The case for private administration of deposit guarantee schemes

Bruno Meyerhof Salama¹ · Vicente P. Braga²

Accepted: 12 December 2021 / Published online: 30 December 2021
© The Author(s) 2021

Abstract

We make the case that the responsibility for appointing board members in Deposit Guarantee Schemes (DGS) for commercial banks should be entrusted to the industry. In doing so, we challenge the position adopted by the International Monetary Fund, which has proposed public DGSs as the best practice. We lay out the comparative advantages of private over public DGS administration, and contend that the role of the government should in principle be limited to regulating DGSs specifically and financial markets in general. We conclude that the current worldwide trend towards greater involvement of government in financial regulation should not be extended to the administration of DGSs.

Keywords Deposit insurance · Deposit guarantee scheme · Financial regulation · Management

JEL Classification K20 · K22 · K23 · K33

Introduction

Almost every country now has an entity responsible for providing explicit deposit insurance.¹ The basic role of these entities is to discourage contagious bank runs by insuring the savings of ordinary depositors, thus avoiding panics. Furthermore, in many jurisdictions deposit insurers carry out

banking supervision and oversight, and sometimes perform delegated public policy functions. Because of that, it is now standard to speak of “deposit insurance schemes” (DIS) or “deposit guaranty schemes” (or DGSs), rather than simply of “deposit insurers”. In this paper, we employ the broadest of the terminologies, DGS, and in using it we are referring specifically to DGSs focused on commercial banks.

Most international organizations with a say on best practices in financial regulation are neutral on whether DGSs should be run by the government, the industry, or by a hybrid system. Such is the case of the International Association of Deposit Insurers (IADI), the Bank of International Settlements (BIS), the European Union, Association of Supervisors of Banks of the Americas (ASBA), the European Forum of Deposit Insurers (EFDI) and the Financial Stability Board (FSB). However, the International Monetary Fund (IMF) has taken the lead in proposing public administration as the form of best practice.

Specifically, the IMF position is that, while bank representatives should not be on the board, neither should government officials [1]. Thus, the IMF has prescribed for DGSs worldwide the model of independent agencies where, to borrow from a famous quote, management is “neither directly elected by the people, nor directly managed by elected

A previous version of this article was presented by the first author to the Monetary and Capital Markets Department of the International Monetary Fund (IMF) in Washington DC on March 6, 2017 and at the Comparative Corporate Governance Distinguished Lecture Series at Fordham Law School in New York on March 8, 2017. We are grateful for comments and suggestions presented by the participants in these presentations, especially to Jefferson Alvares, Richard Carnell, and Martin Gelter. The authors would also like to thank Giuseppe Boccuzzi, Thierry Dissaux, David Hoelscher, Andre Loes, Bruno Lund, Lucas Metzger, Danilo Palermo and Rafif Yezza for helpful comments. All errors are our own.

✉ Bruno Meyerhof Salama
salama@berkeley.edu
Vicente P. Braga
vicentepmb@gmail.com

¹ UC Berkeley Law School, Bruno Meyerhof Salama, 853 Colusa Ave, Berkeley, CA 94707, USA

² Focaccia Amaral Law Firm in São Paulo, Rua Gomes de Carvalho, 1507, 4th floor, Vila Olímpia, São Paulo, SP 04547-005, Brazil

¹ According to the International Association of Deposit Insurers—IADI—on April 2020, 143 countries had established deposit insurance schemes, while 13 others were in the process of establishing one.

officials” [2, 3],² As is plain to see, this is also the model that distinctively characterizes several American independent agencies, and the Federal Deposit Insurance Committee (FDIC) in particular. In large part because of the influence of IMF-supported reform programs, public administration along these lines is now increasingly the dominant trait internationally [4].

The IMF endorsement of public administration, which has been in place for over twenty years, remains unchallenged so far. This is puzzling. The initial wave of creation of DGSs in larger economies in the post-WWII era was a mix of private and public models, with no evidence that the latter performed better than the former. Quite on the contrary, the economic literature on the topic, albeit scant, points out to a positive correlation between private administration and financial stability. Moreover, there are several anecdotes and case studies about the performance of DGSs in different countries during the 2008 crisis showing a number of success stories of privately managed DGSs. One is therefore left with the impression that the IMF’s push for public administration of DGSs, both before and after the 2008 crisis, is grounded more on preference than on a meticulous consideration of the available institutional alternatives.

We develop the argument that private administration should in principle be regarded as superior to public. The simplicity of this statement hides its complexity. In particular, the distinction between public and private administration should not conceal the existence of intermediary structures that borrow from each polar model. For instance, a DGS can be incorporated as a private entity but the government might have powers to appoint some or part of its officers or directors. This is common, and has led to situations where there is a parity of forces between the industry and the government within the DGS’ governance. To illustrate, in a 2017 IADI Survey discussed later in this article,³ Lebanon’s *Institut National de Garantie des Depots* and Peru’s *Fondo de Seguro de Depósitos* identify their administration as neither public nor private, but as “shared” instead.

Variations of this kind explain why the IADI breaks down DGSs not into public and private, but into a more nuanced taxonomy (namely, “government legislated and administered”, “government legislated and privately administered”, “privately established and administered”, “central bank administrated” or “other”). The problem is that even this richer taxonomy falls short of eliminating ambiguities. For instance, in that same 2017 IADI Survey, the Deposit Insurance Corporation of Japan (DICJ) self-identified as “other”—despite informing in its website that its high-level management is entirely government appointed. At

the same time, the United Kingdom’s Financial Services Compensation Scheme (FSCS) self-identified as “government legislated and privately administered”, despite being an independent agency with management appointed by the regulator.⁴

Thus, what we are advocating here has to be refined. We are not arguing that DGSs should be “purely” private, in the sense of being altogether freed from regulation or from any other form of government interference. Our point is more narrow, but hopefully more relevant, and boils down to the contention that the management of DGSs should preferably be appointed by the industry while being subjected to government regulation. When we talk about private DGS, this is what we mean. We also acknowledge that local considerations can tilt the balance in favor of different kinds of management structures, as is proper to any conception of best-practices like the one devised herein. Accordingly, this article can also be read as a call for the IMF and other multilateral institutions to reassess their best-practices guidelines, which we deem misguided with respect to the specific question of appointment of managers in DGSs. We start with a literature review and then move to detailing the case for private administration of DGSs.

Literature review

International regulators and standard setters

The governance of DGS is typically addressed from two complementary perspectives: that of the financial directives imposed by regulators, and that of the market discipline from depositors and borrowers. The study of the internal governance of DGS receives considerably less attention. As remarked by Djurdjica Ognjenovic, one of the few authors to devote a full book to the study of DGSs, “the available published literature on deposit insurance doesn’t research the topic of institutional arrangements in respect of recommendations” [6]. Indeed, the most we find is a recommendation of a general nature such as for example those prescribing that governing body members, senior officers, and employees be subject to rules that minimize conflicts of interest and unethical behavior [7].

The IADI best-practices recommendations are representative of the generality with which questions of corporate structures tend to be assessed. For instance, a 2009 report recommended that the DGSs hold “(1) a higher authority from which the deposit insurer receives its mandate or other authority (e.g., legislature, ministry or treasury department, industry association) and to which it is accountable; (2) the

² See [2]. See also [3].

³ See item [5], *infra*.

⁴ Financial Services and Markets Act 2000, c. 8, § 212 (U.K.).

presence of a governing body (e.g., board of directors or supervisory board); and (3) a management team” [7].⁵ The same report then proceeds with the observation that “irrespective of the deposit insurer’s structure and whether it is administered publicly or privately, the mandate and responsibilities of a deposit insurance system should be clearly defined” [7].⁶ These guidelines suggest that for the IADI private administration is no less acceptable than public.

Most other multilateral institutions share the same stance. For example, in 2011 the FSB launched a series of peer reviews of deposit insurance systems within its member jurisdictions—which are, roughly, developed countries and members of the G20. In these reviews, just like in other FSB publications, one searches in vain for directives on management structures. The closest we get is when, in dealing with privately administered DGS that have an expanded mandate, there is a discussion about challenges for information sharing and cooperation with bank supervisors and resolution authorities [8]. But this difficulty is never presented as an impediment for private administration. Indeed, in the FSB peer reviews, we learn a great deal about the operation of different national DGSs, including how they were tested during the events that followed the 2008 crisis and how they were reformed in its aftermath [9],⁷ but we find no hint of public superiority [10].

