The Parade of the Bankers' New Clothes Continues:

23 Flawed Claims Debunked

Anat Admati and Martin Hellwig

June 23, 2013[*]

The debate on banking regulation has been dominated by flawed and misleading claims. The title of our book *The Bankers New Clothes: What's Wrong with Banking and What to Do about It* (Princeton University Press, 2013, see bankersnewclothes.com) refers to flawed claims about banking and banking regulation, and the book discusses and debunks many of them.

Flawed claims are still made in the policy debate, particularly in the context of proposals that banks be funded with more equity and rely less on borrowing than current or new regulations would allow. Those who make the flawed claims do so without addressing our arguments, even when they comment on the book or on our earlier writings. Because the financial system continues to be dangerous and distorted, however, flawed claims must not win the policy debate.[1]

This document provides a brief account of claims that we have come across since the book was published in February, 2013. We provide brief responses, with references to more detailed discussions in the book and elsewhere.[2] References to chapter numbers refer to our book. Nothing that we heard or read changes our conclusions or our strong policy recommendations.

We first provide a list of the flawed claims that the rest of this document takes on.

---

[*] This is a revised version of a document posted on June 3, 2013. Substantive changes include expanded discussion of Flawed Claims 11, 16, 17 (restated), 20 and 23. We also added references to claims made since June 3 (Footnotes 13, 16, 22, 26, 29, 30, 33-37, 41 and 46).

[1] We are grateful to Peter Conti-Brown and especially to Paul Pfleiderer for comments on an earlier draft of this document. Others who have written recently to challenge the flawed claims include Mark Whitehouse (for example, "Seven Dumb Things Bankers Say," April 5, 2013 and "Too-Big-To-Fail Myths, Goldman Sachs Edition," May 28, 2013, both in Bloomberg View), Bloomberg View Editors (for example, "What's so Radical about a Safer Financial System?" April 9, 2013), and Simon Johnson (for example, "The Impact of Higher Capital Requirements for Banks," April 18, and "The Case for Megabanks Fails," May 2, 2013, *New York Times* Economix blog). Paul Pfleiderer has been active in the debate with academics who make flawed claims and who develop models that are used improperly in the policy debate, some of which we take in this document.

[2] In some cases, we give specific references to writings where flawed claims are made, but we have not attempted to find all such references. Some of the claims have come up in various discussions of the book that we have had after its publication.

List of Flawed Claims

Claim 1: Capital is money that banks hold or set aside as a reserve, like a rainy day fund.

Claim 2: Requiring banks to hold reserves equal to 15% of their assets does not make them safe. Therefore, a capital requirement of 15% is useless.

Claim 3: The argument for requiring banks to have substantially more equity is only based on the so-called Modigliani-Miller theorem, which does not apply in the real world because its assumptions are unrealistic.

Claim 4: The key insights from corporate finance about the economics of funding, including those of Modigliani and Miller, are not relevant for banks because banks are different from other companies.

Claim 5: Banks are special because they produce (or create) money.

Claim 6: Increasing equity requirements would reduce the ability of banks to provide people with deposits and other short-term claims that are liquid and can be used like money.

Claim 7: Increasing equity requirements is undesirable because the funding costs of banks would increase.

Claim 8: Increased equity requirements would lower the banks' return on equity (ROE) and therefore harm shareholders and make investors unwilling to invest in banks' stocks.

Claim 9: Increased equity requirements would force banks to make fewer loans.

Claim 10: Increased equity requirements would induce banks to lend less, and this would be harmful for the economy.

Claim 11: Higher equity requirements are undesirable because they would prevent banks from taking advantage of government subsidies and would force them to charge higher interest on loans.

Claim 12: Banks cannot raise equity and will have to shrink if equity requirements are increased; this will be bad for the economy.

Claim 13: Increasing equity requirements would harm economic growth.

Claim 14: Basel III is already tough, doubling or tripling previous requirements. Banks have much more capital [equity] now than they had earlier and they are safe enough.

Claim 15: Basel III is based on careful scientific analysis of the cost and benefits of different levels of capital requirements, whereas the rough numbers of those who advocate much higher requirements cannot guide policy because they are not supported by scientific calibration.

Claim 16: Because capital requirements should be adjusted to risk, it is essential to rely primarily on requirements that are based on assigning risk weights to assets.

Claim 17: Instead of issuing more equity, banks should be required to issue long-term debt or debt that converts to equity when a trigger is hit, so-called "contingent capital" or co-cos.

Claim 18: The Dodd-Frank Act in the US has done away with the need to bail out banks; if a bank gets into trouble, the FDIC will be able to resolve it without cost to the taxpayer

Claim 19: If capital requirements are increased, banks will increase their "risk appetite," which may make the system more dangerous.

Claim 20: If capital requirements are increased, bank managers will be less disciplined.

Claim 21: Tighter regulation is undesirable because it would cause activities to move to the unregulated shadow banking system.

Claim 22: Since banking is a global business, banking regulation must be coordinated and harmonized between regulators worldwide. It is important to maintain a "level playing field" in global competition.

Claim 23: Stricter regulation is would harm "our" banks; instead we should be supporting them in global competition.

Flawed Claims Debunked

Flawed Claim 1: Capital is money that banks hold or set aside as cash reserve, like a rainy day fund.[3]

What's wrong with this claim? As discussed in Chapters 1 and 6, capital in banking is a source of funding, which can be used to make loans and other investments. This source of funding, elsewhere called equity, must be distinguished from debt, i.e., funds obtained by borrowing. Whereas banks typically fund less than 10% of their investments by equity, it is rare for any healthy non-financial company to have less than 25% in equity, and many successful companies borrow little or nothing, although there is no regulation that prevents them from borrowing as much as they would like (if they can find lenders).

[3] For example, in "How to solve the bank capital Goldilocks question," CNN Money and *Fortune*, May 6, 2013, Cyrus Sanati falsely claims that capital requirements ask banks to "hold some cash on the sidelines." The comparison of capital to "a rainy day fund" has also been used in Andrew Ross Sorkin, "Easing of Rules for Banks Acknowledges Reality" *New York Times*, January 7, 2013, and in Gretchen Morgenson, "Trying to Slam the Bailout Door," *New York Times*, April 27, 2013.

