



TECHNICAL

NOTES & MANUALS

Exceptional Public Solvency Support to the Banking Sector: Pitfalls and Good Practices

Constant Verkoren and Luis Cortávarría-Checkley

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Banking sector distress can be highly disruptive, with substantial implications for financial intermediation and economic growth. Given their disruptive effects, country authorities have often relied on public funds to safeguard financial stability when confronted with systemic crises. The global financial crisis, for example, prompted governments to provide substantial support to ailing banks, as other credible policy options for stabilizing their financial systems were not readily available.

While noting that such interventions should always remain a 'last resort' option, this technical note provides guidance on the proper design and implementation of exceptional public solvency support. Specifically, it discusses:

- the role of solvency support in crisis management and bank restructuring programs;
- minimum conditions and key modalities for exceptional public solvency support; and
- governance and shareholder management arrangements for temporary government investments in the financial sector.

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Abbreviations

AT1	Additional Tier 1
CET1	Common Equity Tier 1
CoCos	Contingent Convertible Capital Instruments
FSB	Financial Stability Board
GDP	gross domestic product
HFSF	Hellenic Financial Stability Fund
IFRS	International Financial Reporting Standards
KA	Key Attributes of Effective Resolution Regimes for Financial Institutions
LAC	loss-absorbing capacity
SIB	Systemically Important Bank
TLAC	total loss-absorbing capacity
UKFI	UK Financial Investments
UKGI	UK Government Investments

Preface

This note reflects contributions of current and former staff of the Financial Crisis Preparedness and Management Division of the IMF's Monetary and Capital Markets Department. Special acknowledgments for inputs and comments go to Thierry Bayle, David Blache, Tomoaki Hayashi, Jan Nolte, Jaime Ponce, and Alvaro Piris, as well as to Hee Kyong Chon, Luc Riedweg, and Ebru Sonbul Iskender from the Monetary and Capital Markets Department's Financial Supervision and Regulation Division. The authors are grateful to Marina Moretti and Marc Dobler for providing valuable direction and guidance, as well as to Charmane Ahmed, Kene Ndir, Geovana Pessoa, and Margo Vandenbroucke for excellent administrative support.

I. Introduction

It has not been uncommon for countries experiencing severe banking sector problems to deploy public resources to protect financial stability and restore confidence. Given the high cost of systemic crises, country authorities have historically relied on extensive policy measures to stabilize their financial systems after large shocks. Although crisis responses have differed across countries, public solvency support to distressed banks has been a common feature. The global financial crisis, for example, prompted governments to provide substantial support to ailing banks, with resources made available for direct government support (excluding guarantees, before recoveries) amounting to 3.5 percent of GDP for advanced G20 economies (IMF 2010), whereas other crisis episodes prompted gross recapitalization costs for some emerging markets of 10–40 percent of GDP (Laeven and Valencia 2018).¹ The interventions largely helped underpin depositor confidence and prevented widespread failures, but the substantial costs for taxpayers, combined with a (perceived) lack of accountability for banks' shareholders and senior management, reinvigorated long-standing debates about the moral hazard associated with government interventions.

Important steps were taken in recent years to minimize the need for public sector bailouts in case of future crises.

- At the November 2010 Summit in Seoul, G20 leaders underscored that no financial institution should be too big or complex to fail, and that taxpayers should not bear the costs of their failure. They endorsed a policy framework, presented by the Financial Stability Board (FSB), to reduce the moral hazard generated by systemically important financial institutions² and to address the too-big-to-fail conundrum (FSB 2010). The resulting policy framework seeks to enhance institutions' resilience through enhanced capital requirements and to reduce the effect of potential failures through orderly resolution. These key objectives are underpinned by strong expectations for supervisory effectiveness and intensity that, among others, seek to (1) enhance operational independence and resourcing of supervisors; (2) strengthen supervisory techniques (including horizontal reviews, stress testing, and business model analysis); (3) enhance macroprudential surveillance; and (4) foster greater collaboration between home and host authorities.
- The FSB's Key Attributes of Effective Resolution Regimes for Financial Institutions (KA) were endorsed by G20 leaders in November 2011 as a key element of the framework for "ending too-big-to-fail."³ The KAs seek to enable the resolution of financial institutions without systemic disruption and without exposing taxpayers to loss. They call for (1) establishing operationally independent administrative authorities that are responsible for exercising resolution powers; (2) providing such authorities with sound governance, adequate resources, robust accountability mechanisms, and protection against liability for actions taken in good faith; (3) enacting a broad range of resolution powers that can be

¹ Laeven and Valencia (2018) identify 151 systemic banking crises—defined as events that (1) generate significant signs of financial distress in the banking system (as indicated by bank runs, losses in the banking system, and bank liquidations) and (2) prompt substantial policy interventions—over the period of 1970–2017, with median costs ranging from 6.7 percent of GDP for high-income countries to 10 percent of GDP for low- and middle-income countries, and increases in public debt of 21.1 percent and 16.4 percent of GDP, respectively. Another comprehensive dataset of government interventions in the financial sector for the period 2007–17 was compiled by Dell'Arccia, Igna, Mauro, Moussawi, Tieman and Zdzienicka (2019).

² Defined as financial institutions whose distress or disorderly failure, because of their size, complexity, and interconnectedness, could cause significant disruption to the wider financial system and economic activity.

³ An updated version of the KAs, incorporating additional guidance, was released in 2024 (FSB 2024).

applied—subject to safeguards—to financial institutions, their holding companies and nonregulated operational entities, and branches of foreign firms; and (4) developing frameworks for recovery and resolution planning.

- Policymakers have sought to ensure that global systemically important banks can absorb losses and be rehabilitated effectively without the need for public support. In line with the international standard on total loss-absorbing capacity (TLAC) in 2015 (FSB 2015), global systemically important banks are expected to ensure adequate loss-absorbing capacity (LAC) through the issuance of instruments that meet specific requirements, with some country authorities having sought to enhance resolvability by imposing similar requirements on other banks.

The introduction of the KA and TLAC requirements were key initiatives to reduce the need for future bailouts, but challenges remain. Although implementation of the policy framework for “ending too-big-to-fail” is progressing, substantial work still lies ahead in enhancing the resolvability of all financial institutions that could be systemically significant or critical if they were to fail (FSB 2023). Moreover, the establishment of sufficient LAC can be challenging, especially for institutions that have traditionally not relied on capital market funding. In this context, country authorities may, under exceptional circumstances, still need to rely on public sector support and place institutions under temporary public ownership to safeguard financial stability—as also acknowledged in the KA (Box 1).

BOX 1. Exceptional Solvency Support and Bank Resolution Regimes

Funding arrangements fulfill an essential function in modern bank resolution regimes, because resolution authorities may require funding at different stages in the resolution process, for example, to provide liquidity to firms in resolution, to capitalize bridge banks, and to contribute resources to facilitate a deposit transfer to a healthy bank. Although cross-country experiences highlight different approaches, the common objective that creditors and the industry at large—rather than the taxpayer—ultimately shoulder the burden of failure is widely accepted.

In this context, the Key Attributes of Effective Resolution Regimes (KA) discuss two stylized options: (1) the creation of privately financed deposit insurance or resolution funds with ex ante contributions from the industry; and (2) the provision of temporary public funding with ex post recovery from the banking sector, albeit under strict conditions that seek to minimize costs for taxpayers and prevent moral hazard. Both options have distinct advantages and disadvantages that warrant careful consideration, informed by country-specific circumstances (Dobler, Croitoru, and Molin 2018).

The KA acknowledge that countries may still opt to place institutions under temporary public ownership as a “last-resort” measure to ensure financial stability, while they seek to arrange permanent solutions through private sector involvement or the use of resolution tools (KA 6.5). In practice, such operations may entail that the government subscribes to newly issued shares, with existing shareholders being written down to absorb losses. Where countries rely on such powers, losses incurred by the state should be recovered as much as possible from unsecured creditors or, if necessary, the financial system more widely (for example, through ex post levies).

This note provides guidance on the use of fiscal resources for public solvency support purposes as an exceptional crisis management measure. Drawing on experience gained through the IMF’s involvement in bank restructuring programs across its membership and technical discussions with national authorities,

this note discusses (1) the rationale of bank solvency support with public funds as a last-resort measure; (2) minimum conditions for injecting public funds that seek to maximize burden sharing, minimize moral hazard, and protect taxpayers; (3) common modalities of solvency support; (4) governance and oversight of recapitalized banks; (5) financing considerations; and (6) the use of bridge banks as an alternative to outright recapitalization.⁴

⁴ This note only covers public solvency support to going-concern institutions and does not discuss other measures adopted by country authorities to contain emerging crises, such as guarantees, outright acquisitions of troubled assets, and the use of public resources to effect orderly wind-downs. It also does not address issues pertaining to "going concern" capitalization of state-owned banks, whereby the state acts in its capacity as ordinary shareholder.

II. Why Do Governments Recapitalize Banks?

Banking sector distress can be highly disruptive to financial systems and economies at large.

