

# Financial Stability Institute

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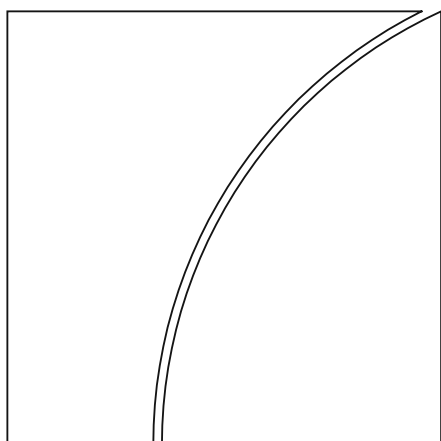
### Managing banking crises in emerging market economies

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# Managing banking crises in emerging market economies<sup>1</sup>

## Executive summary

**Emerging market economies (EMEs) have made much progress on enhancing their crisis management frameworks.** Many of these countries have bank resolution frameworks mandating designated authorities to protect financial stability and safeguard, as much as possible, public funds. Many also have inter-agency bodies that help authorities coordinate as they prepare for, and manage, banking crises. Notwithstanding some differences among them, many EMEs have or are developing escalation processes to help them manage the uncertainties around the point of failure, including coordination of emergency liquidity assistance (ELA) and resolution frameworks. Progress has also been made in the area of cross-border cooperation, although work remains to be done to fully integrate EME authorities in cross-border decision-making.

**Despite this progress, challenges remain regarding the strategies authorities may apply to resolve a crisis and how to fund them.** These challenges concern the characteristic features of banking sectors in EMEs. Typically, banking sectors and bank ownership are more concentrated in EMEs than in advanced economies (AEs). Moreover, bank funding in EMEs is usually dominated by deposits, rather than capital market instruments. As a result, banks in EMEs have lower levels of debt that can reliably absorb losses. They are also less likely to increase their loss-absorbing capacity through more market-based funding practices, as domestic capital markets are much less developed in EMEs than in AEs.

**The funding model of EME banks limits authorities' strategic options.** The major regulatory innovation since the Great Financial Crisis (GFC), bail-in, is difficult to implement in EMEs. Bail-in relies on banks' having sufficient layers of debt that authorities can use to recapitalise a failing bank. That condition can typically be met by AE banks that can access international capital markets, and it is further ensured by the total loss-absorbing capacity (TLAC) standard. However, the strategy is less credible for banks, such as those in EMEs, with deposit-dominated balance sheets. Moreover, if EMEs were to require banks to issue bail-in eligible debt to prepare the ground for bail-in strategies, these issuances would typically have to take place offshore given the limitations of domestic capital markets. This may further increase already high funding costs in EMEs and aggravate existing vulnerabilities from external, foreign currency-denominated indebtedness.

**In consequence, risks for public finances are usually greater in EMEs than in AEs.** Authorities in EMEs are more likely to find themselves in a position where they are forced to use public funds to maintain financial stability. Yet governments' internal revenues may not be sufficient, forcing them to add to their already rising external indebtedness. This consumes limited fiscal space in EMEs and increases governments' debt servicing burden, especially if domestic currencies depreciate. In consequence, the aggregate cost of banking crises, relative to national GDP, is significantly higher for EMEs than for AEs.

**Authorities in EMEs therefore have a strong incentive to improve their funding arrangements for crisis management.** The two main areas of improvement should probably be an efficient use of banks' residual loss-absorbing capacity, including by leveraging, in cases of dominant shareholders, shareholder funds beyond equity, and availability of external sources of funding such as

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The authors thank colleagues in the surveyed countries for providing valuable information on their countries' frameworks and their authorities' practices, Ruth Walters for her very helpful comments on a previous draft, and Marie-Christine Drexler for administrative support.

deposit insurance systems (DIS) and resolution funds. Improved funding can support transfer and recapitalisation strategies. In addition, prudential policies on profit retention and stringent capital conservation may help increase banks' resilience and loss-absorbing capacity.

**To make such alternative strategies fully credible, resolution frameworks could be enhanced in various ways.** In order to make transfer powers a more effective tool, there is scope to modify creditor hierarchies towards general depositor preference, to de-rank funds lent by dominant shareholders, to broaden DIS mandates and to make caps on any DIS support more flexible. Similarly, recapitalisation strategies are easier to implement the lower the risk for the provider of capital that injected funds are used to absorb losses but do not convey control over the recapitalised entity. To achieve this, stringent conditions on prior writedowns of at least shareholder equity, and potentially other shareholder claims, are needed. Bail-in powers can be a helpful ingredient of all such strategies.

**Alternative strategies can mitigate risks for public finances, but do not eliminate the need for public backstops.** The key is to maximise recoveries in case public backstops are used. Authorities should have powers to recoup from the banking sector the expenditures that they incurred under a public backstop. In some EMEs, DIS or resolution funds are administered by central banks and public backstops are provided as a central bank facility. In such cases, the central bank is in a good position to secure recoveries if netting arrangements exist between its facility and the claims of DIS member banks.

**Resolution planning and crisis preparedness are key.** Resolution planning helps authorities to familiarise themselves with the business and structure of a bank. Crisis preparedness increases the confidence of authorities and their staff in their ability to make forward-looking decisions under pressure. The cost of discretion may well be greater in EMEs than in AEs, so bolstering confidence in authorities' abilities to exercise discretionary powers in an equitable manner will probably translate into a reduction in the cost of crisis management. A good way to enhance crisis preparedness is crisis simulation exercises, which allow authorities to test their frameworks and practise crisis management skills.

## Section 1: Introduction

1. **The Global Financial Crisis (GFC) highlighted the inadequacy of many crisis management frameworks.** Most countries, including developed economies, had to deploy massive measures to maintain the functions and stability of the financial sector, at great expense to public funds. As a result, several jurisdictions committed to initiatives to strengthen their ability to prevent and manage financial crises. The reforms that emerged from these efforts include the Financial Stability Board's (FSB) Key Attributes of Effective Resolution Regimes for Financial Institutions (the Key Attributes), which are the international standard for bank resolution frameworks.

2. **Reforms have focused on how to manage the failure of global systemically important banks (G-SIBs).** This focus is due to the need to end the too-big-to-fail (TBTf) problem and solve the moral hazard issue that comes along with it. The TBTf problem meant that, while profits were privatised in good times, the cost and consequences of failure were socialised, as governments had to ensure the continuity of financial services at the expense of the public purse. If unresolved, this problem would have threatened to undermine the social acceptance and legitimacy of private banking. To tackle it, the FSB Key Attributes included as a major innovation the bail-in tool<sup>2</sup>. It allows authorities to convert the senior debt of a failing bank into equity or to write it off partially or entirely. The tool is now available in several jurisdictions, allowing authorities, in principle, to recapitalise a failing bank without the need to inject fresh funds, for example from the public purse. Other elements of the reforms included strengthening authorities' restructuring tools, such as transfer powers or business separation tools, and powers to impose temporary stays on the exercise of early termination rights in financial contracts.

3. **Focus on G-SIBs came with a focus on advanced economies (AEs).** The bail-in tool is a case in point: As it operates by converting debt into capital, it necessarily relies on banks having sufficient levels of debt eligible for that purpose. This precondition is typically met by firms operating in larger and evolved financial markets, as these firms are accustomed to issuing diverse types of debt and have access to markets that can absorb such issuances. To further ensure this precondition, the total loss-absorbing capacity (TLAC) standard was introduced at an international level, requiring globally systemic firms to hold debt with certain characteristics. Indeed, as of July 2019 all G-SIB home jurisdictions had implemented the TLAC standard, and all G-SIBs complied with it.<sup>3</sup> But that precondition may not necessarily be met in emerging market economies (EMEs).<sup>4</sup>

4. **EMEs also need effective crisis management frameworks.** These are an essential component of the broader financial safety net that is needed to support sustainable growth, organic development and social and political stability. For such frameworks to be effective, authorities need to have well defined mandates, appropriate powers and tools and clearly designed strategies for how to use those tools. In particular, sufficient funding arrangements need to be in place to support the swift handling of a bank failure and to protect systemic stability.

5. **Conditions in EMEs may differ from those that underpinned reforms in AEs.** Such differences may relate to more traditional business models among banks, less developed domestic capital markets and/or less access to international capital markets, high levels of foreign, or foreign currency-denominated, debt or concentrated financial sectors. Moreover, financial authorities in EMEs may themselves face different challenges than those of their colleagues in AEs, such as limited staff or resources. Most importantly, tools to enlist privately sourced funding may be lacking, putting already

<sup>2</sup> FSB (2014)

<sup>3</sup> According to the 2020 FSB Resolution Report, all G-SIBs are estimated to already meet the final 2022 minimum external TLAC requirement. Transitional provisions apply for EMEs. See FSB (2020b).

<sup>4</sup> A similar point is made by Dobler et al (2020), who argue that in countries with relatively simpler banking systems other resolution tools may achieve the same objectives as bail-in through simpler legal mechanisms.

limited fiscal resources under additional pressure at times of distress. This highlights the need for EMEs to proceed efficiently as they undertake reforms to their crisis management frameworks. To be efficient, reform measures need to be tailored to the specific needs and conditions prevailing in EMEs and leverage existing strengths and previous experience with a view to strengthening authorities' crisis management capabilities.

6. **This paper analyses the crisis management frameworks and experience of a selected group of EMEs.** It describes institutional arrangements and specific intervention strategies against the backdrop of features and conditions that we observe in our sample and in EMEs more generally. We analyse frameworks and practices in 11 jurisdictions from four regions.<sup>5</sup> Although EMEs diverge markedly from each other, the analysis may help identify common challenges that policymakers and practitioners in these jurisdictions face.

7. **The remainder of this paper is organised as follows:** Section 2 presents an illustrative selection of features of the economic structure and the banking sector of EMEs that are relevant for crisis management. Sections 3 to 7 analyse different aspects of the existing frameworks in surveyed jurisdictions. Section 3 lays the groundwork by discussing institutional arrangements and authorities' mandates in surveyed jurisdictions, with a particular focus on how the public interest influences the design of frameworks. Section 4 discusses how authorities in surveyed jurisdictions prepare for and identify the right time for intervention, and how they manage the uncertainty around it. Section 5 analyses different types of strategies and the preconditions for their successful implementation. Section 6 discusses funding and burden-sharing arrangements. Section 7 explores cross-border issues. Section 8 offers some concluding reflections and suggests potential future work.

<sup>5</sup> Our sample comprises Angola, Armenia, Botswana, Colombia, Kazakhstan, Malaysia, Morocco, Peru, Thailand, Ukraine and Uruguay.

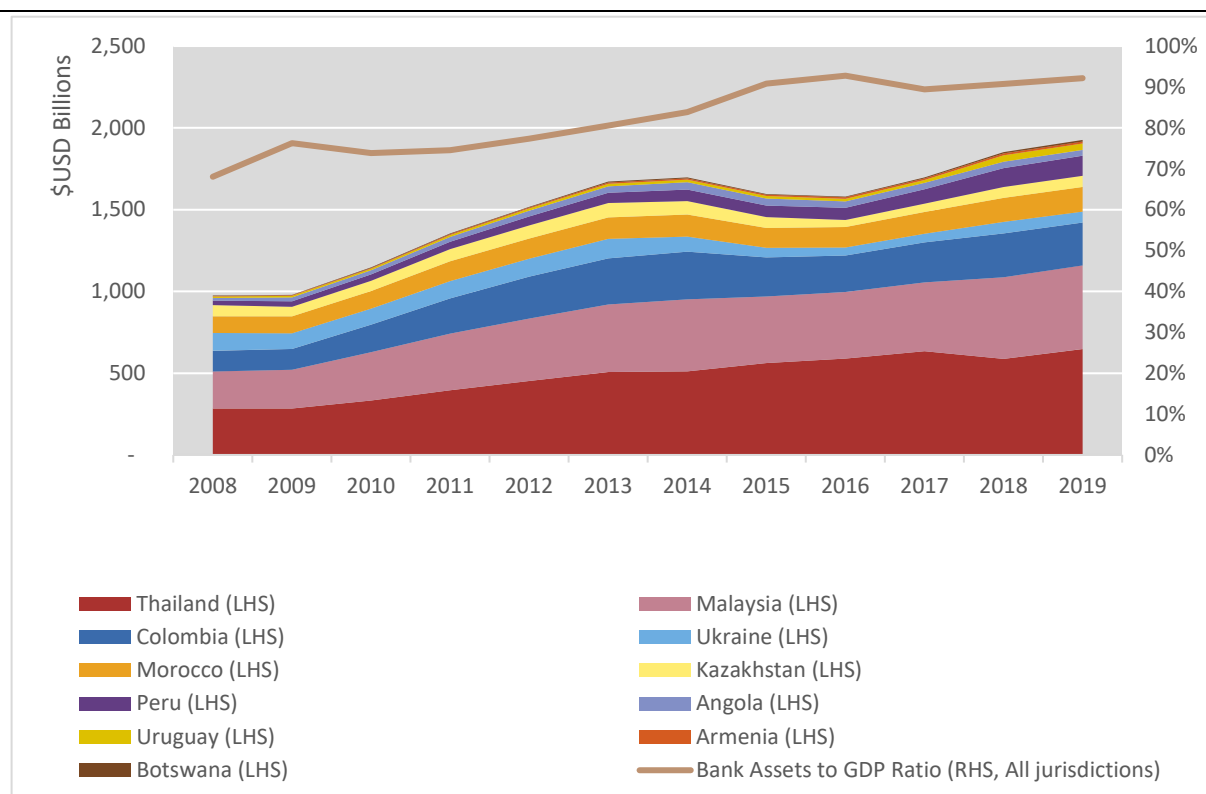
## Section 2: Some features of banking sectors in EMEs

8. **EMEs manifest different types of economic and financial vulnerabilities.** These are related to the structure of their economies and their growth patterns as well as the structure of their corporate and financial sectors and their institutional arrangements. While some of those vulnerabilities may be shared by AEs, most of them are quite specific to EMEs and affect their capacity to both prevent and manage a crisis. This section explores some of these features in general and for the 11 surveyed jurisdictions more specifically.

9. **Banking sectors in EMEs are growing.** This is true in absolute terms as well as in terms of the banking sector's share in a country's GDP. In surveyed jurisdictions, the share of banking assets in GDP has grown considerably over the last decade, bringing the collective share from approximately 70% in 2008 to over 90% as of end-2019 (Chart 1).