The Bank of International Settlements (BIS) follows a similar path. Through the Basle Committee on Banking Supervision, the BIS specifically discussed the problem of information sharing between private DGSs and public supervisors, never to frame it as posing an insurmountable challenge [11]. On the contrary, its influential *Core Principles for Effective Deposit Insurance Systems*, published in cooperation with IADI, expressly recognizes, and in three different passages, the possibility of private administration—and again, with no sign of disfavor [12].⁸

That same approach is shared by the Association of Supervisors of Banks of the Americas (ASBA) [13]⁹ and the European Forum of Deposit Insurers (EFDI). Finally, and of great importance, the European Union has a recent Directive determining that both kinds of DGS administration can be considered a “designated authority” [14].¹⁰ Thus, With the exception of the IMF, the message of supra-national regulators is that DGS governance is important and should be carefully structured to minimize conflicts and undermine

perverse incentives, but with no formal endorsement of a specific corporate model.

The international monetary fund

In a publication of 1999 titled “Deposit Insurance: A Survey of Actual and Best Practices,” the IMF explicitly endorsed public DGS administration along the lines of the American FDIC. The report proposed that the chairman and the majority of the DGS board should have “no current ties to the banking industry” so “bankers should not be on the board” [15]. Besides that, the endorsed type of public administration would be one where “government members should not dominate the board by constituting the majority of its members or by holding the position of chairman” [15].

The justification offered by the IMF is brief. As argued, a departure from the prescribed best practice of public administration through independent agencies would be prone to “political interference and lack of accountability” [15].¹¹ The grounds for such malaise, the report suggests, would be found in the problem of “political capture” [15].¹² Yet, how capture plays out in DGSs is only addressed in passing [15].¹³ Furthermore, not a word is said about the tradeoffs or possible disadvantages of public administration, or about the overall successful experiences of private DGSs in places such as Germany, France, Switzerland and Brazil. The IMF support to public administration of DGS also lacks a discussion about the challenges for replicating the FDIC model in less developed countries, which are many [16–20].

The 1999 IMF report does cross-reference some previous publications that elaborate on the mode of DGS administration, but in them not much is said in support of the independent-agency model. For instance, a pioneer 1995 IMF survey on deposit insurance worldwide explained that privately administered DGSs “puts part of the burden of bank failures on banks themselves and, therefore, forces them to regulate, supervise, and examine themselves” [21].¹⁴ To be sure, there are other IMF publications emphasizing general advantages of independent agencies, but their applicability to the discussions at hand is limited in that they do not focus specifically on deposit insurance [22–24].¹⁵

⁵ [7] at 6.

⁶ [7] at 7.

⁷ For a discussion of reforms undertaken in response to the 2008 crisis, see e.g., [9].

⁸ See [12].

⁹ See, e.g., [13].

¹⁰ See [14].

¹¹ [15] 9.

¹² [15] 7.

¹³ [15] 7.

¹⁴ [21] The report adds the caveat that a privately administered DGS “would require government assistance if the resolution cost was so high as to affect the entire system” so “it could simply some form of implicit guarantee”. This observation however does not necessarily imply a disadvantage of private administration.

¹⁵ See [22–24].

Other policy analysts

The support for the independent-agency model hardly finds any backing in the academic literature. This was true in 1999 when the IMF report was produced, and (with few exceptions we address below) remains true today. A noticeable defense of private DGSs has been articulated over the years by Asli Demirgüç-Kunt, who currently serves as Chief Economist of the Europe and Central Asia Region of the World Bank: her 2002 article with Enrica Detragiache concluded that the adverse impact of deposit insurance in bank stability tends to be stronger when the DGS is run by the government rather than by the private sector [25]; and her 2004 article with Harry Huizinga showed cross-country evidence that joint or private administration of DGSs tends to improve market discipline [26].

Subsequently, Demirgüç-Kunt's 2008 book coauthored with Edward Kane and Luc Laeven concluded that public-private partnerships establish checks and balances that improve management [27]. Later, in 2014, Demirgüç-Kunt, Kane and Laeven conducted a comprehensive reassessment of deposit insurance after the 2008 crisis in the update of the World Bank Deposit Insurance Database [28]. They documented some risks concerning the operation of DGS, especially the fact that "coverage of deposit insurance remains above pre-crisis levels, raising concerns about implicit coverage and moral hazard going forward", but there is no explicit or suggested change of heart concerning private administration superiority.

Earlier academic works had also defended private administration of DGSs. In the 1980s, Charles Calomiris had argued that the American FDIC allows for more moral hazard and less interbank discipline in the United States than the states-based, private DGSs that preceded it [29, 30]. A similar point was made by Bert Ely, who also defended the possibility of instilling competition between different deposit insurers to foster efficiency [31]. Later, Thorsten Beck published a World Bank paper analyzing the German experience with private DGSs and concluded that privately managed and funded deposit insurance schemes can improve banking sector stability and serve as the first line of defense to ensure financial stability when equipped with the right incentive structure and a certain degree of supervisory and regulatory power [32]. More recently, Hogan and Johnson have argued that the benefit of fewer bank runs provided by public administration of DGSs is far outweighed by the ensuing cost of moral hazard [33].

Naturally, there is also a well-established literature proposing a central role for independent agencies within financial regulation. The cornerstone of this literature is that independent government agencies *a la americana* uniquely permit the recruitment of technical experts while insulating them from the electoral pressures that affect politicians and

the pursuit of short-term profit by the regulated industry [34–36]. The adoption of independent agencies is also justified as granting policy stability [37, 38],¹⁶ which is sometimes deemed to be the natural upshot of technical expertise [39, 40]. This literature is however largely US-centered—probably because, as noted by Stavros Gadinis, independent agencies have long been “the dominant paradigm in the U.S. financial regulatory apparatus” [41].¹⁷ Conversely, the embracement of independent agencies outside of the United States is a much more recent phenomenon [22].¹⁸

Moreover, there is literature supporting the endorsement of public administration, as some policy analysts claim that that private deposit insurers: would not be aligned with public policy goals and would not be well equipped to recover losses [42]; are less able to adequately perform a resolution role because they lack the proper authority and would have problems defining resolution methods [43]; or would also face problems in cooperating with authorities and cause regulatory pro-cyclicality [44]. Concerns of that sort seem to motivate and are sometimes explicitly invoked by national public DGSs [45].¹⁹ But viewed as a whole, the existing literature suggests that there is more support for public DGS administration than justifications for it.

Flaws in the case against private administration

The rejection of private administration is comprised of a variety of arguments spread out in the literature that can be summarized in six propositions. Accordingly, private administration (a) reduces the credibility of DGSs, (b) is only compatible with DGSs that have a narrow mandate, (c) harms cooperation with regulators, (d) slows implementation of solutions, (e) facilitates capture by the industry, and (f) reduces DGSs' access to information held by regulators. This section lays out the flaws in each of these contentions.

Damaged credibility of the guarantee

A common critique is that private administration reduces the credibility of the guarantee. Given the government's ability to tax and print money, the logic goes, the credibility of banking insurance rises as governmental involvement with DGS increases. A reduction of government involvement therefore harms the DGS's ability to credibly signal its

¹⁶ [37] highlight the concern with stability during the creation of the Federal Reserve and the Federal Trade Commission; [38].

¹⁷ For an overview, see [41].

¹⁸ See Marc Quintyn et al. [22].

¹⁹ See e.g. [45].

capacity to cover losses ensuing from bank failures. As put by John Armour and his co-authors, “depositors will need to be confident that the insurance scheme will be able to meet demands for payments when they arise [...] but faced with the simultaneous failure of many banks in a financial crisis, it may be impossible for a private or mutual scheme organized by banks themselves to be able to meet all the claims on its funds [so] concerns about the consequences of bank failures will remain” [46]. For Bradley and Craig “it is doubtful that depositors would continue to have confidence in a depleted or weakened insurance fund unless the U.S. Treasury stood behind the deposit guarantee” [42].²⁰ A similar rationale can be extracted by an IMF staff paper regarding a framework for financial stability, in the sense that a DGS should have “close relations with the lender of last resort and the supervisor” and in a systemic crisis should “obtain government backing” [47].

The issue of credibility can be broken down into two separate concerns. On the one hand, there is fear that the industry will push for suboptimal levels of fund capitalization through low levels of contributions. As put by Bradley and Craig, the question is “whether enough capital is available to underwrite private deposit systems.” In practice, this concern tends to be overblown because it can be quite easily curbed with legislation. The existence of a DGS, however administered, should not by itself justify the leniency much less the elimination of other regulatory bodies that continuously monitor not only the banks but also the DGS itself [48].²¹ Private management of the DGS does not prevent the government from legislating the amount, percentage and conditions for contributions by the industry. As such, regulation can set a target fund that can also be calibrated with existing risk models.

