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Solvency as a requirement for emergency liquidity support

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Solvency as a requirement for emergency liquidity support[1]

Highlights

- *Most central banks require firms to which they lend to be solvent. This applies also for emergency liquidity support.*
- *In all jurisdictions surveyed in this paper, the solvency concept applied for emergency liquidity support purposes considers broadly a firm's capacity to meet its financial obligations. However, approaches differ in the extent to which they focus on a snapshot of a firm's balance sheet or on a general, possibly forward-looking, assessment of viability.*
- *As a matter of principle, the forward-looking assessment of viability for the purposes of emergency liquidity support should be consistent with the forward-looking assessment of a firm's likelihood to fail for the purposes of resolution. This calls for close coordination between central banks, supervisors and resolution authorities when dealing with weak banks under their respective responsibilities.*
- *A certain degree of ambiguity in applying these conditions is inevitable and may help to increase authorities' flexibility and optionality in times of distress.*

1. Introduction

Central banks act as lenders of last resort to markets or individual firms. To that end, central banks have developed their toolkits to include various forms of liquidity support.[2] The banking turmoil of 2023 confirmed the importance of liquidity support provided by central banks in times of distress. Some legislatures are considering amending or expanding central bank mandates to allow them to provide liquidity support when financial markets are distressed.[3]

The post-turmoil analyses of authorities' tools and approaches have largely focused on lessons for supervisory effectiveness, liquidity regulation, and central banks' operational preparedness.[4] A key precondition to any lending by a central bank is that the recipient firm be solvent. This has received comparatively little attention, although it is generally recognised as a "fundamental constraint" of central bank lending.[5] Yet the precondition can raise difficulties in two respects. First, when markets are distressed, whether or not a specific firm is factually solvent may be in doubt. Second, given that a universally accepted definition of solvency does not exist, the very concept of solvency may be fluid.

This FSI Brief seeks to contribute to the policy debate on emergency liquidity provision by benchmarking how jurisdictions approach the solvency requirement. Our analysis focuses strictly on the concept of solvency. Other features, such as eligible collateral, available tenors, pricing and interest, are

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2 Eg Arseneau et al (2025).

3 Eg US Congress (2023).

4 Coelho et al (2024); BCBS (2023).

5 Tucker (2020); but see McLaughlin (2025) for a comparison of some aspects of central bank lending tools across five jurisdictions.

equally relevant features of emergency liquidity provision, but they are outside the scope of this paper. Dimensions to compare include the definition of solvency, such as the extent to which forward-looking assessments play a role; the coordination of central banks as lenders of last resort with supervisory authorities and/or national treasuries; and how jurisdictions approach the inevitable overlap between emergency liquidity provision with resolution frameworks designed to manage crises and failures.

While previous studies have considered some differences in solvency definitions across a few jurisdictions,[6] this FSI Brief seeks to expand the scope of analysis by surveying policies across seven jurisdictions and benchmarks how they implement the solvency requirement. Section 2 reviews the theoretical rationale for requiring firms be solvent to borrow from central banks, highlights some experiences from the 2023 banking turmoil and samples the lending frameworks that this paper discusses. Section 3 contrasts how several jurisdictions define and determine solvency as a condition for firms to receive liquidity support at times of distress. The last section seeks to draw some conclusions and offer policy reflections.

2. Emergency liquidity provision and the solvency requirement

2.1 The rationale of the solvency requirement

As a general rule, central banks´ emergency liquidity provision is subject to the requirements that the recipient firm be solvent, provide good collateral and pay a penalty interest rate (above the usual market rate).[7] By lending at a penalty rate, the central bank seeks to minimise moral hazard. The solvency and collateral requirements are designed to minimise credit losses for the central bank and help it maintain a financial position of unquestionable soundness, which is key for its credibility. Moreover, these requirements make sure central bank lending does not support "zombie firms" or unviable businesses.[8]

Yet the solvency requirement has an even broader rationale: if a central bank were to lend to a firm whose solvency is impaired, the firm would be able to repay its debts to any short-term creditors, including to those that are pressing for repayment, for example in a bank run. At the same time, long term creditors, of otherwise equal rank, would likely suffer losses as the impaired solvency or the bank run leads into failure and bankruptcy, while the central bank would be able to mitigate its own losses by enforcing its collateral.[9]