Expanding banking systems in surveyed jurisdictions

Chart 1

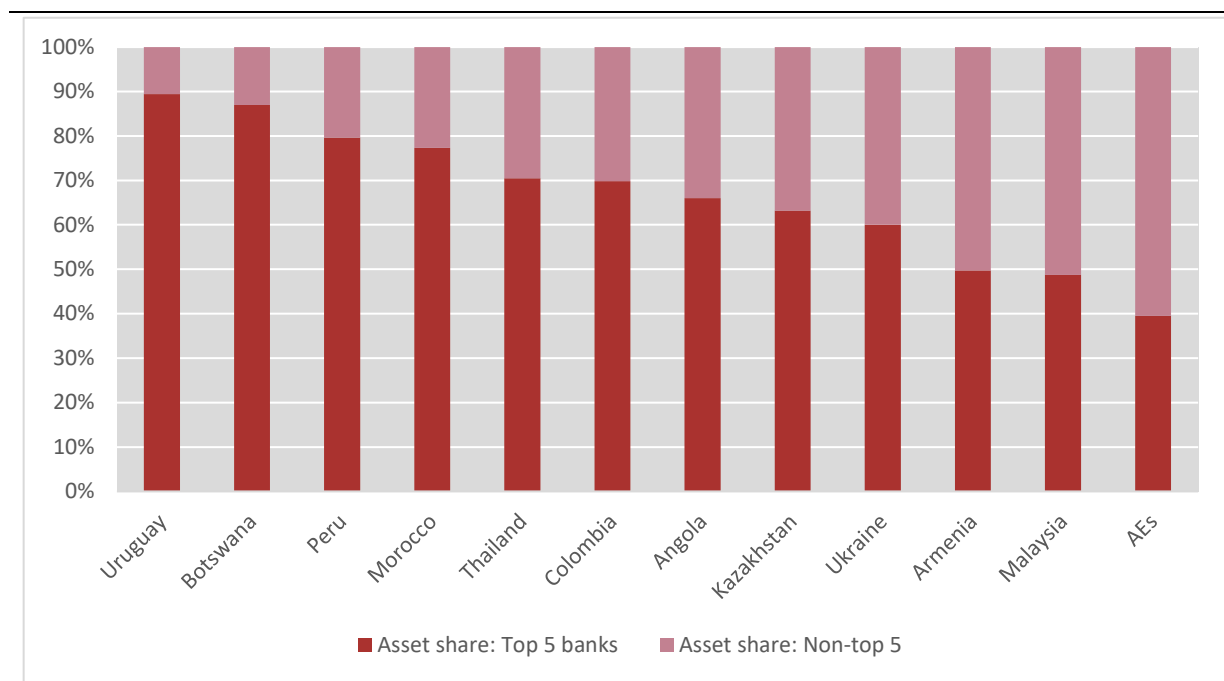


Sources: World Bank; FSI analysis.

10. **Banking sectors in EMEs are typically more concentrated than those in AEs.** In surveyed jurisdictions, the share of the respective top five banks in total banking assets is at least 50%, and often significantly higher (Chart 2). Coupled with the fact that there are generally fewer banks in EMEs than AEs, this emphasises the systemic footprint that each large bank has within the respective jurisdiction. By comparison, banking sector concentration in the US, UK, Italy, Germany, France and Japan, as measured by the share of top five banks, is below 50%.<sup>6</sup>

<sup>6</sup> Source: Statista, ECB Banking Structural Financial Indicators.





AEs = average concentration in France, Germany, Italy, Japan, UK and US.

Sources: ECB, Statista; FSI survey,.

11. **Bank ownership is also much more concentrated in EMEs.** Among the 55 banks that make up the top five banks of the surveyed jurisdictions, all but two have at least one significant shareholder, and in many of these cases those significant shareholders directly or indirectly control a majority of the capital and/or voting rights (Table 1). This is a major difference to most AEs, where the respective top banks are mostly held by free float, as illustrated by the fact that no G-SIB domiciled in an AE has a majority shareholder. In the surveyed jurisdictions, significant shareholders of the top five banks are, in roughly even proportions, either the local sovereign, a non-financial corporate or a large international bank, reflecting the fact that EMEs are often host jurisdictions for international banking groups that are headquartered in AEs. In our sample, large international banks are particularly present in Botswana, Peru and Uruguay.

12. **Concentrated ownership can be both a source of risk and a source of strength.** This is true in going concern, when integration into a broader group can be a stable source of funding, but may also exacerbate spillover and contagion effects. It is also true at times of distress. Disentangling a bank in resolution from the various intragroup exposures that link it to the broader conglomerate may be difficult and complicate authorities' attempts to resolve the bank on a standalone basis. At the same time, a significant shareholder may also be a source of strength, for example if they are willing to inject fresh capital when other investors are not. Moreover, shareholder funds, even if provided by shareholders in a form other than equity (for example, shareholder loans), and whether or not they qualify as regulatory capital, may rank junior to other claims in the creditor hierarchy and can therefore more easily absorb losses.

Significant shareholders of top 5 banks per surveyed jurisdiction

Table 1

Jurisdiction	Bank 1	Bank 2	Bank 3	Bank 4	Bank 5
Angola	na	NFC	Sovereign	NFC	NFC
Armenia	LIB	NFC	NFC	NFC	NFC
Botswana	NFC	LIB	LIB	LIB	NFC
Colombia	NFC	NFC	NFC	LIB	NFC
Kazakhstan	NFC	LIB	NFC	NFC	Sovereign
Malaysia	Sovereign	Sovereign	NFC	Sovereign	NFC
Morocco	Sovereign	NFC	na	LIB	LIB
Peru	NFC	LIB	LIB	NFC	NFC
Thailand	na*	na*	Sovereign	Sovereign	LIB
Ukraine	Sovereign	Sovereign	Sovereign	Sovereign	LIB
Uruguay	Sovereign	LIB	LIB	LIB	LIB

LIB = large international bank; na = no significant shareholder; NFC = non-financial corporate; sovereign = state-owned companies and those with the state as direct or indirect significant shareholder. Shaded area denotes non-domestic significant shareholding.

\* A state owned entity is the major shareholder but holds shares on behalf of private investors and does not exercise voting rights. As such, the state-owned entity does not have control over the business operation of the bank.

Source: Authors' research.

13. **The main sources of funding for banks in EMEs are deposits and capital.** As Chart 3 shows, the share of deposits and capital in total liabilities is at least 66% of total liabilities in all surveyed jurisdictions, and in more than half at least 80%. Debt issued on capital markets plays a far less important role, as the share of bonds in no surveyed jurisdiction exceeds 7% of total liabilities. For comparison, in AEs the share of issued debt securities in total liabilities is twice as large, for example approximately 14% in the euro area and approximately 12% in Switzerland.<sup>7</sup> The large share of deposits in particular is a mixed blessing: it typically makes banks more resilient at times of distress. If, however, a bank succumbs to a crisis, a large deposit share complicates the management of the crisis, because deposits cannot absorb losses without endangering financial stability and a high deposit ratio therefore increases the likelihood that the crisis has a systemic impact.

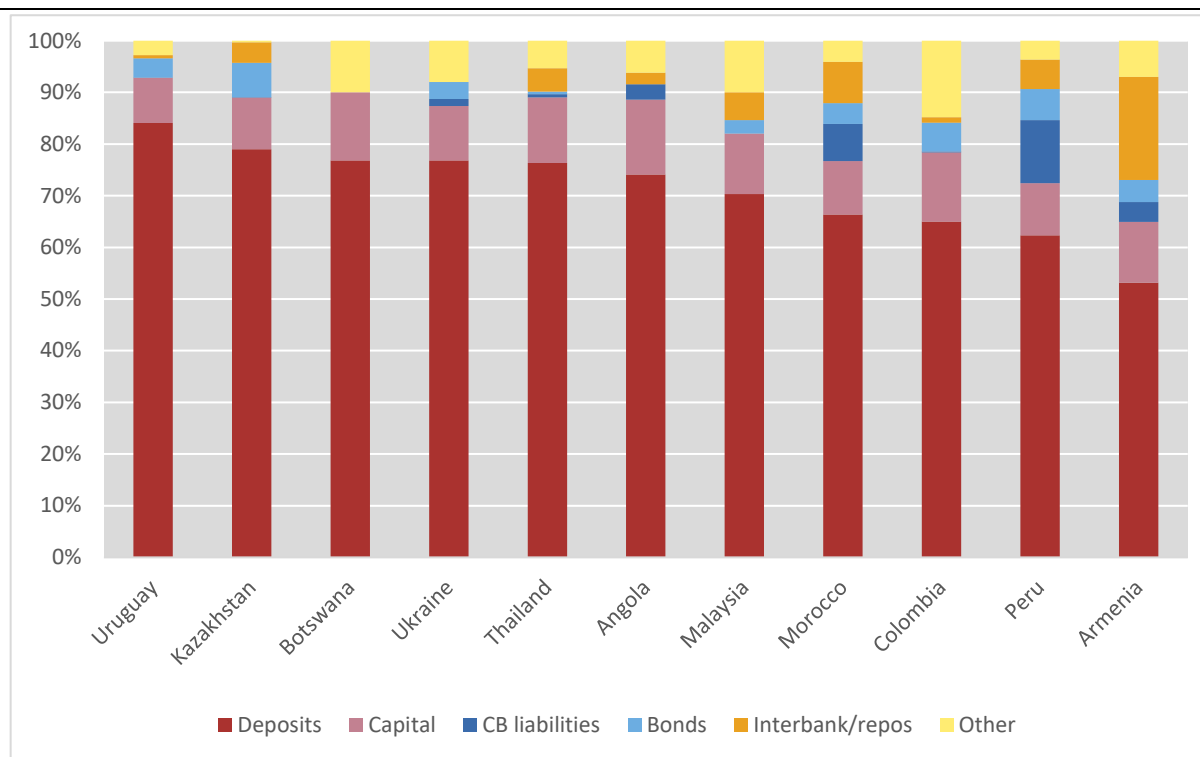
14. **Capital markets in EMEs are generally far smaller, and less deep and liquid, than those in AEs.** While over the last two decades capital markets in EMEs have grown at a greater rate than those in AEs, they continue to be much smaller relative to the size of their economies, and a much smaller source of funding overall. Thus, while in 2019 the ratio of all sectors' combined bonds outstanding to GDP was 170% in AEs, it was 70% in EMEs. AEs and EMEs differ even more if only financial institutions are taken into account. In 2019, financial institutions' bonds outstanding were 60% of GDP in AEs, compared with only 7% in EMEs.<sup>8</sup> In surveyed jurisdictions, capital markets are also much smaller than banking sectors (Chart 4). This illustrates that in EMEs domestic capital markets do not play a significant role in banks' funding.

<sup>7</sup> Source: ECB Supervisory Banking Statistics: Second quarter 2021 (cited data point as of Q4 2020); SNB (annual banking statistics (same reference date).

<sup>8</sup> IOSCO (2020).

Bank funding breakdown in surveyed jurisdictions (% of total assets, 2020)

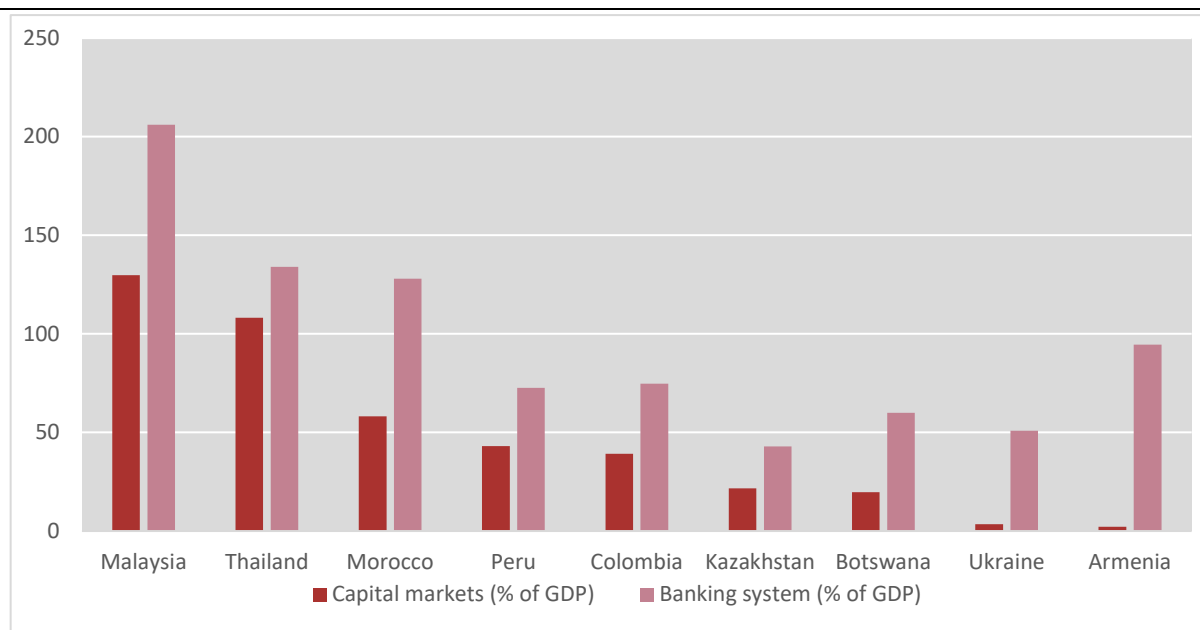
Chart 3



Sources: Public domain; projected values based on surveyed countries' top 5 banks; FSI survey; BIS international debt statistics.

Banking systems and capital markets in surveyed jurisdictions

Chart 4



Sources: Federal Reserve Bank of St Louis, FRED; CEIC; World Bank.

15. **Deposit-based funding models and underdeveloped capital markets limit bank's ability to issue subordinated debt.** To illustrate this, all surveyed jurisdictions report that their banks' AT1 and T2 capital instruments are almost exclusively issued to, and held by, banks' shareholders, rather than issued to the broader market and actively traded on it. As a result, banks in EMEs tend to have low volumes of subordinated debt in their balance sheets. This complicates crisis management, as it results in lower internal loss-absorbing capacity of banks and increases the risk that external sources of funding need to be mobilised.

16. **Other private sources of funding may not be available in a crisis.** While a troubled bank may seek support from a significant or majority shareholder, they are not legally obligated to provide it, and authorities cannot therefore rely on shareholders to help in a crisis. Foreign investors in particular can be reluctant to provide support in a crisis, as their risk policies may compel them to withdraw from EMEs during a crisis. Greater reliance on shareholders is possible if they are required to provide letters of comfort as a licensing condition or if the major shareholder is itself a foreign bank and robust cooperation agreements have been built between home and host authorities pre-crisis. Other potential sources of external funding may include arrangements raised from the banking industry, such as deposit insurance systems or resolution funds. Yet whether or not these can be mobilised to manage a crisis depends on the scope of their mandates, on sufficient funds having been accumulated in time and on the availability of borrowing facilities and, ultimately, public backstops.