Flawed Claim 2: Requiring banks to hold cash reserves equal to 15% of their assets does not make them significantly safer, and therefore capital requirement of 15% would not address the key problems in banking.[4]

What's wrong with this claim? This claim rests on the confusion between bank capital (equity) and cash reserve that is discussed in the context of Flawed Claim 1 above. Bank capital is *not* a cash reserve but a way of funding the bank. *Capital requirements* ***do not*** *impose any restriction on what assets banks hold.* They do not require banks to hold cash reserve. Since current requirements, and even the proposed Basel III reform, allow banks to have as little as 3% equity relative to their total assets, requiring 15% instead (as the proposed Brown-Vitter bill would require of the six largest US banks) would make banks *significantly* safer. With 15% equity, a figure still lower than levels considered minimal for healthy companies in the rest of the economy, banks would be able to absorb significantly more losses without becoming distressed or insolvent and without needing support.

Reserve requirements, by contrast to equity (or "capital") requirements, are not as useful for maintaining the safety of banks unless they are very high. For example, if a bank has $97 billion in deposits and $3 billion in equity funding, cash reserve of $15 billion will not help it to survive if it loses $4 billion on its loans and other investments. After the loss, it has $96 billion in assets and is insolvent, just as a homeowner is "under water" if the mortgage is larger than the value of the house. If instead the bank had $85 billion in deposits and $15 billion in equity, it would easily withstand the $4 billion loss and even a much larger loss without becoming distressed or insolvent.

Flawed Claim 3: The argument for requiring banks to have substantially more equity is only based on the so-called Modigliani-Miller theorem, which does not apply in the real world because its assumptions are unrealistic.[5]

What's wrong with this claim? Chapter 7 discusses the Modigliani-Miller theorem, which says that under some special conditions, a company's mix of equity and debt funding does not affect the company's overall value and funding costs. However, the key insight of Modigliani and Miller, which holds universally, is that in well-functioning financial markets, required rates of return depend on risk, and the risk (and corresponding required rate of return) on any security issued by a firm depends on the firm's overall funding mix.[6] In particular, therefore, any

[4] See for example, Cyrus Sanati, cited in footnote 3, who criticizes the higher capital requirements proposed by Senators Brown and Vitter and who, throughout the piece, falsely refers to the proposal as if it concerns cash reserves.

[5] For example, Barclays Credit Research, "The Costs of a Safer Financial System," March 25, 2013, Clearing House, "Vanquishing TBTF," March 26, 2013, Oxford Economics, "Analyzing the impact of bank capital and liquidity regulations on US economic growth (A report prepared for The Clearing House), April 2013.

[6] See also other references we give, and specifically "On the Relevancy of Modigliani and Miller to Banking: A Parable and Some Observations," by Paul Pfleiderer, available at http://www.gsb.stanford.edu/sites/default/files/research/documents/Relevancy.pdf.

argument that refers to the required return on equity (ROE) as if it is fixed and independent of the overall funding mix is fundamentally flawed.

Chapters 9-10, building on earlier chapters discuss the implications of insight of Modigliani and Miller for more realistic situations where the assumptions of the irrelevance result are not satisfied. In such situations, funding costs may depend on the funding mix, for example, because tax rules favor the use of debt over equity. The effects on third parties, such as taxpayers, must also be taken into account in the policy context.

Our argument for requiring much more equity is *not in any way* based on the presumption that the funding mix, in banking or elsewhere, is irrelevant. Our argument is based, as it should be, on a comparison of the costs and benefits to society of different funding mixes for banks. We argue, in particular, that there is a large cost, and no benefit to society, from having banks funded with as much debt as they can under current and proposed regulations allow.

Flawed Claim 4: The key insights from corporate finance about the economics of funding, including those of Modigliani and Miller, are not relevant for banks because banks are different from other companies.[7]

What's wrong with this claim? Chapter 7 contains a section (pages 110-112) entitled: "The Big Question: Are Banks Special?" that directly takes on the claim "Modigliani-Miller does not apply to banks." What is meant by this claim depends on whether "Modigliani-Miller" is considered as the "irrelevance" result or as an analytical approach. Whereas, as discussed in the context of Flawed Claim 3 above, the irrelevance result holds only under special assumptions, the analytical approach applies to all firms, including banks. Denying the relevance of the key insight of Modigliani and Miller is akin to denying the universal relevance of the laws of gravity in the presence of air frictions.

The logic of Modigliani and Miller applies, in particular, to bank equity and to banks' borrowing in wholesale markets and bond markets. Banks interact with the same investors that buy shares and bonds of other corporations. These investors value banks' shares and bonds in the context of their overall portfolio and using the same criteria for all investments. The logic of how funding costs and the risks borne by different investors depend on the banks' funding mix applies also to the borrowing by banks from other financial institutions.[8]

---

[7] See, for example, Oxford Economics and Barclays Credit Research, both referenced in footnote 5, and "Safety in Numbers," *The Economist*, April 11, 2013. DeAngelo and Stulz, "Why High Leverage is Optimal for Banks," Working Paper, 2013, mis-characterize our arguments as relying only on Modigliani and Miller and proceed to develop a model of liquidity benefits from deposits in a model that assumes no uncertainty, which is hardly suited for discussing the notion of "liquidity." (See footnote 14.)

[8] In some of the academic literature on banking, the statement "MM does not apply to banks" is used to postulate frictions that, under the assumptions of the models, might be addressed by borrowing, while conveniently ignoring

Importantly, like all other firms, banks have owners or shareholders and they can choose how much equity to use for funding and how much to borrow. And, like other firms, banks are more likely to become distressed or insolvent when they are highly indebted and have little equity. Moreover, the issues discussed in Chapter 3, entitled "The dark side of borrowing," including the strong conflicts of interest between borrowers and creditors, and the distortions and inefficiencies of high indebtedness and particularly of distress and insolvency, apply to banks. Those who argue that banks are different and seek to justify the banks' choice of funding mix as inevitable or efficient often neglect these distortions and inefficiencies, which can spill over to taxpayers and the public.[9]

Flawed Claim 5: Banks are special because they produce (or create) money.[10]

What's wrong with this claim? This claim rests on an abuse of the word "money." The notion that banks "produce" or "create" money is based on the observation that people can easily transform deposits into cash and that they regard the funds they have in a bank deposit as being similar to cash and are able to use those funds for payments, such as by checks and credit cards.[11] Monetary economists therefore refer to people's total holdings of cash and of demand deposits in the economy as the "quantity of money."