Widespread problems can disrupt critical payment, clearing, and settlement functions; erode asset values; reduce credit flows; and, more broadly, contribute to a slowdown of economic growth. Although crises can arise from different sources, experience indicates that distress often involves a combination of unsustainable macroeconomic policies (for example, large current account imbalances, persistent budget deficits, unsustainable public debt); rapid financial liberalization; excessive credit growth and asset price bubbles; and weaknesses in banks' governance and risk management practices. Large bank-sovereign linkages, dollarization of financial contracts, or weak regulation and supervision can further exacerbate vulnerabilities (Demirgüç-Kunt and Detragiache 1997; Laeven and Valencia 2018).

As financial sector conditions deteriorate, "gambling for redemption" by weak banks can increase risks and undermine the resilience of the financial system. Riskier operations and weak underwriting standards—possibly exacerbated by compensation practices that reward short-term gains over long-term prudence—erode banks' ability to respond to deteriorating conditions and leave them prone to confidence shocks as losses crystallize and rumors may start to swirl. Excessively complex group structures, as well as "creative" or even fraudulent accounting, can compound weaknesses because banks may try to obfuscate the true condition of their balance sheets to minimize reputational risks, with the aim to delay the implementation of remedial and corrective actions. With even the perception of material weaknesses potentially undermining confidence, concerns about bank solvency can morph into broader liquidity crises that jeopardize financial stability.

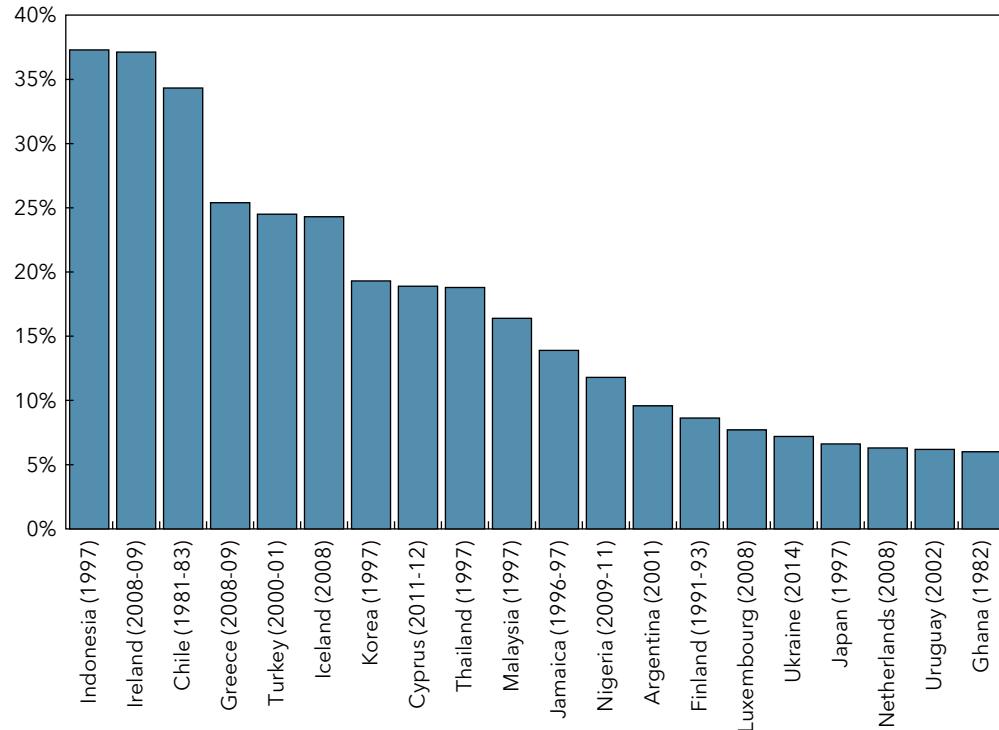
Once depositors and other creditors lose confidence, restoring it requires addressing the root causes of banking system instability. When faced with severe liquidity pressures, rapid deployment of emergency central bank liquidity—and possibly even government guarantees or other exceptional measures—may be required to stem destabilizing runs. However, such measures are typically insufficient to rebuild confidence when used in isolation. Restoring bank solvency is critical to putting institutions on a sound footing and ensuring the efficient functioning of the system at large.

Rebuilding banks' capital after a substantial shock is the responsibility of banks' management and its shareholders, but private sector solutions may not be available at times of systemic distress. Robust capital buffers provide an important cushion against unexpected losses and enable banks to access funding markets, because counterparties view capital adequacy as an important indicator of a bank's health. But tapping private sources of bank capital may be difficult amidst broader distress, because existing shareholders struggle to mobilize funds, new investors have little risk appetite, and asset divestitures (to reduce risk-weighted assets and mobilize cash) become difficult to achieve without risking fire-sale prices. The more the banks face difficulties at the same time, the greater these impediments become, because all distressed institutions will be competing for a finite pool of resources, with banks that are perceived to be weaker and likely to face even greater challenges. Similarly, bank resolution (or potentially liquidation) may not always offer a credible alternative, for example, in view of weaknesses in the country's resolution regime and broader financial sector safety net, or where loss allocation to senior unsecured creditors (for example, through bail-in) is deemed to generate substantial contagion risks. If, under such circumstances, private sector solutions are unavailable and financial stability cannot be ensured through other options, including resolution, public solvency support may become unavoidable to protect financial stability (Addo Awadzi and others 2018; Moretti, Piris, and Dobler 2020). In view of its "last-resort" nature, however, such support should only be considered after policymakers have determined that all other options have been exhausted or cannot achieve financial stability objectives.

Recapitalization programs have been a common feature of countries' strategies for dealing with systemic crises. Managing systemic crises is a complex, multifaceted process that severely tests the ability of country authorities to take decisive action, often under great time pressure and based on imperfect information. Systemic risks typically build gradually but can materialize suddenly, putting a premium on advance preparations, early detection, and timely remediation. Although crisis management strategies should always be tailored to country-specific circumstances, they typically involve three key stages: (1) near-term measures to halt disorderly runs and stabilize financial sector liquidity (for example, central bank support, government guarantees, and, in exceptional circumstances, administrative measures such as deposit freezes); (2) comprehensive restructuring and resolution of affected firms; and (3) actions to manage distressed assets. Recapitalization programs may come into play in the "restructuring and resolution" phase as part of authorities' efforts to restore viability of the affected institutions on a forward-looking basis, with the aim to ensure continued financial intermediation and reduce the probability of future problems.

Public solvency support should be used with great caution because of the risks involved. Cross-country experience points to substantial costs for taxpayers (Figure 1) that, in the long term, may exceed initial estimates as asset quality of supported banks proves weaker than anticipated, business models are unsustainable, and restructuring plans falter. In addition, bailouts are inherently susceptible to political pressure, risking a lack of even-handedness in how individual institutions are treated, and potentially resulting in supported institutions being pushed to pursue public objectives that undermine the commercial viability of their business models (for example, strategies that seek to foster credit growth through directed lending and support certain industries through prescribed investments). Bailouts can be difficult to unwind, because privatizations often prove challenging.⁵

Figure 1. Cost of Exceptional Public Solvency Support (Percent of GDP)



Source: Laeven and Valencia (2018).

⁵ For example, the governments of Belgium and France (Dexia), Greece (National Bank of Greece), Ireland (Allied Irish Banks, Permanent TSB), the Netherlands (ABN AMRO), and the United Kingdom (Royal Bank of Scotland, currently known as NatWest Group) continue to hold stakes in banks that were recapitalized (nationalized) during or after the global financial crisis.

III. Minimum Conditions for Exceptional Public Solvency Support

To minimize prospective fiscal risks, recapitalization strategies should be predicated on accurate and up-to-date assessments of asset quality and associated capital needs. Although under exceptional circumstances, nationalization of banks that have become severely distressed—particularly those that are systemically important—may be an appropriate policy response, authorities should always analyze the associated costs and viability prospects going forward (Enoch, Garcia, and Sundararajan 1999). Accordingly, diagnostic programs—often conducted based on supervisors' powers to gather information or commission special audits and inspections—have been an important feature of crisis management strategies before, during, and after the global financial crisis to gauge the quantum of capital shortfalls (Piris, Gutierrez Garcia and Monaghan 2019), including on a forward-looking basis. Whether the government seeks to recapitalize a single systemically important bank or establishes a recapitalization facility on a systemwide basis, a uniform and rigorous quantification of incurred and prospective losses, together with forward-looking reviews of bank viability (for example through stress tests), is imperative to design robust recapitalization strategies that minimize the risk of recurrent rounds of capital support that would compound risks for taxpayers.⁶ When laying out the terms of reference of diagnostic programs, authorities need to ensure that the exercise is undertaken on the basis of prudent assumptions (for example, with regard to projected loan losses, collateral valuations, bank profitability, and liquidity needs). Although some authorities may prefer to have their own staff conduct the assessment, participation of external parties can help underpin confidence, reduce legal challenges, and avoid overburdening scarce supervisory resources.