17. **At the same time, overall debt levels are growing in EMEs across all sectors.** This holds true for both public and private debt (Chart 5) and is generally a trend in surveyed jurisdictions as well. Specifically, public debt as a percentage of GDP in EMEs has steadily risen since 2010 to roughly 60% of GDP. There has been an even sharper increase in private debt, as the aggregate level of corporate and household debt in EMEs has grown from roughly 120% of GDP to 180% GDP since 2005.<sup>9</sup>

18. **As debt levels rise, foreign creditors may become increasingly skittish.** Foreign ownership of EME sovereign debt has climbed in recent years,<sup>10</sup> and banks in EMEs must also issue bonds internationally, given limited domestic markets. Foreign creditors tend to be quite sensitive to adverse macroeconomic shocks, which represents a vulnerability that is likely to materialise at times of distress and increases with growing levels of debt. The GFC in 2008, the "taper tantrum" episode in 2013–14 and the crisis that resulted from the Covid-19 pandemic in early 2020 are cases in point. In each of those three episodes, EMEs saw very abrupt capital outflows, as foreign creditors ran to repatriate their assets. And each crisis saw outflows greater than in the previous one: In the first four weeks alone, net outflows amounted to \$35 billion in 2008, \$40 billion in 2014 and \$125 billion in 2020.<sup>11</sup>

19. **High debt levels and skittish foreign creditors make funding costly and unstable.** Debt servicing costs are generally higher for EMEs, and average maturities for EME obligations lower. The term to maturity of sovereign EME debt has historically been quite volatile, especially during periods of macroeconomic uncertainty or crisis.<sup>12</sup> These swings may increase rollover risk, which can drive up funding costs and dry up access to funding during periods when governments need it most. To illustrate, as of 2019 about 33% of all EME sovereign debt and 50% of all EME private sector debt was due within three years.<sup>13</sup> Domestic factors, such as weaker growth and higher inflation, together with idiosyncratic factors,

<sup>9</sup> See also the debt level discussions in FSB (2020a), OECD (2020) and IMF (2021b).

<sup>10</sup> IMF, *ibid*; OECD, *ibid*.

<sup>11</sup> BIS (2020).

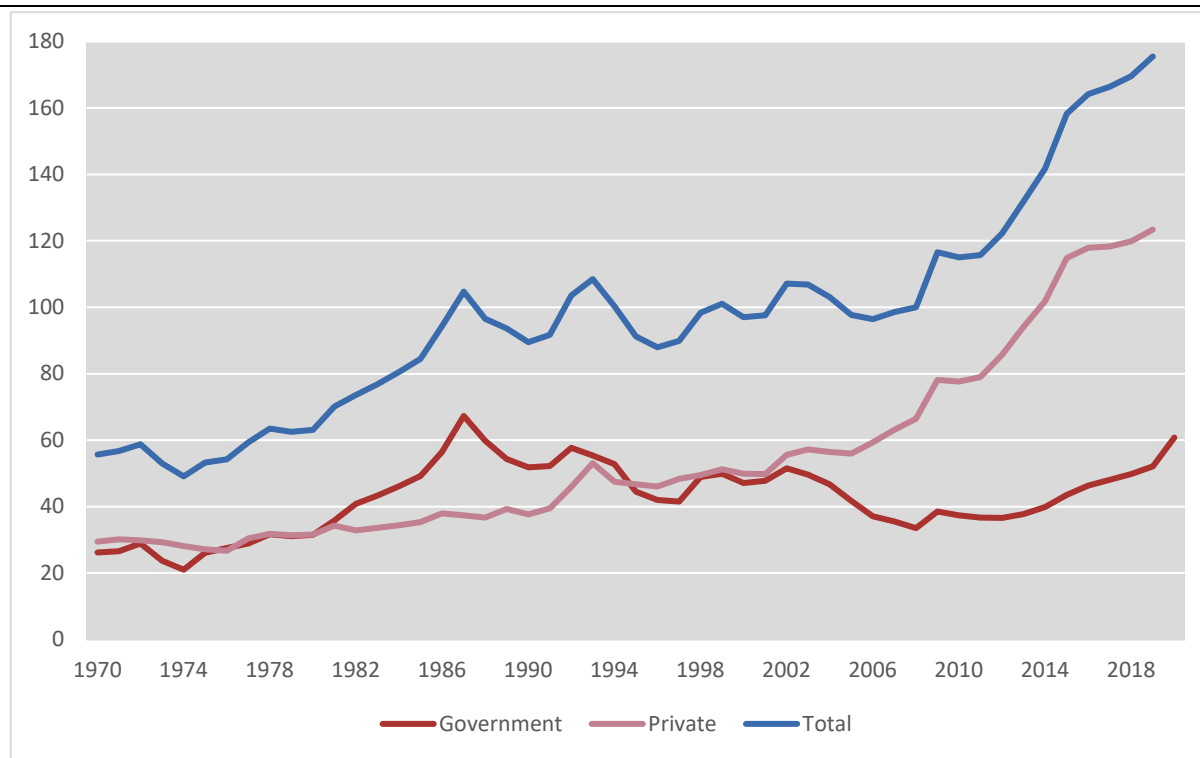
<sup>12</sup> OECD, *op cit*.

<sup>13</sup> OECD, *ibid*.

such as political risks and reduced access to external funding from multinational organisations, may contribute to increased rollover risk for EME governments.<sup>14</sup>

Debt in emerging market economies (% of GDP, 1970–2019)

Chart 5



Source: World Bank.

20. **Banks cannot easily overcome their low loss-absorbing capacity in an environment of rising external debt.** Requiring banks to issue wholesale debt might increase their loss-absorbing capacity, but such issuances would have to be placed offshore, given limitations of domestic capital markets. In consequence, banks would be forced to offer relatively high yields to compete in international debt markets and attract foreign investors, especially as issuances would have to be subordinated and long-term to effectively increase banks' loss-absorbing capacity. Amid overall rising debt, that competition is likely to be fierce and may result in an increase of banks' funding costs that possibly overshoots internalisation of cost of failure, and by extension the cost of credit to the economy. In addition, as issuances would be denominated in foreign currency, banks may start issuing local loans in foreign currency, leading to undesirable outcomes observed in, for example, Argentina and Hungary.<sup>15</sup> No surveyed jurisdiction requires banks to issue loss-absorbing debt beyond regulatory capital instruments.<sup>16</sup>

21. **With banks' loss-absorbing capacity low and other sources of funding unavailable, governments in EMEs risk having to use public funds.** Yet even if jurisdictions are in principle prepared to resort to such a measure, the necessary fiscal resources may be limited, because internal revenues may be insufficient, as growth forecasts in EMEs are being revised downwards.<sup>17</sup> This may force governments

<sup>14</sup> IMF, op cit.

<sup>15</sup> In this context, see the discussion in IMF (2015).

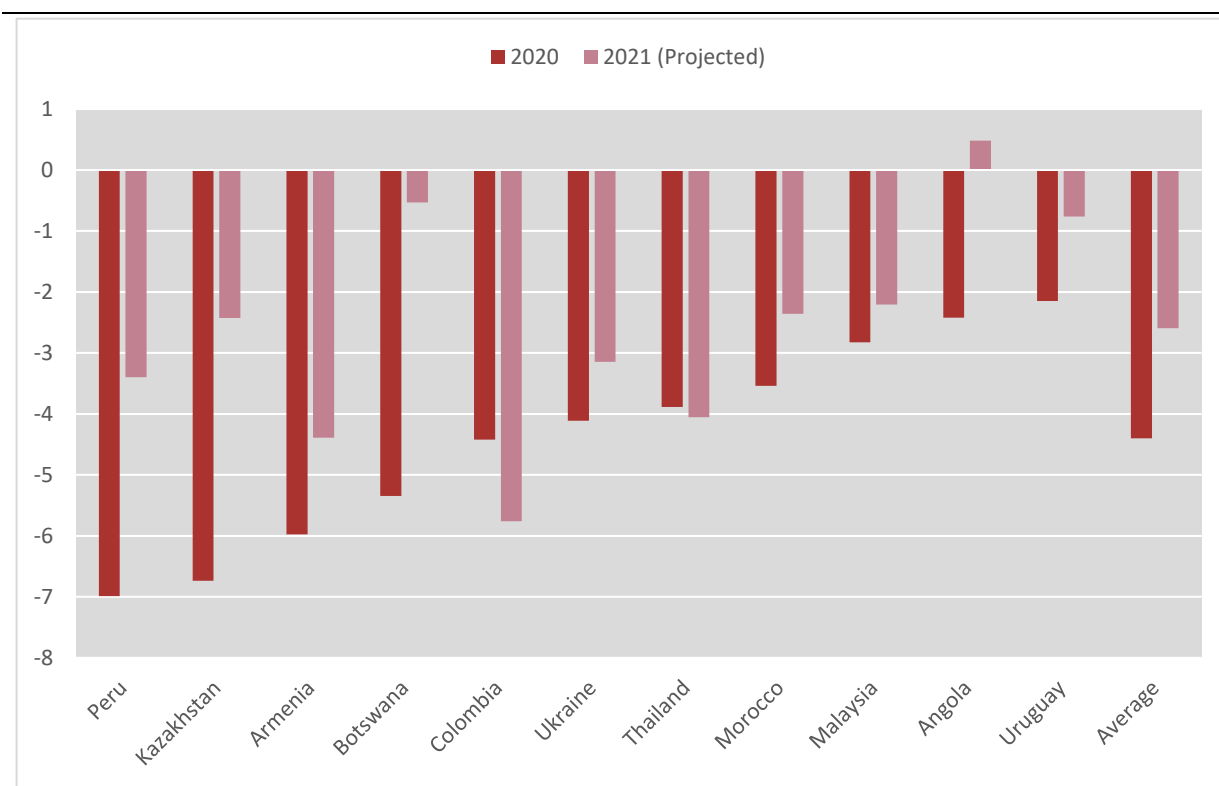
<sup>16</sup> Armenia, however, contemplates introducing a requirement similar to the EU MREL; see paragraph 65.

<sup>17</sup> IMF (2021c).

in EMEs to borrow the necessary funds on international debt markets, adding debt servicing burdens to stretched budgets when overall financing needs and rollover risks in EMEs are already growing.<sup>18</sup> Surveyed jurisdictions, for example, report fiscal deficits for the current year and mostly project fiscal deficits for the coming year (Chart 6). Moreover, the majority of EME sovereign debt continues to be denominated in foreign currency.<sup>19</sup> As a result, EMEs are exposed to currency and interest rate risks, if the direction of monetary policy in AEs changes and forces EMEs to either raise their own interest rates or risk further depreciation of their currencies with soaring costs of FX-denominated obligations.<sup>20</sup> These mechanisms may explain why the direct fiscal costs of banking crises appear to be larger in EMEs than in AEs, relative to the size of financial systems: the median cost for crises is 6.7% of GDP in AEs and 10% in EMEs. Net of recoveries, the difference is even more pronounced: 3.3% of GDP for AEs and 9.6% for EMEs.<sup>21</sup> Funding the management of a banking crisis remains the core difficulty, and EMEs continue to need strategies that address this issue.

Fiscal balances of emerging market economies (% of GDP, relative to 2019)

Chart 6



Source: IMF, Fiscal Monitor, April 2021.

22. **Operational challenges add to the complexity of crisis management in EMEs.** Authorities need staff with expertise in a variety of technical areas, such as legal, asset valuation or accounting and ideally with prior exposure to crisis work. They need to execute asset workout programmes within very short time frames, to negotiate and implement complex financial transactions, and to manage large

<sup>18</sup> IMF (2021b).

<sup>19</sup> See Hofmann and Shin (2020), notwithstanding a recent trend, especially in emerging Asia, to denominate more sovereign debt in local currency; Lynch (2021); Smialek (2021).

<sup>20</sup> While this still is a risk factor, reserve adequacy and balance sheet health in EMEs has generally improved since the taper tantrum. For more information, see Davis (2021).

<sup>21</sup> Laeven and Haksar (2018).

numbers of inevitable litigation cases. Crisis management work also requires a combination of practical skills for intensive short-term projects and the conceptual skills required to draw relevant lessons. Moreover, authorities need to be able to retain personnel over long cycles to build institutional expertise that does not erode in between crises. Developing such expertise and retaining professionals may be difficult if authorities have to compete with a private sector paying higher salaries, especially in EMEs as professionals with these scarce skills may gravitate towards larger financial centres and more developed jurisdictions.

23. **In view of these challenges, and notwithstanding significant progress, further work is needed for EMEs to be able to manage banking crises.** Many EMEs have made progress towards implementation of the Basel Core Principles, the FSB Key Attributes and other international standards.<sup>22</sup> Specifically, all surveyed jurisdictions have taken steps since the GFC to reform their crisis management frameworks or are about to introduce new legislation to that effect (Box 1). But the characteristics of banking sectors in EMEs, the ways EMEs are integrated into the global financial system and the specific challenges that governments and authorities in EMEs face on financial, operational and institutional levels indicate that many EMEs will need to improve their crisis management frameworks to be able to travel a road that is likely to be bumpy in the coming years.

Box 1

### Introducing resolution frameworks in Angola and Morocco

Examples of surveyed jurisdictions that are in the process of introducing bank resolution reforms include Angola and Morocco. In both jurisdictions, reforms are inspired by the FSB Key Attributes and legislation is expected to be passed over the next 12 months.

The Angolan reform establishes the country's central bank, the National Bank of Angola, as the resolution authority with a broad range of tools at its disposal, including the power to bail in senior debt. The mandate of the resolution authority will be to intervene in a failing bank if this is deemed necessary from a public interest perspective. Moreover, an industry-sourced ex ante financed resolution fund will be established as a corporation of public law with financial autonomy, in addition to the country's existing deposit guarantee scheme (DGS).

In Morocco, the reform will replace the currently existing, mostly court-based bank liquidation regime with a bank-specific resolution regime under the authority of the country's central bank, Bank Al-Maghrib. It will also establish a resolution committee (Collège de Résolution) comprising the central bank and the treasury, to coordinate the handling of cases that may require the use of public funds. Moreover, the reform will introduce additional resolution tools and broaden the mandate of the DGS so that it can provide support, up to a certain limit, to funding resolution, for example the transfer of business from a failing to a sound bank.

Source: FSI survey.

## Section 3: Authorities and their mandates

### Bank failure and the public interest

24. **Any bank failure presents a risk to the public interest.** This is because banks provide certain functions which could, if halted, disrupt the financial system and the economy at large. The greater the systemic significance of a bank, the more severe the disruption that its failure will cause. The payment system is an example for one such function: to the extent it is based on banks' deposit-taking operations, the failure of a single bank may disrupt large payment flows and affect broad parts of the economy. The

<sup>22</sup> See Hohl et al (2018) for a review of the Basel Framework in 100 jurisdictions.

same holds true for functions such as lending or market-making. EMEs are especially vulnerable to such disruption as their financial systems are more heavily bank-based than those of AEs.

25. **The public interest lies in a continuation of a bank's core functions to maintain financial stability.** It does not lie in the continuation of the bank's existence as a legal entity. This implies a distinction between the economic utility of banking and the banking entity that provides it: while banks must be able to fail and exit the market, their core functions must continue to be available to the public. Conventional bankruptcy frameworks may often not be well suited for such purpose. They aim to protect creditors by winding down the entity, liquidating its assets and distributing liquidation proceeds to creditors. Yet, in addition to the extinction of the failed entity, such an approach necessarily involves the discontinuation of its activities and all services it provides to the public. It is difficult to reconcile that approach, in its pure form, with the need to maintain banking services.