However, putting demand deposits and cash into the same macroeconomic aggregate does not mean that they are literally the same. A critical difference is that deposits are a form of debt.[12] They oblige the bank to pay the depositor when he or she wants the money back. If it cannot do

---

the enormous frictions and collateral damage on the system that borrowing creates, which we discuss in Chapters 3, 6, 8 and 9. See also "Does Debt Discipline Bankers? An Academic Myth about Bank Indebtedness," available at http://www.gsb.stanford.edu/sites/default/files/research/documents/Academic%20myth-rev2%202-19-13.pdf

[9] On the inefficiency of high leverage see also our paper with Peter DeMarzo and Paul Pfleiderer "Debt Overhang and Capital Regulation," available at
http://www.gsb.stanford.edu/sites/default/files/research/documents/AdmatiDebt032612.pdf

[10] We have been confronted with this statement in various discussions of the book.

[11] Some (for example, Gary Gorton in *Slapped by the Invisible Hand*, 2010) have suggested that the use of short-term borrowing, for example through so-called repos, is a modern-day form of deposits. (See also Cyrus Sanati, referenced in footnote 3.) Repos share with deposits the very short-term nature of the lenders' claims. Unlike deposits, however, repo borrowing is not accompanied by provision of payment services. The repo lender, e.g., a money market fund, might provide payment services to its own investors, but those services have nothing to do with the bank that acts as repo borrower. Repo borrowing takes place in wholesale markets with financial institutions acting as lenders, and in these markets the analytical approach of Modigliani and Miller is fully relevant.

[12] One of the strangest statements in this debate comes from John Stumpf, the CEO of Wells Fargo Bank: who reportedly said in a recent interview: "Because we have this substantial self-funding with consumer deposits we don't have a lot of Debt." (See Tom Braithwaite, "Wells Chief warns Fed over Debt proposal," *Financial Times*, June 2, 2013. "Self-funding" ordinarily refers to equity and retained earnings. Deposits, by contrast, are a form of debt. It is false, indeed a contradiction in terms, to say that a bank that relies primarily on deposit funding does not have a lot of debt.

so, there is a problem. By contrast, cash, issued by a central bank, is nobody's debt.[13] For a detailed discussion, see Chapter 10.

From the bank's perspective, the key difference between deposits and other kinds of debt is not that deposits are "like money" but rather that the bank provides depositors with various services, such as payments through checks and credit cards, or ATM machines making funds available continuously. The demand for deposits depends on these services, as well as the interest that the bank may offer and the risk of the bank becoming insolvent or defaulting. Because deposits involve other services for which depositors are being willing to pay and not just the interest rate, the key insight of Modigliani and Miller is less important for deposits. As discussed in the context of Flawed Claim 4, this insight is essential, however, for the other borrowing banks do, such as short-term borrowing from money market funds or hedge funds, and to their equity. This is discussed in Chapters 4 and 7.

Flawed Claim 6: Increasing equity requirements would reduce the ability of banks to provide people with deposits and other short-term claims that are liquid and can be used like money. [14]

What's wrong with this claim? The claim falsely assumes that the amount of a bank's equity is fixed and limited, and that none of the banks' debt can be replaced with equity without interfering with "liquidity provision." In fact, a bank can raise the amount of equity by retaining and reinvesting its earnings, or by issuing new shares, either in addition or instead of some of its debt. By increasing its equity, the bank could actually raise the amount of deposits it can take; if equity requirements are increased, adding equity would allow the bank to keep its deposits and other "liquid" debts unchanged.

Relying on more equity would actually *enhance* a bank's ability to provide useful liquidity because, with more equity, the bank's debt is more trustworthy. Thus, contrary to the claim, the "liquidity" or "money-like" nature of deposits and other short-term bank debt is actually improved when the bank is less highly indebted and has more equity.

We have made these arguments in more detail in Chapter 10, as well as in earlier writings. Nevertheless, those who make the claim, including academics and others, neglect our arguments even when they cite or criticize our conclusions.[15]

---

[13] Deposits with the central bank usually are claims to receive cash. Since the central bank can itself create this cash, these deposits do not involve serious obligations for the central bank

[14] See Barclays Credit Research, referenced in footnote 5, DeAngelo and Stulz and *The Economist,* referenced in footnote 7, and Kling, "What Do Banks Do?" *The American*, February 26, 2013 warn of the reduction in bank deposits that, in their view, would be implied by higher equity requirements. Gorton, in the recent book *Misunderstanding financial crisis: Why we don't see them coming*," 2013, refers to banks as "producers of debt" in the form of deposits and other short-term claims that people want because these debts are similar to money. Gorton views equity and investments as "inputs" for this debt "production." There is actually no sense in which the bank's equity is an input to its debt when both debt and equity entitle investors to payments from the bank, both being on the same side of the bank's balance sheet. Indeed, it makes little sense to refer to debt promises the bank makes to its creditors as something that is "produced."

Flawed Claim 7: Increasing equity requirements is undesirable because the funding costs of banks would increase.[16]

What's wrong with this claim? First, as discussed in Chapter 7, it is fallacious to suggest that using more equity in the funding mix is more costly on the basis of the mere observation that the required return on equity is higher than the required return on debt. The required return on equity, debt, or any other security depends on the entire funding mix, and the required return on equity (as well as generally on other securities, including debt) will go down if the bank has more equity. As discussed in Chapter 9, the main reason that total funding costs of banks might increase as a result of higher equity requirements is that with more equity banks would be less able to benefit from guarantees and subsidies, which come at the expense of taxpayers. For the policy debate, the relevant concern must be the cost and benefits *to society* of banks using different mixes of funding with different levels of equity. Because the fragility of the financial system is costly and harmful to society, a correct statement, contrary to the claim, is: "Increasing equity requirements would reduce the cost to society of having a fragile and inefficient financial system where banks and other financial institutions borrow excessively, and thus it would be highly beneficial."