Also, the existence of public administration does not by itself guarantee that funding will be adequate. Even the American FDIC has faced situations where its net worth became negative: in the early 1990s decade, during the so-called Savings & Loans Crisis, as well as more recently during the subprime crisis of 2007–08, because its target level had been set too low [49]. To be fair, the FDIC was not the only DGS to go under water. An IADI survey showed that by the end of 2009 four other DGSs reported deficits in their balance sheets: the *Korea Deposit Insurance Corporation*, the Japanese DICJ, the *Taiwan Banking Financial Deposit Insurance Fund*, and the United Kingdom FSCS [50]. Noticeably, all of these DGSs were public administered. As explained by Admati and Hellwig, the FDIC went short of funds when default rates became unexpectedly high

because it calibrated funding based on average default rates [51]. This is not a wrong approach per se—deposit insurers should not be expected to deal with systemic crises, as the cost of accumulating sufficient resources would probably exceed the potential benefits [52]. The point, however, is that insufficiencies of funds occur regardless of whether a DGS is managed publicly or privately.

An examination of the available data shows that target funding normally ranges between 1–5 per cent of existing demand deposits, and this can be insufficient to face a crisis of big magnitude [53]. The bottom line is that, to be able to ensure depositors that their funds are protected during systemic events, deposit insurers—whether publicly or privately managed—must have adequate backstop funding mechanisms.

The main question, therefore, is not whether a private DGS will be better able to set the optimal fund’s reserves: the government can easily fix this problem through regulation (which we do not oppose), and in any case a public administration is no antidote against poorly set reserve levels. The main question has to do with whether the private DGS can access emergency funding. And here, again, private administration does not necessarily create an impairment.

Some places such as Hong Kong have legislated standby funding that DGSs can tap into as needed [53]. Having an emergency funding arrangement in place is in fact a best practice prescribed by the IADI [54], as requesting additional contributions from the industry in the middle of a crisis may backfire [55]. Alternatively, some countries designate extra funding on an ad hoc basis, as was pervasive during the 2007–08 crisis [56].²² For example, to raise additional funds the FDIC imposed a special one-time deposit insurance assessment of 5 basis points payable in September of 2009, and the Korea Deposit Insurance Corporation raised the premium rate by 5 basis points. While these two were public DGS, the broader point is that neither the establishment of an emergency funding arrangement, nor the implementation of ad hoc solutions, are impaired by the DGS management being private.

It is true that in many countries it may be more challenging to set up a public backstop funding line to a privately managed DGS, and these need to be overcome for a private DGS to work properly. There are a few measures that may be adopted to that end. The first one is to recognize—preferably in the legislation—that, although privately managed, a DGS exercises a public function and protects a public good—financial stability. The second one is to have proper regulation and oversight over the DGS—ideally, rules must be in place to ensure that the managers of the private DGS pass a fit-and-proper test, to ensure that contributions collected

²⁰ Bradley and Craig [42] at 29–30.

²¹ See [48], on how additional prudential regulation tools can help solve the problem of risk shifting related to deposit insurance.

²² [56] at 42–43.

from banks are set at adequate levels to ensure the DGS achieves its target-fund ratio within a reasonable period, and to ensure that the DGS has adequate policies to collect information from member institutions and be prepared to effectively payout depositors when needed. And the third measure is to have the backstop funding line specified in the legislation, with provisions ensuring that Treasury has adequate rights to collateral to guarantee the repayment of the amounts lent to the DGS, and possibly the right of a more intrusive oversight in the DGS for as long as amounts are outstanding.

It is important to understand that a DGS is in a very peculiar position when it borrows, because it is funded by contributions of the whole industry. In that sense, no matter how severe the crisis and how many banks are affected, it is reasonable to expect that when the crisis is over some financial institutions will be in business (surviving or newly incorporated ones). So, given a sufficiently long horizon, any deposit insurer—be it privately or publicly managed—will be able to resume the collection of contributions and repay whatever amounts it had to borrow.

Finally, there is the political concern: it may be argued that a backstop funding line to a private DGS may be perceived by the population as using taxpayer money to “bail-out the bankers”. This, however, is a matter of framing that can be addressed with proper communication. The message can as well be framed as using the taxpayers’ funds to protect depositors (rather than bankers) in a manner which is much less risky than the usual bail-out approach, as they will be repaid by the industry as a whole and not by a single institution.

In view of the foregoing, while we recognize that establishing a public backstop funding line may present a few challenges, these are not unsurmountable and may be addressed or at least significantly mitigated. As a final word, it is important to highlight that setting up backstop funding lines to public deposit insurers is also no easy task, often requiring significant adaptations in the budget legislation.

Incompatibility with broad mandates

Another objection leveled against private administration is that it is only compatible with DGSs that operate with classic “paybox” mandates. To see why, consider that in recent times many DGSs have expanded their mandates to incorporate additional tasks such as the provision of financial support in resolution (“paybox plus”), and devising and implementing loss and risk minimization strategies. As argued for example by Dijmarescu [44]²³ and Kerlin [43],²⁴ a number

of circumstances would prevent a privately managed DGS from developing these politically and technically challenging activities. Chiefly among them would be difficulties in cooperating with the government, the lack of proper information for acting adequately, and absence of legal authority.

As it turns out, these concerns do not seem to play out like that. Data available in a IADI 2017 survey shows that privately administered DGSs currently fulfill every type of mandate, from narrower to broader [5].²⁵ In fact, more than half of the existing privately administered DGSs have broad mandates, that is, mandates that contain responsibilities beyond a simple paybox. There are also four privately administered DGSs that act as loss minimizers which is a particularly broad kind of mandate, namely France’s *Fonds de Garantie des Dépôts et de Résolution* (FGDR), Italy’s *Fondo Interbancario di Tutela dei Depositi* (FITD) [57],²⁶ Germany’s *Compensation Scheme of German Banks / Entschädigungseinrichtung deutscher Banken GmbH* (EdB)²⁷ and Uruguay’s *Corporación de Protección del Ahorro Bancario*—COPAB.

Moreover, Germany’s *Deposit Protection Fund of German Banks*—*Association of German Banks* possesses the broadest mandate of all, that of risk minimizer, which includes resolution and oversight powers [32].²⁸ As can be seen, there is no correlation between the extent of the legal mandate and the management structure. On the contrary, what we find is a similar distribution between different kinds of mandates within the large group of public DGSs and the smaller one of private DGSs.

To be fair, the situation of the German *Deposit Protection Fund of German Banks*—*Association of German Banks* poses a challenge to other countries in terms of it being replicable. Indeed, it is reasonable to assume that in many jurisdictions the powers to, for example, liquidate a bank, may be deemed as inuring only to public servants. Yet, even where this is the case, nothing prevents the government from retaining risk minimization powers and ascribing, if needed, other powers to DGSs.

We recognize that there are significant challenges in giving very broad mandates to privately managed DGS. A privately managed DGS can efficiently execute the decisions taken by the resolution authority—often more efficiently than publicly managed ones. However, resolution decisions—which tool to apply, how to mitigate the potential impacts on financial stability and on the real economy, etc.—must take into account the perspectives of and policy

²³ Dijmarescu [44].

²⁴ Kerlin [43].

²⁵ See [5].

²⁶ See [57].

²⁷ The EDB self-assess its functions as being a mixed of paybox plus and loss minimizer.

²⁸ Beck [32].

decisions of the whole country, and it can be argued that they should be taken by the State apparatus. This, however, is no obstacle for having privately managed DGS operating with paybox plus mandates, contributing to resolution in accordance to the directions and regulations issued by a public authority, with significant advantages over publicly managed ones.

Harmed cooperation with regulators

Staving off a financial crisis typically requires coordinated actions of DGSs and other regulators and governmental bodies. Critics fear that the substitution of public servants by private individuals within DGSs could create frictions in the decision-making and implementation. The problem is this view offers too blurry a view of intra-government coordination. The reality is that many governments continuously face the problem of internal strife and bureaucratic combat.

