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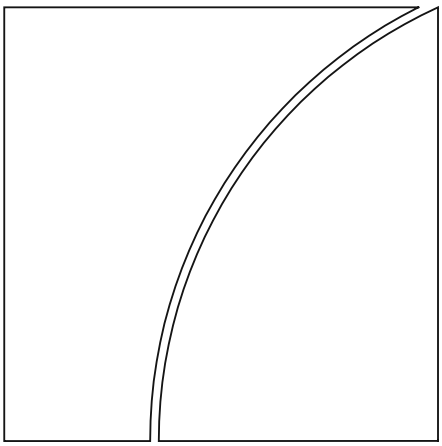

FSI Insights

on policy implementation

No 64

Navigating liquidity stress: operational readiness for central bank support

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December 2024

JEL classification: E58, F33

Keywords: bank runs, central bank lending, collateral prepositioning, emergency liquidity assistance, lender of last resort, liquidity, operational readiness, operational preparedness, operational capacity, collateral due diligence, testing, stigma

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ISSN 2522-249X (online)
ISBN 978-92-9259-813-6 (online)

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Executive summary

The events of the 2023 banking turmoil demonstrated once again the potentially systemic consequences of liquidity stresses and the need for effective central bank lending operations to contain financial instability. During this episode, deposit outflows from the affected banks occurred at an unprecedented speed, enabled by increasingly digitalised finance, including faster payment and settlement services and 24/7 access to banking services through mobile apps, and accelerated by social media. These rapid depositor runs led to the banks' swift decline to non-viability, severely limiting the time available for authorities to prepare a failure management strategy.

A lack of operational readiness to access central bank facilities exacerbated the liquidity stress in 2023. Operational unpreparedness meant that some banks were unable to execute contingency funding plans. For instance, Silicon Valley Bank (SVB) had not recently tested its capacity to borrow at the Federal Reserve's discount window, could not mobilise eligible collateral quickly enough and lacked the necessary operational arrangements to obtain liquidity. While central bank lending would probably not have prevented SVB's failure given the flaws in its business model and governance, it might have allowed more time for authorities to prepare a resolution and may have limited broader system-wide stress.

Operational readiness of both central banks and institutions is key to ensuring that central bank facilities are a reliable source of contingency funding. Access to central bank liquidity requires a range of steps. First, banks and central banks need to have the necessary operational capacity. Second, banks need to post collateral, and the central bank, through a due diligence process, needs to be confident that it can take a legal claim over the collateral and manage all relevant risks associated with the lending operation. Last, the central bank needs to properly value the assets offered as collateral and set haircuts. The process for the second and third steps can be complex for non-traded assets. Hence, it requires time and ideally, will have been completed in advance of any borrowing need.

Banks must have the operational capacity to access central bank lending operations. This entails both the central bank and private sector counterparties having an appropriate IT and legal infrastructure in place and staff that are familiar with the operational process and requirements. Since large volumes of liquidity may be needed unexpectedly and at short notice, a failure on the part of banks to understand legal and operational requirements can unnecessarily delay or even prevent central banks from responding effectively to such requests. This can undermine financial stability. Appropriate preparation in advance of such liquidity needs is crucial to mitigate those risks.

Collateral due diligence is an essential element of central banks' risk management frameworks. The process enables central banks to ensure that the pledging institution can legally and operationally mobilise the collateral. It also allows the central bank to manage potential risks and consider how the collateral will be operationally handled and managed when presented. Early due diligence is particularly important when dealing with less liquid or non-traded collateral such as loan portfolios.

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Collateral due diligence is a resource-intensive process requiring specialised legal, operational and risk expertise, and it can take a substantial amount of time to complete.

Appropriately valuing collateral and setting haircuts is crucial for central banks to protect their balance sheets and mitigate potential risks. Central banks adopt various approaches to valuing assets, often relying on market input for marketable assets and using internal methodologies for less liquid collateral. Haircuts are applied to the collateral depending on their risks, with the aim of protecting the central bank from loss if a counterparty defaults. Haircuts are determined based on factors such as the liquidity of the collateral, credit assessments and concentration risk. Central banks may also adjust haircuts to account for idiosyncratic risks of the borrowing institution or the currency of the collateral presented.

The prepositioning of assets significantly expedites the provision of liquidity against non-traded collateral. The prepositioning process can take different forms across countries. Generally, it involves banks providing details of the possible collateral, the necessary documentation and confirmations. This gives the central bank sufficient information to conduct due diligence, value the asset and set haircuts. Once this process is complete, the assets are said to be "prepositioned". Typically, prepositioned collateral is not encumbered and the arrangements allow banks to use the underlying assets for other purposes. Prepositioned assets allow banks to better plan for contingencies as they can anticipate how much they are likely to be able to borrow from the central bank. Importantly, when collateral is prepositioned, banks can swiftly draw on central bank facilities if needed.

Central banks and supervisory authorities can take actions to improve banks' operational readiness for accessing their lending operations. Supervisory guidance on funding and liquidity risk management encourages banks to incorporate central bank lending operations into their contingency funding arrangements. Central banks may also improve operational readiness through regulatory requirements for testing and simulations across all eligible asset classes. Central banks may also encourage or even require banks to preposition assets at the central bank.

Actions to promote operational readiness are more effective when accompanied by initiatives to reduce the stigma associated with central bank borrowing. Such initiatives seek to minimise the deterrent effect of stigma and encourage greater willingness among institutions to seek liquidity support. This may be pursued, for example, through the provision of market-wide operations during times of crisis and by structuring lending operations in a way that is perceived positively, or at least neutrally, by the market. Additionally, to the extent that stigma persists, lending collateral rather than cash can help mitigate the risk that banks will be identified and stigmatised for accessing central bank facilities. Stigma may also be reduced through disclosure of central banks' lending operations in a way that protects the confidentiality of borrowing institutions and avoids the unintended consequence of stigmatising them. Disclosure may even help to increase confidence in the borrowing institution if it is part of a convincing package of stabilising measures. Finally, transparent communication by authorities regarding their expectations is crucial to ensure readiness and maintain confidence.

Section 1 – Introduction

1. **The events of the 2023 banking turmoil demonstrated once again the potentially systemic consequences of liquidity stresses and the need for effective central bank lending operations to contain financial instability.** The causes of the failures of several US regional banks and Credit Suisse, and the actions taken by US and Swiss authorities, are well rehearsed. However, from the perspective of liquidity risk, several details are worth highlighting. Deposit outflows occurred at an unprecedented speed, enabled by increasingly digitalised finance, including faster payment and settlement services and 24/7 access to banking services through mobile apps, and accelerated by social media. Accelerated depositor runs resulted in a rapid slide to non-viability by the affected banks and severely limited the time available for authorities to prepare a failure management strategy.[2]

2. **A lack of operational readiness to access central bank facilities exacerbated liquidity stress in the 2023 turmoil.** Operational unpreparedness meant that some banks were unable to execute contingency funding plans that involved borrowing from the central bank. For example, Silicon Valley Bank (SVB) had not recently tested its capacity to borrow at the Federal Reserve's discount window, could not mobilise eligible collateral quickly enough and did not have the necessary operational arrangements in place to obtain liquidity. While borrowing from the central bank would probably not have prevented SVB's failure given the flaws in its business model and governance, it might have allowed more time for authorities to prepare a resolution and may have limited broader system-wide stress.

3. **Accordingly, operational readiness of both central banks and institutions is key to ensuring that central bank facilities are a reliable source of contingency funding.** Access to central bank liquidity requires a range of steps (Graph 1). First, banks and the central bank need to have the necessary operational capacity. This requires them to have the appropriate infrastructure and the ability to implement the operational process. Second, banks need to post collateral. This means that, when a bank needs to borrow from the central bank, it has either prepositioned eligible collateral in advance or can mobilise it rapidly and in a way that will allow the central bank to enforce that collateral if necessary. Last, the central bank must value the assets offered as collateral and set haircuts. The latter two steps can be complex for non-traded assets. Hence, they require time and ideally will have been completed in advance of any need to draw on those facilities.

