

EIGHT

HOW WE KNOW THAT THE POLICY MESS IS MANAGED BETTER

Several years after the 2008 meltdown, a senior investment officer of one of the largest pension systems felt compelled to ask: “What if the global financial crisis is not over?” (Dear 2011). Nor was he alone in thinking that the aftermath debt crises had their roots in the meltdown (Das 2011). To see if and how a policy mess is being managed well, let’s return one last time to the financial mess and ask: What would we be looking for to show that it’s being better managed?

First, we would have started to hear more about better practices emerging in the banking and finance sector, along with differentiated scenarios for modifying or applying those practices. We would also be hearing about subsystem scales of governance and management at which these practices actually work for the better. If and when this happens, regional or subsectoral banking differences will be said to matter greatly when it comes to adapting practices on the ground (see, for example, Beattie 2009). This means we wouldn’t hear the panic rhetoric of late 2008, when senior officials said that they had all the tools they needed to manage the systemic event. As the Federal Reserve chair Ben Bernanke told us in late 2008: “I strongly believe that we now have the tools we need to respond with the necessary force” (quoted in Guha and van Duyn 2008).¹ Only at the end of his tenure as Secretary of the Treasury did Henry Paulson admit that he and others had no such tools at the start of the crisis (Guha 2008b). Only in 2010 testimony do we find another federal regulator—Sheila Bair, chair of the Federal Deposit Insurance Corporation—stating unequivocally that “regulators were wholly unprepared and ill-equipped for a systemic event that initially destroyed liquidity in the shadow banking system and subsequently spread to the largest firms throughout the financial system” (quoted in Braithwaite 2010, 4).

When it comes to managing policy messes, no tool is a tool until it has been operationally redesigned by those who have alloyed system-wide practices into prevailing practice locally (see, as an example, the LCH. Clearnet and Depository Trust and Clearing Corporation example in chapter 4). Whether such translations have become widespread since

the financial mess remains an open question. Prices generated by computer models rather than historical prices continue to be a vital part of financial services in the United States, such as mutual funds (Kaplan, Merton, and Richard 2009). Credit default swaps, notwithstanding their documented shortcomings (van Duyn 2010b), remain the basis for ranking some European nations as riskier than “top” corporations (Oakley 2010). Credit ratings agencies are still taken seriously when they threaten to lower the ratings of countries that their errors helped send into financial free fall. Now that some developed-country bonds are no longer as reliable as they were in terms of providing that “risk-free rate” against which investors benchmark other assets (Hughes 2010), pressure has been growing for alternatives—including the rates associated with those credit default swaps that helped bring finance to its knees. In such a world, headlines about how the poor and immiserated will have to depend even more on discredited financial instruments—such as “Microfinance Group in CDO Scheme” (O’Connor and Grene 2009, 24)—do little to reassure us. “Fat tail” events may drive extreme financial change; it is another thing to ensure that the tails are obese. Yet such is what is happening after years of increasing the money supply through central bank buying of government securities and other securities under prolonged just-for-now quantitative easing (see, for example, D. Mackenzie 2012).

We will know the financial mess and its aftermath are being managed better when the role of regulation is rethought. The calls for this or that regulator of systemic risk in the financial sector have been insistent (see Dombret and Tucker 2012). Yet we have seen how the greater systemic risk lies at the inter-infrastructural level where finance interconnects with other critical infrastructures, most importantly electricity and telecommunications (chapter 2). No regulators exist for such intersections, and were they to exist, their real-time regulatory challenge would be amplified by orders of magnitude. Who is to monitor the impact of electricity and telecoms on finance, and vice versa? Who is to demonstrate that the polluter-pays model from the environmental sector would be effective if applied to the financial sector—in other words, making the financial industry pay for its mistakes as a polluting company is supposed to (Labaton 2009)? It is not credible that any regulator would be as skilled in real-time pattern recognition and scenario formulation as the operators in the critical infrastructures are, when it comes to managing the unforeseen setbacks and redesigning operations due to interactions with other infrastructures.

Above I discussed the principle- versus rule-based approaches to

regulation, noting that the latter reduces the regulatory discretion permitted by the former. But when regulators operate outside their domain of competence and in the absence of practice-tolerant policies and protocols, as in the financial mess (FCIC 2011), what is going on scarcely constitutes discretion. “Discretion,” to reiterate, is a property of the domain of competence and is required when policy is out of date with respect to prevailing practice or not structured to be sufficiently sensitive to local context. When policy exists but competence cannot, then “regulation” indeed deserves to be put in quote marks. Better, then, that regulators in the financial sector refocus their efforts toward protecting the mess and reliability professionals already present or nurturing those who are emerging.

