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## What Jamie Dimon Won't Tell You

Anat Admati Baseline Scenario

This post first ran on [BaselineScenario](#).

*More than a year ago, we published this piece from the Stanford finance expert Anat Admati in which she presciently warned of the dangers of continuing to tolerate high levels of leverage in the banking system. She specifically challenged the notion advanced by Jamie Dimon, chief executive of J.P. Morgan Chase, that huge banks are beneficial to society, because they bring economies of scale. Admati's warning about the pitfalls of huge, highly leveraged behemoths dominating finance has only become more relevant in the wake of disclosures that Dimon's J.P. Morgan Chase has lost at least \$2 billion trading credit derivatives — the same sorts of investments that played a leading role in the 2008 financial crisis. Amid reports that the losses could yet increase, and given the scarcity of reliable information about the status of J.P. Morgan's trading positions and the potential for trouble spilling into the broader financial system, Admati's piece is well worth a fresh look. Here it is again. Far from fading, the debate over the potential dangers of “too big to fail” financial institutions is only intensifying.*

The debate is raging about banks and their size, financial regulation, and the international capital standards known as “Basel”. Jamie Dimon of JP Morgan Chase, in his [New York Times magazine profile](#), expresses admiration for the Basel committee and says,

*“... they are asking the questions that, in theory, bankers ask of themselves: how much capital do banks need to withstand the inevitable downturn, and what is an acceptable level of risk?”*

There is one problem, however. Basel may have asked the right question, *but it did not come up with the right answers*, mainly because it allows banks to remain dangerously leveraged, setting equity requirements way too low. This fact is not understood because the debate on capital regulation has been mired with a cloud of confusion, and filled with unsubstantiated assertions by bankers and others. As a result, the issues appear much more mysterious and complicated than they actually are.

After a massive and incredibly costly financial crisis, we seem to have a financial system that is a more consolidated, more powerful, more profitable and, yes, *as fragile and dangerous* as we had before the crisis. How did this happen and what can we do?

- (i) Is “too big” the same as “too big to fail?”
- (ii) Do capital requirements force banks to “set capital aside for a rainy day” and not use it to help the economy grow?
- (iii) Are banks different than non-banks in that high leverage is essential to banks’ ability to function?
- (iv) Would terrible things happen if capital requirements were to increase dramatically?

The first order of business is to clear the fog and focus on the right things. I will try to explain. With the basics in place, answers will begin to emerge, or at least the right questions to ask.

By the way, I answer an emphatic NO to each of the above questions.

### Let’s start with balance sheets

Take a bank; indeed take *any* firm. The *balance sheet* is a snapshot of assets and liabilities. It has two sides, often shown piled on top of one another in financial statements or online data.

On the left hand side, or the top, of the balance sheet are the firm’s *assets*, what the firm *owns*. The numbers come either in the oxymoron called “book value” that accountants produce based on historical costs, or in the more meaningful “market value,” which for illiquid assets might not be readily available, and which can change frequently. More typically, some assets appear at cost and some are “marked to market.”

On the right hand side, or the bottom, of a balance sheet are the liabilities and “shareholder equity,” a summary of the claims that are held by various parties “against” the assets. There are two basic types of claims here: one called broadly “debt” (or “liabilities”) and the other is “equity.”

There is a huge variety of debt claims. One that we all provide to banks is called “demand deposits.” Depositors can demand that this debt is paid back at any time. Other debt claims are distinguished by the length of the commitment, the interest rate, the collateral and the “seniority” (the place in the creditors’ queue in a bankruptcy) and other provisions. Depositors are the most senior creditors of a bank; junior, unsecured debt-holders, or holders of certain “hybrid” securities, are the last in this priority line. If a bankruptcy occurs, however, it can take years to sort all these different debt claims out.

One feature of corporate debt is that the tax code allows interest paid on debt to be called a business expense and it is deductible before corporate taxes are calculated. This is similar to the deductibility of mortgage interest payments for homeowners.

But the main feature of debt that distinguishes all debt claims from equity, is that debt is a *hard* claim, an “I Owe You.” Creditors have rights to take legal action if they are not paid what they are *owed*. They can cause a financial *failure* or bankruptcy. This process can be a terrible thing or not so terrible. Airlines “fail” routinely and they renegotiate some contracts, re-organize, and emerge out of bankruptcy. No stigma is attached, and operations often continue, although of course it is bad news. And debt contracts work well when the bank finances individuals and businesses. Things are different, and much more problematic, when banks use a lot of debt to fund themselves. More on this later.

