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"Dynamic Precaution" in Maintaining Financial Stability: the Importance of FSOC

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ABSTRACT

The Financial Crisis of 2007-09 has shown that financial stability is the ultimate public good: all benefit from it, it is costly to maintain, and its undersupply results in catastrophe. The threat to financial stability comes along four different avenues: first, the effort by institutions *within* the financial stability regime to find loopholes and other sorts of regulatory arbitrage to avoid the regime's costs; second, the effort by institutions *outside* of the regime to produce financial intermediation services that are the functional equivalent of within-the-regime firms; third, "innovation," which includes the unexpected consequence of existing rules in new application; and fourth, macroeconomic forces that magnify the threat of financial instability. The forces, separately and in combination, can reshape the financial system; these forces can move a formerly stable system into one that is systemically susceptible to either an internal or external shock.

One very important lesson of the Financial Crisis is that the maintenance of financial stability is an on-going project that requires an approach of "Dynamic Precaution." This requires an institution such as the Financial Stability Oversight Council to monitor the financial system as it evolves, to call attention to emerging risks to financial stability, and to catalyze the necessary regulatory intervention. In developing a case for Dynamic Precaution, this chapter explains first, why financial institutions need to remain as the focus of the FSOC regime even while observation and regulation aimed at activities is also important; second, how FSOC can serve Dynamic Precaution by using its designation authority to negotiate "off ramps" from enhanced oversight for firms whose instability or failure would otherwise have systemic implications; and third, if the maintenance of financial stability is the apex goal, why cost-benefit analysis can play only a limited role in financial regulation.

JEL: G21, G28, K20, L51, N22

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Introduction

This chapter is addressed to the problem of maintaining financial stability after the immediate shock of the Financial Crisis of 2007-09 has subsided. Financial stability is the ultimate public good; in particular, it's "non-excludible," meaning that every institution, financial and non-financial, and every person benefits from financial stability. Yet, maintaining financial stability is costly: Institutions face onerous-seeming constraints on their plans and activities and we have set up a complicated administrative and supervisory apparatus in the name of maintaining financial stability.

I encounter this problem, the problem of memory and belief, with every fall's teaching in a course called "Financial Crises and Regulatory Responses" (co-taught with the economist Patrick Bolton, for law and business students). The course, which focuses on the recurrent nature of financial crises rather than their singularity, nevertheless devotes particular energy to the financial crisis that began to unfold in 2007. Unlike the Savings and Loan crisis of the 1980s, the crisis of 2007 to 2009 upended the entire U.S. financial sector and spread globally. The economic impact is measured in the $trillions, a massive regulatory project is still underway, and the political consequences still ramify in the United States and its global partners. And this is in the aftermath of a "good" crisis outcome.

One ambition of the course is to give students a sense of the existential dread of living through the crisis while cognizant of the fear and uncertainty. I was then co-teaching a course in comparative corporate governance. This was overtaken by the cascading failures of Lehman Brothers, AIG, and the Reserve Primary Fund and then next, the fitful efforts at Congressional rescue. Stock markets and debt markets continued to deteriorate. On the way to class on many a day, I wondered whether I should draw extra money from the ATM because who knew, maybe the ATM would be closed down later. Sophisticated people scrambled to divide their assets among insured deposit accounts at multiple banks. The day that Congress voted down the initial rescue legislation, the Troubled Assets Relief Program (TARP), was a moment of dysfunction piled on dystopia, a day that Tom Friedman, the New York Times columnist, described as one of the three days in his life time that he feared for the future of the United States. The other two were the assassination of John F. Kennedy and the 9/11 attacks. Even after the TARP infusions, the guarantees of money market fund issuances, bank deposits and loans, the massive liquidity injections – even after all of those extraordinary measures, the financial sector continued to unravel and the economy went in tailspin. And these effects were not limited to the United States. The globalizing pattern of finance, reflected both in global financial firms and global financial flows, spread the disorder worldwide, particularly to Western Europe.

What was most alarming was the risk of a financial collapse that would rip apart the post-World War II economic order. For all its imperfections, that economic order had transferred nationalistic impulses away from the military realm to the economic realm and had produced inter-linked systems of trade and production that would reinforce cooperative rather than competitive impulses at times of stress. We in the United States had been living in sweet spot in world history and it all seemed very much at risk. What would Great Depression II look like? And what twist in U.S. and world history would follow?

The worst was avoided, as we now know. The emergency measures were necessary but not sufficient, however. What definitively turned confidence around was the first stress tests undertaken in early-spring 2009, which demonstrated that the likely loan losses of a major U.S. financial institutions would not render them insolvent. This demonstration was made credible by the assurance that TARP funds would be available to backstop the institutions that would otherwise fail the stress test. The stress test, the fiscal stimulus enacted in the early months of the Obama presidency, the fall 2008 financial sector emergency measures, the rescue of the automobile industry – all of it, in proportions we can never know, made the difference.

Even though the worst had been avoided, the costs were still enormous. These costs were not just the lost $trillions in gross domestic product (GDP), the millions unemployed, and the lives disrupted, but also the terrible political costs. The actions that were necessary to save the financial system from collapse (and to avoid an even worse economic and human outcome) produced a pattern of winners and losers that could not be defended on any principle of desert. The consequence of "bailouts" for Wall Street while defaults for Main Street and foreclosures and job loss for ordinary citizens produced intense and long-lasting resentments. The disparate outcomes fed the belief that the system was "rigged" and that the experts who failed to foretell the danger and then insisted on the remedies were in on the rigging. This in turn makes all problems of a complex global economy more difficult to resolve and compromises harder to enter into. And to repeat, this political turn followed a crisis resolution that, at least in the United States, was on the high side of reasonable expectations.