Critics counter that the real problem is that regulation is always reactively late or simply unable to prevent the determined fraudster. If that is true, why then aren’t the psychiatrists and historians in charge of regulation? After all, they thrive on taking a second look, and they are rarely surprised when people and institutions prevaricate. My point here is that no amount of preexisting legal theory or regulatory law can substitute for practices evolving across cases that now exist, or for that deep knowledge and familiarity that contextualize law and regulation in real time, case by case. This means the financial mess, like any major policy mess, will be better managed when we observe, as an analogue to real-time ecology and real-time economics, real-time regulation on its way to becoming a full-fledged profession. Some of the first signs of this happening will be when far more finance economists and MBAs start taking banking and investment supervision and inspection far more seriously (see Masters 2012a).

What do I mean by “seriously”? All too often, the reliability of financial transactions has been treated as if it can be traded off against some service attribute like the efficiency of transactions. In fact, the reliability of critical infrastructures is a state condition without which there would be no markets. Economics assumes a theory of substitutability, where goods and services have alternatives in the marketplace; reliability, on the other hand, assumes a theory of nonfungibility, where nothing can substitute for the reliability without which there would be no market infrastructure for selecting among alternatives. What, indeed, is money without the reliable institutions that secure it as a means of payment, unit of account, and store of value (Münchau 2010)? Economists object by insisting “we pay for the level of reliability we get” (as if reliability were thoroughly fungible).² But somewhere in their line of argument, the same economists also insist on the neces-

sity of “secure property rights,” when what they really mean is that a hugely reliable infrastructure of contract law, insurance, and registration must be in place and “always on” (for example, de Soto 2012, 9). As the financial crisis showed (see, for example, Hughes 2008a), if we destroy the underlying reliability of market mechanisms, we end up with financial products that have no reliably determined price. Economists and business schools may have to put this acknowledgment of the seriousness of reliability in econo-speak—think of reliability as a public good, a positive externality (like education), an insurance premium that society pays for having its critical infrastructures work, a solution to network externalities, a hurdle fee that has to be met before performance and service are provided, or some other economic formulation³—but if they take it seriously, reliability management by professionals will have a better chance of being more effective in banking and finance.

We’ll know that the financial mess has been managed better when efforts are made to rebuild a sector that can be managed and that regulators can comprehend (see Krugman 2008b). Think of the worst thing that could happen in the electricity grid: Blackouts ripple through the system to the point that the grid collapses. When this happens, grid managers have to recover the system, line by line, and the actual sequence of the process is rarely predetermined. (Indeed, the probability of failure may well be higher in restoration than during “normal operations.”) Each real-time decision—this line rather than that line—has to be thought about carefully and by teams, as a mistake could mean having to start restoring the system all over again. The same is true with the financial sector. Yet “there are few initiatives to overhaul the ‘grid’ of the financial system,” according to the chief risk officer at a major international bank (Banziger 2012).

The financial mess has been managed better if and when we learn that the sector is in fact being restored bank by bank, firm by firm. This, in turn, puts the premium on working through each recapitalization initiative, one by one. What is needed for the postfinancial crisis, according to the former chair of the U.K. Financial Services Authority, is “a plan, country by country and bank by bank, to fortify the [financial] sector” (H. Davies 2011). The reassembly will be made easier, in part, because major areas of service infrastructure have been, up to this point of writing, bypassed in the meltdown (chapter 5). Other elements will be easier to reconnect as and when they are far less opaque and brittle (on the necessity for less impenetrable language in structured securities, see D. MacKenzie 2010). The reassembly will

have to be done in light of a few basic design and policy principles, but there will be no pretense that the financial recovery depends solely or even primarily on the path of policy or on that of principle. To recast this in the terms of our framework, we are looking to reassemble a financial system that can be operationally redesigned as performance conditions change. If this occurs, it will be a slow process.⁴ In such ways, new Basel accords or banking reforms are at best the start of the process, and at worst the misdirection of policymakers and reformers who prefer us not to know if or how their messes are to be managed.