26. **Bank failures therefore require a specific type of framework.** These apply specifically to failing financial institutions (as opposed to non-financial corporates), include a clear mandate for administrative authorities to protect the public interest (as described above) and equip authorities with the powers and tools they need in order to achieve the public interest in any given case. They are referred to as resolution frameworks. The FSB Key Attributes are the relevant international standard for effective resolution regimes and stipulate that jurisdictions should have such regimes in place to deal with the failure of any financial institution that could be systemically significant or critical if it fails. Many jurisdictions choose to make all financial institutions, irrespective of their potential systemic significance, eligible for a resolution regime.

27. **All jurisdictions surveyed in this paper have either already introduced or are developing bank resolution frameworks.** These frameworks require authorities to pursue a public interest mandate when dealing with a banking crisis. All surveyed jurisdictions distinguish these frameworks from their general corporate bankruptcy frameworks and exclude banks from the latter. Thus, although these frameworks differ across jurisdictions in a number of aspects, they all qualify as resolution frameworks in the sense discussed above. Lastly, in most surveyed jurisdictions, resolution frameworks apply to banks only, rather than to financial institutions more generally, even though the financial sectors of most surveyed jurisdictions are dominated by conglomerates which, beyond banks, may include insurance companies, pension funds and various financial or non-financial companies.<sup>23</sup>

28. **All surveyed jurisdictions understand the public interest to mean at least financial stability and functional continuity.** In addition, most surveyed jurisdictions explicitly include the protection of public funds as an objective of their framework.<sup>24</sup> Making protection of public funds an explicit objective is often based on jurisdictions' past experience, as the utility function, the interconnectedness of the banking sector and the resultant contagion risk of bank failures have often forced them to use public funds to avoid disruption to the financial system and long-term macroeconomic costs. Even so, surveyed jurisdictions differ in terms of how the protection of public funds is framed. In some of them, the objective is framed as safeguarding fiscal resources, and in others as minimising the losses that a bank failure may cause on public funds, implying a somewhat greater tolerance for the use of public funds, potentially including their use in the resolution of non-systemic banks. Some surveyed jurisdictions include additional, though closely related, objectives, for example avoiding grave damage to the national economy (Colombia), supporting the financial intermediation process (Malaysia) or protecting bank clients' funds and assets (Morocco and Peru).

29. **Surveyed jurisdictions differ in how they incorporate the public interest mandate into their frameworks.** As Table 2 shows, the difference relates to whether authorities must conduct a public interest test in order to use specific tools or whether they assess the public interest more generally to inform the actions that they intend to take in the given case. This is primarily relevant when triggering resolution, as

<sup>23</sup> See a forthcoming FSI publication for a discussion on bank ownership and supervisory issues related to conglomerates; in some surveyed jurisdictions, reforms are under way to widen the scope of resolution frameworks, for example in Ukraine, where the resolution framework may include credit unions.

<sup>24</sup> For ease of reference, unless specified otherwise, we use the term "framework" to denote surveyed jurisdictions' bank resolution frameworks.



it influences how narrowly (or how broadly) discretionary powers at entry into resolution are framed. Peru is an example for the first model, as the resolution authority, SBS, may trigger resolution if certain defined capital thresholds are met, and a public interest test is only required if a bridge bank or other extraordinary tools are used. The Moroccan framework, by contrast, does not define which capital or other specific thresholds constitute a bank failure that allows triggering resolution, but stipulates that the public interest must require authorities' intervention. Both models have strengths and weaknesses. A public interest assessment at entry into resolution may constitute a high threshold for authorities to initiate a procedure and justify their chosen course of action, and this may delay resolution action if authorities deem that, even though failure may be likely, the public interest does not (yet) require their intervention. In the worst case, this may lead to a failing bank being allowed to remain open, especially in frameworks that exempt banks from general insolvency procedures. On the other hand, a general public interest mandate at entry into resolution provides a large degree of discretion for authorities to intervene, because they do not have to establish a certain microprudential metric, which may facilitate prompt and early intervention. Conversely, the threshold for intervention is lower, and the range of discretion narrower, where the public interest assessment is confined to extraordinary measures.

The public interest in resolution: what is considered, and at what point?

Table 2

Jurisdiction	Aspects to be considered	Assessment to be made...	Authority in charge of assessment
Angola	Financial stability, protection of public funds	...to generally inform authorities' actions	Central bank
Armenia	Financial stability, protection of public funds	...to generally inform authorities' actions	Central bank
Botswana	Financial stability, protection of public funds	...as a test to allow specific tools	Central bank
Colombia	Financial stability, protection of public funds Avoid grave damage to national economy	...as a test to allow specific tools	SFC and Fogafin
Kazakhstan	Financial stability, protection of public funds	...as a test to allow specific tools	Central bank
Malaysia	Financial stability, protection of public funds Support financial intermediation	...to generally inform authorities' actions	PIDM and BNM*
Morocco	Financial stability, protection of public funds Protect clients' funds and assets	...to generally inform authorities' actions	BAM and MoF
Peru	Financial stability Protect clients' funds and assets	...as a test to allow specific tools	SBS with approval of BCRP and MEF
Thailand	Financial stability, protection of public funds	...to generally inform authorities' actions	BoT with approval of the cabinet
Ukraine	Financial stability, protection of public funds	...as a test to allow specific tools	Central bank, DGS and MoF
Uruguay	Financial stability, protection of public funds	...as a test to allow specific tools	COPAB (or legislator)

\* PIDM is the resolution authority for member banks, and BNM for non-member banks (eg investment banks).

30. **All surveyed resolution frameworks cover systemic and non-systemic banks.** This is true irrespective of whether jurisdictions have prudential frameworks for assigning systemic importance to individual banks, as is the case in Colombia, Malaysia and Ukraine, and prospectively in Botswana. In these

countries, a classification as systemic under the prudential framework does not determine whether the resolution framework is activated, but is a consideration that informs the resolution strategy, among others. Some differences exist, but are more formal. Thailand, for example, has a two-track bank failure management framework: an administrative bank-specific liquidation framework that is distinct from the country's general bankruptcy framework exists in parallel to a separate bank resolution framework; the former applies in non-systemic cases and supports transfer, but not recapitalisation strategies, while the latter applies in systemic cases and offers a broader range of tools, including transfer and recapitalisation. In principle, however, this is not materially different from unitary bank resolution frameworks, as a comparison between Thailand and Angola demonstrates: The Angolan resolution framework, while unitary and applicable to systemic and non-systemic banks alike, offers a range of options and tools, of which liquidation and transfer are applied to non-systemic cases and systemic cases may be dealt with through additional means, similar to the arrangement in Thailand.

## Institutional arrangements

31. **The orderly management of a bank failure involves various public functions.** These comprise at least central banking, prudential supervision and resolution. In many countries, including surveyed jurisdictions, the national treasury (ie the ministry of finance) and the deposit insurer are also involved. However, public functions are not the same as government (or public) agencies. Thus, a single authority can have multiple functions, or the same function may be exercised by two authorities acting together. Where the resolution function is housed may therefore vary from jurisdiction to jurisdiction, as does the extent to which it is pooled with other functions in the same authority.

32. **Most surveyed jurisdictions pool the resolution function with one or more other functions.** Pooling resolution with central banking or supervision allows the resolution function to benefit from the independence of the hosting function from political and/or industry pressure, to share in its resources and to build on its existing institutional credibility and experience. Moreover, housing the resolution function together with other functions may be more efficient from a staffing perspective, as it allows exchange of staff across functions and ad hoc adaptations of unit sizes. It may also help address the problem of dormant resolution staff and/or rusty decision-making.

33. **Surveyed jurisdictions differ as to which other functions are combined with resolution.** As reflected in Table 3, surveyed jurisdictions can be broadly analysed on the basis of the typology proposed in Baudino et al (2021): in the central-bank-dominated model, central banks also assume supervisory and resolution functions; it is the model followed in four out of the 11 jurisdictions in our sample. The second model houses resolution functions together with deposit insurance in the same authority. This is the approach in three jurisdictions. The third model, also chosen in three jurisdictions, combines prudential supervision and resolution in one authority that is different from both the central bank and the deposit insurer. In Thailand, the Bank of Thailand houses both central bank and supervision functions (similar to six other countries of our sample), but resolution functions are split such that resolution is designed and proposed by the Bank of Thailand, but executed by the Thai Financial Institutions Development Fund, a separate entity attached to the Bank of Thailand, if the cabinet approves the central bank's proposal.

34. **Most surveyed jurisdictions have established inter-agency bodies to facilitate coordination between agencies.** These enable authorities to coordinate the numerous functions involved in resolution. These range from financial stability analyses, planning and preparatory work, the assessments required to trigger resolution, the execution of a tailored intervention strategy and the provision, where necessary, of funding to support it. The coordination of these actions requires appropriate governance arrangements. In Colombia, for example, the financial supervisor, Superintendencia Financiera de Colombia, and the national deposit insurer, Fogafin, have created the Comisión Intersectoral de Resolución (CIR), which provides resolution-related analysis, steers resolution planning and coordinates authorities' strategies in that area. In other cases, inter-agency bodies have been set up to monitor systemic implications of a bank

failure and cases that may require the use of public funds. This is the case in Morocco, where, following the adoption of currently pending legislation, a resolution college (Collège de Résolution) chaired by the Governor of Bank Al-Maghrib will assemble the heads of the central bank's supervision and resolution departments, a member of the judiciary and two independent members appointed by the Minister of Finance. Uruguay is an example for a jurisdiction where the failing or likely to fail (FOLTF) decision and the design of a case-specific intervention strategy are allocated to an inter-agency body, the Comité de Estabilidad Financiera (CEF), which includes members of the country's ministry of finance, central bank, financial supervisor and deposit insurer. A similar arrangement exists in Ukraine, where the central bank, the DIS and the national treasury form a joint body (the financial stability board) in charge of deciding on the resolution of systemic banks.

## Institutional arrangements

Table 3

Jurisdiction	Central bank	Supervision	Resolution*	Deposit insurance
Angola	National Bank of Angola	National Bank of Angola	National Bank of Angola	Angola Deposit Guarantee Fund
Armenia	Central Bank of Armenia	Central Bank of Armenia	Central Bank of Armenia	Deposit Guarantee Fund of Armenia
Botswana	Bank of Botswana	Bank of Botswana	Bank of Botswana	na**
Colombia	Central Bank of Colombia	Superintendencia Financiera de Colombia	Fondo de Garantías de Entidades Financieras	Fondo de Garantías de Entidades Financieras
Kazakhstan	National Bank of the Republic of Kazakhstan	National Bank of the Republic of Kazakhstan	Agency for Regulation and Development of Financial Market	Deposit Insurance Fund
Malaysia	Central Bank of Malaysia	Central Bank of Malaysia	Malaysia Deposit Insurance Corporation	Malaysia Deposit Insurance Corporation
Morocco	Bank Al-Maghrib	Bank Al-Maghrib	Bank Al-Maghrib	Société Marocaine de Gestion des Fonds de Garantie des Dépôts Bancaires
Peru	Central Reserve Bank of Peru	Superintendencia de Banca, Seguros y AFP	Superintendencia de Banca, Seguros y AFP	Fondo de Seguro de Depósitos
Thailand	Bank of Thailand	Bank of Thailand	Bank of Thailand / Financial Institutions Development Fund	Deposit Protection Agency
Ukraine	National Bank of Ukraine	National Bank of Ukraine	Deposit Guarantee Fund	Deposit Guarantee Fund
Uruguay	Central Bank of Uruguay	Central Bank of Uruguay	Corporación de Protección del Ahorro Bancario	Corporación de Protección del Ahorro Bancario

\* Authority with primary responsibility, notwithstanding need to coordinate with other authorities, which exists in most surveyed jurisdictions.

\*\* Botswana is in the process of introducing deposit insurance.

Source: FSI survey.

35. **Surveyed jurisdictions differ in how much they involve their inter-agency bodies outside of actual crises.** Thus, notwithstanding broadly similar mandates, inter-agency bodies in some surveyed jurisdictions appear to be primarily involved in an acute crisis, while in others they operate on a more continuous basis. An inherent risk of any institutional arrangement is that, absent the pressure and urgency

of an actual crisis, the separation of functions results in lack of interaction, effectively creating silos or leading to the resolution function becoming non-operational. This may be particularly relevant for EMEs, as the less practice authorities have with crisis management, the more likely a resolution function is to become dormant. Inter-agency bodies may help mitigate such risk, but must themselves guard against becoming inactive forums or platforms for formulaic exchanges. A way to mitigate this is to require a minimum frequency of meetings and to use the committee for the design of playbooks, stress-testing, crisis simulation exercises or even the collective evaluation of relevant bank reporting. In our sample, Colombia and Uruguay report the highest frequency of meetings of inter-agency bodies, requiring at least bimonthly or monthly meetings, respectively, to conduct ongoing testing of plans.

36. **Most surveyed jurisdictions involve government officials in resolution.** The issue of how to involve various government levels, and the national treasury in particular, may be particularly challenging for EMEs, given that resolution authorities are expected to operate independently but their actions should be aligned with broader developmental policies as defined by national governments. Most surveyed jurisdictions do not require government approval for FOLTF decisions, although some provide for notification requirements to bodies where national treasuries may be members or (for example, in Angola) non-voting observers. All surveyed jurisdictions require treasury approval if a resolution strategy entails the use of public funds. Differences exist in terms of specific tools, for example bridge banks, where some jurisdictions require treasury approval while others do not. In some surveyed jurisdictions, national treasuries are incorporated in the resolution authority's governance and thus involved in decision-making on systemic and non-systemic cases alike, for example in Colombia and Malaysia. In these countries, members of the national treasury have a seat and vote on the boards of the respective resolution authorities, Fogafin and PIDM.

## Safeguards

37. **Resolution implies balancing the public interest and individual rights.** The main objective of resolution is to protect financial stability while reducing the reliance on public funds. To meet this objective, authorities may have to use intrusive powers that affect the rights of the failing bank's stakeholders. Due to the intrusive nature of these powers, resolution frameworks typically set out safeguards to ensure that authorities do not exercise them beyond what is necessary to meet their objectives. Whereas conditions focus on triggers and public interest tests before taking actions, safeguards limit the extent to which actions can be taken and/or prescribe how they must be taken. Common safeguards include the need to respect the creditor hierarchy when assigning losses or the rule that creditors are entitled to compensation if they are made worse off in resolution than they would be in liquidation, referred to as the "no creditor worse off than in liquidation" (NCWOL) safeguard.

38. **Safeguards in surveyed jurisdictions' frameworks are designed and applied in different ways.** In four surveyed jurisdictions, frameworks contain the NCWOL safeguard; these frameworks also limit or exclude authorities' ability to depart from statutory creditor hierarchies. In another three jurisdictions, no such safeguard applies, and authorities have broader discretion to depart from creditor hierarchies when allocating losses. In the remainder of surveyed jurisdictions, the situation is more nuanced, in that authorities are required to take into account the losses that individual creditors would suffer in liquidation and the creditor hierarchy when determining loss allocation in resolution, although conditions vary (for example, departure only on the basis of an emergency decree). In Malaysia, for example, the NCWOL safeguard is provided via the Assessor Committee, which determines whether the terms of resolution are reasonable as compared with liquidation values. Aggrieved parties may appeal to this body to request a review of the consideration they have received pursuant to the action that BNM or PIDM have taken under resolution.