4. **The prepositioning of assets can substantially expedite the provision of liquidity against non-traded collateral.** This process can take different forms across countries. Generally, it involves banks providing details of the potential collateral, the necessary documentation and confirmations, in a way that gives the central bank sufficient information to conduct due diligence, value the asset and set haircuts. Once this process is complete, the assets are said to be "prepositioned". Typically, prepositioned collateral is not encumbered and the arrangements allow banks to use such assets for other purposes provided that they have not been used as collateral for central bank lending. When previously prepositioned assets are withdrawn, borrowing limits are reduced accordingly. Prepositioned assets allow banks to better plan for contingencies as they can anticipate how much they are likely to be able to borrow from the central bank. Importantly, when collateral is prepositioned, banks can swiftly draw on central bank facilities if needed.

5. **Drawing on the experience of selected central banks, this paper discusses practices that contribute to banks' operational readiness to access central bank lending facilities.[3]** The operational

[2] See BCBS (2024) for a summary of the main findings from the 2023 banking turmoil.

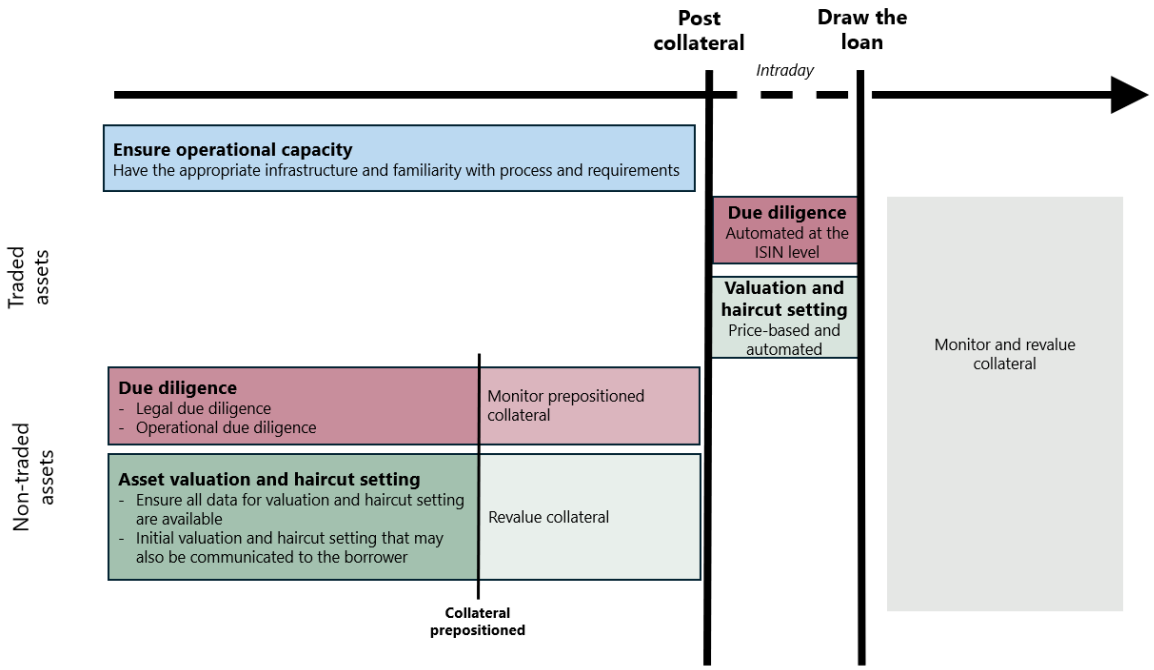
[3] The material presented in this paper is based on research into publicly available information about central bank lending operations and interviews with officials to explore the operational issues in more detail. Interviews were conducted with the Central Bank of Brazil, the European Central Bank, the Bank of Ghana, Central Bank of Malaysia, the Bank of Mexico, the Swiss National Bank, the Bank of England and the US Federal Reserve System (Federal Reserve). The sample was chosen to be geographically diverse and to feature a range of operational approaches and, more broadly, different attitudes towards the extent to which central bank lending operations should be considered a source of contingency funding for banks in stress.

issues discussed in this paper apply to a broad range of central bank lending operations, independent of the objective or other key design features such as pricing, maturity or availability. The discussion therefore refers generically to central bank lending operations. That said, a lack of operational readiness is particularly pertinent and potentially consequential in periods of financial instability or banking sector stress. As such, the issues discussed here are most relevant for central bank lending operations that are materially weighted towards financial stability objectives.

6. **Central bank liquidity support is one among a number of policy instruments that are relevant to addressing banks' liquidity risks and the potentially systemic impact of bank runs.** Other instruments include liquidity requirements, supervisory measures and deposit insurance coverage. In the wake of the 2023 banking turmoil, these areas have received renewed attention with a view to ensuring that they reflect the run risk of specific types of liability and constitute an effective bulwark against severe and rapid-onset liquidity stress. While these are not discussed further in this paper, they form the broader policy context in which consideration of central bank lending takes place.

7. **The paper is structured as follows.** Section 2 provides a brief overview of central bank lending operations. Section 3 explores how central banks ensure operational readiness, with a particular focus on the prepositioning of collateral for advance assessment and due diligence by the central bank. Section 4 discusses the risk of stigma that may be associated with the use of some central bank lending operations and efforts that central banks are making to address that perception. Section 5 concludes.

The timeline of lending operations – a stylised example[1] Graph 1



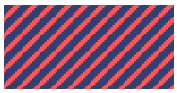
[1] The timeline is stylised and not continuous. Prepositioning non-traded assets can take a substantial amount of time, eg months. The time span for monitoring and revaluing collateral after the loan has drawn depends on the maturity of the loan.

Section 2 – Central bank lending operations: a short primer

8. **Central banks typically offer a range of lending operations.** Those operations can support monetary policy and financial stability objectives, with the relative strength of the objectives varying across

operations (Table 1).[4] For example, the monetary policy objective predominates when central banks use lending operations for their main open market operations to implement the monetary stance. By contrast, the main objective of lender of last resort (LOLR) operations is financial stability.[5] Between a central bank's open market and LOLR operations are its standing lending facilities, which can be accessed daily, and its discretionary, non-standard lending operations. These facilities often have an important financial stability component, though to different degrees.[6] Central banks have also implemented discretionary market-wide operations, some of them to primarily support monetary policy objectives.[7] Nevertheless, these discretionary operations, such as many lending programmes that were offered during the Covid-19 crisis, are also an important tool for supporting financial stability.[8]

Stylistic characterisation of different central bank lending operations — Table 1

	Standard open market operations	**Standing lending facilities**	**Discretionary lending operations**	**Lender of last resort**
Strength of objectives Monetary policy Financial stability				
Frequency of use				
Availability	Regular schedule (daily or weekly)	Available on demand	Discretionary	Discretionary
Access/scope	Market-wide	Market-wide	Market-wide or bilateral	Bilateral
Pricing	At policy rate	Spread above policy rate	Spread above policy rate[1]	Penal pricing
Typical collateral set	Narrow	Broad	Broad	Very broad
Maturity	Short-term[2]	Short-term	Short- or longer-term	Mainly short-term

[1] But can be lower than standing facility or even zero to address financial instability. [2] Standard market operations are typically short-term (eg overnight or for one week). Some central banks also use longer-term refinancing operations (eg three months) to implement the monetary stance.

[4] In practice, there is always a mix of monetary and financial stability objectives for lending operations. The provision of reserves generally supports financial stability since reserves are needed as a means of ultimate settlement. Equally, financial stability, including when supported via LOLR operations, is a prerequisite for monetary stability.

