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ARTICLE

Reconsidering Central Bank Lending of Last Resort

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Abstract Central banks serve many key roles in financial markets and economies. One of their most important tasks consists of lending of last resort. When standard sources of funding dry up, banks and increasingly other financial institutions expect central banks to replace conventional lenders. Changed realities in financial markets, however, challenge central banks to reconsider the terms traditionally applied to their emergency lending facilities. The Bagehot dictum, providing the elementary criteria for last resort lending, must be reassessed in light of today's large, interconnected financial markets in which banks pose enormous threats to financial stability and transposition of monetary policy has become more complicated for central banks. This article analyses these issues from the perspective of lending of last resort by the US Federal Reserve System ('Fed'), the central banks of the Eurozone ('Eurosystem') and the Bank of England. It argues in favour of robust and reliable lending criteria and consequently the elimination of the principle of constructive ambiguity and a flexible application of all other traditional lending requirements. Central banks do not operate in a legal vacuum, but the legal provisions on which such lending relies have been given little attention. The article breaks with this tradition, focusing on the Eurosystem whose legal framework leaves important issues unaddressed. It calls for an explicit mandate of financial stability for the Eurosystem that prescribes the circumstances under which financial stability takes priority over the price stability objective.

Keywords Lending of last resort · Monetary policy · Money supply · Objectives and tasks of central banks · Financial stability · Price stability

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1 Introduction

Central banks play an essential role in the provision of liquidity to banks and other financial intermediaries. During the peak of the global financial crisis (GFC), in the period 2007–2010, the US and Europe experienced unprecedented levels of liquidity shortages in the entire financial sector. Other regions similarly saw their financial markets affected by the GFC, resulting in widespread liquidity crunches globally. Central banks distributed around USD 4 trillion globally to replace dried-up interbank lending markets and other sources of financing for banks.[1] Liquidity was provided to institutions, predominantly banks,[2] but also aimed at markets to make up for the suspension of lending by banks, investments by other financial institutions, and the resulting negative consequences for the wider economy.

Central banks widened the scope of application of their existing lending activities or created credit facilities for the first time to provide short-term lending to banks. They also engaged in large-scale asset purchases from banks and non-bank financial institutions to flood dried-up financial markets with liquidity and, in the Eurozone additionally to provide a market for sovereign debt instruments shunned by investors. Unconventional monetary policy became the new standard for several years in the US and is still the new normal in the Eurozone.

Such monetary policy operations must be distinguished from the concept of lending of last resort, understood as liquidity assistance provided to individual institutions based on their exceptional situation. Strict conditions apply to such lending of last resort in order to avoid that central banks bail out banks, thereby triggering sector-wide moral hazards and exposing themselves to the risk of loss.

This article pursues two objectives. First, it focuses on the questions to what extent the Bagehot criteria, the conditions traditionally applied to lending of last resort, still form the ultimate standard for such lending in today's financial markets or whether changed realities require adjustments. It discusses which lending criteria should apply when liquidity dries up in financial markets, and compares this scenario to situations in which individual institutions require central bank assistance. The article thereby considers research suggesting that Bagehot's work and the Bank of England's lending operations at times have been misinterpreted,[3] and looks at lending of last resort in the context of expansionary monetary policy that has led to an abundance of liquidity in financial markets (all in Sect. 2.3). For a better understanding of the issue, the article briefly examines liquidity management of banks and the conventional ways in which central banks influence the supply of liquidity in financial markets (Sect. 2.1). Section 2.2 contrasts lending of last resort with liquidity supply by means of monetary policy operations.

Second, the article draws attention to the scarcely discussed question of legal limitations that apply to lending transactions of central banks. The concepts of three (systems of) central banks are analysed for comparative purposes. After looking at the lending practices of the Fed, the Eurosystem and the Bank of England during and in the aftermath of the GFC, the article examines the legal frameworks for

[1] Domanski et al. (2014), p 2.

[2] See Sect. 3.1.1 below for exceptions in the US.

[3] See the numerous references to Anson et al. (2017) and to Goodhart (1999) throughout this article.

lending practices in general and lending of last resort in particular. The assessment shows that the three (systems of) central banks rely on different regimes. The Fed operates under detailed rules provided in the Federal Reserve Act (Sect. 3.1). The Bank of England relies on traditional principles applied to open market transactions, but profits from a recently widened mandate that includes the objective of financial stability (Sect. 3.3). Both systems were reformed after the GFC and restrict the central banks in their use of exceptional rescue measures for individual institutions (as emphasized at Sect. 3.4.1). Uncertainties are apparent in the legal regime governing lending by the Eurosystem (Sect. 3.2). The Eurosystem's lending principles have not been reformed, and this article argues that such reforms are indicated. The findings for the Fed and Bank of England support the proposals for improvement of the Eurosystem's legal framework (Sect. 3.4.2).

2 Lending of Last Resort: The Concept and Its Requirements

2.1 Liquidity Management of Banks

Banks have access to deposits of 'ultimate creditors', the source of funding that traditionally defines a bank. Ultimate creditors are commonly defined as resident households, non-financial corporations, state and local governments and (arguably) certain non-bank financial intermediaries such as insurance corporations, pension funds and even investment funds.[4] For this reason, banks are commonly referred to as 'deposit-taking institutions' or 'depository institutions' in the US.[5] EU legislation uses the term 'credit institution' and thereby identifies a similarly typical but less exclusive activity of banks, the extension of loans to customers.[6]

In addition, financial markets, especially the interbank lending market, are standard funding sources for banks.[7] Banks issue money market instruments and enter into repurchase agreements with other banks and non-bank financial intermediaries. To keep costs low and to be able to react swiftly to unexpected changes in market

[4] For a discussion about the exact definition of ultimate creditors, see International Monetary Fund (IMF), 'Shadow Banking around the Globe: how large, and how risky? Global Financial Stability Report: Risk Taking, Liquidity, and Shadow Banking—Curbing Excess while Promoting Growth' (International Monetary Fund, October 2014), pp 68, 92, available at http://www.imf.org/external/pubs/ft/gfsr/2014/02/pdf/text.pdf (last accessed 14 August 2017) (Global Financial Stability Report).

[5] See the definition in Federal Reserve Act of 1913, s. 19(a) (codified as amended at 12 USC ch. 3 (2012)) (Federal Reserve Act).

[6] Defined in Art. 4 no. 1(1) of Council Regulation 2013/575, of the European Parliament and of the Council of 21 June 2013 on the Prudential Requirements for Credit Institutions and Investment Firms [2013] OJ L176/1, as an institution 'undertaking the business of which is to take deposits or other repayable funds from the public and to grant credits for its own account'. On the ever more complicated (in light of financial intermediaries mimicking parts of the banking model) definition of bank deposits, see Armour et al. (2016), pp 281–284.

[7] Central banks set the terms of their schemes by which they provide liquidity in a way that provides incentives for banks to manage their liquidity needs primarily by drawing on private markets. Compare Bank of England, 'The Bank of England's Sterling Monetary Framework' of June 2015 (the 'Red Book'), paras. 13–15, http://www.bankofengland.co.uk/markets/Documents/money/publications/redbook.pdf (last accessed 14 August 2017). On interbank lending, see Dalhuisen (2016), para. 1.1.5; Judge (2016), p 853.

conditions, they prefer short-term over long-term borrowing.[8] However, regulatory requirements set limits to such strategies, especially the Basel III net stable funding ratio that seeks to ensure that banks can rely on more stable funding sources, thereby reducing the risk of liquidity shocks in times of crisis.[9]

Under normal market conditions, central banks do little to interfere with the liquidity management of banks and leave it mostly to the banks and financial markets to allocate the circulating liquidity appropriately. However, this hands-off approach changes when central banks see the need to intervene. Central banks then engage in open market transactions that increase or decrease the amounts of liquidity available to banks. When central banks buy assets from banks (generally, pre-determined types of marketable debt instruments), the purchase price is credited to the accounts of banks with central banks (an expansionary monetary policy tool), while asset sales to banks lead to debits (a contractionary monetary policy tool). Provided they are not constrained by reserve requirements, banks are free to withdraw and use their account surplus.

During times of expansionary monetary policy, central banks encourage banks to make maximum use of liquidity instead of storing it in central bank accounts.[10] Credit in central bank deposit accounts is as liquid as cash and categorized as the 'most liquid asset' possible[11] and accordingly meets the requirements of Level 1 High Quality Liquid Assets (HQLA) under the Liquidity Coverage Ratio (LCR). This Basel III regulatory approach addresses risks stemming from the phenomena of fractional reserves and maturity mismatches, both resulting from the typical business model of banks.[12]

The situation changes when central banks limit the availability of these deposits by way of setting reserve requirements. Reserve requirements lock in a defined percentage of banks' liabilities in central bank accounts for monetary policy purposes. Reserve requirements are one of the monetary policy tools used by central banks when they see the need to reduce the liquidity available to banks for lending and other financial activities. This is because high volumes are viewed as threats to internal price stability.[13] Alternatively, they provide incentives for banks to store

[8] Gabilondo (2015), pp 24–26.

[9] See the Bank for International Settlements, 'Basel Committee on Banking Supervision [BCBS] Consultative Document Basel III: The Net Stable Funding Ratio' (October 2014), available at http://www.bis.org/publ/bcbs271.pdf (last accessed 21 November 2017); Davies (2013), p 293.

[10] This is, for instance, reflected in the current operations executed by the Bank of England. See Red Book, n. 7 above, paras. 69–88 (for a list of the Bank of England's liquidity insurance facilities) and paras. 4, 18, 19 and 60 (explaining that reserves can be used freely and that the Bank provides enough liquidity to meet the demands of banks by abstaining from enforcing any minimum reserve requirements and by operating standing facilities).

[11] Red Book, n. 7 above, para. 12.

[12] Bank for International Settlements, 'Basel Committee on Banking Supervision: Basel III: A Global Regulatory Framework for more Resilient Banks and Banking Systems' (December 2010, rev. June 2011), available at http://www.bis.org/publ/bcbs189.pdf (last accessed 29 March 2017) ('BCBS Global Framework'). In detail on the Basel liquidity requirements see Hartlage (2012), p 453. On the typical maturity mismatch in banking business and reserve requirements, see Gabilondo (2015), pp 24–26.

[13] See the definition of reserves in s. 19(b) of the Federal Reserve Act (codified at 12 USC s. 461(b)) that emphasizes the existence of such requirements 'solely for the purpose of implementing monetary policy'. For the European Central Banks, see Art. 19 of the Statute of the ESCB and ECB [2012] OJ C326/230 (ESCB/ECB Statute). On the principle, see Gabilondo (2015), p 39; Friedman (1999), p 325.

money in reserve accounts by raising interest rates. Such interest paid by central banks provides the floor for interbank lending since no bank would lend for less than the reserve account rate. When the cost of borrowing increases for banks, loans become more expensive in general and volumes of lending drop.

At the opposite end of the spectrum, central banks have a further tool available for expansionary monetary policy. They credit banks' accounts with money lent and counter-book the loan under liabilities in their own balance sheet,[14] thereby creating money and inflating their balance sheet. In times of normal market conditions, central banks limit the overall amounts of loans, e.g. by way of auction-based attributions to banks with the highest bids.[15]

All these measures are undertaken for monetary policy purposes alone. The authority of central banks to engage in such transactions and the limits thereof are determined by the tasks assigned to the central banks and the objectives in light of which they are required to execute these tasks (as discussed in detail in Sect. 3).[16]

2.2 Distinguishing Monetary Policy and Lending of Last Resort

Lending of last resort has been defined as a central bank's tool for preserving the liquidity in the financial system,[17] the reason being that central banks provide liquidity to financial institutions when they engage in lending of last resort, whether exclusively or predominantly to banks. However, this definition is ambiguous because, as explained above, providing liquidity to banks is the quintessential task of central banks. All their activities in pursuit of monetary policy objectives lead central banks to provide liquidity, and since they use banks as their intermediaries, liquidity is generally first provided to banks before it reaches the wider economy.

It is therefore evident that the element of lending does not define lending of last resort, but rather the banks' need to turn to the central bank as a last resort. But what does 'last resort' mean? How far down the track of financial difficulty, whether for an individual bank or the wider financial system, must one go for lending to be 'last resort'?

The traditional and narrow understanding of lending of last resort refers to measures that are intended to improve the liquidity situation of individual deposit-taking institutions.[18] In some jurisdictions, the terminology 'Emergency Liquidity Assistance' (ELA) is used for such lending to individual institutions, e.g. in the UK for lending by the Bank of England and in the Eurozone by the national central

[14] On the credited amounts in the banks' accounts with central banks, see Hellwig (2014), p 10; Gabilondo (2015), p 28. The process is very similar to the creation of money by banks as explained by McLeay et al. (2014), pp 1–14; Bluhm et al. (2016), p 18.

[15] For the ordinary tender procedure of the Eurosystem, see European Central Bank (ECB), 'The Implementation of Monetary Policy in the Eurozone' (February 2011), pp 31–41, available at https://www.ecb.europa.eu/ecb/legal/pdf/gendoc201102en.pdf (last accessed 14 August 2017).

[16] For details, see Gianviti (2010) (as discussed in Sects. 3.2.2.1 and 3.2.2.2).

[17] Humphrey (1975), p 2. The term was coined by Sir Francis Baring in 1797, see Tumpel-Gugerell (2013), pp 513–514.