Commenting on the American financial regulatory system, Timothy Geithner famously attributed failures in the response to the 2007–08 crisis to “regulatory balkanization” [58]. In his words, the US regulatory system had become “riddled with gaps and turf battles [...] and nobody was accountable for the stability of the entire system”. A noteworthy chapter of such battles took place during the collapse of Washington Mutual when the FDIC, then presided over by Sheila Bair, and the NY-FED under Geithner, concerning the extent of the bailout to WaMu’s senior debt holders [58–60].²⁹

In Europe, problems of intra-government coordination seem to have been no smaller. In the United Kingdom, the failure of Northern Rock revealed conflicts between the Treasury, the Financial Services Authority (FSA) and the Bank of England, which in the words of Rosa Lastra “did not function smoothly, promptly or efficiently” [61, 62].³⁰ In particular, “an attempt had been made—it later emerged—that the Bank of England had been in talks with Lloyds TSB about possibly buying Northern Rock, but these discussions had foundered [...] Lloyds had asked for a 30bn (pounds) support facility, which was rejected by the Bank of England.” In fact, Johan Lybeck explains that such transaction had been supported both by the FSA and the Treasury [60].³¹

Lybeck also explains that existence of supra-national regulation at the level of the European Union sometimes added an additional level of complexity. For instance, the Franco-Belgian Dexia, which collapsed in 2011, exposed the “difficulties of the resolution of a transnational bank in today’s eurozone as well as the additional barriers to an

intelligent solution created by the EU Commission’s competition commissioner” [60].³² Similar problems are described in connection with the failure of Fortis in Belgium and Holland in 2008 [60].³³

Letdowns on the part of public DGSs of course do not demonstrate superiority private solutions. One can always argue that public DGS administration was at all times the lesser evil in comparison to the greater evil of private administration. But this is also unwarranted by experience, as exemplified by numerous cases of successful cooperation between industry and regulators both during the 2007–08 crisis and beyond. For example, in Denmark the resolution of banks Roskilde, Fionia e Armagerbanken was implemented on an ad hoc basis through an association of other Danish banks [60, 63].³⁴ In Ireland, non-performing assets of Anglo Irish Bank, Bank of Ireland and Allied Irish Banks, were bought by a newly created agency named National Asset Management Agency where management was shared between government and the industry [64].

Cooperation requires a legal framework that fosters collaboration and goodwill between the parties. None of these factors are exclusive of a public or private model, and the examples above show that there are no solid grounds to support the argument that a private-law DGS would be more prone to lack of cooperation.

Slow implementation of solutions

As a baseline, it should seem strange to argue that adopting a private structure slows implementation of solutions. But central bankers and other financial regulators have over time accumulated powers that permit them to react quickly in times of financial panics. Relying on that, critics such as Dijmarescu [44]³⁵ and Kerlin [43]³⁶ have argued that private DGS administration tends to slow implementation of solutions. Part of the problem would be attributable to potential frictions and miscommunications between private DGSs and public regulators, but that is not a peculiarity of private DGSs, as different bodies of the administration are often criticized for not cooperating with each other. An additional concern has to do with what William English suggested to be a natural incentive towards inaction, in what there was a tendency of private administrated DGSs to engage in “ostrich-like acts of looking away from unpleasant evidence” [65].

Indeed, there are such cases. For instance, in discussing the debacle of the Icelandic banking system in 2008,

³² Lybeck [60], at 196.

³³ Lybeck [60], at 205.

³⁴ [63]; Lybeck [60] at 216–24.

³⁵ Dijmarescu [44].

³⁶ Kerlin [43].

²⁹ See [58], 96, See also [59]; and [60].

³⁰ [61] See also [62].

³¹ Lybeck [60], at 153.

Baldursson and Portes [66] explain how local banks “gambled for resurrection” [65].³⁷ But it would be hard to imagine that the existence of a public DGS would have made much difference for in 2008 Icelandic banks were too big to fail and too big to save, and the incentives for the authorities to put them under resolution were not in place [65].³⁸ Bank supervisors are often accused of forbearance, or “gambling for resurrection”, which is one of the reasons why the Financial Stability Board’s Key Attributes of Effective Resolution Regimes for Financial Institutions require that the resolution authority is independent from supervisors and allowed to make an independent assessment on whether or not a bank is failing or likely to fail. Without a clear action by the supervisors or by the resolution authority, there is very little a DGS can do, regardless of whether it is publicly or privately managed.

A more reliable test for promptness to act is to investigate DGSs actions during normal times. Take for instance the 2014 failure of Bulgaria’s KTB Bank. After a bank-run, the Bulgarian National Bank placed KTB into conservatorship and declared a deposit freeze. According to Djurdjica Ognjenovic, the compensation of depositors by the Bulgarian public DGS only commenced more than five months after the deposits initially became unavailable [6].³⁹ The most interesting aspect of this case is that the Bulgarian public DGS felt no need to obey the European Union rules determining payment in up to 21 days as of the unavailability of deposits. At the time, both the European Commission and the European Banking Authority issued recommendations and ordered the Bulgarian DGS to compensate depositors, to no avail [6].⁴⁰

Had the Bulgarian DGS been a private entity, adaptation to European rules could have been decided autonomously. But for a public entity, changing the law required a revision of banking legislation. Indeed, under the pressure from Europe, the Bulgarian authorities initiated a revision of its banking laws with a view to making them EU-compliant. However, the political crisis caused the Bulgarian Parliament to be dismissed and the more appropriate laws could not be enacted. The relevant point here is that for a private DGS it would have been much harder to simply evade the EU rules and hide behind doubtful local regulations.

The Brazilian *Fundo Garantidor de Créditos* (FGC), which is privately administered, offers good examples of speedy interventions. A good one can be found in the case of Bank BTG Pactual. In 2015, the bank’s CEO had been arrested, prompting a bank run. In less than two days, the

Brazilian privately administered DGS structured a package of liquidity assistance of approximately USD 2 billion that effectively stopped the run and restored confidence [67].⁴¹ To increase liquidity, the FGC also coordinated with the Brazilian Central Bank an exemption of reserve requirements for funding provided for financial assistance [68].

An additional point is the aforementioned powers entrusted to public entities to react quickly in times of financial panics may not always be exercised expediently. For instance, the English government took more than five years to establish a “bad bank” structure to absorb risky assets held by the Royal Bank of Scotland after its failure in 2009 [69]. Similarly, the European Commission took three years to accept a business plan and then three additional years to transfer Germany’s Hypo Real’s assets to a “bad bank” after its failure in 2008 [60].⁴² These recurrent situations of regulatory forbearance [70]⁴³ happen because regulators postpone taking action while they wait for a “shadow resolution” [71], to use the expression coined by Enriques and Hertig. The lesson is that there can be an enormous interval between the powers set out in the books and their actual use in concrete cases.

Other case studies could reveal additional dynamics explaining the agility of privately managed DGSs. Jens-Hinrich Binder, for example, studied the German experience and concluded that competition and cooperation between a privately administered DGS and a public banking supervisor turned out beneficial for financial stability [72]. The bottom line, therefore, is there is no reason to assume that private DGSs are a priori slower than public.

Industry capture

For some, entrusting the industry with powers to appoint management heightens the prospects of conflict of interests, leading to regulatory capture [15].⁴⁴ Capture is the process whereby regulators come to be dominated by the industries’ interests rather than the public interest that they are supposed to protect [73–75].⁴⁵ At its core, the idea is that regulators eventually take on the objectives of management in the firms they regulate [76]. If this is so, the reasoning goes, then it is only natural to surmise that private administration will harm the public interest.

The theory of regulatory capture as originally conceived was deemed to apply to regulatory agencies whose board

³⁷ Kane [65], ‘How Incentive-Incompatible’, 102.

³⁸ Kane [65], ‘How Incentive-Incompatible’, 102.

³⁹ Ognjenovic [6] at 228–230.

⁴⁰ Ognjenovic [6] at 228–230.

⁴¹ See [67].

⁴² Lybeck [60] at 183.

⁴³ See [70].

⁴⁴ IMF [15] at 13.

⁴⁵ See [73, 74]. See also [75]. Preventing Regulatory Capture: Special Interest Influence and How to Limit It.

members were appointed by government—that is, in the terminology we are adopting, to entities where administration is public. Alas, the success and diffusion of capture theory evidences that the mere fact that management is appointed by government does not by itself insulate regulators from undue influence by the industry. In fact, a recent study even discussed the problem of lobbying and capture within the US FDIC [77]. In any case, within time the notion of regulatory capture started to be framed more broadly so as to designate simply the regulator’s “state of being, assisted and sustained by the captive industry” [78]. One could then speak of capture in public and private regulators alike [79].⁴⁶

A more fundamental point is that the consequences of capture in the financial sector may be different from elsewhere. In banking, capture does not necessarily imply ineffectual regulation [80]. It might be in the interest of the industry to impose tight and costly prudential requirements to reduce negative spillovers by weaker banks. In most industries, a desire for regulation can often be connected to an attempt by incumbents to create entry barriers, to push government into spending on complementary activities and to create favorable price-fixing [73].⁴⁷ These risks however tend to play a secondary role in banking, where problems of risk externalization and moral hazard are typically more important.

An additional point is that the institution of a private DGS that shares regulatory space and authority with other public regulators can itself be a mechanism to deter the overall capture of financial regulation by the industry. For a long time now, scholars have floated the argument that a division of power across multiple regulators could prevent capture. One noticeable argument made by game theorists Jean-Jacques Laffont and David Martimort was that regulatory competition among different entities could reduce the likelihood of collusion between individual regulators and a regulated industry by increasing costs. As argued, “separation of regulators divides the information at their disposal and thus limits their discretion in engaging in socially wasteful activities [...] As a result, the transaction costs of collusive activities increase and preventing collusion becomes easier [...] The separation of regulators may be an optimal organizational response to the threat of capture” [81].