[5] LOLR refers to discretionary operations under which a central bank lends to individual firms that are liquidity-stressed but solvent on terms that are generally designed to minimise moral hazard, such as pricing. LOLR lending is often outside of a central bank's published facilities.

[6] Take for example the primary and secondary lending programmes of the Federal Reserve's discount window. The primary credit programme is designed as a safety valve for ensuring adequate liquidity in the banking system if there are, for instance, tight money market conditions or late payment shocks. While this has some financial stability dimension, the primary objective is to contain volatility in the money market in order to ensure the adequate transmission of monetary policy. Secondary credit, on the other hand, has more weight on financial stability as it is designed inter alia to be a backup source of funding on a very short-term basis or to facilitate an orderly resolution of serious financial difficulties. For details see FRB (2024a).

[7] Ad hoc lending operations to counter unexpected shifts in autonomous factors are an example of discretionary market-wide lending operations with primary monetary policy objectives. Some longer-term lending programmes, such as funding-for-lending operations, have also been implemented primarily to support monetary policy objectives (eg see Markets Committee (2023)).

[8] Another example is the Federal Reserve's Bank Term Funding Program in response to the US banking turmoil in 2023. This programme was established to meet the needs of depository institutions amid escalating chances of deposit outflows following the abrupt collapse of SVB and Signature Bank. A key element of the programme was the acceptance of securities at par value. For further details see the Federal Reserve's Bank Term Funding Program.

9. **Two fundamental components of central bank lending frameworks are counterparty access and collateral requirements.** These elements determine which institutions are eligible to participate in central bank lending operations and outline the minimum standards that assets must meet in order to be accepted as collateral by the central bank.

2.1 Counterparty access

10. **Access to central bank lending operations is limited to institutions meeting specified eligibility criteria.** Those criteria can vary widely across countries, stemming from differences in market structures and legal frameworks but also reflecting different views about the appropriate role of the central bank in the financial system.[9] Eligible counterparties may be limited to banks. Eligibility criteria may also differ between domestic and foreign financial institutions. While in some jurisdictions, specific types of non-bank financial institution (NBFI) have access to some central bank lending facilities, whether to expand counterparty access to central bank lending operations to more NBFIs is a topic of ongoing debate.[10]

11. **Eligibility criteria often include operational requirements to ensure that counterparties can in practice transact with the central bank.** A typical operational requirement is that eligible institutions have a reserve account with the central bank (or arrangements with a bank that has a reserve account). For example, access to the Federal Reserve's discount window for US depository institutions and US branches of foreign banks is linked to the holding of reserves. In Canada and Australia, the eligibility criteria specify that an institution must be a member of the large-value payments system. Similarly, the Bank of England criteria specify that, to be eligible, an institution must have the operational capacity to participate in Bank of England operations and to efficiently settle transactions with the Bank of England.

12. **Operational criteria may also include requirements about the provision of information to the central bank.** For example, the Australian Prudential Regulation Authority mandates that banks be operationally prepared to provide specific information when applying for exceptional liquidity assistance from the Reserve Bank of Australia.[11] In the United Kingdom, eligible institutions must regularly provide the Bank of England with any liquidity and risk management information that it may require (and which is not available from the supervisory authority).[12]

2.2 Collateral requirements

13. **In general, central banks lend solely on a collateralised basis.**[13] There are a range of reasons for this principle, arguably the most important being that uncollateralised lending subjects the central bank to considerable risks. Losses could undermine the financial autonomy of the central bank and, ultimately, its independence. The reputational risks may also be substantial.[14]

[9] See eg Committee on the Global Financial System (2017).

[10] See eg Markets Committee (2022) for a discussion about the trade-offs related to expanding counterparty access.

[11] See Australian Prudential Regulation Authority (2024).

[12] See Bank of England (2022).

[13] There have been instances in which central banks have lent uncollateralised but with a government guarantee. Rule (2012) also reports that there have been rare examples of unsecured lending by central banks on occasions when suitable collateral was not readily available.

[14] For further discussion, see eg Bindseil and Papadia (2006) and Markets Committee (2013).

14. **Collateral frameworks may be narrow or broad, and they often vary for different lending operations.**[15] For example, the Federal Reserve accepts only high-quality collateral such as treasury securities, agency debt securities and agency mortgage-backed securities at its standing repurchase agreement facility. In contrast, the eligible collateral pool for the discount window is much broader, including investment grade-rated fixed income securities denominated in US dollars, selected AAA-rated fixed income securities denominated in a foreign currency and performing bank loans.[16]

15. **For marketable assets, central banks typically stipulate some eligibility criteria to facilitate their operations and risk management.** For example, as part of the eligibility criteria for marketable assets for its repo operations, the Swiss National Bank requires, amongst other things, that debt securities have a credit rating from at least one of the major rating agencies; that they are traded with market price data published on a regular basis; that they are delivered through one particular custody service provider; and that the intermediate and ultimate securities depository is in one of a set of specified jurisdictions.

16. **For non-marketable assets, central banks also specify eligibility criteria for operational and risk management purposes.** For example, some criteria for loans specified by the Bank of England relate to the location of the debtor or the guarantor, the type of debtor, the currency of the loan and requirements about the governing law. It has size thresholds to mitigate concentration within a loan pool and alleviate the operational burden associated with handling many small-value loans. Additionally, it has requirements relating to features such as the ability to waive a borrower's right of setoff and stipulates that loan documentation should not restrict the information that can be disclosed to it. In a similar fashion, the Eurosystem accepts bank loans using eligibility criteria relating to the characteristics of the loans (eg the principal amount and the coupon structure) and of the debtors or guarantors of the loans.

17. **Eligibility criteria also ensure that the loan collateral can be seized and enforced by the central bank in the event that the borrower defaults.** For example, the Federal Reserve specifies that the borrowing institution must have rights to grant an enforceable security interest, ensuring that the Reserve Bank obtains a clear priority claim. Furthermore, securities and loans must be free of regulatory or other constraints that impede their liquidation. Certain loans to related parties are not eligible. The Bank of England imposes a non-subordination requirement and requires that eligible loans be fully drawn and free from any existing encumbrances. The Swiss National Bank, when provided with mortgages as collateral, requires the transfer of both the mortgage contract and the mortgage certificate, since both are necessary to enable it to fully seize and enforce its collateral.

18. **Central banks typically set performance requirements for loans in order to minimise risk exposure.** The Bank of England requires a minimum seasoning as a condition of collateral eligibility. It also undertakes its own quantitative assessment of the credit risks inherent in the collateral pool. The European Central Bank has specified loan rating thresholds (eg based on banks' credit assessment systems as approved by supervisors). The Central Bank of Brazil relies on the ratings registered in its Credit Information System and accepts only loans with a high rating. The Federal Reserve does not accept loans that are more than either 30 or 60 days past due, depending on the type; any loans that have a negative classification; or loans that it otherwise deems unacceptable following a review of the pledging institution's internal risk rating policy.

[15] There are various trade-offs in the relative narrowness or breadth of central banks' collateral frameworks. Bindseil (2016) highlights three objectives that are relevant to framework design. First, there should be sufficient collateral available to implement monetary policy and to support financial stability. Second, collateral frameworks should be market-neutral to avoid the distortion of relative asset prices. Third, the collateral should protect central banks from losses if a counterparty defaults.

[16] See FRB (2024b).

Section 3 – Ensuring operational readiness

19. **Without operational readiness, central bank lending operations cannot be effective.** For instance, a lack of operational readiness contributed to the failures during the 2023 banking turmoil in the United States. Despite identifying the discount window as a source of funding in its contingency plans, SVB had not tested the arrangement in the year prior to its failure, while Signature Bank was reported as not having tested the arrangement for five years prior to its failure.[17] As a result of their lack of preparedness, SVB was unable to mobilise collateral within deadlines and Signature demonstrated no understanding of collateral eligibility.[18]

20. **Access to central bank liquidity facilities is contingent on several key factors.** These include the operational capacity of banks to access the facilities, the due diligence process, and valuing collateral and setting haircuts, and are discussed next.