Identifying the origins of idiosyncratic weaknesses is also essential for designing effective recapitalization strategies. Although even well-managed banks can be overwhelmed by exceptionally severe shocks, experience shows that persistent capital shortfalls often coincide with governance, risk management, and internal control failures that result in risk concentrations, asset quality problems, and large currency and maturity mismatches. Pressures can be further exacerbated by preexisting prudential breaches, delayed loss recognition (enabling the continuation of unsustainable lending practices), and fraud (including illicit transactions with related parties). Failure to identify and address the underlying root causes of solvency problems will hamper successful rehabilitation, because the supported banks may continue to incur losses, eroding the newly injected capital and potentially resulting in a need for further support. The authorities should also address any broader macroeconomic imbalances and regulatory and institutional weaknesses that may have contributed to banking sector problems.

Cost-effectiveness should be a key consideration when designing public solvency support programs. In the event of systemic distress, national authorities need to quickly gather political support for the use of public resources, so that further destabilization, asset value destruction, and social unrest can be avoided. To minimize moral hazard, all stakeholders—including creditors, market analysts, and the public—need to be shown that the authorities' strategy seeks to minimize public sector costs. To this end, public solvency support should:

⁶ For the purposes of this note, viability is defined as the ability to remain profitable on a forward-looking basis, while maintaining compliance with capital and other regulatory requirements.

- **Be reserved for institutions whose failure, individually or as a group, pose systemic risks**,⁷ that is, those institutions that, if they were to fail, could cause widespread disruption to the provision of financial services or undermine confidence in the system at large. In practice, this could involve the idiosyncratic failure of a bank that has been identified as systemically important on an *ex ante* basis,⁸ as well as more widespread problems that jeopardize financial stability and call for systemwide solutions (for example, in view of broader contagion risks associated with cascading failures of smaller institutions). In most cases, the individual failure of a non-systemic bank would not, in principle, be eligible for government support; instead, such institutions would be resolved or liquidated, with insured depositors being protected by the deposit insurance scheme. This does not mean, however, that support should never be directed to institutions that have not been explicitly identified as systemically important on an *ex ante* basis, because the failure of institutions not previously identified as such could—under exceptional circumstances—still pose systemic risks; see, for example, the nationalization of Northern Rock in 2007 by the United Kingdom’s government or the protection of all depositors that was extended by the United States’ authorities in connection with the failure of Silicon Valley Bank in 2023.
- **Be predicated on loss allocation to former owners and, if possible, junior creditors.** To ensure that existing owners are duly incentivized to seek as much private capital as possible, decisions to provide solvency support should be informed by burden-sharing considerations. In practice, loss allocation to existing shareholders can be effected through dilution, commensurate with the magnitude of the losses sustained, whereas existing hybrid instruments should be converted or written down in accordance with their contractual provisions. Additional efforts involving bank creditors, for example, through debt-to-equity swaps, may need to be explored—possibly on a voluntary basis—as a precursor for government support.⁹
- **Where possible, be designed to allow for concurrent private sector investments.** Encouraging private sector investments can reduce upfront costs for taxpayers and improve restructuring prospects (as private sector investors will have strong incentives to ensure that the supported bank is rehabilitated). In practice, the government’s willingness to provide support can be confidence-enhancing and may thus help solicit private sector interest. Underwriting commitments from the government can help improve prospects for a successful public share offering, because the government’s involvement could be seen as reinforcing future viability. Enabling private investors who join recapitalization efforts to eventually acquire the government’s stake (for example, through call options or rights of first refusal)

⁷ In this note, we follow the generally accepted definition for systemic risk, that is, “the risk of disruption to the flow of financial services that is (i) caused by an impairment of all or parts of the financial system; and (ii) has the potential to have serious negative consequences for the real economy.” See, for example, the joint Guidance from the IMF, Bank for International Settlements, and FSB (IMF 2009) issued to the G20 in October 2009, *Guidance to Assess the Systemic Importance of Financial Institutions, Markets and Instruments: Initial Considerations*.

⁸ For example, based on the principles suggested by the Basel Committee on Banking Supervision for the identification of the domestic systemically important banks (BCBS 2012), incorporated in the Basel Framework as Chapter SCO50.

⁹ In the Spanish recapitalization program, for example, a haircut was applied to the nominal amount of the hybrid instruments and subordinated debt issued by supported banks, prior to conversion of the residual into shares or long-term debt of the institutions. The holders of subordinated debt (which enjoyed a higher market value than hybrid instruments and perpetual subordinated debt) were allowed to reinvest their remaining amount in a senior debt product, with an identical maturity to the affected subordinated debt, and an annual 2 percent coupon payable on maturity. As a very significant volume of the hybrid instruments affected had been marketed to retail investors (around 70 percent), additional measures were put in place to compensate retail investors who were often unaware of the risks associated with their investments. As a result of the burden-sharing exercise, the amount of public support needed was reduced by about 25 percent. The European Commission Banking Communication, governing the application of state aid rules to support measures for the banking sector, explicitly requires burden sharing by shareholders, subordinated creditors, and investors in hybrid capital instruments, either through conversions into Common Equity Tier 1 or as write-downs of principal.

can also improve market incentives.¹⁰ When opting for a recapitalization that leverages public and private sources, enhanced supervisory scrutiny is needed to ensure that banks are not “round-tripping” capital by providing financing to external investors. Moreover, dividend policies of the supported bank need to balance the importance of earnings retention (to further strengthen financial soundness) with investors’ commercial interests (who will be discouraged to invest if the bank is unable to distribute profits).

- **Not introduce unfair competition into the financial sector.** The provision of public solvency support should not lead to the sudden transformation of a failing bank into a privileged institution that is granted special benefits that are not available to others (for example, through substantial overcapitalization, excessive liquidity infusions through placement of large government deposits, measures to offload nonperforming loans at off-market prices, or government guarantees) or otherwise benefit from special treatment (for example, regulatory forbearance, reduced supervisory scrutiny).¹¹ Such privileges will ultimately increase costs for the government and make it more difficult for privately owned banks to compete on equal terms. On the other hand, care needs to be taken that policies to minimize competitive distortions do not result in undue restrictions that hamper the bank’s rehabilitation.

Clear legal mandates that are well integrated into the overall public financial management framework should underpin the provision of public solvency support. Although governments are generally able to enter into contracts (and, thus, acquire rights and make binding commitments), legal or constitutional provisions may constrain timely action—for example, by capping the number of shares that can be purchased in privately owned companies, or requiring a specific legislative basis before public funds can be deployed. In addition, consideration will need to be given to corporate law requirements (for example, for authorizing equity issuances and treatment of pre-emption rights) and regulatory approvals (for example, change of control and registration requirements). Country authorities—with the support of IMF staff—often prefer constructive ambiguity over “standing” recapitalization powers, primarily to curb moral hazard, and the appropriation of public resources should be governed by public financial management frameworks that address (1) budget formulation, (2) execution, (3) accounting and reporting, (4) fiscal risk management, and (5) audit. In the absence of standing authorizations, governments may need to rely on supplementary budgets, possibly approved on an expedited basis. More broadly, risks associated with public solvency support underscore the importance of proactive monitoring of financial sector risks, not only by prudential supervisors but also as part of a broader collaboration between central banks, supervisory agencies, and ministries of finance. Proactive fiscal risk management by the latter—including through public financial management systems, and cash and debt management strategies—is an important step to enhance crisis preparedness, particularly when financial sector risks are mounting.

The development of credible restructuring plans should be a key plank in the authorities’ recapitalization strategy. This typically requires the identification of timebound measures aimed at cost reduction, restructuring of nonprofitable operations, disposal of noncore assets, improvement of key operational processes (loan origination, debt workouts, and so on), and management information systems. To be credible, plans should be supported by financial projections for income and expenditure, balance sheet

¹⁰ A right of first refusal is a contractual right that provides a counterparty with the opportunity to enter into a business transaction before anyone else can. It is only after the holder of the right of first refusal declines to do so that the obligor is free to entertain other offers. Rights of first refusal are often used in joint venture arrangements, enabling partners to acquire each other’s stakes, should one of them decide to exit, but they can also be used in shareholder agreements to allow existing shareholders to increase their stake before bringing in new shareholders.