To be sure, there are limits to this collusion model. As pointed out by Nolan McCarty, in highly complex industries the key problem often is ambiguous information and lack of expertise that impair regulators’ ability to act (and not that a monopoly on information facilitates collusion with self-interested regulators) [82]. This model is consistent with the worldwide trend verified by Stavros Gadinis that in the

wake of the 2007–08 crisis there was a concentration and an increase in the public sectors’ discretionary regulatory powers [3].⁴⁸ Regulatory concentration risks undermining diversity in the sources of expertise in regulatory decision making, increasing the risk of “cultural capture” [83].⁴⁹ In any case, as noticed by Carpenter and Moss, whether a capture-by-complexity or a collusion model is at work in a particular case cannot be told a priori, and that underscores the importance of “carefully diagnosing the causes of capture, and evaluating alternatives, before advocating reform” [84].

A second type of capture occurs when one or two market players manage to capture an institution to obtain information to prey on competitors. Often it is said that in a private DGS a bank can easily capture an executive or a board member and collude to obtain sensitive information. Here, one could argue that the risk in a private DGS is even smaller than in a public one. In a private DGS, the industry as a whole—who nominate the board members and executives—will have incentives to ensure that proper corporate governance measures are in place, after all, any leakage of information can be detrimental to all participants. In a public DGS, however, there is often very little the banks can do to curb this sort of behavior.

Reduced access to information held by regulators

Access to information held by regulators is widely considered to be one of the main downsides of private DGS administration. Public–private cooperation in exchange of information is problematic mostly because of the nature of the information held by the regulators. Djurdjica Ognjenovic contends that bank supervisors may hesitate to share data on individual banks’ risks with the DGS and are often limited by regulation on bank secrecy. For example, supervisors hold information on the banks’ risk profiles, which in turn serves as input for DGSs to calculate differential premiums.⁵⁰ Likewise, information on insured deposits, sectorial trends and regulatory violations by banks could streamline both payouts and bailouts by the DGS. And yet, critics say, questions of legality can get in the way.

Yet simple legislated solutions can considerably mitigate the problem. In Italy, for example, legislation expressly allowed the Bank of Italy to share information with the Italian private deposit insurer (known as FITD) and also with foreign DGSs. Indeed, the concept of financial stability is relevant enough to override questions of confidentiality and secrecy in the sharing of information amongst safety net

⁴⁶ See e.g., [79].

⁴⁷ Stigler [73], at 4–6.

⁴⁸ Gadinis [3].

⁴⁹ See, e.g., [83].

⁵⁰ Ognjenovic [6] at 133.

entities.⁵¹ Of course, some precautions are in order. Italian law for example established criminal charges for the FITD and its personnel if they fail to respect the professional secrecy of the information received. As explained by Giuseppe Boccuzzi, under specific memoranda of understanding, each quarter the Bank of Italy provides the deposit insurers with information on the business profile and contribution basis that it has gathered from its files, and the insurers are also informed promptly of the start of crisis management procedures [85]. The Italian arrangement in fact spells out a IADI Core Principle determining that there should be a formal and comprehensive framework in place for the close coordination of activities and information sharing, on an ongoing basis, between the deposit insurer and other financial safety-net participants [50, 54].⁵²

Organizational and compliance rules within the private DGS can also help maintain secrecy. The Brazilian DGS, FGC, prohibits individuals linked directly or indirectly to financial institutions from holding board positions [86]. These individuals can however hold office in the Advisory Council that can be convened at the request of the Board of Directors. Besides that, every board member signs a confidentiality letter addressed to the Central Bank of Brazil. Board members are forbidden from going back to the banking industry for four months after they leave the FGC. None of these compliance rules is in itself an innovation; suffices to remember that structures of *Chinese Wall* have now been legislated and implemented in many places. Of course, these structures in private entities sometimes fail; but so do those within state-run bureaucracies.

The message is that there are legal solutions that greatly minimize the problem of confidentiality, especially in private DGSs that have a governance structure setting out degrees of clearance, fulltime management and a system of quarantine for executives and *Chinese Walls* where applicable. This is why the IADI Core Principles contain a requirement for sharing of information between participants of the financial system networks, and to be implement by means of laws, regulations, MoUs, agreements or a combination thereof [50, 54].⁵³

Moreover, publicly managed DGSs are also often victims of lack of transparency in the relations with other authorities. In many jurisdictions, power disputes within the state administration lead to poor collaboration between the deposit insurer, the supervisor and the resolution authority. In practice, the decisive factor is not whether the DGS is publicly or privately managed, but whether there is goodwill

in the relation between the many components of the safety net.

The comparative advantages of private administration

Another way to study the structure for the administration of DGSs is to consider the comparative advantages of private DGS administration vis-à-vis public. These advantages are the following: privately administered DGSs (a) award greater protection to taxpayers' money, (b) mitigate depositors' moral hazard, (c) permit greater exposure to market information, (d) contain a powerful moral symbolism, and (e) are more largely premised on private law legality. Let us briefly examine each one of these points.

Greater protection to taxpayers

In DGSs under private management, there is overall greater protection to taxpayer resources. First and foremost, this is because, in the case of insolvency of a public DGS, the pressure on the government to foot the bill for depleted resources is very high. This is precisely what happened for example when the US Federal Savings and Loans Corporation (FSLIC) failed in the 1980s. The FSLIC had been established by Congress in 1934 and administered deposit insurance for the savings and loan industry. The FSLIC was recapitalized with taxpayer money numerous times during the Savings and Loan Crisis of the 1980s, but by 1989 it was considered "too insolvent to save" [87]. The FSLIC was then abolished and the FDIC took over the task of insuring savings and loan institutions—all at a total loss of approximately \$ 154 billion [88].

Similarly, and more recently, when the public DGS of Lithuania became insolvent in 2011, it borrowed more than 900 million euros from the Lithuanian Treasury [89]. This example is also telling because the unavailability of funds was attributed to excessive concentration of assets in Lithuanian government bonds, and it is plausible to assume that assets could have been managed better and in a more diversified fashion if the DGS management had not been all appointed by the government. In this sense, we could expect at least more pressure towards greater diversification.

Second, the bylaws of private DGSs often make room for the possibility of advance payments from associates whenever needed. This makes private resources from bank the first line of defense in banking crises, an idea that is in fact consistent with the current regulatory trend of creating mechanisms to reduce the extent of implicit government guarantees [90]. Thus, solutions such as the one adopted in

⁵¹ Ognjenovic [6] at 133.

⁵² [54] at 23. See also [50] at 19–28.

⁵³ [54] at 54, and [50] at 19–28.

the Netherlands in the case of SNS [60]⁵⁴ to seek resources directly from private banks could be facilitated by access to the assets contained in the private DGS. Additionally, in Brazil, the DGS is used as an alternative to the legal limitations of public funds to manage bank crises [91].

Third, it is often the case that bank resolutions lead to litigation of various kinds. Creditors that are not paid in full can look for grounds to sue the DGS, the shareholders or the management of defunct banks. The latter can sometimes counter and sue accountants and even lawyers. Public prosecution sometimes steps in to charge fines and try to impose other penalties. The outcomes of such litigation are highly dependent on details and context, but one thing is certain: the government typically holds the deep pockets, and this is far from irrelevant. Even if in many jurisdictions public DGSs can create segregated assets, there often remains a perception of government accountability for the solvency of the DGS, and this perception cannot be circumvented or avoided with design adjustments. The public purse can end up better protected when the DGS is more clearly not a part of government.⁵⁵

Fourth, there is the issue of administrative costs. Public DGSs often have bigger and less efficient structures, especially in the developing world. That makes them expensive to run. As of 2020, for example, IPAB, the publicly managed Mexican DGS, had 259 employees [92]. FOGAFIN, the DGS in Colombia, which is also publicly managed, declared having 105 employees [93]. At the same time, FGC—the Brazilian, private DGS, which oversees a bigger financial system—had a staff of 48 employees [94]. To be fair, IPAB has been lowering its staff for the past 20 years; it had 721 employees when established, back in 1999 [92]. The broader point, however, is that the opportunities for waste within the public sector should not be downplayed. The Zimbabwean DGS, which is administered as an independent agency and represents one of the few African DGSs making its financial statements easily available, published reports from 2018, 2019 and 2020 declaring staff costs of 11%, 16% and 29% of its total income [95]. This is high when benchmarked against private DGSs.

