REVIEW:
Legislating Instability: Adam Smith, Free Banking, and the Financial Crisis of 1772 by Tyler Beck Goodspeed

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1. INTRODUCTION

Years after the recent economic and banking crisis, policy makers and economists are still discussing how we should reform our banking systems so that they can be more resilient. It has become conventional wisdom in the post–Great Recession literature to attribute to the banking sector and its fragilities the causes and length of the economic crisis and its capacity to rapidly spread to the whole economy. This emphasis on banks has obviously led governments to lay special focus on banking reform and banking restrictions, and to adopt a severely pessimistic view regarding the inherent fragility of banking systems.

Despite the fact that Goodspeed's book does not address the current financial crisis, his historical analysis concerning the Scottish free-banking period and his novel interpretation of the Ayr (Douglas, Heron & Co.) bank crisis are a fresh contribution that has relevance to understanding the role of banks and regulation in economic crisis and where to pursue institutional reforms. Goodspeed's book is a revision of the history of banking episodes in eighteenth-century Scotland, but it has substantial contemporary relevance and invaluable insights for policy makers in regards to the perils of banking regulation, the role of interest groups in shaping reforms of the financial sector, and the fragility or resilience of alternative banking systems. Conceivably, in order to build more resilient banking systems, we should scrutinize history to find successful banking experiences and compare them institutionally with our existent ones, so that they might illuminate the path to institutional reform (or at least illuminate the dangers of ill-conceived reform).

Approximately from 1716 to 1845, Scotland's banking system was among the most dynamic, resilient, and competitive banking systems in Europe. The Scottish system effectively absorbed several economic shocks that affected the economies of Scotland and England and threatened the stability of financial markets. Scotland operated in a highly competitive and lightly regulated environment that had no central bank to act as a lender of last resort, no monopolist issuer of currency, no legal restrictions on entry, no ex ante binding limits on the number and size of banks, and finally no capital and reserve requirements (p. 7). Yet despite *the lack* of all those formal rules, governmental support, and explicit state-created institutions, the Scottish banking system was remarkably more stable and robust than the English system.

The book addresses in depth the institutional structure of Scottish banks and the wide forms of bank competition during the Scottish free-banking period, both of which helped the banks (and the system) to become more resilient than their English counterparts. It also explores in depth the regulatory environment in which banks operated, and how the 'regulatory quality' of that environment devolved due to interest groups and government involvement. More critically, it discusses the endogenous and collaborative institutional and contractual arrangements that banks generated (among themselves and with their shareholders) to attempt to endogenously and privately solve problems such as lack of a lender of last resort, volatile capital outflows, and banking crises without needing an outside agency. Indeed, the historical case reviewed could also be broadly interpreted as factual evidence of the real possibilities of robust institutional heterogeneity in banking, and how voluntary forms of decentralized self-governance, liability contracts, and polycentric structures are robust private means of efficiently governing banking matters without the need for centralizing banking services (Paniagua 2017).

Before 1765, the collapse of a bank did not entail any substantial threat to the stability of the system, mainly because no single bank acquired sufficient size, interconnectedness, and systemic importance that its failure would constitute a severe menace to counterparties and credit markets. Even if a bank had done so, the system had contractual mechanisms, such as optional clauses and unlimited liability, for mitigating systemic shocks (p. 137). The biggest threat to the Scottish system occurred during the financial crisis of 1772, in which sixteen banks failed. Goodspeed revisits this experience in detail, arguing that prior regulations and impositions from seven years earlier severely undermined banks' resilience and flexibility to deal with the crisis. The fact that Scottish free banking and the Ayr crisis occurred during the time Adam Smith was working on *The Wealth of Nations* makes this historical episode particularly remarkable. Goodspeed revises Adam Smith's arguments concerning free banking and regulation, concluding, contrary to Smith's claims, that the crisis, far from revealing the weaknesses of free banking, actually supplies important lessons on ill-conceived and ill-implemented banking reform arising when banks as interest groups engage in regulatory capture.

