

Capital Structure: Some Legal and Policy Issues

by

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Much of my research has focused on capital structure, that is, on corporate financing decisions. The corporations I study are consumers, not providers, of the laws governing those decisions. I am not a lawyer or jurist, but I can speak for those consumers. What types of financing decisions should the law support, and what types should it constrain? How can the law adapt and evolve to enhance the efficiency, profitability and value of modern corporations?

Of course these are hopelessly open-ended questions. Therefore I will make just a few specific points, more or less in outline form, as a prelude to discussion by the panel and audience:

1. With well-functioning financial markets and institutions, it is difficult or impossible to add value by changes in financing.
2. Financial innovation brings companies and economies closer to that ideal. Therefore law and regulation should not impede financial innovation, and accommodate a variety of capital structures and financing strategies.
3. It will always be possible to destroy value by stupid financing decisions, but the law should not encourage such decisions.
4. Companies' access to financing depends on legal protection for creditors, minority stockholders, and for the dispersed majority of stockholders of public corporations.
5. However, that legal protection should not impede the flow of capital out of mature companies that have run out of profitable growth opportunities. Share repurchases have proven a flexible and effective means of returning capital to investors.

Definitions and the Modigliani-Miller Propositions

“Capital structure” is defined as the mix of debt and equity securities used to finance real investment. Capital structure reflects the firm's financing strategy, for example, its overall target debt-equity ratio, and also financing tactics, for example, the design and timing of a particular debt issue.

For this conference, this definition is too narrow. Studies of capital structure typically assume that the firm has access to financing and take the amount of financing as

given. We are concerned with how and how much capital is raised from outside investors and with the mechanisms balancing the investors' interests with the interests of the firm's managers and employees.

Nevertheless it is helpful to start with the Modigliani-Miller ("MM") proof that financing doesn't matter in perfect financial markets. Consider a simple, market-value balance sheet:

Assets-in- place and growth opportunities	Debt (D)
	Equity (E)
	Firm value (V)

The market values of the firm's debt and equity, D and E, add up to total firm value V. MM showed that V is a constant, regardless of the proportions of D and E, provided that the assets and growth opportunities on the left-hand side of the balance sheet are held constant. This result generalizes to any mix of securities issued by the firm. For example, it doesn't matter whether the debt is short- or long-term, callable or call-protected, straight or convertible, in dollars or euros, or some mixture of all of these or other types.

If leverage is irrelevant, then each firm's overall cost of capital is a constant, regardless of the debt ratio D/V. The cost of capital can be measured by the weighted-average expected return on a portfolio of all the firm's outstanding securities.

The economic intuition for MM's leverage-irrelevance proposition is simple, equivalent to asserting that in a perfect-market supermarket "The value of a pizzas does not depend on how they are sliced." But is the theory credible? Could financial markets ever be sufficiently perfect? After all, the values of pizzas *do depend* on how they are sliced. Consumers are willing to pay more for the several slices than for the equivalent whole. Perhaps the value of the firm does depend on how its assets, cash flows and growth opportunities are sliced up and offered to investors. For example, investors cannot easily borrow with limited liability, but corporations provide limited liability and can

borrow on their stockholders' behalf. There should be a clientele of investors standing ready to bid up the value of levered firms.

The practical relevance and credibility of MM's propositions therefore cannot rest on a lack of demand for financial leverage or for specialized securities. The proposition's support must come from the supply side. The proposition works when the cost of "slicing the pizza" is small relative to the market value of the firm. If the supply-cost is small, then the clientele of investors who would be willing to pay extra to borrow through a corporation do not have to do so, because the cost of manufacturing debt and equity securities, rather than equity only, is a small fraction of the securities' market values. The supply of debt expands until the value added for the marginal investor is zero. The supply of any mix of securities demanded by investors expands until investors' demand is satiated and the contribution of that financing mix to the value of the firm is zero.

These arguments are straight from Finance 101. But from the viewpoints of law, regulation and public policy, the MM leverage-irrelevance proposition is the ideal end result. If that result could be achieved in practice, then investors' diverse demands for specialized securities would be satisfied at negligible cost. All firms would have equal access to capital, and the cost of capital would not depend on financing, but only on business risk. Capital would flow directly to its most efficient use.