The final part of the balance sheet is the category of “equity.” Bankers like to call it “capital,” but let’s stick to the standard terminology of equity. (Using a different lingo than for other types of firms is part of the mystique of banking and helps in creating confusion.)

There are a few distinctions within equity too, mostly between “preferred” and “common” equity. Preferred equity, like debt, specifies how much the holder of the preferred will be paid. The lowest-class equity, called “common equity” cannot be paid at all until the preferred equity is paid what it was “promised.” The key difference with debt, however, is that the firm does not “fail” if it does not pay its equity holders, even if they are “preferred.”

Why does anyone buy this bottom-feeding equity? Because equity gets the upside, the profits of the firm, and if the firm is successful —and banks make a lot of money most of the time — this can be a very good deal. For banks, in fact, the return on equity is very high, often in the order of 25%. This is not something “abnormal.” It is likely the “appropriate” return, because this “leveraged” equity is also quite risky. In financial markets, the higher the risk, the higher the average or required return.

### **Leverage and funding costs: the basics**

Financial leverage is about how much debt relative to equity a firm has. The more debt relative to equity, the higher is the leverage. Does it matter to overall funding costs how much debt vs equity a firm uses? There was a great deal of confusion about this way back in the first half of the 20<sup>th</sup> century. In 1958, two economists, Franco Modigliani and Merton Miller (who separately won Nobel prizes, partly for this work) considered this issue and showed that, while leverage does typically affect overall funding costs, *this is not due to the reasons people were giving at the time*, which were based mostly on the fact that equity has a higher required return than debt.

The so-called MM result from 1958 builds on a basic “conservation of value” principle. As leverage changes, so does the riskiness of equity (and sometimes that of debt as well), and thus its required return. If there were no *other* factors, such as third parties (think governments) taking or injecting cash in taxes or subsidies, *and* if the funding method did not affect the investment decisions of the firm that determine what is on the assets’ side of the balance sheet, then it would be irrelevant how much debt vs. equity is on the balance sheet. Of course, none of these “ifs” are true in reality, particularly for banks, so capital structure does matter, sometimes a lot.

MM is a basic “physical law,” taught in every basic corporate finance course, and the starting point of any intelligent discussion of financing decisions. Yet, quite astonishingly, bankers and others, with a straight face, routinely and to this date, make the outrageous claim that “Modigliani and Miller does not apply to banks.” As if banking is so different from the rest of the world that it is exempt from natural laws. This is akin to saying that one can ignore the force of gravity because of air friction.

If there are frictions, we must consider their *impact*. Do air frictions work against gravity or in the same direction? Do frictions associated with funding favor debt or equity, in the sense that — in their presence — funding costs or the total value that can be created on both sides of the balance sheet favors a particular mix of funding means? And, importantly in the context of banks, because the funding decisions of any bank may have broader implications, if a bank chooses a certain way to fund itself, does it follow that society is best off under this structure?

### **Key observations on the effects of leverage**

It turns out that the biggest friction in bank funding is not one that is “inherent” in the banking system or in funding more generally, something unavoidable and found “in nature,” like the wind. The main friction is the result of *government policies*. That would not be so bad if these policies worked to our collective benefits. Unfortunately, these policies go exactly in the wrong direction, favoring leverage that inflicts systemic fragility and extraordinary costs during crisis, precisely because they give bankers strong reasons to choose high leverage.

The fact is that, because of government policies, the funding costs of banks are lower the more debt they have relative to equity, i.e., the higher is their leverage.

Even worse, these same policies, and the resulting excessive leverage, distort the investment decisions of banks. They give incentives for excessive risk taking, which means that banks may overinvest in risky loans (something we witnessed quite clearly in the housing market leading up to the crisis). And it can interfere sometimes with banks' ability to provide credit and fund valuable investments, because, with a lot of prior debt commitments hanging over them, it may be harder for highly leveraged firms to raise new funds. This so-called "debt overhang" problem contributed to the credit crunch that we experienced in the crisis.

Clearly, the consequences to society of highly leveraged banks are exceedingly negative. Yet, we have a system where we subsidize leverage!

If this sounds crazy to you, this is because it *is* crazy. The analog would be a government policy that subsidized pollutants, such that the more they pollute, the larger the subsidy. If pollution is bad for health and for the environment, and you required pollutants to limit emissions, they would obviously complain that their cost of production would increase, and this might be true because they lose subsidies. Does this mean we must subsidize pollution? Clearly not, especially if there is an alternative!