3.1 Ensuring operational capacity

21. **Accessing central bank lending operations requires that banks have the operational capacity to do so.** This includes an appropriate IT and legal infrastructure, and staff that are familiar with the operational processes and requirements.

22. **Central banks therefore focus on ensuring banks' operational readiness.** Checks for operational readiness may cover the entire process of mobilising, assessing and lending against collateral. For example, the Bank of Mexico conducts simulations to ensure that banks are familiar with the facilities and know how to access them if needed. The simulation covers the entire lending process, the only difference from reality being the terms of the operations and the small amounts involved. The bank makes a liquidity request and presents the collateral, and the Bank of Mexico lends the money. The assets and funds are retained for a few days and the loan is then reversed. Banks participating in the simulation are also encouraged to use this as an opportunity to verify the status of potentially eligible assets.

23. **Tests for operational readiness can be underpinned by regulation.** For example, in Brazil, the largest and the internationally active financial institutions must participate in the financial liquidity facility framework. This entails complying with certain operational requirements and conducting tests to obtain liquidity from the Central Bank of Brazil against all eligible asset classes. Similarly, the Swiss National Bank requires systemically important banks to test their operational ability to access its emergency lending facilities.[19] These tests require banks to deliver collateral to the Swiss National Bank and ensure that they can fulfil certain legal and operational requirements. In response to the 2023 banking turmoil, US authorities amended their supervisory guidance on funding and liquidity risk management with a view to encouraging banks to incorporate the Federal Reserve's discount window into their contingency funding arrangements.[20] Firms that do so are expected to establish and maintain operational readiness for borrowing from it. In particular, this entails prepositioning collateral and periodically testing access to the discount window.[21]

24. **Some central banks provide incentives to foster operational readiness.** For instance, systemically important banks that take certain preparatory steps for accessing emergency lending from

17 See McLaughlin (2023).

18 For example, prior to its failure, Signature had attempted to pledge collateral that was ineligible, even though it should have been clear that it was ineligible from information published by the Federal Reserve System.

19 See Swiss Federal Council (2024).

20 See FRB et al (2023) for further details.

21 See Barr (2024a) and FRB et al (2023).

the Swiss National Bank against mortgage receivables may be entitled to recognise some of those assets for the purpose of meeting liquidity requirements.

25. **The central bank's own readiness is also important since lending operations supporting financial stability are often needed unexpectedly and at short notice**. Appropriate advance preparation mitigates those risks (Box 1).

Box 1

Legal techniques for transferring loan collateral

The legal form in which collateral is mobilised differs across jurisdictions, reflecting the nature of the collateral and national legal frameworks and differences in financial market structures.①

In general, repurchase (repo) agreements are used where central bank lending is collateralised. These agreements may be bespoke, but even where standard, market conventions can differ across jurisdictions. Such national differences become more apparent with the mobilisation of loan books as collateral. Various techniques are used, including pledge (eg Bank of France), assignment (eg Deutsche Bundesbank) and floating charge (eg Central Bank of Ireland). Some central banks (eg the Bank of England, Central Bank of the Republic of Austria) rely on multiple techniques. Detailed discussion of these techniques is beyond the scope of this paper.

Requirements may also differ with regard to whether loans are mobilised individually or can be grouped in pools. In Europe, prior to 2011, loans were mainly mobilised individually. However, with the introduction of the European Central Bank's additional credit claim (ACC) framework, it became possible for all national central banks to accept pools of loans.②

National legal frameworks often impose additional requirements, particularly for loans. These may include notifications of mobilisation to the underlying debtor (eg Bank of Greece) or the physical transfer of underlying loan agreements to the central bank (eg Bank of Finland, Croatian National Bank). There are also requirements for registering the pool of loans being mobilised, either on a public register (eg Central Bank of Ireland) or on the counterparty's books (eg Bank of England, Central Bank of the Republic of Austria).

① For further detail, see Tamura and Tabakis (2013). ② Under the ACC framework, Eurosystem central banks may accept credit claims that comply with the eligibility criteria and risk control measures set by the national central banks accepting that collateral, subject to prior approval of the European Central Bank Governing Council.

3.2 Conducting due diligence

26. **Before a central bank can lend against any type of collateral, it needs to be confident that it can manage the associated financial, legal and operational risks.** These vary significantly between traded and non-traded assets. Thus, the process for carrying out due diligence and the required time frame differ significantly (see Graph 1).

27. **For traded assets, the due diligence process for evaluating collateral is straightforward.** Eligibility assessments can be conducted at the level of the instruments' ISIN, and ownership is perfected on delivery to the central bank or the agreed custodian. The delivery process for the collateral is typically straightforward. Traded assets are often dematerialised within a central securities depository, which can be accessible via or integrated with the central bank-operated payment system. This integration facilitates the technical ease and feasibility of transferring securities, subject to constraints such as encumbrance and system closure timings. Therefore, provided a bank is operationally ready, the whole process can be carried out rapidly and within a day.

28. **For non-traded assets, such as loans, a comprehensive due diligence process is required.** This covers legal and operational dimensions, including verifying that assets exist and that an enforceable legal interest can be created, and ensures that the central bank can manage all the associated risks. Given that the process is often lengthy, undertaking it in advance of any application to borrow against the

collateral avoids a situation in which due diligence has to be carried out imperfectly and under severe time pressure in a crisis. Early due diligence facilitates the central bank's valuation and haircut setting for assets without an observable price. This in turn helps a bank assess how much it could borrow from the central bank and incorporate this information into its contingency liquidity planning.

29. **Central banks' due diligence processes for loan collateral typically involve the assessment of the loan pools and of a bank's operational and governance processes.** The Bank of England undertakes collateral due diligence within its prepositioning framework (see Box 2 below).[22] This focuses on the bank's business strategy and the eligibility and risk controls associated with the loan portfolios that have been identified for use as collateral. Advance due diligence by Eurosystem central banks on loans puts emphasis on legal, operational and systems checks.[23] The Federal Reserve conducts sample testing to confirm that the loans and securities meet the published eligibility criteria. The checks are largely automated, and anomalies identified through this process are then investigated by Federal Reserve staff.

30. **Due diligence processes may also involve an examination of loan documentation to ensure that the loan can be effectively transferred to the central bank.** For example, Eurosystem central banks review loan documents to verify that there are no restrictions on the mobilisation and enforcement of the collateral (including against third parties) and no restrictions relating to banking secrecy or confidentiality that would impede transfer. This process also identifies any debtor or public notification requirements that would apply when the loans are mobilised. The legal review of the loan portfolio required under the Bank of England's due diligence process checks whether loan documentation supports effective collateral use; verifies, among other things, the legality and enforceability of loans and compliance with consumer credit laws; and confirms the standard of loan origination and that the participant has an effective charge over any collateral used to secure the underlying loan.[24]

31. **Central banks typically perform checks to ensure that they are satisfied with the loan origination process of the bank providing the collateral.** The European Central Bank requires national central banks to confirm the accurate recording of loans in the bank's systems so that loan variables are not misreported and the institution's IT systems accurately filter only eligible and unencumbered bank loans.[25] The Bank of England requires banks seeking to preposition collateral to complete a due diligence questionnaire. This questionnaire provides an overview of the bank's strategy, underwriting, risk management, regulatory compliance, loan servicing and IT systems for the business line that originated the loans. It also requires a third-party audit that verifies the existence of loans, the quality of systems and processes, and compliance with its eligibility criteria. Inputs include the submission of a loan-level data tape, which sets out which loans are included in the pool and provides visibility of individual loan characteristics, for analysis so that the Bank of England can determine a haircut.[26] For due diligence on commercial loan portfolios, the Federal Reserve requires institutions to submit their internal risk rating policies to their local Reserve Bank for assessment. If the institution's internal rating system and loan documentation practices are deemed acceptable, the Reserve Bank will rely on these to confirm the credit quality of loans and determine their eligibility and collateral value.