39. **Surveyed jurisdictions differ in how they subject resolution to judicial review.** Finding the right balance in this policy area may be particularly challenging for EMEs, as they need to be able to

intervene quickly while managing investors' expectations on due process and judicial control. In most surveyed jurisdictions, courts may review, but cannot block or reverse, authorities' intervention decisions. The only surveyed jurisdictions where courts play a more active role are Angola, Armenia and Malaysia. In Angola, courts can block or reverse decisions taken by the resolution authority, but resolution authority may invoke legitimate cause for non-execution of the court's decision under the rules applying to administrative litigation. In Armenia and Malaysia, the current frameworks provide that prior court approval is needed to liquidate a bank, although pending reforms in Armenia may limit this role of the court in the future. The scope of judicial review differs across surveyed jurisdictions. In some of them (for example, Thailand), it is explicitly limited to fundamental legal principles (eg proportionality) and explicitly excludes, either on the basis of statutory law or judicial self-restraint, the review of technical supervisory aspects.

## Section 4: Preparing and deciding to intervene

### From planning to having a suitable strategy

40. **If a bank fails, authorities should have a suitable intervention strategy ready.** A resolution framework that provides authorities with appropriate tools and powers is a necessary first step. However, authorities must also be able to apply those tools to the case at hand in a way that can achieve the public interest. Designing such a case-specific strategy is a major challenge, as it needs to be made in a short time and under great pressure. This is especially true if there was no prior planning and the strategy is designed completely ad hoc. Ad hoc strategies often risk reflecting institutional or other biases, for example if functions are pooled in a single authority and one of them has a predominant role.<sup>25</sup> Advance resolution planning helps avoid such biases as well as the risk of arbitrary decision-making, because it allows resolution authorities to familiarise themselves with a firm's structure and business. In addition to firm-specific planning, authorities may also pre-agree on a template strategy that they only need to customise to the particular case.

41. **Almost half of surveyed jurisdictions have at least tentative template strategies.** These default strategies typically reflect the focus and the specific features of the respective frameworks and can thus leverage its specific strengths. Thus, the default strategy in Colombia, Peru and Uruguay is to effect the market exit of a failing bank, typically via a transfer transaction combined with a liquidation of the residual entity. In Angola and Morocco, authorities differentiate between failures that may have a systemic impact, where recapitalisation strategies are applied, and other cases, where exit strategies are used. The remainder of the surveyed jurisdictions do not report having a template strategy.

42. **Some surveyed jurisdictions have processes in place to regularly update their default strategies.** In these, default strategies are turned into more concrete, at times bank-specific, plans that are regularly updated. In Colombia, for example, the inter-agency Comisión Intersectoral de Resolución (CIR), which includes SFC and Fogafin, the country's bank supervisor and resolution authority, respectively, is in charge of steering the development of bank-specific resolution plans. Banks are required to prepare such plans, which include a description of the strategy to be applied in case of failure and a definition of the conditions that may trigger an intervention. Banks are required to prepare such plans as "living wills" and submit them. As CIR meets on a monthly basis, these plans may be regularly updated to reflect changes in the framework and lessons learned over the course of the planning process or application. Similar arrangements exist in Uruguay and Morocco. Malaysia and Peru are reviewing their resolution frameworks with a view to introducing recovery and resolution planning requirements.

<sup>25</sup> For a discussion of pooling supervisory and resolution functions, see Baudino et al (2021), also with regard to arrangements in an EME (South Africa).

## Managing uncertainty: temporary measures and emergency liquidity assistance (ELA)

43. **As a bank approaches potential failure, authorities face increasing uncertainties.** In order to customise a strategy, they need good quality information and a thorough understanding of the dynamics at play before resolution is triggered. However, collecting information when failure is imminent carries the risk of accelerating the very failure that authorities seek to pre-empt (for example, through information leakage). This is especially the case if information is collected on an ad hoc basis, rather than through advance resolution planning. Moreover, authorities need to weigh whether specific weaknesses need and can be addressed or the entire bank is approaching failure. Lastly, if liquidity symptoms indicate trouble, authorities need to decide whether they should offer liquidity assistance. In AEs and EMEs alike, managing these challenges requires carefully structured escalation processes and frameworks that integrate resolution and other supervisory processes.

44. **All surveyed jurisdictions have inspection powers and early intervention regimes that help them manage an escalation.** This includes powers to overcome the lack of information that is typical of situations where banks may be approaching the point of failure. Specifically, authorities in all surveyed jurisdictions may appoint special administrators to help them review or investigate a problem bank's affairs, and all report that this is part of their standard procedures in times of distress. In addition to collecting information, a well structured escalation process may also help authorities to identify the right moment for intervention and avoid regulatory forbearance. In Uruguay, for example, the escalation process provides that preparatory actions must commence as soon as the lowest supervisory ratings have been met, and the resolution function is involved in the rating process to ensure its interests are met (Box 2).

Box 2

### The escalation process in Uruguay

The resolution process in Uruguay commences if the central bank determines that a bank is failing or likely to fail and informs COPAB, the country's deposit insurer and resolution authority.

Originally COPAB had five months to find a solution. During this time, deposits were frozen. Following an FSAP recommendation in 2012, this was changed to a 15-day period to find a solution. To facilitate this, a process of preparatory actions (actos preparatorios) was introduced in 2018. It allows COPAB to perform due diligence of the failing bank and design and prepare a strategy prior to resolution being initiated, while the bank remains open for business.

The preparatory regime is based in law and on a formal agreement between COPAB and the central bank. It is further supported by an MoU between the central bank, acting through the Superintendency for Financial Services, and COPAB. The MoU promotes information-sharing between those institutions and coordinates their actions in a crisis intervention. The coordination of activities is triggered as soon as a bank is classified in the highest or second-highest risk category of a four-category risk framework, based on CERT principles (corporate, equity, risk, technology, similar to the CAMELS framework used in many jurisdictions). The review process is monitored by a joint working group comprising representatives of the central bank (including the supervisory function) and COPAB, and might even recommend preparatory actions or the initiation of resolution to the central bank if problems persist.

Source: FSI survey.

45. **All surveyed authorities have powers to curb banks' dividends.** This allows them to strengthen banks' capital positions by requiring banks to retain profits and thus be in a better position to withstand an impending crisis and weather future losses. Many jurisdictions, including EMEs, have chosen to curb banks' dividends during the Covid-19 pandemic.<sup>26</sup> Within our sample, Morocco reports the broadest scope and application of such powers, in that they can be used to curb indiscriminately all

<sup>26</sup> For a discussion on profit retention in the context of Covid-19, see Svoronos et al (2020).

distributions to shareholders as well as any discretionary payments to other related parties, such as bonuses to management. Moreover, consistent profit retention policies may increase banks' loss-absorbing capacities and make up for the lack of debt issuance potential, especially as some banks in EMEs report high profitabilities.

46. **Moratoriums are available in all surveyed frameworks, but not a major element in authorities' strategies.** In theory, imposing a moratorium on certain or all liabilities of a bank may help to temporarily stabilise a situation and give authorities time to devise and implement more profound measures. All surveyed authorities have such power at their disposal, and this may be useful if, for example, they need to freeze funds of individual parties. However, the broader the scope of a moratorium, the more likely it is to have a procyclical effect. Markets will perceive the moratorium as a confirmation of a more deeply rooted viability problem, and the moratorium will thus create the very loss of confidence in the bank's viability that authorities seek to pre-empt. Indeed, no surveyed jurisdiction reports relying on moratoriums as a major element of its resolution strategy, as they may not work well for mainly deposit-financed banks.

47. **Central banks in surveyed jurisdictions either have or are expected to receive ELA powers.** These allow them to extend short- to mid-term liquidity facilities to banks that experience liquidity shortages or have problems accessing liquidity markets. All surveyed frameworks pre-identify conditions or principles for the provision of ELA to ensure consistency and help them assess applications for assistance.<sup>27</sup> Such pre-identified conditions relate to maturities, interest rates, collateral and other features of the facilities provided under ELA. All surveyed central banks require collateral for ELA, but differ in terms of what they accept as collateral (for example, corporate bonds). Most of them lend at above-market rates, although the methods used to establish such rates differ.

48. **A major difference relates to the role of solvency as a condition for ELA.** Most surveyed jurisdictions assess the applicant bank's solvency, but the scope and process of such assessment differs. Table 4 describes those differences across three dimensions: (i) whether solvency is assessed at all, what scope of assessment is applied and what assessment method is used; (ii) whether solvency is a precondition for obtaining ELA or other lending from the central bank, and if not, what provisos apply to any lending by the central bank to a potentially unviable bank; and (iii) what kind of governance arrangements apply, and specifically what the role of supervisors is. In all those regards, significant differences exist across surveyed jurisdictions. With respect to solvency analysis for ELA purposes, some apply a net asset perspective as of the time of lending, while others, for example Morocco and Thailand, include a broader, more forward-looking assessment of the bank's viability. Some central banks commission an independent review of the applicant bank's assets or perform such review themselves. Some jurisdictions prohibit ELA if a negative supervisory assessment has been issued. The degree to which bank supervisors are involved also differs. In some jurisdictions, central banks notify banks' supervisors, while others require a more formal consultation.

49. **Surveyed jurisdictions are in early stages in terms of coordinating their ELA and resolution lending frameworks.** As Table 4 shows, frameworks differ as far as central bank lending to potentially unviable banks is concerned. In a few surveyed jurisdictions, central banks may lend to such banks, provided certain safeguarding arrangements are in place. The nature and stringency of those arrangements varies. In Morocco, the central bank may lend to a bank whose solvency is in doubt, but only if a state guarantee has been given. Similarly, ELA may be extended to potentially troubled banks in Colombia, provided they are placed under a special surveillance regime by their supervisors that typically involves some restructuring measures. In Armenia, where lending to a bank in resolution has super-preference over all other liabilities, the pending resolution reform will coordinate the ELA process with the new resolution framework. This will help distinguish between cases where an otherwise viable bank only requires temporary liquidity assistance (ELA) and cases where a bank must be placed in resolution and

<sup>27</sup> Information on ELA in Malaysia is not available.

funding is provided by the central bank to support an open bank resolution strategy. It is key to coordinate the conditions for central bank lending with those of resolution because of the distributionary effects involved in providing ELA to potentially unviable banks (Box 3). Conceptually, this concern is equally important for AEs and EMEs, but practically may be particularly relevant for EMEs, given the dominant role of often private shareholders and the risk that they may unduly benefit at the expense of the broader depositor base.<sup>28</sup>

ELA frameworks				Table 4
Jurisdiction	Solvency assessed / scope / method	If solvency in doubt	Governance and other aspects	
Angola	Yes, solvency assessed General net asset assessment	ELA not possible	Central bank decides ELA contingent on corrective measures ELA not possible if negative supervisory assessment issued	
Armenia	Yes, solvency assessed General net asset assessment	ELA not possible Central bank may lend, subject to resolution of applicant bank	Central bank decides ELA contingent on corrective measures	
Botswana	Yes, solvency assessed	ELA not possible	Central bank decides ELA subject to government guaranteeing the loan	
Colombia	Yes, solvency assessed Assessment of viability	ELA not possible Central bank may lend, subject to special surveillance regime over applicant bank	Central bank decides upon notifying supervisor ELA not possible if negative supervisory assessment issued	
Kazakhstan	Yes, solvency assessed	ELA not possible	Central bank decides upon notifying supervisor	
Malaysia		[Data not available]		
Morocco	Yes, solvency assessed Assessment of viability Asset review by central bank	Central bank may lend subject to state guarantee	Central bank decides	
Peru	Yes, solvency assessed General net asset assessment	ELA not possible	Central bank decides upon notifying supervisor	
Thailand	Yes, solvency assessed Viability assessment	ELA not possible	Central bank decides	
Ukraine	Yes, solvency assessed	ELA not possible	Central bank decides	
Uruguay	Yes, solvency assessed General net asset assessment	ELA not possible	Central bank decides upon consulting with supervisor	

Source: FSI survey.

<sup>28</sup> Coordination of the classic central bank function of lender of last resort and the resolution function is also relevant from an institutional perspective, irrespective of whether these functions are pooled in the same authority; for a discussion of institutional arrangements, see Baudino et al (2021); for a discussion of ELA in foreign currency, particularly relevant for EMEs, see Dobler et al (2020b).



## ELA, solvency and resolution

All surveyed jurisdictions assess a bank's solvency prior to extending ELA and either make solvency a pre-condition for ELA or apply specific conditions when the solvency of the applicant bank is in doubt. Indeed, solvency has long been established as an important aspect when deciding on ELA.

Consider a case where a collateralised loan is extended to a potentially unviable bank. The fate of the bank is uncertain: it may fail or it may eventually recover by growing out of its insolvency. In any case, the loan enables the bank to pay back in full some of its liabilities, primarily those that happen to mature shortly after the loan was granted. If the bank subsequently fails, these creditors do not suffer any loss, and neither does the lender as they are protected by the collateral they lent against. As a consequence, creditors whose claims did not mature between loan and failure, but who are otherwise of the same class and rank, suffer greater losses than if the bank had been put in liquidation on the grounds that its solvency was in doubt. They may thus claim that the loan has only artificially prolonged the bank's going concern, gambling on the bank's recovery at their expense alone. In other words, the loan facilitated a distribution of the bank's assets that deviates from the one that should be applied in cases where going concern is questionable.

The same logic applies to ELA if granted to a potentially unviable bank. Of course, there may be legitimate reasons to extend ELA to a bank that is undergoing temporary liquidity stress if its solvency is not in doubt. The practical difficulty is to distinguish between cases where the liquidity stress is due to a temporary operational issue and those where it is the symptom of a more deeply rooted problem. To deal with this uncertainty, many argue that central bank lending to banks whose viability is in doubt should typically be accompanied with thorough restructuring measures ensuring their return to viability (for a recent example for this position, see Tucker (2020)). This is typically carried out under a resolution process.

Source: FSI survey.

## Pulling the trigger

50. **A bank fails if it loses the market confidence that it needs to conduct its business.** Loss of confidence may have a variety of causes, such as insufficient quality of service, a non-viable business model or other real or even perceived deficiencies. It is a sudden, unexpected loss of confidence ("bank run") that often causes the greatest disruption to the financial system. Such failures should not be dealt with ex post, but pre-emptively.<sup>29</sup> To do so, resolution frameworks work with various criteria that seek to capture the circumstances under which a bank may be expected to be at imminent risk of losing market confidence and thus indicate the need for, and the power of, authorities to intervene. Traditionally, these criteria have focused on capital ratios or a depletion of statutory or regulatory capital. Other criteria indicate imminent failure through the inability to make payments when due or a measurable deterioration of funding conditions.

51. **All surveyed authorities have the power to initiate resolution on both liquidity and solvency grounds.** This is in addition to their general power to close banks if they do not meet licensing conditions. Yet surveyed jurisdictions differ in how they measure liquidity stress. Thus, some jurisdictions consider a bank to be under liquidity stress if it does not make payments on due obligations (ie actual non-payment), while others apply a more forward-looking approach, allowing intervention when the bank is at imminent risk of not making such payments (Table 5, centre column). As regards the definition of solvency impairment, methodologies also differ, albeit to a lesser extent, as some frameworks apply a risk-weighted asset (RWA) based approach, while others measure the rate of depletion of statutory or regulatory capital.