Mitigated depositors' moral hazard

Concerns with moral hazard due to the establishment of DGSs date back to the first recorded experience of the New York Safety Fund. In principle, one would not expect differences in the moral hazard perception of a DGS solely because it is publicly or privately managed. All else equal:

level of coverage, level of reserves, public awareness and public confidence—there should not be discrepancies in the perception of moral hazard.

The question of moral hazard arises not on “day-to-day” operations of DGS, where coverage is limited to small depositors who are incapable of altering the behavior of banks. However, as argued in the World Bank’s “Global Financial Development Report 2019/2020” [96], in the aftermath of the Global Financial Crisis there was a significant expansion in coverage and scope of deposit insurers, with several countries offering blanket guarantees (which are technically a form of bailing out the financial system). These interventions have the power to distort the incentive of banks and depositors, reinforcing expectations of an implicit state guarantee and ultimately undermining market discipline.

Given this historical perception of intervention bias by the government in times of difficulty, it can be argued that the concern with moral hazard is more pronounced for public DGSs, as governments tend to be less likely to overburden a private DGS with the payment of extended or blanket guarantees (as compared to burdening a public agency, with access to taxpayers’ funds). Thus, private administration of the DGS would be a means of lowering moral hazard, albeit to a limited extent, given that the fact that the DGS is private does not preclude governments from using other forms of bail-out [25–28].⁵⁶

Greater exposure to market information

Private DGSs may face difficulties in obtaining confidential information from regulators, especially in the absence of cooperation agreements protected by secrecy clauses and legislation (but much less so in the presence of such protections). This disadvantage can be offset by an informational advantage of private DGS, namely its greater exposure to market information that comes directly from member banks.

This is so, first, because board members in private DGSs typically have not only banking but also market expertise, potentially giving them the ability to identify certain trends faster than a bureaucrat might. To illustrate, Jens-Hinrich Binder and his co-authors find that industry participation helps early detection of financial stress, helping explain the German private DGS’ high recovery rates in liquidation cases [97].

Moreover, the search for arbitrage gains that so distinctively marks the financial industry means that banks devote large efforts to monitoring other banks and the financial markets in general, so it is not senseless to fathom that banks (and DGSs) may become aware of relevant information

⁵⁴ Lybeck [60] at 207–208.

⁵⁵ This conclusion is also supported by written comments offered by the German, Icelandic and Swiss DGSs (on file with authors).

⁵⁶ Demirgüç-Kunt and Detragiache [25]; Demirgüç-Kunt and Huizinga [26]; Demirgüç-Kunt and Kane [27, 28], at 193.

before regulators. Besides that, it is common to hear from professionals linked to self-regulatory entities and private DGSs that these organizations tend to be seen as more accessible and less intimidating by industry members than a state regulator, mostly for a lesser fear of reprisals. This is another way in which information could flow more easily to private rather than public DGS. Consequently, and considering the international trend of expanding the mandates of the DGSs in the financial safety net, this information and private sector expertise can contribute immensely in more effective resolution alternatives, as suggested by the experiences of Denmark and Ireland during the 2008 crisis.⁵⁷

Powerful moral symbolism

Banking crises affect a high percentage of the population of a country, most of which is poorly versed in the technicalities of the system and financial regulation. In light of this, communication strategies with the public are of great importance—or, to say it differently, how a policy is formalized in laws and regulations can be just as important as how it is communicated to the public. In this sense, greater support for private DGS administration (possibly, coupled with other initiatives) can be framed as an attempt to place the industry as the first line of defence of the financial system against shocks. It could signal the banks being held responsible for "dealing with their own mess."

This is not to deny that the 2008 crisis and later developments may have undermined the public's trust in the industry self-regulation—and reduced public trust in self-regulation is yet another reason why a "purely" private DGS that is unconstrained by regulation would in many cases be a poor fitting for present times. But a combination of DGS management and public regulation seems more promising than placing unfettered trust in the ability of the government to solve every problem in the financial system and beyond that.

Private law legality

The baseline for the distinction between public and private law is that under public law acts are only permissible if allowed by law whereas under private law acts are allowed when they are not expressly forbidden. This difference implies that an entity governed by private law has comparatively more flexibility in its activities, and thus can in principle more speedily respond to unpredicted contingencies in the financial sector. The greater flexibility can also reduce the risks that government actions taken under more limiting

legal basis be subsequently questioned in court, a common problem in some Western democracies.

Conclusion and policy recommendations

As we see it, private DGSs administration is a viable alternative to public, and in most cases a superior one. The following policy recommendations should follow suit: (a) the current international trend towards greater involvement of government with financial regulation should not be extended to the administration of DGSs; (b) countries that are implementing DGS should be instructed by their peers and the competent international regulators that private administration is a viable option that may be considered; (c) any problems in private DGS should not be addressed simply with uncritical nationalization, because public administration is clearly not a panacea; (d) any change in the management structure of a DGS must be preceded by design adjustments that seek to mitigate the disadvantages of the management model that will be adopted; and (e) international regulators and national DGSs should resume the discussion on management models.

Declarations

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

1. Garcia, G.G.H. 1999. *Deposit Insurance: A Survey of Actual and Best Practices*. International Monetary Fund, Working Papers, Working Paper (99/54).
2. Thatcher, M., and A.S. Sweet. 2002. Theory and Practice of Delegation to Non-Majoritarian Institutions. *West European Politics* 25(1): 1–22.
3. Gadinis, S. 2013. From Independence to Politics in Financial Regulation. *California Law Review* 101(2): 327–336.
4. Demirgüç-Kunt, A., E.J. Kane, and L. Laeven. 2014. *Deposit Insurance Database*. International Monetary Fund Working Papers, IMF Working Paper (14/118).

⁵⁷ As discussed in "Harmed cooperation with regulators" section above.