Financial Innovation

When I first studied finance in the 1960s, there were no traded options, financial futures or swaps. There was no organized junk-bond market. There were no floating-rate preferred shares or catastrophe bonds. The private-equity partnerships that now invest in venture capital and buyouts were not yet invented. There were no mechanisms for routine syndication and trading of bank loans. The number of new securities, markets and trading and hedging strategies developed in the last 30 years seems almost countless.

The continuing innovation in the corporate financing proves that financing can matter. If new securities or financing tactics never added value, then there would be no incentive to innovate. On the other hand, financial innovation provides the best circumstantial evidence that financing is, if not irrelevant, at least unimportant. The costs of designing and creating new securities and financing schemes are low, and the costs of

imitation are trivial. (Fortunately, securities and financing tactics cannot be patented.) Thus temporary departures from MM's leverage-irrelevance proposition create the opportunity for financial innovation, but successful innovations quickly become "commodities," that is, standard, low-margin financial products. The rapid response of supply to the discovery of successful new financial products restores the MM equilibrium. Companies may find it convenient to use these new products, but only the first users will increase value, or lower the cost of capital, by doing so.

Therefore law and regulation should accommodate financial innovation because it makes financing decisions relatively unimportant.

History provides many examples where law or regulation has impeded financial innovation. For example, the development of the Japanese domestic bond market was for many years held back by various hurdles set for would-be issuers. But this sort of direct restriction on financing choices is presumably now rare in OECD countries.

The more important restrictions may now lie in the structure of financial markets and institutions. For example, private investment in venture capital won't work unless there is a stock market prepared to accept IPOs by young and unproved growth companies. New European exchanges, particularly EASDAQ, the Neuer Markt and the Nouveau Marche, allow such companies go public early in order to cash out the venture capitalists and to maintain incentives for the managers and employees. (Note that public companies can pay internal entrepreneurs in shares valued by outside investors. The entrepreneurs can be compensated immediately for creating growth opportunities, that is, valuable opportunities for future investment.)

This does not mean that all new ventures should be separate public corporations. Financing in public equity markets has its own costs, particularly where accounting and disclosure standards are substandard. In some cases it can be more efficient for large corporations to finance new ventures in house, by way of an internal capital market.

Financial innovation will lead to very different financing strategies for different purposes. Policymakers, particularly in developing countries, often aspire to an idealized, modern financial system, with public companies, banks and bond and stock markets playing their conventional roles. This is fine so long as companies are not locked into a

particular financial architecture. If in the U. S. all investment and innovation were assigned to public corporations, the economy would be hobbled.

The costs of financing mistakes

Modigliani and Miller showed why financing decisions can not increase value in perfect financial markets. They would agree that financing mistakes can destroy value. Mistakes are inevitable, but governments should not encourage them.

One obvious mistake is to finance risky, high-tech investments mostly with debt. But governments often try to subsidize investment in favored areas by offering low-interest rate loans.

The classic bad example is the U. S. savings and loan (S&L) crisis. S&Ls had been designed in the 1930s to make mortgage loans to individuals buying homes. The S&Ls took short-term deposits and savings accounts – with federal deposit insurance – and acquired long-term, fixed-rate loans. They were designed to “borrow short, lend long.” When interest rates rose steeply in the late 1970s, the value of these loans fell, leaving a large fraction of the S&L industry insolvent on a market-value basis.

An insolvent, or near-insolvent company has little to lose by borrowing more and making risky investments. Normal lenders recognize this temptation and try to step in and protect their interests. But in this case the lenders were savers and depositors protected by the government. Then legislation was passed which loosened the restrictions on the investments S&Ls were allowed to undertake. For example, they were allowed to borrow, by taking in deposits at government-guaranteed rates, and invest real estate development loans and junk bonds. They were allowed to take on more leverage and more asset risk at the same time. Is it any surprise that so many S&Ls failed in the recession of the late 1980s?

