The Squam Lake Report:
Fifteen Economists in Search of Financial Reform

by

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Abstract: The *Squam Lake Report* is a volume by economists for economists. It offers the fruits of the labors of 15 top economists who met at Squam Lake, New Hampshire, to discuss financial reform. While somewhat disjointed, and avoiding many important issues, the book is nonetheless a tour du force. Its many recommendations derive from two basic principles: that reformers need to think systemically, and that third-party costs stemming from systemic risk need to be internalized. And its approach is just what you would expect from a group of academic economists. It asks (and answers) questions like: Where did incentives go wrong? What were the sources of market failure? How can we better protect society against negative externalities?

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1. In praise of Squam Lake

It is bad form for a reviewer to sing the praises of a book too loudly. It makes you sound like a sycophant, instead of an imperious reviewer confident of his superiority to the authors. But please pardon me, for I have trouble restraining myself in this case. In truth, I'd like to pat all 15 co-authors on the back. Indeed, I am tempted to drive up to Squam Lake to see what's in the water. Because I consider it little short of miraculous that the Squam Lake Group, a collection of 15 independent-minded academic experts, managed to agree on as much as they did. Indeed, I participated in a somewhat similar group exercise—though one not limited to academic economists—and we were able to agree on much less.[2] One look at the list of co-authors tells you that they hail from different parts of the ideological spectrum. Whoever managed to get Bob Shiller and John Cochrane (and you can choose other pairs) to agree on such a wide range of issues should be nominated to coach the French national soccer team. (Was it, by marvelous coincidence, Ken French?)

2. Delineating the problem

More important, the numerous points of agreement in this report are not limited to verbal pabulum or high-minded generalities. The group gets down in the weeds on many essential issues. You will find 37 recommendations scattered over the nine main substantive chapters of this slim volume. They are not only sensible and intelligent, but also, for the most part, practical. (Much more on practicality later.) If the issues dealt with seem a bit scattershot (Why do they take up this issue and leave out that one?), I presume the reason is that we are witnessing the limits of the group's ability to agree. Using that as an organizing principle is understandable, but it nonetheless makes for a somewhat disjointed read. For example, the chapters appear in no logical order, and several important topics are omitted entirely (see below). But overall, the achievement is still impressive.

[2] The Pew Task Force on Financial Reform, a group of similar size but very different composition (e.g., including lawyers and market participants) began its work in May 2009 and produced its main recommendations in December 2009. See Pew Task Force (2009).

2.1. What's inside

This is a volume by economists for economists—which, I presume, is one reason for the surprisingly wide agreement. The report approaches the financial system just as you would expect a group of academic economists to do—by asking questions like: What were the incentives, and where did they malfunction? What were the salient features of the various market structures, and were they appropriate? If there were market failures, what were their sources? And how can we better protect the interests of innocent bystanders, especially taxpayers, against negative externalities?

These are all fine questions, and *a propos*, too. The answers matter. But so do other major questions and issues. I presume it was the inability to reach agreement that led the report to omit, or to dance around, a number of big controversial issues that are critical to financial reform. More on that shortly, but first to the areas of agreement.

The Squam Lake Report takes clear positions on an impressively long list of issues, some of which are quite controversial. Each area of potential reform receives its own chapter—which was originally issued as one of the group's position papers between February 2009 and April 2010 (Chapters 2-10).[3] The remainder of the book consists of a useful, though overly-brief, opening chapter that summarizes the world financial crisis, and a conclusion that elucidates the group's "central principles" (which should have appeared in Chapter 1) and explains why the system would have worked better under their recommendations. Here, in approximate order of importance to overall financial reform—according to *my* judgment, not theirs—are the eight central issues on which the Squam Lake Group opines. Notice that this list is *not* in the order of appearance in the book:

1. the need for and design of a special resolution authority for systemically-important financial institutions (Chapter 8)
2. the need for and design of a systemic risk regulator (Chapter 2)
3. regulation of derivatives (Chapter 9)
4. reform of compensation practices (Chapter 6)

[3] See www.cfr.org/thinktank/cgs/squamlakepapers.html on the website of the Council on Foreign Relations. The group was first convened at Squam Lake, which is near Dartmouth College, by Kenneth French in the fall of 2008.

5. regulatory capital requirements (Chapter 5)
6. reverse convertible bonds (Chapter 7) (a fine idea which belongs under #5)
7. new rules for prime brokers (Chapter 10) (an important contribution that many reformers have ignored.)
8. what they call a "new information structure for financial markets" (Chapter 3). (actually, a subset of #2)

In addition, the report throws in an interesting and well-thought-out chapter on retirement saving (Chapter 4), which seems strangely out of place in this volume. I guess they included it after discovering it was something on which they could all agree.

2.2. Some prominent omissions

So what does this list leave out? Plenty. Here is my personal list of nine major omissions:

2.2.1. Innovation versus safety

The first is the tradeoff between innovation and safety, which the report does mention, albeit briefly.[4] This tradeoff is at the heart of the issue that divides those who worry about *over*-regulation stifling innovation from those who worry about *under*-regulation leaving the system vulnerable to risky and abusive behaviors. One quintessential example arises in the controversy over regulating derivatives. Those who worry more about safety favor standardization and exchange trading, while those who worry more about innovation want to preserve customization and over-the-counter ("OTC") trading. (More on this debate later.) It is probably asking too much to expect the Squam Lake Group to have reached any sort of agreement on this somewhat amorphous—though over-arching—issue. But it certainly bears more discussion than it gets in the report.