5. International Association of Deposit Insurers. 2017. *Annual Survey 2016, IADI Annual Survey 2017*. www.iadi.org/en/assets/File/Deposit%20Insurance%20Surveys/2016%20Annual%20Survey%2022082017.xlsx.
6. Ognjenovic, D. 2017. *Deposit Insurance Schemes: Funding, Policy and Operational Challenges*, 59. Berlin: Springer.
7. International Association of Deposit Insurers. 2009. *Governance of Deposit Insurance Systems*. www.iadi.org/en/assets/File/Papers/Approved%20Guidance%20Papers/Governance%20Final%20Guidance%20Paper%206_May_2009.pdf.
8. Financial Stability Board. 2012. *Thematic Review on Deposit Insurance Systems*. www.fsb.org/wp-content/uploads/r_120208.pdf.
9. Peer Review Reports. 2012. *Financial Stability Board, Thematic Review*, 9. <https://www.fsb.org/publications/peer-review-reports/>.
10. Peer Review Reports. 2019. *Financial Stability Board*. <https://www.fsb.org/publications/peer-review-reports/>.
11. Bank for International Settlements. 2015. *Guidelines for Identifying and Dealing with Weak Banks* 23. www.asbasupervision.com/en/bibl/problem-bank-management-and-resolution/735-lr156-2014jul-guidelines-for-identifying-and-dealing-with-weak-banks/file.
12. Bank for International Settlements. 2010. *Core Principles for Effective Deposit Insurance Systems 1*. www.asbasupervision.com/en/bibl/recommended-reading/369-lr06/file.
13. Center for Global Development. 2019. *Making Basel III Work for Emerging Markets and Developing Economies 11*. www.cgdev.org/sites/default/files/making-basel-iii-work-emerging-markets-developing-economies.pdf.
14. Directive 2014/49 of The European Parliament and of the Council of 16 April 2014 on Deposit Guarantee Schemes (2014) Official Journal of the European Union (L 173), 149–78.
15. International Monetary Fund. 1999. Annual Report of the Executive Board for the Financial Year Ended. *Annual Report* 1999: 13.
16. Teodoro, M.P., and M.A. Pitcher. 2017. Contingent Technocracy: Bureaucratic Independence in Developing Countries. *Journal of Public Policy* 37(4): 401–429.
17. Jordana, J., and D. Levi-Faur. 2005. The Diffusion of Regulatory Capitalism in Latin America: Sectoral and National Channels in the Making of a New Order. *The Annals of the American Academy of Political and Social Science* 1: 102–124.
18. Dubash, N.K., and B. Morgan, eds. 2013. *The Rise of the Regulatory State of the South: Infrastructure and Development in Emerging Economies*. Oxford: University Press.
19. Araral, E. 2014. Policy and Regulatory Design for Developing Countries: A Mechanism Design and Transaction Cost Approach. *Policy Sciences* 47(3): 289–303.
20. Palma, J., and B.M. Salama. 2017. *Agencies Without the Rooseveltian State: Legal Regime of Regulatory Agencies in Brazil*. FGV Direito SP Research Paper Series no. 156. www.papers.ssrn.com/sol3/papers.cfm?abstract_id=2968906.
21. Kyei, A. 1995. *Deposit Protection Arrangements: A Survey*. International Monetary Fund Working Papers: Working Paper (95/134): 5–11.
22. Quintyn, M., S.L. Ramirez, and M. Taylor. 2007. *The Fear of Freedom: Politicians and the Independence and Accountability of Financial Sector Supervisors*. International Monetary Fund Working Papers: Working Paper 37 (07/05).
23. Quintyn, M. and M.W. Taylor. 2002. *Regulatory and Supervisory Independence and Financial Stability*. International Monetary Fund Working Papers, Working Paper (02/46).
24. Masciandaro, D., M. Quintyn, and M. Taylor. 2008. *Financial Supervisory Independence and Accountability-Exploring the Determinants*. International Monetary Fund Working Papers, Working Paper (08/147).
25. Demirgüç-Kunt, A., and E. Detragiache. 2002. Does Deposit Insurance Increase Banking System Stability? An Empirical Investigation. *Journal of Monetary Economics* 49(7): 1373–1406.
26. Demirgüç-Kunt, A., and H. Huizinga. 2004. Market Discipline and Deposit Insurance. *Journal of Monetary Economics* 51(2): 375–399.
27. Demirgüç-Kunt, A., E.J. Kane, and L. Laeven. 2008. *Deposit Insurance Design and Implementation: Policy Lessons from Research and Practice*. In *Deposit Insurance Around the World: Issues of Design and Implementation* 24.
28. Demirgüç-Kunt, A., E.J. Kane, and L. Laeven. 2014. *Deposit Insurance Database. Policy Research Working Paper*. Working Paper (6934). www.openknowledge.worldbank.org/handle/10986/18820.
29. Calomiris, C.W. 1989. Is Deposit Insurance Necessary? A Historical Perspective. *The Journal of Economic History* 50: 283.
30. Calomiris, C.W. 1989. Deposit Insurance: Lessons from the Record. *Economic Perspectives* 10: 10–30.
31. Ely, B. 1985. Yes - Private Sector Depositor Protection Is a Viable Alternative to Federal Deposit Insurance. In *Proceedings of a Conference on Bank Structure and Competition*, Federal Reserve Bank of Chicago, 338–353.
32. Beck, T. 2001. *Deposit Insurance as Private Club: Is Germany a Model?* World Bank Policy Research Working Paper 24 (2559).
33. Hogan, T.L., and K. Johnson. 2016. Alternatives to the Federal Deposit Insurance Corporation. In *Reframing Financial Regulation: Enhancing Stability and Protecting Consumers*, eds. H. Peirce and B. Klutsey, 20(3).
34. Tushnet, M. 2011. Administrative Law in the 1930s: The Supreme Court's Accommodation of Progressive Legal Theory. *Duke Law Journal* 60: 1565.
35. Witherspoon, J.P. 2011. Civil Rights Policy in the Federal System: Proposals for a Better Use of Administrative Process. *Yale Law Journal* 74(1171): 1210.
36. Magill, E., and A. Vermeule. 2011. Allocating Power Within Agencies. *Yale Law Journal* 120(032): 1035.
37. Barkow, R.E. 2010. Insulating Agencies: Avoiding Capture Through Institutional Design. *Texas Law Review* 89(15): 24.
38. Henisz, W.J. 2004. Political Institutions and Policy Volatility. *Economics & Policy* 16: 1–2.
39. Jacobs, A.M. 2011. *Governing for the Long Term: Democracy and the Politics of Investment*, 28–30. Cambridge: Cambridge University Press.
40. O'Connell, A.J. 2011. Agency Rulemaking and Political Transitions. *Northwestern University Law Review* 105(471): 526.
41. Gadinis, S. 2013. From Independence to Politics in Financial Regulation. *California Law Review* 101: 327.
42. Bradley, C., and V. Craig. 2007. Privatizing Deposit Insurance: Results of the 2006 FDIC Study. *FDIC Quarterly* 1(23): 31.
43. Kerlin, J. 2017. *The Role of Deposit Guarantee Schemes as a Financial Safety Net in the European Union*, 257–261. Berlin: Springer.
44. Dijmarescu, E. 2012. Governance Options for Deposit Guarantee Schemes. *European Forum of Deposit Insurers EFDI Annual Conference*. DGS and Crisis Management. Geneva. www.fgdb.ro/publications/ED13092012.pdf.
45. Monetary Authority of Singapore. 2004. *Second Consultation on Deposit Insurance*. Consultation Paper 4–5. www.mas.gov.sg/-/media/MAS/resource/publications/consult_papers/2004/Second-Consultation-on-DI.pdf.
46. Armour, J., et al. 2016. *Principles of Financial Regulation*, 281. Oxford: Oxford University Press.
47. Folkerts-Landau, D. and C.J. Lindgren. 1998. *Toward a Framework for Financial Stability*. International Monetary Fund 30. www.imf.org/external/pubs/ft/wefs/toward/pdf/file01.pdf.