The lesson of the Financial Crisis of 2007 to 2009 is that the maintenance of financial stability must be the apex goal of the financial regulatory system. As noted above, financial stability is costly to maintain. For example: Under the present regulatory structure, the largest banks must limit payouts to shareholders so as to maintain a prescribed ratio of assets to shareholders' equity, using two different measures, one adjusted for the purported riskiness of bank assets, the other without such adjustments. These banks face asset composition and funding rules that will limit the amount of liquidity and maturity transformation that they can undertake. Efforts to off-load liabilities through securitization are constrained by risk-retention requirements. Proprietary trading is off-limits, and the banks must monitor the boundaries between "market-making," which is permitted, and proprietary trading, which is not. This description hardly

exhausts the list of regulatory constraints nor weighs the compliance costs of staying within the rules.

Part of the reason Bolton and I teach our course is to put successive generations of students – each further distant from a lived experience – into that existential moment, so that they may have a glimmer of the urgency that justifies those costs. For example, reading the staff memo that accompanied the financial deregulatory proposal that emerged from the House Financial Services Committee in summer 2016, the so-called CHOICE Act (short for **C**reating **H**ope and **O**pportunity for **I**nvestors, **C**onsumers, and **E**ntrepreneurs),[2] those who lived through the crisis will probably think it was written by a smart 27 year old staffer who was a sophomore in college as the world teetered on the edge of Great Depression II.

One very important lesson of the Financial Crisis is that the maintenance of financial stability is an on-going project that requires an approach of what I will call "Dynamic Precaution." The threat comes along four different avenues: first, the effort by institutions within the financial stability regime to find loopholes and other sorts of regulatory arbitrage to avoid the regime's costs; second, the effort by institutions outside of the regime to produce financial intermediation services that are the functional equivalent of within-the-regime firms; third, "innovation," which includes the unexpected consequence of existing rules in new application; and fourth, macroeconomic forces that magnify the threat of financial instability. The forces, separately and in combination, can reshape the financial system; these forces can move a formerly stable system into one that is systemically susceptible to either an internal or external shock.

Dynamic Precaution calls for a governmental institution whose principal function is to monitor the financial system as it evolves, call attention to emerging risks to financial stability, and then catalyze the necessary regulatory intervention. This institution should sit outside the existing regulatory agencies. This distance will cost some deep knowledge about particular institutions and financial system segments but it also avoids the blinders associated with the inevitable desire of a functional regulator to advance the interests of its regulatory clients. The institution must also be obliged to disclose what it observes to the public and to the legislative branches. Such required disclosure provides some measure of independence from actors who may have political and economic investments in existing arrangements and also puts other responsible actors on public notice. This general scheme is embodied in the Financial Stability Oversight Council (FSOC) created by the Dodd-Frank Act and its companion, Office of Financial Research.

Financial systems are a bundle of financial activities and financial institutions (entities). Although the way certain financial activities are carried out can create financial fragility and add to systemic risk, ultimately it is institutions that carry on the business of financial intermediation.

[2] House Committee on Financial Services, Explanatory Statement Accompany the Financial CHOICE Act, June 23, 2016.

It was the failure and near-failure of financial institutions that produced the sudden stop in the world economy in fall 2008. These points appear to have been confused in current efforts by the U.S. Treasury to cutback the FSOC's power to designate additional financial institutions as systemically important and thus subject to a regime of "enhanced prudential supervision" established by the Federal Reserve Board.

In developing a case for Dynamic Precaution, this chapter explains first, why financial institutions need to remain as the focus of the FSOC regime even while observation and regulation aimed at activities is also important; second, how FSOC can serve Dynamic Precaution by using its designation authority to negotiate "off ramps" for firms whose instability or failure would otherwise have systemic implications; and third, if the maintenance of financial stability is the apex goal, cost-benefit analysis can play only a limited role in financial regulation.

I. Activities and Institutions

A. Why Activities Matter

There is no doubt that the structure and volume of financial activities can measurably affect the level of systemic risk generally and the fragility of particular institutions. The case of derivatives (or "swaps") provides a good demonstration of activity-based concerns that are trans-institutional, as illustrated by these three examples. First, derivatives trading was initially undertaken among a small group of financial firms, especially investment banks, and the trades were documented via casual record-keeping even as the volume of derivatives trading vastly increased. This was perceived as laying the groundwork for a systemic "back office" crisis similar to securities trading in the late 1960s. Prodded by the NY Fed, an industry task force undertook a concerted effort to resolve this activity-based risk that, as one participant put it, was "one dog that didn't bark" during the financial crisis.

Second, prior to the financial crisis, most derivatives were entered into on bilateral basis, meaning that all the players were exposed to counterparty risk. The failure of Lehman Brothers meant that millions of open positions needed to be closed (under applicable netting rules). The uncertainty about the incidence of financial losses in this process on firms that were highly leveraged was certainly a factor in the financial freeze in fall 2008.

Third, because of the Lehman Brothers experience and because of the unexpected (and catastrophic) warehousing of credit default swap risk by AIG, one of the major Dodd-Frank Act reforms now shifts most derivative trading activity to Central Clearing Parties (CCP). This means that each side of a "swap" is protected by the clearinghouse, backed by its capitalization and additional callable commitments of clearinghouse members. The CCP also gets additional protection as a "Financial Market Utility" as described in the Dodd - Frank Act.

The Dodd-Frank Act also contains many other instances of activity-based regulation. For example, it establishes a regime of "safe securitization," which tries to control the moral hazard in origination by requiring a securitizer to retain a certain portion of risk that would be otherwise transferred. The Volcker Rule's separation of "market making" (permitted for a large bank holding company) and "proprietary trading" (forbidden) is an effort to place certain risky activities outside of systemically important financial firms. Financial fragility can be created by the activities that facilitate short-term finance, in light of the greater susceptibility to runs, which produces the sudden need to shrink balance sheets, leading to fire sale pricing and the consequent threats to bank solvency. The activities in question include securities lending and the short-term secured lending known as "repo." Regulation can target the activity directly, for example, by focusing on the value stability of the underlying collateral or by devising settlement protocols that reduce the daylight risk of the banks that intermediate the tri-party repo market. But sometimes activity risks are best addressed at the institutional level, by limiting reliance on short-term wholesale finance by large financial firms, as exemplified in the so-called "Net Stable Funding Ratio" in the Basel III rules.