Such an outcome would effectively redistribute value across creditor classes in violation of the creditor hierarchy, leaving certain creditors worse off than they would be if the troubled bank had been put into liquidation.[10] However, redistribution of value, even where legitimate from a public interest perspective, constitutes a fiscal subsidy and therefore falls within the remit of fiscal policy and outside the mandate of central banks.[11]

6 Eg Tucker (2020) who compares, at a high level, the United States with the European banking union without analysing other jurisdictions; see also CGFS (2017) ("exact definition of … solvency may differ considerably across jurisdictions").

7 Bagehot (1873, chap VII); eg Carlos et al (2015, pp 5–6) summarise more recent perspectives.

8 Eg Amundsen et al (2025).

9 See Judge (2014, p 804).

10 This is even more pronounced where central bank loans have priority over other creditors' loans; see, for example, Bank of Canada (2020), Art 4(a)(ii), (b)(ii), (c)(ii).

11 Lending to an insolvent institution comes close to qualifying as spending or fiscal policy. Eg Arnold (2025); Hauser (2014).

2.2 Applying the solvency requirement during distress

The banking turmoil of early 2023 provides an interesting illustration of how the solvency requirement operates in practice. Banks in Switzerland and the United States experienced significant liquidity distress as markets lost confidence in the sufficiency of their assets, their ability to remain viable amid a changed macro-economic environment and concerns around their investment decisions and risk management. Central banks in both countries stepped in to provide emergency liquidity support, and meeting the solvency requirement was a key precondition for that support.

In the United States, the Board of Governors of the Federal Reserve authorised the introduction of the Bank Term Funding Program (BTFP). At its peak, the BTFP provided over $120 billion in advances to US banks,[12] and research suggests that BTFP was instrumental in helping banks that relied heavily on uninsured deposits and faced significant deposit outflows during the turmoil.[13] While an important feature of BTFP was that collateral could be posted at par value, a key guardrail of BTFP was that lending was only allowed to firms eligible for primary credit under the Federal Reserve's discount window. As only firms that are adequately capitalised – and on that basis can be considered solvent – are eligible for primary credit, that guardrail ensured that the solvency requirement was met.[14] Moreover, BTFP was introduced under section 13(3) of the Federal Reserve Act, which prohibits lending to any "insolvent" firm.[15] The implementing regulations require the Federal Reserve to "obtain evidence that the person or entity is not insolvent" in order for them to receive a loan under this authority.[16] The statute and regulations also require such a programme to have "broad-based eligibility," which is to be "designed to provide liquidity to an identifiable market or sector of the financial system."[17]

Unlike in the United States, liquidity support in Switzerland was not provided to markets in general but to a single troubled firm in particular, namely Credit Suisse before it merged with UBS to pre-empt its failure. This had an impact on how the Swiss National Bank (SNB) approached the solvency requirement. Swiss legislation does not explicitly mandate that firms be solvent to receive central bank liquidity support. Yet it is a scholarly consensus in Swiss law, and therefore has been the longstanding published policy of SNB, that lending is only permitted to solvent firms. Thus, the emergency liquidity assistance (ELA) guidelines of SNB provide that recipients of such assistance be solvent.[18] In the Credit Suisse case, SNB ensured that requirement was met by requesting and obtaining a confirmation by the Swiss Financial Market Supervisory Authority (FINMA) that Credit Suisse was solvent at the time. On that basis, SNB decided to provide liquidity support of CHF 168 billion.[19]

2.3 Types of emergency liquidity provision

Central banks offer a range of lending operations that are best described as a continuum of facilities (Coelho et al (2024)). While most standing facilities are offered under central banks' monetary policy frameworks, some facilities, whether offered on a standing or discretionary basis, are more directed

12 Board of Governors of the Federal Reserve System (2023c).

13 Glancy et al (2024).

14 Board of Governors of the Federal Reserve System (2023a) (citing 12 § CFR 201.4(a)); see 12 CFR § 201.4(a); see also 12 U.S.C. § 347b(b)(1).