2.2.2. Too big to fail

The second big issue is whether or not some institutions are too big to fail ("TBTF"). Remember, some well-respected parties have argued that institutions that are too big to fail are too big to exist,[5] which suggests, e.g., break-ups of major financial institutions. Others, however, argue that systemically-

[4] See pages 25–26.
[5] See, for example, King (2009).

important financial institutions ("SIFIs") will always be with us; to think otherwise is romantic. The Squam Lakers clearly fall in the second camp, as do I. But the report has relatively little to say about TBTF in general, though it does touch on it in Chapter 8. The report does, however, make quite a few useful recommendations on systemic risk regulation (Chapters 2 and 3) and on resolution of potentially failing institutions (Chapters 7 and 8).

2.2.3.Proprietary trading

Is it appropriate to conduct proprietary trading inside institutions that have access to the public safety net—thereby potentially socializing extreme losses? The so-called Volcker Rule answers this question with an emphatic *no*, but the Squam Lake Group is silent on it. If trading is allowed inside SIFIs, should there be any limits and/or safeguards? I think so; they don't say.

2.2.4.Consumer protection

There is still a lively controversy over both the need for and the appropriate nature of government interventions to protect consumers from misleading claims, risky contracts that they don't understand, or even from their own gullibility. Oddly, the Squam Lake Group takes this last issue up only in the context of retirement saving plans. How about mortgages, guys? Many of the same principles apply there, too.

2.2.5.The regulatory deck chairs

How many financial regulatory agencies should the U.S. have, and what should be the responsibilities of each? Both the U.S Treasury, in its original June 2009 proposals, and the U.S. Congress, in the financial reform bill that passed in July 2010 ("the Dodd-Frank Act"), punted on the regulatory deck chairs issue—scared off both by the politics and bureaucratic turf wars. So the country came out of the regulatory reform process with the same number of federal financial regulatory agencies it had when it went in: six.[6] This fealty to the *status quo* was understandable, and probably politically astute. But it doesn't make much economic sense, and it's too bad the Squam Lake Group, unconstrained by politics, couldn't do better.

[6] We lost one (the hapless Office of Thrift Supervision, OTS) and gained one (the Consumer Financial Protection Bureau, awkwardly housed at the Federal Reserve Board). The other five are the Fed, the Office of the Controller of the Currency (OCC), the Federal Deposit Insurance Corporation (FDIC), the Securities and Exchange Commission (SEC), and the Commodity Futures Trading Commission (CFTC),

2.2.6.*The rating agencies*

The dismal performance of the credit ratings agencies makes everyone's list of the causes of the financial crisis. The recently-passed reform bill eliminates many of the statutory requirements to use agency ratings and asks various federal government bureaus to reconsider the rest. This is all to the good. But there have been several suggestions for more radical steps that would alleviate—or, better yet, eliminate—the conflicts of interest and ratings-shopping problems that inhere in the issuer-pays model. Two such examples are third-party payment and random assignment of raters. The Dodd-Frank Act asks both the SEC and the GAO to study some of these options. I would have liked to see the Squam Lakers advocate and defend one of them—or say why a report reputedly focused on bad incentives didn't.

2.2.7.Procyclical capital requirements

Next on my list of omissions comes the *procyclicality* of capital requirements under the current Basel accords. This (unintended) procyclicality stems from the fact that loan-loss provisions—which eat into regulatory capital—are naturally lower in good times, when banks can afford them but suffer fewer losses, and higher in bad times, when banks absorb larger losses. The Spanish "dynamic provisioning" system is one way to mitigate this problem, on which the Basel Committee is now working. But the Squam Lake Group, oddly, let it pass.

2.2.8.Fixing and elevating banks' risk management systems

In my view, one of the biggest—and least discussed—culprits in the crisis was the woeful inadequacy of banks' risk-management systems. Yet the *Squam Lake Report* barely mentions it. Some of the most elementary precepts of sound risk management, such as limiting asset concentrations, were violated massively and repeatedly by allegedly smart financial institutions. Their disgraceful dereliction of duty exposed them to ruinous losses. Much more important, it exposed the rest of us to calamitous consequences. It even altered the worldview of the great deregulator, Alan Greenspan.[7]

[7] According to *The New York Times* on October 23, 2008, Greenspan told a House committee that "Those of us who have looked to the self-interest of lending institutions to protect shareholders' equity, myself included, are in a state of shocked disbelief."

Incompetence is one thing, but I think there also was—and still is—a structural flaw that needs to be addressed, analogous to a market failure. Think of the position of a risk manager within the hierarchy of a large financial company that is making handsome trading profits while the good times roll. She becomes worried that a certain business line is taking excessive risks with the firm's capital. The line manager disagrees; after all, his traders are earning copious profits for the bank. So they take the dispute to their superiors, who see the traders as sources of profit and the risk managers as naysayers—and a cost center to boot.[8] Can this built-in bias against risk managers be overcome? Not easily. Boards of directors—those alleged guardians of shareholder interests—should correct it; but history teaches us not to rely on boards. So an external prod from bank supervisors is probably needed. Maybe there are better ideas—which is why I would have liked the Squam Lake Group to wade into these waters.

2.2.9 What to do about housing finance after Fannie and Freddie

Last, but certainly not least, there is the issue that almost everyone—including the Treasury, Congress, and the Squam Lake Group is kicking down the road: housing finance. America's vaunted system of mortgage securitization collapsed in the crisis, though whether much of that collapse was due to flawed incentives inherent in the originate-to-distribute model is hotly debated. Fannie Mae and Freddie Mac, which were *designed* to have poorly-diversified portfolios (but probably were *not* designed to take on so much leverage) were bankrupted into the arms of the U.S. government, where they continue to bleed money. By this backdoor method, "lemon socialism" became almost the sole source of mortgage securitization. To keep the market for mortgage-backed securities alive, the Federal Reserve wound up buying enormous amounts.