B. Institutions (entities) are nevertheless the critical regulatory focus

Financial institutions bundle various financial activities and thus, notwithstanding the independent importance of activities in systemic oversight, institutions must be the critical regulatory focus. All activities are channeled through institutions. Institutions are, in effect, bundles of activities. The fragility of the institution is commonly a function of the variables in that bundle, including the weighting. The risks associated with short-term wholesale finance, for example, depends on its importance to the institution's balance sheet, both as a proportion of liabilities and its liquid assets.

Institutions are nodes in the financial system. They bring together customers, markets, fund flows, relationships and provide multiple sorts of interconnection. The failure of large financial firm tears a hole in that network. Switching and recontracting costs can disrupt the real economy. The financial crisis provided strong evidence that the failure of even a single important financial firm could ramify in escalating ways. This why the Dodd-Frank Act took up systemically important financial firms so extensively, in three particular ways: first, in empowering the Federal Reserve to devise a system of "enhanced prudential standards" to minimize failure risk for a category of firms that Congress deemed to be systemically important both because of their direct linkage to the banking system and their asset size; second, in devising a general strategy for "orderly liquidation" of a failed or failing institution deemed to be systemically important to minimize the knock-on effects of its failure; and third, in giving the FSOC power to designate "non-bank" financial institutions as systemically important and thus subject to enhanced prudential standards as devised by the Fed.

II. FSOC designation authority and Dynamic Precaution

FSOC designation authority, which has been used sparingly by the FSOC, has nevertheless become a source of great controversy. In appreciating the critical role of this designation authority, it is important to recall the Financial Crisis itself. The Crisis was, in historical terms, a "banking crisis." Such a crisis generally arises from a credit-fueled asset bubble in which much of the banking sector faces insolvency when the bubble collapses and loans go unpaid. Insolvent banks will default on obligations to depositors and other creditors and of course can no longer funnel credit to businesses or consumers. Bank insolvencies can also disrupt the payments system, meaning that consumers and businesses lose the channels for making or receiving payments for goods and services. Before deposit insurance, the risk of bank insolvency could readily become self-fulfilling, because a run by self-protecting depositors could force the rapid sale of a bank's assets at "fire sale" prices, producing insolvency even for relatively well-capitalized banks. Banking crises are commonly associated with real estate, in the belief that the supply inelasticity of real estate assets means that prices will invariably increase, but, as exemplified by the stock market crash of 1929, can be associated with any asset that investors mistakenly believe will always appreciate.

An essential fact about the Financial Crisis of 2007 to 2009 is that a banking crisis emerged outside of the traditional commercial banking sector. The investment bank Bear Stearns failed when short-term credit suppliers grew suspicious of the value of the mortgage-backed securities on its balance sheet. Lehman Brothers, another investment bank, failed because of similar suspicions about its commercial real estate assets. AIG, an insurance company, failed because it was unable to make good on its guarantees of mortgage-related derivatives. Reserve Primary Fund "failed" because the write-down of its credit extension to Lehman meant that it was unable to cover redemption requests by its own short term claimants. Bear and AIG were, of course, rescued; Lehman was not. The crisis demonstrated that a significant portion of the U.S. "banking" system had migrated outside of the official commercial banking sector to institutions that operated through securities markets. Investment banks and money market funds performed all three "transformations" that characterize banking: credit, maturity, and liquidity; that is, the conversion of risk-laden, illiquid, long-term assets into short term risk-free liabilities. The counterparty relationships that were sundered by the Lehman failure also revealed the existence of a private payments system that tied together financial firms.

Thus one of the most important lessons of the financial crisis was that systemic risk could arise outside of the official banking system. A further lesson was that reforms designed to protect the banking sector may prompt the migration of such systemic risk. For example, the Glass-Steagall Act was designed to protect the banking sector by separating commercial banks from securities market activities. In achieving this separation, Glass-Steagall also energized free-standing investment banks to use securities markets to create functional substitutes for credit

provided by commercial banks. A substitute banking system (the "shadow banking" system) emerged but without the oversight, deposit insurance, and public lender-of-last-resort backstop that we have come to think necessary to assure the stability of the banking sector. More generally, measures that strengthen the official commercial banking sector almost invariably produce financial innovation outside the official sector, with the goal of providing equivalent credit-intermediation while not bearing the financial stability costs.

The core regulatory problem is this: The maintenance of financial stability requires the adjustment of the regulatory perimeter to cover new financial intermediaries as they become systemically important. This is true for three reasons. First, the failure of such a large intermediary could eliminate an important credit channel for a significant group of borrowers. Second, its failure may well have knock-on effects for the official banking sector through balance sheet linkages or correlated asset holdings that will damage banks' financial position. Banks may have extended credit to the new financial intermediary, either through a direct loan, purchase of a debt security, or purchase of an asset backed by the intermediary's guarantee. Banks may have entered into contingent credit (or guarantee) arrangements with the intermediary. Banks may hold similar assets as the new intermediary, which are subject to abrupt devaluation as the troubled intermediary disposes of assets to meet claims of counterparties and the official sector hoards liquidity. Thus, directly and indirectly, the failure of such an institution will damage the real economy through an abrupt contraction in credit availability.

And third, the success of new intermediaries will presumably come at the expense of institutions in the official banking sector and will be attributable at least in part to a lighter, less costly regulatory burden. This competitive success will put pressure on the overseers of the official sector to relax regulatory constraints so that official banking institutions can compete, even though these costs were necessary to maintain financial stability. Thus financial stability free-riding by extra-perimeter systemically important financial intermediaries undercuts the capacity of regulators to maintain financial stability over the long term.