2. THE BOOK ITSELF

The nearly 130 years of success of the Scottish free-banking period is of particular interest, not only for the history of banking, but also to understand alternative and plausible institutional banking arrangements that could be more resilient and stable than contemporary ones based on central banks. If we are indeed interested in reforming banking systems so that we could avoid or at least ameliorate the damage of economic crisis, then we should seriously analyze all the real institutional possibilities or structural liability reforms that we have available. The case of free banking in Scotland is particularly important for us today in a post–Great Recession world, especially in understanding contemporary debates on banking reform, which type of regulations to undertake, and more broadly how sound and resilient a free-banking arrangement would be compared to a centrally controlled one. I consider this case relevant for three reasons.

First, the Scottish system has been one of the closest (if not the closest) banking systems to that proposed in the theory of free banking: "Scotland from 1716 to 1845 is widely considered by economic and financial historians to have been one of the closest ever historical approximations to 'free banking'" (p. 7). Hence understanding how the Scottish system actually functioned, and identifying its contractual and market mechanisms and how well it dealt with crisis, is a valuable way of understanding how a real (close to an ideal) free banking system could actually function.

Second, the system suffered in 1772 a financial crisis that severely threatened the system. This crisis has been considered by banking scholars an indication of how fragile a banking system would be in the absence of other institutional features such as stronger regulation, a lender of last resort, or even a central bank. Hence understanding the timing and legal context of the 1772 Ayr crisis, particularly in light of the recent drastic changes in the regulatory environment in 1765 and the political and macroeconomic context in which it occurred, would help to clarify misconceptions and doubts concerning the resilience of real free-banking systems and their vulnerabilities in the face of regulatory changes.

Finally, the third reason concerns the unique role that regulations and restrictions play—both directly and, indirectly, by interacting among themselves—in the evolution and erosion of the institutional structure of banking and finance. The Scottish experience offers a unique opportunity to identify the first- and second-order systemic and institutional effects of banking regulation, and how they can interact and unintendedly undermine other existent institutional features that are relevant to sustaining banking resilience. In addition, it sheds light on how additional and unforeseen regulatory complexity and interventions emerge from the unintended interactions among restrictions, and how that complexity is created from regulatory capture and vested interests. Particularly, it illuminates how top-down or ill-conceived and politically-led regulations can—even when well intended—*interact* among themselves, with prior existing restrictions, and with institutions, exacerbating the fragility of the entire system and bringing severe costs to society in ways that are impossible to foresee. Regulatory interventions therefore might not only have direct adverse effects, but more critically, as the case of the Ayr Bank suggests, they can have severe unexpected destabilizing interaction effects, undermining the whole institutional structure.

Thus there is a complex nonlinear relationship between politics, regulatory changes and the institutional development and fragilities that such regulations and their interactions will generate. In other words, there is vital aspect of institutional and governance structures related to their en-

dogenous changes and their evolutions, that is significantly related to how we attempt to regulate and alter their environments and legal context; either through exogenously imposed political or legislative means. In fact, Goodspeed's analysis actually demonstrates that ill-conceived and interest-group-captured regulation in concomitance with restrictions implemented in a nonlinear highly complex environment, might actually have the tendency to reinforce each other negatively, severely increasing both systemic banking fragility and its negative spill over effects into other markets in ways that are unforeseeable. Thus "adding complexity to complex systems—such as highly interconnected financial networks—can exacerbate the risk that adverse shocks are amplified and propagated throughout the system" (p. 22). Therefore, regulatory matters cannot be dissociated from institutional dynamics and changes, systemic risk, and complexity, making the art of politically-led regulation a very difficult and dangerous task. Recognizing those potential institutional erosions and fragility costs, alongside the dangers of enlarging the systemic fragility of banking systems that regulations could bring, should be vital theoretical aspects of economic regulation.

Goodspeed's central argument is "that the salient [1772] financial crisis of the Scottish free banking period, the obtrusive exception to the hypothesis of greater financial stability under free banking in Scotland, was, pace Adam Smith, made more rather than less likely by precisely those regulated or "unfree' elements of Scottish banking which the author of The Wealth of Nations promoted" (p. 8). Goodspeed notices that this conclusion should not be surprising, once we acknowledge that "the oldest, largest, and most established banks in Scotland … lobbied for … legal restrictions on banking; regulations that had the effects of raising barriers to entry, lowering competition in the provision of short-term credit, increasing the efficient scale of banking, and therefore, ultimately, amplifying the level of systemic risk" (Ibid.).