15 12 U.S.C. § 343(3)(B)(ii); see also Board of Governors of the Federal Reserve System (2023b, p 42; 2023c).

16 12 CFR § 201.4(d)(5)(ii).

17 12 U.S.C. § 343(3)(A); 12 CFR § 201.4(d)(4)(ii).

18 SNB (2025, Art 6); Swiss Parliament (2024, p 185); see SNB (2003, Art 9(1)).

19 French et al (2025, p 438).

towards financial stability objectives.[20] These include facilities that aim, to varying degrees, at alleviating liquidity distress and broadly fall into three categories: (i) standing facilities that are explicitly designed to allow commercial banks that are experiencing liquidity stress to obtain liquidity on demand; (ii) discretionary emergency liquidity assistance to specific firms under stress; and (iii) extraordinary liquidity provision through lending programmes or facilities established on an ad hoc basis in times of distress.

The sample of facilities considered in this paper seeks to include each type of stress-related facility (Table 1):

– Secondary credit under the US discount window, for example, falls within the first category, in that it is a standing facility, available on demand, that expressly functions as a source of backup liquidity when individual firms may experience stress.[21]

– The second category includes ELA frameworks in the European banking union, Canada, Singapore and the United Kingdom, albeit these frameworks differ amongst themselves in the extent to which they have formalised their ELA guidelines. Compare, for example, the Bank of England's approach to that of the Monetary Authority of Singapore (MAS). In the former case, emergency liquidity assistance is any lending provided outside of the central bank's standing facilities; that said, a 2025 memorandum of understanding between the Bank of England and His Majesty's Treasury makes certain provisions on emergency liquidity assistance.[22] In contrast, MAS has published an ELA framework reflecting its approach to the provision of liquidity assistance at times of distress.[23] This is akin to the approach of central banks in the banking union.

– Last, the third category – extraordinary programmes – is represented in our sample through the Federal Reserve System's power to provide credit outside the discount window to address liquidity issues "[i]n unusual and exigent circumstances" under section 13(3) of the Federal Reserve Act, subject to special governance procedures and a range of conditions.[24] This was the case, as shown above, under the BTFP in response to the US banking turmoil in 2023. The liquidity support of SNB in the Credit Suisse case may also fall into this category.[25]

All these facilities require recipient firms to meet certain solvency criteria. That said, the way in which these facilities define solvency differ across several dimensions, which we explore in the next section.

[20] Eg Coelho et al (2024, p 7) (describing central banks' super-priority in general); Bank of Canada (2020), Art 4(a)(ii), (b)(ii), (c)(ii). See also Arseneau et al (2025).

[21] 12 U.S.C. § 347b(a); Board of Governors of the Federal Reserve System (2025); see Arseneau et al (2025).

[22] Bank of England (2025).

[23] MAS (2019).

[24] 12 U.S.C. § 343(3).

[25] French et al (2025, pp 433, 436); see SNB (2023, p 7).

Lending frameworks addressing liquidity distress

Table 1

Jurisdiction	Framework	Language on solvency and additional comments
European banking union	2024 Agreement on ELA	"A [firm is] solvent … if [CET1, T1, total capital and leverage ratios] … comply with … minimum regulatory own funds levels (namely 4.5%, 6%, 8%, and 3%, respectively, or there is a credible prospect of recapitalisation … in duly justified, exceptional cases"① Primary ELA responsibility with national central banks; 2024 Agreement on ELA has coordinative function
Canada	ELA provisions in BoC Act and BoC Regulation	"To be eligible for ELA Advances, a financial institution must … in the judgment of the Bank, have a credible recovery and resolution framework."②
Japan	Special loans (tokuyu) under Art 38 BoJ Act	Available upon request from government and decision by BoJ. Solvency requirement can be relaxed but subject to (i) high systemic risk likelihood; (ii) no alternative sources of funding; (iii) moral hazard prevention; and (iv) maintaining BoJ's financial soundness.③
Singapore	2019 ELA monograph	"MAS will only provide ELA to a bank that is assessed to be viable."④
Switzerland	2004 Guidelines on monetary policy instruments	"The bank seeking credit must be solvent."⑤
United Kingdom	[no published ELA framework]	"ELA to firms that are at risk but are judged to be solvent"⑥ MoU between BoE, PRA and HMT with provisions on ELA published in 2025
United States	Secondary credit under DW, section 10B FRA	[solvency not defined, implied in capital requirements] Secondary credit is available to meet backup liquidity needs Governed by FRA and Regulation A
	Credit under section 13(3) FRA	"The [Federal Reserve] Board shall … prohibit borrowing from programs and facilities by borrowers that are insolvent."⑦ Governed by Federal Reserve Act; most recently used under Bank Term Funding Program (BTFP)