48. Krishnamurthy, P. 2018. George Stigler on His Head: The Consequences of Restrictions on Competition in (Bank) Regulation. *Yale Journal on Regulation* 35: 832.
49. Ellis, D. 2013. *Deposit Insurance Funding: Assuring Confidence*. Federal Deposit Insurance Corporation 10. www.fdic.gov/deposit/insurance/assuringconfidence.pdf.
50. International Association of Deposit Insurers. 2012. *Handling of Systemic Crises*. International Association of Deposit Insurers, 36. [www.iasi.org/en/assets/File/Papers/Approved%20Research%20-%20Discussion%20Papers/IASI_Research_Paper-Handling_of_Systemic_Crises-Final_201210\(2012-12_to_IADI\).pdf](http://www.iasi.org/en/assets/File/Papers/Approved%20Research%20-%20Discussion%20Papers/IASI_Research_Paper-Handling_of_Systemic_Crises-Final_201210(2012-12_to_IADI).pdf).
51. Admati, A., and M. Hellwig. 2013. *The Bankers' New Clothes: What's Wrong with Banking and What to Do about It*. Economics Books 136.
52. Klefouri, N. 2015. *Deposit Protection and Bank Resolution*, 59–60. Oxford: Oxford University Press.
53. International Association of Deposit Insurers. 2015. *Enhanced Guidance for Effective Deposit Insurance Systems: Ex Ante Funding*. Research and Guidance Committee International Association of Deposit Insurers, 7, 11. www.iasi.org/en/assets/File/Papers/Approved%20Guidance%20Papers/IASI_Enhanced_Guidance_on_Ex-Ante_Funding_June_2015.pdf.
54. International Association of Deposit Insurers. 2014. *Core Principles for Effective Deposit Insurance Systems* 10, 29. www.iasi.org/en/assets/File/Core%20Principles/cprevised2014nov.pdf.
55. Gleeson, S. 2013. Clifford Chance, Deposits, Deposit Guarantee Schemes and Bank Resolution 2.
56. International Association of Deposit Insurers. 2012. *Handling of Systemic Crises*. International Association of Deposit Insurers, 36. [www.iasi.org/en/assets/File/Papers/Approved%20Research%20-%20Discussion%20Papers/IASI_Research_Paper-Handling_of_Systemic_Crises-Final_201210\(2012-12_to_IADI\).pdf](http://www.iasi.org/en/assets/File/Papers/Approved%20Research%20-%20Discussion%20Papers/IASI_Research_Paper-Handling_of_Systemic_Crises-Final_201210(2012-12_to_IADI).pdf).
57. Mieli, S. 2010. Crisis management and deposit insurance schemes: the Italian experience and the European perspective. In *Efdi/Iadi-International Conference on Deposit Guarantee Schemes*.
58. Geithner, T. 2014. *Stress Test: Reflections on Financial Crises*, 96. New York: Broadway Books.
59. Bair, S. 2012. *Bull by the Horns: Fighting to Save Main Street from Wall Street and Wall Street from Itself*. New York: Simon & Schuster.
60. Lybeck, J.A. 2016. *The Future of Financial Regulation: Who Should Pay for the Failure of American and European Banks?*, 342–357. Cambridge: Cambridge University Press.
61. Lastra, R.M. 2008. Northern Rock, UK Bank Insolvency and Cross-Border Bank Insolvency. *Journal of Banking Regulation* 9: 165–166.
62. Shin, H.S. 2009. Reflections on Northern Rock: The Bank that Heralded the Global Financial Crisis. *Journal of economic perspectives* 23: 101.
63. Committee on the Causes of the Financial Crisis in Denmark. 2013. *The Financial Crisis in Denmark—Causes, Consequences and Lessons*. www.eng.em.dk/media/10594/conclusions-and-recommendations-170913.pdf.
64. Woll, C. (2014) The Power of Inaction: Bank Bailouts in Comparison. *Cornell Studies in Political Economy* 155.
65. Kane, E. 1989. *How Incentive-Incompatible Deposit-Insurance Funds Fail*. National Bureau of Economic Research, Working Paper (2836).
66. Baldursson, F.M. and R. Portes. 2013. *Gambling for Resurrection in Iceland: The Rise and Fall of the Banks*. Papers 102, www.poseidon01.ssrn.com/delivery.php?ID=954020088007068021014091082029015070007012064010087068076004022072008101092001071027102040034061127107011018081006029094111117042055041008014106089125002025028044071106094004104118078007068089030116025114073089089122107028069028006124076093120&EXT=pdf.
67. Duran, C.V., and C. Borges. 2017. Enfrentando a Crise Financeira: Como Constrangimentos Jurídicos Causaram a Fragmentação Institucional do Poder Monetário Brasileiro no Pós-2008. *Revista Direito GV* 450 (Braz.) 12.
68. Machado, D., E. Campos, and F. Marques. 2015. *Banco Central muda algumas regras do depósito compulsório*. Valor Econômico, Brazilian Central Bank Circular (3.775). www.valor.com.br/financas/252F4360104%252Fbanco-central-muda-algumas-regras-do-deposito-compulsorio.
69. Goff, S. and M. Arnold. 2014. *Five Years on and the RBS Pain is Still Far from Over*. Financial Times. www.ft.com/content/b3569c72-9fad-11e3-94f3-00144feab7de.
70. Kaufman, G.G., and S.A. Seelig. 2006. Post-Resolution Treatment of Depositors at Failed Banks: Implications for the Severity of Banking Crises, Systemic Risk, and Too-Big-To-Fail. In *Bank Restructuring and Resolution Procyclicality of Financial Systems in Asia*, ed. D.S. Hoelscher, 166. London: Palgrave Macmillan.
71. Enriques, L. and G. Hertig. 2015. Shadow Resolutions as a No-No in a Sound Banking Union. In *Financial Regulation: A Transatlantic Perspective*. Paper SSRN 3: 150.
72. Binder, J.H. 2005. Regulatory Competition Between the Deposit Insurer and a Single Financial Regulator—The Case of Germany. *International Lawyer* 39: 3–14.
73. Stigler, G.J. 1976. The Theory of Economic Regulation. *The Bell Journal of Economics and Management Science* 2: 3.
74. Peltzman, S. 1976. Toward a More General Theory of Regulation. *The Journal of Law and Economics* 19: 211.
75. Laffont, J.J. and J. Tirole. 1993. *A Theory of Incentives in Procurement and Regulation*. Cambridge.
76. Benink, H.A., and R. Schmidt. 2004. Europe's Single Market for Financial Services: Views by the European Shadow Financial Regulatory Committee. *Journal of Financial Stability* 1(157): 186.
77. Igan, D. et al. 2017. *Winning Connections? Special Interests and the Sale of Failed Banks*. International Monetary Fund Working Papers, Working Paper (17/262).
78. Hempling, S. 2014. Regulatory Capture: Sources and Solutions. *Emory Corporate Governance and Accountability Review* 1: 23.
79. Lokanan, M. 2017. Regulatory Capture of Regulators: The Case of the Investment Dealers Association of Canada. *Journal Public Administration* 41: 1243.
80. Hardy, D.C. 2006. *Regulatory Capture in Banking*. International Monetary Fund Working Papers, Working Paper (06/34).
81. Laffont, J.J. and D. Martimort. 1999. Separation of Regulators against Collusive Behavior. *The Rand Journal of Economics* 30: 232, 233, 257.
82. McCarty, N. 2013. Complexity, Capacity and Culture. In *Preventing Capture: Special Interest Influence and How to Limit It*, ed. D. Carpenter and D. Moss, 99. Cambridge: Cambridge University Press.
83. Kwak, J. 2013. Cultural Capture and the Financial Crisis. In *Preventing Capture: Special Interest Influence and How to Limit It*, ed. D. Carpenter and D. Moss, 70. Cambridge: Cambridge University Press.
84. Carpenter, D., and D. Moss. 2013. Conclusion. In *Preventing Regulatory Capture: Special Interest Influence and How to Limit It*, ed. D. Carpenter and D. Moss, 460. Cambridge: Cambridge University Press.
85. Boccuzzi, G. 2005. *Interrelationships Between Deposit Insurers and Supervisory Authorities in the Italian and International Experience*. FITD, Working Paper 8 (9).
86. Brazilian Central Bank Resolution N° 4.688 of September 25, 2018. (2018) Annex II, arts. 25, 29, 30 and 31.
87. Macey, J. 2011. Reducing Systemic Risk: The Role of Money Market Mutual Funds as Substitutes for Federally Insured Bank Deposits. *Stanford Journal Law Business & Finance* 17: 153.

88. Curry, T., and L. Shibut. 2000. The Cost of the Savings and Loan Crisis: Truth and Consequences. *FDIC Banking Rev.* 13: 26.
89. Zilinskas, R., and L. Gaizauskas. 2015. The Investment Policy of Deposit Guarantee Funds under Conditions of Limited Domestic Securities Markets. *Ekonomika* 94(131): 137–138.
90. Barth, J.R., and C. Wihlborg. 2017. Too Big to Fail: Measures, Remedies, and Consequences for Efficiency and Stability. *Financial Markets Institutions & Instruments* 26: 235–237.
91. Calomiris, C.W., and S.H. Haber. 2014. *Fragile by Design: The Political Origins of Banking Crises and Scarce Credit*. Economic Policy 444.
92. Instituto para la Protección al Ahorro Bancario – IPAB. *Informe IPAB Seguro de Depósitos Bancarios 2020*. https://www.gob.mx/cms/uploads/attachment/file/650158/Informe-Anual_2020.pdf.
93. Fondo de Garantías de Instituciones Financieras – FOGAFIN. *Directorio de funcionários 2020*. <https://www.fogafin.gov.co/docs/default-source/Generales/directorio-de-funcionarios-fogafin---septiembre-2020.xlsx?sfvrsn=26>.
94. Fundo Garantidor de Créditos – FGC. *Relatório Anual 2020*. <https://www.fgc.org.br/backend/upload/media/arquivos/Nossos%20Numeros/Demonstrac%C3%A7%C3%A3o%20Financeiras/Relatorio%20Anual/relatorio-anual-fgc-2020-6.pdf>.
95. Zimbabwe Deposit Protection Corporation. *Annual Reports for 2018, 2019 and 2020*. <https://www.dpcorp.co.zw/assets/dpc-2018-annual-report.pdf>; <https://www.dpcorp.co.zw/assets/dpc-2019-annual-report.pdf>; <https://www.dpcorp.co.zw/assets/dpc-2020-annual-report.pdf>.
96. World Bank Group. 2020. *Bank Regulation and Supervision a Decade After the Global Financial Crisis*. World Bank Group 10. www.worldbank.org/en/publication/gfdr.
97. Binder, J.H., M. Krimminger, M.J. Nieto, and D. Singh. The Choice Between Judicial and Administrative Sanctioned

Procedures to Manage Liquidation of Banks: A Transatlantic Perspective. *Capital Markets Law Journal* 14: 176–214 at 185.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Bruno Meyerhof Salama is a Lecturer at UC Berkeley School of Law where he teaches *Monetary Law and Regulation* and *Law, Technology and Entrepreneurship*, and *Law and Economics*, among other courses. He is also a founding partner of Salama Silva Filho, a law firm based in São Paulo, and a Senior Global Fellow at FGV Law School in São Paulo. He has practiced law with Sullivan & Cromwell LLP in New York and has been a Visiting Professor at Columbia University Law School and at Beijing Jiaotong University Law School in China. He has also been a regulator as member of the Brazilian National Financial System Appeals Council. He holds a J.S.D. and an LL.M from UC Berkeley Law School, an M.A. in Economics from FGV in São Paulo, and a LL.B. from the University of São Paulo. In 2020, The Global Banking Regulation Review named him one of the “45 under 45” world experts in banking law.

Vicente P. Braga is a partner at Focaccia Amaral Law Firm in São Paulo where he heads the banking law practice. Before joining the firm, he was legal counsel with the Brazilian Deposit Insurance Fund (FGC) and with the Brazilian Financial and Capital Markets Association (ANBIMA). He holds a J.S.D. from the University of São Paulo, an LL.M from FGV Law School in São Paulo and a LL.B from the Federal University of Paraná in Brazil.