Flawed Claim 8: Increased equity requirements would lower the banks' return on equity (ROE) and therefore harm shareholders and make investors unwilling to invest in banks' stocks.

What's wrong with this claim? As explained in Chapter 8, the first statement is false; when asset returns are low, the ROE is actually higher with more equity. Investors' willingness to invest in banks' stocks, or in the stocks of other firms, depends on whether they are properly compensated for the risk they take, not just on the stocks' expected returns. If managers target specific ROE levels, they may actually harm shareholders by exposing them to risk without proper compensation. Moreover, when managers borrow excessively or take excessive risks, they harm creditors and taxpayers and endanger the public, which includes most of their shareholders.

---

[15] Most recently, Paul Tucker, in "Banking reform and macroprudential regulation: implications for banks' capital structure and credit conditions" (speech at At the SUERF/Bank of Finland Conference, June 13, 2013), states (p. 6): "if banks are forced to hold too much equity, there is a risk of choking off the truly valuable liquidity services that deposit-taking banks provide to the economy." This statement is false for levels of equity such as 20-30 percent that clearly allow banks to fund the majority of their investments with debt and take as many deposits as are deemed useful. DeAngelo and Stulz, referenced in footnote 7, present a theoretical model intended to show that banks must be fully funded with deposits because deposits provide consumers with liquidity benefits. As a piece of theoretical analysis, this paper is flawed because it fails to note that in a competitive market, banks would not able to appropriate the benefits they provide to their customers. The model also assumes that banks' investments are riskless; yet, equity requirements as well as liquidity benefits from deposits only make sense when there is risk. The paper offers no analysis and no insights for a world with uncertainty, clearly essential for real-world relevance.

[16] See, for example, Oxford Economics, and Barclays Credit Research, (referenced in footnote 5), *The Economist* (referenced in footnote 7), and Douglas Elliott "Higher Bank Capital Requirements Would Come at a Price," Brookings paper, February 20, 2013.

Flawed Claim 9: Increased equity requirements would force banks to make fewer loans.[17]

What's wrong with this claim? As explained in Chapters 6 and 11, to comply with higher equity requirements, healthy banks can increase their equity levels by retaining their earnings or by selling new shares to investors. In either case, with more equity banks would have *more* funds, which can in turn be used to increase their lending. If increased equity requirements cause banks to reduce their lending, the reason is that they do not *want* to increase their equity. As explained in Chapters 3, 8, and 10, this phenomenon is due to the effect of debt overhang, and the effect is reinforced by compensation structures that rely on ROE and other measures that do not account for risk.[18] Banks that are unable to raise equity at any price may well be insolvent and should be unwound, as discussed in Chapter 11.

Banks' lending decisions also depend on how attractive loans are relative to other investments. Many banks, including most of the large banks in the United States, are not even using all the funding they obtain from depositors to make loans.[19] If banks do not make loans, therefore, the problem is *not* a lack of funds *nor* an inability to raise more funds for profitable loans, but rather the banks' choices to focus on other investments instead.[20] The risk-weighting system used in capital regulation, which we discuss in some detail in Chapter 11, also creates incentives for banks to invest in securities in the market rather than, for example, make business loans.

Flawed Claim 10: Increased equity requirements would induce banks to lend less, and this would be harmful for the economy.[21]

What's wrong with this claim? This claim obscures the fact that credit crunches are primarily due to heavy indebtedness and financial distress, not from "too much equity." More equity generally enables banks to *increase* their lending and to be able to continue to lend in

---

[17] See, for example, S&P, "Brown Vitter Bill: Game-Changing Regulation for U.S. banks, April 25, 2013. Elliott (referred to in footnote 16) stresses that frictions in capital markets make it difficult or impossible for banks to raise new equity. As we discuss in Chapter 11, the arguments he gives that allude to information asymmetries are not applicable to new equity issues through rights offerings.

[18] The debt overhang effect applies to retentions and rights offerings as well as other forms raising equity. The effect is in many ways more basic than frictions from information asymmetries. On debt overhang, see "Debt Overhang and Capital Regulation," referred to in footnote 9.

[19] See, for example, Elizabeth Dexheimer, "JPMorgan Leads U.S. Banks Lending Least Deposits in 5 Years," Bloomberg, February 20, 2013. In the same story quotes a principal at Deloitte & Touche LLP, saying that new regulations that include "holding more capital to cushion losses" would impede lending. Quite obviously, especially in the context of the story (about the low ratio of loans to deposits), this statement is fallacious and misleading. This fact may not be as obvious because of the pervasive confusion between capital and cash reserves discussed in Claim 1 above).

[20] Under-investment is among the distortions and inefficiencies associated with heavy borrowing, again due to a "debt overhang" effect. This problem is explained in Chapter 3.

[21] In addition to Barclays Credit Research, Oxford Economics, referenced in footnotes 5, and Elliott, referenced in footnote 16. The Clearing House, referenced in footnote 5, and S&P, referenced in footnote 17, also warn that higher equity requirements would reduce the supply of credit.

downturns.[22] As discussed in our response to the preceding claim and in Chapter 11, if banks choose to make fewer loans, the reason would most likely be because their overhanging debt makes issuing new shares unattractive or because they intensify their efforts at "risk weight management," which, under the current system of capital regulation, induces a bias against lending and in favor of other investments. Controlling the transition to more equity by banning payouts to shareholders and specifying target levels of equity rather than ratios would mitigate any such effect.

It is also false to presume that all lending is useful. Banks help the economy by making *appropriate* loans at *appropriate* interest rates that reflect the borrowers' risks and the cost of funds. Some loans (such as, quite clearly some subprime mortgages prior to 2008) might actually be wasteful and inappropriate; such loans are usually the result of banks counting on someone else to bear the losses. Excessive lending can also result when there are too many banks with too much capacity; in this case, banks' "gambling for survival" may offer cheap loans for a while, but their actions may expose the economy to increased risk of a major crisis later on. In fact, as already noted, credit crunch and reduced lending are due to the effect of debt overhang, which comes from excessive borrowing, not from having "too much equity."

Flawed Claim 11: Higher equity requirements are undesirable because they would prevent banks from taking advantage of government subsidies and would cause them to charge higher interest on loans.[23]

What's wrong with this claim? Blanket subsidies given to all bank borrowing, and especially implicit subsidies for which banks do not pay, are highly distortive. Chapter 9, entitled "Sweet Subsidies," discusses guarantees and subsidies. The distortions for the economy are further discussed in Chapters 12 and 13.