None of this should or will continue. Most observers sees the hybrid GSE ("government sponsored enterprise") model for securitizing mortgages—in which Fannie and Freddie were part government agency, part for-profit corporation—as dead, as it should be. But what should replace it? I, for one, would have liked to hear the Squam Lake view of what should come next.

[8] The best eye-witness account of this problem may be the anonymous "Confessions of a risk manager," published in *The Economist*, August 7, 2008.

These are all important issues, and it would have been nice to read the Squam Lake views on each—if they exist. If not, it would have been nice to see the differing opinions expressed.

3. Diagnoses: Squam Lake's and Mine

The Mikado wanted the punishment to fit the crime. The Squam Lake Group, quite reasonably, wants the remedies tailored to the underlying problems. What were they? According to the 15 co-authors, there were only four main ones. (But I will add several more below.)

3.1. Sources of the problem, according to Squam Lake

First, a variety of conflicts of interest or agency problems led self-interested agents to take excessive risk. These included:

(a) the typical compensation system, which offers traders huge rewards for success but only meager penalties for failure when they gamble with "other people's money."

(b) The parallel problem with top executives is that they earn spectacular rewards for good performance and, sometimes, equally spectacular rewards—in the form of golden parachutes—for failure. Squam Lake recommends "holdback" accounts, in which "a significant portion of senior management's compensation is deferred and contingent on the firm surviving without extraordinary government assistance." (p. 81).[9] This is a useful suggestion—and the last clause is innovative. But I don't understand why they didn't make a parallel recommendation for traders.

(c) The fact that financial institutions typically operate with high leverage exacerbates the well-known agency problem between equity holders (who benefit from successful risk taking) and debt holders (who do not). Squam Lake, like everyone else, recommends more capital.

(d) The too-big-to-fail doctrine socializes some losses while leaving all gains in private hands—creating a huge externality problem. Squam Lake recommends several changes that would internalize more of the costs of failure. Indeed, it's a major thrust of the whole report.

[9] All page references like this refer to *The Squam Lake Report*.

Second, normal bankruptcy "procedures appear to work well for nonfinancial corporations but not so well for financial organizations [because] the Chapter 11 approach of separating a firm's financial affairs from its nonfinancial business activities is infeasible when the business of the firm is financial transactions." (p. 22) And apart from FDIC resolution for banks (but *not* for bank holding companies), we entered the crisis with no special mechanism to resolve systemically-important financial firms.

Third, our system was vulnerable to the modern equivalent of bank runs in ways that few people understood prior to the panic of 2007, and contagious runs may be the ultimate externality. Federal deposit insurance all but ended old-fashioned bank runs back in the 1930s, and the U.S. experienced virtually none during the crisis. But the so-called *shadow banking system* was acutely vulnerable to wholesale, rather than retail, runs. Gary Gorton, for example, has emphasized the huge role that the "run on repo" played in the panic of 2007.[10] Prime brokers, who often commingle clients' assets with their own, also experienced runs during the crisis as worried customers scurried to secure their collateral. (More on this later.) The extreme reliance on very short-term liabilities, such as overnight borrowing and one-week commercial paper, that typified the balance sheets of the big investment banks left them acutely vulnerable to runs when they could not roll over their existing debt.[11]

Finally, and perhaps most obviously, our regulatory structure was plainly not up to the task. It was fragmented (e.g., six regulatory agencies), barely competent if that (e.g., the OTS supervising AIG), plagued by some glaring gaps (e.g., no regulation of derivatives), incapable of keeping up with financial innovation (e.g., CDS), and, to be frank, didn't even seem to try very hard (e.g., the banking agencies were unwilling to crack down on egregious subprime lending practices).

3.2. Some more omissions

I agree with this diagnosis wholeheartedly. But I think the Squam Lake view of the *status quo ante* leaves out a few very important contributors.

[10] See Gorton (2010) and Gorton and Metrick (2009).

[11] See Adrian and Shin (2009).

One was *the bubbles* themselves—and I mean both of them (see the next paragraph). *The Squam Lake Report* does mention bursting bubbles in passing, conceding that "the sharp drop in asset prices both contributed to and was a symptom of the Crisis." (p. 28) But bubbles are certainly not emphasized. And the group's discussion of the need for a systemic risk regulator (Chapter 2) does not even include monitoring and/or leaning against asset market bubbles among its presumed duties.

Pardon me, Squam Lakers, but bubbles merit far more attention than that. Had the unprecedented house-price bubble never blown up as it did, we would not have experienced a financial crisis anywhere near the dimensions of what actually occurred. Similarly, what I call the "fixed income bubble" amounted to a massive underestimation (or even ignoring) of risk. When the market sets risk premiums too low, perhaps because of myopic concentration on favorable recent default experience, it pushes the prices of fixed-income securities too high. These bloated valuations were bound to come tumbling back to earth at some point[12]—as Hyman Minsky understood so well.[13] This may not have been a "market failure" as classically defined; but it certainly was a failure of the markets to price risk correctly.

Scanning the list of authors, it is hard to imagine that more than a few of them adhere to the strict efficient-markets view that there is no such thing as an "irrational" bubble and that "rational" bubbles are, by definition, only recognizable *ex post*. So why, then, did the group not finger bubbles as a major culprit? Perhaps because they could not reach agreement on either the role of bubbles in causing the crisis or what, if anything, to do about them. If it's the former, I recommend they wake up and smell the rotting roses. If it's the latter, let me offer a suggestion.[14]

For equity-type bubbles that are *not* fueled by leverage and rapid credit expansion, the old Greenspan-Bernanke view still seems appropriate: The central bank should not try to prick bubbles, but just "mop up after".[15] After all, the central bank has neither informational advantages over the private

[12] In fact, when bubbles burst, asset prices usually overshoot in the opposite direction—which probably happened in 2008–2009.