One of the most valuable, if imperfectly realized, achievements of the Dodd-Frank Act is the recognition of evolving and migrating systemic risks and the design of a regulatory apparatus to address this, the FSOC. FSOC is a council of U.S. regulators, charged with identifying "potential emerging threats to the financial stability of the United States." FSOC was given a research arm, the Office of Financial Research, and also various tools to engage with these threats. One of the most important tools is the power to designate a non-bank financial institution as systemically important and subject it to "prudential standards" devised by the Board of Governors (of the Fed) and otherwise to the Fed's supervision. To designate the non-bank firm for such treatment, the Council must "determine[] that material financial distress [at this firm], or the nature, scope, scale, concentration, interconnectedness, or mix of activities of [this firm] could pose a threat to the financial stability of the United States." Let's call this the designation of the firm as

a systemically important financial institution, or "SIFI." To guide the FSOC in this determination, the Act specifies that the FSOC "shall consider" 10 wide-ranging "considerations" "and any other risk-related factors that the Council deems appropriate." The Council's designation decision is reviewable, but the applicable standard of review is the deferential test of "arbitrary and capricious."

This SIFI-designation authority has been controversial. Its opponents bring out the heavy artillery: The broad grant of discretion is said to be inconsistent with the rule of law, because by regulatory determination, a large financial firm can be made subject to a potentially stringent prudential regime of a regulator, the Fed, with whom it may have had no prior engagement. One of the few designated firms, MetLife, challenged FSOC in court and achieved success.[3]

A major reason for pushback is that most of the initial targets of FSOC designation have been insurers, which despite their $1 trillion-plus balance sheets claim they could not be a source of systemic risk because their liabilities (insurance policies of various types) are not readily runnable. This claim is asserted despite the business fact that insurers have used this balance sheet stability as a selling point for non-traditional insurance financial activities (AIG was only an extreme example). Before the financial crisis it was common to hear that all financial institutions were, like happy families, alike in their core function of risk management and allocation. Post-crisis, the insurers strenuously assert that they are unalike. The United States has historically relegated the regulation of insurers to the states and a suspicious mind might think that insurers prefer a predictably laxer regulatory diffusion to concerted oversight by a single federal regulator. It is also true that the Fed has no experience with insurance regulation and reflexively inclines to bank-like regulation -- capital bolstering and balance sheet strengthening -- rather than a tailored consideration of insurance company specific risks.

Thus a major reason for the controversy over SIFI designation is that no one knows exactly what it entails. The Fed becomes a regulator of the designated firm, responsible for setting prudential standards and engaging in supervision, but it has significant flexibility in fulfilling these tasks.[4] The Council has a mandate to offer "recommendations" to the Fed,[5] including recommendations tailored to the designated firm's business.[6] The Fed is invited to "consult" with the Council about alternatives to risk-based capital and leverage that achieve "similarly stringent" risk control.[7] The Fed is required to "consult" with the primary "functional" regulator of the subject firm (if any).[8] Nevertheless, the Fed has the last word on the substance of the standards

[3] MetLife, Inc. v. Fin. Stability Oversight Council, 177 F. Supp. 219 (D.D.C 2016), appeal dismissed, 2018 WL 1052618 (Jan. 23, 2018).
[4] See generally DFA § 165.
[5] DFA §§ 115, 165 (a)(1).
[6] DFA §§ 115(a)(3), 165 (a)(2)(A).
[7] DFA § 165(b)(1)(A).
[8] DFA § 165(b)(4).

and the nature of the supervision. The only statutory structural requirement is that the designated firm must prepare a "living will" for its resolution in bankruptcy, just like the large bank holding companies that were designated as systemically important under the Dodd-Frank Act.[9] The concern that the Fed will apply bank-like capital and liquidity standard to every designated SIFI, no matter its business model, has created much of the resistance to the FSOC's designation power, whether or not such fears are justified. The discretion granted to the Fed for "tailored application,"[10] necessary in the circumstances, is an incomplete solution.

This analysis of the FSOC designation authority misunderstands how the FSOC scheme should function. The key point is this: The optimal number of new SIFIs is zero. The FSOC designation process and the subsequent annual review for each designated SIFI is designed to provide an off-ramp for firms whose size, business strategy, interconnectedness, and other characteristics would raise questions about their systemic import. In other words, the FSOC's designation authority becomes the mechanism for *avoiding* the creation (or continuation) of firms that are "too big to fail." The designation process is a way to identify systemic concerns and to give firms the opportunity to mitigate them. It is not a mechanism by which new classes of financial firms are ported over to the Fed for regulation and supervision.

Moreover, the FSOC's designation authority often spurs other regulators to expand their perimeters and set stability-promoting standards. One example is the recent program of the Comptroller of the Currency to offer special national banking charters to FinTech firms, which could bring some prudential oversight to this rapidly expanding sector.[11] The recent initiative of the U.S. Securities and Exchange Commission (SEC) to require mutual funds to plan for adequate liquidity buffers came in response to FSOC's investigation of systemic concerns in asset management.[12] Liquidity buffers reduce the risk of runs and fire sale dispositions that could have knock-on effects to other financial institutions holding similar assets. FSOC's possible designation of particular asset managers prompted the SEC's action, which aims to reduce systemic risk by other means.