<sup>29</sup> A bank may also be considered to be failing if it consistently fails to meet licensing requirements, without this necessarily triggering a run. Such failure may not necessarily have to be dealt through resolution frameworks.

52. **All surveyed jurisdictions report that their authorities may intervene while there is still residual positive equity in the failing bank.** This is a key difference between bank resolution frameworks and general corporate insolvency frameworks, which may typically only be triggered if a balance sheet insolvency has been established. Being mindful of that difference is particularly relevant for EMEs, for two reasons. First, their bank resolution frameworks are often derived from traditional corporate insolvency frameworks, and consequently practices, especially judicial practices, that evolved under the latter may continue to influence the application of the former, even though legislation has changed.<sup>30</sup> Second, intervening while there is still residual positive equity is an efficient way to minimise funding needs in resolution and thus to protect external sources of funding, such as deposit guarantee schemes (DGS), resolution funds or, ultimately, public funds. Many surveyed jurisdictions therefore link resolution frameworks to prudential capital requirements, allowing resolution to be initiated if those requirements are not met.

53. **Most surveyed frameworks feature both specific supervisory criteria and more generic intervention grounds.** Generic intervention grounds are those that allow authorities to intervene if they determine that a bank is “failing”, “under financial distress” or “non-viable”, without such concepts being specified in greater detail (Table 5, first column). Such generic terms reflect that no single set of specific criteria can comprehensively capture all potential aspects of a bank failure. Their benefit is that they allow authorities to exercise discretion and judgment when initiating resolution, which they need in order to take pre-emptive measures. Among those surveyed jurisdictions which do not have both specific and generic intervention grounds, some have only the former and others only the latter. In these jurisdictions, authorities need to be especially mindful of flexibility and consistency, respectively, when applying such intervention grounds to initiate resolution.

54. **Surveyed jurisdictions differ in how they approach the challenge of discretion-based interventions.** Such interventions may be especially challenging in EMEs, as they involve managing the tensions between more traditional insolvency grounds, the need to bolster investor confidence in their legal systems and fair decision-making and the uncertainties implied in all forward-looking measures. Among surveyed jurisdictions, some require a specific linkage between discretionary interventions and the public interest objectives of preserving financial stability. In Malaysia, for example, statutory intervention grounds are complemented with internal metrics by BNM, and both are interpreted and applied to meet the overarching objective of financial stability. This may be particularly useful in those jurisdictions where specific supervisory criteria are not defined in statutory law. Another approach, which, however, presupposes the coexistence of specific and generic criteria, is to primarily apply specific, formal intervention triggers such as capital or liquidity metrics and only motivate interventions on purely discretionary grounds as a last resort (for example, in Armenia).

55. **Most surveyed jurisdictions limit the personal liability of decision-makers to gross negligence or disregard of professional duties.** Protection from personal liability is key to enabling forward-looking decision-making and professional judgment. This is especially true for EMEs, where in many cases authorities only recently acquired resolution responsibilities and are still in the process of building relevant capacities, and consequently many members of staff may not yet have built the experience and confidence necessary to make far-reaching discretionary decisions. Protection from liability strengthens staff’s willingness to take decisions under conditions of uncertainty and take pre-emptive action. As a guidance and benchmark to facilitate decision-making under pressure, it helps if, in addition to official, statutory intervention grounds authorities have in place purely internal, technical triggers (for example, in resolution plans) to facilitate escalation procedures and decision-making.

<sup>30</sup> Indeed, many surveyed frameworks continue to include balance sheet insolvency as a distinct ground for intervention, in addition to capital depletion.

Intervention grounds: some examples for specific or discretionary criteria

Table 5

Jurisdiction	Generic intervention grounds	Examples for funding-based specifications	Examples for solvency-based specifications
Angola	Licensing conditions are breached or at risk of being breached, and this is deemed a risk to ensuring continuation of financial services, preventing systemic risk, safeguarding the interests of taxpayers and the state, safeguarding depositors' confidence depositors	[No specific examples]	[No specific examples]
Armenia	The bank's CAMELS performance is lower than the one required by Board of the central bank	If bank is unable to satisfy claims as they fall due	If more than 50% of the bank's statutory capital is depleted
Botswana	The bank is deemed to be non-viable The bank's business conduct threatens its safety and soundness or the interests of depositors	[No specific examples]	If the bank is likely to breach the prudential requirements
Colombia	The bank is deemed to be under financial distress	[No specific examples]	[No specific examples]
Kazakhstan	[No generic criteria]	If bank does not meet its monetary obligations as they fall due	If capital is depleted to below one third of regulatory level
Malaysia	Assets of the bank are not sufficient to give adequate protection to creditors Capital of the bank has reached a level or is eroding in a manner that may detrimentally affect its depositors, creditors or the public generally Bank is or is likely to become insolvent Any other state of affairs exists in respect of the institution that may be materially prejudicial to the interests of the depositors or creditors	If bank is likely to become unable to meet all or any of its obligations	[No specific examples]
Morocco	The bank is deemed to have failed or its failure is imminent, no private sector solution is available and the public interest requires intervention	[No specific examples]	[No specific examples]
Peru	The bank fails to comply with commitments under a special surveillance regime	If bank has suspended payments on its obligations	If capital is less than 5% of total RWA If capital has been reduced by more than 50% over the last 12 months
Thailand	The bank fails to comply with any licensing condition or is deemed to have a condition or operation which may cause damage to the public interest	[No specific examples]	[No specific examples]
Ukraine	Bank is considered a problem bank by the supervisor for more than 120 days	Bank does not comply with liquidity ratios for more than 30 days in a row	If bank does not comply with capital ratio twice in a 30-day period
Uruguay	The solvency, liquidity or viability of the bank is deemed to be irreparably impaired	[No specific examples]	[No specific examples]

Source: FSI survey.

## Section 5: Strategies

### Transfer strategies

56. **In transfer strategies, a failing bank's deposits, and potentially other critical liabilities, are transferred to a healthy third party together with sound assets.** This minimises disruption to the financial system, as the failing bank's functions may continue at the level of the third party acquirer. Non-critical liabilities and problematic assets remain in the failing bank, which is wound down on the basis of a massively reduced balance sheet. Due to the balance sheet reduction, the liquidation is less costly, faster and less burdensome to authorities than if they had to liquidate the failing bank's entire business. The problematic assets left behind in the residual bank are, however, unlikely to support its solvent wind-down. Thus, transfer strategies imply a preferential treatment of transferred liabilities relative to those that remain behind, in that they exempt the former from losses and allocate all losses to the latter and the bank's shareholders.

57. **In all surveyed jurisdictions, authorities have the power to transfer a failing bank's assets and liabilities.** Authorities across surveyed jurisdictions agree that transfer strategies have both strengths and weaknesses. The dependence on a third-party acquirer narrows their room for manoeuvre and may require balancing competing interests and objectives. Thus, acquirers may have to consume hitherto unused capital cushions to support the acquisition, and authorities need to weigh whether this is justified. Other considerations are an increased concentration, if the acquirer is already a major market participant, or whether the licensing of a new market entry is warranted. The former consideration in particular is relevant for EMEs, given their already highly concentrated banking sectors. On the other hand, involving a third-party acquirer may bolster market confidence as it signals a belief in the viability of at least a part of the failing bank's business. On that basis, some surveyed authorities consider transfer strategies to be their default strategy to deal with a bank failure (Section 4).

58. **Surveyed authorities recognise that having transfer powers alone is not sufficient to execute a viable transfer strategy.** Two other elements are required for authorities to be able to use those powers: First, the implied preference that these strategies afford to transferred liabilities must be in line with the jurisdiction's creditor hierarchy, or else the strategy will violate the NCWOL safeguard and may expose the authority that pursues it to liability risks. Second, authorities frequently need to financially support the third-party acquirer to assume the failing bank's business. Table 6 compares the ranking of deposits and the ability to provide financial support across the surveyed jurisdictions, and identifies differences in their capacity to fund a transfer.

59. **Creditor hierarchies in all surveyed jurisdictions are in principle compatible with transfer strategies.** This is because in all surveyed jurisdictions, deposits rank senior to general liabilities, including interbank debt, even though some surveyed jurisdictions further differentiate within the depositor class. The seniority of deposits makes it possible for authorities in all surveyed jurisdictions to transfer the entire depositor base to the acquirer and still comply with the creditor hierarchy. This is key, as the ability to transfer the entire depositor base, rather than insured deposits only, is crucial to market the portfolio to potential acquirers, who are typically not interested in only a portion of the portfolio. However, issues may arise if authorities wish to also transfer general liabilities that have the same rank as those that are meant to remain at the residual bank. In such scenarios, for authorities to avoid successful NCWOL compensation claims, they need to establish that the projected cost savings of the envisaged transfer strategy relative to straight liquidation are so large that, although the entire cost of failure is imposed on remaining liabilities, their individual losses are not greater than those that these liabilities would suffer in straight liquidation.<sup>31</sup>

<sup>31</sup> Seniority of deposits over general liabilities may also contribute to the skittishness of wholesale creditors, especially from offshore. For a discussion of this phenomenon from a US perspective, see Bennett et al (1999); a broader discussion of depositor rank is provided by IMF (2020).

60. **Greater differences exist in terms of surveyed jurisdictions’ abilities to support third-party acquisitions.** Such support is needed whenever there is a mismatch between the failing bank’s sound assets and the liabilities that authorities wish to transfer. Interventions prior to balance sheet insolvency help minimise such mismatches. The financial incentive may be provided as a negative purchase price paid to the acquirer or a loss-sharing arrangement between them and the authorities. In any case, such arrangements require external funding, and this is especially true if, as in surveyed jurisdictions, banks are not prudentially required to build layers of internal loss-absorbing capacity beyond regulatory capital (Section 2). Deposit guarantee schemes or industry-sourced resolution funds are potential providers of such external funding. Most surveyed jurisdictions may resort to DIS resources to support transfer strategies. In Angola, a recently established industry-sourced resolution fund can also financially support transfer strategies. In Thailand, such support is available from the FIDF, which is part of the Bank of Thailand but is a separate legal entity.

61. **In most surveyed jurisdictions, DIS support for transfer strategies is capped.** The only surveyed jurisdictions where this is not the case are Kazakhstan and Malaysia. In Angola, DIS support is subject to a cap, but the support from soon to be established resolution funds is not expected to be subject to any caps. However, no surveyed jurisdiction caps DIS support by reference to a DIS target level, a share of a DIS’s actual funds, a share of a jurisdiction’s aggregate deposit base at any point in time or an absolute amount. Rather, DIS support is capped by reference to the payout that a DIS would make if it had to reimburse depositors in liquidation. Jurisdictions differ in how they operationalise the reference to payout: some surveyed jurisdictions determine the cap on a gross basis, ie by reference to the expenditure that the DIS would have to incur in order to reimburse depositors. Others apply a net basis, ie by reference to the ultimate loss that the DIS would suffer if it did not recover some or all reimbursed amounts from its share in liquidation proceeds. As a result, the stringency of caps differs considerably across surveyed jurisdictions. Caps are especially stringent in those jurisdictions where caps are calculated on a net basis and insured depositors are super-preferred. Box 4 discusses financial caps in more detail.

62. **Most surveyed jurisdictions have the bridge bank tool.** Creating a bridge bank may provide authorities with additional time to tailor an optimal resolution strategy. Bridge banks allow the failed bank’s business to be operated under the responsibility of the authorities for an interim, medium-term period, typically a few years, until a suitable acquirer or a way to recapitalise the business is found. However, bridge banks entail a significant commitment of resources and responsibilities on the part of authorities. Approaches to this tool differ across surveyed jurisdictions. Malaysia, for example, considers it a going-concern strategy that may be applied depending on the outcome of the Malaysian systemic least cost assessment, whereas other surveyed authorities consider bridge banks as a last resort because of the disproportionate operational burden. The Peruvian framework, for example, explicitly restricts use of the bridge bank tool to an exceptional situation, and the power to determine that such a situation exists rests with the country’s resolution authority, SBS, which needs to act in agreement with BCRP and MEF.

Conditions for transfer strategies – deposit rank and funding support

Table 6

Jurisdiction	Rank of deposits	Funding support*	Caps or provisos
Angola	Super-preference of insured deposits	DIS (paybox plus) Resolution fund	Cap on gross basis
Armenia	Super-preference of insured deposits	None (DIS paybox)	na
Botswana**	Super-preference of insured deposits	DIS (paybox plus)	Cap on net basis
Colombia	General depositor preference	DIS (loss minimiser)	Cap on net basis Systemic exception available

Conditions for transfer strategies – deposit rank and funding support

Table 6

Kazakhstan	General depositor preference	DIS Resolution fund	No cap
Malaysia	General depositor preference	DIS (risk minimiser)	No cap
Morocco	Super-preference of insured deposits	DIS (paybox plus)	Cap on a gross basis
Peru	Super-preference of insured deposits	DIS (paybox plus)	Cap on gross basis Systemic exception available
Thailand	Super-preference of insured deposits	None (DIS paybox) Funding or loss-sharing by FIDF in systemic cases	na
Ukraine	Super-preference of insured deposits	DIS (loss minimiser)	na
Uruguay ***	Super-preference of insured deposits	DIS (paybox plus)	Cap on net basis

\* Mandate description based on IADI Core Principles taxonomy.

\*\* Information for Botswana reflects a pending proposal that has not yet been implemented.

\*\*\* In Uruguay, the LCT is calculated on a net basis with a stylised recovery rate of 25% of a failed bank’s assets, based on historical losses. Moreover, a modified depositor preference applies for purposes of P&A transactions.

Source: Authors’ conceptualisation.

Box 4

Calculating the cap to DIS support

In jurisdictions where the cap is calculated on a net basis (payout minus recoveries), authorities that intend to enlist DIS support for a transfer strategy need to consider a counterfactual liquidation proceeding and estimate the amount of recoveries that the DIS would realise as legal successor to the deposits that it would reimburse in such a scenario. Such estimates are driven by two main factors: (i) authorities’ projections about the uncertainties associated with the liquidation process, such as its length, the realisable value of liquidated assets, the operational expense necessary to realise those assets and derive distributable proceeds, the claims of competing creditors etc; and (ii) the position of the DIS within the hierarchy of claims. Thus, the DIS, as legal successor of insured deposits, is more likely to recover all its expenses if insured deposits are super-preferred than if they rank pari passu with uninsured deposits. This, in turn, lowers the cap, and as a result narrows the room for the DIS to support a transfer strategy (potentially to zero, if the DIS can expect to recover all its expenses).