[13] As reported by Mihm (2009), Minsky stated that "success breeds a disregard of the possibility of failure."

[14] This idea is developed in Blinder (2008), Mishkin (2008), and, to some extent, in Bernanke (2010).

[15] See Bernanke (2002) and Greenspan (2002). For an elaboration, see Blinder and Reis (2005).

sector on proper equity valuations (so it shouldn't try) nor well-targeted weapons to deploy against stock-market bubbles (so it won't succeed without killing the economy).

But in the case of debt-financed bubbles featuring high leverage, especially when bank-financed, these two objections melt away. As long as the central bank is also a bank supervisor, it has both superior information about lending practices (from its confidential supervisory reports) and targeted weapons to aim directly at the bubble (e.g., insisting on more respectable underwriting standards). An important part of "fixing the financial system" is giving the Fed (and other central banks) responsibility for doing just that.

The group's second "omission" is more a matter of emphasis: *Excessive leverage* is certainly mentioned in the report, but it does not get the starring role it deserves. On my own list of the structural weaknesses that imperiled our financial system on the eve of the crisis, excessive leverage ranks right at the top. But apparently not on Squam Lake's.[16] By the way, I mean excessive leverage *everywhere*: in households with little or no equity in their houses, in banks that used SIVs to mask their true leverage, in investment banks that operated with balance sheets leveraged 30-to-1 and more, and in complex derivatives that synthesized leverage in myriad ways. Our financial system circa 2007 was leveraged to the hilt—indeed, over the hilt.

Third, I have already mentioned the disgraceful *risk management practices* of many of our leading financial institutions. The monumental failures in this domain include excessive risk concentrations, the elevation of risk takers over risk controllers, truly disgraceful underwriting standards for mortgages, and the dysfunctional compensation schemes that the *Squam Lake Report* (partly) discusses—to name just a few. To me, but perhaps not to the Squam Lakers, these errors were massively consequential and demand major changes not only in public policy, but also in private corporate governance.

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[16] In fairness, leverage is mentioned several times. Some of the conflicts they emphasize lead to excessive leverage; and the vulnerability to runs is one manifestation of high leverage.

Fourth, we come again to the statistical *rating agencies*, which performed so badly in the years leading up to the crisis, but which (as noted earlier) are barely mentioned in the report. How, I wonder, did the skewed incentives created by the issuer-pays model escape the attention of a group so focused on incentives?

Finally, and perhaps most controversially, I would add the undue *complexity*, which normally also implies *opacity*, of much of structured finance, derivatives, and the like. At least in retrospect, it appears that many of the players who bought, sold, and even designed these imaginative securities did not really understand them.[17] If so, doesn't that suggest that the high priests of finance prayed too much at the altar of innovation, and too little at the altar of safety? I know it might be expecting too much for a group including so many professors of finance to condemn parts of fancy finance. But it sure would have been refreshing.

4. The search for a cure

As mentioned at the outset, one great strength of the *Squam Lake Report* is its strong grounding in *principles*—in fact, in just two broad principles that they finally manage to elucidate in the concluding chapter. (They should have revealed them earlier. Why keep readers in suspense?) So I quote the two principles, both of which I endorse and applaud, at length:

1. "The first principle is that, when developing and enforcing regulations, government officials must consider the implications not only for individual institutions but also for the financial system as a whole." (p. 135)
2. "Our second central principle is that regulators must create conditions that minimize the likelihood of bailouts of financial firms by forcing them to internalize the costs of failure they have been imposing on taxpayers and the broader economy." (p. 137)

Notice that these two principles can both be considered corollaries of what is really the Squam Lake Group's (unstated) mantra: *Think systemically*. It is not enough to keep individual banks safe and

[17] The right theme song for the crisis might be a well-known verse from *I Whistle a Happy Tune*: "The result of this deception is very strange to tell, for when I fool the people I fear, I fool myself as well!"

sound, if the system as a whole is interlinked, crisis-prone, and fragile. That mind-set suffuses the report. Its most important meta-recommendation is that regulatory reform strive to *internalize the potential spillover costs* imposed by each institution. It's an important insight and calls attention to perhaps the biggest market failure of them all: Free-market competition seems to breed institutions that deal poorly, if at all, with the externalities caused by their failure.[18]

4.1. Macro-prudential versus micro-prudential regulation

So, in particular, the group's first principle emphasizes the inadequacy of even very good *micro-prudential* regulation. It is simply not enough to prevent runs and other externalities, and must therefore be complemented by comprehensive *macro-prudential* regulation.

One reason is that myopic concentration on the safety and soundness of individual institutions "ignores critical interactions between *(sic)* institutions" (p. 135), such as counterparty linkages, lines of credit, scrambles for collateral, and other aspects of what is often called the financial plumbing. Hence the need for a *systemic* risk regulator (the subject of Chapters 2 and 3).

Another reason is that "strict regulation of a narrow portion of the financial system, such as the commercial banking industry, encourages migration of financial activities outside the regulated system to a shadow financial system whose risks are then poorly understood and inadequately monitored." (p. 137) Hence the need to close gaps in the regulatory structure, such as the non-regulation of derivatives, although the report barely touches on such gaps.

A third reason is that the authors doubt that the government can credibly commit itself "not to bail out the unregulated financial system in the event of a crisis." (p. 137) They're right. And I'd add a corollary: The government *wants to* bail out the financial system when the health of the entire economy is on the line.

