

## **Minsky, central banking, and the future of money**

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### *Abstract*

This paper uses Hyman P. Minsky’s institutional analysis of money and banking to contribute to current debates on central banking and the future of money. It adopts a “money view” in which central banking is understood as the management of Minsky’s “survival constraint” — the requirement that financial institutions settle obligations in central bank money — through a balance of elasticity and discipline. Recent developments in the Bank of England’s operating framework, including the transition from abundant to ample reserves, expanded collateralised lending facilities, and greater emphasis on the pre-positioning of collateral, are assessed as a partial rediscovery of Minskian principles centred on the discount window and the supervision of financing structures. The paper further examines the tension identified by Minsky between the banking system’s role in providing safe and sound means of exchange and its role in financing the capital development of the economy, alongside the potential for institutional innovation to resolve this tension. It concludes that ongoing changes in monetary architecture strengthen the case for a renewed “money-credit constitution” governing the relationship between central banks, banks, non-banks, and new monetary technologies.

**Keywords:** Hyman Minsky; central banking; future of money; lender of last resort; stablecoins; central bank digital currency; non-bank financial intermediation

**JEL Codes:** E42, E44, E52, E58, G21, B31.

### **1. Introduction**

The work of Hyman P Minsky found wider popularity outside of post-Keynesian circles with the global financial crisis, in which a sudden collapse in asset prices was characterised as a ‘Minsky moment’, in reference to the economist’s financial instability hypothesis. The concept of a ‘climate Minsky moment’, referring to a sudden collapse in asset prices due to the effects of climate change or a disorderly transition to a low-carbon economy, has grown since its adoption by Mark Carney (2015) while governor of the Bank of England. More recently, the work of Minsky has repeatedly been invoked by the current governor, particularly in the context of the evolving structure of the financial system and calls for regulation to be relaxed (Bailey, 2024; Bailey, 2025a; Bailey, 2025b; Bailey 2026). Charles Goodhart (2025) has characterised the near impossibility of measuring the optimal degree of regulation on capital and liquidity as the “Minsky problem” and suggested that a Minsky moment and a future crisis may be “within eyesight”.

Yet while Minsky’s account of why financial instability develops has proved popular, much less attention has been paid to Minsky’s prescription of what can and should be done to stabilise an unstable economy, to put it in the terms of his most widely read volume. While he of course emphasised the endogeneity of financial instability, in *Stabilizing An Unstable Economy*, Minsky (1986) stressed the need for central banks to actively lean against speculative and Ponzi financing structures and to encourage hedge financing, with the

discount window as their most effective tool. Despite the attractiveness of his theories to economists, practical adoption may have been limited by the difficulty in formalising Minsky's models "into a sufficiently rigorous mathematical format to persuade the rest of the profession", as Charles Goodhart (2009) has suggested.

Especially in his later work, Minsky (1992) was concerned with the practicalities of financing the capital development of the economy, echoing Keynes' warning that this is likely to be "ill done" if "enterprise becomes the bubble on a whirlpool of speculation". Minsky's (1994) analysis of the apparent 'decline of banking', with the changing structure of the financial system and new forms of money, remains highly relevant to discussion today.

This paper explores the future of money and central banking through the prescient works of Hyman Minsky and via the 'money view' he inspired. It considers the not completely compatible requirements for the banking system to provide both safe and sound means of exchange and to support the capital development of the economy as a central problem posed by Minsky, and the potential for institutional innovation to resolve this tension.

The rest of this paper is structured as follows. Section 2 introduces the influence of Minsky, particularly his concept of the 'survival constraint', on theory today, namely through the 'money view'. Section 3 relates recent developments in the Bank of England's monetary policy framework to Minsky's writing on central banking. Section 4 shows the enduring prescience of Minsky's work for discussions on the future of money.