Despite these conclusions, Goodspeed clarifies that "it is not my contention that the introduction of legal restrictions into Scottish banking *caused* the 1772 crisis, but rather that they critically undermined the flexibility and resilience previously exhibited by Scottish finance, and thereby elevated the risk that adverse economic or financial shocks might metastasize into broader threats to financial stability" (Ibid., emphasis in original). The historical evidence suggests that the institutional and systemic resilience of the Scottish system drastically changed and was severely undermined during the regulatory changes of 1765–72. Despite those changes however, the system remained stable and responded relatively well in the face of such a severe global crisis.

Chapter 1, "A Very Melancholy Situation," starts with a short introduction to the historical context in which the crisis occurred. Goodspeed briefly reviews the unfolding of the 1772 crisis—in particular, the liquidity problems for Scottish bills in the London discount market, and how that affected refinancing and the rollover of short-term debt of Scottish banks. The crisis affected several banks' liquidity and soundness, but most importantly it ruined the "banking behemoth" Douglas, Heron & Co., the Ayr Bank. Goodspeed reviews how Adam Smith, during 1765 and 1772, advocated more regulation and restrictions on banks to deal with the problem. The contradiction however is that the reforms Smith advocated—mainly, a prohibition on small-denomination banknotes, a maximum legal rate of interest, and a prohibition of contingent-liability banknotes—"were already law seven years *before* the crisis of 1772. More curious still is the realization that these restrictions … were in reality the products of intense political lobbying" (p. 6, emphasis in original).

Chapter 1 also reviews how the Ayr crisis is a great example of what George Stigler designated the "theory of economic regulation"—specifically, the dynamics of regulatory capture. In the Scottish case, Goodspeed shows that we have a great example in which a government agency or a regulatory body designed and intended to serve the public interest "in fact serve[d] instead mainly to advance private concerns with concentrated interests in the regulated sector … The crisis itself presents a stark warning of the risks posed by regulatory capture, particularly in financial markets" (p. 21). Perhaps this is the most relevant argument Goodspeed gives as to why the 1772 crisis is relevant for us today, especially in the context of the international banking reforms such as Dodd-Frank among others, since it sheds light on how banking regulation and restrictions do not necessarily work in the public interest and to build resilience in our systems. In fact, quite the opposite could occur.

When regulations and restrictions are largely designed to satisfy concentrated interests, there is a substantial unperceived "institutional-fragility cost" that is shifted from the key institutional players into society, or onto the rest of the institutional structure. In other words, the dynamics of regulatory capture entail substantial concentrated monetary benefits for interest groups, at the expense of the transfer and dispersal of institutional fragility and its costs: the transmission of institutional fragility and financial risk

to the rest of the system and the enlargement of systemic risks. Hence "capturing agents are essentially incentivized to produce negative externalities … [T]hese negative externalities can be especially costly when reduced competition gives rise to systematically important financial institutions" (p. 22).

The core insight here is that, institutionally speaking, regulations and restrictions are not only not positive sum, but also, quite certainly, negative sum. Banking regulation not only may not work to satisfy the public interest, but through time it can also undermine and deeply damage the public interest and their well-being, through destroying and eroding the long-term existent institutional resilience of a given system, making it more fragile and increasing its systemic risk. This is a relevant contribution to the theory of economic regulation and institutional analysis since it suggests that the social cost of regulatory capture is quite difficult to measure in quantitative terms. Its greater cost is increasing: regulatory complexity, long-term institutional erosion, and a gradual enlargement of the systemic risk and the spill over effects of banking failures into the rest of the economy, which amounts to more than a single shift in the cost-benefit equilibrium of the system. It seems the biggest welfare cost of regulatory capture resides in its capacity to undermine through time the resilience and the welfare-enhancing properties of a system as a whole.