¹¹ The EU legislative framework (notably Article 107(1) of the Treaty on the Functioning of the European Union prohibits any aid granted by a Member State that distorts or threatens to distort competition by favoring certain undertakings. Detailed provisions on the treatment of state aid to banks can be found in the European Commission’s Banking Communication (EC 2013), issued in July 2013.

items, cashflows, and key regulatory ratios, with underlying assumptions clearly spelled out. Measures to entrench viability should be taken as soon as possible, even if they generate near-term losses (for example, costs associated with divestitures, redundancy plans, and information technology investments), to minimize the risk of recurrent interventions. In some cases, the creation of a noncore unit can help facilitate the orderly wind-down of nonstrategic (and possibly distressed) assets by dedicated teams, thus ensuring that the complexity of such processes does not distract senior management from its core focus on strengthening primary businesses. By improving profitability over the medium term, restructuring plans can also enhance cost recovery prospects for the government, and thus reduce the need for ex post loss recovery from the industry.¹²

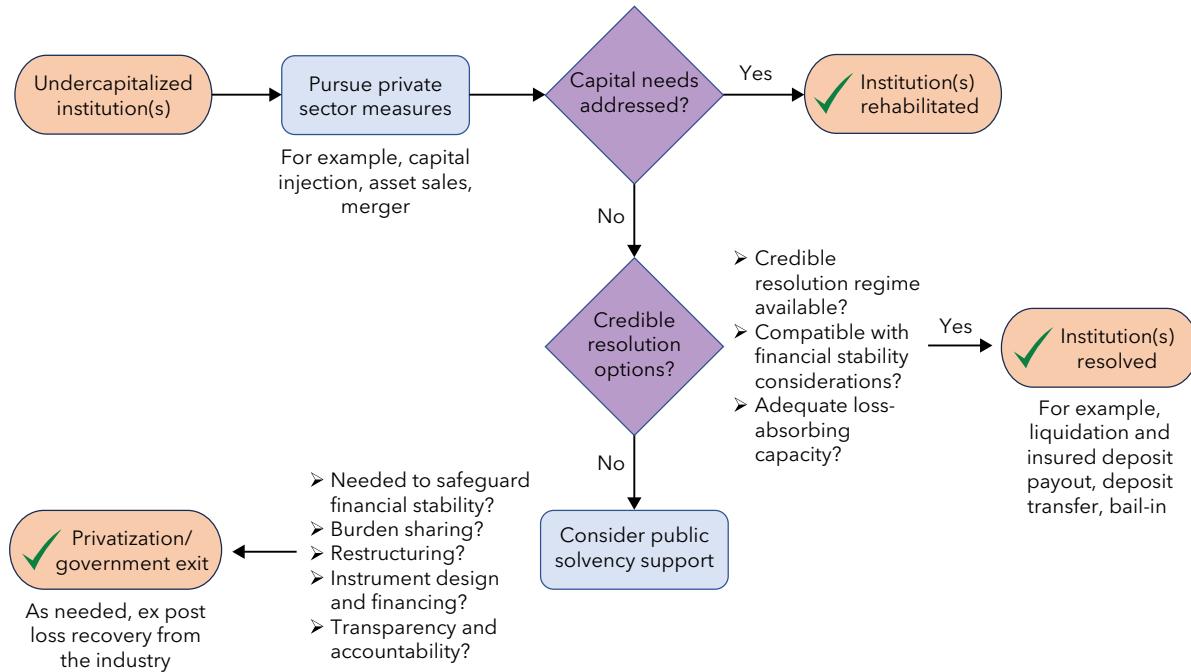
In general, management changes can put supported banks on a safer footing. Conveying the bank's turnaround strategy to prospective investors, counterparties, and clients will be difficult if questions about the suitability of the bank's management continue to loom over its restructuring. Hence, changes to boards of directors and senior management are typically necessary to ensure a clear demarcation between the period of distress and the government-supported rehabilitation phase—although a staggered transition may be justified to ensure continuity while preparing a restructuring plan. As discussed in Section V, professional management, including independent board members, should lead the recipients of public solvency support to insulate day-to-day operations from political interference, and management can focus on commercially sustainable operations. Practices and frameworks for effective governance and risk management are critical for improving performance and maximizing prospects for a successful rehabilitation.

Sound governance of recapitalization decisions is another critical success factor. Good practices call for a high-level interagency committee to coordinate decision making (Figure 2 provides a stylized decision tree) and enhance efficiency of the recapitalization process. At a minimum, it should include (1) the Ministry of Finance (typically in the lead on mobilizing public funds for financial sector support),¹³ (2) the supervisory agency (responsible for the assessment of capital needs and bank viability), and (3) the central bank (which may need to provide liquidity support as the recapitalization process unfolds). Moreover, pertinent information about the recapitalization modalities may need to be shared with foreign counterparts to ensure that their implications are duly understood and local regulatory requirements can be complied with (for example, change of control requirements of foreign subsidiaries of the recapitalized entity if the government obtains a controlling equity stake). For large recapitalization programs, technical working groups could be established under the high-level committee to handle specific issues (asset valuation, contract negotiation, communications with stakeholders, and so on). Given the associated complexities, support from external experts (for example, transaction advisory services, legal support) is advisable. In practice, interagency financial stability committees can provide a useful forum for information-sharing and collaboration among all stakeholders.

¹² In line with the overarching objective of preventing losses for taxpayers, unrecoverable expenditures incurred by the government (for example, because of unsatisfactory privatization proceeds) should be shouldered by the industry at large through ex post loss allocation (for example, through a financial stability levy). Also see KA 6.5.

¹³ It would also be incumbent upon the Ministry of Finance to consider when and how parliament should be involved in the process, as the deployment of public funds would typically require approval by the legislature, for example, by way of amended budget allocations. In this regard, a balance will need to be struck between early engagement—which can prove useful to avoid costly delays—and efforts to maintain strict confidentiality.

Figure 2. Stylized Decision Tree for Exceptional Public Solvency Support



Source: IMF staff analysis.

Irrespective of the program's modalities, bank ownership should be the exclusive responsibility of the government and not involve other safety net participants. Temporary government ownership is commensurate with the use of government resources and can help minimize potential conflicts of interest when a supervisory agency, the deposit insurance scheme, or the central bank acquires bank shares. Supervisory agencies face conflicts of interest when they need to enforce prudential rules on—and take supervisory measures against—entities that they own; providing insurance coverage to entities in which they hold financial stakes presents conflicts for the deposit insurance scheme; and central banks may become conflicted if an institution they own requires liquidity support. Moreover, bank ownership exposes the deposit insurance scheme and the central bank to losses that can undermine their financial soundness and negatively affect their credibility (Moretti, Piris, and Dobler 2020). If ownership arises despite best practices—for example, a central bank providing equity capital to a distressed bank to address near-term financial stability risks while budgetary appropriations are ongoing—shares should be transferred to the government as soon as possible, with full compensation for any losses incurred because of the execution of the transaction. In such circumstances, the government should cover potential losses that may accrue before such a transfer materializes.

Proper inclusion of public solvency support in government statistics is important to ensure transparency and enable consistent analyses of fiscal risks. For solvency support provided through equity participation, statistical treatment would hinge on whether the government can expect to realize a realistic return on its investment. If a realistic return can be expected, that is, through dividends or likely gains at the time of divestiture (which can be difficult to gauge at times of crisis), the government would record an increase in financial assets (that is, the equity acquired) and either a decrease in deposits or an increase in liabilities (depending on how the transaction is financed). In this case, the transaction would have no effect on the deficit but could increase gross government debt. However, if no such return can be expected,

the transaction would be treated as a capital transfer that would need to be reflected in the government deficit.¹⁴ Substantial doubt about the long-term viability of the supported institution(s) would warrant a classification of capital transfer.¹⁵

To ensure accountability, potential wrongdoing at supported banks should be duly investigated and steps taken to recoup any illicitly extracted funds. Former owners and management, along with professional service providers (for example, auditors, law firms) should be investigated for culpability in the bank's losses and pursued for restitution, if found at fault—although legal mechanisms for holding bank managers accountable may differ, based on the circumstances at hand and the legal (criminal and civil) tradition in the country. Unless it is beyond any doubt that the capital needs were wholly caused by exogenous factors (for example, an exceptional event driving up credit losses), initiating a comprehensive forensic audit should be one of the first priorities of the bank's new management. Customers and accounts that are reportedly associated with illicit activities, including money laundering and corruption, should be submitted to the competent authorities for potential prosecution, so that the bank's operations, going forward, are not associated with (the perception of) criminal behavior. Furthermore, the national banking authorities need to ascertain that any remaining shareholders are fit and proper, and to ensure that their continued involvement does not jeopardize the execution of the bank's restructuring strategy. Transparency on the estimated cost of the public solvency support and any recoveries realized, including through periodic fiscal risk statements, is crucial for accountability to taxpayers.

A review of the events that led up to a bank's failure is advisable to draw lessons that may help prevent recurrence. The review, conducted by independent experts, should identify structural weaknesses in the bank's business model, its governance, and its risk control infrastructure—with the aim to draw lessons that could help prevent recurrence in other institutions—and to assess the culpability of senior management. The supervisor should also closely evaluate its own supervisory activities in relation to the banks, so that potential improvements to supervisory procedures, the reporting framework, and instruments for early intervention can be identified. Depending on the severity of the issues, the preparation of a comprehensive action plan for strengthening supervision may be necessary.

¹⁴ See para. A3.49 *et seq* of the IMF's *Government Finance Statistics Manual* 2014 (Government Finance Statistics Manual).