Continuing with the analogy, what if there was another process by which to produce the same product, which would actually not increase the cost of production but which is not chosen because of the subsidies given to the polluting technologies? This analogy is key to understanding the battle over bank funding. The way in which subsidies are given to banks makes no sense. If we believe that banks provide important services, and if we want to subsidize them, we must find other ways to do so which do not lead to this perverse situation. We should not effectively *penalize* equity as a form of financing.

### **Leverage in banking and elsewhere**

The tax code gives an advantage to debt financing not just for banks, of course. (Whether this makes sense is highly debatable. Many economists, including Michael Boskin, advocate abolishing the corporate tax code in part because of this effect.) But despite the tax incentives, many highly productive firms hardly use any debt at all, and no one chooses to fund themselves with anywhere near as much debt as banks. (The following, for example, are funded virtually only by equity: Apple, Google, Gap, Yahoo, eBay, Bed, Bath and Beyond, Broadcom, and Citrix.) This is because there are other forces that work against leverage, such as constraints lenders put on firms, and the distortions in investment decisions that are due to conflict of interest between equity and debt. An "all equity" firm is the gold standard for making good investment decisions, as it takes into account properly the upside and the downside of its decisions.

Everything is different for banks. Banks *love* high leverage. Whenever they make money, which is most of the time, they pay much of it out (to managers and shareholders), and they keep rolling over their huge debt, continuing to borrow more as they pay off what they owe. Equity is always a relatively small fraction of the total balance sheet. High leverage creates fragility because even a small change in the asset value can wipe out the equity and cause insolvency and financial "failure."

Bankers tell us that they *must* be allowed to maintain high leverage because this is part of the business of banking. They assert that economies will suffer if they are made to fund more of their investments with equity, there will be credit crunches, terrible things will happen. We clearly must examine these statements carefully before agreeing.

The “safety net” that was created to make sure banks’ operations are not disrupted by economic shocks, i.e., the fact that the FDIC, the Treasury, or the Fed, often stand ready and are expected to back up the banks’ liabilities, plays havoc on banks’ incentives to manage their risk and their leverage prudently and create a gap between what the banks find optimal and what is good for society. This is a very unhealthy situation.

The reason banks strongly prefer debt over equity is because their creditors or debt holders feel reasonably safe about being paid and thus do not require much in average return from the bank. Such creditors don’t have to put restrictions and conditions on banks’ activities. As long as they are confident they will be paid, creditors don’t care what the bank does with its money. When they become nervous, it’s often too late and the system freezes.

Why have we established this safety net for banks? Experience and research has shown that bank runs are very inefficient and disruptive. To prevent inefficient runs, deposit insurance was introduced. The safety net was expanded because the distress or failure of a bank has certain “contagion” effects and can thus be very disruptive and costly to the financial system and to the economy.

Even the suspicion of possible insolvency for a bank can lead creditors to withhold further funding. Banks then may need to engage in massive “fire sale” of their assets to pay their debts, and even that might not be sufficient if they are truly insolvent. This can lead the entire system of credit and payment to freeze. Does this sound familiar?

Allowing the legal process of bank “failure” to work itself out is extraordinarily costly and disruptive, particularly for global banks subject to different legal systems. There are no great options here. The Lehman bankruptcy process, which is still going on for more than two years, has consumed many billions of dollars in direct and indirect costs. And we are still dealing with its fallout.

So when Jamie Dimon says that he favors resolution authorities and that JP Morgan “should file for bankruptcy” if the situation arises, we must ask ourselves the following: first, do we believe that the government will actually let JP Morgan go into bankruptcy, and if they did, would this be the right thing? Second, is there an alternative? Can we prevent more of these costly and disruptive failures and the need for bankruptcy and resolution procedures? And if so, how?

### **Is high leverage necessary for banks?**

Here is the good news, and the simple and powerful answer. NO! Quite simply, *high leverage is not necessary for banks!* We can significantly lower the fragility and the likelihood of needing resolution and bankruptcy in banking by insisting that they use a lot more equity and less debt to fund themselves. And, for society, this will only have positive side effect, despite what the bankers say. Focusing on more equity funding is the simplest and most effective approach to the “too big to fail” problem, because it directly works to reduce the likelihood of “failure.” It does not rely on costly resolution or “bail-in” mechanisms that we are not sure would work or on bankruptcy courts. And it forces banks to “own up” to their investment decisions and alleviates many distortions associated with high leverage.