① ECB (2024). ② Bank of Canada (2020, Art 4(c)(iii)). ③ Bank of Japan (2025). ④ MAS (2019, para 5.2). ⑤ SNB (2025, Art 6). ⑥ Bank of England (2025, sub-clause 10 (ii)). ⑦ 12 U.S.C. § 343(3)(B)(ii).

Source: authors' research.

3. Solvency tests across jurisdictions

3.1 Solvency, capital and viability

Do jurisdictions apply specific metrics or criteria to determine the solvency of a firm, and if so, which ones? Table 2 shows that jurisdictions pursue one of three approaches:

– Some jurisdictions apply a generic concept of solvency, without reference to any particular regulatory metric or exemplary explanation. This approach, while lacking specific guidance, may allow authorities to judge solvency as and when they need to do so, taking into account all particularities of the situation in which liquidity support is needed. It is the approach taken in Switzerland and the United Kingdom.

– In other jurisdictions, lending frameworks focus on regulatory capital as the relevant measure of solvency. This is the approach in the banking union and the United States. Moreover, the European banking union's Agreement on ELA offers an alternative way to determine whether a firm may be considered solvent, by reference to a prospective recapitalisation rather than presently established minimum capital.

– Last, the frameworks in Canada and Singapore take an altogether different approach. These frameworks do not use the term "solvency" at all, nor do they refer to regulatory capital. Rather, they make the borrowing firm's "viability" the central precondition to obtaining emergency liquidity provision. In both frameworks, the viability assessment may be informed by – but does not have to be based on – considerations relating to the capital situation or a firm's ability to restore minimum capital requirements (or other metrics) and can resort to other aspects from a non-exhaustive list of criteria.[26]

Solvency concepts: Generic, capital-based, viability-based — Table 2

Jurisdiction	Framework	Approach to defining "solvency"
European banking union	2024 ELA Agreement	Capital-based
Canada	ELA provisions in BoC Act and BoC Regulation	Viability-based
Japan	Special loans (*tokuyu*) under Art. 38 BoJ Act	[no specific solvency language but subject to four principles of *tokuyu*]
Singapore	2019 ELA Monograph	Viability-based
Switzerland	2004 Guidelines on monetary policy instruments	Generic concept of solvency
United Kingdom	[no published ELA framework]	Generic concept of solvency
United States	Secondary credit under DW, Sec. 10B FRA	Capital-based
	Credit under Sec 13(3) FRA	Capital-based

Source: authors' research.

3.2 Forward-looking assessments

At times of distress, banks' balance sheets, as a pure snapshot reflection of the bank's present financial situation, may be affected by transitory asset depreciations or may not sufficiently reflect the present value of future income streams. Moreover, balance sheets may not sufficiently take into account actions that may have already been taken or are realistically expected to be taken to restore a shaken financial position. When making lending decisions at times of distress, central banks may therefore adopt a prospective approach. Such an approach takes into account forthcoming actions and events that could be relevant when assessing a firm's ability to meet its future financial obligations and continue to operate profitably, and it is referred to as a "forward-looking" assessment of financial soundness. A forward-looking assessment allows focus on a firm's ongoing capacity to generate resources and thereby satisfy creditors, rather than on whether or not its assets are presently sufficient to cover liabilities.

In our sample, most frameworks (except the United States) allow lending to be based on a forward-looking assessment of financial soundness when present solvency may be questionable. In the

[26] Bank of Canada (2020); MAS (2017, 2019); on generic concepts of viability, see also CGFS (2017, p 17) and Arnold et al (2025, p 61).