¹⁵ Also see IMF Special COVID-19 Note on how to record government policy interventions in fiscal statistics (IMF 2020), published in April 2020. Also see Arslanalp and Liao (2015), for a discussion of contingent fiscal liabilities that can arise from bank failures.

IV. Support Modalities: Equity and Other Instruments

A government may support a bank's solvency through several means. Amid a systemic crisis, governments have various options to support distressed banks, each presenting different risk-reward trade-offs. Assisted mergers, for example, can help achieve continuity of critical functions with limited upfront costs for taxpayers but may set the stage for larger problems down the line as envisaged synergies may prove hard to realize, too-big-to-fail concerns are exacerbated, and competition is adversely affected. Direct acquisition of problem assets by the state, another policy option, exposes the government to future losses (as the assets may continue to underperform) and the selling bank to moral hazard, especially if transfer prices were set too high (Otero, Hayashi, Ponce, and Dobler 2024). Neither type of intervention provides assurances that the supported bank will be managed prudently going forward, because opportunities to impose conditionality or otherwise influence the bank's behavior are limited. Direct recapitalization, on the other hand, can provide the government with greater control over the rehabilitation of the supported bank, provided the recapitalization modalities are carefully designed. In particular, the design of a bank restructuring program should factor in the risks arising from direct government involvement and should protect taxpayers while minimizing moral hazard.

In many cases, equity investments may provide a straightforward and transparent approach for channeling support to eligible banks. In essence, equity capital (Common Equity Tier 1) represents the portion of banks' assets that is not committed to the repayment of outstanding liabilities and, therefore, acts as a buffer to absorb an unexpected decline in the value of assets or increase of outstanding liabilities. It carries no requirement to be paid back, is not remunerated (although shareholders may benefit from dividend payments if profits are realized), and has the lowest repayment priority in bankruptcy. From a recapitalization perspective, relying on equity instruments helps strengthen the bank's capital base with high-quality (fully loss-absorbing) instruments, although simultaneously enabling the government to determine key decisions, after recapitalization, through the use of its shareholder powers—for example, appointment of board members, approval of mergers and acquisitions, and determination of dividend and remuneration policies (although, as noted later, such powers need to be used judiciously). Moreover, the prospect of eventually divesting the shares provides the government with a clear "exit" scenario. Equity recapitalizations are particularly relevant when losses have already been incurred, and banks need an immediate infusion of cash to regain market confidence.

Specific circumstances may call for different trade-offs between economic ownership and voting rights. Considering the desired composition of banks' capital structure, options for the government to best preserve value on its investment, and reputational aspects associated with government ownership, authorities may need to choose between acquiring common shares and using capital instruments that do not provide voting rights. In both cases, the government would obtain an economic interest in the institution, but the latter would leave control of the institution unchanged; an outcome that may be preferred if authorities are keen to avoid placing distressed banks under government control. For example, the Capital Purchase Program established under the United States' Troubled Asset Relief Program provided for investments by the US Treasury in preferred stock of more than 700 financial institutions (CBO 2021).^{16,17} Limiting

¹⁶ More than one-third of the total Troubled Asset Relief Program funding (that is, \$250 billion out of \$700 billion) was allocated to the Capital Purchase Program, with \$204.9 billion invested. Also see Calomiris and Khan (2015) and <https://home.treasury.gov/data/troubled-assets-relief-program/bank-investment-programs>.

¹⁷ Preferred shares generally take precedence over common stock in the event of liquidation. Most preference shares have a fixed dividend, but some variants exist, including *cumulative* preferred stocks, which enable preferred dividends to continue to accrue until profits are realized, and *convertible* preferred stocks that allow shareholders to convert their preferred shares into common shares at a certain point in time.

the government's voting rights can help alleviate concerns of private investors about political interference, but such options should only be considered if there are sufficient assurances that public and private incentives are duly aligned and private investors remain committed to pursuing sustainable value for all stakeholders (for example, no short-term profit maximization). In practice, regulatory considerations will also play an important—and often more pressing—role in designing the recapitalization approach, given strict eligibility criteria for regulatory capital purposes.¹⁸

During the global financial crisis, recapitalization through contingent convertible capital instruments gained traction as a means of providing support on a precautionary basis, although Additional Tier 1 (AT1) instruments' going-concern loss absorbency continues to be untested.¹⁹ These instruments mostly helped address banks' potential capital needs arising from stress-testing scenarios, although actual capital shortfalls (for example, identified through asset quality reviews) were addressed with common equity instruments. The use of contingent convertible capital instruments—which can be structured as AT1 or Tier 2 capital instruments—could have several benefits,²⁰ but they need to be designed carefully to ensure that operational complexities can be effectively managed and the instruments can fulfill their loss-absorbing role.²¹ However, in most jurisdictions, the going-concern loss absorbency of AT1 instruments continues to be untested. Although shareholders may prefer to strengthen banks' LAC through nondilutive instruments—as doing so would not, or at least not immediately, impair their voting rights—such instruments are not suitable when significant losses have already materialized or are likely to materialize soon, nor when recipient banks lack the necessary revenues to pay the expected remuneration. In fact, if perceived negatively, conversion could trigger a liquidity squeeze because market participants may interpret such an operation as evidence of structural fragilities that the bank was otherwise not able to overcome. Table 1 summarizes the trade-offs of different instruments.

¹⁸ The Basel III framework, originally adopted by the Basel Committee on Banking Supervision in 2010, seeks to ensure that banks are better positioned to withstand losses in times of stress. Among others, it emphasized that banks' predominant form of capital should be common shares (or its equivalent in the case of non joint stock companies) and retained earnings; preferred shares would typically not qualify as the so-called "Common Equity Tier 1" but could qualify as AT1 or AT2 capital. Further details can be found in the Basel Committee on Banking Supervision's "Definition of Capital" (https://www.bis.org/basel_framework/standard/CAP.htm) standard.

¹⁹ Originally, contingent convertible capital instruments were introduced as hybrid instruments designed to absorb losses through conversion into equity or write-down if a preidentified (and contractually agreed) capital trigger is breached.

²⁰ Contingent convertible capital instruments, for example, may act as a tax shield, as they are treated as debt for tax purposes in many countries. Also see Pazarbasioglu, Le Lesle, Moore, and Zhou (2011) and Avdijiev, Kartasheva and Bogdanova (2013).

²¹ The flexibility allowed by the Basel standards has resulted in notable differences in the implementation of AT1 instruments across jurisdictions including variations in rules for calls, dividend stoppers, accounting classification, and predefined loss absorption mechanisms. Although all jurisdictions mandate point-of-nonviability provisions, practices diverge in the sequencing and type of write-downs or conversions, with some requiring Common Equity Tier 1 (CET1) instruments to be wiped out or heavily diluted before AT1 and Tier 2, whereas others permit full AT1 write-offs even when CET1 retains positive value. In addition, some jurisdictions restrict mechanisms to equity conversion, whereas others favor permanent write-downs. Although debt-to-equity conversions and write-downs can be used to achieve similar effects, legal implications may be distinctly different with the former, for example, potentially constituting an offer of securities that may require prior registration or trigger prospectus requirements.

Table 1. Pros and Cons of Different Recapitalization Instruments

	Advantages	Disadvantages
Common equity	Underpins confidence by providing the bank with a capital infusion of the highest quality	Absent arm's length mechanisms for shareholder management, direct control by the government may result in public sector interference in day-to-day operations
	Immediate burden sharing with private sector through dilution of existing shareholders	No meaningful recoveries until divestitures take place, because common shares are not remunerated
	Voting rights provide the government with greater influence over the bank's strategic direction	Difficult to unwind if market conditions do not improve
	Share divestitures provide the government with a transparent exit mechanism	
Convertible debt instruments	Greater flexibility as terms of the instrument can be negotiated (subject to prudential requirements)	Utilization not practicable after loss crystallization as regaining market confidence may hinge on the steps to strengthen the bank's common equity
	Can help dispel concerns associated with direct government control	Nondilutive nature leaves control of the bank in the hands of original shareholders, undermining accountability and public support
	Financial upside for the government through interest payments	Additional costs for the supported bank may complicate its rehabilitation

Whatever option is selected, governments placing banks under temporary public ownership should initiate divestitures as soon as market conditions allow. Although reprivatization should aim to ensure an adequate return on the public funds, the overarching objective should be to return the bank to private ownership as soon as market interest (re)emerges, even if that means that some market value is sacrificed in the divestiture process. Care should be taken, however, that divestitures are effected in accordance with best practices, especially regarding transparency and fair competition. Privatization options that can be considered include equity sales in the domestic or international capital markets, as well as private sales, although the former are typically only considered for more developed markets (Bertay and others 2020).