The business of banking does mean that banks cannot be funded completely with equity as Apple or Gap, because demand deposits and even money market funds and certificates of deposit are part of their business of financial intermediation. Thus, a certain amount of debt is built into banks’ balance sheet. But this does *not* imply that banks’ leverage must be as high as it is or as they would like it to be or even as high as Basel III would allow.

There is simply *nothing* that prevents banks from doing everything valuable for society at dramatically lower leverage, say 30% of total balance sheet. (In an interview on CNBC in May, Gene Fama suggested 40% or 50% in equity for banks



And issuing more equity to support the liability on their own would not increase their funding cost *in a way that represents any social cost*. (If they lose some subsidies, we save on providing these subsidies!)

Not only would we have a safer system if equity levels were dramatically higher, it is hard to think of any negatives, from society's perspective, of doing so. Back to the pollution analogy, the alternative, clean technology of funding turns out to be cheaper than the polluting one once subsidies are removed!

The fact that so much fog was created to prevent the above from being recognized by decision makers in Basel and in many governments, including US, is maddening.

There are other claims made in this debate, but the bottom line holds up upon closer examination: there does not seem to be any compelling reason that banks must be as highly leveraged as Basel III would allow. Those who say otherwise, and bank executives such as Vikram Pandit of Citi have complained that Basel III is too harsh on banks cannot justify their claims coherently. The only interpretation is that they are motivated by self interest.

In a paper I wrote with Stanford colleagues Peter DeMarzo and Paul Pfledierer and with Martin Hellwig from Bonn, we discuss in some detail every argument we are aware of regarding the mantra that "equity (or, as bankers call it, "capital") is expensive." We also discuss contingent capital and bailout funds, arguing that the equity-based solution dominates them. The [paper is available here](#).

Many experts agree with the conclusion of our paper, as is clear in this [letter signed by some very prominent academics](#) in finance and banking. For another letter I sent to *Financial Times* this week as part of this debate, see [this link](#).

## Conclusion

The case for much more equity funding for large banks (and possibly other financial institutions) is overwhelming. The main challenges are to define the "regulatory umbrella" appropriately, to understand the "shadow banking" system, and to find effective ways to monitor the true risk and leverage of financial institutions on and off the balance sheets. These challenges can be met if energy is focused appropriately.

Sensible capital regulation does not necessarily involve a hard and fixed "number" for the equity ratio, but rather a flexible system of buffers and adjustments where the balance sheet of the banks is managed with the objective of allowing them to operate without overly endangering themselves and the system. Supervising the payouts and the funding methods of banks so as to keep the system healthy and functional is eminently possible if we take up the challenge.

First, however, we should remove the fog of confusion. Then we must find the political will to insist on prudent regulation before another crisis hits.

## Comments on Hoenig, Dimon and banks being "too big"

Many argue that banks that are "too big to fail" are simply "too big." In an excellent [op ed in the New York Times](#) this week, Kansas Fed president Thomas Hoenig identifies the key problems of "too big to fail" banks and argues that we should strive to create smaller banks, none too big to fail. Related proposals were made by Andy Haldane from the Bank of England (see [this link](#)), and by Simon Johnson and James Kwak, authors of the important book "[13 Bankers](#)." These proposals, and the so-called Volcker Rule, focus on the total size of the bank and more generally on the "asset" side of the balance sheet. How does this relate to leverage?

If managed properly, breaking up the banks would likely be a step in the right direction. But we cannot ignore leverage. Many small but interconnected banks would still be fragile and subject to systemic risk and possible crises if each of them was highly leveraged. A small drop in the asset value of a leveraged bank leads to distress and possible insolvency, and this can be contagious in such a system. So fragility in the banking system invariably relates to the degree of leverage.

Jamie Dimon of JP Morgan says large banks are useful and efficient. He wants to be the Walmart of banking. Presumably, he wants to have the size of Walmart but he is not planning to have the type of *capital structure* that Walmart and firms like it have, with more than twice as much equity as debt on the balance sheet (at least by market value).

Mr. Dimon, how about you start helping the world of banking and the economy by pushing for banks to be much less leveraged, relying more on equity funding than Basel III allows, and for regulators to make sure they are? If you do that, your growth aspirations might seem a bit less scary.

**Here are nine other big bank fails:**



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