United States, borrowing under BTFP did not include forward-looking assessments as it was conditional on current adequate capitalisation.[27] Similarly, to access secondary credit under the Federal Reserve's discount window, it must be presently established that a firm has a sufficient level of capitalisation, which does not allow extending credit to firms whose solvency is not reflected in their balance sheets.[28]

While most other jurisdictions allow for a forward-looking solvency assessment, nuances distinguish them. These can be analysed in three directions: First, in terms of the relevant time horizon for the purposes of a forward-looking assessment. The only framework within our sample that defines such a time horizon is that of the European banking union. It mandates that relevant capital levels be restored within six months of the relevant reporting quarter, although the framework does allow for an extension of that term in duly justified, exceptional cases.[29] All other frameworks do not specify any time horizon.

Second, forward-looking assessments may be read to imply different degrees of tolerance in respect of a presently impaired solvency, and by extension different degrees of requisite confidence in that forthcoming actions will remedy it. Compare, for example, the Canadian and Swiss frameworks. The Bank of Canada may only extend credit under its standing facilities to firms for which it has "no concern about their financial soundness". That prerequisite does not apply to ELA advances by the Bank of Canada and is replaced by the requirement that the borrowing firm "has a credible recovery and resolution framework". This suggests that some concerns about financial soundness may exist, provided they will be overcome going forward. The Swiss approach implies that a "bank must be solvent and viable, or a package of measures must be available which ensures that the business will *remain* viable", and this may indicate a lower degree of tolerance for impaired solvency.[30]

Last, frameworks differ in terms of how forward-looking assessments are framed and positioned relative to present assessments. Compare, for example, the frameworks of the banking union and Canada with that of Singapore. The European banking union and Canada require a positive determination that a firm has a "credible prospect of recapitalisation" or "a credible recovery and resolution framework", respectively.[31] Meanwhile, Singapore excludes emergency liquidity assistance to a firm that "has no reasonable prospect of becoming viable in the future"[32]. The positive or negative framing may have an impact on where the burden of proof lies and how arguments need to be deployed, and this may result in differences in terms of requisite levels of assuredness.

3.3 Institutional coordination

Frameworks for emergency lending tend to include provisions requiring central banks to take certain procedural steps as they assess whether solvency-related preconditions are met. Typically, these include coordinating or consulting with supervisory authorities and coordinating with, or obtaining endorsement or approval from, national treasuries. This serves four objectives. First, in critical situations, these authorities are likely to take measures themselves and central bank measures should be aligned with those. Second, to the extent that central banks have to assess a firm's solvency, viability or financial soundness, supervisory data may be needed and a supervisory opinion may be mandatory, warranted or in any case helpful for such assessment. Third, if solvency is uncertain and especially if it is assessed on a forward-looking basis,

[27] 12 U.S.C. § 343(3)(B)(ii) ("prohibit[ing] borrowing … by borrowers that *are* insolvent") (emphasis added); 12 CFR § 201.4(d)(5)(i)-(v).

[28] 12 U.S.C. §§ 347b(b)(1)-(2) which prohibits lending to "advances to any undercapitalized depository institution … [from being] outstanding for more than 60 days in any 120-day period" with very limited exceptions. Note that secondary credit requires a lower level of capital than primary credit, but it is extended on tighter terms.

[29] ECB (2024, Art 4.1(b)).

[30] Schlegel (2023) (emphasis added); Martin (2025) implies the possibility to "restore [an impaired] solvency".

[31] ECB (2024, Art 4.1(b)); Bank of Canada (2020, Art 4(c)(iii)).

[32] MAS (2019).

involving third party stakeholders may help to exercise prudent judgment and put the assessment on a more stable footing. And fourth, to the extent that emergency lending carries special risks (see above), the question arises if treasury indemnities could be available to mitigate them.