Chapter 2, "Beggarly Bankers," analyzes—contra Smith—the positive role that the emergence and proliferation of the so-called "beggarly bankers," or the small-scale note issuers, played in actually bringing greater credit competition, diversification of risk, and macroeconomic stability; elements that contributed to building a remarkably resilient banking system that withstood severe adverse economic shocks prior to 1765. Goodspeed reviews here the tumultuous years between 1760 and 1765, which comprehended a severe balance-of-payments crisis in 1762, and how these events and the proliferation of small issuers affected Smith's theoretical views on banking. Goodspeed also challenges Smith's convictions that this period was marked by a "small note mania" attributable to the freedom of banks to issue banknotes for sums below £1 in addition to the free use of dilatory optional clauses in banks' notes. Goodspeed finds "not only little evidence of a 'mania,' but also that the alleged banking offenses—namely, the issuance of notes in denominations bellow £1 and the adoption of optional clauses—were in fact rational and effective market responses to the very real challenges confronting the Scottish economy" (p. 30). Indeed, this chapter severely challenges the misapprehensions around the freedom to issue small notes and the use of optional clauses.

The Scottish economy was a small open and fast-growing emergent economy with a fixed exchange rate, open to large, volatile capital inflows and outflows that contributed to generating a balance-of-payments crisis and immense pressure on the financial system. Since the economy experienced large capital outflows due to international political events, the issuance of small notes was a rational endogenous response of the system to provide liquidity and credit in the face of an acute shortage of circulating media, particularly when big banks curtailed credit to attempt to ride out a real exchange rate depreciation. This 1760–65 period of relatively higher issuance of notes cannot be considered "manic" since it did not produce any marked difference in inflation rates in Scotland when compared to England (pp. 45–47). Furthermore, regarding the privately issued notes, a secondary and very dynamic market developed in which "there was certainly no shortage of willing bankers and agents to exchange them … [A] considerable ecosystem of quasi banking and clearing institutions formed around the issuance of small commercial banknotes" (p. 52).

The optional clauses, on the other hand, were rarely used and exclusively applied against "high-volume English speculators and arbitrageurs." The clauses were "essentially a private application of capital controls on large 'hot money' outflows" (p. 30). The optional clauses therefore, were useful also to allow illiquid but solvent banks to liquidate assets without precipitating fire-sale losses and to form an orderly backstop against bank panics, and emerged endogenously from the oldest and biggest Scottish banks around 1730, which were originally trying to defend themselves from hostile note raids by rival banks. In addition, they eventually developed mainly as a useful and *selective* way around banks' inabilities to respond to massive international capital outflows and external drains of specie, in turn because existing usury laws prohibited them to increase their deposit rates above 5 percent (p. 43). The optional clauses then were crucial to impose temporary and selective capital controls that "allowed time for the current account deficit to sort itself out through nominal adjustments in the bills of exchange market" (p. 128), while small-note issuers helped to avoid a contraction in the money supply and additional deflation.

These two features, though criticized by Adam Smith and banking scholars, were the product of competition and voluntary freedom of contact, and both contributed deeply to the resilience and flexibility of the system (pp. 45–47). They

also allowed the system to absorb and contain international financial shocks while reducing their capacity to metastasize into systemic banking panics and limiting their transmission to the real economy.

Chapter 3, "Procuring an Act," reviews the major "higher-order effects," or the unintended complexity-institutional effects that the 1765 restrictions played in the dynamics of banking and the stability of the overall Scottish system. This chapter traces the legislative history and origins of the 1765 Bank Act, reviews the details of regulatory capture in its formation and serves to contrast the drastic institutional effects that the new act, which was largely implemented at the insistence of pressure groups, had on the prior competitive system reviewed earlier. The act was intended to restrain the profusion of paper currency experienced during 1760–65, and it was therefore a legal response to the exaggerated views policy makers had at the time on the supposed small-note mania. The act "did indeed curtail the issuance of private banknotes … [T]hey did so at the cost of exacerbating the vulnerability of the Scottish financial system to adverse shocks" (p. 61). Unfortunately, the act "did nothing to resolve the fundamental problem … while at the same time it undermined some of the strengths that had previously enabled the Scottish banking system to absorb such volatility" (p. 129).