Understanding how FSOC's designation authority can best discourage the creation or maintenance of a SIFI requires looking at both at the statutory mandate and a "Three Stage Process" described in FSOC's interpretive guidance.[13] In Stage 1, FSOC will use quantitative

[9] DFA § 165(b)(1).
[10] DFA § 165(a)(2) (caption of section).
[11] OCC Begins Accepting National Bank Charter Applications from Financial Technology Companies (Office of the Comptroller of the Currency Press Release, July 31, 2018); Comptroller's Licensing Manual Draft Supplement, Considering Charter Applications from Financial Technology Companies (July 2018).
[12] See Investment Company Liquidity Risk Management Programs, SEC Rel. No. 33-10233; IC-32315 (Oct. 13, 2016) (adding Rule 22e-4 under the Investment Company Act of 1940).; FSOC, Notice Seeks Comment on Asset Management Products and Activities (2014); Office of Financial Research, Asset Management and Financial Stability (2013).
[13] See 12 CFR § 1310 and Appendix thereto, and discussion at 77 Fed. Reg. 21637-21662.

thresholds to identify a set of nonbank financial firms "that merit further evaluation," in particular a consolidated asset threshold ($50 billion) plus one other quantitative measure in specific categories pertaining to the firm's size or risk appetite (such as leverage or short term funding). In Stage 2, each firm identified in Stage 1 will be subject to analysis of its potential threat to U.S. financial stability, using existing public and regulatory resources. For firms that present a prima facie case for designation after Stage 2, FSOC will collect information directly from the particular firm, including, presumably, proprietary information; this is Stage 3. Based on its assessment, FSOC may move to a "Proposed Determination" that the firm presents a risk to financial stability that requires oversight by the Fed. Before the determination becomes final, FSOC must provide notice to the candidate firm, "including an explanation of the basis of the proposed determination." The firm is entitled to respond with written submissions and, at the Council's invitation, oral testimony and argument.

Consider the factors that FSOC says it will consider in Stage 3, in addition to the quantifiable ones, that "could mitigate or aggravate" the firm's potential threat to financial stability: "the opacity of the [firm's] operations, its complexity, and the extent to which it is subject to existing regulatory scrutiny and the nature of such scrutiny." The analysis will include "an evaluation of the [firm's] resolvability … [which] entails an assessment of the complexity of [firm's] legal, funding, and operational structure, and any obstacles to the rapid and orderly resolution of the [firm]." Resolvability factors include "legal entity and cross-border operations issues;" "the ability to separate functions and spin off services or business lines; the likelihood of preserving franchise value in a recovery or resolution scenario, and of maintaining critical services within the existing or in a new legal entity or structure; the degree of the [firm's] intra-group dependency for liquidity and funding, payment operation, and risk management needs; and the size and nature of the [firm's] intra-group transactions."[14]

Each of these elements is an invitation to the targeted firm to try to eliminate its threat to financial stability and avoid a designation. The firm can restructure to reduce its systemic profile; subject itself to regulatory oversight as a substitute for the Fed (e.g., OCC for FinTech firms); and, in particular, subject itself to a "living wills" process designed to facilitate the resolution of a significant financial firm. In other words, the FSOC review process is designed to *avoid* designation by giving a firm the opportunity to address the issues that trouble FSOC. The targeted firm and FSOC can negotiate a solution that mitigates the systemic risk that would otherwise call for the Fed's oversight. One analogy is Justice Department review of a significant merger: The parties and the department negotiate to look for acceptable accommodation to antitrust concerns before the department brings an enforcement action. There is no serious criticism that this practice, which is common to competition regimes world-wide, is inconsistent with the rule of law. The interaction between FSOC, the targeted firm, and the Fed is quite similar.

[14] See 77 Fed. Reg. at 21662 (April 11, 2012).

Even after designation, the non-bank financial firm is entitled to annual review of its designation.[15] This too is an invitation for the designated firm to address FSOC's financial stability concern. The goal of the FSOC designation process is to *avoid* the creation or maintenance of systemically important firms. Subjecting non-bank financial firms to the Fed's oversight is a backup where accommodation cannot be found. In short, the FSOC process is set up to provide off-ramps from designation.

Evidence for this dynamic is in FSOC's designation of GE Capital in July 2013[16] and its rescission of that determination in June 2016.[17] The basis for the initial determination was straightforward: GE Capital, a wholly owned subsidiary of General Electric Corp., was "one of the largest financial services companies in the United States, ranked by assets," $539 billion as of yearend 2012, and was "a significant source of credit to the U.S. economy," extending credit to 243,000 commercial customers, 201,000 small businesses, and 57 million consumers. Through many different channels, "material financial distress at the company, if it were to occur, could pose a threat to U.S. financial stability."

Yet over the subsequent three years, "GE Capital has fundamentally changed its business model. Through a series of divestitures, a transformation of its funding model, and a corporate reorganization, the company has become a much less significant participant in financial markets and the economy. GE Capital has decreased its total assets by over 50 percent, shifted away from short-term funding, and reduced its interconnectedness with large financial institutions. Further, the company no longer owns any U.S. depository institutions and does not provide financing to consumers or small business customers in the United States."[18] The 2016 rescission decision described how company officials met with Council staff regarding how it might undertake strategic actions that would reduce its systemic risk. In short, in response to guidance by the FSOC, the company steered away from those activities and mechanisms that would render its failure a systemic threat. The head of GE Capital said the decision reflected the transformation of GE Capital into a "smaller, safer financial services company."[19] It was once a SIFI but no longer.[20] And the American economy is now more stable because of the change.

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[15] DFA § 113(d).

[16] See U.S. Treasury, Basis of the Financial Stability Oversight Council's Final Determination Regarding General Electric Capital Corporation, Inc. (July 8, 2013), available at https://www.treasury.gov/initiatives/fsoc/designations/Pages/default.aspx.

[17] See U.S. Dept. of the Treasury, Basis of the Financial Stability Oversight Council's Rescission of Its Determination Regarding General Electric Capital Global Holdings, LLC (June 28, 2016), available at https://www.treasury.gov/initiatives/fsoc/designations/Pages/default.aspx.

[18] Id., p. 2.

[19] Ted Mann & Tracy Ryan, "GE Capital Sheds 'Systemically Important' Label," Wall St. J., June 29, 2016 (quoting Keith Sherin).