But how do you make this first principle concrete? The *Squam Lake Report* offers several good suggestions:

[18] Notice the contrast here with failures in most other lines of businesses. If one grocery store or car dealership goes out of business, other firms in the market presumably gain. Not so with financial institutions subject to runs.

(1) "Capital requirements for regulated financial institutions should depend on the systemic risk they pose." (p. 35) This idea is undoubtedly correct but, in the absence of an agreed-upon measure of (marginal) systemic risk, hard to make operational. The report recommends higher capital charges for banks that are larger, less liquid, and more reliant on short-term debt. Good ideas all, and I would add a fourth criterion: "more involved in unhedged position taking."[19] Unfortunately, the concept of super-additivity rears its ugly head here: You won't get the whole systemic risk by adding up the marginal components firm by firm. The systemic risk contributed by Bank A's behavior depends sensitively on what Banks B, C, and D are doing. This makes the Squam Lake idea that much harder to implement.

(2) "Capital requirements should be higher for banks that require more time to restructure and close." (p. 103) Implementing this idea might require the use of "living wills," which will be discussed shortly. But remember that capital requirements for internationally-active banks are supposed to be uniform across nations. That is the purpose of the Basel accords. So the Squam Lakers presumably want this idea—and the living wills that go with it—to be embodied in Basel III. Good luck.[20]

(3) "Regulators should impose and monitor liquidity requirements on systemically important banks and broker-dealers." (p. 131) This is another good idea, though hardly unique to Squam Lake. The Basel Committee is trying to implement liquidity requirements right now, and has deferred part of the job for years. Liquidity requirements are specifically aimed at mitigating runs—which impose negative externalities on other firms and on society as whole.

(4) "To the extent that a bank or broker-dealer depends for short-term financing on its customer's assets, this financing source should be assumed to disappear when determining… liquidity requirements." (p. 131). Here the Squam Lake Group performs a valuable service, for few observers have paid much attention to the way current practices make the system vulnerable to runs. Prime brokers often commingle their customers' (e.g., hedge funds) assets with their own—using them, for example, as collateral for loans. In the U.S., there are some limits on this practice; in the U.K., there are none. When markets get

[19] This is a variant of the "Volcker Rule" that relies on raising the cost of proprietary trading rather than banning it outright.

[20] The idea is embraced by Dodd-Frank.

nervous, customers have strong incentives to ask for their assets back—which at best leads to runs on the brokers, and at worst is impossible because the assets are pledged as collateral to others. Thus, commingling assets makes the system very fragile. So I'd go further than the Squam Lake recommendation and require customers' assets to be fully segregated, as is done with custodial accounts.[21]

4.2. Minimizing the costs of bailouts

The second Squam Lake principle pertains to bailouts. The group seeks a more "robust financial system in which any troubled financial company is allowed to fail." (p. 137) Hence the need for the special resolution regime discussed in Chapter 8. So-called living wills, which "would help authorities anticipate and address the difficulties that might arise in a resolution" (p. 96), are one key ingredient. The report describes these wills as a "set of detailed instructions [that]… explain how the institution could be legally dismantled in the event of its failure." (p. 105)

The Squam Lakers opt for a special resolution regime for failing SIFIs, rather than advocating a new "Chapter 16" of the bankruptcy code.[22] I agree, although the issue is not open and shut. While participating in the Pew Task Force mentioned earlier, I thought about this choice quite a lot—and listened to the *pros* and *cons* presented by several leading lawyers. In the end, I came down on the side of new resolution authority, rather than beefed-up bankruptcy procedures, for two main reasons, neither of which is mentioned (and one of which is almost contradicted) in the Squam Lake Report.[23]

The first is the need for flexibility during a financial storm, rather than being hamstrung by rigid legalistic rules. Since every crisis is different, we don't want the authorities' hands tied by "Chapter 16" rules that would probably be tailored to the details of the crisis we've just been through. This desideratum, unfortunately, seems vaguely inconsistent with the Squam Lake Group's desire for a

[21] The *Report* (pages 132–133) acknowledges that complete segregation "is cleaner, simpler, and easier to monitor," but nonetheless rejects it because "it imposes additional costs" on prime brokers.

[22] The current U.S. bankruptcy code has 15 chapters.

[23] For further elaboration of the two points to follow, see Cohen and Goldstein (2009).

"resolution procedure [that is] transparent, objective, and well understood by the private sector." (p. 98) Good ideals, all. But, in fact, those words encapsulate the main arguments made by proponents of using legal bankruptcy procedures rather than special resolution.[24] Readers of this *Journal* will, of course, recognize this disagreement as yet another chapter in the never-ending rules-versus-discretion debate.

The second reason to favor special resolution over bankruptcy is to allow regulators to intervene early, *before* a company becomes insolvent and seeks protection from its creditors. That, of course, is exactly what we do with banks under the prompt corrective action system established by the FDIC Improvement Act in 1991. As banks' capital positions weaken, supervisors place them under increasing regulatory constraints.

Now, what about those living wills? It's a clever idea that I have liked ever since I first heard it—and still do.[25] Congress was right to recommend it in the recently-passed financial reform law.[26] But unlike the Squam Lake Group and some other devoted proponents, I fear that the likely benefits of living wills may have been exaggerated. For example, I wonder how practical they would be in a rapidly-changing market environment. How often would the wills be rewritten? Each time a new division was created, spun off, or amalgamated? Every time a firm's balance sheet changed in a major way? (The Squam Lake Group suggests quarterly.) Keeping the wills both detailed and up to date could impose large burdens on firms. More likely, firms would develop cookie-cutter, "check the box" approaches to save time and expense. In fact, I can think immediately of several consulting companies that are probably preparing right now to go into the business of selling templates to firms for use in satisfying their regulators.

