# Section 4: Objectives and Possible Consequences of Deposit Insurance

Since the creation of the FDIC in 1933, more than 140 national jurisdictions have adopted deposit insurance systems.<sup>74</sup> Financial stability and depositor protection are the two leading public policy objectives of deposit insurance. However, deposit insurance can also change bank behaviors and lead to market distortions. This section reviews the objectives of deposit insurance and its consequences in the context of U.S. institutions and the regulatory framework. It highlights the important tools, discussed in Section 5, that may be used along with changes to deposit insurance coverage to meet policy objectives while minimizing undesired consequences.

## **Objectives**

In addition to financial stability and depositor protection, deposit insurance objectives may include providing consistency and transparency and minimizing disruptions from bank resolution. This subsection discusses each objective, which informs the comparison of reform options discussed in Section 6.

### **Financial Stability**

Improving financial stability by preventing bank runs is a primary objective of deposit insurance. Fundamentally, banks are susceptible to runs because they raise funding by issuing liquid deposits, usually available immediately upon demand, to invest in illiquid (or less-liquid) long-term assets such as loans.<sup>75</sup> Long-term assets generally pay banks a higher interest rate than deposits cost the bank, so banks will

generally be solvent and profitable if they can hold the loans to maturity.<sup>76</sup> If, however, many depositors simultaneously demand the return of their deposits from a bank and it exhausts its supply of liquid assets (the supply of which is typically rather limited compared with the volume of deposit liabilities), the bank will be forced to sell its illiquid and longterm assets before they mature to meet depositor withdrawals. In selling its long-term assets, especially in a short timeframe, the bank must accept prices for the assets that may be lower than their intrinsic value-that is, the bank takes a loss on the sale. If the bank sells enough assets at a loss, losses exceed the bank's cushion of equity capital and the bank becomes insolvent and unable to meet its financial obligations to remaining depositors. Depositors might withdraw their deposits collectively (i.e., run on the bank) because they fear that the bank might be insolvent,<sup>77</sup> but they might also run even on a bank they know is solvent simply because they believe other depositors will do the same.<sup>78</sup> Because banks serve depositors in the order that they arrive,<sup>79</sup> the first depositor to run on a solvent bank can withdraw their full deposit amount. As the bank sells more assets at a loss and becomes insolvent, depositors who are later to run are unable to obtain their full deposit amount. Thus, once a run starts, all depositors want to be as close to the front of the line as possible—the collective expectation of a run becomes self-fulfilling, and the bank fails.<sup>80</sup>

Bank failures, especially failures of otherwise solvent banks caused by runs, impose significant costs on the financial system and the economy. First and most

<sup>&</sup>lt;sup>74</sup>IADI, "Deposit Insurance Systems Worldwide," 2023, <u>https://www.iadi.org/en/about-iadi/deposit-insurance-systems/dis-worldwide/</u>.

<sup>&</sup>lt;sup>75</sup>The reason banks are structured in this way has been the subject of significant academic debate, but a typical explanation is that by pooling the idiosyncratic (or, largely uncorrelated) liquidity needs of many depositors, a bank can provide the needed liquidity for all its depositors without holding as many liquid assets as the depositors would need to hold if they were to provide for their own liquidity individually. By reducing the amount of funding that needs to be held in a liquid form, the bank frees funds to be invested in productive but less liquid loans and projects. These illiquid projects, in turn, provide for economic growth and opportunity. Without banks, many of society's resources would be tied up to provide liquidity, and economic well-being would be lower. See Diamond and Dybvig (1983) for more on this explanation. Alternative explanations are offered by, among others, Fama (1985), Calomiris and Kahn (1991), Diamond and Rajan (2011), and Kashyap, Rajan, and Stein (2002).

<sup>&</sup>lt;sup>76</sup>For the purposes of this argument, we abstract from the possibility of unexpected asset losses, bank mismanagement, or other reasons besides depositor runs that might cause banks to become insolvent or fail.

<sup>&</sup>lt;sup>77</sup> For more on informationally driven or fundamentals-based bank runs, see, for example, Gorton (1988), Jacklin and Bhattacharya (1988), Calomiris and Gorton (1991), and Goldstein and Pauzner (2005).