[20] A similar process of down-sizing and restructuring is underway in the case of MetLife, which is separating its U.S. individual life insurance business from its remaining insurance and financial-services businesses. This is described in Form 10-K, Brighthouse Life Insurance Co, FY 2016 (March 28, 2017), available through the

Moreover, the Fed played a role in this process of negotiated un-designation. It both issued enhanced prudential standards for GE Capital and substantially suspended them while the company was in the process of restructuring.[21]

In sum, GE Capital's travels through the FSOC designation process underscore that the ultimate goal is to reduce the number of systemically important financial institutions, not to increase the Fed's regulatory reach and regulatory burden. Presumably this is an objective that all sides of the debate can embrace. Those who think that SIFI designation means the firm will be regarded as "too big to fail" and thus a bailout candidate should welcome a process aimed at reducing the number of firms that are "systemic." Those who think that FSOC needs to expand the regulatory perimeter to protect financial stability should appreciate that ex ante reduction of systemic risk is better than greater ex post regulation. The key legislative fact is this: FSOC's designation authority is essential to this dynamic. The credible possibility of designation is what disciplines managerial decisions about the size, scope, leverage, and interconnectedness of a financial firm's activities.

FSOC's designation authority thus can play a major role in maintaining financial stability over the long term. FSOC intervention (or its threat) can help keep some firms below the systemic threshold, induce some firms to back-off if they have crossed it, and lead other regulators to constrain some of the systemically-risky behavior of firms that they oversee. In short, there will be fewer SIFIs with FSOC-designation authority than without. And for firms that are unavoidably systemic, FSOC designation (and Fed oversight) will be very important.

III. Cost Benefit Analysis vs. Dynamic Precaution in Financial Regulation

Cost-benefit analysis (CBA) has become a familiar prescription in financial regulation. Courts have taken great license with existing statutes to require a quantified tally of costs and benefits, even in one remarkable case insisting that this methodology was required under the "arbitrary and capricious" judicial review standard of the Administrative Procedure Act,[22] which is quite remarkable in light of the recency of CBA in judicial review of administrative action and the 1946 origins of the APA. The fundamental flaw with CBA in the financial regulatory area is the poor fit with the dynamic nature of the financial system itself. Even if it were possible to tally the costs and benefits of a particular financial regulatory rule at a given moment in a non-

SEC's EDGAR site. For current developments, see Leslie Scism, "MetLife Closer to Spinning Off U.S. Life Insurance Business," Wall St. J., June 28, 2017.

[21] Federal Reserve System, Application of Enhanced Prudential Standards and Reporting Requirements to General Electric Corporation, 80 Fed. Reg. 44111 (July 24, 2015).

[22] See MetLife, Inc. v. Fin. Stability Oversight Council, 177 F. Supp. 219 (D.D.C 2016), appeal dismissed, 2018 WL 1052618 (Jan. 23, 2018); Business Roundtable .

arbitrary,[23] non-trivial[24] way, the point is that for any important rule, the relevant effect will be prospective. The rule will play a role in reshaping the financial sector, meaning that the prior assessment of costs and benefits will be obsolete. As I have elsewhere argued,

> "[T]he financial system is not a natural system. It is constituted by regulation, a constructed system…. [T]he system itself is not stable: parties will adapt in light of the regulation, the system of finance will change, and with it the benefits and costs of the regulation in question."[25]

Where CBA has been commonly used, in health and safety and the environmental areas, the primitives of the system -- the laws of physics, chemistry, and biology, for example -- are invariant to the rules that are founded on their operation. There are no comparable primitives in finance. The rules constitute the financial system and thus changing major rules will change the system in often quite unpredictable ways.

To reject CBA analysis in its quantified form is not the same as rejecting pragmatic efforts to assess the likely impact of regulation, which includes the thoughtful use of the available empirical evidence and sophisticated modeling of financial system dynamics. Instrumental rationality has value in financial regulation. In context, CBA is an irrational facsimile. Precisely because of the humility a regulator should bring to the exercise, the most appropriate stance of a systemic regulator is Dynamic Precaution. The point is to observe the financial system as it evolves, to monitor the build-up of stresses and potential sources of financial instability, to propose intervention as then necessary. This consists of monitoring on at least two dimensions: First is the tracking of financial stress on its time-series dimensions, reflected, for example in the rapid expansion of credit or an unusual escalation of asset prices.[26] Second is the tracking of cross-sectional institutional development, such as the growth of a new class of financial intermediaries or rapid move to a new form of financial intermediation or new financial activity.[27]

Cost-benefit analysis encourages a "one and done approach," which is exactly the wrong attitude necessary for the maintenance of financial stability. Modern financial systems are always

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[23] John Coates, Cost-Benefit Analysis of Financial Regulation: Case Studies and Implications, 124 *Yale Law Journal 882* (2014) (identifying arbitrary choices in cost/benefit choices).

[24] Such as by assessing the attorney time (and costs) in regulatory filings regarding rules that shape an industry.

[25] Jeffrey N. Gordon, The Empty Call for Benefit-Cost Analysis in Financial Regulation, 43(2) Journal of Legal Studies S351, S366-67 (June 2014) ("Empty Call").

[26] The Office of Financial Research has devised the "Financial Stress Index," which provides "a daily snapshot of stress in global financial markets," and the "Financial System Vulnerabilities Monitor," "designed to provide early warning signals of potential US financial system vulnerabilities." See www.financialresearch.gov.

[27] These two approaches to macroprudential regulation are more fully developed in see John Armour, Dan Awrey, Paul Davies, Luca Enriques, Jeffrey Gordon, Colin Mayer and Jennifer Payne, The Principles of Financial Regulation (2016), ch. 19, pp. 409-430.

a work in progress, dynamic not static. The energy comes from multiple sources: First are the efforts by institutions within the official perimeter to innovate to evade regulatory constraints, for example, the Special Investment Vehicles that banks devised pre-crisis to move assets off the balance sheet and thus avoid the need to augment regulatory capital. Second are the institutions outside the official perimeter that attempt to provide functional equivalent financial intermediation as "banks" without paying the financial stability tax. Pre-crisis, credit intermediation shifted in significant measure to institutions outside of the official banking system, such as securitization vehicles, money market funds, and investment banks.[28] Innovations in contractual arrangements (securitization) and in finance ("repo") appeared to offer a lower cost strategy for housing finance than plain vanilla mortgages run through the banking system. Third, technology itself can be transformative. Neither sophisticated securitization (or other forms of structured finance) nor derivatives would have been possible without high-powered computers. "Dynamic precaution" inclines the regulator to be forward looking not backwards or presentist.