V. Governance of Temporary Government Investments in the Financial Sector

Independent and professional representation of bank shares temporarily held by the government is important to achieve a timely transfer back to private ownership. A key challenge in the relationship between a recapitalized bank and the government relates to the delicate balance between operational independence of the supported banks and their accountability to the government. In fact, public banks are inherently more vulnerable to political pressure, because the government may, directly or indirectly, seek to influence public banks' day-to-day activities, possibly resulting in activities that do not generate appropriate returns or generate considerable credit and market risks—for example, stemming from large-scale infrastructure or project financing—and as a result, may erode the bank's financial viability over the medium term (Adams, Aydin, Chon, Morozova, and Iskender 2022).²² A clear delineation between the government's socioeconomic objectives and its role as commercial shareholder is necessary to maintain the legitimacy of its actions and to improve prospects for a successful divestiture over the medium term through arm's length ownership.

It is good practice to establish transparent arrangements for exercising the government's shareholder rights on a commercial and arm's length basis. Although detailed modalities may differ across countries, the two main options pursued entail the establishment of a holding company-type structure that seeks to ensure that the government's shareholder rights are exercised on a commercial basis and the establishment of a dedicated unit within a government ministry (typically the Ministry of Finance) that is tasked to advise on matters pertaining to bank ownership (Adams, Aydin, Chon, Morozova, and Iskender 2022). Box 2 offers further details.

BOX 2. A Closer Look at Shareholder Management Arrangements

Cross-country experience highlights good practices for formalizing the relationship between the government and supported banks.

- **United Kingdom.** The responsibility for managing the government's shareholding in the financial institutions that were acquired as part of a range of interventions designed to restore economic and financial stability was initially entrusted to UK Financial Investments (UKFI), a government-owned company established in November 2008. UKFI was tasked with managing the government's investments on a commercial basis, with the aim being to protect and create long-term value for the taxpayer, while giving due regard to other policy considerations, including financial stability and competition. Its board comprised a chairman, a chief executive, and six nonexecutive directors. In 2018, the operations of UKFI were transferred to UK Government Investments (UKGI), a new government-owned company created in 2015 to take on the functions and operations of the Shareholder Executive. UKGI continues to operate based

²² Staff analysis suggests that public banks tend to have lower financial soundness indicators and weaker performance than private banks, findings that are corroborated by various studies on the impact of state ownership on bank performance. See Adams, Aydin, Chon, Morozova, and Iskender (2022).

on similar principles as UKFI in relation to assets taken on as a result of the global financial crisis, with a mandate to manage investments on a commercial basis while pursuing orderly disposals.

- **Greece.** The Hellenic Financial Stability Fund (HFSF) was established in July 2010, with the objective of contributing to the stability of the Greek banking system in the public interest. It is wholly owned by the state but enjoys administrative and financial autonomy, with a two-tier management structure that largely comprises independent professionals. In pursuing its objective, the HFSF monitors the performance of the supported banks (Alpha Bank, Eurobank, National Bank of Greece, and Piraeus Bank), although ensuring that they operate on market terms and are returned to private ownership in an open and transparent manner. Principles governing the relationship between the HFSF and the supported banks have been documented in Relationship Framework Agreements that, among others, underscore the HFSF's commitment to respect the banks' business autonomy and avoid actions that could prevent, restrict, or distort competition. The supported banks, on the other hand, have agreed to adopt best practice frameworks for corporate governance and to seek the HFSF's consent on certain issues (for example, amendments of their restructuring plans and remuneration policies).
- **Ireland.** The management of the government's shareholdings and investments in the financial sector (Bank of Ireland, Allied Irish Banks, and Permanent TSB) has been allocated to the Shareholding and Financial Advisory Division of the Department of Finance, which is responsible for monitoring the banks' performance, protecting the government's shareholder rights, and advising the minister on privatization strategies. As per the Relationship Framework Agreements signed with each of the banks, the minister does not intervene in the banks' day-to-day operations but is entitled to receive periodic briefings on the achievement of their business plans.
- **Israel.** During the bank stock crisis of 1983, the Israeli government designed a set of safeguards that sought to counteract government involvement in the day-to-day management of banks placed under its control, without the additional overhead associated with institutional structures. The approach taken resulted in the establishment of multiple committees, for example, a public committee, comprising experts appointed by the Minister of Finance, which in turn appointed members of independent shareholder committees tasked with executing the government's shareholder responsibilities, including the nomination of board members for the banks. The shareholder committees were instructed to exercise their voting rights at their own discretion, except for proposals that would weaken the rights attached to the governments' shares and their transferability, which the committee members were directed to oppose. Committee members were subject to competence and independence standards and could not serve on more than one committee. Divestiture decisions remained under the purview of the Minister of Finance and share transactions could not be pursued without explicit written instructions.
- **Ukraine.** To ensure that its banking sector investments are managed on a commercial basis, the Ukrainian government has entrusted the oversight of state-owned banks to a dedicated Shareholder Management Unit within the Ministry of Finance. To strengthen corporate governance in state-owned banks, the ministry has sought to establish supervisory boards with a two-thirds majority of independent members. The Banking Law provides important safeguards that seek to ensure operations at arms' length, for example, by outlining the state's responsibilities as shareholder; specifying eligibility criteria for supervisory board members (two-thirds of whom need to be independent); prescribing the process for the competitive selection of supervisory board members; and specifying dismissal criteria. In addition, the government (as

represented by the cabinet of ministers) has entered into relationship agreements with the banks that underscore their operational autonomy; address the provision of information by the banks' supervisory boards; establish communication protocols; provide principles for the remuneration of the banks' managers; and elaborate on the annual assessment of the supervisory boards.

Sources: Country authorities; and UKGI, HFSF, Ireland's Department of Finance, and Ukraine Ministry of Finance websites.

Irrespective of the legal ownership structure, the statutory framework governing the shareholding management entity should prioritize the preservation of the supported banks' operational independence. Concrete measures to ensure independence include (1) the establishment of framework agreements between the entity and the banks that define, and clearly limit, modalities for periodic interaction and reporting (which is particularly delicate if there are minority shareholders); and (2) arrangements for the selection of executive board members of the supported banks. Moreover, the functioning of the shareholder management entity itself should be supported by clear understandings with the government on, among other things, the composition of its board (ideally with a board majority comprising independent members, and no government officials in executive roles), and procedures for selecting and appointing board members. Agreements guiding the relation between shareholder management entities and the government should seek to regulate which strategic decisions would require government approval, including those that relate to the divestiture strategy.²³ Transparency on the performance of the shareholder management entity and the achievement of its objectives (in qualitative and quantitative terms, for example, performance of shareholder responsibilities and realization of recoveries) is crucial to ensure accountability to taxpayers.

Professional management and independent board members can help enhance value generation at state-supported banks. Shielding senior management from political pressure helps prevent unprofitable or excessively risky activities at supported banks that will discourage private sector investors from eventually taking over the institution. Instead, supported banks should aim to improve their medium-term marketability to domestic and foreign investors by competing on market terms, acting in good faith, and avoiding protracted reliance on the government. A management team with clear reprivatization goals will ensure that the institution under their responsibility aims to maintain financial ratios in line with those of other banks, thus protecting the bank's reputation and reducing the need for potentially onerous restructuring by future owners. Board members who operate independently from the government can provide an important safeguard against political interference and conflicts of interest that may otherwise become entrenched at the institution. As identifying suitable managers and board members can be challenging, especially under time pressure amidst impending distress, relevant authorities may want to maintain lists of potential candidates as part of their crisis management binders. Transparent nomination and dismissal processes, together with clearly outlined roles and responsibilities of board members, including ex officio members, in board charters can help reinforce corporate governance and accountability.²⁴

²³ Although it is not advisable to prescribe mandatory divestiture periods, given that transactions will need to be guided by market conditions, the government and board of the shareholder management entity should seek to ensure consensus on the broad timeframe and modalities of "exit" strategies.

²⁴ Governance frameworks should be duly aligned with international best practices, for example, the Basel Committee on Banking Supervision's Corporate Governance Principles for Banks (BCBS 2015) and the G20/Organisation for Economic Co-operation and Development's Principles of Corporate Governance (OECD 2023). Also see Annex 2 of Adams and others (2022).

To prevent misspending of scarce public resources, remuneration modalities of supported banks should be designed to curb excessive risk taking. As the global financial crisis illustrated, compensation practices can amplify risk taking by rewarding short-term profits over prudent risk management. In response, policymakers have sought to address unsound compensation programs and emphasize that financial firms should exercise good stewardship by boards of directors of their compensation practices and alignment of compensation with prudent risk taking (see Box 3).²⁵ Introducing sound compensation practices is particularly important in order to encourage a healthy risk culture and support the legitimacy of the support operation through demonstration that public funds are being prudently used. At the same time, supported banks should not be placed under limitations that preclude them from attracting and maintaining talent, because this could undermine financial performance and prevent the government from maximizing the value of its investment. Rather than imposing caps on remuneration and transposing salary limits for public officials to supported banks, governments should seek an effective alignment of compensation practices with prudent risk management and pursue timely and comprehensive disclosure of remuneration policies.