22 See Bank of England (2020).

23 See Title III, Chapter 1, Section 1 of Guideline (EU) 2015/510 of the European Central Bank of 19 December 2014 on the implementation of the Eurosystem monetary policy framework.

24 See Bank of England (2020).

25 The verification process may be supported by on-site inspections, where a sample output can be cross-checked against the institution's systems and loan documentation.

26 See Bank of England (2020).

Box 2

The Bank of England's process for prepositioning loan collateral

The Bank of England strongly encourages banks to preposition a broad range of collateral for its operations with a view to enhancing banks' readiness to manage liquidity stress and promoting operational readiness.① This is particularly relevant for less liquid or non-traded assets, such as loans, due to the time required to properly risk-assess, price and value collateral and set suitable haircuts in advance of a drawdown.② Accordingly, the Bank of England has invested significant resources to put in place a comprehensive process for prepositioning loan collateral.③

The process starts with an introductory call, where the firm provides the Bank of England with an overview of the portfolio planned for prepositioning. The firm also shares the outcomes of its initial assessment of any potential legal impediments to the Bank of England taking title over the loans and/or enforcing the collateral. Before advancing, the relevant Bank of England committee conducts a preliminary review to evaluate whether the assets are expected to align with the Bank of England's eligibility criteria and then decides on the course of action regarding the prepositioning process.

Following this assessment, firms submit loan-level data tapes for each proposed portfolio. The data tapes serve two main purposes: (i) identifying the loans and their collateral use and (ii) providing loan characteristics for haircut determination. These tapes must comply with prescribed formats, which vary by asset class. All data submissions are conducted through a portal, featuring validation engines for quality assurance. The information provided through the data tapes is supplemented by responses to the Due Diligence Questionnaire (DDQ). The DDQ provides an overview of the business lines associated with the assets planned for prepositioning, including in relation to risk management, monitoring, controls, servicing, arrears and foreclosures. For example, firms wishing to preposition residential mortgage loans provide historical foreclosure and repossession data.

Armed with this information, the Bank of England conducts an on-site visit to the firm. This visit is an opportunity for the Bank of England to address any queries arising from the completed DDQ, engage with members of the management team and gain a qualitative understanding of the firm's operations. The Bank of England also mandates a loan portfolio audit to verify the existence of loans. This has to be carried out by qualified third party appointed by the firm. This audit encompasses data validation and analysis to confirm that the loans meet Bank of England eligibility criteria and adhere to specific "agreed-upon procedures" tailored to each asset class.

The loan portfolio also undergoes a comprehensive legal review to ensure, among other things, that ownership of collateral can be legally transferred. The review includes various stages and involves the firm's legal counsel, the Bank of England's external legal counsel, the Bank of England's internal legal team and the Bank of England's collateral team. As a result, the legal review is often the most time-consuming phase of the prepositioning process. The Bank of England bears the costs for its internal legal and operational costs, while external legal costs are charged to the market participant.

After fulfilling these prerequisites, the portfolio undergoes evaluation for eligibility by the Bank of England's internal collateral risk committee. Upon approval, the pool becomes eligible for use as collateral, subject to haircuts. Haircut calibration depends on various factors, including the Bank of England's qualitative assessment of the firm's origination practices and risk management capabilities and its quantitative evaluation of the pool's inherent credit risks.

The Bank of England does not obtain beneficial interest in the loan portfolios at the conclusion of this process, but rather when the bank wishes to draw against the collateral. However, because of the preparation, moving from the prepositioning of assets to their encumbrance as collateral involves only minor administrative steps. The beneficial interest may be converted into legal title in the event of the default of the borrower.

① See, for example, Fisher (2012). ② The Bank of England estimates that the prepositioning process for residential mortgages lasts three to 12 months, depending upon the complexity. ③ See Bank of England (2020) for further details.

33. **Prepositioned assets are also monitored to ensure that they continue to comply with eligibility criteria and that their overall risk characteristics are not significantly changed.** Such monitoring is conducted through periodic checks for as long as assets remain prepositioned, pending their use as collateral. When the collateral is mobilised for use, the European Central Bank requires the bank to certify, on a quarterly basis, the continued existence and eligibility of the loans presented and to confirm

the credit assessment methodology used. The Bank of England uses a "churn threshold" to determine whether a repeat third-party audit is necessary.[27] When a third-party custody arrangement is used to preposition loans for future use in Federal Reserve lending operations, the institution prepositioning those loans must submit a periodic collateral schedule that identifies the loans held. The Federal Reserve conducts routine inspections of such collateral.

34. **Collateral due diligence is a resource-intensive process requiring specialised legal, operational and risk expertise.** For example, the prepositioning process at the Bank of England involves legal reviews, audits and risk assessments by multiple Bank of England and external parties (see Box 2). For the Federal Reserve, due diligence is largely automated and carried out in-house. In rare cases, the Reserve Bank may engage its external lawyers. For foreign banks, external legal opinions may be required, while smaller banks might hire external auditors to ensure requirements and obligations are met. All these costs are borne by the banks themselves. In the Eurosystem, due diligence is carried out by national central banks. Legal, risk management and operational teams are involved, and checks or inspections can be undertaken by the central bank itself or the national competent authority or external auditor.

Central bank due diligence practices for loan portfolios — Table 2

	Bank of England	European Central Bank/Eurosystem	Federal Reserve
Initial due diligence	Business strategy and loan process checks during site visit Due Diligence Questionnaire Loan data tape submission in specified format Legal and data audit Assessment of identified loan pools	Verification of systems and procedures to ensure only eligible loans are mobilised Loan-level template requirement for pools	Suitability of bank's lending practices and internal rating systems In-house assessment of bank's credit policy A legal opinion in the case of foreign loans File format requirements
Ongoing monitoring	Notification by bank of significant changes to business activities Repeat cycle for legal and data audit Other requirements such as loan top-up and thresholds for repeat audits Bank of England provides regular update of asset valuation and haircuts	Quarterly confirmation by bank of existence, any changes to, and conformity of loans Annual confirmation by bank of credit assessment Checks on eligible loans submitted (either remote or on-site)	Monthly updated collateral file (or when the value of the pool falls by 10% or more) Independent audit reviews Routine periodic reviews (either remote or on-site)
Published details	Bank of England loan collateral guidance	European Central Bank monetary policy implementation framework	Federal Reserve guideline

Source: Analysis based on information obtained from the respective central bank websites.

[27] Churn, calculated at the participant level per asset type, is the ratio of the sum of the current balance of loans added since the last data audit to the current balance of loans in the data tape in the month of the last data audit. Banks that have prepositioned collateral can generally add loans to pools without a data audit until they breach this threshold, which varies by asset type. The Bank of England reserves the right to request due diligence below these thresholds if necessary. Typically, it requests an external audit a maximum of twice per year per asset type, ideally limiting it to once per year. See Bank of England (2020).

35. **Given the nature of the assessment, collateral due diligence can be a long process**. It can take months and is dependent on the potential collateral and the size and business model of the bank presenting it.[28] In general, once due diligence is concluded, actual mobilisation of collateral for use can be completed in as short a period as one day.

3.3. Valuing collateral and setting haircuts

36. **Operational readiness is predicated on sound practices for valuing collateral and setting haircuts.** Such practices aim to ensure that, should a borrower fail, the central bank will hold sufficient collateral to cover the value of the claim.[29] Valuing collateral aims to determine the "fair value" of different types of collateral. This may be particularly challenging when reliable market prices are not available, so central banks often apply a margin of conservativism. "Haircuts" refer to the amount that the central bank is willing to lend against the value of the collateral.[30] These are set to account for the expected volatility in the realisable value of the collateral in the event of the borrower's default. Their calibration follows different methodologies and is based on the central bank's risk tolerance level.