[18] On the aspects that make banks special in the financial world see Gabilondo (2015), pp 24 and 26; Davies (2013), pp 293–294.

banks that form part of the Eurosystem (as discussed in detail in Sects. 3.2 and 3.3).[19]

The 'Bagehot Dictum'[20] is named after Walter Bagehot who popularized the concept in his 1873 essay 'Lombard Street: A Description of the Money Market', drawing on Henry Thornton's 1802 classic 'The Paper Credit of Great Britain'.[21] The dictum is commonly applied to last resort lending and understood as restricting its scope to solvent banks, which receive financing from central banks in exchange for adequate collateral and for above-market ('punitive') interest rates.[22] Whether this interpretation is accurate and to what extent these criteria are still relevant is discussed below (Sect. 2.3).

The distinction between standard or conventional monetary policy measures of central banks, on the one hand, and lending of last resort, on the other, is intuitive. Standard monetary policy operations influence the overall amount of liquidity available in markets (the money supply), but are not meant to replace market financing as the dominant source of liquidity for banks. When central banks transact with banks in such ordinary times, they are not motivated by concerns over the stability of banks or the banking sector, but by the objective of implementing their monetary policies.

In times of crisis however, the situation changes. Because of their reliance on short-term borrowing, banks depend on depositors' trust as well as functioning interbank and wholesale lending markets. When these sources of funding dry up, banks experience difficulties in refinancing outflows of liquidity, and risks stemming from maturity transformation materialize. Assets must be liquidated, and when banks hold large amounts of assets with low liquidity, fire-sales of such assets lead to massive losses. Depending on the bank's capital cushion, it can survive in spite of such losses for a while. However, if large amounts of assets must be sold below book value, liquidity shortages will ultimately result in a solvency crisis.

A liquidity and looming solvency crisis can affect an individual bank, a group of banks, or the entire financial sector.[23] When an institution experiences solvency issues, markets may be alarmed and contagion becomes an imminent danger. However, while critical in terms of sector-wide stability, the failure of a single

[19] It should be added, however, that some authors refer to both types of lending as ELA. See e.g. Domanski et al. (2014), throughout the entire paper; Lastra (2015), para. 4.09, defines ELA as market liquidity assistance via open market operations. Campbell and Lastra (2008–2009), pp 453–454 use these terms in the opposite way as we do here: ELA is supposed to 'encompass a broader array of operations'.

[20] The principles established by the W. Bagehot dictum are not legal rules but rather doctrinal principles: Lastra (2015), para. 4.09.

[21] For a detailed analysis of this work's impact on lending of last resort, see Goodhart (1999), pp 340–342.

[22] Bagehot (1873), pp 57–59. On W. Bagehot's and H. Thornton's contributions, see Humphrey (1975), p 3. For the Bagehot criteria, see Campbell and Lastra (2008–2009), p 465; Acharya and Backus (2009), pp 305–307.

[23] Liquidity shortages occur when the efficient distribution of liquidity breaks down. Reasons are macroeconomic shocks that result in a vast demand for liquidity by all intermediaries and the unwillingness or lack of ability of financial intermediaries to efficiently redistribute existing liquidity. See Giavazzi and Giovannini (2011), pp 4 and 13.

institution in a diversified banking sector is a minor issue compared with the sector-wide crisis experienced during the GFC. Within days of the collapse of the Lehman Brothers financial services group, inter-lending markets dried up entirely.[24] Liquidity became unavailable to banks, because of a massive loss of trust from investors such as financial institutions and even depositors. Unsurprisingly, these liquidity access difficulties for banks swiftly caused or aggravated solvency issues.

In times of crisis, central banks can no longer achieve their monetary policy objectives by way of ordinary means drawn from their usual policy toolkits. They must fight at least two issues simultaneously. First, malfunctioning markets that no longer provide banks with liquidity and thereby bring bank operations (above all, lending) to a halt. Second, recessions across or within their economies, which are not primarily caused, but aggravated, by reduced lending by banks.

Central banks react to such challenges in multiple ways, but all such applied tools of unconventional measures lead to a massive expansion of liquidity supply to financial markets and economies. They increase the volume of their open market operations, by purchasing assets in much higher volumes and being prepared to hold them longer than they ordinarily would. Additionally, direct lending activities to banks are introduced or increased, including lending facilities with much longer maturities than those applied in normal market conditions, leading to lending commitments of months and years. All these measures provide liquidity to banks and, as observed during the GFC, temporarily replace their conventional funding sources.[25]

The effects of unconventional monetary policy measures explain why some authors categorise them under the term lending of last resort.[26] But such a wide understanding of lending of last resort is misleading because it dilutes the distinction of different objectives pursued by central banks when engaging in different types of lending transactions. Lending of last resort should therefore still be defined in the traditional sense, i.e. as central bank lending supplied for the sole purpose of preventing the collapse of an individual bank, not as macro-sector funding for a wider range of objectives.[27]

2.3 The Bagehot Criteria in Modern Financial Markets

The experience during the GFC years raises the core question of the future concept of lending of last resort, especially whether and to what extent the traditional Bagehot approach remains appropriate. One lesson clearly learnt from the GFC is that banks which run out of funding options ought not be turned away and allowed to collapse. In such situations, powerful lending of last resort mechanisms are needed more than ever. However, present-day financial systems have little in common with the

[24] On the Lehman collapse, see Ferrarini and Chiarella (2013), p 9; Westbrook (2014), p 345; Davies (2015), p 261.

[25] For a discussion on the unconventional monetary policy operations for the Eurosystem since 2007, see Hofmann (2013), pp 534–539.

[26] For a wide understanding, see Domanski et al. (2014), p 3. See also Carlson et al. (2015), p 9.

[27] For a similar distinction, see Campbell and Lastra (2008–2009), p 457.

financial landscape of England in the 19th century when the Bagehot paradigm developed.[28] Consequently, there is a question of how last resort lending should be designed to continue to serve its purpose as a stabilizing mechanism in banking and financial markets when conventional sources of liquidity dry up.

2.3.1 Bagehot and Individual Banks

As will be argued in the following discussion, the Bagehot criteria still provide a good approach when individual banks need lending of last resort but nowadays need to be applied even more generously than suggested by Bagehot himself.

2.3.1.1 Solvency of Banks and Adequate Collateralization Excluding insolvent banks from last resort lending serves multiple purposes that are as important today as they were in the past. It reduces moral hazard since central bank bail-outs of insolvent banks would promote risky behaviour within the banking sector.[29] In addition, the solvency requirement protects central banks (and therefore ultimately taxpayers)[30] as well as other creditors from losses that would likely occur if lending were extended to insolvent banks. For these very reasons, modern bank resolution regimes try to limit instances of government bail-outs, an objective which would be undermined by last resort lending to insolvent banks.[31]

In theory, these arguments support a strict solvency requirement. In practice however, the issue arises that illiquidity and insolvency are closely interrelated. Because of the principle of fractional reserves on which banks rely, a serious liquidity crisis easily escalates into a solvency crisis.[32] Banks typically experience liquidity crises in situations where creditors are worried about their solvency. In theory, the central bank should assess whether such rumours are the result of actual solvency concerns, but lending of last resort is an *ad hoc* emergency measure, which requires immediate action and cannot be delayed until complicated data has been gathered and analysed. Whether the central bank is the prudential supervisor or relies on its collaboration with a separate state agency, illiquidity and insolvency are indistinguishable in many situations where banks require immediate liquidity assistance.[33]

[28] Humphrey (1975), p 2.

[29] Lastra (2015), para. 4.16. For a wider understanding of moral hazard stemming from lending of last resort (such lending may lead per se to reliance and lack of adequate provision against liquidity shortages by the recipients), see Domanski et al. (2014), p 4. As Hellwig (2014), p 7, points out, lending of last resort always and unavoidably causes some moral hazard, but requirements must seek to reduce its degree.

[30] Lastra (2015), paras. 4.17–4.19.

[31] An example is the EU Bank Recovery and Resolution Directive 2014/59 ('BRRD') of 15 May 2014, [2014] OJ L173/190 that limits instances of public aid for financial institutions. For details, see Schillig (2016).

[32] Davies (2013), p 311; Lastra (2010), p 63.

[33] Goodhart (1999), pp 343 and 346; Lastra (2010), p 63; Judge (2016), pp 903–907; Domanski et al. (2014), p 4; Davies (2013), p 311; Freixas et al. (2003), p 5; Hauser (2014), p 88; Anson et al. (2017), pp 53–54.

Closely related to the issue of solvency is the further requirement of adequate collateralization. Lending in exchange for adequate collateral is motivated by the same policy reasons as the solvency requirement. Both seek to shield central banks from bearing the risk of losses when banks default on their repayment obligations. However, it is not obvious why central banks still need such protection from losses in times of fiat money. Central banks do not collect the money they lend from markets or governments; they create it and, consequently, are under no obligation to repay it to anyone.

However, even central banks operate on the basis of balance sheets that resemble those of entities established under private law. They are capitalized with public (i.e. taxpayers') money, and the money they create (mostly as credit in banks' reserve accounts) is reflected as debt on the liabilities side of the balance sheet.

When assets need to be written down or off (as would be the case if borrowing banks defaulted and had not provided adequate collateral) the central bank's capital shrinks, resulting in less profits and ultimately undercapitalization. Undercapitalization does not render the central bank dysfunctional. It is not subject to the principles of insolvency like entities governed by private law.[34] Instead, it can continue to create money and thereby still pursue its monetary policy goals. However, a central bank's creative abilities are limited to the domestic currency, and problems arise when losses start to undermine confidence in its currency management.[35] If erosion of trust occurs, a central bank may no longer be able to execute the tasks vested in it in the public interest. It would entirely depend on its government's willingness and, more importantly in light of events during the Eurozone sovereign debt crisis, ability to recapitalize it. This dependency may undermine its independence, an important principle of central banking in many jurisdictions including the ones discussed here.[36] However, the reputational damage to the currency depends not only on the central bank's financial situation, but also on the country's financial strength and political stability.[37] Temporary balance sheet insolvencies of central banks in countries with strong economies, steady and high fiscal income and a stable political system cause little harm, yet as a general rule, balance sheet insolvency and capital-reducing losses should be avoided even in times of fiat money.

As explained by Goodhart, adequate collateralization is the essential requirement on which Bagehot's dictum relies. During Bagehot's time, the Bank of England lent against bills of exchange, thereby relying on the initial drawer's creditworthiness.[38] Whereas the choice of assets has changed, the lending of central banks still relies on adequate collateralization for the above reasons. At the same time, it follows that if

[34] As Goodhart (1999), p 343 explains, losses for central banks are no longer as dramatic as they were in times when central banks were entities of private law.

[35] European Central Bank (ECB), 'The Financial Risk Management of the Eurosystem's Monetary Policy Operations' (July 2015), p 5; Gabilondo (2015), p 40; Hellwig (2014), p 10. As Hellwig also points out, central banks that borrow foreign currency from other central banks, e.g. the Eurosystem from the Fed, run a genuine risk of default.

[36] See ECB, n. 35 above, p 5.

[37] Goodhart (1999), pp 347–348.

[38] Goodhart (1999), p 343; Anson et al. (2017), pp 8–11.

the central bank is adequately secured against the default of a bank, then the bank's solvency is of little importance to preventing losses for central banks.[39]

Here, another concern requires attention. If central banks lend to insolvent banks in exchange for adequate collateral, they reduce the asset pool for other creditors and disadvantage them when banks default on their obligations.[40] Consequently, there is (still) merit in the solvency requirement. Modern resolution regimes for financial institutions like the EU-BRRD and Eurozone-Single Resolution Mechanism (SRM) have added emphasis to this important point. The decision of what to do with a failing bank is vested in resolution authorities, not in monetary authorities.[41]

The above considerations lead to the following conclusions on the solvency requirement. Central banks should only lend to solvent banks and in exchange for adequate collateral, but in most situations of urgent liquidity shortages there is no time to assess a bank's solvency in detail. A bank which is clearly solvent and able to provide adequate collateral would not find it difficult to borrow from markets.[42] Consequently, only evidently insolvent banks should be excluded from last resort lending[43] and instead be subject to restructuring and resolution measures by the competent resolution authorities.

Apart from such clear-cut cases, central banks should provide lending to banks for adequate collateral if the central bank presumes that the bank's failure would lead to contagion and financial stability concerns. In a situation of imminent threat to the financial sector, it is more important to prevent a disastrous chain reaction than to clearly distinguish between liquidity and solvency issues. The potential disadvantages for creditors and moral hazard concerns that are related to lending to a potentially insolvent institution are outweighed by the benefits for financial stability.[44]

However, central banks may have to go even further in the interest of financial stability because the assessment of whether offered collateral is adequate may be as complicated as the solvency assessment. The assets held by the bank may have become untradeable as a result of difficult market conditions. In such scenarios, central banks can only embrace their roles of lenders of last resort if they replace markets, not complement them. They must accept assets that are shunned by the markets because of difficulties with assessing their value.

Here again, central banks should not accept evidently worthless assets. If the underlying credit risks are clearly high, then central banks must reject them. However, if current write-downs on such assets are rooted in uncertainty about their future performance, then central banks are better prepared than banks to have these

[39] Goodhart (1999), p 343. See also Tumpel-Gugerell (2013), p 514.