The case for dynamic precaution is well-illustrated by the many financial regulatory rules that produced outcomes far outside the assessment of the costs and benefits contemplated by the rule's enactors, outcomes that were an integral part of the Financial Crisis. One example, of course, is the case of money market funds ("MMFs"), which the SEC introduced in the late 1970s as a vehicle for retail investors to benefit from high short term money market fund rates at a time when bank deposit rates were constrained by regulation.[29] Throughout the 1990s, MMFs increasingly became a short-term wholesale investment vehicle for institutions looking for liquidity, safety, and cash management. This produced a set of very large financial intermediaries in a $3.5 trillion industry (as of 2008) outside of the official banking system – without capital or a lender of last resort. The run on MMFs after the failure of the Reserve Primary Fund was an accident waiting to happen.

The second example, a 2005 Bankruptcy Act change,[30] justified via a thinly-reasoned cost-benefit analysis as reducing systemic risk, turned out almost immediately to be the vector of systemic risk throughout the financial system. The Bankruptcy Abuse Prevention and Consumer Protection Act of 2005, "BAPCPA," made what might seem to be a limited, technical change to the operation of a bankruptcy "safe harbor" for financial contacts, and made this in the name of *reducing* systemic risk. Yet the change made it easier to finance extensions of credit to residential real estate, which both inflated an already overheated subprime mortgage market and heightened susceptibility to bank runs throughout the financial system. The lens of quantified cost-benefit analysis, which assessed the stability of the financial system as it then was, brought exactly the

[28] For a more detailed discussion, see id., pp. 439-44, 481-87.
[29] This is drawn from Gordon, Empty Call, supra note 25; Jeffrey N. Gordon and Christopher M. Gandia, Money Market Fund Risk: Will Floating Net Asset Value Fix the Problem? 2014 Columbia Business Law Review 313 (2014).
[30] Bankruptcy Abuse Prevention and Consumer Protection Act of 2005, Pub. L. No. 109-8, § 907, 119 Stat. 23, 171–72 (codified as amended at 11 U.S.C. § 101(47) (2012)) ["BAPCPA"].

wrong regulatory attitude. Instead, the question needs to be, how is the financial system changed through these new rules? Will that require intervention?

To understand this requires some unpacking.[31]

Financial intermediaries commonly finance assets on their balance sheets with short term collateralized loans called "repo." "Dealer banks" can earn a "spread" on the difference between higher long-term rates and lower short term rates. Similarly, financial intermediaries commonly collateralize transactions with one another (especially derivatives) with repo. A leading text on financial regulation describes repo this way:

> "Repo [is] a collateralized loan structured as a sale and repurchase transaction in which the 'seller' (borrower) sells a security to the 'purchaser' (lender) with the understanding that it will repurchase the security [at a higher price that reflects the interest charge]. Commonly the market value of the security exceeds the loan, and the difference is the so-called 'haircut' (or 'margin') and reflects the extent to which the loan is over-collateralized. If the borrower defaults on its repurchase obligation (repayment of the loan), the lender can … sell [the security] and apply the proceeds to the loan. *Laws of most jurisdictions protect the lender (purchaser) from insolvency laws that might otherwise stay a secured party's foreclosing on the borrower's collateral, a bankruptcy safe harbor.* By protecting the value of the lender's 'deposit,' repo provides a kind of private deposit insurance."[32] [emphasis added]

The key to the counterparty's security in this short term lending arrangement is the capacity to foreclose on collateral which is at least equal to the loaned amount and immediately to realize on this value. This means that such creditor self-help must be excluded from the "automatic stay" that is generally triggered by a bankruptcy filing, designed to preserve the going concern value of the debtor. This "safe harbor" for repo in financial contracts was initially added to the Bankruptcy Act in 1984, with the proviso that the collateral eligible for such treatment was limited to U.S. Treasury securities, Agency securities, and certain bank issuances thought to be protected through the social safety net. The increasing volume of derivatives transactions in the 1990s led to a push to expand the range of collateral that would be eligible for repo safe harbor treatment.[33] After an

[31] For more extensive accounts see Edward R. Morrison, Mark J. Roe, and Christopher S. Sontchi, Rolling Back the Repo Safe Harbors, 60 Business Lawyer 1015 (2014); Edward R. Morrison and Joerg Riegel, Financial Contracts and the New Bankruptcy Code: Insulating Markets from Bankrupt Debtors and Bankruptcy Judges, 13 American Bankruptcy Institute Law Review 641 (2005).
[32] Armour et al, supra note 27, 440-41.
[33] See Financial Contract Netting Improvement Act of 2000, report from Comm. On Banking and Financial Services, 106th Congress 19-20 (Sept. 7, 2000); Safety and Soundness Issues Related to Bank Derivatives Activities – Part 3: Hearings before the Comm. On Banking, Finance, and Urban Affairs, H.R. (Part 3 -- Minority Report) 103d Cong 4 (Oct. 28, 1993).

eight year effort, such a provision was added as a title to bankruptcy legislation (in 2005) otherwise aimed at a purported increase in fraud and abuse in consumer bankruptcy.