<sup>&</sup>lt;sup>78</sup>See Diamond and Dybvig (1983) for a theoretical explanation of this behavior.

<sup>&</sup>lt;sup>79</sup>This "first come, first served" type of behavior is sometimes referred to as a "sequential service constraint."

<sup>&</sup>lt;sup>80</sup>See Murton (1989) for a more detailed presentation of this argument.

simply, bank runs, and the associated panic, can be contagious among depositors of different banks for purely behavioral and psychological reasons: a run on one bank can spread to others. Second, one bank's funding stress can be transmitted to other banks through various asset prices. Distressed banks might raise their deposit rates to attract or retain funding, increasing the equilibrium rate in the market that all other banks must pay or attracting funds from other banks.<sup>81</sup> Alternatively, banks facing deposit outflows may engage in asset fire sales to fund withdrawals, depressing market prices for those assets and impairing the liquidity and solvency of other financial institutions holding similar assets.<sup>82</sup> Bank runs and bank failures also have real economic costs, especially arising from a loss of credit intermediation by the banks. Banks form relationships with, and learn about, borrowers in their communities, and they fund productive projects by these borrowers using money obtained from deposits. When deposits flee or banks fail, this credit intermediation is disrupted and productive projects might go unfunded, depressing economic activity.<sup>83</sup> If other banks are concerned they might face a run, they may also forgo lending to profitable projects to retain liquidity for precautionary reasons, further limiting credit intermediation.

Beyond general effects on the financial system or economy, bank failures can be painful for individual uninsured depositors or other creditors of failed banks, and for entities exposed indirectly to the bank. Counterparties to banks include individuals and households that invest their savings or maintain liquid funds to pay their mortgages or bills. Without access to their deposits, uninsured depositors may lack the money to make payments and access to the payment system to transmit their money to those with whom they do business. Given the \$250,000 limit, the proportion of households unable to pay bills due to losses on uninsured deposits is likely to be exceptionally small and includes only the wealthiest households. As the recent bank failures showed, losses to uninsured deposits held in business payment accounts present an important concern. Payment accounts are critical to businesses' ability to pay expenses and their employees. Because many firms' cash flow needs are high, these payment accounts by necessity are often large and uninsured at the current deposit insurance limit. Thus, a disorderly bank failure can result in missed payments on trade credit and lost labor income for employees who have no direct exposure to the failed bank or ability to protect themselves from the risk of the bank.<sup>84</sup> Losses on uninsured business accounts from bank runs can contribute to lost wages, business closures, and job losses.

Deposit insurance removes depositor incentives to run on their bank, thereby preventing runs and avoiding the numerous costs associated with them. Depositors know that their insured funds are safe because the FDIC and the DIF, especially in combination with the full faith and credit guarantee of the U.S. government, are credible backstops for deposits. Depositors can be confident that if their bank fails, they will have access to their insured deposits without interruption. As a result, insured depositors have little incentive to run on their bank, even if they expect other depositors to do so or if they believe their bank to be insolvent.

Empirically, deposit insurance is highly effective at preventing runs. At a high level, the rarity of bank runs in the United States, especially runs by insured depositors, since the creation of the FDIC is clear evidence of the stabilizing benefits of deposit insurance. At the level of individual depositor behavior, analysis on data from both the United States and abroad provides consistent evidence on the effectiveness of deposit insurance in stabilizing insured deposit funding.<sup>85</sup> Banks facing funding stress originating from uninsured depositors and other creditors may be able to address this funding stress by increasing deposit interest rates to attract additional

<sup>&</sup>lt;sup>81</sup>For example, see Egan, Hortaçsu, and Matvos (2017).

<sup>&</sup>lt;sup>82</sup> There exists a rich literature on asset fire sales, including Diamond and Rajan (2011), Shleifer and Vishny (2011), Tirole (2011), Brunnermeier (2009), and Allen and Gale (1994).

<sup>&</sup>lt;sup>83</sup>For example, see Bernanke (1983).

<sup>&</sup>lt;sup>84</sup>See, for example, "Remarks by President Biden on Maintaining a Resilient Banking System and Protecting Our Historic Economic Recovery," March 13, 2023, https://www.whitehouse.gov/briefing-room/speeches-remarks/2023/03/13/remarks-by-president-biden-on-maintaining-a-resilient-banking-system-andprotecting-our-historic-economic-recovery/.