[40] For such concerns see Gabilondo (2015), p 29.

[41] See Hauser (2014), pp 84–85, who emphasizes that only the combination of a lender of last resort with microprudential liquid asset requirements and a bank resolution regime can provide a satisfactory solution.

[42] Schoenmaker (2000), p 219. Some authors argue, however, that for this reason central banks should never lend to individual banks but only replace markets if the entire banking sector is affected, see the summary by Tumpel-Gugerell (2013), p 515.

[43] Goodhart (1999), p 346; Davies (2013), p 311.

[44] Goodhart (1999), p 353.

risks in their books because the above-explained mechanisms (irrelevance of temporary balance sheet insolvency) buy central banks time to hold the assets until market insecurities vanish and their prices recover. Haircuts apply to face or book entry value, but their amounts are based on *ad hoc* assessments that may prove as faulty as the other judgements the central banks are forced to make in this situation of imminent danger to the recipient of lending.

The aspect of duration of lending effectively limits the exposure of central banks. The length of emergency lending must be guided by the principle that central banks are supposed to replace conventional funding sources for banks on a temporary basis until institutions can return to market financing. In practice, such returns to markets should be possible after a few days or, at the longest, a few weeks. Market financing will remain unavailable for longer periods of time, either during a major financial crisis which affects the entire sector, or if market trust in an individual bank cannot be re-established by liquidity injections alone. In the latter scenario, central banks should only continue their rescue efforts in coordination with the competent resolution authorities.[45]

The time window of 30 days introduced under Basel III for stress tests provides guidance in this respect. These stress tests assume that banks are sufficiently prepared for a liquidity crisis if their HQLA spare them from fire-selling their assets for a period of 30 days of extreme stress. The assumption is that only institutions capable of resolving their issues within this time window are able to return to normality while others should be resolved.[46]

2.3.1.2 Punitive Interest Rates The aspect of interest rates also requires further attention. It has been argued that lending should come at a punitive, i.e. above-market rate to deter banks from being overly reliant on central bank lending. However, the combination of the three criteria of solvency, adequate collateral and punitive interest rates makes little sense as solvent banks with adequate collateral have access to market financing under normal market conditions. If such banks cannot find market financing, the reasons must lie in dysfunctional market mechanism, not in the bank's behaviour or situation. Above-market interest rates are therefore of no use in such scenarios.[47]

The above-discussed scenarios of markets shying away from lending to banks because their solvency is in doubt are more common. It has been argued here that central banks should intervene in such situations, and in these scenarios, there may be merit to punitive rates to counter moral hazard concerns,[48] but punitive rates must also be applied moderately because excessively high financing costs would

[45] However, see Lastra (2010), p 63, who suggests that central banks seek approval from or refer the matter to fiscal authorities when lending stretches over an extended period of time.

[46] The Basel principles, currently at the stage of Basel III, seek to establish a worldwide standard for risk-weighted equity requirements and crisis-resistant liquidity reserves for banks, see BCBS, n. 9 above. On stress tests and resulting liquidity requirements, see Bank for International Settlements, 'Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools' (January 2013), para. 16.

[47] See Goodhart (1999), p 341 who convincingly shows that Bagehot never supported above-market interest rates for solvent banks.

[48] On these aspects, see Avgouleas and Goodhart (2016), pp 270–271.

aggravate banks' financial difficulties and worsen the prospects of an early return to normality. An example for a cautious approach to interest set at rates which are slightly above market-financing costs are the below-described interest rates for secondary lending by the Fed (see Sect. 3.1.1).

2.3.1.3 Constructive Ambiguity An element of discretion exercised in lending of last resort is useful insofar as it prevents central banks from being subject to binding commitments in situations in which last resort lending would seem counter-productive. Central banks should be able to decide on a case-by-case basis whether to grant support. They must avoid irrational reliance on their lending capacities in light of risks of moral hazard by banks and, more importantly, of creditors seeing less need for proper monitoring of banks. Reserving lending of last resort to instances in which contagion threats are high and financial stability is at stake is a common way of exercising discretion in a way that reduces the potential of moral hazard,[49] even if it hardly helps against the most problematic institutions, the systemically important banks because their failure always leads to such hazards.

However, to term this element of discretion 'constructive ambiguity' is problematic because Bagehot argued against practices that would create ambiguity. He was a proponent of free lending because turning away banks with adequate collateral sends a signal to the markets, which is the exact opposite of what last resort lending seeks to achieve. It indicates that lending to these banks is unwise, making it impossible for them to receive funding at a normal market rate.[50]

The most important justification for lending of last resort is the reassuring effect it has on banks and their creditors.[51] It should eliminate the risk that liquidity shortages lead to the collapse of banks. The operating model of relying on fractional reserves has traditionally been accepted in banking, and while new requirements for sufficient amounts of highly liquid assets under the Basel III Liquidity Coverage Ratio (LCR) seek to reduce the exposure of banks,[52] extraordinary situations may still result in severe liquidity shortages. A solvent bank which experiences such difficulties despite complying with regulatory requirements should have access to lending of last resort if it meets all its preconditions.

These considerations lead to the result that 'constructive ambiguity' would better be termed 'constructive discretion'. Central banks should be advised to clearly

[49] See Lastra (2015), para. 4.10. Lending provisions in central bank acts commonly emphasize this aspect, see s. 10B(b)(4) of the Federal Reserve Act, 12 USC s. 347b(b)(4) (2012), which reads: 'A Federal Reserve bank shall have no obligation to make, increase, renew, or extend any advance or discount under this Act to any depository institution'. For the Eurosystem, see the ECB, 'ELA Procedures' (the procedures underlying the Governing Council's role pursuant to Art. 14.4 of the ESCB/ECB Statute with regard to the provision of ELA to individual credit institutions), at https://www.ecb.europa.eu/pub/pdf/other/201402_elaprocedures.en.pdf (last accessed 14 August 2017). For the Bank of England, see the discussion at Sect. 3.3.

[50] Similar Goodhart (1999), pp 341–342.

[51] See, generally, Domanski et al. (2014).

[52] For details on the Basel III liquidity coverage ratio (LCR) requirements focusing on sufficient reserves of unencumbered high-quality liquid assets (HQLA), see Bank for International Settlements, n. 46 above.

communicate their requirements for lending of last resort,[53] above all the requirements of solvency and adequate collateralization. Lack of clarity about the lending conditions may cause overreliance on central bank support.[54] Central banks may formulate further requirements, but these should not jeopardize the soothing effect that the availability of last resort lending is intended to have on markets. Central banks commonly publicize that lending of last resort is only provided in instances of systemic importance, but this requirement should not overburden the central bank with the need for *ad hoc* assessments in situations where time is of the essence. As even smaller banks may prove systemically important if their defaults trigger disproportionate reactions, central banks are advised to lend generously whenever systemic risk is not clearly out of the question.

2.3.2 Bagehot and the Banking Sector

The situation is fundamentally different if the entire banking sector experiences liquidity issues. Unconventional monetary policy mechanisms must be activated to provide sufficient liquidity to all banks in times when markets no longer serve their conventional roles. Whereas such measures are not lending of last resort, their effects on banks' and markets' liquidity raises the issue of whether central banks should adhere to the Bagehot principles.

The case for punitive interest rates in the individual bank scenario breaks down in these circumstances. Instead, rates determined by tender procedures, as were offered by the Fed during the peak of the GFC in the US, seem promising as they imitate market conditions and thereby prevent stigmatization.

Solvency and adequate collateral are of the highest importance when central banks engage in sector-wide lending because they expose themselves not to the credit-risk of a few institutions, but to that of the entire financial sector. However, similar issues to those explained above (Sect. 2.3.1.1) for lending to individual institutions apply. Whether a bank is solvent and available assets are adequate becomes particularly difficult to assess in a situation that requires expansive lending, e.g. in a large-scale financial crisis. Central banks face the double imperative to assess the solvency of institutions and the value of collateral. Decisions must be taken on the spot because delays result in exactly the kind of escalation that lending of last resort is meant to prevent, i.e. illiquidity and the potential insolvency of banks.[55]

Consequently, solvency and adequate collateralization must remain prerequisites for lending of last resort, but central banks must prepare for their flexible application. As the US, UK and Eurozone examples show (see below Sects. 3.1–3.3), a severe crisis may require central banks to lend to all institutions that are not clearly insolvent and widen their lists of adequate collateral.

[53] Lastra (2015), para. 4.36.

[54] Hauser (2014), p 86.

[55] On these aspects, see Sect. 2.3.1.1 above and Domanski et al. (2014), p 4 (on the difficulty to assessing institution's solvency and the need for a prompt decision); Hellwig (2014), p 22. See also at p 21 where the author points out that restrictive lending policies may prompt banks to cover up losses on their assets and engage in poor lending strategies.

Finally, the concept of 'constructive discretion' should apply as explained above (Sect. 2.3.1.3), albeit with one modification. Sector-wide lending can serve different purposes. It can be motivated by concerns over financial stability alone.[56] In that case the central bank must be able to rely on a corresponding mandate. If concerns over price stability prevail, central banks can rely on more conventional objectives of monetary policy (as discussed in detail in Sect. 3.2).

2.3.3 Bagehot and Non-bank Recipients of Lending of Last Resort

As seen during the peak of the GFC in the US, central banks may extend the circle of recipients of lending of last resort in extreme situations and provide liquidity assistance to non-bank financial institutions (see below Sect. 3.1). In addition, a study of the early beginnings of last resort lending of the Bank of England shows that non-bank financial intermediaries have traditionally been eligible when the Bank considered such widened scopes of application of its credit facilities necessary or helpful.[57]

The problematic aspect of expanded lending activities is the disruption of the privilege-burden interplay. Access to lending facilities provided by central banks is certainly rooted in financial stability concerns, but must additionally be understood as a privilege for which banks must pay by complying with the strictest and most costly form of regulation in the financial industry.

It is obvious that the discussion about a widened circle of profiteers of central bank lending is closely related to another timely topic, the issue of regulatory arbitrage stemming from shadow banking activities. Such activities are defined as bank-like intermediation, i.e. credit, maturity and liquidity transformation. They entail bank-like (stability) risks, but shadow banks do not profit from public sector guarantees for which banks pay by compliance with strict regulatory requirements. Such public sector guarantees are, above all, deposit insurance and access to central bank lending of last resort facilities.[58]

The specific issue of shadow banking and proposals that seek to eliminate regulatory arbitrage will not be discussed here,[59] but one essential aspect should be emphasized. There are strong arguments against the inclusion of shadow banks in the scope of application of central bank lending of last resort, mainly focusing on the fact that it would provide a disincentive for private monitoring and result in excessively risky activities of such intermediaries.[60]

However, financial stability concerns may require central banks to react to liquidity shortages of systemically important non-bank financial intermediaries. It should not be forgotten that central banks commonly transact with such intermediaries when they see the need for unconventional monetary policy

[56] Dalhuisen (2016), para. 1.1.5.

[57] Anson et al. (2017), p 53.

[58] Adrian and Ashcraft (2012), p 5.

[59] Instead, see, for example, IMF, Global Financial Stability Report, n. 4 above; Gorton (2009), pp 14–15; Huang (2015), p 481.

[60] Adrian and Ashcraft (2012), p 8.

programmes such as Quantitative Easing (QE).[61] However, such programmes are motivated by monetary policy concerns, especially deflationary tendencies due to inadequate intermediation by banks, which lead to liquidity shortages in the wider economy. The programmes do not provide an adequate response to financial stability concerns.

Most commonly, financial stability is at stake when assets which are typically held by non-bank institutions have come under extreme price pressure. Fire-sales by mutual funds, insurance companies and, above all, investment banks triggered by extraordinarily high outflows of liquidity would further aggravate such asset depreciation. In extreme situations, such as the peak of the GFC, central banks are the only market participants that can buy time for financial institutions. Because of their unique capacity to create liquidity combined with the principle that they remain operational when their capital turns negative,[62] central banks can absorb temporarily untradeable assets and hold them until markets have recovered and prices stabilized. Although far from ideal, the exposure of central banks to the potentially permanent losses which result from lending to distressed non-banks of systemic importance may be unavoidable to hedge against greater risks.

The lending principles which have been established in the US and UK as a reaction to experiences during the GFC lead the way. They recognize the undeniable need for a wide application of emergency lending in extraordinary circumstances when the entire financial system is threatened by market turmoil and contagion triggered or aggravated by distressed non-bank financial intermediaries.[63]

On the other hand, non-bank institutions should not be eligible for lending if only their individual survival is at stake. Exposing central banks to the risk of loss and allowing non-bank institutions to externalize risk is only justifiable when their collapse is likely to result in higher societal costs than last resort lending. Provisions authorizing central banks to include non-bank institutions in their lending of last resort should reflect these principles. In addition to limiting lending for the sole purpose of providing liquidity to the entire financial sector (as opposed to aiding individual institutions), the law should require that central banks react to imminent dangers which threaten financial stability.[64]

It should be added that the need for such wide scopes of central bank lending reflects regulatory shortcomings. Non-bank financial institutions of systemic importance are undesirable, at least if they are permitted to free-ride on benefits financed by others. Regulators may consider to either prevent non-bank

[61] For the Eurosystems' Asset-Backed Securities Purchase Programme (ABSPP), which can be considered its version of QE, see the list of eligible counterparts in ECB Decision of 19 November 2014 on the implementation of the asset-backed securities purchase programme (ECB/2014/45), Art. 4. The list is much wider than the list of eligible counterparties for standard monetary policy operations. On the latter, see ECB, n. 35 above, pp 13–14 (at section. 2.2).