We will know the financial mess is managed when there is more recognition and acceptance that the future of financial services is now. Alan Greenspan, as we saw before, told the Financial Crisis Inquiry Commission that the next financial mess will doubtless exhibit myriad new assets and unintended consequences that cannot be foreseen (Politi and Rappeport 2010). But if the Greenspan future is the mess we are in, then to change today's mess is to change that future. To believe that something out there in a future beyond our imagination could save us is to ignore the fact that we are managing for those very resources and alternatives in the policy messes we confront today. To manage is both to allocate scarce resources and to generate more or fewer options, more or less volatility. That is the central point of real-time economics.

This leads to my final set of points. We will know the financial mess is better managed when mainstream economics recovers from the part it played in the mess.⁵ I tell my students that policy analysis is indebted to economics for a useful three-legged stool: Opportunity costs are real, trade-offs drive priorities, and price is a coordinating mechanism when opportunity costs and trade-offs are accurate. Each leg is weak, but together the stool is strong. Passing itself off as best-of-show theory, modern securitized finance has befouled each leg of that stool.⁶

First to be stained was the notion that the opportunity cost of the forgone alternative makes choice difficult. The financial mess was what happened when money was decoupled from its opportunity cost, as in all the talk about “free money” (see, for example, Price 2009). Governments turned into ATMs from which cash was withdrawn at near-zero interest rates for well-beyond-zero returns. We were told that we'd be a fool not to dance when everyone else was. But there's the rub—deciding to take our chances on the floor or sit this one out differs from choosing whether to go to the dance or do something altogether different. In the former situation, I *could* lose what others around me get; in the latter, I lose the other thing I *would* have gotten. The dance was always a gamble; no forgone alternative ever is, or there wouldn't be such a thing as an opportunity cost.⁷

Second to be soiled by mongrel financialization was the notion that trade-offs drive priorities. Opportunity costs revolve around choosing this versus that, but trade-offs are rarely only either-or; they usually also involve having to choose enough of each—enough guns and butter, because you cannot have it all. The unhinged view leading up to the financial mess, however, was: “You can never have enough money.” Here, any amount of money we have is the burning reminder that we can never have enough. Thus Canadians are derided for the very same thing they were praised for: Their prudent behavior in the financial mess has meant that they “missed out” on making more money by not buying up all those delinquent banks in the United States (see, for example, Cyran 2009). If that is true, then we end in the deepest irony, a banking and finance sector in crisis because there is simply too much money around to be managed reliably. If the point is that financial regulation can always be circumvented, is that a failure of regulation or of having more money than could ever be regulated?

The third leg of the stool, which is just as tainted as the other two, is the notion of price as coordinating mechanism. When money is unhinged from opportunity cost and trade-offs are reduced to the “priority” of never, never, never having enough money, price ceases to coordinate behavior, be it for allocation or production. If the financial mess was about anything, it was about the difficulty in pricing subprime mortgages, mortgage-backed securities, credit derivatives, credit default swaps, and other instruments. No small number of mark-to-market assets ended up illiquid and unpriceable, and, as we have seen, the opportunity cost of those illiquid assets was the very reliability of markets that had to be forgone whenever these assets were “transacted.” Or, to put this in a positive register, we should have learned from the financial mess that the statement “most markets are mostly efficient most of the time” cannot be treated as a starting principle. It is at best an emerging generalization to be based on a wide range of empirical cases that, in turn, will have to be modified for new cases.

How will we know when this three-legged stool is fit to use again in finance and banking? The answer is to look for the recoupling of opportunity costs, trade-offs, and prices to economic choice. The virtue of a levy on individual financial services transactions (for example, a surcharge or Tobin tax on major bank transactions) is not that it would fund financial recovery in the next collapse (that could indeed encourage banks to take more risks, because they know that such a fund will bail them out later). Rather, it is to give financial transactions an opportunity cost they may not have and without which there would be no moral hazard to worry about or correct.⁸

If recoupling is the focus, then we must look to those economists who are willing and able to detail a new kind of market failure hitherto largely undiscussed. The majority of economists will tell you there are four types of market failure: public goods, externalities, asymmetric information, and market power. In this book, I have spent considerable time discussing an important hybrid: the failure of efficient markets to value or price fully the reliability required for undertaking market transactions. If, for example, algorithm-based high-frequency trading strategies accelerate “flash crashes” in the very market infrastructure that those strategies help to make more efficient, then the price of maintaining this infrastructure reliably has to reflect more than the efficiencies of those trading strategies. Otherwise, *efficient* markets can become their own form of market failure. Some economists already recognize that models of efficient markets undermined the infrastructure professionals needed to ensure reliable financial markets. Using terms introduced earlier, the University of Chicago economist Raghuram Rajan concluded that “modeling that took the plumbing for granted ensured the breakdown of the plumbing” (2010, 117).