Don't get me wrong. I favor living wills. Merely having a complete list of all of the firm's subsidiaries and affiliates, with the legal jurisdiction for each, would be enormously helpful to any

[24] See, for example, Wallison (2009a).

[25] The idea apparently originated in Brunnermeier *et al*. (2009).

[26] The act refers to them as "resolution plans" rather than "living wills."

regulator seeking to put a financial giant to rest peacefully.[27] A log of all counterparty exposures would be even more helpful—though much harder to keep up to date. But we should take a clear-eyed view of how much living wills are likely to accomplish. The Squam Lake Group wants these plans to center around "an estimate of the time the firms would be in various bankruptcy courts around the world, including delays for potential pitfalls." (p. 101). Sure.

Another crucial Squam Lake recommendation that should expedite (maybe even forestall) special resolution is what they awkwardly call "regulatory hybrid securities," and what I (and others) call *reverse convertible bonds*. "Reverse" because the regulator, not the bondholder, gets to decide when the debt is converted to equity. This clever idea is, in fact, my personal favorite among all 37 Squam Lake recommendations.[28]

Normal convertible bonds, which have existed for decades, come with a call option on the stock. The bondholder "buys" this option as part of a package deal, and he pays for it by accepting a *lower* interest rate than on ordinary (non-convertible) debt. The buyer of a *reverse* convertible bond, by contrast, essentially *sells* a *put option* on the stock. He gets paid for that option by receiving a *higher* interest rate, but he assumes the risk of having his bond converted to stock just when he would prefer not to.

The beauty of this proposal derives from two features. The first is capital efficiency. Instead of forcing banks to hold more capital in *every* state of nature, reverse convertibles would allow them to operate with less capital in good times, but then force them to acquire more capital *automatically* in bad times, which is just when society needs them to have it.[29] The second is automaticity. A systemic emergency may be the worst time for banks to go to the market for new equity. With reverse convertibles, they don't have to; it comes to them automatically, by pre-arrangement.

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[27] The *Report* (p. 147) notes that Lehman Brothers had more than 900 operating companies in more than 40 countries. Who knew that on September 15, 2008?

[28] As the group properly notes, the idea originated with Mark Flannery (2005).

[29] In the specific Squam Lake proposal (pp. 91–92), debt-to-equity conversion has a dual trigger: The bank would have to be in trouble (e.g., have inadequate Tier 1 capital) *and* the systemic risk regulator would have to declare a systemic crisis.

As indicated, I love this idea. But, as with living wills, we should not get carried away. In the first place, reverse convertible debt is likely to be quite expensive. Notice that buyers of such securities "win" in good states of nature and "lose" in bad states. That payoff structure is likely to be *positively* correlated with most of their other portfolio returns, and to have a high "beta" to boot. So buyers of reverse convertibles will demand high expected returns, maybe very high ones. For this reason, regulators will have to *force* SIFIs to issue them—which is, by the way, one good way to penalize TBTF status.

Furthermore, to achieve the objectives intended by the Squam Lake Group, firms would have to issue quite a lot of these reverse convertibles. The Squam Lakers want debt-to-equity conversions to "transform an undercapitalized or insolvent bank into a well-capitalized bank at no cost to the taxpayers" and without "capital infusions from the government." (p. 90) To go all the way from insolvent to well-capitalized would require a huge dose of new equity—in the range of the firm's total Tier 1 capital requirement or higher. Can that much unconventional debt be sold by every SIFI? The report seems to recognize this problem when it concedes that "additional complementary resolution mechanisms… may be needed." (p. 91) Indeed.

5. The Fed as systemic risk regulator

One of the major debates in financial reform is the question of whether the central bank in general, and the Federal Reserve in particular, should be the systemic risk regulator—including giving it supervisory authority over some or all SIFIs. This question was argued at length as the United States debated regulatory reform—with a number of economists (and others) lining up on the "no" side.[30] The Squam Lake Group came down squarely on the "yes" side, as did I and—most importantly—as did the U.S. Congress, largely for the same reasons:[31]

First, the central bank has the expertise, the broad purview over both the financial system and the entire economy, and the close contacts with financial markets to do the job. No other governmental entity

[30] See, for example, Rivlin (2009) or Crockett (2009).

[31] See pages 38–42 of the report, Blinder (2010), and Blinder (forthcoming).

comes close. All of these attributes could be built from scratch in a new agency, of course; that's the FSA model. But, at best, that would take time; at worst, it wouldn't work.

Second, financial stability is a close relative of the central bank's standard monetary policy responsibilities: stabilizing output and inflation. How, after all, can you stabilize the macroeconomy if the financial system is unstable? Thus preserving financial stability and conducting conventional monetary policy are, in one of the Squam Lake Group's favorite words, both *macro-prudential* functions.[32] So a straightforward economies-of-scope argument says that it makes little sense to separate the two functions in two different government bureaus.[33]

Third, the pursuit of financial stability will often involve the use of lender-of-last-resort powers—which only central banks have. That is why central banks all over the world (including the U.S.) have naturally assumed responsibility for financial stability, albeit not always with great success.[34] Indeed, central banks were assigned to financial stability long before anyone had any notions about countercyclical monetary policy.

Fourth, the central banks of most countries are more politically independent than any other agency of government. People who argue *against* making the central bank the systemic risk regulator worry that doing so might compromise its independence in the sphere of monetary policy. That is possible because financial behemoths are large, highly visible, and politically connected. But I think the political independence issue cuts exactly the other way. We want the regulator of SIFIs to be fiercely independent of politics. What government agency will ever have as much independence as the central bank?