There are two types of subsidies to bank borrowing. First, explicit guarantees through deposit insurance, for which banks often to pay the appropriate economic costs, and any implicit

---

[22] In the same spirit, Mervyn King, the outgoing governor of the Bank of England, recently said: "Those who argue that requiring higher levels of capital will necessarily restrict lending are wrong. The reverse is true. It is insufficient capital that restricts lending. That is why some of our weaker banks are shrinking their balance sheets. Capital supports lending and provides resilience. And, without a resilient banking system, it will be difficult to sustain a recovery." (See "A Governor looks back – and forward," speech given at the Lord Mayor's Banquet for Bankers and Merchants of the City of London, June 19, 2013, available at http://www.bankofengland.co.uk/publications/Documents/speeches/2013/speech670.pdf .) Empirical research by Tümer Kapan and Camelia Minoiu, "Balance Sheet Strength and Bank Lending During the Global Financial Crisis," (IMF working paper 13/102, available at http://www.imf.org/external/pubs/ft/wp/2013/wp13102.pdf) shows that "banks with strong balance sheets were better able to maintain lending during the crisis," and suggest that "strong bank balance sheets are key for the recovery of credit following crises."

[23] See, for example, Oxford Economics, referenced in footnotes 5, Elliott and Tucker, both referenced in footnote 16. William Isaac, in "Better than Brown-Vitter: Make Banks Issue Long-Term Debt," *American Banker*, June 4, 2013 warns that higher equity requirements on the largest banks would cause them "to decrease their lending dramatically and/or increase significantly the price of loans."

guarantees, encourage and subsidize additional borrowing.[24] Second, the tax code in most countries gives debt a tax advantage relative to equity for all corporations.

Whereas deposit insurance is valuable for preventing inefficient runs, guarantees, and especially implicit guarantees, create distorted incentives that must be countered. Tax codes that encourage excessive and inefficient borrowing, which capital regulations attempt to control, are problematic and paradoxical, exacerbating the distorting effect of guarantees (and the force of debt overhangs) and widening the wedge between what is privately optimal for banks and what is good for society. The effect can and should be changed or neutralized, but taxes are public funds. Requirements that banks have equity levels that are minimal for other corporations do not impose a cost to society; rather, they attempt to correct distortions and reduce excessive subsidies.

More generally, if it is deemed desirable to subsidize specific loans, subsidies should be given directly, for example by attaching them to the loans, rather than by giving blanket subsidies to bank borrowing. Blanket subsidies to bank borrowing provide banks with below-market funding that they can use for investments at their discretion. The cheap funds may not actually go to the loans that the economy needs, and the borrowing itself makes banks more fragile, exposes the economy to substantial risks, and gives banks even more incentives to take excessive risk in their investments.[25]

---

[24] Large banks, meanwhile, are denying the existence of subsidies, which would undermine the claim if correct. For example, "Measuring the TBTF effect on bond pricing," by Goldman Sachs Global Markets Institute, May 22, 2013, argues that large banks do not benefit from a too-big-to-fail effect on their funding costs. There are a number of critical flaws in this analysis, and most are discussed in Mark Whitehouse "Too-Big-To-Fail Myths, Goldman Sachs Edition," Bloomberg View, May 28, 2013. (See also Christopher Cole, "Goldman's TBTF Study Used Flawed Data to Reach Flawed Conclusions," American Banker, May 30, 2013.) First, it compares interest rates on bonds of large banks and small banks without adjusting for differences in the risk that creditors are exposed to. As discussed by Luis Brandao Marques, Ricardo Correa, and Horacio Sapriza, "International Evidence on Government Support and Risk Taking in the Banking Sector," IMF Working Paper WP/13/94, too-big-to-fail banks tend to take more risks in their investment than smaller banks; unless the implicit guarantee is perfect, this would raise the interest TBTF banks have to pay. Second, the observation that creditors suffer more in failures of small banks relative to those of large itself reflects too-big-to-fail policies, including support from the Federal Reserve that has provided ample and cheap funding to banks since 2008. The GS paper dismisses findings of a large literature (most of which is cited in Chapter 9) without engaging on substance. In particular, it cites and dismisses without discussion a recent study ("The End of Market Discipline? Investor Expectations of Implicit State Guarantees," by Viral Acharya, Daniel Anginer and A. Joseph Warburton, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1961656) that covers roughly the same ground with a more appropriate methodological approach and concludes that the value of the subsidies is in the tens of billions of dollars, and is particularly large in downturns. Many other industry-sponsored studies also fail to correct properly for the funding mix and other parameters of the bank borrowing that would affect the risks that their long term creditors would be exposed to, relative to those of other companies that do not have access to safety nets.

[25] Paul Tucker, referenced in Footnote 14, takes the tax code as given and states that the cost advantage of debt "cost "should be largely passed on to customers," failing to recognize that blanket subsidies to banks' debt are highly inefficient and distortive. Matt Yglesias, in "Banks Borrow Too Much," Slate, March 7, 2013, expresses concerns regarding the potential cost of withdrawing the banks' subsidies. However, in his subsequent blog post entitled "How I Learned to Stop Worrying and Love Higher Capital Requirements," March 8, 2013 (http://www.slate.com/blogs/moneybox/2013/03/08/bankers_new_clothes_persuaded_me.html, he states that in our

Flawed Claim 12: Banks cannot raise equity and will have to shrink if equity requirements are increased; this will be bad for the economy.

What's wrong with this claim? As we discuss in Chapter 11, solvent banks can always raise equity by selling additional shares, to existing shareholders through rights offerings or to new shareholders in the market. If a bank cannot raise equity at any price, the bank may well be insolvent. The existence of nonviable banks that cannot raise equity may reflect excess capacity in banking. (Excess capacity appears to be a serious problem in some countries and maybe globally at this time.) In this case, some downsizing of the industry would benefit the economy, contrary to the claim. The remaining banks would be viable and would have fewer incentives to gamble at the expense of their creditors, the taxpayers and the economy.

