

# Do the M&M propositions apply to banks?

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## Abstract

Yes and no.

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## 1. Introduction

I was asked to discuss whether (and how) the M&M Propositions apply to banking. Doing so here will let me finish at last a heated colloquy I had on that topic some 15 years ago at another banking conference, hosted by someone familiar to many of you, Carter Golembe. Carter always chose exotic places for his banking conferences, this time the colonial Town Hall building in Williamsburg, Virginia. My panel was held in a lovely room overlooking the well-manicured lawns of the Village Green. Our subject that day was (what else?) Capital Requirements in Banking. Some things never seem to change! The banker sitting next to me was lamenting the profitable lending opportunities being passed up by capital constrained banks, when I broke in to ask: "Then, why don't they raise more capital?" "They can't," he said. "It's too expensive. Their stock is selling for only 50 percent of book value." "Book values have nothing to do with the cost of equity capital," I replied. "That's just the market's way of saying: We gave those guys a dollar and they managed to turn it into 50 cents."

At that point, there was a rumbling noise from the audience of bankers many of whom were selling for even less than 50 percent of book value. And when I

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looked up I could see through the window a platoon of soldiers in Revolutionary War costumes and muskets marching on the Village Green toward the Town Hall.

My God, I thought, they're sending for the firing squad!

They did not actually shoot me, needless to say, but they did not let me say anything else either. I never could seem to catch the moderator's eye.

Looking back now, I must confess that while my banker panelist may not have been making his point effectively, he *did* have a point. Equity capital *can* be an expensive form of capital to raise, especially for smaller banks, if only for the flotation and underwriting costs involved. But, that statement in no way contradicts the M&M Propositions, properly understood.

The M&M Propositions are *ex ante* propositions. They are concerned with *having* equity, not with *raising* equity. Raising new equity, under some circumstances may just transfer wealth from the old shareholders to the bondholders, as when a firm has substantial amounts of debt already in place, and when the original contract interest rate on that debt has not anticipated the new infusion of equity, or could not be renegotiated to reflect it. Floating new shares then is like pumping gas into another man's car as Mickey Rooney used to say of his alimony payments.

And, sometimes, of course, the stock price may fall substantially on announcement of a new equity issue if investors feel the insiders are bailing out at the top of the market. Nor can such adverse information effects always be avoided by using the dividend-cutting route to boost equity capital. The market might well read that as 'pulling the red handle' to quote the then Chairman of Continental Illinois, explaining his decision to maintain Continental's dividend in the teeth of the rumors, later confirmed, that it was about to go belly-up.

Raising *new* equity capital, then, external or internal, does present problems which I'll get to in due course. But first let me shift from these unanticipated changes in dividends or equity to *ex ante*, fully-anticipated bank capital ratios. Would the M&M Propositions apply there to the same extent as to any other industry? Or is there something fundamentally different about banking? And if so, what?

## 2. Are deposits like other securities?

The notion that the M&M Propositions might apply to banks strikes some as strange because demand deposits, by far the major source of funds for most banks, differ in so many ways from ordinary corporate securities. For nearly 30 years, in fact, banks couldn't even pay interest legally on those deposits, yet the public held them. Try *that* on corporate bonds and see how far you get. But the interest prohibition applied, of course, only to cash payments. Banks simply paid interest in less efficient noncash forms such as low-fee checking, convenient branches and premiums. I still have the free toaster my bank gave me in the early 1950's; it's actually lasted longer than the bank.

Though demand deposits now do pay interest like other securities, many believe they pay much less interest than they 'ought to,' in some relative sense. Because deposits are so liquid, the public pays more, in foregone yield, than it costs banks to supply the liquidity. But if banks could gain a financing advantage by issuing liquid, low-risk, conveniently transferrable demand obligations, then surely other businesses would also go fishing in those waters. After all, virtually any large, well-known firm, no matter what the distribution of returns on its underlying assets, could issue *some* close-to-riskless demand obligations provided only, of course, that it didn't issue too many of them. And at least one firm already *has* issued them, which shows that it's possible.

I am referring not to Merrill Lynch, as some of you may think, whose CMA accounts do indeed compete directly with bank deposits. In fact, if a bank is defined as a firm issuing riskless transferrable demand deposits, then Merrill Lynch is the biggest bank in the country today. But Merrill Lynch does not treat its demand accounts as a means of financing its regular business activities. The IBM Corporation, however, does. Its lease-financing subsidiary, IBM Credit Corporation issues, under an ongoing shelf registration, a security it calls a Variable Rate (i.e., a floating rate) Book Entry Demand Note. That security, of which about \$1 billion or so is currently outstanding, is functionally equivalent to a bank demand deposit. Why haven't more companies chosen to issue riskless debt in that form? I really don't know. Perhaps they will once they recognize the competitive advantages they have over banks: no reserve requirements, no bank examiners, no Community Reinvestment Act.<sup>1</sup> Or perhaps they are waiting until a Wall Street genius can come up with a sexier acronym.