Perhaps the main argument against giving the central bank the job of systemic risk regulation is an alleged conflict of interest. It is quite plausible that one or more SIFIs would get into trouble, and therefore merit supervisory discipline, just when the macroeconomy is weak. If so, the central bank's supervisory role might tell it to crack down on the wayward banks, while its monetary policy role might

[32] Conducting *unconventional* monetary policy, as the Fed has done since 2008, is even more closely tied to financial stability.

[33] The argument is developed further in Blinder (2010).

[34] The Dodd-Frank Act essentially assigns the systemic risk regulation job to the Fed, as the operating arm of the newly-established Financial Stability Oversight Council.

suggest regulatory forbearance. Critics fear that mixing the two roles could result in lax supervision just when banks are least safe and sound. But would that really be so bad? Maybe what some people portray as a worrisome conflict of interest is more appropriately seen as the rational balancing of two competing objectives. If so, shouldn't a single agency do the balancing? And who can balance those competing objectives better than the central bank?

6. A potpourri of other issues

The *Squam Lake Report* takes positions on several other important and controversial issues that I applaud and would like to endorse.

The first revolves around "naming and shaming." Specifically, one school of thought objects to designating specific firms as SIFIs, and thus too big to fail messily, because such a designation gives them privileged access to capital markets and creates moral hazard.[35] Another school of thought, which includes the Squam Lakers, me, and the U.S. Congress, holds that SIFIs need to be subjected to a tougher regulatory regime than other firms; and they should be made to pay for their presumably lower cost of capital (with, e.g., higher capital charges, reverse convertibles, and the like). Both of those considerations require that SIFIs be named.

A second issue has to do with capital charges under the Basel accords. One huge problem was that Basel II allowed banks to use their own internal models to measure risk—and thus, essentially, to set their own capital charges. Allowing such self-assessments presumes higher degrees of competence and honesty than are warranted, in my view. Furthermore, several quantitative assessments by regulators in the mid 2000s found that different banks' models gave wildly different estimates of the appropriate capital charges for the *same* portfolio of assets.[36] The *Squam Lake Report* appropriately recognizes that "regulators need to standardize the process used to measure valuations and risk exposures" (p. 49), and

[35] See, among others, Cooley (2009) or Wallison (2009b).

[36] Some of this is discussed in Tarullo (2008).

that one way to accomplish that "is for each firm to value its positions using a standard set of models" (p. 50) provided by regulators. When I read those words, I almost jumped for joy. Basel, are you listening?

In these areas and others not mentioned, the *Squam Lake Report* dispenses valuable wisdom. But on the negative side, there are a few issues over which I disagree or wish the Squam Lake positions had been stronger. Several of these have been mentioned already; here are a few more.

Start with derivatives. I have argued for years that the most important step the world's governments could take in regulating derivatives would be to push as much trading as possible into central clearinghouses and onto organized exchanges—whether by cajoling, regulatory incentives, or regulatory coercion. Cajoling might mean letting banks know that their regulators view OTC derivatives as far riskier than exchange-traded derivatives. Arched eyebrows often work. Incentives might mean higher capital charges on OTC derivatives than on exchange-traded derivatives, so that regulatory arbitrage might actually enhance rather than undermine safety and soundness. Coercion might mean banning certain types of institutions (e.g., insured depositories) from trading in OTC derivatives, except perhaps for unambiguous hedging and/or market-making purposes.[37] I have long advocated the middle approach: providing strong regulatory incentives to move trading onto organized exchanges. And I am more hawkish than the Squam Lakers on these matters, perhaps reflecting a different position on the aforementioned tradeoff between innovation and safety.

The arguments against standardization generally revolve around (a) the costs of hedging and (b) the importance of customized—and often highly creative—contracts. While these are legitimate issues, I am skeptical on both counts. It is true that higher collateral requirements would raise the costs of hedging; but it is also true that they would make derivatives safer. Furthermore, exchange trading and standardization should *reduce* the costs of using derivatives enormously. Once (standardized) derivatives become "just a commodity," bid-ask spreads will shrink dramatically.

Regarding customization, it may be true that the risk space is not completely spanned by a limited set of standardized contracts. But we can probably come pretty close, and, frankly, I'm not too concerned

[37] This would be a piece of the so-called Volcker Rule.

about the remainder. Standardized stock options do quite well, for example, even though you can't buy IBM calls that mature on May 11th with a strike price of $123.48. In any case, purity is not the goal. There are surely isolated instances in which customized derivatives are appropriate. Furthermore, any financial contract whose payoffs depend on any other financial prices can be considered a "derivative." And the government certainly does not want to prevent two companies from making a one-off financial deal that is in both parties' interests—as long as the deal poses no systemic dangers. Moreover, genuinely customized derivative contracts, by their very nature, should not be of systemic importance. If and as they grow in volume, they should become standardized and forced onto exchanges where, among other things, sufficient capital and collateral would be required.

Finally, I have noted several times that the Squam Lake Group seems to be extremely sanguine—one might even say, naïve—about the possibility of getting international agreements on issues such as resolution authority, derivatives, and prime brokerage. Here's an example: "Negotiations to create a unified cross-country resolution process should begin immediately. These negotiations should not, however, delay the implementation of interim regulations in each country." (p. 99).

The group evinces a certain charming naïveté here. Bankruptcy procedures have *never* been homogenized across national borders. Why should we think special resolution authority will be—if indeed all major countries opt for special resolution over bankruptcy? The authors recognize this problem, of course, in the second sentence quoted above. But notice the word "interim." In the recently-passed Dodd-Frank Act, Congress did indeed *not* wait for the rest of the world. (The U.S. Congress never needs such advice!) If say, the U.K. and the E.U. subsequently adopt different solutions to the resolution problem, are we to believe that Congress will reverse itself and conform U.S. law to international practice? I doubt it.