<sup>&</sup>lt;sup>85</sup> Martin, Puri, and Ufier (Forthcoming) and Davenport and McDill (2006) provide evidence from the United States that FDIC insurance stabilizes insured deposits at the level of individual deposit accounts, especially in the face of financial market stress or when depositors have reason to question the solvency of their bank. Brown, Guin, and Morkoetter (2020), Iyer, Jensen, Johanessen, and Sheridan (2019), Iyer, Puri, and Ryan (2016), and Iyer and Puri (2012) provide complementary evidence from foreign countries, specifically Switzerland, Denmark, and India.

insured funding.<sup>86</sup> Generally, a higher share of insured deposits in bank funding structures makes banks individually—and the banking system as a whole—less susceptible to runs.<sup>87</sup>

### **Depositor Protection**

Protecting small depositors, who constitute most deposit accounts, has been an objective of the deposit insurance system since its founding. In hearings preceding the creation of the FDIC, Representative Steagall argued, "The hard-earned savings of the majority of our people who are only able to deposit in one bank must be protected."88 From the market crash in the fall of 1929 to the end of 1933, about 9,000 banks suspended operation, resulting in losses to depositors of about \$1.3 billion.<sup>89</sup> To help reestablish consumer confidence in the banking system, the FDIC was created, and the initial deposit insurance limit was \$2,500 per depositor. Increases in the deposit insurance limit have been justified based on "protect[ing] the small depositor."90 There are several reasons to provide specific protection to small depositors.

First, monitoring a bank for safety and soundness likely requires fixed costs, making it both impractical and inefficient for small depositors to conduct due diligence. Second, monitoring for safety and soundness requires financial, regulatory, and legal expertise that is time consuming and cannot be expected of small depositors. Deposit insurance provides small depositors a mechanism to protect their hard-earned savings, without placing these undue costs and burdens on them.

Third, information is an important component to effective monitoring. Depositors, large and small, do not have access to supervisory information. Large depositors, however, can more easily justify various costs associated with collecting and analyzing financial market reports from private vendors that may be used for monitoring. Finally, information on the safety and soundness of banks is a public good: when monitoring by investors results in changes in bank risk-taking, all creditors benefit. Based on these factors and given the differences in expertise, size, and availability of proprietary information, small depositors are poorly situated to contribute to monitoring their bank for safety and soundness relative to supervisors or larger, institutional depositors.<sup>91</sup>

For small depositors, a low-cost, viable alternative to monitoring is to withdraw their funds from the banking system, which may then affect the health of the economy more broadly. Thus, in providing small depositors a safe vehicle for saving and transactions, deposit insurance promotes confidence in the banking sector and supports the circulation of currency.

Although larger, institutional depositors are better equipped than smaller depositors to perform due diligence, they may also use their resources to expand their deposit insurance coverage beyond the \$250,000 limit by using deposit services such as brokered deposits, reciprocal deposits, and sweep accounts. Use of these products shows that there is a demand for deposit insurance protection at higher levels. Further, the presence of brokered deposits, sweeps, and reciprocal deposits demonstrates that the current system already provides deposit insurance coverage for large depositors. However, access to insured deposit coverage above the deposit insurance limit under the current system differs across depositors based on depositor awareness and legal, financial, and regulatory expertise.

To compare the options, this report focuses primarily on financial stability and consistency and transparency. The report does not separately discuss the role of the options in meeting the depositor protection objectives; however, depositor protection issues, such as prompt access to insured funds after a failure, are mentioned in relevant areas.

<sup>&</sup>lt;sup>86</sup>For a theoretical discussion of this possibility, see Egan, Hortaçsu, and Matvos (2017). For empirical evidence, see Martin, Puri, and Ufier (Forthcoming). <sup>87</sup>For theoretical support, see Egan, Hortaçsu, and Matvos (2017).

<sup>&</sup>lt;sup>88</sup>Hearings Before the Subcommittee of the Committee on Banking and Currency, U.S. House of Representatives, March and April 1932, p. 268, <u>https://babel.hathitrust.org/cgi/pt?id=umn.31951d03595099g&view=1up&seq=272&q1=deposit</u>.

<sup>&</sup>lt;sup>89</sup>FDIC (1984), p. 3.