Access to Financing

Investors do not supply financing unless their interests are protected. Therefore one would expect countries with legal systems that protect investors to also have the most developed financial markets and the greatest flow of external financing to companies. A remarkable paper by La Porta, Lopez-De-Silanes, Shleifer and Vishny confirms this

prediction across a sample of 49 countries.¹ For example, countries with effective law enforcement and strong shareholder rights have higher ratios of stock market capitalization to GNP; more publicly traded firms, relative to population, and more IPOs. The study also found clear differences in financial development between countries with legal systems derived from English (common law) vs. French (civil law) origins. Civil-law countries have the weakest investor protection and the least-developed financial markets. Countries with German or Scandinavian systems are intermediate.

This study confirms the importance of investor protection. But does that protection depend on specific laws or regulations, for example, legal capital requirements? Perhaps the specifics are less important than the broader attributes, for example, the quality of law enforcement and investors' confidence in financial contracts.

In the U. S. there is no effective minimum legal capital requirement. There are restrictions on the payment of dividends from the par value of common stock, but par value is usually a nominal amount, say \$1.00 per share. Creditors are protected by debt covenants; by laws prohibiting fraudulent conveyance, that is, the distribution of cash or assets in anticipation of default, and by the ability to recover assets in bankruptcy.² They are also protected by the managers' and shareholders' natural aversion to high debt ratios. If capital structure is irrelevant, or at least unimportant, then it is better to rely on equity rather than risk financial distress and the loss of the firm's intangible assets and growth opportunities.

Minimum capital requirements were intended to protect creditors. It may be more important – and difficult – to protect outside equity investors. Even if outside stockholders control a majority of shares, their power is limited if ownership is dispersed.

¹ R. La Porta, F. Lopez-de-Silanes, A. Shleifer and R. W. Vishny, "Legal Determinants of External Finance," *Journal of Finance* 52 (July 1997), 1131-1150. The paper uses several measures of investor protection, including survey-based estimates of the quality of law enforcement and checklists of the rights granted to outside shareholders vs. the company and its directors. The statistical tests also controlled for the level and growth of GNP.

² However, creditors are not always given strict priority over equity investors when a company is reorganized in bankruptcy proceedings.

Textbook finance mostly assumes that the interests of the firm's managers and shareholders are perfectly aligned, and that financial decisions are made to maximize the value of the firm's existing shares. But perfect alignment is implausible in theory and impossible in practice. When ownership and control are separated, managers will inevitably give weight to their own interests. They will seek higher-than-market salaries, perquisites, job security and, in extreme cases, direct capture of assets or cash flows. They will favor "entrenching investments" which adapt the firm's assets and operations to the managers' skills and knowledge, and increase their bargaining power vs. investors. The investors can discourage such value transfers by various mechanisms of monitoring and control, including supervision by independent directors and the threat of takeover. But these mechanisms are costly and subject to decreasing returns, so perfect monitoring is out of the question.³

Outright fraud or theft by management is rare in countries with developed financial markets, and perquisites are typically not expensive compared to the overall value of the firm. The more serious problem is the tendency of mature corporations to invest in unprofitable projects. Many cash-cow companies should shrink, but do not willingly do so. Jensen called this the "free cash flow" problem: "The problem is how to

³ Managers' and investors' interests can also be aligned by design of compensation packages. Here again perfection is out of reach. First, the manager never bears the full costs that his or her actions impose on investors – unless, of course, the manager is also the owner. Second, there is no pure, observable measure of managers' performance. Their actions typically account for only a small part of the variance of observable outcomes, such as common-stock returns or changes in earnings. Investors would like to reward effort, commitment and good decisions, but these inputs are imperfectly observable. Even if good performance on these dimensions were observable by some informed monitor, the performance would not be verifiable. A contract offering a bonus for, say, "good decisions" would not be enforceable, because the decisions could not be evaluated by a disinterested outsider or by a court of law. Complete contracts cannot be written.

motivate managers to disgorge the cash rather than investing it below the cost of capital or wasting it on organizational inefficiencies.”⁴

Returning Cash to Investors

Access to outside equity capital finally depends on investors’ confidence that the firm will disgorge cash when it runs out of profitable growth opportunities. The obvious channel for returning cash is payment of cash dividends. However, there are several alternative channels.