Some surveyed jurisdictions avoid these difficulties by calculating the cap on a gross basis (Angola, Kazakhstan, Peru), allowing for DIS support up to the aggregate amount of insured deposits. Those that apply a net-based methodology manage these challenges in different ways: Uruguay, for example, deals with the uncertainties of projecting liquidation recoveries by applying a stylised recovery rate of 25% of a failed bank’s assets, based on historically observed losses, which obviates the need for authorities to make specific projections in a given case and allows COPAB to support transfer strategies with funding up to 75% of reimbursed deposits. In Colombia, the cap is calculated on a net basis and Fogafin must make concrete projections about expected recoveries, but may also invoke a systemic exception to mobilise more funding, for example if a bank is critical to a particular region.

Many jurisdictions’ frameworks include caps in one way or another. Some jurisdictions do not cap DIS support, but mandate that, if authorities have multiple intervention options, they should choose the one that is the least costly to the entire system (rather than to the DIS alone). In Malaysia, for example, the DIS has a broad, risk-minimiser mandate that is not subject to a cap, but Malaysian authorities must opt for the intervention strategy that they consider least costly to the Malaysian financial system as a whole.

Source: FSI survey

## Bail-in strategies in EMEs

63. **A pure bail-in strategy operates like a financial restructuring that aims to restore a failing bank's viability.** In such a strategy, a resolution authority writes down certain liabilities of a failing bank and/or converts them into capital to restore the bank's capital position. Although such a strategy merely rearranges the existing liabilities side of a failing bank's balance sheet, as opposed to providing fresh funds, the swift restoration of the bank's formal capital position may provide interim stability needed for a more thorough, and thus more time-consuming, reorganisation of the business. For pure bail-in strategies to work, two preconditions need to be in place. First, authorities should have the power to write down or convert debt. Second, banks should have sufficiently large layers of debt that authorities may write down or convert without jeopardising public interests.

64. **Among surveyed jurisdictions, only authorities in Angola, Botswana and Kazakhstan are adopting bail-in powers.** In these countries, reforms have been enacted or are under way that allow authorities to exercise broad powers to restructure a failing bank's debt. These powers will cover all types of debt and include the total cancellation of the debt instrument or the partial reduction of its nominal amount (writedown), the modification of its maturity profile, the alteration of interest payments in terms of their amount or payment date and the temporary suspension of payments of interest or capital. Authorities in these jurisdictions report that bail-in will be an important element of their default intervention strategy, especially in systemic cases. Armenia is considering the introduction of similar powers. In all other surveyed jurisdictions, authorities do not have such powers and policymakers do not contemplate their introduction at this stage.

65. **No surveyed jurisdiction has a requirement for banks to hold bail-in eligible debt.** This is even true for those jurisdictions in which authorities will soon have bail-in powers, although policymakers in Armenia contemplate establishing a requirement similar to the EU's minimum requirement for own funds and eligible liabilities (MREL). Authorities justify this position by a number of considerations: They are concerned that their domestic capital markets are not sufficiently deep and liquid (Section 2). Domestic investors are mostly insurance companies and pension funds, whose investment policies may not allow them to hold debt with loss-absorbing features. Moreover, banks' funding costs would rise as banks in EMEs would have to issue such debt offshore. Lastly, interviewed authorities cite the high concentration of banking sectors that may result in a high ratio of cross-selling of bail-in-able instruments, generating contagion risks.

66. **Surveyed authorities also cite practical considerations against additional debt requirements.** Specifically, they weigh the additional complexity against expected benefits. Some are concerned that a lack of supervisory experience in reviewing complex debt instruments may create the risk of non-executability or of banks holding their own debt instruments via complex financial structures. Tax regimes may have to be adapted to avoid the debt cancellation inherent in any bail-in being considered income for tax purposes, which effectively reduces the amounts created by bail-in by the applicable tax rate, ie typically around 30%. Another cited risk is that such instruments would be sold to retail investors or the general public, which could result in a massive conversion of deposits into bail-in-able instruments without a proper risk explanation. Lastly, it may be difficult for issuers, investors and supervisors to clearly distinguish whether a particular instrument contains a contractual bail-in clause or may be subject to mandatory bail-in.

67. **Against this background, many authorities in surveyed jurisdictions consider bail-in as a supporting element within a broader strategy, rather than a strategy in itself.** Specifically, bail-in may help absorb losses and thus prepare the ground for the entry of new capital, which in turn helps broaden the pool of potential third-party investors. This may be especially a consideration for those surveyed jurisdictions that report aiming for recapitalisation strategies as their preferred default strategy for bank resolution, ie Angola, Botswana, Kazakhstan and Morocco. Jurisdictions may also consider a mixed approach, under which claims of related parties (shareholders and management) would be subject to

mandatory bail-in, while local markets would incrementally be developed to absorb debt instruments with contractual bail-in features. Such mandatory bail-in of related parties is contemplated in Angola, Kazakhstan and Morocco.

## Recapitalisation strategies

68. **If bail-in strategies do not work, authorities may choose to inject fresh funds to recapitalise a failing bank.** Thus, much like transfer strategies, standard recapitalisation strategies depend on external sources of funding. Prior to the issuance of new shares, however, all incurred losses need to be absorbed to ensure that the value of the newly created capital corresponds to the amount of the funds injected and protect the provider of funding against the dilution of its newly purchased shares. This is done by writing down old capital to the extent needed to absorb losses. Ideally, if intervention occurs while there is residual equity, old capital should suffice to absorb losses, although a complete writedown may be advisable to capture hidden losses. If losses exceed stated capital, a writedown of additional liabilities is needed. Without a writedown, old shareholders and potentially creditors are bailed out and the burden of failure is imposed on the provider of new funds, for example a DIS or a resolution fund.

69. **Authorities in most surveyed jurisdictions have powers to require banks to raise fresh capital by issuing new shares.** Often, authorities in surveyed jurisdictions call on existing shareholders to purchase such shares, at least if their share exceeds a certain proportion. Indeed, given the importance of significant shareholders in all surveyed jurisdictions (Section 2), this may often be a plausible approach. In Botswana, for example, bank shareholders are required to issue letters of comfort in favour of their bank as a licensing condition, allowing authorities to more formally resort to shareholder support at times of distress. Absent such arrangements, however, as shareholder liability is legally limited, authorities realise that new capital injections by existing shareholders are not legally enforceable. Authorities cannot therefore rely on the expectation that moral suasion will always prevail and typically have to identify alternative strategies, unless specific circumstances apply, for example if a bank is wholly owned by the sovereign.

70. **In most surveyed jurisdictions, DIS have mandates that allow them to participate in the recapitalisation of a failing bank.** In some of the jurisdictions where this is not the case, other sources of funding may be available. Thus, in Thailand, the DIS has a pure paybox mandate and as liquidator of the failed bank cannot participate in a recapitalisation, but the Financial Institutions Development Fund, which is in charge of executing the resolution strategy as approved by the country's cabinet, can. Absent such sources of funding, authorities have in the past resorted to enlisting support from "national champions" to help them recapitalise a failing bank. Thus, the Angolan subsidiary of the Portuguese Espírito Santo group was recapitalised in 2014 with the support of the national oil company, Sonangol (Box 5). The case motivated the creation of an industry-sourced resolution fund in Angola, which is expected to be completed by end-2021.

71. **Surveyed jurisdictions differ in how they mitigate the risks that recapitalisation strategies entail for providers of new capital.** One such risk is that fresh funds are injected without losses having been completely absorbed beforehand, resulting in the value of capital being lower than the amount of funds injected. Another risk is that capital is provided but does not convey sufficient control over the recapitalised bank. Lastly, providers of new capital will consider the future fate of their investment. Table 7 illustrates this across the dimensions as to whether jurisdictions require a prior writedown of existing capital, a change of control and a predetermined exit. In Peru, for example, the DIS may, in principle, participate in a recapitalisation, provided that existing capital is entirely written down, and the DIS acquires control of the recapitalised bank and shall exit the investment within three years, although the Peruvian authorities report they would consider this an extraordinary scenario. Most surveyed jurisdictions report that they would pursue similar conditions in recapitalisation strategies, although these conditions are not always formalised as binding requirements of their frameworks. Absent a formal requirement to that effect,



the writedown may become a case by case decision, which increases the risk for incoming providers of capital, including DIS or resolution funds.

72. **Jurisdictions can further minimise risks to providers of capital if they have bail-in powers.** Angola and Kazakhstan have introduced bail-in powers for their resolution authorities, and Botswana is potentially introducing them. Absent sufficient layers of bail-in eligible debt, these powers may not yet fully support bail-in strategies, but may help protect DIS or resolution funds to the extent that a failing bank’s losses exceed regulatory capital and the bank happens to have debt that authorities deem eligible for bail-in. Similarly, authorities in Angola and Morocco may impose losses on claims of related parties, such as shareholders or managers, applying a “substance over form” approach and treating those instruments similarly to capital instruments. Having bail-in or similar powers in relation to debt therefore increases authorities’ options to leverage the participation of third parties in a capital increase. This widens the pool of external funding and thus helps address the funding scarcity that is typical of EMEs.

Recapitalisation strategies Table 7

Jurisdiction	Scope of writedown	Source of new capital	Legal requirements
Angola	Regulatory capital Senior debt	DIS Resolution fund	Mandatory prior writedown
Armenia*	na	na	na
Botswana*	na	na	na
Colombia**	Regulatory capital	DIS	Prior writedown not mandatory
Kazakhstan	Regulatory capital Senior debt	Resolution fund	Mandatory prior writedown
Malaysia	Regulatory capital	DIS	Mandatory prior writedown Writedown requires court approval
Morocco	Regulatory capital	DIS	Mandatory prior write-down
Peru	Regulatory capital	DIS	Mandatory prior writedown DIS must take control Mandatory exit after three years
Thailand	Regulatory capital	Resolution fund	Mandatory prior writedown
Ukraine*	na	na	na
Uruguay*	na	na	na

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\* In these jurisdictions, regulatory capital may also be written down to absorb losses, but DIS or resolution funds are not available for recapitalisation strategies, hence na.

\*\* In Colombia, Fogafin may order that capital be written down to absorb losses prior to injection of new capital (“Accordeon”).

Source: FSI survey.

73. **In all surveyed jurisdictions, the frameworks include powers for authorities to appoint investigators and commission asset valuations.** Asset valuations help estimate losses and determine capital needs. In 2014, for example, the Bank of Angola commissioned an asset valuation to establish the losses of the Angolan subsidiary of the failing Espírito Santo group, which provided the basis for its recapitalisation. However, asset valuations have the disadvantage of reflecting administrative assessments made at the point of intervention, which may expose authorities to liability or reputational risks. Given these difficulties, many surveyed authorities report factoring in buffers to avoid understating losses and capital add-ons to ensure a solid level of capitalisation. This, however, increases the overall funding needs.

To avoid this, some surveyed authorities report that they seek to involve an independent private party in the recapitalisation, as a “hybrid” recapitalisation combining private resources and those from DIS or resolution funds may bolster market confidence in the recapitalisation and may include competitive elements, much like in transfer strategies.

Box 5

### The resolution of Banco Espírito Santo Angola

Following the collapse of the Portuguese Espírito Santo Group in August 2014, the Bank of Angola (BoA) announced that it would apply reorganisation measures to its Angolan subsidiary, Banco Espírito Santo Angola (BESA). The BoA imposed restrictions on the bank’s commercial activities and appointed provisional directors with a mandate to veto actions that may negatively impact the bank’s solvency or financial stability. Moreover, it conducted a detailed assessment of BESA’s assets.

Based on these assessments, the BoA determined that BESA was insolvent. BoA instructed shareholders to approve the following measures:

- A reduction of shareholders’ equity to absorb losses and a wipeout of certain senior liabilities held by related parties.
- A share capital increase and an issuance of additional subordinated instruments to meet prudential requirements, which were subscribed by national oil company Sonangol and Novo Banco, respectively.
- A carve-out of bad assets from the balance sheet of BESA, which were purchased by the government, acting through the state-owned Empresa Nacional de Seguros e Resseguros de Angola (ENSA); the purchase was refinanced by an issuance of €200 million in public debt.

Following this restructuring, the bank operated under the new name of Banco Economica, SA with Sonangol as the new majority shareholder.

Authorities’ strategy combined transfer and recapitalisation elements to restructure the bank, and the case highlights the benefits of powers that allow authorities to bail in liabilities and to carve out bad assets. Moreover, the case illustrates the importance of external sources of funding. Without it, more specifically without the issuance of public debt, the capital subscription and the asset carve-out could probably not have gone through. The case motivated the creation of the soon to be established industry-sourced resolution fund in Angola.

## Section 6: Refinancing and public backstops

74. **A major challenge for EMEs is to fund bank resolution.** That challenge stems from three major factors. First, banks’ own dominant reliance on capital and deposits as a source of funding implies that internal loss-absorbing capacity is limited (Sections 2 and 5). Second, private parties cannot always be relied upon as external sources of funding, as existing shareholders have limited liability and domestic third parties or foreign investors may themselves be withdrawing from the market or may not be suitable from authorities’ perspectives. Third, industry-sourced funding arrangements such as DIS or resolution funds may have limited firepower. This may be true in terms of the absolute amount of funds available in a DIS or resolution fund, especially if they have been established only recently. It may also be true in view of the concentrated banking sectors in EMEs, as a high degree of concentration implies a large relative weight and likely systemic importance of individual banks. This, in turns, makes it likely that the funding needed to deal with the failure of such a bank may exceed the capacity of a jurisdiction’s DIS. Table 8 provides an overview of the firepower of such arrangements, how jurisdictions seek to enhance it when needed, and what public backstops they have in place.

75. **Most surveyed jurisdictions have DIS with mandatory membership for banks.** In most surveyed jurisdictions, DIS are, in principle, mandated to support both transfer and recapitalisation strategies (see above). Their organisational setup differs somewhat across surveyed jurisdictions, as some

are organised as statutory bodies while others as companies under private law. Yet notwithstanding such more formal differences, all DIS are under public control. A more prominent difference relates to the operational setup. In six surveyed jurisdictions, the DIS is operationally attached to the central bank, while in the remaining five, the DIS is as standalone, operationally independent entity.

76. **The principal source of funding of DIS is ex ante paid premia.** Other sources include proceeds from bank liquidations in which DIS participate to the extent they have paid out depositors and, in some jurisdictions (for example, Kazakhstan) fines and penalties payable by banks on account of certain violations of law. Differences exist across surveyed jurisdictions in premia methodology and in target and actual funding levels. DIS' firepower consequently differs across surveyed jurisdictions, although this is also the result of DIS having been established at different times. Colombia and Kazakhstan report the highest actual levels in terms of the DIS fund's share in aggregate eligible deposits, with 5.8% and 4.7%, respectively.

77. **Only three surveyed jurisdictions have industry-sourced funds, in addition to DIS, that may be used in resolution.** These are Angola, Kazakhstan and Thailand. Angola is in the process of establishing a resolution fund that will be industry-sourced through ex ante payable premia and operate as an autonomous entity under the auspices of the central bank. Its main purpose will be to provide funds for the recapitalisation of systemic banks in resolution. The Kazakhstan Problem Loan Fund was established in 2012 to help banks work out their non-performing loan (NPL) portfolios, and the Kazakhstan Financial Sustainability Fund, established in 2017, may provide financial support to the resolution of banks with significant social significance, subject to mandatory participation of shareholders. In both these countries, these funds will complement DIS with mandates that in principle allow resolution funding. In Thailand, the DIS cannot fund resolution, but the FIDF has a broader developmental mandate in respect of the financial sector, which includes support for bank resolution in systemic cases, subject to loss absorption by shareholders and certain creditors.