<sup>&</sup>lt;sup>90</sup>U.S. Senate Committee on Banking and Currency, Amendments to the Federal Deposit Insurance Act: Hearings on S. 80, S. 2094, S. 2307, and S. 2822 before the Subcommittee, 81st Cong., 2nd sess. (1950).

<sup>&</sup>lt;sup>91</sup>Blinder and Wescott (2001).

The arguments in favor of protecting small depositors may also extend to the protection of business payment accounts. Much like small depositors, employees and trade creditors of a business that uses its deposit accounts for payment services are poorly positioned to understand their exposure to failure of that firm's bank. Surveys suggest that even small, relatively unexpected expenses as little as \$400 could cause financial hardship for many Americans.<sup>92</sup> Protecting workers from a sudden wage or job loss resulting from bank runs by protecting the accounts used to pay their wages may therefore yield significant benefits to consumers.

### **Minimizing Disruptions From Bank Resolution**

Deposit insurance coverage has direct implications for the costs associated with bank resolutions. Three key objectives of bank resolution include paying insured depositors promptly, retaining franchise value, and minimizing costs to the insurance fund and banking system.

Resolving an institution does not happen without considerable planning and preparation before a potential failure. Bank runs can shorten, or eliminate, the time available to the FDIC to implement an orderly resolution and increase the costs of the resolution. Severe liquidity challenges that induce a bank failure are likely to progress quickly and with little warning. To stop a bank run, and to prevent it from potentially spreading to other institutions, the FDIC must act swiftly to close the bank. Doing so hinders the FDIC from executing its preferred processes to prepare for failure.<sup>93</sup>

When supervisory authorities conclude that an insured depository institution is operating in an unsafe condition, the FDIC undertakes preparations to resolve the institution should failure occur.<sup>94</sup> These preparations relate directly to the key objectives stated above.

The FDIC aims for a seamless experience for depositors and creditors. In the ideal scenario, depositors

maintain almost continuous access to their funds, borrowers experience a quick transfer to another bank without intermediate servicing issues, and neither group particularly notices that ownership of the institution has changed.

Providing insured depositors access to their funds may require the completion of an insurance determination, which involves the FDIC obtaining and analyzing bank customer and account data. Full execution of an insurance determination entails substantial manual effort to determine account ownership and associated insurance status. For some account types, full execution of an insurance determination requires manual review of documentation that the bank does not maintain. This can delay the determination of an account's insurance status. Simplification of the system or regulation<sup>95</sup> could reduce the costs of the deposit insurance determination and thus lessen administrative costs of the receivership.

An abbreviated lead-up to failure also affects the ability of the FDIC to maximize the franchise value of the failed institution. The FDIC is less able to market the institution to potential acquirers, and interested parties are less able to conduct due diligence. This leads to increased uncertainty that may reduce competition in bidding for the failed bank's assets and may result in lower prices or increases in the cost of the terms offered by the FDIC to potential acquirers, such as more generous cost-sharing agreements. These dynamics increase the cost to the DIF and, ultimately, the banking system that must pay higher assessments to recapitalize the Fund.

### **Consistency and Transparency**

One objective of deposit insurance is to make protections explicit and to provide clear expectations to markets in advance.<sup>96</sup> Differences in market perceptions regarding the potential for uninsured depositor losses can distort incentives and affect competition. Market perceptions may be informed both by bank regulatory and resolution regimes that differ across banks and expectations on the future

93 Hoggarth, Reidhill, and Sinclair (2004).

<sup>&</sup>lt;sup>92</sup>Federal Reserve Board of Governors, "Report on the Economic Well-Being of U.S. Households in 2019–May 2020," <u>https://www.federalreserve.gov/publications/2020-economic-well-being-of-us-households-in-2019-dealing-with-unexpected-expenses.htm</u>.

<sup>&</sup>lt;sup>94</sup>See FDIC (2017), chapter 6, "Bank Resolutions and Receiverships," and FDIC (1998), Vol. 1, chapter 2, "Overview of the Resolution Process."