BOX 3. Remuneration Reforms in Practice

When gauging the appropriateness of remuneration policies, insights from the FSB's progress report on the effective implementation of the Principles for Sound Compensation Practices and Implementation Standards, can serve as a useful starting point (FSB 2021).

- **Governance mechanisms.** Robust oversight and involvement of independent control functions (for example, human resources, risk management, compliance, and internal audit) are critically important to ensure the effectiveness of remuneration policies. Independent Compensation Committees, comprising nonexecutive directors, can help reinforce such governance mechanisms, including by establishing and monitoring banks' overall compensation systems. Control functions can provide input to relevant board committees on quantitative and qualitative criteria used for aligning variable remuneration with banks' risk appetite frameworks, and otherwise advise on how to respond to risk events that could trigger clawbacks or negative adjustments ("malus") to variable compensation.
- **Measurement of performance.** Financial metrics used to determine variable compensation should be duly risk-adjusted, for example, risk-adjusted return on capital and return on capital. Moreover, compensation frameworks should incorporate risk indicators for asset quality (nonperforming loans), capital adequacy, liquidity, and revenue volatility. Nonfinancial metrics should also be considered (for example, data on operational incidents, findings of regulatory examinations and audit reports, and customer complaints). Although the FSB's progress report highlights some successful applications of clawback, legal challenges—ranging from challenges in proving culpability to costs of legal action potentially exceeding the amount due for recovery—may still be considerable, especially for older contracts that lack explicit clawback mechanisms.

²⁵ See, for example, the Principles for Sound Compensation Practices, issued by the Financial Stability Forum in April 2009 (FSB 2009) and the Supplementary Guidance to the afore-mentioned Principles (FSB 2018). Also see the European Banking Authority's Guidelines on Sound Remuneration Policies (EBA 2021), issued in July 2021.

- **Aligning compensation and risk taking.** To ensure that risk taking is duly aligned with long-term objectives for value creation, a mix of instruments (for example, cash and shares) is generally preferable. Variable components should be subject to in-year ex ante adjustment and deferral (for example, three to five years), with the possibility to make ex post changes in case of misconduct and material breaches of risk management policies or other internal requirements. CEO and CRO compensation, in particular, warrants close attention.

Linking compensation with the realization of market value will help align incentives of senior management and staff with the government's reprivatization objectives. A substantial proportion of variable compensation could be awarded in shares or share-linked instruments (for example, warrants) that vest upon successful transfer of the bank to the private sector. Thus, policymakers would ensure that incentives remain duly aligned with the aforementioned initiatives that seek to promote sound and effective risk management through remuneration practices in the financial sector. Clawbacks should be considered if bank performance lags or actions are not aligned with long-term value creation and prudent risk taking. The provision of public solvency support should trigger a review of the compensation structures of highly paid employees to ensure that they are compatible with desired risk outcomes.

Maintaining supervisory independence is critical for effective oversight of state-owned institutions. Like other state-owned banks, institutions that have benefited from public solvency support should be subjected to the same supervisory scrutiny as privately owned institutions of comparable size and complexity. There should be no erosion of supervisory standards and powers, and prudential requirements based on public ownership, and board members of banks placed under government control should meet the same fit and proper requirements that apply to other institutions (Adams, Aydin, Chon, Morozova, and Iskender 2020).

Oversight of the restructuring measures should feature prominently in the prudential supervision of banks benefiting from public solvency support. Consistent with the overarching objective of safeguarding financial stability, supervisors should ensure that vulnerabilities that may have contributed to capital shortfalls are addressed decisively, including through comprehensive restructuring of the bank's operations. Among others, supervisors should closely scrutinize the realism of restructuring plans (including under stressed conditions) and maintain a close dialogue with bank's management, its board of directors, and internal and external auditors about the effectiveness of its risk control environment and the sustainability of its business model, after recapitalization. Implementation delays or broader concerns about the robustness of the measures taken by the bank should be promptly escalated, with bank management required to take corrective actions as needed.

Transparency is important to underpin accountability. Considering that effective governance is predicated on the timely provision of relevant information, public banks should be subject to the same disclosure requirements as those applicable to private banks (Adams, Aydin, Chon, Morozova, and Iskender 2020). In practice, government may have valid reasons to be even more demanding of the banks they own, especially regarding the relationships between the bank and the state (for example, in connection with lending to state-owned enterprises). Similarly, it is good practice for governments to publish the details of any public support arrangements, with additional safeguards put in place to approve, monitor, and track how the government funds are used.

VI. Financing Options for Public Solvency Support

A well-designed financing strategy is key to the effectiveness of a recapitalization strategy. How much a recapitalization strategy can help restore confidence depends on its credibility. Relevant factors include the government's ability to absorb fiscal costs (a reflection of preexisting debt levels), sophistication and depth of capital markets (if recapitalization hinges on issuance or placement of debt instruments), and the strength of the country's institutional arrangements (notably, for monetary policy, exchange rate management, and prudential supervision) (Honohan 2001). The probability of realizing recoveries (privatization prospects and ability to recover nonperforming loans) could also play a role, because it is an important input for the estimation of net recapitalization costs.

Decisions on bank recapitalization entail a difficult balancing act between the government's financing capacity and the needs of the supported bank. Often, financing constraints for the government form an important consideration, fueled by difficult fiscal trade-offs if government finances are also adversely affected by other shocks, for example, through a reduction in tax revenues or higher expenditures associated with a slowdown of the economy at large. Trade-offs are particularly complex in sovereign debt restructuring scenarios, with a restructuring of domestic debt potentially giving rise to sizable bank capital needs that, at least in part, may require fiscal support—for example, in case of state-owned banks or risks of widespread confidence shocks if banks were to fail (Breuer, Ilyina, and Pham 2021). As argued in the following section, opportunity costs associated with the use of cash buffers for recapitalization purposes need to be carefully considered, factoring in the challenges associated with (re)building such buffers through new borrowing at a time when market access may have been lost or borrowing costs are spiking. At the same time, the government's preferences need to be carefully weighed against the medium-term viability of the supported banks.

Cash-based solvency support is clearly preferable and required under Basel capital rules. It provides troubled institutions with an instant infusion of liquidity, enabling recipients to promptly meet any obligations (including potential withdrawal requests), although it provides maximum flexibility as far as subsequent investment decisions are concerned. In practice, banks confronted with (large) capital shortfalls are often also liquidity constrained, with (the perception of) financial fragilities reducing access to the interbank market or prompting deposit withdrawals. Providing such institutions with noncash instruments undermines their ability to channel credit to the economy and meet deposit withdrawals. Bond-based recapitalizations reinforce the sovereign-bank nexus by increasing government securities in bank balance sheets, and are at odds with Basel standards, which among other issues preclude banks from directly or indirectly funding the purchase of their capital instruments.²⁶

In practice, cash-based recapitalization may not be feasible when governments have limited cash buffers and lack market access. Withdrawing government deposits may generate liquidity pressures elsewhere in the system, and rapid asset divestitures may not be possible or entail fire-sale losses. Similarly, mobilizing resources through bond issuances may not be feasible because of market dislocations, or prove excessively costly, with investors demanding higher returns in view of perceived risks to debt sustainability. These challenges are likely to be significant in a systemic crisis, even more so in countries with underdeveloped capital markets.

²⁶ See Definition of Capital (CAP) in the Basel Framework (Section 10.8). Concerns may also arise in connection with the requirement that capital instruments are fully paid, as the accompanying FAQ explains that "paid-in capital generally refers to capital that (. . .) does not directly or indirectly expose the bank to the credit risk of the investor."

Governments that face severe fiscal constraints have sometimes turned to the direct placement of bonds with the institutions to be recapitalized, notwithstanding the risks. Bond-based recapitalizations were used extensively in past crisis episodes in emerging markets (for example, in the aftermath of the 1994–95 Mexican peso crisis, the 1997–98 Asian financial crisis, and the 2000–01 Turkey crisis), but reliance thereon has diminished in recent years, largely because of tighter regulatory requirements (as discussed in the previous section) and accounting standards. Under IFRS, any debt securities received would need to be recorded at fair value at initial recognition, with subsequent valuation changes—depending on the specific accounting treatment—potentially resulting in further capital needs.²⁷ Bond valuation may also prove to be challenging given the potential lack of market data needed to price them (for example, quoted prices on an active market, yield curve, credit spreads). Notwithstanding these constraints, bond-based recapitalization may continue to play a role in systemic crises, when no viable alternatives exist and the cost of inaction may outweigh other considerations.

Bond-based recapitalization strategies warrant careful design, to ensure they do not undermine bank viability. When confronted with recapitalization plans, debt management officers may be inclined to focus extensively on cashflow considerations for the government and seek to minimize the effect on debt servicing through long-dated instruments, grace periods, interest moratoria, and below-market coupons. Such strategies will undermine rehabilitation prospects for the recapitalized bank, for example, when the government injects nonmarketable instruments that do not generate the returns needed to sustain the bank's operations. Thus, rather than aiming to reduce the upfront fiscal impact, the recapitalization strategy should be designed to deliver sound banking outcomes that minimize the risk of recurrent capital needs (see Box 4) while maximizing recovery prospects for the government through divestments. Because bond-based recapitalizations exacerbate the bank-sovereign nexus and expose recapitalized banks to further losses in case of debt-servicing problems by the government, debt management challenges associated with these strategies should be addressed holistically, using all tools at the government's disposal. This may include liability management operations that seek to reduce any servicing pressures after the issuance of recapitalization bonds.