[62] However, the above-described (Sect. 2.3.1.1) caveats apply so that negative capital should always be of limited duration.

[63] For details, see Sect. 3.1.1 (for the US) and Sect. 3.3.1 (for the UK) below. In support of lending to non-bank financial institutions also Hauser (2014), p 90.

[64] The reformed legal framework for last resort lending of the Fed and the Bank of England contain such requirements, see below Sect. 3.1 (for the US) and Sect. 3.3 (for the UK) and, in comparison, Sect. 3.4.

intermediaries from growing into institutions of systemic importance or make them pay, e.g. by subjecting them to the essential principles of bank regulation, such as adequate liquidity requirements,[65] resolution regimes[66] and contributions to sector-specific rescue funds such as the Resolution Financing Arrangements mandatory for all EU members (or the Eurozone Single Resolution Fund).[67]

3 Lending of Last Resort: The Concept and Legal Framework in the US, Eurozone and UK

This part of the article compares the concepts of last resort lending in three regions of importance for global financial stability. The lending practices of the Fed, the Bank of England and the Eurosystem during and after the GFC provide the basis for this analysis, which focuses on the legal frameworks under which these three central bank systems operate their lending facilities. It is certainly true that lending of last resort traditionally has been considered a typical source of emergency financing of banks, even in jurisdictions where legislation does not (explicitly) refer to it.[68] Questions of a legal nature nevertheless arise. In the absence of provisions detailing the requirements of last resort lending, the authority of central banks to engage in such lending results from the tasks assigned to them which must be interpreted in light of the prescribed objectives.

The analysis examines two different models. The US Federal Reserve Act (FRA) consists of a set of specific rules on last resort lending (Sect. 3.1.2) in contrast to the more general legal frameworks establishing and governing the UK and Eurosystem ELA proceedings (Sects. 3.2.2 and 3.3.2). In addition, the Eurosystem operates under a narrow mandate which could lead to irreconcilable tensions between financial and price stability. The conclusions drawn from the comparison (Sect. 3.4.1) form the basis for proposals of how to improve emergency lending in the Eurosystem (Sect. 3.4.2).

[65] BCBS Global Framework, n. 12 above; Hartlage (2012).

[66] In the countries forming part of the Eurozone where the new SRM applies, see Regulation 806/2014 of 15 July 2014 [2014] OJ L225/1 (EU) ('SRM Regulation'). In the remaining EU countries, substantive rules of bank resolution stem from the Bank Recovery and Resolution Directive 2014/59 ('BRRD') of 15 May 2014 [2014] OJ L173/190 (EU). For the US, see the new resolution mechanism for systemically important financial institutions, called 'Orderly Liquidation Authority (OLA)' and administered by the Federal Deposit Insurance Corporation (FDIC), Title II of the Dodd-Frank Act, 12 USC ss. 5381–5394. For details, see Schillig (2016).

[67] The Single Resolution Fund (SRF) is part of the SRM and established by the SRM Regulation, n. 66 above. Non-Euro EU countries are required to establish national sector-specific funding mechanisms, called the 'European system of financing arrangements' as required by Title VII (Arts. 99–107) of Directive 2014/59, n. 66 above.

[68] On the fact that UK legislation has never explicitly addressed lending of last resort, see Campbell and Lastra (2008–2009), p 486.

3.1 Liquidity Programmes and Emergency Lending by the US Federal Reserve System

3.1.1 The Lending Programmes of the Fed

The Fed traditionally provides lending mechanisms for US banks. The 'Primary Credit Facility' (PCF) is a permanent and standard discount window lending facility. The term 'discount window' stems from the requirement that borrowers provide adequate collateral subject to a haircut ('discount') to ensure that the Fed will not incur losses should the collateral's market value depreciate.

PCF is short-term lending, usually overnight. The Fed can extend its duration to a few weeks if the borrower is financially sound and experiences difficulties in receiving market financing.[69] A smaller bank eligible for financing can receive lending for an even longer period under the 'Seasonal Credit Facility' to assist it 'in meeting regular needs for funds arising from expected patterns of movement in its deposits and loans'.[70]

During the peak of the GFC in the US, the Fed eased the terms of lending drastically.[71] The penalty rates for borrowing were lowered to insignificant amounts. The spread between the primary credit rate and the target federal funds rate was reduced from its normal rate of 100 basis points to ultimately 25 basis points. In addition, and to create a more reliable source of funding for banks, the maturity of the loans was extended from overnight to ultimately 90 days.

PCF lending, however, proved unpopular, supposedly because of acceptance issues, i.e. fears of banks that seeking PCF lending would taint their reputation for financial management and solvency.[72] In response, the Fed introduced a new facility on a tender basis with auction-determined interest rates, called 'Term Auction Facility' (TAF), which was well-received by banks.

Both PCF and TAF lending activities were executed under the regular authority of the Fed, not its emergency authority.[73] While penalty interest was suspended, all other traditional requirements for lending of last resort remained intact. The recipients of PCF and TAF lending had to be financially sound and provide adequate collateral. To hedge against any risk of losses, the Fed claimed senior creditor status in addition to collateralization of assets.

Such high lending standards proved unsuitable for banks whose financial difficulties exceeded mere liquidity shortages. To provide redress, the Fed enabled these institutions to fall back on yet another type of lending facility called

[69] 12 Code of Federal Regulations (CFR) s. 201.4(a) (2016).

[70] 12 CFR s. 201.4(c) (2016). The provision also sets further lending requirements such as the smaller bank's inability to receive sufficient funding from markets and a 'seasonal need', i.e. a need that will persist for several weeks.

[71] On this policy and the following narrative, see Carlson et al. (2015), pp 14–20. In detail about Fed lending during the peak of the crisis, see Judge (2016), pp 873–911; Carlson and Wheelock (2013), pp 32–36; Adrian and Ashcraft (2012), pp 11–15.

[72] On the stigma associated with last resort lending (from the UK perspective), see Hauser (2014), pp 89–90.

[73] On the TAF see Campbell and Lastra (2008–2009), p 492; Judge (2016), p 855.

'secondary credit loans', which aimed at bridging liquidity shortages of such institutions until their ultimate fate crystallized—i.e. they returned to normality under improved market conditions or deteriorated to the point where resolution was unavoidable.[74]

Secondary lending terms were less favourable than under the primary facilities. While solvency requirements were lowered, penalty rates were higher, but with 50 basis points still moderate, higher haircuts on collateral were applied, and the Fed restricted usage of the extended credit. In addition, the institutions became subject to stricter supervisory oversight. However, the most remarkable aspect of Fed secondary lending during the peak years of the GFC is the widened circle of eligible recipients which included non-deposit-taking financial institutions. Special programmes were created from which money market funds, insurance companies, investment banks and other non-bank financial intermediaries profited.[75]

Secondary lending was executed under the emergency authority of the Fed based on section 13(3) Federal Reserve Act (FRA).[76] It was the first time since the 1930s that the Fed made use of this option. The lending activities of the Fed facilitated the acquisition of Bear Stearns by JP Morgan and supported the financially troubled insurance provider American International Group (AIG). The farthest-reaching measure consisted of the creation and funding of three special purpose vehicles (SPVs) 'Maiden Lanes' numbered 1–3 that were used to purchase toxic financial instruments from financial institutions, among them non-banks.[77] These debt instruments were, above all, the 'infamous' collateralized debt obligations (CDO) and asset backed securities (ABS) created in the US prior to the outbreak of the financial crisis, which bundled and securitized residential mortgages from the US housing market.[78]

Critics pointed out that Fed operations that cleansed the balance sheets of non-deposit-taking institutions had nothing to do with the traditional purpose for which the Fed's lending of last resort authority had been created.[79] The core accusation

[74] 12 CFR s. 201.4(b) (2016).

[75] In order to help money market funds meet redemptions and improve liquidity in money markets, the Fed established three credit facilities: the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF), the Commercial Paper Funding Facility (CPFF) and the Money Market Investor Funding Facility (MMIFF). See Federal Reserve System, 'Report Pursuant to Section 29 of the Emergency Economic Stabilization Act of 2008: Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility' (September 2008). The Asset-Backed Securities Loan Facility (TALF) programme was operated by the Fed to support the asset-backed security market with funds. The Treasury backed TALF with credit protection with Troubled Asset Relief Program (TARP) funds, created by the Emergency Economic Stabilization Act (EESA; P.L. 110–343) in October 2008. See Federal Reserve System, 'Report Pursuant to Section 129 of the Emergency Economic Stabilization Act of 2008: Securities Borrowing Facility for American International Group, Inc.' (September 2008), available at https://www.federalreserve.gov/monetarypolicy/files/129aigsecborrowfacility.pdf (last accessed 14 August 2017).

[76] The provisions in the Federal Reserve Act are identical to those in 12 USC Subchapter IX—Powers and Duties of Federal Reserve Banks (12 USC ss. 341–362).

[77] On 'Maiden Lane' see Campbell and Lastra (2008–2009), p 493. On the Fed instituted 'balance sheet cleansing' for financial institutions Domanski et al. (2014), p 7. See also Judge (2016), p 849.

[78] Gabilondo (2015), p 32. See also Judge (2016), p 856.

[79] Gabilondo (2015), p 31.

was that the Fed lacked the mandate to engage in these transactions. Ultimately, the Fed did not incur losses from the financing of asset purchases. While the absorbed financial instruments proved untradeable during the peak GFC years, the vast majority of underlying claims remained sound, generating a steady stream of payments to the SPVs and enabling them to pay back their Fed loans.[80]

3.1.2 The Legal Basis for Lending by the Fed

The Federal Reserve Act (FRA)[81] distinguishes several types of lending to financial institutions. The details for any lending activity are laid down in 'Regulation A',[82] a set of federal regulations issued by the Fed in exercise of authority vested in it by several provisions of the FRA.[83] Because of these explicit rules, there is no need to derive the lending powers from the broadly-worded tasks assigned to the Fed.[84]

The Fed's discount window lending can consist of primary, secondary and seasonal loans as explained above (Sect. 3.1.1).[85] Any discount window lending requires adequate collateralization,[86] and is limited to deposit-taking institutions.[87] It is executed 'with due regard to the basic objectives of monetary policy and the maintenance of a sound and orderly financial system'.[88] These objectives of monetary policy are embedded in the Fed's 'dual mandate' of economic growth including maximum employment and price stability, with neither of the two taking priority over the other.[89]

Lending to banks and non-bank institutions is possible under the emergency lending authority of the Fed.[90] Emergency lending can be provided to institutions

[80] Carlson et al. (2015), p 3.

[81] Forming part of Title 12 of the Code of Federal Regulations, see at https://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR (last accessed 19 Aug 2017).

[82] Extensions of Credit by Federal Reserve Banks (Regulation A), 12 CFR s. 201.1–110 (2016).

[83] FRA ss. 10A, 10B, 11(i), 11(j), 13, 13A, 14(d), and 19, see 12 CFR s. 201.1(a) (2016).

[84] The Fed states its tasks as '[c]onducting the nation's monetary policy, […] supervising and regulating banks and other important financial institutions, […] maintaining the stability of the financial system and containing systemic risk that may arise in financial markets, providing certain financial services to the U.S. government, U.S. financial institutions, and foreign official institutions, and playing a major role in operating and overseeing the nation's payments systems'. See 'What is the Purpose of the Federal Reserve System?', http://www.federalreserve.gov/faqs/about_12594.htm (last accessed 8 March 2016).

[85] Executed under the authority of the Federal Reserve Act § 10B. For details see 'The Federal Reserve Discount Window', available at https://www.frbdiscountwindow.org/en/Pages/General-Information/The-Discount-Window.aspx (last accessed 10 March 2017).

[86] 12 CFR s. 201.3 (2016).

[87] 12 CFR s. 201.4 (2016).

[88] 12 CFR s. 201.1 (2016).

[89] S. 2A of the Federal Reserve Act reads: 'The Board of Governors of the Federal Reserve System and the Federal Open Market Committee shall maintain long run growth of the monetary and credit aggregates commensurate with the economy's long run potential to increase production, so as to promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates.' Stable prices and moderate interest rates are read conjunctively as ultimately amounting to the same results.

[90] Federal Reserve Act s. 13(3).

that cannot receive sufficient funding under the discount window lending because (1) amounts available under discount window lending are limited in times when the Fed restricts lending volumes for monetary policy purposes; (2) the applicant institution is not a bank; or (3) the applicant bank does not meet the criteria for discount window lending.