The act, by prohibiting both the issuance of small notes and the inclusion of optional clauses, increased the efficient scale of banking. Banks then got substantially bigger in size and lowered competition (quasi-banking or informal bank operations exited the market), having the double effect of amplifying the risk assumed by individual banks and also the system-level risk. Goodspeed notices that this result "should hardly come as a surprise … [I]ts [the act] underlying purpose was to achieve precisely what it did achieve … to raise barriers to entry and limit competition" (p. 61). He specifically finds historical and statistical evidence of substantial institutional changes as direct consequences of the act, including an increase in the average bank size, substantially lower competition and fewer bank formations, drastic shifts in the composition and riskiness of banks' assets and loan portfolios, shifts in the composition of reserves away from gold and silver toward big rivals' bank notes, and an increase in the frequency of bank failures (from less than one per decade to more than eight) (pp. 75–84). In consequence, banks were "getting bigger [riskier, more interconnected], and there were fewer of them" (p. 78). The 1765 act therefore increased the efficient scale of banking, forced the exit of small-note issuers, elevated the level of counterparty risk, and created a rare institutional environment characterized by a "credit vacuum" (due to the exit of small-note issuers) that increased the likelihood that the institutional evolution of banking would lead to the establishment of a much larger, difficult-to-oversee, and more systemically important institution, as eventually did occurred when the Ayr Bank was actually established in 1769 (p. 89).

Goodspeed exhibits here a case of regulatory capture, a substantial vested interest in the legislative process, and the extreme unintended negative consequences, or "higher-order effects," of legal restrictions given the complexity and opacity of banking and financial markets. This case illustrates how different restrictions might actually reinforce each other unpredictably and undesirably, producing nonlinear impacts on banks' size, counterparty and systemic risk, and institutional fragility. Here he finds that the restrictions and limitations on Scottish banking enacted before 1772 "elevated the level of systemic risk in Scottish financial markets," concluding that "attempts to regulate specific categories of financial activity can therefore generate not simply offsetting changes in bank behavior, but changes that interact in often unpredictable ways with existing institutions, as well as with unanticipated changes in economic circumstances" (p. 138).

In chapter 4, "Prodigals and Projectors," Goodspeed addresses the crucial role that unlimited legal liability of shareholders in Scottish banks played in increasing systemic stability of the banking system and in securing a rapid recovery after 1772. He also convincingly argues that it was actually the unlimited liability of banks' partners that worked as an efficient market-based lender of last resort that avoided disrupting credit markets. Despite the regulatory changes explored in chapter 3 that severely damaged the overall institutional structure and resilience inherent in the Scottish system, Goodspeed recognizes that "Scottish banking nonetheless retained much of its resilience" (p. 25). This fact is particularly relevant since the restrictions on small-note issuance and optional clauses had a significant negative effect in lowering competition in Scottish credit markets. Nevertheless, Goodspeed sheds new light on how resilient the Scottish banking system remained, mainly due to unlimited shareholder liability, appropriate rules for rapidly sequestering shareholders' assets and providing for their equitable distribution among creditors, and robust copartnery agreements (p. 100).

Setting aside the litigation among the Ayr Bank's unlimitedly liable shareholders, the creditors and depositors of the bank were fully restituted between 1774 and 1786 through

the issuance of tradable eight-year, coupon-bearing bonds that were also secured by the Ayr shareholders' personal assets and wealth (p. 113). With that mechanism, the Ayr Bank was converted into a sort of "bad bank" whose sole function was to slowly work off its toxic assets and gradually pay its creditors, while the assets and property of the bank's owners functioned as a financial backstop. This particular market-based contractual solution to reassure, pay, and protect creditors is a valuable example of how a decentralized free-banking system could provide credible, organized, and legally enforceable private solutions to liquidations and bank failures.

This case illustrates how—even if a big bank fails in a free-banking environment, which is as plausible an outcome as in any other banking system—there are still several liability regimes and financial mechanisms to provide credibility and security to creditors and mitigate counterparty risk through endogenous and voluntary forms of contracting equity bail-ins. These forms of equity bail-ins have the positive effect of "unfreezing" and restoring calm and transparency to the credit and interbank lending systems, diminishing counterparty risk. They mitigate financial shocks that otherwise could have spread and affected the real economy, *while simultaneously* allowing mismanaged banks to deservedly fail, in turn discouraging long-term "too big to fail" problems and moral hazard. Furthermore, the issuance of tradable bonds backed by the Ayr Bank enabled all its counterparties to quickly resume lending and discounting bills after 1773, as these bonds were used by the remaining banks as collateral for loans (p. 112).