In a capital market left to its own devices, then, it's hard to see anything about demand securities so special as to rule out application of the M&M Propositions to the banking industry. When it comes to banking, however, the markets are not left to their own devices. The government repayment guarantees for bank demand deposits, found on no other corporate securities, will surely affect the cost of capital from this source. But are those guarantees a net subsidy or a net tax?

Much of the academic literature on banking, particularly during the banking and S&L crisis years of 1990–1992, has routinely treated the insurance program as a net subsidy, enabling banks to obtain funds at less than an appropriately risk-adjusted cost. This advantage was said to lead banks to a corner solution with their desired ratio of deposit liabilities to earning assets as large as possible and their desired equity ratio as small as possible, much in the spirit of the M&M Tax Correction paper of 1963. Bankers, however, often complained in the 1950's and 60's, and many more are doing so today, that the insurance premiums more than offset the benefits they draw from the guarantee. Some money-center banks I

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<sup>1</sup> I am indebted to my colleague Geoffrey Miller, of the University of Chicago Law School, for calling my attention to the IBM demand notes.

know would be only too happy to abandon their supposedly 'cheap' deposit funding altogether and turn themselves into merchant banks, if they could somehow do so without losing access to the discount window. Both views of the insurance premium may well be correct because selecting a uniform schedule of insurance premiums exactly matching the value each bank derives from the guarantee is virtually impossible. The premiums are bound to be too high for some and too low for others (and even for the same bank at different times).

### 3. How much does bank equity really cost?

Perhaps, then, the widely-presumed inapplicability of the M&M Propositions to banking might stand out more clearly by shifting focus to the other side of the capital structure equation, the equity component rather than the deposit liability side. And indeed, people often tell me they can easily imagine a viable bank with 95 percent deposits and 5 percent equity, but they cannot imagine a viable bank with 5 percent deposits and 95 percent equity. Well, *I* can certainly imagine one. That seems hard only to those who think of the cost of equity capital as a single fixed number like, say, the 12 percent that investors have earned on average on U.S. equities over the last 70 years. And clearly, if a bank were earning only 8 percent on average on its loan portfolio, financing that portfolio with 12 percent money wouldn't make a lot of sense. But the cost of equity is *not* a fixed number; it's a *function* that depends both on the risk of the firm's earning assets *and* the degree of leverage in the firm's capital structure. The 12 percent figure I quoted is merely one point on that function reflecting the average business risk and average leverage position of American equities. But for any firm with less than average systematic risk and less than average leverage, the cost of equity would be lower; and at zero leverage, much lower, perhaps as low as say 6 percent. At that rate, even an all-equity bank with an expected return on assets of only 8 percent would not only be viable, but would presumably sell for a 1.3 premium over book value.

But what if the market expected the all-equity bank could earn only 5 percent on average on its assets in the years ahead? Then it would sell for only about 80 percent of book value. And now comes the heartbreaker. The market value of the equity would still lie below its book value even if the bank levered up its capital structure and hence its expected earnings per share with deposit money for which it pays only 4 percent. The leveraging will indeed raise the expected earnings per share on the equity, but not by enough to compensate the shareholders for the risks added by the leverage. All this, I might add, is just standard M&M Proposition II stuff.

An essential message of the M&M Propositions as applied to banking, in sum is that you cannot hope to lever up a sow's ear into a silk purse. You may *think* you can during the good times; but you'll give it all back and more when the bad times roll around.

Some will object at this point, that while an all-equity bank might well exist in principle, no such banks exist in practice, which suggests that the M&M Propositions really *don't* apply to banking. But, of course, taken literally, they would not apply anywhere else either. Much of the research focus in finance in the last 30 years has been precisely on those departures from the strict M&M assumptions – things like taxes and agency costs – that will give a push or a tilt toward more or less leverage in a firm's desired, long-run target capital structure. No very simple or coherent set of tilting principles has yet emerged, however, nor, for that matter, has any clear pattern of capital structures been observed across firms. Even banks display some substantial and not always easily explainable differences in their choice of operating and financial risk profiles.

But this is neither the time nor the occasion to review all or even the most important, extensions and qualifications of the M&M Propositions that have accumulated in the academic literature. Let me conclude instead by homing in on what the M&M Propositions *can* contribute to the vexing policy issue of bank capital requirements.