BOX 4. How to Design Effective Recapitalization Bonds

Bond recapitalization seeks to alleviate sovereign financing constraints that may otherwise preclude the provision of public solvency support to distressed banks. Its key advantage for the government is that it does not deplete cash reserves and avoids the issuance of debt securities to third-party investors, which can prove impossible or prohibitively expensive at times of crisis. At the same time, the bonds' characteristics should not undermine the medium-term viability of the recipient bank, for example, by immobilizing banks' balance sheets (if secondary bond markets lack depth or the instrument are not marketable), or provide the recipient with insufficient earnings to ensure sustainable returns going forward. The following issues are particularly relevant.

- **Marketability and liquidity.** Providing the recipient banks with bonds that are marketable (and for which secondary trading occurs) will facilitate liquidity management, because the bonds

²⁷ IFRS 9 requires financial entities to record financial assets at fair value when they are first recognized on banks' balance sheets. After initial recognition, measurement will depend on the business model of the bank: on the basis of *amortized cost* (for assets held within a business model that is solely predicated on the collection of contractual cash flows); *fair value through other comprehensive income* (if assets are held in a business model whose objective can be achieved through both the collection of contractual cashflows and asset divestitures); or *fair value through profit and loss* (as a residual category for assets not held in one of the two aforementioned business models). Recapitalization bonds that are likely to be sold before maturity, for example, to meet liquidity needs and to reorient the recapitalized bank's balance sheet toward private sector lending, would typically be classified as *fair value through other comprehensive income*.

can either be sold or used in repo operations with private counterparts. However, the risks associated with supplying bonds that the recipient bank may sell opportunistically could be detrimental to bond market development, to reinvest the proceeds in more risky assets (with the aim to boost near-term profitability). Consequently, it may be appropriate to curtail tradability of the bonds during an initial period, when operational restructuring plans are still being prepared, and the temptation of opportunistic behavior will be the greatest. Even during this period, recipient banks should be able to use the instruments as collateral (subject to adequate haircuts) for refinancing operations with the central bank, thus ensuring that they can respond effectively to any near-term liquidity pressures that may materialize.

- **Interest rates.** The government's interest in minimizing costs by reducing coupons may conflict with banks' efforts to restore profitability. If the recapitalization takes place while interest rates are elevated, fixed-rate instruments would be advantageous for recipients, although considerations would be exactly opposite for the government, because locking in high coupons would generate higher fiscal outlays over the lifetime of the bonds. Although potential debt-servicing constraints of the government need to be carefully considered, failure to provide duly remunerated instruments is counterproductive because it erodes banks' interest margins, potentially jeopardizing their viability.
- **Maturity.** When using bonds for recapitalization purposes, for example, because shallow capital markets hinder efforts to raise cash resources, avoiding substantial maturity mismatches and potentially large duration gaps becomes critically important. To enable more effective asset and liability management by the supported bank(s), providing a mix of securities with different maturities (possibly through reopening previous issuances) is typically advantageous, while still allowing the government to smooth its debt-servicing obligations.
- **Currency.** Under most circumstances, governments will want to provide domestic currency bonds, because they will be reluctant to take on (or increase) exchange rate risks. However, if supported banks are heavily dollarized, the provision of foreign currency-denominated securities may be necessary to minimize currency mismatches.

Source: Andrews and Josefsson 2003.

VII. Closing Remarks

Bank recapitalization using public resources carries significant risks and thus should only be considered under exceptional circumstances. Governments normally have no role to play in ensuring adequate capitalization of privately owned banks: it is first incumbent on banks and their shareholders to mobilize additional capital when needed, while ensuring compliance of applicable regulatory requirements (for example, change of control, prospectus requirements in case of share offerings). In exceptional cases, however, recapitalization using private sector resources may not be feasible, and standard policy responses—including bank resolution—may be deemed inconsistent with financial stability. Under such circumstances, public solvency support may become unavoidable and a last resort.

To minimize risks to taxpayers, public solvency support should be subject to strict requirements that seek to maximize burden sharing and minimize moral hazard. In particular, support should be contingent on loss allocation to shareholders and, if possible, junior creditors; and predicated on the development of credible restructuring plans that help underpin the viability of the recapitalized bank and minimize the risk of further recapitalization needs. Moreover, it should be combined with management changes and other steps to hold former managers and owners accountable for any wrongdoing that contributed to the bank's failure; and coincide with strict oversight to prevent excessive risk taking, promote effective governance, and address decisively the vulnerabilities that contributed to capital shortfalls. In line with its exceptional nature, public solvency support should be considered only when the stability of the financial system is jeopardized, and the cost of inaction outweighs the risks to taxpayers. In this context, authorities should ensure that their crisis management playbooks are sufficiently flexible and that procedural requirements (for example, stemming from public financial management frameworks) are duly considered as part of their contingency planning efforts.

Prudent governance and decision making are essential factors when considering public solvency support. Because solvency support is ultimately a fiscal responsibility, ministries of finance—which are accountable to Parliament for the appropriation of public resources—need to play a key role in decision-making processes. Thus, Ministries of Finance should be informed early by prudential authorities about mounting risks in the financial sector that may necessitate public interventions; for example, in case of distress in a systemically important bank or a cluster of smaller banks with similar characteristics. Supervisory agencies, central banks, and deposit insurers should not be called upon to finance recapitalization or acquire bank shares, as doing so would expose all of them to considerable conflicts of interest and undermine their ability to discharge their primary mandates. Their expertise will help design recapitalization programs, for example, in connection with viability assessments and the alignment of recapitalization instruments with prudential requirements for regulatory capital eligibility. Interagency committees, involving all relevant stakeholders, can provide a suitable platform to coordinate decision making and develop comprehensive communication plans. If the provision of public solvency support entails the acquisition of ownership stakes, it is good practice to establish transparent shareholder management arrangements that ensure shareholder rights are exercised on a commercial and arm's-length basis.

The selection of recapitalization instruments and financing options should be informed by country-specific circumstances. Common equity participations may be advisable when losses have already materialized, (partial) ownership is deemed helpful to effectively influence the design and implementation of credible restructuring plans, and the government is looking for a clear exit strategy. Moreover, the acquisition of common equity allows for the immediate dilution of existing shareholders, in line with burden-sharing objectives. Other capital instruments may be useful where public ownership may generate stigma and the solvency support is precautionary, for example, when banks face the prospect of considerable losses in stress

tests and their ability to generate sufficient capital to strengthen their buffers is highly uncertain. Regarding financing modalities, cash-based recapitalizations are clearly preferable. When they are not feasible, recapitalization strategies involving the direct injection of government securities could be considered as a fallback, subject to safeguards.

Resolution of systemically important banks through bridge banks may offer a cheaper alternative to outright public solvency support. In the presence of an effective bank resolution regime, including transfer powers (that is, the ability to transfer selected assets and liabilities without requiring consent of any interested party or creditor), the authorities should consider establishing (and capitalizing) a bridge bank to which a subset of the original bank's assets and liabilities would be transferred.²⁸ Similar to asset and liability transfers to privately owned institutions, bridge banks can be used to maintain the continuity of critical functions and viable operations, although bad assets and uninsured and unsecured liabilities are handled as part of the failed bank's liquidation. By carefully selecting assets and liabilities that are transferred to the bridge bank—and thus ensuring that the entity is not burdened by nonviable operations and contingent liabilities of the failed bank—upfront recapitalization costs can be reduced. It is considered good practice to have bridge banks maintain a low-risk profile, including by restricting high-risk activities such as proprietary trading. Similarly, activities that can undermine the long-term viability of the bridge bank (for example, developmental lending) should be avoided because they risk impairing divestiture prospects.

Bridge banks are no panacea, however. Bridge banks can lower upfront costs for taxpayers but cross-country experience suggests that uncertainty about their medium-term future may hamper efforts to regain market access and maintain a healthy deposit base. Moreover, challenges with the operationalization of bridge banks—for example, related with the departure of key staff, deposit withdrawals stemming from uncertainty about the bridge bank's future, and legal and operational complexities—further underscore the need for caution in using this instrument. Given such complexities, many authorities would only consider their establishment to ensure the continuity of systemically important functions of failing banks that cannot be resolved in an orderly fashion through other means. To enhance effectiveness, resolution plans for systemically important banks could consider which assets and liabilities could potentially be moved to a bridge bank, factoring in their future marketability.

²⁸ Bridge banks are entities established to temporarily take over and maintain certain assets, liabilities, and operations of a failed bank as part of the resolution process.

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