Flawed Claim 13: Increasing equity requirements would harm economic growth.[26]

What's wrong with this claim? In fact, the worst downturn in economic growth occurred as a result of the financial crisis in the last quarter of 2008. One reason for the severity of the financial crisis was the lack of equity in banks, which made banks vulnerable to the decline in US real estate markets, defaults on subprime mortgages and the collapse of the markets for asset-backed securities. Banks with more equity to absorb losses without becoming distressed would be more able to sustain lending in a subsequent economic downturn, and this would have positive effects for investment and the economy. As we discuss in Chapter 11, if the transition is handled properly, there would be no negative consequences to making banks safer.

Flawed Claim 14: Basel III is already tough, doubling or tripling previous requirements. Banks have much more capital [equity] now than they had earlier and they are safe enough.[27]

What's wrong with this claim? As we discuss in Chapter 11 (on the basis of the arguments of previous chapters), these statements use a false benchmark for the desired and feasible equity levels. Basel III still allows banks to fund up to 97% of the assets on their balance sheets by borrowing, just as Lehman Brothers did. The proposals in Basel III are not based on sound analysis, and the papers justifying them are fundamentally flawed. Stress tests have also based on flawed and incomplete approaches involving biased scenarios and unreliable data; they have

---

book we "in many ways end up underselling the power of [our] idea," emphasizing that not only would more equity make banks safer, but it will also make their lending and investment decisions more appropriate and better for society.

[26] See for example Oxford Economics, referenced in footnote 5.

[27] Claims that the requirements are tough and that banks are stronger now are frequently made by regulators, bankers and others. For example, Tom Braithwaite, in "Quest for Profits can Make Banks Safer," *Financial Times*, February 18, 2013, suggests that the "lust for improved ROE" is a helpful, ignoring the possibility that a lust for return often involves taking risks and borrowing inefficiently, including to get around regulations based on risk weights.

been much derided when banks that the stress tests said were safe became insolvent only a few months afterwards.[28]

Flawed Claim 15: Basel III is based on careful scientific analysis of the cost and benefits of different levels of capital requirements, whereas the rough numbers of those who advocate much higher requirements cannot guide policy because they are not supported by scientific calibration.[29]

What's wrong with this claim? As we discuss in Chapter 11 and elsewhere, the studies that support the Basel III proposals are based on flawed models and their quantitative results are meaningless. For example, they assume that the required return on equity is independent of risk; one paper purports to derive the "optimality" of Basel III without even considering the costs that bank failures can impose on the rest of the financial system and the economy.[30]

In a subsequent paper[31] we compare the use of flawed theoretical models as a basis for quantitative analysis to the use of the distorted "map of the world as seen from New York's 9th Avenue" for orientation in traveling through the American Midwest. The fact that studies end up with precise numbers for "optimal" capital regulation is irrelevant if the foundations of the studies are shaky.

We are not aware of any theory or model that would provide appropriate estimates of the costs and benefits to society associated with different funding mixes for banks. Despite this, we are confident in asserting that equity levels of three percent of total assets, as admitted by Basel III, are unsafe, and that a significant increase will substantially improve the health and safety of the financial system. Low levels of equity expose the banks and the economy to unnecessary risk. And allowing banks to rely as much on subsidized borrowing distorts the economy. Countering the banks' tendency to choose unsafe levels by effective regulation is essential.

Flawed Claim 16: Because capital requirements should be adjusted to risk, it is essential to rely primarily on requirements that are based on assigning risk weights to assets.[32]

---

[28] We discuss stress tests in Chapter 11. See also "Behind Smoke and Mirrors On The Alleged Recapitalization of Europe's Banks," by Jakob Vestergaard and María Retana, available at http://www.diis.dk/graphics/Publications/Reports2013/RP2013-10-Smoke-and-mirrors_web.jpg.pdf

[29] Claims that the requirements are tough and based on "science" are frequently made by regulators, bankers and others. For example, in a November 19, 2013 interview to *Die Welt* Lloyd Blankfein, CEO of Goldman Sachs, said: "The new capital adequacy regulations under Basel III are the results of a long and meticulous process."

[30] See "An Assessment of the Long-term Economic Impact of Stronger Capital and Liquidity Requirements" and "Calibrating Regulatory Minimum Capital Requirements." and "Capital Buffers – A Top-Down Approach," Basel Committee on Banking Supervision Discussion Papers 173 and 180, Bank for International Settlements, 2010.

[31] See "Does Debt Discipline Bankers? An Academic Myth about Bank Indebtedness," referred to in footnote 9.

[32] For example, Tom Braithwaite (referenced in footnote 25) praises the Basel risk weights system for controlling banks' risks. Most regulators appear to take it for granted that risk weights are essential, and the Federal Reserve has proposed to adopt Basel III, including the use of risk weights, for all US banks.

What's wrong with this claim? As we discuss in Chapter 11, the system of risk weights that we currently have has more to do with politics and tradition than with science. Important risks such as funding risks for long-term lending or risks from correlated borrower defaults are not taken into account. Even if the politics of the regulation could be dealt with, attempts to improve risk weighting are limited by a lack of data and by the never-ending changes in the risks and correlations.

In practice, the system of risk weights allows banks to be extremely highly indebted, masks important risks, and adds to the interconnectedness of the system. Whereas proponents of the system argue that it is important to require banks to have more equity funding when their assets are more risky, in fact the system allows banks to get away with *much less* equity funding when they say that their assets are less risky. A uniform ratio of required equity to total assets would provide a bound on the banks' leverage. By contrast, because some risk weights are (near) zero, the risk-weighting system allows very high leverage. Thus, banks could take large positions in assets with (close to) zero risk weights, such as Greek sovereign debt or AAA-rated toxic securities, and fund them almost entirely with debt and with hardly any equity. The system also distorts banks investment decisions, typically against lending, and is highly manipulable by the banks.[33]

Flawed Claim 17: Instead of issuing more equity, banks should be required to issue long-term debt or debt that converts to equity when a trigger is hit, so-called "contingent capital" or co-cos.[34]

