MM agree that borrowing raises the expected rate of return on shareholders' investments. But it also increases the risk of the firm's shares. MM show that the higher risk exactly offsets the increase in expected return, leaving stockholders no better or worse off.

Proposition 1 is an extremely general result. It applies not just to the debt–equity trade-off but to *any* choice of financing instruments. For example, MM would say that the choice between long-term and short-term debt has no effect on firm value.

MM's theory boils down to saying, "There is no magic in financial leverage." Some might object that there is a clientele of investors who are willing to pay a premium for shares of levered firms. But this argument is incomplete. There may be a clientele for levered equity, but that is not enough; this clientele has to be *unsatisfied* and obliged to pay more for levered equity than MM would predict. There are already thousands of levered firms available for investment. Is there still an unsatisfied clientele for garden-variety debt and equity? We doubt it.

Proposition 1 is violated when financial managers find an untapped demand and satisfy it by issuing something new and different. The argument between MM and the traditionalists finally boils down to whether this is difficult or easy. We lean toward MM's view: Finding unsatisfied clienteles and designing exotic securities to meet their needs is a game that's fun to play but hard to win.

If MM are right, the overall cost of capital—the expected rate of return on a portfolio of all the firm's outstanding securities—is the same regardless of the mix of securities issued to finance the firm. The overall cost of capital is usually called the company cost of capital or the weighted-average cost of capital (WACC). MM say that WACC doesn't depend on capital structure. But MM assume away lots of complications. The first complication is taxes. When we recognize that debt interest is tax-deductible, and compute WACC with the after-tax interest rate, WACC declines as the debt ratio increases. There is more—lots more—on taxes and other complications in the next two chapters.

Danger lurks where naïve financial managers try to add value simply by "levering up." MM did not say that borrowing is a bad thing, but they insisted that financial risk offsets the higher average returns from financial leverage. Do not ignore financial risk. Watch out especially for hidden leverage, for example, from financing leases or pension obligations.

FURTHER READING

The fall 1988 issue of the Journal of Economic Perspectives *contains a collection of articles, including one by Modigliani and Miller, that review and assess the MM propositions. The summer 1989 issue of* Financial Management *contains three more articles under the heading "Reflections on the MM Propositions 30 Years Later."*

Two surveys of financial innovation include:

F. Allen and G. Yago, *Financing the Future: Market-Based Innovations for Growth,* Wharton School Publishing-Milken Institute Series on Financial Innovations (Upper Saddle River, NJ: Pearson Education, 2010).

P. Tufano, "Financial Innovation," in G. M. Constantinides, M. Harris, and R. Stulz, eds., *Handbook of the Economics of Finance,* vol. 1A (Amsterdam: Elsevier/North-Holland, 2003), pp. 307–335.

Miller reviews the MM propositions in:

M. H. Miller, "The Modigliani-Miller Propositions after Thirty Years," *Journal of Economic Perspectives,* 2 (Autumn 1988), pp. 99–120.

For a skeptic's view of MM's arguments see:

S. Titman, "The Modigliani and Miller Theorem and the Integration of Financial Markets," *Financial Management* 31 (Spring 2002), pp. 101–115.