However, emergency lending is not easily available in situation (3). Recipients must be solvent,[91] and subject to further conditions, which were introduced by the Dodd-Frank Act.[92] The reform reflects the US legislator's reaction to the Fed's expansive lending policy during the crisis years. Critics argued that the Fed's activities went well beyond the concept of lending of last resort and amounted to bail-outs of the financial industry. The US Congress took the view that the Fed lacked the democratic legitimacy to engage in such rescue measures and has since restricted the emergency authority of the Fed.[93]

Because of the amendments, lending requires 'unusual and exigent circumstances' and 'a program or facility with broad-based eligibility'.[94] Broad-based eligibility is present when the programme or facility is designed to provide liquidity to an 'identifiable market or sector of the financial system'. Explicitly excluded are programmes and facilities intended to save one or more specific entities from bankruptcy or insolvency proceedings.[95] Additionally, the programme needs prior approval from the Secretary of the US Treasury[96] and evidence is required that the recipient of emergency liquidity 'is unable to secure adequate credit accommodations from other banking institutions'.[97]

It is consistent with the distinction between general monetary policy measures and lending of last resort emphasized here (above Sect. 2.2) that the emergency lending authority of the Fed is not subject to the Fed's general objectives while the regular lending facilities are. As accentuated below for the Eurosystem (Sect. 3.2.2), extraordinary circumstances, that make lending of last resort necessary have nothing to do with the pursuit of conventional monetary policy objectives and might even be incompatible with them.

The recent amendments to the FRA have led to a clearer separation of competences. The Fed is still mandated to provide emergency lending, but only for reasons of financial stability. Solvency is a strict requirement while recapitalization of insolvent institutions is subject to Federal Deposit Insurance Corporation (FDIC) intervention under the reformed restructuring and resolution regime.[98] State aid that seeks to secure the survival of a failing institution depends upon the approval by the

[91] 12 CFR s. 201.4(d)(5) (2016).

[92] Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act).

[93] On the reform, see Lastra (2015), para. 4.14.

[94] Both criteria stem from 12 CFR s. 201.4(d)(1) (2016).

[95] 12 CFR s. 201.4(d)(4) (2016).

[96] Federal Reserve Act s. 13(3)(B)(iv) and 12 CFR s. 201.4(d)(2) (2016).

[97] Federal Reserve Act s. 13(3)(a). All requirements are further specified in detailed provisions of Regulation A, 12 CFR s. 201.4(d) (2016).

[98] On the Dodd-Frank resolution rules, especially on the Orderly Liquidation Authority (OLA), see Title II of the Dodd-Frank Act, 12 USC ch. 53 ss. 5381–5394; Jackson and Skeel (2012), pp 439–444.

US Congress and is executed by the US Treasury Department, i.e. financed by the US federal budget, not by expansions of the Fed's balance sheet.

3.2 Liquidity Programmes and ELA by the Eurosystem

Many developments in the Eurozone resemble those in the US, but differences exist which are rooted in the Eurozone experience of the GFC escalating into a sovereign debt crisis.

3.2.1 Liquidity Programmes of the Eurosystem

3.2.1.1 Liquidity Programmes for the Financial Sector The Eurozone remains in crisis mode and the central banks of the Eurozone, the so-called Eurosystem,[99] still engage in unconventional monetary policy operations. During the peak of the GFC in the Eurozone from 2008 to 2010, the Eurosystem was predominantly occupied with attempts to stabilize financial markets and replace interbank and wholesale lending just as the Fed did. However, in the Eurozone the focus has been on core monetary policy concerns since mid-2010. The Eurosystem has been battling deflationary tendencies and recession in the Eurozone. It has also been providing a market for sovereign marketable debt of highly-indebted Eurozone Member States because, as the European Central Bank (ECB) has repeatedly stated, the slowdown of trade of marketable sovereign debt instruments of some Eurozone Member States imperils the transposition of the Eurosystem's monetary policy.[100]

Direct lending to banks via standing facilities has a long tradition in the Eurosystem, but is usually limited to overnight lending. Main Refinancing Operations (MROs) also form a traditional part of its monetary policy operations and are ordinarily also limited to short lending periods, normally a few weeks.[101] In addition, they are generally subject to tendering so that by defining the monetary base, the Eurosystem can steer the money supply.[102]

Since the outbreak of the crisis, the Eurosystem has had little reason to worry about inflation threats. It has been more concerned with slow economic recovery, persistently low trade in secondary markets for highly indebted Eurozone Member States, and reduced lending activity of banks. To stimulate bank lending, it has been offering unlimited amounts in loans to banks by way of its longer-term refinancing

[99] Consolidated Version of the Treaty on the Functioning of the European Union Art. 282(1), October 2012 [2012] OJ C326/47 (TFEU); Protocol (No. 4) on the Statute of the European System of Central Banks and of the European Central Bank Art. 1 [2012] OJ C326/230. For details on the Eurosystem, see Louis (2014), p 103.

[100] As reflected for the Outright Monetary Transactions of the Eurosystem in Case C–62/14 *Gauweiler and Others v. Deutscher Bundestag* ECLI:EU:C:2015:400, para. 50. See also Louis (2014), p 111.

[101] ECB, n. 35 above, p 11.

[102] For the ordinary tender procedure of the Eurosystem see ECB, 'The Implementation of Monetary Policy in the Eurozone—General Documentation on Eurosystem Monetary Policy Instruments and Procedures' (February 2011), pp 31–41, available at http://www.ecb.int/pub/pdf/other/gendoc2011en.pdf (last accessed 14 August 2017).

operations (LTROs) whose normal lending durations of 3 months (standard LTROs) were extended to several years (non-standard LTROs).[103]

The Eurosystem's massive asset purchasing programmes in secondary markets provide further liquidity to banks and stimulate trade in markets that would otherwise see low activities, thereby relieving investors of unpopular assets and facilitating primary market purchases of sovereign debt instruments. The 'Securities Markets Programme' (SMP) was followed by the announcement of 'Outright Monetary Transactions' (OMT) and the execution of the 'Expanded Asset Purchase Programme' (APP), the latter being the Eurosystem's version of Quantitative Easing. It goes without saying that these aggressive interventions of the Eurosystem have drawn a lot of criticism from politicians and academics, especially from countries like Germany whose economies recovered faster and whose public deficits are lower.[104] Prominently, the Federal Constitutional Court of Germany sought clarification[105] from the Court of Justice of the European Union (CJEU), and the CJEU issued a preliminary ruling[106] stating that the OMT programme of the Eurosystem was covered by its mandate and compatible with all other requirements of EU law.[107]

All these measures lead to the distribution of central bank money to banks and provide liquidity assistance to the entire banking sector on a general basis. All direct lending is subject to strict requirements of adequate collateral which eliminates banks with solvency issues from the group of eligible counterparties.[108]

Sovereign debt instruments are often used as collateral when banks borrow from central banks, commonly in the form of repo transactions.[109] The principle of adequacy which applies to collateral requires excellent credit ratings. While higher haircuts can compensate for lower ratings, it is highly unusual for central banks to admit bonds with, or near, junk ratings. Following from the high levels of indebtedness of some Eurozone sovereigns, and concerns that they could default on their payment obligations, their marketable debt came under severe pressure, resulting in hefty rating downgrades.

[103] ECB, n. 35 above.

[104] See, e.g., Degenhart (2015), pp 30–36.

[105] BVerfG, 'Urteil des Zweiten Senats' (14 January 2014) 2 BvR 2728/13, available at www.bundesverfassungsgericht.de/SharedDocs/Entscheidungen/EN/2014/01/rs20140114_2bvr272813en.html (English translation) (last accessed 14 August 2017).

[106] The reference for a preliminary ruling is based on TFEU Art. 267 and enables national courts to question the CJEU on the interpretation or validity of European law. See http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=URISERV%3Al14552 for a summary (last accessed 14 August 2017).

[107] Case C–62/14 *Gauweiler and Others v. Deutscher Bundestag* ECLI:EU:C:2015:400. For an analysis of the ruling see Hofmann (2017), pp 1–30.

[108] The eligibility of counterparties is prescribed in the 'Guideline of the European Central Bank of 20 September 2011 on monetary policy instruments and procedures of the Eurosystem' (recast) 2011/817 [2011] OJ L331/1. For eligibility of collateral, the ECB establishes, maintains and publishes a list of eligible assets in accordance with the criteria specified in the 'General' and 'Temporary' framework Guidelines, available at https://www.ecb.europa.eu/ecb/legal/1002/1014/html/index-tabs.en.html#gf (last accessed 14 August 2017). See also Hofmann (2011).

[109] Hofmann (2011), p 460.

These downgrades should have resulted in their debt being struck off the list of eligible collateral. But in light of banks' heavy investment in such assets (often for reasons of prudential regulation[110]) such a move was unrealistic since it would have excluded banks from central bank liquidity. In fact, the very banks that needed liquidity assistance the most would have been affected, i.e. the banks from highly indebted sovereigns whose debt instruments were subject to massive downgrades.

The Eurosystem resorted to drastic action. It suspended its minimum rating requirements for Greece, Ireland, Portugal and Cyprus.[111] This helped banks with significant holdings of debt instruments issued by these four Eurozone Member States, above all the banks based in their territories. Had it not been for massive financial support from Eurozone lending facilities such as the European Financial Stability Facility (EFSF) and European Stability Mechanism (ESM), these countries would have likely defaulted on their payment obligations.[112] While the Fed's purchases of assets shunned by markets ultimately did not result in losses, the outcome for the Eurosystem is still unknown as many of these sovereign bonds will mature in the (far) future and the financial situation of some sovereign debtors, especially Greece, has not improved enough to reignite market demand for them.[113]

3.2.1.2 ELA as Liquidity Support for Individual Banks Remarkably, and in contrast to the measures executed by the Fed in 2008–2010, the Eurosystem has not provided any lending of last resort tailored to the needs of individual institutions. Such inactivity is, to some extent, the result of substantial rescue efforts of national fiscal authorities and the EFSF and ESM for troubled banks, combined with the unconventional monetary policy operations of the Eurosystem described above. However, the main reason is the strict separation of monetary policy operations and last resort lending.

The ECB Governing Council, the primary decision-making organ of the 'European System of Central Banks' (ESCB) and the Eurosystem,[114] understands ELA as the process where a National Central Bank (NCB), which is part of the ESCB, provides central bank money or other forms of financial assistance that may

[110] Prior to some improvements stemming from implementation of Basel III, sovereign debt on banks' balance sheet was commonly assigned a zero risk weightage in EU countries, leading to large holdings by Eurozone banks as no capital was required for such assets. See Hannoun (2011), pp 140–143 and 148–149.

[111] ECB, 'ECB announces change in eligibility of debt instruments issued or guaranteed by the Greek government', 3 May 2010; ECB, 'ECB announces the suspension of the rating threshold for debt instruments of the Irish government', 31 March 2011; ECB, 'ECB announces change in eligibility of debt instruments issued or guaranteed by the Portuguese government', 7 July 2011; ECB, 'ECB announces change in eligibility of marketable debt instruments issued or guaranteed by the Cypriot government', 2 May 2013.

[112] On these events, see Dalhuisen (2016), para. 1.1.5. For the ESM and EFSF, see Hofmann (2013), pp 527–529.

[113] On the related issue of often-discussed debt relief for these Eurozone Member States and the underlying legal obstacles, see Hofmann (2017), pp 10–30.

[114] The ECB Governing Council consists of the members of the ECB Executive Board and the governors of the 19 Eurozone central banks, see Art. 12.1 ESCB/ECB Statute. On the Executive Board, see Art. 11.6 and Art. 12.1. See also Krauskopf and Steven (2009), p 1143.

lead to an increase in central bank money. The recipient must be a solvent financial institution or group of solvent financial institutions facing temporary liquidity problems. The decision of whether to provide ELA lies within the discretion of the NCBs.[115]

ELA thereby highlights the double role of central banks of EU Member States. All central banks of the 28 EU Member States plus the ECB are part of the ESCB.[116] While they remain NCBs of their countries, these central banks are also integral parts of the ESCB.[117] The provisions in the Treaty on the Functioning of the European Union (TFEU) on the Economic and Monetary Policy (Title 8) apply to all of them, for example the provision guaranteeing their independence from government interference[118] and the prohibition on financing governments, the so-called ban on monetary financing.[119] In addition to being part of the ESCB, all the central banks (with the exception of the ECB) are NCBs of their home countries.[120]

Article 14.4 of the Statute on the ESCB and ECB (the ESCB/ECB-Statute)[121] stipulates that NCBs 'may perform functions other than those specified in this Statute unless the [ECB] Governing Council finds, by a majority of two-thirds of the votes cast, that these interfere with the objectives and tasks of the ESCB. Such functions shall be performed on the responsibility and liability of NCBs and shall not be regarded as being part of the functions of the ESCB.'

All EU central banks serve such a double role as NCBs and members of the ESCB, but the practical significance is much higher for the 19 Eurozone NCBs than for the rest. The reason is that the Eurozone monetary policy is set and executed jointly by the Eurosystem whereas the other nine EU NCBs remain solely responsible for the monetary policy in their home countries.[122]

It is evident that the central banks of non-Eurozone EU Member States are in charge of lending of last resort and may independently decide when, how and under

[115] ECB Monthly Bulletin 2/2007, p 80.

[116] Art. 282(1) TFEU [2012] OJ C329 (EU), in conjunction with Art. 1 of the ESCB/ECB Statute. On the principals of the European System of Central Banks, see generally Krauskopf and Steven (2009), pp 1143–1175; see Priego and Conlledo (2005), pp 189–190; Louis (2009), p 277; Wolf and Servais (2009), p 447 (especially for a comprehensive enumeration of its tasks); Lhonneux (2009), p 457 (especially on the legal nature of the ESCB). On the role of the Eurosystem NCBs, see Scheller (2006), p 44; see also the ECB website at https://www.ecb.europa.eu/pub/pdf/other/ecbhistoryrolefunctions2006en.pdf (last accessed 14 Aug 2017).