What's wrong with this claim? As we explain in Chapter 11 (pp. 187-188, section entitled "Anything but equity"), long-term debt, co-cos, or other hybrids between debt and equity, offer no advantages, and in fact have important disadvantages, relative to equity. First, like other debt, they raise the specter of domino effects or near the triggers where debt is not paid in full and suffers "haircuts" within a resolution or "bail-in" process, or when it converts to equity. If the institutions that hold the long-term debt or co-cos are systemic, the consequences of a write-down or a conversion to equity can be dramatic, and fear of these consequences might motivate a

[33] The report on JP Morgan Chase "London Whale" loss by the Senate Committee on Investigation specifically refers to attempts to manipulate models, and points to poor risk controls. See, for example, David Henry and Lauren Tara LaCapra, "JPMorgan and other banks tinker with risk models," Reuters, March 18, 2013, and Floyd Norris, "Masked by Gibberish, the Risks Run Amok," *New York Times*, March 21, 2013. On the flaws in the Basel approach, see also Thomas Hoenig, "Basel III, a Well Intentioned Illusion," Speech in Basel, Switzerrland, April 9, 2013, Andrew Haldane, "Constraining discretion in bank regulation," speech at the Federal Reserve Bank of Atlanta Conference, April 9, 2013, Joe Rizzi, "Risk-Based Capital: The Good, the Bad and Mostly the Ugly," *American Banker*, May 20, 2013, William Isaac, referenced in Footnote 24, and Robert T. Taylor, "Basel Rules Echo Missteps of S&L Era," *American Banker*, June 19, 2013.

[34] See William Isaac, referenced in Footnote 24, Charles Calomiris, "Should Big Banks be Broken Up?" *Economist* online debate, May 14-22.and Paul Tucker, referred to in footnote 16. The Federal Reserve has proposed requiring more long-term debt (which Wells Fargo Bank CEO was warning against in the interview cited in footnote 13). Proposals to use co-cos instead of equity have been implemented in Switzerland and are being discussed in the UK (see UK Independent Commission on Banking) and the European Union (see Liikanen Report).

bailout. Indeed, in 2008-2009, holders of long-term debt and other hybrid securities meant to absorb losses were paid even as banks were bailed out with taxpayer funds. Second, in the case of co-cos, when conversion is imminent, the strategic behavior of market participants can induce dramatic changes in prices of equity and/or co-cos. Thus, long-term debt and co-cos do not provide reliable loss absorption and can create instability in a crisis. Third, as long as they have not been converted to equity, co-cos and long-term debt add distortions to banks' lending decisions by exacerbating the effect of debt overhang and contributing to credit reductions in downturns.

There is no sense in which having banks rely on long-term debt or co-cos is "cheaper" or better for society than relying on equity. For the purpose of regulation, using equity simply dominates these alternatives. Those who propose long-term debt or co-cos as a substitute for equity have yet to give a valid reason for their proposal that is relevant for policy considerations.[35]

Flawed Claim 18: The Dodd-Frank Act in the US, or newly developed resolution mechanisms in UK and elsewhere, have done away with the need to bail out banks; if a bank gets into trouble, the FDIC, or another resolution authority, will be able to resolve it without cost to the taxpayer.[36]

What's wrong with this claim? As we discuss at the end of Chapter 5 and in Chapter 9, this claim is not credible.[37] Even if the Orderly Liquidation Authority created by Dodd-Frank won't require the deployment of taxpayer funds, the claim ignores a number of critical points. First, it ignores the costs and disruptions to the economy of having banks become distressed or going into resolution. Second, in a crisis, when many banks may be weak at the same time, the industry as a whole or the banks' creditors (which may be other financial institutions) may be too weak to provide the money needed to repay the government loans that might be called for in the resolution process. Third, cross-border issues in the resolution of global banks, which played an important role in the Lehman Brothers bankruptcy, have hardly been addressed.

---

[35] We also discuss the issues and provide references in our comments to the UK Independent Commission on Banking, so-called Vickers Commission, see especially pages 29-34. (The document is available at http://www.gsb.stanford.edu/sites/default/files/research/documents/ICB_Admati_Hellwig.pdf). As discussed in the context of Flawed Claim 9, compromising financial stability in order to give tax subsidies to inefficient funding by banks makes no sense. (Because they do not give their holders creditors' rights, co-cos do not qualify as debt under the US tax code. and thus do not have the tax advantage over equity in the US that they appear to have in Europe.) On the claim that long-term debt provides better discipline, see the discussion of Flawed Claim 20 below

[36] See, for example, presentation by the Clearing House to the Board of Governors of the Federal Reserve regarding Title II of Dodd Frank Act on February 13, 2013, and their March 26, 2013"Vanquishing TBTF." See also Paul Tucker, referrenced in Footnote 16, and William Isaac, referenced in Footnote 34.

[37] See also Simon Johnson, "The Myth of a Perfect Orderly Liquidation Authority for Big Banks," *New York Times* Economix, May 16, 2013, and Simon Johnson and Marc Jarsulic, "How a Big Bank Failure Could Unfold, *New York Times* Economix, May 23, 2013.

Flawed Claim 19: If capital requirements are increased, banks will increase their "risk appetite," which may make the system more dangerous.[38]

What's wrong with this claim? As we discuss in Chapter 8, such a claim was made by Bob Diamond when he was CEO of Barclays. Statements like these may be empty threats, but if they are not, the claim raises serious concerns about governance that should trouble banks' shareholders and boards of directors. If risks are worth taking on behalf of the banks' investors, why aren't the banks already taking them? If the risks are not worth taking, why would the banks take them when they are funded with more equity? The claims appear related to the flawed focus on ROE in banking that we discuss in Chapter 8.[39]

Flawed Claim 20: If equity requirements are increased, bank managers will be less disciplined.[40]

What's wrong with this claim? The claim rests on the false notion that bank creditors can "discipline" bankers, or provide better governance, than shareholders, and that bankers are more disciplined when investing borrowed money than when they invest shareholders' money.

The academic literature includes theoretical models that claim to capture the idea that "debt disciplines managers." Some such theories are specific to banks, arguing that by threatening to withdraw their funding, depositors and short-term creditors can provide "discipline." As we have argued in various writings, including Chapter 10, these models are a poor basis for policy advice because they lack empirical support and ignore critical elements of the real world which, if included, would reverse their conclusions.[41] The fact that assertions about the real world are made on the basis of theoretical models without justifying the appropriateness of the models or addressing the critical issues we raise about their inadequacy is highly disturbing.