The first alternative channel is to repurchase and retire common stock. This is common in the U. S., but prohibited in many other countries. The economic rationale for the prohibition is unclear. If the purpose is to protect creditors, then share repurchase should be restricted only to the extent that cash dividends are restricted. If creditors are harmed by repurchase of, say, \$10 million’s worth of shares, they are equally harmed by payment of \$10 million in dividends. The main requirement for repurchases is that they be done in broad daylight, so to speak, so that selling stockholders know that the company is the buyer, and that any information conveyed by the decision to repurchase is embodied in the stock price before the repurchase transaction is complete.

The second alternative channel is increased debt service. The answer can be debt, which forces the firm to pay out cash. A high debt ratio can be dangerous, but it can also add value by putting the firm on a diet. The LBOs of the 1980s were of course the classic examples of diet deals. They were shock therapy designed to cut back wasteful investment and force sale of underutilized assets, and generally to strengthen management’s incentives to maximize value to investors.

Debt plays a similar role in leveraged restructurings, where a public firm all at once borrows a large fraction of the value of its assets and pays out the proceeds to stockholders. Sometimes the payout is voluntary, but more often it takes pressure from outside investors (as in the leveraged restructurings of several major oil companies when threatened by takeover in the 1980s).

⁴ M. Jensen, “Agency Costs of Free Cash Flow, Corporate Finance and Takeovers,” *American Economic Review* 76 (May 1986), 323.

The companies involved in LBOs and restructurings have a surplus of cash and a shortage of good investments. Companies with credibly profitable growth opportunities are exempt from these transactions.

The third alternative channel is mergers and acquisitions. Takeovers are often launched in order to shrink the target firm. Notice that over-capacity in an industry is generally a prelude to mergers. For example, the end of the cold war meant rapid shrinkage of U. S. defense budgets, and triggered a series of mergers in the defense industry. (Perhaps managers would rather take over and shrink some one else's company rather than their own.) Another clear example is banking: state regulation left the U. S. with far too many banks, and deregulation was followed by merger after merger.

This is not to say that all LBOs, restructuring and takeovers were economically efficient. Mistakes were made, and some of the gains to investors were at the expense of other stakeholders. For example, the mere announcement that a company would be "in play" for an LBO in the 1980s triggered immediate losses averaging 5.2% of the market value of the company's existing bonds.⁵

Nevertheless, laws or regulations which prevent takeovers, or restrict the "excessive" leverage in LBOs and restructurings, close off channels that can convey large amounts of capital back to investors for reinvestment elsewhere in the economy. If those channels are blocked and share repurchases prohibited, only one channel is left, cash dividends. The amount of cash flowing along the dividend channel is typically a small fraction of the value of the firm. That small flow is of no concern when the firm can invest profitably. In fact, most growth firms pay no dividends at all. But firms which should return capital in large amounts to investors are unlikely to do so through dividends alone.

Concluding Comment

⁵ This was for bonds lacking covenant protection, as was common at the time. See P. Asquith and T. Wizman, "Event Risk, Bond Covenants, and the Return to Existing Bondholders in Corporate Buyouts," *Journal of Financial Economics* 27 (September 1990), 195-213.

I should not leave the impression that all of the cash flow generated by a mature firm should go to outside investors. There are also inside investors, namely managers and employees. The insiders' investment comes in the form of personal risk-taking, sweat equity (working extra-hard for less than an opportunity wage) and by specialization of human capital to the firm. So a general financial theory of the firm would model the co-investment of human and financial capital. Some basic theoretical work has done here, focused primarily on the conditions under which insiders can raise financing from outside investors when insiders make the investment decisions and can extract cash or private benefits after the investment is made.⁶ But this work has not focused on the form of outside financing, for example debt vs. equity. There are, to my knowledge, no formally developed theories of capital structure derived from the conditions for efficient co-investment of human and financial capital.

⁶ See, for example, O. Hart (1995), *Firms, Contracts and Capital Structure*, Oxford University Press, Oxford, U. K., 1995; M. Burkart, D. Gromb and F. Panuzzi, "Large Shareholders, Monitoring and the Value of the Firm," *Quarterly Journal of Economics* 112 (1997), 693-728; S. C. Myers, "Outside Equity," *Journal of Finance* 55 (June 2000), 1005-1038, and L. Zingales, "In Search of New Foundations," *Journal of Finance* 55 (August 2000), 1623-1653.