[117] Art. 14.3 of Protocol (No. 4) on the Statute of the European System of Central Banks and of the European Central Bank [2012] OJ C326/230 (EU) (ESCB/ECB Statute); see also ECJ Case C-62/14, *Gauweiler and Others v. Deutscher Bundestag* ECLI:EU:C:2015:400, para. 39. On the pursuit of a single monetary policy for the members of the monetary union see Smits (2008), p 1614.

[118] Art. 130 TFEU.

[119] Art. 123 TFEU.

[120] By virtue of Art. 127 TFEU and Art. 14.3 of the ESCB/ECB Statute.

[121] ESCB/ECB Statute, n. 117 above.

[122] The ESCB central banks execute tasks assigned to them by the ECB according to Art. 12.1 of the ESCB/ECB Statute and are subject to the decisions of the Governing Council of the ECB and the instructions of the Executive Board of the ECB by virtue of Art. 14.3. The practical relevance of these principles is dominantly limited to the Eurosystem Central Banks because such decisions are predominantly taken in terms of monetary policy.

what conditions to grant last resort lending. The opposite is true for Eurozone central banks. For the implications they have on the money supply, provisions of liquidity to banks are obviously a matter of monetary policy and therefore a task of the Eurosystem, not of its NBCs on an individual basis.[123]

Notwithstanding these differences, ELA is vested in the individual NCBs even in the Eurosystem. While losses stemming from Eurosystem operations are shared by the Eurosystem and therefore ultimately by the Eurozone Member States in their entirety, losses from national tasks are not.[124] In practice, the competent NCB borrows the funds for its ELA transactions from other NCBs within the Eurosystem, resulting in a claim against the borrowing NCB in the Eurosystem's consolidated balance sheet.[125]

However, the Eurosystem watches over the monetary implications of ELA. The ECB Governing Council exercises its supervisory function to prevent the national operations of individual central banks from interfering with the objectives and tasks of the Eurosystem.[126] It is entitled to restrict or prohibit ELA measures[127] and issues specific guidelines for the execution of ELA.[128]

These guidelines require NCBs to communicate specifics about their ELA operations to the ECB Governing Council. They are especially required to provide details about the counterparty, the volume, maturity dates and interest of the loans and the collateral provided including applied haircuts. Importantly, the NCBs must inform the ECB about the reasons for ELA, especially potential systemic risks stemming from the situation of the recipient institution and their cross-border implications. They must also transmit detailed liquidity and solvency assessments issued by the competent prudential supervisor, and all information must be kept up to date.[129]

With such detailed information the Eurosystem can sterilize the effect of ELA in the Eurozone financial market by taking counter-measures to mitigate potential negative effects of the increase in liquidity caused by ELA.[130] Such negative effects become more likely the higher the volumes of ELA. The critical threshold above which the Eurosystem suspects a higher likelihood of interference with its tasks and objectives is set at EUR 500 mill. To avoid the risk for the NCBs that the ECB Governing Council may interfere and put a stop to their ongoing ELA operations, the NCBs may request of the Governing Council 'to set a threshold and not to object to intended ELA operations that are below that threshold and conducted within a

[123] For this reason, authors have argued that the Eurosystem and not the NCBs should execute ELA, see Schoenmaker (2000), pp 218–219.

[124] Art. 33(2) of ESCB/ECB Statute.

[125] Gortsos (2015), p 7.

[126] Gortsos (2015), p 7.

[127] ECB, ELA Procedures, n. 49 above. Such decisions are taken with a majority of two-thirds of the votes cast.

[128] These guidelines bind all NCBs, see ECB, ELA Procedures, n. 49 above, p 2.

[129] The details mentioned here form part of a list of nine matters that the NCB must communicate to the ECB no later than 2 business days after the ELA operation was executed, see ECB, ELA Procedures, pp 1–2 (fn 1–9). See also Magnus and Xirou (2017), p 3 (box 2).

[130] Gortsos (2015), p 6.

pre-specified short period of time' for one or several recipients of ELA by the requesting NCB.[131]

These principles have gained practical relevance in the ongoing sovereign debt crisis of the Eurozone. The suspension of minimum rating requirements for sovereign marketable instruments issued by Greece (see Sect. 3.2.1.1) was revoked in February 2015.[132] Following the reluctance of the Greek government, led by the 'Syriza' coalition, to comply with the terms of loan agreements with its main creditors, the ECB Governing Council saw an increased risk for a Greek payment default and excluded Greek bonds from the list of eligible collateral for Eurosystem transactions with banks. This move resulted in the temporary[133] cut-off of Greek banks from central bank financing and prompted them to request ELA from the Greek national bank.[134]

3.2.2 The Authority for Lending by the Eurosystem and Its NCBs

The Eurosystem rejects financial responsibility for last resort lending to individual institutions by making it a task reserved to NCBs under their reserved powers stemming from Article 14.4 of the ESCB/ECB Statute.[135] Although, reasons of efficiency in terms of monetary policy transposition and recovery and resolution efforts argue in favour of assigning this function to the Eurosystem, such policy-driven discussions depend on the outcome of a legalistic analysis. If the Eurosystem lacks the legal authority to provide last resort lending, then even convincing reasons of efficiency are irrelevant.

3.2.2.1 Lending Operations and the Objective of Price Stability The legal basis for the lending operations of the Eurosystem is Article 18.1 of the ESCB/ECB Statute, which provides that: 'In order to achieve the objectives of the ESCB and to carry out its tasks, the ECB and the national central banks may […] conduct credit operations with credit institutions and other market participants, with lending being based on adequate collateral'.[136] Importantly, the provision restricts its authorization to instances in which the Eurosystem's lending serves the tasks and objectives

[131] On the ECB ELA Procedures, see n. 49 above, p 2.

[132] See Press Release, ECB, 'Eligibility of Greek Bonds Used as Collateral in Eurosystem Monetary Policy Operations' (4 February 2015), available at https://www.ecb.europa.eu/press/pr/date/2015/html/pr150204.en.html (last accessed 15 August 2017). For a previous period of ineligibility of Greek sovereign debt for Eurosystem lending, see Press Release, ECB, 'Collateral eligibility of bonds issued or guaranteed by the Greek government' (20 July 2012), available at https://www.ecb.europa.eu/press/pr/date/2012/html/pr120720.en.html (last accessed 29 March 2017).

[133] The waiver was reinstated with effect from 29 June 2016, rendering Greek bonds eligible for Eurosystem lending. See Press Release, ECB, 'ECB Reinstates Waiver Affecting the Eligibility of Greek Bonds Used as Collateral in Eurosystem Monetary Policy Operations' (22 June 2016), available at https://www.ecb.europa.eu/press/pr/date/2016/html/pr160622_1.en.html (last accessed 14 August 2017).

[134] For numbers of ELA provided to Greece from 2011 to 2016, see Magnus and Xirou (2017), p 4 (Graph 1).

[135] See the discussion above at Sect. 3.2.1.2.

[136] Art. 18.1 of the ESCB/ECB Statute.

assigned to it, leading to the conclusion that there is no authorization for lending outside of the assigned tasks and objectives.

The same follows from the 'opening clause' in Article 20 of the ESCB/ECB Statute, which vests additional powers in the ECB's Governing Council.[137] It is authorized to decide 'upon the use of such other operational methods of monetary control as it sees fit', but likewise subject to the objectives assigned to the Eurosystem.[138]

According to Article 127(2) TFEU and Article 3(1) of the ESCB/ECB Statute, the tasks of the ESCB[139] are 'to define and implement the monetary policy of the Union; to conduct foreign-exchange operations […]; to hold and manage the official foreign reserves of the Member States; to promote the smooth operation of payment systems'.[140] Tasks must be read in light of the objectives assigned to central banks and pursued in ways that serve them.[141]

The Eurosystem operates on a narrower mandate than the Fed and many other central banks. The relevant article in the ESCB/ECB Statute reads: '[…] the primary objective of the ESCB shall be to maintain price stability. Without prejudice to the objective of price stability, it shall support the general economic policies in the Union […]'.[142] The objective of support for the economic policies of the EU is subject to the objective of price stability, thereby creating such a clear hierarchy between the two that the inferior objective of economic support is of little practical relevance as the law 'assigns overriding importance to price stability'.[143]

Consequently, all measures of expansionary monetary policy, including lending to banks, are covered by its mandate for as long as the ECB Governing Council can justify them with reference to price stability. Difficulties arise when that is not the case, i.e. when lending is not indicated by the Eurosystem's inflation targets, but solely prompted by concerns over financial stability.

Academic writing argues that a financial stability objective is always, even if unwritten, part of a central bank's monetary policy mandate. In ordinary times, open market transactions of central banks, including lending to banks, serve monetary policy objectives and simultaneously support financial stability. In a crisis, such alignments may not necessarily be present. In a situation of financial instability,

[137] These powers reflect again the outstanding role of the ECB's Governing Council in the Eurosystem. Louis (2014), p 106, calls it the 'principal' or 'captain' of the team of central banks.

[138] By requiring that such decisions respect Art. 2 of the ESCB/ECB Statute, which contains the objectives to which the EU legislator subjects the Eurosystem.

[139] As explained above, the ESCB/ECB Statute refers to the ESCB as the monetary authority of the EU, stemming from the outdated assumption that all EU members would join the monetary union. All references to the ESCB in matters of monetary policy must currently be read as references to the Eurosystem. On the role of the Eurosystem as the monetary authority of the Eurozone, see Louis (2014), p 105.

[140] ESCB/ECB Statute Art. 3(1).

[141] Gianviti (2010), para. 22.01–02.

[142] ESCB/ECB Statute Art. 2 and identical with TFEU Art. 127(1).

[143] See the generally accepted statement of the ECB at https://www.ecb.europa.eu/mopo/intro/objective/html/index.en.html (last accessed 19 December 2016); Lastra and Louis (2013), pp 133–134 (also emphasizing that the provision's wording had been heavily influenced by the equivalent provision in the German Central Bank Act.

ordinary policies supporting price stability have no stabilizing effects, and stabilizing policies lead to expansions of the monetary base and may drive inflation. These realities prompt authors to argue that in situations where markets are in turmoil and financial institutions go into crisis, other objectives become impossible to pursue, especially the objective of maintenance of price stability. In this view, a core purpose of central banks is maintaining systemic stability of the banking and payments systems, and an implied financial stability objective supports transactions such as lending of last resort to the extent where financial stability concerns impair the pursuit of (ordinary) monetary policies.[144]

Consequently, the Eurosystem may provide lending of last resort when short-term financial stability concerns take priority over long-term price stability policies. But what sounds like a clear-cut distinction in the national context, is a more complex issue in a monetary union. The Eurosystem determines the monetary policy in a currency union of 19 Member States, all of which decide their fiscal policies nationally. Resulting from the wide-spanning effects of its monetary policy and confronted with entirely different economic and fiscal preconditions in different parts of its area of operation, the Eurosystem is faced with a unique challenge. While some parts of the Eurozone may be haunted by recession and serious instability of their banking and financial sectors, others may pursue stringent fiscal policies and vigorously restructure their financial industries. Monetary stimulus needed in the former group of countries may lead to overheating economies and high inflation in the latter. In this situation, the Eurosystem may face a serious conflict between its primary objective of internal price stability and its desire to respond to financial stability concerns.

While still hypothetical,[145] such reflections reveal potential risks resulting from the Eurosystem's narrowly worded objectives. Its monetary policy operations are subject to judicial review,[146] and the CJEU has recently issued a ruling about its open market operations.[147] In this ruling, the court granted the Eurosystem wide discretion in the pursuit of its objectives, especially in its choice of monetary policy mechanisms.[148] However, the mere fact that the court heard the case and discussed the Eurosystem's mandate and legal boundaries is a strong indicator that it takes the underlying legal issues very seriously. A further request for a preliminary ruling on monetary policy matters was recently submitted to the CJEU,[149] meaning that legal challenges to the Eurosystem's mandate are real.[150]

[144] Goodhart and Tsomocos (2010), pp 128 and 134; similar Herrero and Río (2005), pp 12–13; Smits (1997), p 269; Giavazzi and Giovannini (2011), p 6. Compare also Hellwig (2014), p 14.

[145] But see Hellwig (2007), pp 13–14 for examples from the past when such scenarios occurred.

[146] The acts or omissions of the ECB are subject to judicial review per Art. 35(1) ESCB/ECB Statute.

[147] Case C-62/14, *Gauweiler and Others v. Deutscher Bundestag* ECLI:EU:C:2015:400. See also Case C-370/12 *Thomas Pringle v. Government of Ireland* ECLI:EU:C:2012:756 that did not challenge monetary policy, but similar high-profile decisions in exercise of sovereign powers.

[148] Case C-62/14, *Gauweiler and Others v. Deutscher Bundestag* ECLI:EU:C:2015:400, paras. 50–55.

[149] Again by the German Constitutional Court, see BVerfG decision of 18 July 2017, ECLI:DE:BVerfG:2017:rs20170718.2bvr085915, currently only available in German at http://www.bverfg.de/e/rs20170718_2bvr085915.html (last accessed 22 August 2017).