We explore coordination requirements in Table 3. Coordination with supervisors is not universally required in our sample (first column). An example for a lending framework that explicitly requires a supervisory opinion is the banking union. The ELA Agreement makes extending liquidity assistance conditional on obtaining the prudential supervisor's assessment of the liquidity position and the solvency of the recipient firm. This reflects the specific institutional set-up of the banking union, in which national central banks remain responsible for ELA, while the European Central Bank (ECB) has a coordinating role.

Coordination with other authorities — Table 3

Jurisdiction	Supervisor	Treasury
European banking union	Supervisory assessment of liquidity and solvency of the recipient firm required	n/a
Canada	[statute does not mandate coordination with supervisor]	[statute does not mandate coordination with treasury]
Japan	BoJ conducts on-site exams and/or credit analyses for borrowers of *tokuyu*	Art. 38 BoJ Act stipulates a request by Prime Minister and treasury prior to BoJ's decision
Singapore	[MAS is prudential supervisor]	[statute does not mandate coordination with treasury]
Switzerland	Solvency attestation from FINMA used to be required; procedural aspects of this policy will be adapted	[statute does not mandate coordination with treasury]
United Kingdom	MoU between BoE, PRA and HMT indicates coordination with supervisor	MoU between BoE, PRA and HMT indicates coordination with treasury, ELA subject to authorisation and direction by HMT and with HMT indemnity
United States	Regulation A requires the Board of Governors of the Federal Reserve System to consult with the relevant federal banking agency when deciding on secondary credit	No requirement for coordination with UST for secondary credit
	No requirement for lending under Sec 13(3) FRA (eg, BTFP)	Section 13(3) (b)(iv) FRA requires the Board of Governors of the Federal Reserve System to obtain prior approval from United States Department of the Treasury for any programme or facility under this section (eg BTFP)

Source: authors' research.

The Swiss framework provides for a different example. The ELA framework of SNB requires a positive solvency assessment, yet SNB does not have supervisory responsibilities for banks. Swiss law does not specify the process under which SNB should establish whether firms applying for ELA are solvent, and hence SNB has broad discretion to define its approach. In the past, SNB has relied on a supervisory opinion from FINMA, confirming a recipient firm's solvency (for example, in the Credit Suisse case).[33] More recently, SNB has announced a modification to its approach. While previously ELA was only available to systemically important banks (subject to solvency and collateral), its forthcoming Extended Liquidity Facility will be available to all banks in Switzerland, provided banks make the requisite preparations and,

[33] SNB (2025); Swiss Parliament (2024, pp 185, 310).

again, subject to solvency and collateral.[34] In that context, however, SNB will no longer require a solvency confirmation by FINMA, if borrowing under the new facility does not exceed a certain predefined level. SNB has clarified that this modification should not be viewed as a deviation from the substantive solvency requirement and is intended to ease the processing of the new facility; SNB can suspend simplified access in cases where there are concerns about solvency.

Formal requirements regarding the interaction of central banks and treasuries in the context of distressed lending exist in Japan, the United Kingdom and the United States (second column). In the US, any programme under Section 13(3) of the Federal Reserve Act, including BTFP, requires prior approval of the Secretary of the Treasury. In Japan, the Prime Minister and the Minister of Finance may request that the Bank of Japan make special loans (*tokuyu*), whose conditions differ from standard lending operations, in order to maintain an orderly financial system; if such loans are granted, they may benefit from treasury indemnities. Similarly, the 2025 Memorandum of Understanding between the Bank of England and His Majesty's Treasury provides that the Bank of England may extend emergency liquidity support to firms that are at risk but judged to be solvent if authorised to do so by His Majesty's Treasury. His Majesty's Treasury may also direct the Bank of England to lend to firms that are judged not to be solvent by the Bank of England. In these scenarios, lending must be necessary to resolve or reduce a serious threat to the stability of the financial system of the United Kingdom and may benefit from treasury indemnities.