How does this actually work? If it is, as *The Financial Times* assures us, that “mark-to-market accounting is the price that banks must pay for a securitized credit system” (Lex Column 2008b), then better management includes the costs of relying on this kind of accounting. The debate over the structure of derivative clearinghouses—ranging from quasi-public utilities to for-profit companies—reflects just this concern to ensure that the full costs of “too big to fail” are priced from the outset (Grant 2010).⁹ This is also the case for the other avatar of financial efficiency—the just-on-time liquidity of overnight banking. When such overnight banking becomes the same road to the just-for-now, last-resort financing of linchpin institutions that would otherwise fail (as in the case of Bear Stearns), then the efficiency of one financial market undermines the wider financial market (see, for example, Goldstein 2008)—and without markets, what sense does it make to correct for the other four types of market failure?

Perhaps there is no better example of this fifth, hybrid type of market failure and its effects than the U.S. flash crash of May 6, 2010 (Bowley 2011; for an evaluation of the flash crash, start with Commodity Futures Trading Commission and the Securities and Exchange Commission 2010a). In this case, market transactions happened so fast and were so numerous under conditions of high-frequency trading and collocated servers (to reduce transaction times even further), that there came a point when no liquidity was left to meet proffered trans-

actions: “Indeed, even in the absence of extraordinary market events, limit order books can quickly empty and prices can crash simply due to the speed and numbers of orders flowing into the market and due to the ability to instantly cancel orders” (Commodity Futures Trading Commission and the Securities and Exchange Commission 2010b, 2). Once liquidity emptied from the market, so too went price discovery: Markets can’t clear because efficient market transactions have ensured that there is no market to clear. Increasing efficiencies, in other words, can put market design and structure at risk: “Liquidity in a high-speed world is not a given: market design and market structure must ensure that liquidity provision arises continuously in a highly fragmented, highly interconnected trading environment” (2). If such assurances are not provided—and the federal report on the flash crash recommended better pricing mechanisms as an important corrective—market efficiency and market failure are perversely and positively correlated. None of this was made any easier by the deliberate coupling of a highly volatile derivatives market to a more stable equities market; if the reliability of market infrastructure were a priority, you would have expected buffering or decoupling to have taken place instead.

An economist might counter by asserting, “*Obviously* the markets were *not* efficient or complete because *the full costs of reliability* were not internalized.” True, a great deal more can and must be done to bring reliability into the cost equation. Paul Schulman and I have spent a considerable amount of time developing indicators showing that reliability can be better reflected in the real-time price of a critical service and the job descriptions (and thus the salaries) of those doing the real-time management (Roe and Schulman 2008). However, there is a limit to what can be done along these lines. Reliability mandates on banking and finance pose nonfungible limits. There is a point after which the safe and continuous provision of a critical service cannot be traded off against cost or any other attribute of the service without undermining those very trade-offs. In fact, the flash crash demonstrates what happens when reliability is treated as fully fungible with those attributes of cost, speed, and convenience. Nor did such concerns about costly trading, software, and computer malfunctions stop with the 2010 event, worries over which continue as well (Demos 2012). After an increased number of computer glitches on the various exchanges, a well-known industry expert reported in the *New York Times*: “In the race for speed, however, some industry experts say reliability has been sacrificed.” How? “The markets basically gutted their high-cost, nonstop infrastructures for very fast, low-cost infrastructures” (Popper 2012).

Moreover—and this is a crucial point—when efficient markets work to undermine market infrastructure, we must shift the concern for moral hazard as well. The more the managers of these infrastructures keep their systems reliable under increasing demands, the more the infrastructure and managers are expected to manage ever more demands reliably—until the system in question crashes, or its elements are decoupled from the volatility. This is the dynamic described in chapter 6's five propositions. Too many people have incorrectly seen the major moral hazard as banks and investment firms becoming more risk-taking and less resilient because of easy credit and bailouts. A more fearsome moral hazard, however, lies in senior executives and officials taking predatory advantage of their organizations every time its middle managers and operators continue to be reliable in the face of their predations. That is the sure road to destroying the middle managers' capacity to be resilient and anticipatory at the same time (for more on the role of executive management failures in modern-day disasters, see Perrow 2007). We would do well to remember that the answer to weak regulation is *not* efficient markets that undermine the infrastructures for reliable markets and their regulation.