[150] Scepticism among German politicians and academics is running high as reflected in literature. See e.g. Degenhart (2015), p 30; Siekmann and Wieland (2014), p 6; Hofmann (2017).

3.2.2.2 The Tasks of Prudential Supervision and Support of Financial Stability Recent developments in the Eurozone have added a further task to the competences of the ECB. Since 2014, the ECB has been the prudential supervisor of all systemically important banks in the Eurozone under the Single Supervisory Mechanism (SSM).[151] This new task is based on a provision in Article 127(6) TFEU which authorizes the Council of the EU to 'confer specific tasks upon the European Central Bank concerning policies relating to the prudential supervision of credit institutions and other financial institutions with the exception of insurance undertakings'. It is a specification of the further task contained in Article 127(5) TFEU according to which the 'ESCB shall contribute to the smooth conduct of policies pursued by the competent authorities relating to the prudential supervision of credit institutions and the stability of the financial system'.

Prudential supervision of banks serves the purpose of financial stability in the banking sector. If a central bank is tasked with the prudential supervision of banks, it must necessarily be assigned the objective of financial stability. When the Council of the EU exercised its competence under Article 127(6) TFEU and bestowed on the ECB a central role in the supervision of banks in the Eurozone, it simultaneously triggered a further objective of financial stability which is implied in Article 127(5) TFEU and limited to the ECB's role as prudential supervisor.[152] However, it is an objective that is exclusively pursued by means of prudential bank supervision and unrelated to monetary policy. Monetary policy and prudential supervision of banks are often united in one institution for reasons of information synergies. Monetary authorities transact with banks, monitor markets for macroeconomic reasons and coordinate payment streams, thereby gathering data that is helpful for prudential supervision. However, both functions are strictly separate and executed by different departments, and different objectives are pursued with one and the other.

The legal framework establishing the SSM addresses in all clarity the main concern that policy-makers voiced prior to its establishment, that the role of the Governing Council of the ECB as the guardian over price stability might be compromised by the new role the ECB plays in the prudential supervision of banks. The answer was to keep monetary policy in pursuit of maintenance of price stability strictly separated from the supervisory tasks in pursuit of financial stability.[153]

[151] Council Regulation 1024/2013, Conferring Specific Tasks on The European Central Bank Concerning Policies Relating to the Prudential Supervision of Credit Institutions [2013] OJ L287, Arts. 4 and 6.

[152] On implicit objectives see Gianviti (2010), para. 22.02.

[153] Council Regulation 1024/2013, n. 151 above, recital 65, reads: 'The ECB is responsible for carrying out monetary policy functions with a view to maintaining price stability in accordance with Article 127(1) TFEU. The exercise of supervisory tasks has the objective to protect the safety and soundness of credit institutions and the stability of the financial system. They should therefore be carried out in full separation, in order to avoid conflicts of interests and to ensure that each function is exercised in accordance with the applicable objectives. The ECB should be able to ensure that the Governing Council operates in a completely differentiated manner as regards monetary and supervisory functions. Such differentiation should at least include strictly separated meetings and agendas.' See also Schammo (2017), pp 8 and 18 (on the objectives assigned to the ECB as prudential supervisor); Hellwig (2014), p 29.

The Eurosystem executes its monetary policy in pursuit of price stability without considering financial stability concerns related to the supervisory function of the ECB. Lending of any sort, including lending of last resort, is a function traditionally assigned to monetary authorities and not prudential supervisors. A financial stability objective which is explicitly limited to the supervisory task assigned to a central bank is therefore unrelated to its lending activities and irrelevant for the interpretation of a central bank's lending authority.

These conclusions are supported by a further observation. The ECB is not the monetary authority of the Eurozone, it is an EU institution that forms part of both the Eurosystem and the ESCB. The monetary policy of the Eurozone is vested in the Eurosystem and therefore jointly in the ECB and the NCBs of the Eurozone members. In contrast, prudential supervision is conferred on the ECB in close collaboration with the national competent authorities (NCAs) of the Eurozone members. The term 'competent' refers to the powers of prudential supervision that have been conferred on these authorities. In some cases, national legislation in the Eurozone entrusts this task to national banks. In others, this task is assigned to entirely different agencies. Consequently, the Eurosystem does not operate under the financial stability objective that is implied in the task of prudential bank supervision.

In addition, Article 127(5) TFEU provides another task for the ESCB (and consequently for the Eurosystem).[154] The ESBC 'shall contribute to the smooth conduct of policies pursued by the competent authorities relating to the […] stability of the financial system'.[155] Read in context, the provision entails a specific task,[156] which complements the basic tasks under Article 127(2) TFEU. It is different from the basic tasks as its pursuit does not primarily serve the purpose of implementing the objectives of Article 127(1) TFEU. It is intended to support the financial stability objective assigned to other authorities, once again raising the issue of whether the support of other authorities' financial stability objective is compatible with the price stability objective (as discussed in Sect. 3.2.2.1). In analogy to the discussion of the financial stability objective implied in the price stability objective (above Sect. 3.2.2.1), the answer must be that the Eurosystem is mandated to execute such tasks for as long as it does not contravene its price stability objective under TFEU Article 127(1).[157]

ELA, understood as individual last resort lending to financial institutions, is the quintessential activity by which the Eurosystem can 'contribute to the smooth conduct of policies pursued by the competent authorities relating to the […] stability of the financial system' as required by Article 127(5) TFEU. In coordination with

[154] According to Lastra and Louis (2013), p 134 the provision states a 'goal' (i.e. an objective) and not a task. However, the authors emphasize that it should not be understood as a key objective of the ESCB and criticize this fact as 'shortsighted'.

[155] Art. 127(5) TFEU and, with identical wording, Art. 3(3) of the ESCB/ECB Statute.

[156] Lastra and Louis (2013), p 137 refer to it as a non-basic task and refer to the legislative history that was dominated by Member States' resistance against a larger role of the ESCB in the pursuit of financial stability and financial supervision.

[157] However, see Steinbach (2016), p 366, who implies that the financial stability objective ranks equally to the price stability objective, an assumption that would lead to different conclusions here.

efforts by the resolution authorities, ELA helps to prevent the collapse of financial institutions and thereby contributes to financial stability. Furthermore, ELA for individual institutions remains below the massive levels of liquidity needed for monetary policy implications. It is hard to see how there could be a conflict with the objective of price stability, but should there be, then the NCBs are required to avoid it.[158]

These findings lead to the conclusion that legally speaking, providing ELA could be assigned to the Eurosystem.[159] From an efficiency perspective, it should be carried out by the Eurosystem as opposed to its NCBs. The Eurosystem, not an individual NCB, can counterbalance the effects of ELA to individual banks by contrasting open market operations (effect of sterilization).[160] Furthermore, enormous reform efforts on the EU and Eurozone levels have resulted in the creation of a harmonized EU bank recovery and resolution regime[161] and in resolution powers which have even been centralized under the Single Resolution Mechanism (SRM) that applies in all Eurozone Member States.[162] ELA and bank recovery efforts must, however, be closely coordinated to achieve optimal outcomes, an objective that can best be achieved if the decision about ELA is not a national task. Instead, the decision should be made by the ECB Governing Council, which not only is the highest decision-making organ in the supervision of systemically important banks operating in the Eurozone,[163] but is also involved in the bank resolution process under the SRM.[164] No other institution or body therefore appears better suited than the ECB Governing Council to directly control all liquidity support to financial institutions.[165]

3.3 Liquidity Programmes and ELA by the Bank of England

The Bank of England forms part of the ESCB, and consequently Article 14.4 of the ESCB/ECB Statute applies to the Bank of England. However, since the UK is not part of the Euro monetary union, the Bank of England's lending of last resort decisions have direct monetary implications on the British Pound Sterling and the

[158] As required by ECB, n. 35 above, p 34.

[159] Strongly in support is Schoenmaker (2000), pp 218–219. In principle in support is Steinbach (2016), p 370, but subject to the principle of subsidiarity and therefore limited to instances in which the national banks cannot achieve the goals of ELA as effectively. Undecided are Lastra and Louis (2013), p 146: '[…] the LOLR role tests the limits of the mandate of the ECB in the pursuit of its objectives and hence the ambiguity that surrounds the provision of ELA'.

[160] Schoenmaker (2000), p 218.

[161] Directive 2014/59, n. 66 above.

[162] SRM Regulation, n. 66 above.

[163] Under the Single Supervisory Mechanism, see the Single Supervisory Mechanism Regulation (SSMR), Council Regulation 1024/2013, Conferring Specific Tasks on The European Central Bank Concerning Policies Relating to the Prudential Supervision of Credit Institutions [2013] OJ L287/63. See also Ferran and Babis (2013), p 255.

[164] SRM Regulation, n. 66 above.

[165] In his demands similar Siekmann (2016), but different in his analysis that identifies ELA as part of the Eurosystem's monetary policy operations, see the transcript of the interview at http://scnem.com/a.php?sid=8u8ai.37fcbd,f=5,n=8u8ai.37fcbd,p=1,artref=5525454 (last accessed 22 August 2017).

UK economy, but not on the Euro. ELA is a purely national task in the EU Member States that are not part of the monetary union and the above discussed (Sect. 3.2.1.2) safeguards put in place to ensure that ELA operations have no impeding effect on the tasks and objectives of the Eurosystem do not apply to the Bank of England.

3.3.1 The Lending Programmes of the Bank of England

Before the GFC, the Bank of England offered last resort lending on an individual basis subject to its discretionary decision.[166] In 2008, it expanded its lending drastically under its Special Liquidity Scheme, a lending programme operated as asset swaps. The Bank of England supplied recipient banks with UK Treasury Bills in exchange for beneficial interest in mortgage-backed securities.[167] The institutions thereby swapped assets of low liquidity for assets of high liquidity, and were allowed under the loan agreement to retain the sovereign bonds as liquidity buffers or to use them in the markets.[168]

The Bank of England sought to minimize the risk of losses by setting the following criteria. Recipient banks had to be solvent, in need of liquidity assistance on a short-term basis and able to show a realistic exit strategy from ELA. Adequate haircuts were applied to the banks' assets swapped for the treasury bills, recipient banks became subject to intensified monitoring of their liquidity management and 200 basis points were charged on the daily market value of the treasury bills in 2008–2009. Finally, lending was limited to cases where a systemic impact assessment led to the result that recipient banks could pose a threat to financial stability if they failed.[169]

In response to the GFC, in 2008–2009 the Bank of England established the Sterling Monetary Framework (SMF) as a permanent lending facility consisting of three schemes. The Indexed Long-Term Repo (ILTR) is the Bank of England's standing scheme of lending and operates through monthly auctions of liquid assets for a term of 6 months.[170] The Discount Window Facility (DWF) provides an additional funding mechanism for banks that experience unexpected liquidity issues

[166] Davies (2013), pp 306–308.

[167] Market Notice (Bank of England, 3 February 2009), available at http://www.bankofengland.co.uk/markets/Documents/marketnotice090203c.pdf (last accessed 14 August 2017). See also Lastra (2015), para. 4.30.

[168] Plenderleith (2012), p 50.

[169] On all these criteria, see Plenderleith (2012), p 69. On the systemic impact assessment, see Plenderleith (2012), pp 46, 48, 54 and 56. On the applied haircuts see the Market Notice, n. 167 above. In a later dispute between a hedge fund that held shares in Northern Rock and the UK government, the English Court of Appeal held that the governing principle of lending of last resort by the Bank of England had traditionally been the deployment of assistance in the interest of the financial system as a whole, not in the interest of specific stakeholders such as the recipient banks and their shareholders. See *SRM Global Master Fund LP v. The Commissioners of Her Majesty's Treasury* [2009] EWCA Civ 788. On the judgment, see Armour et al. (2016), p 325. On lending of last resort to Northern Rock, see Davies (2013), p 305.

[170] Red Book, n. 7 above, para. 33. See also Bank of England, 'Indexed Long-term Repo' (July 2016), available at http://www.bankofengland.co.uk/markets/Documents/money/iltrshortguide.pdf (last accessed 14 August 2017).

and meet all lending requirements.[171] It is triggered by the demand of institutions 'experiencing a firm-specific or market-wide shock' and 'allows participants to borrow highly liquid assets in return for less liquid collateral'.[172]

The ILTR and DWF are complemented by a third scheme offered by the Bank of England 'in response to actual or prospective market-wide stress of an exceptional nature'. The Contingent Term Repo Facility (CTRF)[173] applies market-wide and provides liquid assets against eligible collateral subject to the terms set by the Bank of England.[174]

These three SMF lending facilities should cover the vast majority of situations in which banks see the need to turn to the bank of England for liquidity as an alternative to (largely unavailable) market financing.[175] However, situations may arise in which institutions cannot meet the criteria for DWF lending, especially in terms of adequacy of remaining collateral.[176] In response, the Bank of England reserves the option of providing Emergency Liquidity Assistance (ELA) in addition to its SMF lending facilities.[177]

3.3.2 The Lending Authority of the Bank of England

There are no specific provisions about the Bank of England's lending operations in the Bank of England Act. As explained above (Sect. 3.3.1), the Redbook[178] contains detailed rules about the different lending facilities provided by the Bank, but these are the Bank's self-governing regulations and define its legal relationship with private entities, mainly credit institutions, but do not constitute the basis for the Bank's authority.