Hence through unlimited liability of banks' shareholders and the issuance of bonds to creditors linked to those shareholders' assets, the Scottish system had a built-in private contractual mechanism to restore and unfreeze credit markets whenever a banking crisis occurred. Through an expedient legal process of transparent, publicly advertised, and predictable sequestration and equitable distribution of the banks' and owners' liquidated assets, the system mitigated widespread bank panics and fire-sale liquidations (pp. 100–102).

The 1772 crisis was, no doubt, severe. However, comparatively speaking and unlike the Great Recession, most of the social and economic losses and distress eventually ended up being borne solely by the owners and directors of the bankrupted banks themselves, which had done, after all, a negligent job in securing sound banking practices, respecting the principles of copartnery, and enforcing managerial rules (pp. 117–21). Simultaneously and positively, by "bailing in" and making responsible and accountable the bank owners and directors for the misbegotten bank behavior, the system also protected note holders, depositors, and creditors and arrested the crisis and facilitated a rapid credit and economic recovery.

Goodspeed shows that the unlimited liability of shareholders of the bankrupt banks essentially served the homologous role of a private decentralized lender of last resort since the sequestration of shareholders' personal assets "bailed them in" for more than their subscribed capital. Moreover, even if shareholders transferred their shares, the partners still remained indefinitely liable for all debts incurred during their ownership (p. 116). This form of voluntarily contracted lender of last resort, being market based (apolitical) and free of interest groups, might actually be a more institutionally robust alternative financial mechanism to provide stability and liquidity compared to a lender of last resort as represented by a government agency bailing out banks by socializing losses and using taxpayers' money. A key difference between the Scottish lender of last resort and its more common form today resides in the fact that banks were indeed allowed to fail, and the cost of bankruptcy was borne by the banks themselves without inflicting losses on the rest of society. This should invite us to reflect more critically on how we allocate financial liability today (p. 139).

These properties allowed the Scottish system to recover quickly and to avoid a severe credit contraction that would have affected the rest of the economy. Indeed, the recovery of the Scottish economy after the Ayr collapse is particularly telling concerning the comparative macroeconomic recovery effects of alternative financial systems and different liability regimes. During its collapse, the Ayr Bank was allowed to issue transferable bonds to its creditors in order to fully restitute its claims. The bond issue also allowed the bank to satisfy through time the creditors while providing an orderly liquidation of the company's assets and those of its partners. From that time (1773–74), credit markets thawed and the Scottish economy rebounded sharply (p. 111).

This historical case suggests that systems that possess sound, incentive-aligned, and market-based mechanisms for liquidating banks, in addition to "liability regimes that (unlike static, technical rules) *automatically* generate voluntary contracted, *countercyclical* equity bail-ins, may in fact challenge Reinhart and Rogoff's conclusion that deep financial crises necessarily entail long, slow economic recovery" (p. 26, emphasis in original).

This point is particularly relevant today for diagnosing and understanding the slow and long recovery suffered by the United States. Whereas there might be other factors affecting the recovery, we have to acknowledge that a significant part of the explanation comes from the substantial damage that the banking system did to credit markets and to financial intermediation (Reinhart and Rogoff 2009). However, if we take Goodspeed's insights seriously, the conclusions drawn by Reinhart and Rogoff (2009) in regards to the unavoidable "inherent drag" imposed on recoveries by banking crises have to be *institutionally contextualized*. The Scottish experience suggests that not all banking systems need to impose a severe, long, and slow recovery whenever a banking crisis occur. Institutional context, incentives for shareholders and bank managers, and the rules of banking liability matter considerably in determining the severity of and recovery from banking crisis. Painful and slow economic recoveries are not inherent, unavoidable outcomes of any banking systems failing or inherent maladies of capitalistic economies. They rather seem to be an institutionally conditioned outcome of fragile, inefficient, and overly (yet inadequately) regulated banking systems.