37. **Valuing traded assets as collateral is relatively straightforward.** In this case, market prices are available and provide information about the value of an asset. For less liquid traded instruments, central banks may apply a margin of conservatism to ensure an appropriate valuation. Given observable pricing data, the process can be automated and valuation can be done rapidly.

38. **Valuing non-traded assets as collateral is more difficult.** Typically, central banks use internal methodologies and conduct both qualitative and quantitative assessments. For example, the Federal Reserve estimates the value of prepositioned loans monthly, using information provided by the depository institution and market data. The amount of information that it requires depends in part on the type of the institution. "In-scope" institutions, which include larger depository institutions and foreign banks, are required to provide up to 20 data points, such as loan type, interest rate, maturity date, borrower credit score and collateral backing the loan. To alleviate the burden on smaller banks, the Federal Reserve requires a more limited set of data, although the bank may provide the additional information voluntarily. The Federal Reserve may also make general assumptions when determining either a loan's value or its haircut when information about a loan is not available. Similarly, Eurosystem central banks determine a theoretical value for non-marketable collateral daily, based on the face value of the loan and a haircut that aims to mitigate risk of overvaluation.

39. **As haircuts are set to protect the central bank from loss should the borrower default, they reflect very adverse scenarios.** Typically, the haircut corresponds to the expected shortfall at a certain confidence interval. For example, in the Eurosystem, haircuts are set based on the expected shortfall at a 99% confidence interval (ie the average loss in the worst 1% of cases).[31] Similarly, the Bank of England uses a stress scenario pricing model to estimate the probability of default and the loss-given-default of loan collateral. Haircuts represent the difference between the nominal value of the loan collateral and its stress value.

[28] Banks have different lending books and recording practices because of their different business models. For example, larger banks tend to have simpler, more standardised loan books compared with smaller banks' more complex loans that reflect the bespoke needs of their clients.

[29] In addition to the overall pricing of the facility, the valuation of collateral and the setting of haircuts can also influence the effectiveness of a lending operation.

[30] For example, a haircut of 10% means that the bank will lend 90 against 100 of collateral, as valued by the central bank.

[31] See Bindseil et al (2017).

Box 3

The Central Bank of Brazil's process for valuing loan collateral and setting haircuts

The Central Bank of Brazil has established a process for accepting securitised credit claims as collateral in its lending operations. To determine the value of such assets, the Central Bank of Brazil uses detailed information from its Credit Information System regarding the underlying loans, together with data from the central securities depository where the securities are held.

The value of securitised credit claims is determined by considering two factors: (i) the net present value of the underlying loan, as reported in the Credit Information System and calculated after excluding expected repayments and accounting provisions over a 90-day period; and (ii) the price of the claim as reported by the central securities depository. The Central Bank of Brazil considers the lower of those values as the value of the claim.

Haircuts are based on the borrower's risk score and specific characteristics of the underlying loan, such as the nature and duration of the credit. The Central Bank of Brazil estimates the borrower's risk score using data from its Credit Information System on all loans extended to that borrower across the financial system. Transition matrices are used to estimate haircuts for different types of eligible credit. These matrices are constructed by analysing multiple cohorts of loans over a 10-year period to understand how loans of a specific type of credit tend to deteriorate over one year. Haircuts are also adjusted to account for the expected reduction in the outstanding loan value due to regular repayments.

This entire process is automated, and the Central Bank of Brazil communicates the outcome and resulting credit limits daily to the institutions providing the collateral. If collateral is insufficient, a margin call is issued. If the additional collateral is not provided, the counterparty may be unable to access liquidity until the loans are repaid or additional collateral is provided. If the situation persists, the Central Bank of Brazil may declare the counterparty to be in default and enforce the collateral.

40. **Haircuts are determined by a range of factors, such as liquidity, credit assessments, market valuation and concentration risk, but can be adjusted based on qualitative information.** For example, when setting haircuts for loan collateral, the Federal Reserve considers the loans' cash flow and credit characteristics, and the historical price volatility of each category of loan collateral.[32] It relies on the same classes of information it used to value the asset to set haircuts. Some central banks may adjust haircuts to account for individual features of the borrowing institution. For example, the haircuts set by the Bank of England take account of, among other factors, a qualitative assessment of the borrowing institution's strategy and governance framework, origination and servicing practices, risk management competency and IT capabilities.[33]

41. **Haircuts are reviewed regularly but, to avoid procyclicality, not in response to changed market conditions**. Haircuts are generally reviewed and updated at a typical interval of 12 or 18 months. However, since calibration is based on severely adverse conditions, haircuts are expected to remain relatively stable to avoid procyclicality. For example, the Federal Reserve typically updates its schedule or haircuts annually (compared with collateral prices, which are set monthly), and they apply unchanged until the next update. The Federal Reserve avoids changing haircuts reactively to market conditions in order to avoid exacerbating problems during stress periods within the banking sector. As a result, borrowing from the Federal Reserve is expensive in good times relative to market prices, but likely to be comparatively cheaper when times are bad.

[32] See FRB (2024c).

[33] See Bank of England (2020).

3.4 Prepositioning practices at central banks

42. **The relevance of prepositioning arrangements depends on the breadth of eligible collateral accepted by the central bank.** The broader the collateral framework, the greater the utility of prepositioning. Prepositioning arrangements also take different forms, but generally do not entail an anticipatory execution of an encumbrance or legal title in favour of the central bank. Rather, they constitute a preparatory process so that mobilisation of prepositioned assets as collateral and the execution of the central bank's interest can be completed rapidly when needed.

Prepositioning practices at selected central banks — Table 3

Bank of England	The Bank of England has established procedures for banks to preposition loan collateral.[1] It encourages early delivery and the prepositioning of non-marketable collateral, such as loans, own name securities and complex securities, where extensive due diligence is required. That encouragement is communicated through guidance on its market-wide operations, supervisory statements on liquidity and speeches by senior Bank of England officials.[2] The largest category of prepositioned assets is mortgage loans. Prepositioned assets are not legally transferred to the Bank of England or encumbered prior to use as collateral.
European Central Bank/Eurosystem	Eurosystem central banks operate pooling collateral arrangements, meaning that once collateral is deemed eligible and valued and haircuts are applied, it is pooled for use across all types of lending operation, including by Eurosystem national central banks.[3] Assets in a collateral pool may be withdrawn at any time if not actually used as collateral in a lending operation. On aggregate, the pool consists predominantly of non-marketable collateral since the opportunity cost to the bank of prepositioning such assets is minimal.[4]
Federal Reserve	The Federal Reserve established a number of collateral custody prepositioning arrangements for loans. These include: a borrower-in-custody (BIC) arrangement, in which – subject to approval – collateral can be maintained at the borrowing institution; a third-party custodian arrangement, in which an approved third-party can hold the loans; and a Reserve Bank custody arrangement, in which tangible assets such as promissory notes can be physically delivered to the Federal Reserve. Where loans have been prepositioned, they can be withdrawn from the pool of assets and used for other purposes unless a loan is outstanding against that collateral. Banks are not required to report withdrawals from the pool to the Federal Reserve unless they exceed 10% of the value of the prepositioned pool.
Bank of Ghana	The Bank of Ghana operates arrangements for advance legal and financial assessment of assets not held in the national central securities depository. The arrangements do not involve the transfer of the asset to the Bank of Ghana. Banks that wish to preposition collateral are required to engage, at their own cost, independent counsel and a qualified third party, both of whom must be acceptable to the Bank of Ghana, to conduct legal and financial due diligence, respectively. The former aims to establish, among other things, the title, validity, unencumbered status and enforceability of the proposed collateral. The latter consists of an audit or financial review to verify its existence, quality and value. The due diligence reports are submitted to the Bank of Ghana for review and clearance. Once the assets are accepted as potential collateral, they are monitored so that the Bank of Ghana can retain an accurate valuation and haircut. Until used as collateral, the assets remain in the control of the bank itself.