Article 18.1 of the ESCB/ECB Statute does not apply because under the current state of affairs in the EU, it refers to open market operations of relevance to the currency union. EU countries that do not form part of the currency union remain in charge of their national monetary policies and do not engage in transactions 'in order to achieve the objectives of the ESCB and to carry out its tasks' as postulated by Article 18.1 of the ESCB/ECB Statute. Instead, the Bank's authority follows from a combination of two basic facts. First, central banks in open market economies use open market operations to pursue their monetary policy objectives. Second, lending to banks is a classic element of the toolbox of central banks used for their open market operations.

[171] Plenderleith (2012), p 76 (para. 281).

[172] Red Book, n. 7 above, para. 33.

[173] Red Book, n. 7 above, para. 33. Until 2014, it was called Extended Collateral Term Repo, see Sterling Monetary Framework Annual Report 2013–14, Quarterly Bulletin 2014 Q2, p 6 (chart 3).

[174] Red Book, n. 7 above, para. 33; Armour et al. (2016), p 328.

[175] Plenderleith (2012), p 76 (para. 281).

[176] Plenderleith (2012), p 76 (para. 283).

[177] The Financial Services Act 2012 c. 21 (UK) sets out that the authorities must cooperate during a crisis, and a Memorandum of Understanding (MOU) operationalizes this. See 'MOU on Financial Crisis Management' (1 April 2013), available at http://www.bankofengland.co.uk/about/Documents/mous/statutory/moufincrisis.pdf (last accessed 19 November 2017).

[178] See n. 7 above.

There can therefore be no doubt that the Bank of England is authorized to lend to banks, but its lending programmes are subject to the objectives assigned to it. The Bank of England's objectives are two-pronged. The traditional price stability objective[179] is complemented by one of financial stability.[180] Consequently, the Bank of England can focus on operations to stabilize the financial sector without the need to justify them by considerations of price stability. Last resort lending to individual institutions is therefore unproblematic,[181] and even large-scale sector-wide liquidity programmes need no price stability justification.

Yet, like the developments in the US (above Sect. 3.1.2), the Bank's competence to engage in individual ELA lending has been limited. ELA, since it involves lending outside the Bank of England's SMF facilities (above Sect. 3.3.1), requires authorization by the Treasury.[182] Such authorization is obligatory in all situations where the bank cannot manage risks to financial stability without public funds being put at risk.[183]

While all SMF lending is limited to banks, the Bank of England may extend ELA to non-bank recipients if such lending seems necessary to counteract threats to financial stability, again contingent upon the Treasury's approval.[184]

3.4 Conclusions for Liquidity Programmes from a Comparative Perspective

3.4.1 Summary of Strengths and Weaknesses

The preceding parts have shown that the central banks in all three systems were able to react flexibly and effectively to the severe liquidity shortages experienced during

[179] Bank of England Act 1998 (UK) (as amended in 2012) (Bank of England Act), s. 11 reads: 'In relation to monetary policy, the objectives of the Bank of England shall be (a) to maintain price stability, and (b) subject to that, to support the economic policy of Her Majesty's Government, including its objectives for growth and employment'.

[180] Bank of England Act s. 2A (which is also reflected in Banking Act 2009 (UK) Art. 238), stipulates that '(1) [a]n objective of the Bank shall be to protect and enhance the stability of the financial system of the United Kingdom (the "Financial Stability Objective"). (2) In pursuing the Financial Stability Objective the Bank shall aim to work with other relevant bodies (including the Treasury, the Financial Conduct Authority and the Prudential Regulation Authority)'. The Bank of England is independent in its monetary policy decisions while required to cooperate with the UK Treasury and other parts of the UK government in matters of financial stability, as reflected in Bank of England Act ss. 2A(2), 9A(2), 10 and most strongly in 4(1): 'The Treasury may from time to time give such directions to the Bank as, after consultation with the Governor of the Bank, they think necessary in the public interest, except in relation to monetary policy'.

[181] See Bank of England, 'Liquidity Insurance at the Bank of England: Developments in the Sterling Monetary Framework', (October 2013) p 1 para. 7i reads: 'Liquidity insurance is a core function of the Bank of England. It directly supports the Bank's second Core Purpose—to protect and enhance the stability of the financial system—and can indirectly help to ensure monetary stability, by reducing the incidence of large and unpredictable shifts in the demand for central bank money'.

[182] Plenderleith (2012), p 79 (para. 292). See also MOU on Financial Crisis Management, n. 177 above, p 6.

[183] MOU on Financial Crisis Management, n. 177 above, p 19.

[184] Plenderleith (2012), p 77 (para. 285); Anson et al. (2017), p 53.

the GFC. The lending frameworks in place passed the severest test experienced by financial markets in Europe and North America since the 1930s. However, weaknesses and undesirable outcomes have occurred as well and led to reforms in the US and UK. In both countries, distinctions between standard and exceptional lending facilities have been introduced.

The Fed's authority to provide emergency lending to institutions that do not meet the criteria for its primary and secondary credit facilities has been curbed. Emergency lending is reserved to solvent institutions under unusual circumstances and with the approval of the Treasury. Insolvent institutions are not eligible for any Fed funding but fall under the authority of the FDIC that decides about adequate resolution measures.

The reform of the Bank of England's lending regime has resulted in the best of the three models. It clearly distinguishes sector-wide liquidity programmes from individual lending and provides different facilities tailored to the situations of institutions. In addition to sector-wide lending programmes (the ILTR and exceptionally the CTRF), banks can rely on the DWF in situations of liquidity shortages experienced by individual institutions. ELA applies when individual institutions cannot meet the criteria for DWF lending because their available assets do not meet the high criteria for adequate collateral.

Because the Bank of England also needs the Treasury's approval, its authority to provide ELA has been restricted in a fashion similar to the Fed's competence of emergency lending. Otherwise, no restrictions apply. The Fed can only support liquidity programmes of which a number of institutions profit. The bank of England's ELA is still more in line with traditional principles of lending of last resort. It may be granted to individual institutions for as long as the Treasury approves, and the Bank of England is not bound by rigid legislative requirements. It can apply the Bagehot criteria in flexible ways, e.g. follow the proposals submitted here of not spending too much time on a solvency analysis in tricky cases but instead focusing mainly on adequately adapted collateral criteria.

This latter aspect is a positive conclusion which can also be drawn from the ELA principles applicable in the Eurosystem. The principles guiding ELA in the Eurosystem address the phenomenon that last resort lending is not provided by the monetary authority of the Eurozone, requiring that the NCBs as providers of lending inform the Governing Council of the ECB as the representative of the Eurosystem about the lending details so that the latter can take action if its monetary policy goals are affected. However, the lending conditions are otherwise set by the NCBs. Recent examples confirm that such ELA support is granted to institutions that are too troubled to profit from the large-scale liquidity programmes of the Eurosystem, either because they are haunted by solvency issues or because they lack adequate collateral.

This article criticises the lending practise and legal framework of the Eurosystem in two respects. First, ELA should be executed by the Eurosystem, not by its NCBs, and a transfer of this task to the Eurosystem is proposed (Sect. 3.2.2.2). Second, the Eurosystem's single mandate leads to difficulties when financial and price stability concerns clash. In the final part of this article, this issue is tackled and a wider mandate proposed for the Eurosystem.

3.4.2 Conclusions for the Eurosystem's ELA Transactions

As explained, expansionary monetary policy operations that provide vast amounts of liquidity to the banking sector are not lending of last resort, but they have similar effects, especially in times when ordinary channels for liquidity supply have dried up. As also explained, providing such liquidity to banks is one of the quintessential tasks of the Eurosystem, but the ever-present objective of price stability sets limits to its activities. In the scenario of serious fiscal and economic differences among different regions in the Eurozone as described in Sect. 3.2.2.1, sector-wide lending to banks and potentially other financial institutions across the entire Eurozone seems incompatible with the objective of price stability if such lending leads to inflation in parts of the Eurozone. The same effect may be triggered by ELA transactions which according to the findings in Sect. 3.2.2.2, should be vested in the Eurosystem.

The legal framework under which the Eurosystem operates requires a uniform monetary policy.[185] In addition to this legal restriction, any attempt to approach the issue of significantly distinct monetary policy needs in different parts of the Eurozone by limiting lending to the regions with financial stability and economic growth concerns, would be doomed to fail for practical reasons. Any containment of capital flows requires drastic measures[186] in a single market in which the free movement of capital is a basic freedom guaranteed under the EU's most authoritative legal source, the TFEU,[187] and a shared currency further facilitates the free flow of liquidity.

It follows from these considerations that the narrowly worded objectives of the Eurosystem's monetary policy limit its lending activities. Only concerns over price stability can justify that markets are flooded with liquidity. A situation is required in which internal price stability is at stake, i.e. deflationary tendencies in the entire Eurozone or in parts of it without substantial inflation risks in others.

In comparison with this restrictive legal framework under which the Eurosystem operates, central banks with a financial stability objective can rely on their mandate when they lend to individual institutions or the entire financial sector in situations without price stability concerns. As explained above,[188] the Bank of England is one such example, enabling the Bank to engage in efforts to stabilize the financial sector even when they are (temporarily) incompatible with its price stability objective. The Federal Reserve Act achieves the same result by excluding last resort lending from the objectives ordinarily pursued by the Fed. Limitations nevertheless apply. The powers of the Fed are restricted by the need to seek the approval of the fiscal authorities.[189]

[185] Louis (2014), p 110.

[186] Memories of the 2015 Greek and 2013 Cyprus capital controls come to mind.

[187] The central provision in this respect is Art. 63 TFEU.

[188] See Sect. 3.3.2 above.

[189] See Sect. 3.1.2 above.

For the Eurosystem to avoid any of the above-addressed legal challenges to the mandate of large-scale liquidity programmes for the financial sector[190] and therefore to provide the predictable reliability that markets need in the situation of a crisis,[191] a clearer mandate for financial stability in Article 127 TFEU would be required. The requirements under which this financial stability objective may override price stability concerns should clearly be stated, ideally in the ESCB/ECB Statute.[192]

Finally, if the Eurosystem is tasked with ELA as suggested here, its preconditions should follow the principles proposed here for last resort lending to individual institutions (Sect. 2.3.1) and include the possibility to lend to non-bank institutions in exceptional circumstances (Sect. 2.3.3).

4 Summary

The analysis has shown that the Bagehot criteria, which traditionally have applied to central bank lending of last resort, require reconsideration in light of substantially changed realities in financial markets and challenges to central banks. For numerous reasons, but above all to avoid moral hazard and protect central banks' capital, recipients of lending must be solvent and lending adequately collateralized. However, swiftness is key in a situation of imminent dangers to financial stability and central banks cannot afford to lose time on lengthy assessments.

Depending on the reasons why institutions apply for lending of last resort, punitive interest rates are either entirely pointless or may have counterproductive effects because excessively high financing costs would aggravate banks' financial difficulties and worsen the prospects of an early return to normality. The principle of higher than market interest rates should therefore be abandoned entirely when institutions with impeccable collateral seek liquidity help and applied cautiously in all other instances.

The criterion of constructive ambiguity, here termed 'constructive discretion', should ensure that central banks can independently pursue their assigned objectives. It should not be exercised in ways that undermine confidence of financial markets in central banks' determination to do what it takes to stabilize the financial system in times of turmoil.

Finally, it is argued here that although undesirable from a policy perspective, scopes of emergency lending should allow central banks to include non-bank financial intermediaries if their collapse could trigger stability concerns of systemic importance.

[190] On the court proceedings challenging the legality of the securities-purchasing programmes of the Eurosystem, see Sect. 3.2.1.1 above. See also Lastra and Louis (2013), p 152 discussing the CJEU's general approach, which is to take the limitations for the Eurosystem's independence drawn by its objectives and tasks very seriously.

[191] On this aspect Hellwig (2007), p 30.

[192] Hellwig (2014), p 19. See also Lastra (2014), p 96 who argues that price stability is the core objective in normal times, but that a financial crisis requires adequate response which shifts the focus toward a financial stability objective. See also Lastra and Louis (2013), p 144 arguing in favour of a wider mandate for the Eurosystem by way of introduction of a general financial stability objective.

Central banks that are mandated to pursue their tasks in light of wider objectives can more easily justify expansionary monetary policy operations leading to large-scale liquidity support for the entire financial sector. This is especially the case if central banks are held to the objective of financial stability. If the banking or financial system is at risk of collapse because typical lending sources have become unavailable, central banks can justify the replacement of wholesale lending markets with reference to the financial stability objective. Flooding markets with liquidity is backed by these mandates even in situations when other objectives such as price stability are not at stake.

To guarantee that lending of last resort is readily available, central bank acts should explicitly authorise central banks to measures of emergency support and specify the requirements in detail. This model is pursued by the Federal Reserve Act. Alternatively, central bank acts may define lending as a task subject to the bank's objectives as is the approach in the Eurozone and the UK. In exceptional situations in which price stability concerns warrant reductions of the money supply but institutions require substantial liquidity support, only a financial stability objective allows central banks to engage in large-scale emergency lending. As explained, such situations are rare (if not nearly impossible) on the national level, but possible in the Eurozone. It is therefore argued that a financial stability objective should be clearly stated in Article 127 TFEU and its relation to the objective of price stability sorted out in the ESCB/ECB Statute. Consequently, lending of last resort should become a task of the Eurosystem, not of its individual NCBs.

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