<sup>&</sup>lt;sup>95</sup>Some regulations are currently applied to large banks through Part 360.9 of the FDIC's regulations, titled "Large-Bank Deposit Insurance Determination Modernization," and Part 370 of those regulations, titled "Recordkeeping for Timely Deposit Insurance Determination." <sup>96</sup>Garcia (2000).

treatment of uninsured depositors in resolution given previous interventions. A well-designed deposit insurance system that credibly limits the need for government interventions during a crisis provides transparent protection and enables informed decisionmaking on how to allocate costs accordingly.

Explicit deposit insurance coverage that can be credibly executed in a resolution may increase transparency and allow market participants to operate under fewer assumptions. In addition, even when they expand protection, explicit policies may cause a reduction in risk-taking if they correct distortions based on subjective beliefs about the potential for uninsured depositor losses.<sup>97</sup>

Because of the constant evolution of financial institutions and risk exposures, explicit policies are unlikely to materialize as described for all possible scenarios. However, lawmakers and regulators can strengthen the financial system and prepare for potential shocks through explicit, well-designed policies.

### **Possible Consequences**

Despite its potential financial and economic benefits, deposit insurance may create distortions that undermine or reduce its efficacy in meeting its objectives. Deposit insurance also can affect bank risk-taking and bank funding choices. This subsection examines these unintended consequences of deposit insurance.

## Moral Hazard, Market Discipline, and Depositor Discipline

Moral hazard is the incentive to take on greater risk as a result of being protected from the consequences of risk-taking. It is a common concern in insurance

markets, including deposit insurance. Deposit insurance eliminates the risk of loss on deposits for insured depositors, which makes depositors less sensitive to bank risk levels, shielding banks (to an extent) from losing deposits. As a result, moral hazard can lead to risk-shifting, with the consequences of excessive risk-taking being borne by the deposit insurer. Absent deposit insurance, depositors have incentives to act as bank monitors. Depositors who are not sufficiently compensated for a bank's risktaking are incentivized to move their deposits to a different bank offering a better risk-return tradeoff.<sup>98</sup> Thus, banks taking on excessive risk face the choice of increasing the rates offered to depositors or losing deposit funding, a mechanism known as depositor discipline. Deposit insurance generally weakens depositor discipline because insurance reduces depositors' concerns for the safety of their deposits, though evidence is mixed on whether there is a measurable effect on bank risk-taking.99

Depositor discipline may result in a proactive reduction in bank risk-taking or may manifest as a reactive punishment to bank risk, without affecting bank risk-taking incentives. While reductions in bank risk-taking from depositor discipline improve financial stability, discipline in the form of a sudden withdrawal of funding and a potential bank run decreases financial stability. Therefore, it is important to focus on the extent to which depositor discipline results in reductions in bank risk-taking when examining the potential consequences of increases in deposit insurance.

The institutional environment, such as the transparency of the accounting system and reporting, bank supervision, and well-defined legal rights, plays an important role in determining bank risk-taking and depositor incentives to monitor banks. Research shows that countries with strong institutional

<sup>&</sup>lt;sup>97</sup>Gropp and Vesala (2004), Cutura (2021).

<sup>&</sup>lt;sup>98</sup>Park and Peristiani (1998), Jordan (2000), Martinez Peria and Schmukler (2001), Davenport and McDill (2006), Maechler and McDill (2006), Bennett, Hwa, and Kwast (2015), Berger and Turk-Ariss (2015), Iyer, Jensen, Johannesen, and Sheridan (2019), and Martin, Puri, and Ufier (Forthcoming). In addition to interest rates, banks may compete on other dimensions (such as payment services) to attract deposits.

<sup>&</sup>lt;sup>99</sup>Empirically, there is both evidence that deposit insurance can increase bank risk-taking and evidence to the contrary. The relationship between deposit insurance and moral hazard is dependent on institutional factors that differ across time and countries. This dependence can sometimes lead to conflicting conclusions. Thus, drawing implications from other countries or under different sets of laws and regulations should be done with care. Examples of studies that find that deposit insurance increases risk-taking include Grossman (1992), Wheelock and Wilson (1995), Hooks and Robinson (2002), Demirgüç-Kunt and Detragiache (2002), Ioannidou and Penas (2010), Lambert, Noth, and Schüwer (2017), and Calomiris and Jaremski (2019). Studies that do not find evidence that deposit insurance increases risk-taking include Karels and McClatchey (1999), Gueyie and Lai (2003), and Gropp and Vesala (2004). Some studies find conflicting effects of deposit insurance depending on other factors like the economic cycle or the institutional environment; these include Hovakimian, Kane, and Laeven (2003) and Anginer, Demirgüç-Kunt, and Zhu (2014). Some studies such as Karas, Pyle, and Schoors (2013) find evidence of depositor discipline but do not directly establish a resulting effect on bank risk-taking ; see Bliss and Flannery (2002) for a discussion of this phenomenon in the market discipline literature more broadly.