## **2. The 'money view' and the survival constraint**

Minsky approached the economy as a set of balance sheet relationships, with all agents able to issue liabilities to finance positions in assets. "Money not only arises in the process of financing, but an economy has a number of different types of money: everyone can create money; the problem is to get it accepted", as Minsky (1986) famously put it. Another way of expressing this could be "anyone can create money, but not necessarily liquidity." The essence of banking is the swapping of IOUs - the IOUs issued by banks are highly liquid because they are accepted in payment of debts.

Such a Minskian approach is reflected in the 'money view', popularised by Perry Mehrling, which draws heavily from Minsky's concept of the 'survival constraint', in which cash inflows must be sufficient to meet cash outflows. In the money view, the essence of an asset's liquidity is in its 'shiftability', or its 'rediscountability' - the ability for it to be exchanged for money to meet survival constraints. For banks, the survival constraint is imposed by the requirement to settle payments in central bank money. "The survival constraint is the discipline that maintains the coherence of our decentralized market system, and management of that constraint is the most important duty of the central bank", as Mehrling (2011) puts it. In this view, the art of central banking is managing the balance between 'elasticity and 'discipline'. Survival constraints instil discipline, while the central bank's use of its balance sheet to provide reserves gifts liquidity to the entire system.

Given that central banks are obliged to act as lender of last resort and provide reserves to avoid a breakdown of the payment systems, this means that policymakers have tended to validate undesirable financial structures *ex ante*. Minsky argued this necessitated much

greater supervision of the assets that banks, and indeed non-banks, are financing. For Minsky, the discount window, at which the central bank lends reserves, was the mechanism through which supervision and influence over the financial system could be most effectively exercised, with collateral policy discouraging speculative financing structures and encouraging hedge financing. As Mehrling (2011) argues, “instead of a Minskian reworking of central banking verities for modern circumstances, we got active money management along monetary Walrasian lines”, and “the natural thrust toward fragility was amplified, not dampened by the operations of the financial authority.”

### **3. Re-opening the window?**

With quantitative easing (QE) resulting in banks holding reserves far in excess of quantities required to settle payments, the survival constraint appears particularly loose. Yet, through quantitative tightening (QT), the Bank of England is draining reserves which were supplied through asset purchases, and it is judged that the UK banking system is approaching the upper end of its ‘preferred minimum range of reserves’ (PMRR), estimated to range from £375 billion to £540 billion (Dolan and Roberts-Sklar, 2025).

We are therefore seeing a transition to a system in which reserves are no longer ‘abundant’, but merely ‘ample’ - from a supply-driven to a demand-driven operating framework (Bank of England, 2025a). In managing this transition, officials have emphasised that the Bank of England is ‘open for business’ as a lender of reserves (Saporta, 2024). This role appears to be increasingly important as the growth of non-bank financial intermediation and new forms of money threatens to ‘disintermediate’ the banking sector. Not only is the Discount Window Facility ‘open for business’, but the Bank has also expanded its suite of collateralised lending facilities, including the Operational Standing Facility, as well as a Contingent Non-Bank Financial Institution Repo Facility, which would provide liquidity for a wider range of financial institutions, including insurers, pension schemes and other investment funds (Bank of England, 2025b). The number of institutions with Sterling Monetary Framework membership, and thus benefitting from access to Bank of England liquidity facilities, has increased from less than 100 in 2010, to 220 in 2025 (Bank of England, 2025c). Looking ahead, there is also the prospect of a wider range of fintech operators, including stablecoin issuers, being given access to the central bank’s balance sheet, with backstop lending facilities under consideration (Bank of England, 2025d). With the growing significance of non-bank financial intermediation, and new forms of money supposedly poised to ‘disintermediate’ the banking sector, the central bank may have to open out its liquidity umbrella to cover an increasingly wide range of institutions.