The general argument for the bankruptcy safe-harbor in financial contracts is that it reduces systemic risk. Financial firms at the center of the financial system have a huge book of trades with one another, secured through repo, and are thinly capitalized relative to the notional value of their trading books, on the view that 1) their trading book is roughly balanced and 2) their counterparty credit risk is eliminated through collateral arrangements like repo. If firm A could not immediately realize on the value of its outstanding credit extensions to Firm B, then Firm A could not meet its obligations to Firm C – a falling dominos theory of systemic risk. Moreover, without the assurance of immediate realization, A would refuse to rollover existing credit extensions to B, triggering a liquidity crisis for B that could easily lead to B's failure, and the potential systemic run-off from that. The justification invoked for expanding the collateral eligible for bankruptcy safe harbor treatment, in particular to add mortgage-backed securities, was that financial firms were in fact using such securities in their repo transactions.[34] So systemic stability would be served by including this sort of collateral in the safe harbor.[35]

The assumption that this expansion of the safe harbor provision would add to systemic stability underpinned an explicit assessment of costs performed by the Congressional Budget Office in connection with a 2000 version of the legislation.[36] The benefits of greater systemic stability were assumed; the quantified assessment of costs focused on record-keeping. In no respect did the CBO consider impact of the collateral eligibility provisions on the financial system overall or any other vector of systemic risk. In light of the complicated politics relating to other elements of the bankruptcy legislation, the financial contracting provisions were enacted into law after significant delay, in 2005, as part of a consumer-focused bankruptcy package. An examination of the eight-year odyssey of the provision reflected in legislative proposals and committee hearings and reports in the 1998-2005 period produces ample evidence of a single-minded focus on one-way systemic risk implications, with the quantification of costs limited to the most banal.

Yet this seeming technical change to a piece of financial system architecture was a significant accelerant to the financial distress that broke out in fall 2008.[37] How so? First, the legislative change produced an immediate increase in mortgage-backed securitization. Now that

[34] The Business Bankruptcy Reform Act: Business Bankruptcy Issues in Review: Hearings on S. 1914 before the Subcomm. on Administrative Oversight and the Courts of the S. Comm. On the Judiciary, 105th Cong. 56 (1998) (Bond Market Ass'n statement).
[35] Id. at 38-39 (U.S. Treasury position).
[36] See Financial Contract Netting Improvement Act of 2000, Report from the Comm. on Banking and Financial Services, 106th Cong. 22 (Sept. 7, 2000).
[37] See generally Mark J. Roe, The Derivative Market's Payment Priorities as Financial Crisis Accelerator, 63 Stanford Law Review 539 (2011).

mortgage-backed securities could for sure serve as collateral for repo, they could be cheaply financed through short term credit provided by money market funds and other wholesale short term creditors. A recent paper by Srinivasan demonstrates this by showing the growth of repo and securitization immediately after the passage of BAPCPA.[38] He shows first, a consistent linear relationship between the growth of repo and the growth in structured finance; second, a growth in repo after the BAPCPA's passage in 2005; third, concentration of such growth in structured finance among the banks that regularly traded in repo and thus would find it easiest to ramp up; and fourth, an increase among those banks in their securitization activity immediately after BAPCPA.

Second, these mortgage-backed securities were structured in a way to produce the financial alchemy of transforming pools of subprime mortgages into a large fraction of securities rated AAA. These highly-rated securities were then used to collateralize the repo loans. How did this matter for the Crisis? As mortgage foreclosures accelerated in 2007 to2008 and the methodology behind mortgage-backed securitization became suspect, the value of the AAA securities used as collateral became suspect. The lenders demanded increasingly large haircuts or simply withdrew from the repo market. This rapid reduction of short term credit provision amounted to a "run," and correspondingly required financial firms rapidly to sell off assets; the two sides of the balance sheet must match, after all. The rapidly escalating asset sales were at prices that imposed huge losses not only on the selling institutions but also at other firms holding similar assets, required by mark-to-market accounting, and threatened systemic insolvency.

One engine of the Financial Crisis was a bank run originating in the shadow banking system and then spreading, principally through fire-sale externalities to the financial sector more generally.[39] The "Run on Repo" is a critical element in the financial contagion story, [40] and the way that BAPCPA brought fragile collateral into the repo system dramatically exacerbated the risk of runs.

In short, the consequence of BAPCPA was to increase the demand for securitized products (because they could be more cheaply financed) and thus to bring additional funds into already over-heated real estate markets and add additional volume to the bubble. And, because no one seemed to appreciate that the stability of the financial system depended upon the repo collateral holding its value within a pre-determined range (the "haircut") no matter what, BAPCPA produced a vector through which financial distress spread virally throughout the financial system. The parties did not consider the risk that the new collateral would produce a new form of systemic risk.

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[38] See Kandarp Srinivasan, The Securitization Flash Flood (Aug. 2017), available at https://ssrn.com/abstract=2814717.

[39] For a useful literature survey on the triggers for the crisis, see Gary Gorton and Andrew Metrick, Getting Up to Speed on the Financial Crisis: A One Weekend Guide, 50(1) Journal of Economic Literature 128 (2012).

[40] See Gary Gorton and Andrew Metrick, Securitized Banking and the run on Repo, 104(3) Journal of Financial Economics 425 (2012).

The cost-benefit analyses, formal and informal, were predicted upon the existing state of the world, not the world that resulted after adoption of the new rule. Congress of course was not required to perform a cost benefit analysis, but they seemed to think they were doing one, to produce the benefit of greater systemic stability, rather than engaging in redistribution.

The point is this: that a cost benefit analysis of the safe-harbor change the kind of rule change that the financial regulatory agencies commonly make, would have not picked up the way the change would significantly change the financial system. The challenge of financial stability is not to assess cost and benefits of the system as it presently exists but to observe the system as it changes, and to observe the effects of new rules on the system as a whole. This is the stance of Dynamic Precaution.

Conclusion

This chapter concludes where it started. The Financial Crisis was an extraordinarily costly set of events, even though it resolved somewhere in the top half of potential outcomes. That is a sobering thought. The maintenance of financial stability must therefore be an apex goal of the financial regulatory system. Because the financial system is a continuous work in progress, the right regulatory approach is Dynamic Precaution. This calls for institutions like the FSOC to play a vigorous monitoring role over the financial system as it evolves. It calls for regulators (and more so, courts) to avoid over-claiming for what can be obtained through quantification of costs and benefits.