Resilience and anticipation are core to mess and reliability management in the same way that productivity is to economics, and for the same reason. Improving the resilience and anticipation skills of real-time professionals is by and large the way we improve their productivity and the management of the critical service or infrastructure in question. Although improvements in labor and capital productivity are measured in increases in output, improvements in resilience and anticipation among real-time professionals are measured in terms of sustaining the reliability, however messily realized, required for those output increases.¹⁰ That kind of productivity is important for mess and reliability managers, if only to reframe inevitable setbacks as occasions for subsequent learning and improved outputs. Productivity in real-time economics has much more to do with operational redesign by competent professionals than it does with stumbling on innovation as an unintended consequence of having been thrust into unstudied conditions. As we have seen, designers' innovation^{positive} all too readily turns out to be the managers' innovation^{negative}. After all, isn't one of the major points of the financial mess that too much innovation led to too much human and organizational error, thereby undermining productivity across multiple factors?

The ethical implications of treating resilience and anticipation as productivity are subtle but altogether visible for those who wish to see.

The priority given to the resilience and anticipation in reliably operating within the domain between system patterns and localized scenarios means that a network's sense of fairness shifts from universals at the macro level and individual morality at the micro level. Instead, it focuses on applying and modifying what are today taken to be better practices to the context in which we find ourselves with the case at hand. The French historian Pierre Rosanvallon made this point at length in *The New Social Question*:

As society gains more knowledge of its differences, a considerable change in the perception of fairness tends to be produced. . . . The increased knowledge of the differences between individuals and groups strains the bases of the social contract. If some know they will be spared some costly serious illness, will they agree to continue paying the same contributions of health insurance as those who are genetically condemned to develop that affliction? In an unpredictable universe, the essence of justice is *procedural*; it is bound up with the search for a universal rule. Our increased knowledge of inequalities and differences makes that definition of justice problematic. . . . As long as society is perceived simplistically, as structured into classes assumed to be homogeneous, the issue of justice can be formulated globally. But when that condition disappears, society appears as what it is: an unstable tangle of individuals and multiple economic, social and professional classifications. (2000, 29–30, 34)

A mess and reliability professional cannot be realistic about the tangle of such work without adapting what has been found to be fair in like situations, given that the default to totalizing universal principles or individual exceptionalism would only make the messes worse. This sense of fairness arises out of the network in which professionals find themselves confronting the morphing challenges of policy and management. Part of this is the value pluralism of having to reconcile multiple macro principles in the midst of competing trends, practices, and context-rich scenarios. To my mind, this is pluralism worth having because it actually works—thankfully without the perfect reliability that leaders promise but cannot deliver, and with more mess than some like when it comes to fairness. Why thankfully? Because if relied on too much, even the most principled theory, and not only the most unprincipled politics, will undermine mess and reliability professionals and their networks. You do not need to be a Mussolini or an Eichmann to want the trains to run on time in our political economy, nor can we expect any political theory to secure such reliability for us.

And who, one last time, is this “us”? I pointed out how the skills of

mess and reliability professionals for managing the probable (in terms of patterns and scenarios) also make them adept at identifying and assessing the possible. The “we” of this book are also the ones who work and manage their way to possibilities in the arenas in which we find ourselves. The crux of this challenge is captured in a beautiful passage by John Berger, the essayist, novelist, and painter:

The other day I saw a lorry carting blocks of stone, white in the sunlight, from the quarries on the other side of the village. On top of the blocks was a wooden box with tools in it. On top of them, carefully placed so that it should not blow away, lay a sprig of cherry blossom. In the rockface is buried the promise of dynamite: in the dynamite the promise of space: in the space grows the promise of a tree: in the core of the tree the promise of blossom. That was the relationship between the spray and the blocks of stone on the lorry. (2003, 213)

That too is the relationship we have to possibilities when we are working the rock face of mess and reliability. It is here where policy, management, and politics metamorphose under heat and pressure, and where their possibilities have to be managed. Some call this intersection of practice and possibility, hope.