environments are less likely to suffer from moral hazard associated with deposit insurance.<sup>100</sup> As discussed in Section 5, tools such as risk-based pricing, regulation, and supervision can constrain bank risktaking. In addition, market discipline from non-deposit stakeholders at the bank can also limit bank risktaking. Given the prioritization of depositors in the claims structure and their sizes relative to institutional investors, non-depositor creditors and shareholders may play a larger role than depositors in exerting market discipline to constrain moral hazard.<sup>101</sup>

In addition to acting as their own constraints to bank risk-taking, the institutional environment may reduce depositor monitoring incentives and the efficacy of depositor discipline. For example, because monitoring is costly, depositors may rely on bank supervisors or other market participants to expend monitoring effort. Thus, a strong institutional environment both mitigates concerns of moral hazard associated with deposit insurance and reduces the relative role that depositor discipline plays in affecting bank risk.

Several factors limit depositor discipline from effectively controlling bank risk. First, depositors may face significant costs to monitor and discipline banks, as it requires expertise in accessing and evaluating bank financials. Second, savvy depositors who are most likely to impose depositor discipline may be able to eliminate their risk through other means, such as using cash management services to limit their exposure to uninsured deposits. Thus, depositors most equipped to monitor banks may exert little or no depositor discipline in practice. Third, the impact of depositor discipline may be reduced if banks can readily find substitutes for uninsured deposits.<sup>102</sup> For example, if banks can use—or expect that they can use-other forms of funding to meet outflows, then potential withdrawal of uninsured deposits has a smaller effect on bank risk-taking incentives.

Finally, depositor discipline can function only if uninsured depositors have an expectation of possible loss. In most bank failures since 1992, the acquiring bank assumed uninsured deposits in the resolution (Table 3.3). Consequently, absent a stress event, an uninsured depositor may rationally expect that it is unlikely both that their bank fails and that as an uninsured depositor they would face a loss in the event it did. Further, some uninsured depositors may expect that their deposits will be protected in the event of a bank failure even if not explicitly insured. The infrequency of bank failures with uninsured depositor loss weakens the depositor discipline mechanism in deterring bank risk-taking.<sup>103</sup> However, in some cases, including some high-profile ones, the losses to uninsured deposits have been high. Therefore, although uninsured depositors may not monitor the bank in general, in the context of a stress event, uninsured depositors may choose to run.

Despite its weaknesses, depositor discipline provides a market-based risk deterrent. The threat of a bank run may encourage banks to maintain high levels of transparency and financial stability to attract and retain deposits. To avoid the devastating effects of a run, bank managers may avoid risky actions long before there is any risk of a bank run.

If deposit withdrawals are gradual and do not culminate quickly into a bank run, withdrawals may serve as an early-warning signal to supervisors and other market participants. Once a run is underway, it is likely too late for a bank to correct any mismanagement of risk. In these cases, depositor discipline punishes institutions already in deep trouble, which is likely to impede the ability of supervisors to impose corrective actions and prevent the situation from worsening. In such cases, depositor discipline is detrimental to financial stability.<sup>104</sup> On the other hand, bank runs can end risky behaviors that had gone unaddressed and that could otherwise continue to build if they remained unrectified by supervisors or other market forces. Also, the bank run may prompt stronger controls on similar risk-taking at banks not subject to the run.

Ultimately, moral hazard depends on several factors, of which depositor discipline is just one. Moral hazard associated with deposit insurance is less concerning

<sup>&</sup>lt;sup>100</sup>Demirgüç-Kunt and Detragiache (2002), and Hovakimian, Kane, and Laeven (2003).

<sup>&</sup>lt;sup>101</sup>Sironi (2003), Gropp and Vesala (2004), Anginer, Demirgüç-Kunt, and Zhu (2014), and Kandrac and Schlusche (2021).