[1] That procedure is set out in published guidance (Bank of England (2020)) and is described in Box 2. [2] See, for example, Prudential Regulation Authority (2023), paragraph 5.3. Among other things, this indicates that banks count prepositioned assets to meet the PRA's quantitative liquidity guidance if certain conditions are met. [3] There are generally two types of collateral management arrangement: pooling and earmarking. Within a pooling arrangement, assets are grouped together to create a collateral pool used to collateralise all lending operations. On the other hand, under an earmarking arrangement, specific assets are designated as collateral for specific lending operations. [4] See Eurosystem collateral data for further details.

43. **Many central banks allow for and encourage prepositioning for their facilities.** In some cases, encouragement is reinforced by regulatory incentives. For example, the Central Bank of Brazil reduces the volume of mandatory reserves that are required for banks that have prepositioned collateral.

To date, no central bank requires prepositioning.[34] However, following the 2023 banking sector turmoil, there has been some regulatory consideration of a targeted requirement. The US authorities are exploring a requirement that larger banks maintain a minimum amount of readily available liquidity with a pool of reserves and prepositioned collateral at the discount window, based on a fraction of their uninsured deposits.[35] This would go beyond their current stance of encouraging banks to incorporate the Federal Reserve's discount window into their contingency funding arrangements.[36]

44. **There have also been more radical policy proposals for compulsory prepositioning of potentially large quantities of collateral to minimise the risk of runs.** For example, Mervyn King and Paul Tucker have proposed that banks cover all their short-term liabilities with reserves or eligible collateral prepositioned at the central bank.[37] In this context, the central bank would calculate the haircut that it would apply to each asset class. The net amount of a bank's prepositioned collateral would put a limit on its runnable liabilities, which would not be permitted to exceed the liquidity that would be available to cover them. In theory, this would prevent runs and would implicitly replace capital and liquidity regulation. However, it could ultimately impair banks' business models. The Group of Thirty (G30) put forward a similar but more moderate proposal in that banks should preposition collateral that is sufficient, after the application of haircuts, to cover all their liabilities excluding capital, long-term debt, swap liabilities and insured deposits.[38]

Section 4 – Reducing stigma

45. **As a broad principle, central banks should be transparent and accountable when providing liquidity support.** Central bank lending operations with financial stability objectives can be very sizeable, as was the case eg during the Great Financial Crisis (GFC) or the Covid-19 pandemic. Some lending operations, in particular LOLR, may also be politically sensitive. This therefore calls for transparency in order to underpin the actions taken by central banks as autonomous and accountable public institutions.[39]

46. **At the same time, public disclosure of liquidity support can have the undesirable consequence of stigmatising the receiving institution.** Disclosure may be formal and deliberate, such as through public statements to facilitate greater central bank transparency or general balance sheet reporting obligations. It may also arise through media speculation or leaks. Irrespective of the channel, a well recognised downside of the disclosure of emergency liquidity support is the likelihood that the receiving institution or future recipient will encounter some degree of stigma. Market participants and the public may draw adverse inferences about the financial condition of an institution if its borrowing is disclosed, and a perception may arise that the institution is weak and could possibly fail. In a worst case scenario, this can lead to a bank run.[40]

47. **The stigma associated with emergency lending has persisted in the years since the GFC and remains an impediment to banks' willingness to seek timely support.** Despite enhancements aimed at smoothing and expediting engagement with central banks, financial institutions' willingness to seek

34 As far as the authors are aware.

35 See Barr (2024b)

36 See Barr (2024a) and FRB et al (2023).

37 See Tucker (2023) and King (2023). The role of the central bank under such an arrangement has been described as "a pawnbroker for all seasons".

38 See G30 (2024).

39 See International Monetary Fund (2019, 2020).

40 This point is well illustrated by the bank run on the UK bank Northern Rock in September 2007 (see House of Commons (2008)).

support may be tempered by the fear of stigmatisation, resulting in hesitancy and delay. For example, fears about stigmatisation may have contributed to Banco Popular delaying its request for emergency liquidity assistance (ELA) in 2017.[41] Similarly, it was reported that Credit Suisse was concerned about the signalling effect of receiving ELA without a package of measures to stabilise the bank.[42]

48. **Stigma is not a uniform concept**. Conceptually it is possible to distinguish between "in-the-moment" stigma, which refers to banks' reluctance to use central bank facilities to meet their immediate funding needs for fear that depositors and other liability holders may penalise them, and "anticipatory" stigma, which affects business decisions about contingency funding, operational preparedness and attitudes towards central bank lending as a possible future source of liquidity. Several initiatives by central banks aim to address anticipatory stigma by changing attitudes to future use. In-the-moment stigma is less susceptible to reduction through such initiatives. Where a bank has no other option, in-the-moment fears of stigma are unlikely to prevent it from applying to borrow from the central bank, but they might delay that application.[43]

49. **The risk and nature of stigma depends on the specific circumstances of the borrowing institution.** The provision of central bank emergency liquidity without sufficient accompanying measures aimed at strengthening the bank may be interpreted by stakeholders as a sign of weakness, exacerbating the bank's problems. On the other hand, if the liquidity provision is viewed by the market and depositors as a comprehensive and credible response to systemic issues, it can restore confidence and mitigate the stigma associated with seeking emergency assistance.[44]

50. **The impact of stigma also depends on operational characteristics and can vary across counterparties.** Bilateral, on-demand facilities generally carry a greater risk of stigma than market-wide operations. Banks therefore prefer to use market-wide facilities rather than bilateral ones whenever possible, allowing them to adopt the narrative of "being in this together".[45] However, if there is a market perception that such operations are a vehicle for bailout, this could become detrimental for sound banks.[46] More penal pricing also seems to increase stigma concerns. For example, the Federal Reserve reduced the cost associated with the primary discount window in 2020 to avoid the perception of excessive penalisation and has attempted to communicate to the market that the primary credit facility of its discount window is a legitimate source of funding that should not carry a stigma.[47]

51. **Disclosure policies by some central banks have attempted to reduce stigma by ensuring that central bank lending cannot readily be identified through routine balance sheet reporting.** For example, the Bank of England reports over 90% of its balance sheet by value on a rolling weekly basis. However, to avoid revealing the provision of covert liquidity support, its full balance sheet is disclosed on a lagged basis.[48] Any discount window facility is disclosed with a five-quarter delay and on an aggregated and averaged basis, rather than at the level of individual transactions. The Federal Reserve releases

41 This delay, coupled with a denial of the impending need for ELA, is likely to have undermined preparations and led to collateral-related issues when large volumes were needed (see Gore (2019)).

42 BCBS (2023) suggests that: "Supervisory and market scrutiny were additional impediments to the use of the LCR buffer. While the LCR standard specifies a lagged disclosure of an average LCR, CS [Credit Suisse] was of the view that "breaches" of regulatory requirements needed to be communicated to comply with ad hoc disclosure requirements. Furthermore, the bank was cautious to fall below regulatory LCR levels and was wary of the signalling implications when using ELA."

43 For further discussion, see Schulhofer-Wohl (2024).

44 For example, during the Irish financial crisis, central bank emergency liquidity support was accompanied by capital and liquidity reviews for banks deemed to be going concerns, which helped renew market confidence in those banks. For further discussion, see Baudino et al (2020).