3.4 Coordination with resolution frameworks

A firm may experience liquidity distress while fundamentally solvent, or pending the restoration of its solvency in a resolution proceeding. Frameworks for emergency liquidity support therefore tend to overlap with lending components of resolution frameworks, especially if the concept of solvency includes forward-looking elements. That overlap raises questions of coordination, which jurisdictions approach in different ways. We find two models:

– Some jurisdictions allow access to ELA to firms both in and outside resolution. These jurisdictions all apply a forward-looking approach, albeit to differing degrees. They differ, however, in whether or not they *explicitly* allow the provision of ELA to firms in resolution or merely *imply* that such firms may be eligible. Thus, the Canadian ELA framework expressly requires firms to have a "credible … resolution framework" to be eligible to receive ELA.[35] In contrast, the relevant provision of the ELA Agreement in the European banking union refers to a future "credible prospect of recapitalisation" of the recipient firm and does not expressly mention a recapitalisation in resolution.[36] This may be because, in practice, liquidity needs during resolution are expected to be addressed through resolution tools and planning, rather than central bank liquidity provision. Switzerland has a similarly implicit approach.[37]

– Other jurisdictions in our sample have lending frameworks for firms in resolution that are separate from the lending frameworks discussed in this paper and are subject to special terms and conditions. In Japan, tokuyu loans are not available to firms in resolution as funding needs are addressed by the Deposit Insurance Corporation of Japan (DICJ).[38] In Singapore, the ELA framework of MAS expressly excludes lending to firms in resolution, for which separate resolution funding arrangements exist.[39] In the United Kingdom, the Bank of England has a separate

[34] Martin (2025).

[35] Bank of Canada (2020, Art 4(c)(iii)).

[36] ECB (2024, Art 4.1(b)).

[37] See Martin (2025).

[38] See Bank of Japan (2025) which devotes tokuyu loans to “stability of the financial system” instead.

[39] MAS (2019, para 7.2).

resolution liquidity framework.[40] In the United States, lending under BTFP was not, and lending under any other programme on the basis of Section 13(3) of the Federal Reserve Act is not, allowed to firms in resolution or bankruptcy, including firms that are under Chapter 11-proceedings (Dodd Frank Act Title I) or proceedings under Dodd Frank Act Title II.[41] However, these jurisdictions differ amongst themselves as to whether lending to distressed firms outside of resolution may require treasury approval.

To the extent that the jurisdictions we studied have insolvency or liquidation frameworks (as opposed to resolution frameworks) to manage bank failure, they disallow central banks to lend to firms that are subject to such proceedings.

4. Conclusions

Emergency liquidity support is provided in times of distress and hence carries greater risks than those that central banks incur under business as usual operations. Perhaps more importantly, lending to firms that are potentially unviable carries a risk of the central bank overstepping its mandate by subsidising a firm. To mitigate these risks, central banks make the solvency of recipient firms a key requirement.

The solvency requirement can take different forms. While in some jurisdictions, the concept of solvency is based on a firm's capital, others focus on a broader concept of viability (sometimes termed "economic solvency"), as a firm's viability is a key indicator of its ability to generate sufficient resources to meet all its financial obligations. Approaches may also differ in the extent to which they permit solvency to be established not only as a snapshot of a firm's balance sheet, but also on a forward-looking basis, by taking into account actions or events that may restore a balance sheet that is currently uncertain or potentially impaired.

If solvency is conceived on a forward-looking basis, an overlap exists between that concept as a precondition for emergency liquidity support and the viability concepts upon which the "failing or likely to fail"-triggers for resolution frameworks are based.[42] In consequence, a central bank's assessment that a firm is solvent or viable for the purposes of emergency liquidity support should be consistent with the assessment of supervisors or resolution authorities that the firm is not failing or likely to fail for the purposes of resolution. This calls for close coordination across central banks (in their capacity as lenders of last resort), supervisors and resolution authorities. That said, a straight forward definition of solvency that could be applied for both liquidity support and resolution purposes is unlikely to be workable in practice. Rather, a forward-looking assessment is an exercise of judgment, and maintaining a certain amount of ambiguity is probably preferable to a mechanical approach and tends to increase authorities' flexibility and optionality in distressed situations.

[40] Bank of England (2023).

[41] 12 U.S.C. § 343(3)(B)(ii); note, however, that a bridge bank used by the FDIC to resolve a failed depository institution may, under certain conditions, have access to central bank funding.

[42] See Bailey (2025), who comments on how resolution tools complement "traditional Bagehot tools" (including the solvency requirement).

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