78. **Public backstop arrangements differ across surveyed jurisdictions.** In about the half of surveyed jurisdictions, DIS (or any resolution fund) may borrow from the national treasury, although some jurisdictions specify that such loans would only be granted in systemic cases, whereas others explicitly report that public backstops are not restricted to systemic cases. A few jurisdictions allow their DIS (or any resolution fund) to issue treasury-guaranteed bonds on the debt capital markets. In some jurisdictions, DIS (or any resolution fund) may borrow from the central bank, sometimes in addition to being able to borrow from the national treasury.

79. **Most surveyed jurisdictions report that, if public backstops are activated, any lending is provided on a collateralised basis.** However, no surveyed jurisdiction reports having arrangements under which the DIS, any resolution fund or their member banks are required to pre-position collateral during non-crisis times for the treasury or central bank to lend against if and when needed. In some surveyed jurisdictions, DIS or resolution funds are administered by central banks and public backstops provided as a central bank facility. In such cases, the central bank is in a good position to secure recoveries if netting arrangements exist between its facility and the liabilities of DIS member banks.

80. **Authorities' ability to recoup public expenses through ex post levies varies across surveyed jurisdictions.** Recoupment powers are crucial to ensure treasury and/or central bank loans extended in a crisis are repaid, especially if collateral has not been posted. Practices differ as to how such powers are constrained. Uruguayan authorities may require the banking sector to make ad hoc contributions, but only up to an amount equal to the existing annual contributions of three years, and such amount is counted towards the sector's contributions over the subsequent three years, representing an advance rather than an ad hoc increase. In Morocco and Thailand, authorities have comparatively broader powers and may impose discretionary additional levies on the banking industry, up to a certain limit, to recoup any expenses of the public purse incurred through a resolution.

## Firepower of DIS and resolution funds and public backstops

Table 8

Jurisdiction	General information	DIS capacity*	Ex post levies and recoupment	Public backstop
Angola	DIS a separate public entity, attached to central bank Resolution fund for systemic cases	DIS and resolution fund being established	Not available	Treasury loan (only for systemic cases)
Armenia	DIS a separate public entity Paybox mandate	Actual level: 2.6% of total deposits / \$175 mn	Ex post levies only if funds insufficient for payout of insured deposits	Central bank facility guaranteed by treasury
Botswana	DIS proposed, not yet established	DIS proposed, not yet established	Not yet determined	Not yet determined
Colombia	DIS a separate public entity	Actual level: 5.8% of total deposits / \$7.4 bn	Discretionary ex post levies up to legally defined maximum	Treasury loan Treasury-guaranteed bonds
Kazakhstan	DIS a separate public entity attached to central bank Kazakhstan Sustainability Fund for systemic cases Problem Loan Fund for NPL workout purposes	Actual level: 4.6% of total deposits / \$2.3 bn	Discretionary, subject to treasury approval	Treasury loan Central bank facility
Malaysia	PIDM a standalone government agency	Actual level: 0.5% of insured deposits / \$715.2mn	Discretionary, subject to treasury approval	Treasury loan
Morocco	Private company jointly owned by BAM and member institutions	Actual level: 2.9% of total deposits / \$3.1 bn	Discretionary, subject to conditions defined by BAM	Central bank facility Treasury-guaranteed bonds
Peru	Standalone agency under mixed (private/public) administration	Actual level: 1.7% of total deposits / \$1.5 bn	None	Treasury loan Treasury-guaranteed loan Both subject to emergency decree
Thailand	DIS as a standalone agency with paybox mandate FIDF for systemic cases	Actual level: 0.9% of total deposits / \$4.1 bn	Discretionary, subject to cabinet approval Discretionary ex post levies by FIDF, subject to cabinet approval	Central bank facility Treasury-guaranteed FIDF bonds Both subject to emergency decree
Ukraine	DIS standalone body	Actual level: 2.5% of insured household deposits	Special levies available under DIS legislation	Central bank facility Treasury loan
Uruguay	Standalone agency	Actual level: 2.3% of total deposits / \$746 mn	Ad hoc levies for three years in advance	None

\* Actual level as of most recently available, converted into USD as per May 2020, to the extent available in public domain.

Sources: IADI (2018); FSI survey; public domain.

## Section 7: Cross-border issues

81. **All surveyed jurisdictions provide for some level of information-sharing with foreign supervisory authorities.** To enhance the effectiveness of the consolidated supervision of large banking groups, information-sharing arrangements between relevant supervisory authorities in the home and host jurisdictions are often created. These arrangements are typically in the form of memoranda of understanding (MoUs), as is the case for supervisors in Colombia, Kazakhstan, Malaysia, Peru, Thailand and Ukraine. Angola requires that these arrangements be conducted on a reciprocal basis. Because of the highly sensitive nature of this information, there are usually stipulations to safeguard its confidentiality, as well as general language that the information obtained from the arrangements be used exclusively for supervisory purposes.<sup>32</sup> None of the surveyed jurisdictions explicitly mandate information to be shared between host and home supervisors.

82. **Similarly, the rate of participation of host supervisors in supervisory or resolution colleges is quite high overall.** Within our sample, all but three jurisdictions – Kazakhstan, Ukraine and Uruguay – are involved in supervisory and/or resolution colleges for their major banks. Such colleges may be useful as vehicles for information-sharing, as forums for resolution planning or as bodies that host technical cooperation and coordinate decision-making across jurisdictional borders in times of distress. As such, they are especially relevant for jurisdictions where one or more foreign banks hold significant market share. Indeed, in our sample all but three of the 11 surveyed jurisdictions have at least one foreign bank as one of their five largest, and in Botswana, Peru and Uruguay foreign banks comprise the majority of the five largest banks. Given the high levels of bank asset concentration across all jurisdictions, the burden on the host supervisor of resolving a bank that is a subsidiary of a foreign group and locally systemic may be lessened if there are clear and concrete procedures and arrangements in place – which are often facilitated by the participation in these colleges. Additionally, host authorities may be able to draw on the experiences of home regulators so that some practical and operational pitfalls may be avoided. In Morocco, for instance, host supervisors of a foreign bank may ask the foreign bank’s parent for input on restructuring and resolution plans.

83. **Lack of participation and formal legal backing for cooperation agreements may inhibit effective cross-border resolution.** While efforts to participate in information-sharing arrangements – whether they be bilateral or through multilateral colleges or groups – have improved, four surveyed jurisdictions are either not involved or have very limited exposure to these types of arrangements. As discussed by Baudino et al (2020), the extent to which a host jurisdiction may cooperate with group resolution strategies or procedures is a function of how involved they are in group-level discussions and if they receive relevant information on resolution plans.<sup>33</sup> If they are not involved, they may act unilaterally and impose measures that are consistent with objectives to safeguard domestic financial stability, but may undermine or go against the preferred group-level resolution strategy. Thus, the formation of formal, regular channels to discuss cross-border resolution and supervisory issues is key. Colombia and Thailand, for instance, are both members of multilateral resolution and supervisory groups.<sup>34</sup> Furthermore, while single point of entry (SPoE) strategies appear to be the preferred method for cross-border resolution, they require confidence and assurance from the home supervisor that the concerns and needs of the host authorities will be addressed and met, so that the host supervisor will not take sudden, unilateral actions (ring-fencing, freezing of subsidiary funds). In fact, some of the surveyed jurisdictions have intentionally structured their frameworks to more easily facilitate a multiple point of entry (MPE) approach instead.

<sup>32</sup> Ukraine specifies that this information can be used in the evaluation of AML/CFT risks as well.

<sup>33</sup> See Baudino et al (2020).

<sup>34</sup> Colombia has been a member of the Council of Central American Banking Supervisors (CCSBSO) since 2012. Thailand signed the Cross-border Coordination Agreement (COAG) as a host authority.

84. **All surveyed jurisdictions have powers to alter the distribution of capital, ring-fence local entities, or impose capital controls or exchange rate restrictions.** In general, supervisory regimes in the surveyed jurisdictions apply irrespective of whether a bank is a domestic firm, a locally incorporated subsidiary of a foreign bank, or a foreign bank branch. Even so, some jurisdictions require foreign banks to be organised as local subsidiaries to facilitate intervention at the local level. Thus, Botswana, Malaysia and Peru require that foreign banks wishing to do business in these countries must set up a locally incorporated subsidiary; they cannot open foreign branches. This allows authorities to impose corrective measures more easily should the subsidiary experience material financial distress. In Malaysia, Thailand and Uruguay, authorities may impose restrictions (on dividends, asset growth, transfer of assets) on subsidiaries that are struggling. Other jurisdictions have some idiosyncratic powers. Botswana explicitly allows ring-fencing of a distressed subsidiary from its parent or related companies. About half of the surveyed jurisdictions have minor restrictions or stipulations in place with regards to the movement of private and foreign capital. These may range from general provisions aimed at curbing speculation, such as in Thailand, to approval requirements – by the central bank or foreign exchange regulator – for foreign investment, such as in Angola and Morocco, to outright risk-based foreign currency limits, as is the case in Uruguay.

## Section 8: Conclusion

85. **EMEs face specific challenges in dealing with bank failures.** These challenges include the typical funding structure of their banks, limited domestic capital markets and concentrated banking sectors. Other features also distinguish banking sectors in EMEs from those in AEs, for example the prevalence of significant shareholders in banks' capital. All this calls for resolution strategies that are tailored to the specific conditions in EMEs, and for frameworks that are designed to support such strategies and compatible with EMEs' broader development goals. Most importantly, resolution frameworks should enable authorities in EMEs to design and pursue strategies that address the funding gap by maximising available private sources of funding and minimising the need to resort to public funds.

86. **Many EMEs have taken steps to reform their resolution frameworks.** Thus, all jurisdictions surveyed in this paper have strengthened their frameworks since the GFC, and some are in the process of introducing reforms that are based on the FSB Key Attributes. These reforms have introduced a range of tools and powers for authorities that go beyond those that are available in conventional corporate bankruptcy frameworks, notably transfer powers, which are available in all surveyed jurisdictions. Moreover, frameworks have established specialised authorities and feature intervention grounds that, in principle, allow authorities to intervene pre-emptively. Authorities are therefore in a good position to make clear, both for their internal preparatory purposes but also, where appropriate, publicly that they intend to use their powers to intervene before capital is entirely depleted. Most importantly, authorities in all surveyed jurisdictions have the explicit mandate to pursue public interest objectives when resolving a failing bank, subject to certain safeguards designed to protect banks and bank stakeholders against supervisory overreach.

87. **Notwithstanding those reforms, authorities' crisis management capabilities could be developed further.** Thus, even though institutional arrangements have evolved, it remains challenging to keep resolution functions operational outside crisis times as well as to organise prompt decision making in times of distress. To tackle this, authorities could consider greater use of inter-agency bodies or cross-departmental committees, including during business as usual times, to refine and practise internal escalation processes. An important area is to ensure legal protection for decision-makers to bolster their professional confidence and avoid indecisiveness and the supervisory forbearance that typically comes with it.

88. **Jurisdictions may strengthen their preparedness through resolution planning.** A few surveyed jurisdictions already have planning processes in place, and some also have preferred or default strategies. Having such default strategies allows jurisdictions to identify any gaps that stand in the way of their successful implementation when needed. Thus, jurisdictions with transfer strategies as their preferred standard strategy need to consider whether the creditor hierarchy in their country supports the implied loss allocation and whether funding arrangements, in particular from DIS, are flexible enough to provide necessary financial support for a third-party acquisition.

89. **A standard strategy is a good basis to develop more refined, bank-specific resolution plans.** In some jurisdictions, inter-agency bodies are mandated to monitor the development of such bank-specific plans. Bank-specific plans designed in non-crisis times are rarely implemented without any change when a crisis hits. Even so, the additional information gathered outside the crisis, and the increased familiarity with the bank in question are benefits that immediately translate into the effectiveness of even substantially modified plans. Inter-agency bodies may also be suitable forums to develop playbooks or conduct simulation exercises. Crisis simulation exercises are a good way to test frameworks as well as authorities' capabilities in general and the efficiency of inter-agency coordination specifically. They also enhance crisis preparedness by allowing authorities' staff to practise their crisis management skills.<sup>35</sup> An important side benefit of planning is that it helps smooth the natural volatility of crisis-related work and thus promotes greater continuity of policies and practices, at both the individual staff and institutional level, through greater institutional memory.

90. **Bail-in can be a helpful ingredient in support of recapitalisation strategies.** Underdeveloped capital markets mean that, in the short term, pure bail-in strategies will be of limited use, given that banks are unlikely to build the required layers of eligible debt without exacerbating existing vulnerabilities. Yet authorities may consider including the use of bail-in powers within the context of broader recapitalisation strategies. This minimises the need for external funding and by extension widens the pool of potential funding providers, decreasing the risk of having to draw on public backstops. In addition, profit retention policies during business as usual times may help increase banks' loss-absorbing capacities, leveraging often high bank profitabilities in EMEs and making up for lack of debt issuance potential. EMEs may also leverage the fact that many banks have dominant shareholders and their claims can therefore be treated functionally equivalent to equity, further increasing loss-absorbing capacity and at the same time acting as a tax on bank ownership concentration. In the long term, development of capital markets will also help crisis management capabilities.

91. **Public backstops are in any case necessary.** While all surveyed jurisdictions feature ex ante funded DIS, and some even industry-sourced resolution funds in addition to DIS, the overall firepower of these arrangements is limited. As a consequence, authorities are likely to draw on a public backstop sooner rather than later. Most backstop facilities contemplate treasury loans, although some also consider central bank lending. In both cases, it is key to maximise recoveries. This helps control the moral hazard associated with any assumption that public funds will be available. Specifically, authorities should be able to recover any loans they have extended through ex post levies. Collateral is also important, and may be more easily available if prepositioned or if netting arrangements exist between the public backstop facility and banks' claims towards the provider of the facility (for example, the central bank).

92. **The combined used of public and private funding may minimise exposure of the former.** It may work in both transfer and recapitalisation strategies. Transfer strategies always involve a, typically private, third party. Recapitalisation strategy may also do so, for example through joint temporary recapitalisations ("hybrid" strategies).

93. **Formal arrangements for information-sharing and, when possible, participation in supervisory or resolution colleges may help address cross-border challenges.** While the surveyed jurisdictions often participate on an informal basis, codifying procedures and arrangements between host

<sup>35</sup> See FSI (2021) for a report on a crisis simulation exercise involving six jurisdictions in South America.

and home supervisors both increases the likelihood that group-wide resolution strategies are adhered to and decreases the likelihood that host supervisors may act unilaterally. Powers to restrict the deployment of capital during business as usual or its mobility at times of distress by ring-fencing local subsidiaries exist, but have not been used in the context of the failure of a large, international domestic systemically important bank (D-SIB). Given the significant presence that large, foreign banks have in many of these jurisdictions, cross-border risks remain an important point of evaluation.



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