45 See Hauser (2014).

46 See Tucker (2014).

47 See FRB (2020).

48 For further details, see Bank of England (2014).

transaction-level data with a two-year delay, but publishes aggregated discount window usage on a weekly basis. The European Central Bank does not disclose the number or identity of counterparties that access its standard monetary lending facilities, only aggregate amounts. That disclosure policy is motivated by an awareness of risks from market scrutiny. However, in the European banking union ELA is a national competence and, under Eurosystem rules, national central banks disclose their full balance sheet, from which the amounts of such lending may be deduced, on a monthly basis.[49]

Box 4

Publication of central bank emergency liquidity arrangements

Public messaging about central bank emergency lending may have an impact on the stigma associated with central bank borrowing. Traditionally, central banks followed a policy of "constructive ambiguity" by publishing limited details about the availability and terms of such operations. While that policy may allow for greater flexibility, opacity about the criteria and conditions of access did not help alleviate the associated stigma nor did it seem to help limit moral hazard prior to the GFC.① Over the last decade, central banks have shifted to "constructive clarity" about their discretionary lending operations. This approach seeks to provide improved information and guidance to the market about these operations to ensure operational readiness, which in turn can help condition market behaviour.

At present, several central banks publish the criteria and terms associated with at least some of their discretionary lending facilities. For example, the Central Bank of Brazil, the Bank of Canada, the Bank of England, the Bank of Ghana, the European Central Bank and the Federal Reserve publish their core requirements, even if the exact thresholds or specifics in all cases are not fully disclosed.

What do these country practices show? It appears that central banks with published market-wide facilities are less likely to have published bilateral ELA frameworks. For example, the Bank of England categorises emergency lending as anything outside of its published framework. Conversely, central banks that retain more discretion in providing liquidity under market-wide facilities are more likely to have published emergency liquidity frameworks or have at least publicised the broad eligibility parameters of the arrangement (eg the Bank of Canada, the Reserve Bank of Australia).②

Selected central banks' ex ante disclosure arrangements

Table A

Emergency lending	Detailed publication	Limited publication
Market-wide discretionary arrangement (DA) or facility (F)	Central Bank of Brazil (F), (DA) Bank of Mexico (F) Bank of England (F) Federal Reserve (F), (DA) Bank of Canada (DA)	–
Bilateral discretionary ELA arrangement[1]	Bank of Canada Bank of Ghana European Central Bank/Eurosystem Swiss National Bank	Reserve Bank of Australia Bank of England Bank of Mexico Central Bank of Malaysia

[1] The Federal Reserve is distinct in that emergency lending must be undertaken as part of a broad-based programme.

Source: Analysis is based on public information.

① Bank for International Settlements (2014). ② See Jones (2023) in the case of the Reserve Bank of Australia. See also Swiss National Bank, *Guidelines of the Swiss National Bank on monetary policy instruments*, March 2024 and the discussion in Swiss Federal Council (2024).

[49] See Cadamuro and Papadia (2021).

52. **Lending collateral rather than cash may also help alleviate the risk that banks accessing central bank facilities will be identified and stigmatised.** For example, the Bank of England can provide either cash or UK government sterling debt instruments (gilts) through its Discount Window Facility. Lending gilts is effectively a collateral upgrade for the borrowing bank, which can then use that high-grade collateral to obtain liquidity in the repo market. The main benefit of such a transaction is that it allows borrowing institutions to remain active in secured money markets. This signals strength to other market participants, provided the bank can find counterparties to monetise the collateral in the market. Moreover, it avoids the visible impact of cash loans on the published quantity of reserves in circulation. This reduces the risk of increased market scrutiny and a search for possibly weak institutions following a dramatic change in that amount. Decisions by the Bank of England on whether to lend cash or gilts are made on a case by case basis depending on several factors, including the loan amount, the counterparty size, the nature of its immediate liquidity needs, and its access to repo markets both generally and in the specific circumstances.

53. **Recent efforts to reduce stigma aim to position central bank facilities as part of banks' range of liquidity options rather than an inevitable sign of distress**.[50] Such initiatives tend to be accompanied by efforts to increase banks' operational readiness and prepositioning. For example, the Bank of England has introduced reforms that have increased the availability and flexibility of liquidity insurance, with greater predictability of access. The stated goal is to signal that the Bank of England is "open for business", meaning that individual firms that meet the applicable conditions (which include solvency) and have appropriate collateral will be allowed to access the facilities when they wish to borrow.[51] Similarly, the Federal Reserve allows banks to access the primary credit facility with no questions asked and no limitations on how they could use the facility.[52] Moreover, the Federal Reserve has recently clarified that non-private market sources of liquidity, such as the discount window, can be included as a monetisation channel in banks' internal stress tests.[53]

54. **Despite the measures taken, stigma remains an area of concern.** One reason seems to be the "memory problem", in that long-standing board directives continue to impede some banks from accessing well established facilities, for reasons of stigma, if any other options exist. Newer facilities may be less affected by that problem. It is possible that this phenomenon may be mitigated by a credible rebranding of emergency facilities, accompanied by strong and consistent messaging by financial authorities.[54]

55. **Some sources of stigma may also be outside the direct control of central banks and bank supervisors.** For example, in order to comply with securities regulation or market rules, banks are generally required to disclose price-sensitive information in a timely fashion. In some jurisdictions, such as in the European Union, there are exemptions from this requirement that permit delays where immediate disclosure could threaten financial stability.[55] But even then, some banks may publish their liquidity buffers

[50] See, for example, Saporta (2024).

[51] See Bank of England (2013). The reforms were adopted in response to reviews following the GFC (Plenderleith (2012) and Winters (2012)) that recommended that reducing stigma should be a key goal, which could be achieved by increasing the accessibility of the Bank of England's operations.

[52] See Ennis and Price (2020).

[53] See also Federal Reserve FAQs.

[54] As noted by McLaughlin (2023), "supervisory and regulatory practices, requirements and language are often at odds with the "no questions asked" policy stance on primary credit".

[55] Regulation (EU) No 596/2014 of the European Parliament and of the Council of 16 April 2014 on market abuse, Article 17, paragraph 5 states: "In order to preserve the stability of the financial system, an issuer that is a credit institution or a financial institution may, on its own responsibility, delay the public disclosure of inside information, including information which is related to a temporary liquidity problem and, in particular, the need to receive temporary liquidity assistance from a central bank or lender of last resort…"

voluntarily to signal strength in an episode of financial instability, which in turn puts pressure on other banks.

56. **An element of stigma may also be useful as a check on moral hazard.**[56] Moral hazard will arise if market participants believe that central bank emergency funding will be available whenever financial stress develops and that institutions can access such lending operations at limited costs and without any negative consequences, such as stigma.[57] That said, it is crucial that stigma is not so powerful that it undermines central bank actions to address liquidity stress, possibly amplifying and deepening stress further.[58] Therefore, a careful balance needs to be struck so that stigma continues to operate as a useful check on moral hazard but does not fully impede banks from seeking emergency support as soon as it is needed.

Section 5 – Conclusion

57. **The 2023 banking sector turmoil underscored the importance of operational readiness in accessing central bank lending operations to mitigate financial stability risks.** Those episodes also highlighted that while central bank liquidity should not prevent the failure of non-viable institutions, it can facilitate more orderly and cost-effective resolutions and limit system-wide stress. This requires institutions to have the operational capacity to access lending arrangements quickly. Achieving such operational readiness, however, cannot happen overnight and requires significant advanced preparation by both banks and central banks.

58. **Several measures can help enhance banks' operational readiness.** Requiring banks to conduct regular testing and simulations involving different asset classes helps familiarise banks with procedures and can help identify and eliminate potential obstacles. Central banks may also want to encourage or even require the prepositioning of collateral, as this can significantly enhance the speed at which banks can access central bank facilities during times of stress. Moreover, such actions will be more effective if paired with clear and consistent messaging around conditions of use. Messaging can also eliminate uncertainty regarding the regulatory treatment and supervisory view of liquidity operations as contingency sources of liquidity. Transparent communication by authorities regarding their expectations is crucial.

[56] See Plenderleith (2012).

[57] See Bernanke (2008).

[58] See Dobler et al (2016).

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