In chapter 5, "Upon Daedalian Wings," Goodspeed acknowledges that the reforms and the regulatory changes lobbied for and implemented in 1765 were not simply and entirely an outcome of anticompetitive rent seeking or regulatory capture on behalf of Scotland's biggest banks, "and ought therefore to caution us against too simple a conception of regulatory capture" (p. 23). Goodspeed acknowledges that the act was partly a genuine attempt of Scotland's largest banks "to impose order on a highly difficult and poorly understood macroeconomic situation, an effort that, from their perspectives, was complicated by unrestricted entry of smaller banks and notes issuers" (p. 137). Nevertheless, those impulses for reform were—due to the complexity of the problem in a context of multifaceted banking regulation—ill directed. They led to a superficial interpretation and misdiagnosis of the problem since there was a general confusion in regards to the true sources of Scotland's complicated troubles.

The 1765 legislation interacted severely and negatively with the existent usury restrictions, affecting the institutional evolution of banking and severely contributing to the Ayr Bank's formation, massive size, risky insider-lending practices, lack of managerial accountability, and eventual demise (p. 123). The act did not solve the perennial problem of the balance of payments, but furthermore it "increased the likelihood that future financial shocks would be more disruptive" (p. 132). By increasing the average size of banks, it also undermined in part the benefits of unlimited liability in effectively monitoring management, thus making lack of managerial accountability severely problematic.

Finally, Goodspeed interprets the lessons from the 1772 crisis and the institutional evolution and demise of the Ayr Bank as ways to think more thoroughly about "the potential implications of particular types of regulatory change and institutional arrangements in financial markets" (p. 137). This case is an illustrative example of how banking practices, systemic risk, and management oversight are severely shaped, limited, and at times undermined by the constitutional context and complex legal system in which banks operate (p. 142; see also Paniagua 2017). With the Great Recession in mind, Goodspeed considers the Scottish experience as "a cautionary tale of the risks of rushing to regulate *in the middle of* an ongoing financial crisis and *before* the causes of that crisis are sufficiently understood" (p. 24, emphasis in original). It seems that today we have not taken that cautionary tale seriously, once again rushing to regulate banking without yet understanding the origins of the crisis. Hence perhaps today we are adding further complexity and planting the regulatory seeds that will make the next crisis not only more likely, but more severe.

3. CONCLUSIONS FOR AN ANTIFRAGILE RESEARCH AGENDA

As suggested, the Scottish system and free banking in general, possessed institutional and learning properties that greatly resemble systems that Nassim Taleb has designated antifragile. In other words, free banking possesses incentive and competitive structures, feedback mechanisms, and institutional properties that allow the system to become more robust from macroeconomic shocks (Paniagua 2017). It also has the discipline of markets and lacks bailout policies, which aligns the incentives of individuals in the system and incentivizes private bankers and customers to improve their behavior and develop market and contractual mechanisms based on past experiences. These incentives and virtuous institutional properties encourage the system as a whole to evolve, learn, and gain from economic stressors.

As evidenced throughout Goodspeed's book, Scottish banking certainly resembled an antifragile system. The notion of antifragility resonates also with the concepts of institutional robustness and with polycentricity in political economy (Paniagua 2017). It would be certainly noteworthy to undertake an antifragile research agenda to develop

a framework of institutional analysis that incorporates all three concepts in order to analyze systemic risk and the macrostability properties inherent in different banking systems.

Evidence suggests that free-banking regimes possess a great degree of antifragility. In contrast to Goodspeed's historical case, contemporary societies have followed an alternative approach that, in fact, has driven us ever further away from antifragility into severe and ever-growing systemic fragility. Now that we are reflecting on the Great Recession, and looking for ways to fix our banking maladies, perhaps we should take a closer look at what banking history might tell us concerning the dangers of legislative reforms, complexity, and the alternative, robust institutional structures that we should consider more seriously.[2]

NOTES

1 Indeed, of the sixteen banks that failed in 1772, only three failed to pay their creditors in full. However, their biggest creditor was actually the Ayr Bank, meaning that the losses were ultimately borne by the shareholders of the Ayr (ibid., 98). The other thirteen banks, in fact, transparently and in an orderly manner settled their debts in full, with stable expectations and confidence in the security and wealth of their proprietors to render them able to pay and be liable for more than enough to cover the liabilities.

2 I am grateful to Harry David for editing assistance.

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