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ABSTRACT
Central banks and finance ministries have been faced with growing calls for better monetary-fiscal coordination in recent years as the solution to an array of macroeconomic policy problems, promoted by an ever-wider range of stakeholders. Yet, how can the silver-bullet solution of coordination be expected to play out across very different political-economic contexts? This paper sheds light on this question by introducing a novel typology of monetary-fiscal coordination that can help us make sense of formal and informal coordination efforts in the post-2008 era. It zooms in on a peculiar but key aspect which monetary and fiscal authorities have sought to achieve coordination on: The fiscal backing of central banks' balance sheets to insure monetary policy against losses and 'insolvency'. To understand central bankers' aversion towards loss-making despite their ability to create currency, the paper develops a political economy account which emphasizes policy-makers' interpretations of their own independence and their desire for fiscal protection, in contrast to traditional accounts of delegation that treat independent agents as discretion-seekers and power-maximizers. The typology is illustrated with case studies of the European Central Bank, Bank of England, and Bank of Japan between 2008 and 2023, each representing a different type of monetary-fiscal coordination post-crisis.

KEYWORDS
Central banking; monetary-fiscal coordination; central bank losses; European Central Bank; Bank of England; Bank of Japan

Introduction

Few recent macroeconomic policy proposals have attracted broader, and more unlikely, support coalitions than that of monetary-fiscal coordination. Since the 2008 financial crisis—during which monetary policy notoriously became the only game in town due to the lack of a coordinated fiscal policy response (Rajan, 2012)—a consensus has emerged that central bank independence should no longer equate 'loneliness' (Mabbett & Schelkle, 2019) and that enhanced cooperation

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between monetary and fiscal authorities is crucial to this end. The extent to which this view had reached the mainstream was on full display when a host of former monetary policy-makers, now advising the asset management firm BlackRock, prepared a paper for the annual gathering of central bankers in Jackson Hole in 2019 which promoted 'unprecedented policy coordination' for 'dealing with the next downturn' (Bartsch et al., 2019). Once said downturn did materialize in the wake of the COVID-19 pandemic, calls for better coordination between monetary and fiscal authorities have come to be voiced near-unanimously by mainstream (Galí, 2020) and heterodox (Gabor, 2023) economists alike and have been put forward by progressive think tanks (de Boer & Van 't Klooster, 2021) as much as by the International Monetary Fund (IMF) (Kammer, 2022). As a result, monetary-fiscal coordination has arisen as a *sine qua no* solution to a vast array of policy problems in both deflationary and inflationary environments, for both entering and exiting from asset-purchasing programmes (quantitative easing and quantitative tightening), for preventing or at least quelling turmoil in financial markets, and for tackling climate change (Allen et al., 2021; Dezernat Zukunft, 2020).

Yet, for all its popularity, we know relatively little about how attempts at such coordination have played out in the recent past and can be expected to play out across different political-economic contexts in the future. This is not due to a lack of relevant cases, however (Monnet, 2018; Ryan-Collins & Van Lerven, 2018). One such case is the fiscal backing of central banks' balance sheets to protect monetary policy against the risk of losses and negative capital. What renders this case particularly relevant is that fears of losses and the desire for fiscal protection have been suspected to be key factors in restraining central banks from providing additional stimulus during times of stress, when forceful policy action was needed ever so badly (Bernanke, 1999; Cargill, 2005; De Grauwe, 2013; Goncharov et al., 2023; Krugman et al., 1998). The issue becomes more perplexing still if we bear in mind the plethora of central banks across the globe that have been known to conduct monetary policy with persistent losses or even negative capital at different points in time and without discernible operational problems.[1] The extant economics literature suggests, and for the most part concludes, that while balance sheet losses and negative capital may not pose a *technical* problem for the achievement of monetary policy objectives, they will become a *political* problem down the road. Scholars of comparative and international political economy, however, have failed to take up these calls for an investigation into the alleged politics of central bank losses and capital as a problem of monetary-fiscal coordination to date.

To fill this lacuna, the paper puts forward a novel typology of monetary-fiscal coordination that can help us conceptualize different types of interactions between central banks and finance ministries. I argue that the way in which these interactions will play out across different cases—including the case of fiscal protection against central bank losses—is mediated not only by differences in the formal institutional design but also in the informal interpretation of central bank independence. Leveraging primary and secondary data from the European Central Bank, the Bank of England, and the Bank of Japan, I show that coordination between monetary and fiscal authorities is more likely to be achieved in contexts in which such coordination is not merely formally specified in a central bank's mandate, but is also seen to be compatible with independence in the eyes of monetary policy-makers themselves.