<sup>&</sup>lt;sup>102</sup>Ashcraft, Bech, and Frame (2010), and Martin, Puri, and Ufier (Forthcoming).

<sup>&</sup>lt;sup>103</sup>lyer, Jensen, Johannesen, and Sheridan (2016).

<sup>&</sup>lt;sup>104</sup> Flannery and Bliss (2019) distinguish between corrective market discipline and discipline that could take a "wrong turn" toward depositor runs, with little time for corrective action.

when institutions are strong and when depositor discipline does not meaningfully drive bank risk management decisions. The risk of moral hazard arising from deposit insurance should be evaluated with comprehensive consideration of the existing institutional controls that limit bank risk-taking.

#### **Changes to Other Bank Funding Sources**

Because deposits are the primary source of funding for banks, changes in deposit insurance coverage can significantly affect bank funding choices. In general terms, increased insurance coverage is expected to decrease the cost and increase the availability of deposits for banks, leading to increased bank reliance on deposit funding and decreased reliance on alternative sources of funding.

Domestic deposits are the largest funding source for banks in the aggregate.<sup>105</sup> Other non-deposit sources of funding include loans from the FHLB System

(known as advances), subordinated debt, borrowing in the federal funds market, discount window borrowing, and many other small sources of funding. Figure 4.1 shows that as of December 31, 2022, domestic deposits represented about 83 percent of aggregate bank liabilities, foreign office deposits represented about 7 percent, and FHLB advances represented about 3 percent. At year-end 2022, bank reliance on domestic deposits was higher than was typical in the past few decades, though domestic deposits decreased in 2022 in association with the recent cycle of monetary tightening. As domestic deposits have declined of late, banks have increased their reliance on FHLB advances. Funding sources other than domestic deposits vary considerably across banks, especially for banks of different sizes.

Changes in deposit insurance coverage are likely to affect the liability structure of banks in normal economic times and in periods of financial distress.

### FIGURE 4.1 Domestic Deposits, Foreign Deposits, and Federal Home Loan Bank Advances



<sup>&</sup>lt;sup>105</sup>Banks also source deposits from foreign offices, though these are not eligible for FDIC deposit insurance. See CFR §330.3(e).

Increases in deposit insurance coverage may improve the availability and cost of domestic deposits to banks, reducing bank reliance on other sources of funding. This effect might be broadly true at all points in the business cycle, but perhaps especially so in times of turmoil. In periods of banking system stress in the past, bank funding has come under pressure as uninsured depositors and other unsecured creditors moved their funds out of banks and into assets perceived to be safe.<sup>106</sup> An increase in deposit insurance coverage, by expanding the share of insured bank funding, may reduce the degree of funding stress banks face during a crisis and lessen their reliance on emergency sources of funding. Moreover, higher deposit insurance coverage has the potential to make banks beneficiaries of the flights to quality and liquidity that have historically involved funding flows to other financial assets perceived as liquid and government backed.

### **Other Possible Consequences**

Deposit insurance can affect competition between banks, competition between banks and nonbank financial companies, and competition between deposits and other financial assets. Deposit insurance can affect how banks compete with one another, as insured depositors do not need to worry about bank risk. In addition, changes to deposit insurance coverage are likely to affect the interaction between banks and nonbank financials that compete with banks along some dimensions and partner with banks along other dimensions. Nonbank financials may compete with banks on the liability side, creating deposit-like savings or transaction vehicles, and on the asset side, making loans traditionally associated with chartered depository institutions. Changes to deposit insurance may alter the competition between banks and financial assets viewed as substitutes. An increase in deposit insurance coverage would likely make deposits more competitive, decreasing the demand for alternative assets at least to some degree. A discussion of the competitive effects of deposit insurance is beyond the scope of this report.

<sup>106</sup>Acharya and Mora (2015) document that between the freezing of the asset-backed commercial paper market in August 2007 and the broad federal interventions in the banking system in October 2008, investors shifted balances away from large deposits and toward securities perceived to have stronger government support, such as Treasury and agency debt (and money market funds holding these securities). Facing a shortfall in deposit funding, banks increased reliance on the Federal Home Loan Bank System, a government-sponsored entity whose debt is perceived to enjoy implicit government support.