A shift from the large-scale open-market operations (OMOs) represented by QE/QT to reserves being supplied directly to a wider range of financial institutions would likely have impressed Minsky (1986), who argued that the central bank should stop relying on OMOs and instead furnish reserves by discounting bank assets. Indeed, historically, the Bank of England primarily relied on the discount window, rather than OMOs, for the implementation of monetary policy (Tucker, 2004). Minsky (1986) argued that the need for banks to “cofinance” their assets by borrowing from the central bank allows the central bank to guide business and bank financing practices, proposing that access to such cofinancing should be through business assets that reflect hedge financing. Given the Minskian view that banks are not unique in their ability to issue liabilities that function as money, it should not be surprising

that Minsky (1986) also argued for a wider range of institutions to be given direct or indirect access to the discount window by discounting eligible paper, recognising the increased importance of non-bank financial institutions.

Central banks, including the Bank of England, have encouraged greater ‘pre-positioning’ or ‘pre-pledging’ of assets at the central bank, which would serve as collateral for reserves to be accessed against in a demand-driven framework (Saporta, 2024). This would allow reserves to be drawn upon on demand, against assets posted as collateral on pre-agreed terms, enabling banks to hold longer-term assets without the risk of such assets having to be sold at fire-sale terms during stress.

The G30’s (2024) report on the lessons from the 2023 bank failures recommended requiring banks pre-position sufficient collateral at the central bank to cover all of their ‘runnable liabilities’, which is defined as all liabilities, except capital, senior and subordinated debt with more than one year remaining until maturity, swap liabilities and fully insured deposits. Such an approach to supervising the financial system through the pre-positioning of collateral would resemble the role the Bank of England played in the 19th century, where it operated primarily by buying and lending against bankers’ acceptances (Tucker, 2019). Indeed, Minsky (1986) viewed the Bank of England money-market relations prior to World War I as a model for an “apt” relation between the central bank, commercial banks and money-market institutions. The rediscounting of eligible commercial paper at the central bank allowed the banking system to be responsive to the needs of trade, which Minsky (1994) suggested provided an avenue towards “a banking and financing structure that was not only safe and secure but which also facilitated the capital development of the economy.”

Such discounting also strengthens the crucial function of central bank supervision. As Minsky (1986) wrote:

The discounting technique sets up financing relations between the central bank, commercial banks, and various money-market institutions. Bankers well recognize that a lender has the right to look over the shoulders of borrowers in order to be assured of their continued probity and creditworthiness. The Federal Reserve, as the potential and actual lender to commercial banks, would have the right to look over the shoulder and comment on the adequacy of a bank's practices. Too great a growth of ineligible paper would mean a review of the availability of credit for a bank. Bank examination would then be a natural outgrowth of the banking relation between banks and the Federal Reserve.

The pre-positioning of collateral would offer a powerful means to address the validation problem set out by Minsky. It would force financing structures to be pre-validated, rather than validated *ex ante* when the central bank is forced to relax discipline when acting as lender of last resort in order to protect the payments system. In a ‘full’ pre-positioning regime, banks would be able to issue short-term liabilities to finance sound assets in support of the long-term capital development of the economy, without the risk that such assets would have to be liquidated at fire-sale prices in order to meet survival constraints.

A greater emphasis on the pre-positioning of collateral would naturally increase the influence of the central bank's collateral framework, which determines what assets are eligible as collateral, and on what terms. According to Minsky (1986):

The central bank affects how business is financed by its power to define the assets it will protect and by selecting the assets it will use to furnish reserves to the banking system. The assets it acquires in creating reserves finance some activity which then receives favorable terms. As long as banks need central bank deposits as reserves and as long as the central bank has a monopoly of currency issue, the central bank can affect bank portfolios.

Minsky (1986) contended that the “eligibility requirement for discounting can be used to assure that to-the-asset financing flourishes”, and would likely have embraced using the collateral framework to encourage such hedge financing, given his view that central banks have a responsibility to steer the evolution of financial structures. As Minsky (1986) put it, “central banking exists because Ponzi and speculative financing exist”, and policy must continuously “lean against” the use of such finance and favour hedge financing.

#### **4. The future of money and banking**

Alongside the transition to a monetary policy framework in which reserves are no longer ‘abundant’, bank survival constraints may also be reintroduced by wider changes in the structure of the financial system displacing the historically central functions of bank balance sheets in both providing means of payments and facilitating capital investment.