[38] See, for example, Bill Black, "Brown-Vitter Will not and Cannot Work but it is Criminogenic," Naked Capitalism blog, May 11, 2013.

[39] See also Anat Admati, "Beware of Banks' Flawed Focus on Return on Equity," *New York Times* Dealbook, July 25, 2011, and Anat Admati and Martin Hellwig, "The Case Against Banking's Case for Less Capital," Bloomberg View, February 5, 2013.

[40] A recent example is Raghuram Rajan, "Love the Bank, Hate the Banker," Project Syndicate, March 27, 2013, , which refers to the Washington Mutual (WaMu) bank failure, claiming that it is an illustration that the threat of runs helps provide "discipline" to bank managers. In fact, the timing of the events in the WaMu case is at odds with the argument Rajan seems to be trying to make. Significant withdrawals from WaMu started after the Lehman Brothers bankruptcy on September 15, 2008, and the bank was closed on September 24, 2008. By that time, it was too late to "discipline" the bank's managers. William Isaac, referenced in Footnote 24, and Paul Tucker, referenced in Footnote 16, argue that long-term debt provides better discipline than equity. Seemingly echoing such claims, Jamie Dimon, CEO of JP Morgan Chase, warned in 2011 that bankers might do "stupid things" if they had "too much capital." (See Alistair Barr, "J.P. Morgan's Dimon concerned about too much capital: Surfeit of capital may make people do 'stupid things,' CEO says," *Wall Street Journal* MarketWatch, February 15, 2011.) His statement raises the concern of why bankers would do stupid things with shareholder money, and why they would expect to get away with it.

[41] In our paper "Does Debt Discipline Bankers? An Academic Myth about Bank Indebtedness," referred to in footnote 10, we explain that fragility in banking is more likely to reflect a *lack* of discipline, which allows bankers to continue to borrow and thus prevents debt from providing any discipline.

As we discussed in earlier writings,[42] the suggestion that long-term debt provides better discipline to managers than equity is flawed in the context of banking. First, whereas long-term debt does not cause a risk of runs, it may still generate systemic risk. As discussed in the context of Flawed Claim 18, if debt holders are sufficiently important for the financial system, for example large insurance companies, it may be deemed undesirable to impose losses on them in resolution or insolvency. Moreover, the too-big-to-fail problem is relevant for long-term debt as well as short-term debt in that the collateral damage associated with distress or insolvency may lead to bailouts. If debt holders believe they can count on being bailed out, they will not impose any discipline on the bank.

Second, even if long-term creditors want to impose discipline, the scope for doing so is limited. For example, with a ten-year bond, on average one tenth of the debt is rolled over each year. But discipline can only be imposed when the debt must be renewed and investors negotiate with the bank for the conditions under which a renewal would be granted. As we have argued in the context of the possibility of deposit and short-term debt providing "discipline," long-term debt may in fact provide the precise *opposite* of discipline: Negotiating with new short-term creditors, or offering them collateral, can make incumbent long-term creditors worse off (should they expect to bear losses), yet these creditors are unable to withdraw their claims until the debt expires.

Flawed Claim 21: Tighter regulation is undesirable because it would cause activities to move to the unregulated shadow banking system.[43]

What's wrong with this claim? As we discuss, particularly in Chapter 13, the development of the shadow banking system and the risks it poses point to the past weakness of enforcement. The most dangerous parts of the shadow banking system developed primarily to avoid existing regulation. Examples include the so called off-balance-sheet special purpose vehicles and money market funds, both of which played in infamous role in the 2007-2009 financial crisis. The lessons should be that we need better rules and better enforcement, not that we should give up on rules.

Flawed Claim 22: Since banking is a global business, banking regulation must be coordinated and harmonized between regulators worldwide. It is important to maintain a "level playing field" in global competition.[44]

---

[42] See Section 5 in "Fallacies, Irrelevant Facts and Myths in the Discussion of Capital Regulation: Why Bank Equity is Not Expensive," by Admati, DeMarzo Hellwig, and Pfleiderer, March 2011, available at https://gsbapps.stanford.edu/researchpapers/library/RP2065R1&86.pdf

[43] See, for example Elliott, referenced in footnote 16.

[44] This argument is made frequently. See, for example, The Clearing House, referenced in footnote 5, and S&P, referenced in footnote 17.

What's wrong with this claim? The claim, discussed in Chapter 12, is false. If some countries foolishly allow their banks to pursue very risky strategies and to borrow excessively, this is not a reason why other countries should do the same. Each country should be concerned with how much of a risk from its banks it is willing to accept, just as each country has its own building codes, consumer safety standards, environmental regulation and energy policy. We would not allow chemical companies to pollute rivers and lakes simply because the industry maintains that somewhere in the world another country is allowing these things. The search for "level playing fields" in global competition is highly damaging if it leads to a race to the bottom, where each country ends up fighting stricter regulation on behalf of its members of the industry. [45]

Flawed Claim 23: Stricter regulation would harm "our" banks; instead we should be supporting them in global competition.

What's wrong with this claim? Like the preceding claim, this claim is false, as discussed in detail in Chapter 12.[46] The success of a nation's banks in global competition is not an appropriate objective for policy. The global economy is not a sports event where a country might win medals in all disciplines. Rather, it is a system in which people and firms from different countries trade with each other, and a country necessarily "loses" in the markets for those goods which it imports. For the country, and for the people living in it, it is efficient to specialize on goods they are good at and to import the others. Government subsidies to banks, or indeed any firms, in international competition is undesirable; such subsidies creates distortions in favor of these firms at the expense of others in the economy, and it may direct too many resources, including talent, inefficiently to one industry over others. Weak regulation that allows banks or other firms to take risks at the expense of others is also very distorting. It is also legitimate for national regulators to protect their citizens by regulating foreign banks' subsidiaries if they deem regulations in the banks' home country to be insufficient or ineffective.

[45] See also Anat Admati and Martin Hellwig, "Global Level Playing Field Arguments are Invalid," a version of which appeared as a comment in *Financial Times*, June 3, 2011. The text is available here http://www.gsb.stanford.edu/news/research/admati-battle-begun.html

[46] See also the article referred to in the previous footnote.