did so to hedge commitments. As many as 40% of derivatives users said they sometimes took a view on the direction of markets, but only 8% admitted to doing so frequently.

To justify speculation, managers ought to have good reason to suppose that they can consistently outwit firms for which playing the financial markets is a core business. Commodity businesses, such as oil or grain companies taking positions on the direction of their related commodity markets, may have such reason, but non-financial firms taking bets on interest rates or foreign-exchange rates almost certainly do not - though some claim to make a profit on it. But why might hedging be wrong?

In the 1950s, Merton Miller and Franco Modigliani, another financial economist, demonstrated that firms make money only if they make good investments - the kind that increase their operating cash flows. Whether those investments are financed through debt, equity or retained earnings is irrelevant. Different methods of financing simply determine how a firm's value is divided between its various sorts of investors (eg, shareholders or bondholders), not the value itself. This surprising insight helped win each of them a Nobel prize. If they are right, it has crucial implications for hedging. For if methods of financing and the character of financial risks do not matter, managing them is pointless. It cannot add to the firm's value; on the contrary, as derivatives do not come free, using them for hedging might actually lower that value. Moreover, as Messrs Miller and Modigliani showed, if investors want to avoid the financial risks attached to holding shares in a firm, they can diversify their portfolio of holdings. Firms need not manage their financial risks; investors can do it for themselves.

In recent years, other academics have challenged the Miller-Modigliani thesis - at least in its pure form - and demonstrated that hedging can sometimes add value. That is because firms may be able to manage certain risks internally in ways that cannot be replicated by outside investors. Some investors may not want, or be able, to hold diversified share portfolios (for instance, if the firm is family-owned). It may be possible to use derivatives to reduce profits in good years and raise them in bad years in order to cut the firm's average tax bill. Hedging can also be used to

prevent the firm getting into financial difficulties, or even going bust.

Recently, another view has been winning converts. According to Kenneth Froot, David Sharfstein and Jeremy Stein, three Boston-based economists, firms should hedge to ensure they always have sufficient cash flow to fund their planned investment programme**. Otherwise some potentially profitable investments may be missed because of inefficiencies in the bond and equity markets that prevent the firm raising the funds, or the reluctance of managers to tap these markets when internal cash is tight. Merck, an American pharmaceuticals firm, has helped to pioneer the use of derivatives to ensure that investment plans - particularly in R&D - can always be financed. In a paper explaining the firm's strategy, Judy Lewent and John Kearney observed that 'our experience, and that of the • drugs) industry in general, has been that cash-flow and earnings uncertainty caused by exchange-rate volatility leads to a reduction in research spending.'***

Though apparently simple, such a strategy has some intriguing implications. As Messrs Froot, Scharfstein and Stein point out, the factors that cause cash flow to fall below expectations may also cut the number of profitable investment opportunities, so lessening the need to hedge. For instance, an oil company's cash flow may suffer due to a fall in oil prices. However, that fall in prices also reduces the value of investing in developing new oil fields. With fewer profitable projects to invest in, the firm will need less cash to finance investment.

All about cash flow

Rene Stulz, an economist at Ohio State University, sees even more powerful implications****. He says that there are only a couple of good reasons why a firm should hedge. One is to cut its tax bills, which is likely to happen only if the firm's profits tend to yo-yo between lower and higher tax bands. The other one is being unable to get cash when it needs it, or facing a serious risk of running short. By this rule, reckons Mr Stulz, a firm with little debt or with highly-rated debt has no need to hedge, as the risk of it getting into financial trouble is tiny. If he is right, many of America's biggest hedgers - including some of those that have revealed losses on derivatives, such as Procter & Gamble - may be wasting their energies, or worse. By contrast, Mr Stulz thinks that if a firm is highly geared, hedging can boost its value significantly. Indeed, during the leveraged buy-out craze of the 1980s, when firms were taken over by buying off shareholders and loading up on debt, tough risk-management requirements were standard in any borrowing arrangement.

Messrs Culp and Miller, of the University of Chicago, take this argument a step further in defending the management of Metallgesellschaft from some of the wilder accusations of recklessness (a matter that is now before the American courts). Instead of analysing the firm's hedging strategy (which involved selling oil for up to ten years ahead and hedging this exposure with futures contracts) in terms of its effectiveness in reducing risk, Messrs Culp and Miller argue that the company had no need to reduce its risk-exposure because it had no reason to suppose it could not get hold of cash if needed. After all, the mighty Deutsche Bank, as its principal creditor and controlling shareholder, was behind the firm, ensuring that it could not go bust; and, as it turned out, it did not. Rather, the aim of the hedging strategy was to exploit what Metallgesellschaft thought was its superior understanding of the relationship between spot prices and futures prices - risky but not obviously foolish.

Not everyone agrees that firms with little debt should not hedge. Myron Scholes, an economist

at Stanford University, reaches the opposite conclusion: firms with little debt could reduce their riskiness by hedging, and so be able to borrow more and rely less on equity. Equity can be expensive compared with debt; it is inherently riskier, offering no guaranteed payout, so investors require a higher average return on it than they do on bonds. Ultimately, through risk-reducing hedging and borrowing, more firms might be able to remain (or become) privately owned, reckons Mr Scholes. But to do this well, managers will need a very good understanding of the risks to which their firm is exposed, and of opportunities to hedge.

However, the way firms typically use derivatives to reduce the cost of capital is different from that described above. Rather than hedge and borrow more, they substitute for traditional debt a hybrid of bonds and options and/or futures that will pay off in certain circumstances, thus lowering capital costs. This is speculation dressed up as prudence, because if events take an unexpected turn, capital costs go up by at least the cost of the options.

* 'Hedging in the Theory of Corporate Finance: A Reply to our Critics'. By Christopher Culp and Merton Miller. Journal of Applied Corporate Finance; Spring 1995

** 'A Framework for Risk Management'. By Kenneth Froot, David Scharfstein and Jeremy Stein. Harvard Business Review; November 1994

*** 'Identifying, Measuring and Hedging Currency Risk at Merck'. By Judy Lewent and John Kearney. In 'The New Corporate Finance,' edited by Donald Chew, McGraw-Hill; 1993

**** 'Rethinking Risk Management'. By Rene Stulz. Ohio State University working paper; 1995