#### 4. Bank capital requirements in light of the M&M propositions

In taking up issues of bank capital requirements and the M&M Propositions, I am actually returning to a subject treated in a paper on the regulation of bank holding companies that Fischer Black, Richard Posner and I wrote back in 1978. We start there with the proposition that if the government is indeed insuring bank deposits either explicitly, or implicitly via the too-big-to-fail doctrine, then it effectively stands as a creditor *vis a vis* the bank's owners; and its regulations, to be socially efficient, should resemble the measures adopted by freely-contracting private lenders in similar circumstances. And, at least in a broad-brush way, they really do. Both, for example, maintain surveillance against changes in the debtor's business activities that might jeopardize the safety of the loan; both impose equity capital requirements; and both monitor any dividend diversions to the shareholders that might pull the capital ratio below the agreed-upon levels. So close is the mimicry in fact, that I can't help smiling at complaints from bankers about their capital requirements, knowing that they have always imposed even stronger requirements on people in debt to them.

The regulatory and the market creditor policies may indeed be similar in outline, but they clearly also differ in significant details. One is the way they define the capital in their capital requirements. Surely no private lending institution using anything as arbitrary as the definitions under the Basel accords could hope to survive long as a major player in a competitive lending market. But we called attention in our 1978 paper to a far more important difference: "in private markets, the capital requirements imposed by the lender involve a *quid pro quo*: the benefits of additional capital put up when the loan is being negotiated are passed on to the borrower in the form of a reduced administrative cost component

in the interest rate. This is not the case with government regulation of banks' (Black et al., 1978, pp. 386–387).

Or at least it was not the case back in 1978. In the years since then, and especially in the recent bank reform legislation, steps have been taken to attach rewards and punishments particularly, but not only, in the insurance premiums charged, for increases and decreases in a bank's capital. That was certainly a move in a sensible direction and I applaud the ingenuity of some of the original proposals. But by the time Congress got through with them, it is not clear how much closer to the efficiency boundary we really have come.

Nor is that in any way surprising or remarkable. Standard government blunderbuss, one-size-fits-all regulations cannot, and should not be expected to match the kind of delicate balancing of interests achievable through private contracting. Surely we learned that from Friedrich von Hayek more than 60 years ago! Hence bank capital requirements can be expected to continue as a source of inefficiency and of friction between the banks and their regulators. As bankers often say when finally turning down a long-standing but troublesome customer: Perhaps, it's time for someone else to take a fresh look at this problem.

Fischer Black, Richard Posner and I hinted obliquely at what that fresh look might lead to, but we weren't ready for radical steps at that time. Remember that our paper was written before the first threatened S&L and bank collapse of the early 1980's, the Continental Bank bailout of the middle 1980's, and the even bigger bank and S&L bailouts of the late 1980's and early 90's. In the 1970's, a simple, enhanced capital-requirements approach could be presumed to protect depositors at relatively low cost or at least at a much lower cost, thanks to the M&M Propositions, than bankers seemed to believe; and certainly at a lower cost than some of the alternatives then being proposed. Capital requirements, we recognized, were no panacea. They could not prevent embezzlement, of course, a frequent cause of past bank failures in the U.S. Nor could the banks be kept easily from offsetting the added depositor protection by increasing the risk of their assets still further. But given the then existing structure of bank surveillance and examination—which, like most outside observers in that more trusting age, we believed were, if anything, too conservative—we concluded that enhanced capital requirements would be the cheapest solution within the existing regulatory framework.

But why *must* we stay within that framework? It certainly hasn't been a conspicuous success, to put it mildly. Why not just scrap the whole costly system of deposit insurance, capital requirements plus risk surveillance in favor of a variant on Irving Fisher's 100 percent money proposal, under which insured deposits – and no limitation need be placed on the size of the accounts – must be invested only in short term Treasury bills or their close equivalents? *That* will surely guarantee the safety of the payment system and head off any future taxpayer bailouts. Small and medium-size businesses won't thereby lose access to bank financing. Banks will simply raise the funds to support their loan portfolios

by issuing non-guaranteed securities of any of a variety of kinds, like leasing companies or merchant banks now do, at rates reflecting each bank's risk posture more accurately than any feasible scheme of insurance premiums.

The Fisher plan has other advantages as well, not least, preventing monetary meltdowns like those of 1930–33. That's why Fisher proposed it in the first place! And with that major worry removed from their shoulders, the monetary authorities can begin to take a more positive view of financial innovation and experimentation. But there's even more good news. Think how much national economic welfare could rise under Fisher's narrow banking scheme when thousands of no longer needed bank regulators (and hundreds of academic banking economists) find themselves forced at last to seek more socially productive lines of economic activity.

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### **References**

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