7. Some hints for researchers

Despite their authorships (by 16 academics), neither the Squam Lake Report nor this article devotes much attention to directions for future scholarly research. Yet such suggestions are hidden in plain sight throughout both documents. Let me make a few of my favorites explicit.

My list of research topics begins exactly where my list of shortcomings of the Squam Lake Report started: with the *tradeoff between innovation and safety*. Economists have been researching and measuring the gains from innovative activity for generations. One major theme of this research has been the measurement of the beneficial externalities involved in R&D. Because of such large (estimated) spillovers from the innovators, who can appropriate only part of the gains, to society as a whole, economists normally conclude that there is underinvestment in innovation. But when it comes to *financial* innovation, at least two major researchable questions arise. The first, in many cases, is whether the spillovers are even positive.[38] Or does the financial industry somehow manage to appropriate *more than* 100 percent of the social gains—if, indeed, there are net gains?[39] I'd like to see some serious research on this question, focusing, I imagine, on specific financial innovations. (Remember hybrid corn?) But the more important questions come on the cost side of the cost-benefit ledger. The costs of large-scale financial failure—partly caused by bad innovations—can be huge. Clearly, most of these costs are borne by the rest of us, not by the innovating firms. Can economists estimate the size of these negative externalities?

Next on my list comes a research activity that has already begun: assessing the probabilities and *measuring the sizes of asset-price bubbles*. Economists know that these are difficult tasks. But maybe, if we are willing tolerate imprecision, not impossible. Work of the sort done by Borio and Drehmann (2009) and others seems to holds promise. We need more of it.

Third, and related, I suggested above an emerging "new view" of *how a central bank should react to bubbles*: It should just "mop up after" equity bubbles (the Greenspan-Bernanke view), but it should intervene with regulatory weapons against bubbles fueled by credit expansion (the BIS view). It would be nice to have some research—perhaps within the context of fully-articulated macro models—either supporting or refuting that idea.

[38] I am thinking here of CDOs, not ATMs.
[39] Many derivatives look to be zero-sum contracts, unless one of the parties defaults—in which case they become negative-sum because of bankruptcy costs.

Fourth, if we are to try our hands at systemic risk regulation—as we are about to do—it would be nice to have some usable, empirical *measures of systemic risk.* In Section 4.1, I discussed how hard it would be to operationalize Squam Lake's sensible recommendation that capital requirements should rise with an institution's systemic risk. More academic work on measuring *marginal* systemic risk might help.

Fifth, I remain a bit mystified by why financial firms give their traders such *skewed go-for-broke incentives*: These (mainly young and venturesome) men and women get huge payoffs on the upside risk but shoulder relatively little risk on the downside, which creates massive and obvious agency problems that are allowed to fester. Why? Within the corporate sector, part of the presumed answer is that the top executives face similar go-for-broke incentives, and so want their traders—acting as their agents—to go for broke. Never mind the shareholders. But that doesn't explain why similar compensation schemes prevail in the hedge fund sector, where the managers are also substantial owners.

Sixth, I have mentioned my enthusiastic agreement with Squam Lake that regulators should force banks to used *standardized models*—rather than their own, individual, proprietary models—to measure risk for capital-adequacy (Basel) purposes. But where will such a model come from? More academic research would help.

Seventh, I mentioned in Section 6 the debate over how much would be lost by (almost) limiting derivative trading to contracts that can be standardized and traded on exchanges. This debate raises the sort of mainline finance questions that have been asked since Arrow-Debreu: How close can we come to "spanning the space" with a finite number of securities? How much do we lose by not quite spanning it? It seems to me that financial economics has tools that could be used to answer such questions.

Finally, I have mentioned the problem of *undue complexity* in financial instruments—and the concomitant notion that opacity contributes to panic when valuations are virtually unknowable. This is where *homo economicus* gets off the train, for *nothing* is too complicated for him. He's a calculating beast! But in the world of mere mortals—including those Ivy-League-educated "rocket scientists" (and their former teachers)—it sure looks like complexity got way out of hand. More important, it sure looks like excessive complexity cost society dearly. Modeling phenomena like these may require academic

economists to step outside the treasured, neoclassical, rational-expectations box. May I invite them to do so?

8. Last word

Taken as a whole, my suggested amendments to the Squam Lake recommendations are pretty minor qualifications to a notable and noble effort that deserves to be applauded, read, studied, understood—and emulated. The Squam Lake Group is right far more often than it is wrong. Indeed, almost all of its "errors" are errors of omission, not errors of commission. They are easily explained by the difficulty of getting 15 strong-minded members to agree.

On those rare occasions, years ago, when I allowed myself to dream utopian dreams, I sometimes imagined a non-political body of economic experts that would opine on the validity of various economic claims made by politicians and advocacy groups—sort of like the FDA's expert panels. Then I would wake up from my reverie and dismiss the idea as totally impractical and probably useless. The group wouldn't agree; no one would listen anyway; and the lobbyists hold all the cards.

Well, maybe I was wrong about the first two. The *Squam Lake Report* had a different goal, of course—not just unbiased analysis, but policy advocacy. Surely agreement on policy is harder to achieve than agreement on facts and analysis, and yet the group somehow succeeded. Besides, unbiased recommendations from a diverse panel of experts can make a valuable contribution to a heated public policy debate. At the very least, if it's well publicized, it can serve as a useful counterweight to the ridiculous claims so often made by lobbyists and other interested parties.

So maybe there should be more groups like Squam Lake. America certainly has lots of tough economic policy issues to tackle—and lots of lakes.

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