Minsky (1994) identified “two not completely compatible requirements placed upon the monetary and banking system: to provide a safe and sound medium of exchange and to furnish channels for the financing of the capital development of the economy.” In a typically prescient observation, Minsky (1994) suggested that new forms of money, such as “smart cards with encoded value” (i.e, e-cash), could have the virtue of separating these two functions of banking, with means of payment backed by government debt, and contingent value liabilities financing the capital development of the economy.

This may be a direction we are heading in today, with new forms of money such as a digital version of cash or stablecoins backed by government debt positioned to replace the role of bank deposits in payments, and the growth of market-based financing of capital investment.

The prospect of large shifts from bank deposits to new forms of money has raised concerns around ‘disintermediation’. Given that banks don’t simply intermediate between savers and borrowers but instead issue deposits when they lend (Jakab and Kumhof, 2015), disintermediation can perhaps be best thought of as banks being less able to create credit without bumping up against survival constraints, as money is less likely to be held as deposits in the banking system. Though this is often considered to be the imposition of a novel form of discipline on the banking sector, it may instead represent a return to the not-too-distant past, where customers would typically withdraw cash to make in-person payments, prior to the widespread adoption of credit and debit cards. Following the principles of double-entry bookkeeping, if bank deposits are exchanged for digital currency,

this must result in some financial market participant obtaining claims against the banking sector - any loss of deposit funding could be offset by the central bank recycling 'passthrough' funding (Niepelt, 2025). The question is against what assets, and on what terms, funding is provided, bringing us back to the role of the central bank's collateral framework.

While Minsky embraced the opportunity to disentangle the payments system from channels for financing the capital development of the economy, banks remain important. Minsky (1992) viewed 'compartmentalizing' of financial institutions as a means to ensure robust financing of investment based upon anticipated cash flows, and community banks were "at the heart of a financing structure that will be biased towards resource creation." Though the increased reliance on bank deposits as a means of payment may have interfered with their ability to focus on this function in more recent decades, commercial banks have historically been relied on to provide working capital to businesses, and market-based finance may be unable to meet this need, particularly for SMEs who are not well positioned to issue marketable securities. Indeed, Minsky (1994) identified a correlation between the size of banks and size of business it can serve, and identified an ever greater concentration of banking into a small number of national branch systems as an "element in the stagnation of the British Economy over the past century".

## **Conclusion**

In a money view reading of Minsky, central banking is the art of balancing elasticity and discipline through the management of the survival constraint - the requirement for payments to be settled in central bank money. The reversal of QE, and the prospect of 'disintermediation' accelerated by new forms of money threaten to tighten this survival constraint, reintroducing the role of the central bank's provision of reserves via the 'discount window' as the means through which it instills elasticity or discipline to financing structures.

Through a Minskian framework, enhanced supervision through banks and non-banks pre-positioning collateral to cover runnable liabilities, would be a positive development.

In a prescient paper questioning the apparent 'decline of banking', Minsky (1994) concluded with a 'modest proposal' for a "national inquiry into the structure of the banking and financial system", reflecting how "radical changes now underway in technology, computing and communication means that much of what we now have may be obsolete":

I suggest that enough is amiss in our financial and banking structures so that it is time to go back to the drawing board and determine what the monetary, financial and financing arrangements should be in the 21st century. A late 20th century National Monetary Commission should be on the public policy agenda.

In the UK there had been such endeavours at regular intervals throughout the 20th century, such as the Macmillan Committee on Finance and Industry following the 1929 crash, the Radcliffe Report of the Committee on the Working of the Monetary System of the 1950s, and the Wilson Committee Review of the Functioning of Financial Institutions published in the 1980s. The profound institutional innovations explored in this paper amplify the case for a 'Money-Credit Constitution' which would set out 'rules of the game' for central banking, and

the intertwining of finance and technology provides a timely opportunity to clarify what is within and what is outside the monetary system (Tucker, 2017; Tucker, 2018; Tucker, 2019).

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