This paper contributes to two separate but interrelated literatures. On the one hand, it speaks to the growing political economy branch of the 'social studies of money' (Braun, 2016, p. 1067; Cohen, 2017; Murau, 2017; Norrlof, 2017) and 'social studies of central banking' literatures (Best, 2019; Coombs & Thiemann, 2022, p. 8; Gabor, 2016; Johnson, 2016; Lombardi & Moschella, 2015; Moschella, 2015; Van Doorslaer & Vermeiren, 2021), to which it contributes the first examination of an important but understudied macroeconomic policy problem with insights from cases across Europe and East Asia—in line with recent attempts in the discipline to 'revive the comparative political economy of central banking' (Wansleben, 2023, p. 1). On the other hand, it speaks to the wider political science and international relations literature on delegation to independent agencies, pushing back against the tendency in parts of that literature to treat technocratic agents as discretion-seekers and power-maximizers (McCubbins et al., 1989; Pollack, 1997; Stone, 2011; cf. Best, 2012; Kim, 2023; Mabbett & Schelkle, 2019).

The rest of the paper is organized as follows. The next section delves into the curious problem of central bank losses and insolvency by reviewing the extant literature and by uncovering a number of unresolved paradoxes and omissions. The third section puts forward a political economy account of central bankers' desire to obtain fiscal backing and theorizes the ways in which formal institutions and informal interpretations of central bank independence interact, yielding a novel typology. Sections four and five present and discuss findings from three in-depth case studies, each highlighting a different type of monetary-fiscal coordination. Implications for the political economy of macroeconomic policy and prospects for improved coordination in the future are reflected upon in the concluding discussion.

Central bank losses and the specter of 'central bankruptcy'

The problem of central bank losses and negative capital was long believed to be limited to low- and middle-income countries' mixed experiences with different exchange rate regimes, prompting the IMF to observe a degree of 'complacency' about the subject in their high-income counterparts (Vaez-Zadeh, 1991, p. 70). Up until the 2008 financial crisis, the consensus among economists seemed to be that central banks experiencing periods of negative capital were a phenomenon confined to 'mostly Latin American countries with a history of monetary instability' (Jeanne & Svensson, 2004, p. 18), given the 'improbability of losses in developed countries' (Cukierman, 2011, pp. 44-45; cf. Sims, 2004; Stella, 2005). The times of complacency, however, seem long gone. Instead, the question of central bank losses and negative capital has been propelled into the Global North as well—first at the Bank of Japan, and by now at most other central banks (Buiter, 2008; Reis, 2015; Ueda, 2003). To maintain financial stability and fend off deflation, central banks' post-crisis policies have been financed by issuing interest-bearing liabilities (in the form of commercial bank reserves), while subjecting the asset side of their balance sheets to higher default, interest, and exchange rate risks (Hall & Reis, 2015).

Debates about the prospect of losses at major central banks have soon followed, with various observers suggesting that governments should coordinate explicitly with their monetary authorities to provide them with *ex ante* fiscal support, for example in the form of indemnities (Del Negro & Sims, 2015; Pinter, 2018; Van Riet, 2017). One veteran central banker, speaking at the Bank of England anniversary conference on 20 years of central bank independence (CBI), went as far as suggesting that although the provision of fiscal indemnities was 'not foreseen as an issue in CBI', it turned out to be 'fundamental' during the financial crisis (Posen, 2017, no page number). To others, however, the idea that central banks require fiscal support is 'ludicrous', as it raises the paradoxical prospect that 'governments that can, and sometimes do, default are needed to provide the capital of an institution that cannot default' (De Grauwe, 2013, p. 526). According to this line of argument, balance sheet capital should be a non-issue since, in a fiat currency regime, a central bank's legal monopoly to issue currency enables it to always create the necessary means to service its obligations and thus to avoid insolvency.

If one seeks to establish anything close to an *economic* rule on central bank capital and solvency, then it would seem that the limit to a central bank's loss-making is implied by its inflation-fighting mandate. As the late Maxwell Fry put it, a central bank should be considered insolvent when it can 'service its liabilities only through *accelerating* inflation' (Fry, 1992, p. 91, emphasis in original). Similarly, Ricardo Reis (2015) suggests that central bank insolvency is ultimately equivalent to hyperinflation or currency reform.[2] Put differently, (excess) inflation is the hard or intertemporal budget constraint of a central bank. By the same token, however, a central bank's *accounting* capital should not place constraints on its monetary operations in and of itself (Buiter, 2008).

It is hardly surprising, then, that few to no economic studies venture to suggest an actual level or proportion of balance sheet capital that central banks should ideally hold and that fiscal authorities should commit to protecting (cf. De Nederlandsche Bank (DNB), 2022). Having dedicated an entire edited volume to the subject, Sue Milton and the late Peter Sinclair (Milton & Sinclair, 2011, no page number), for example, conclude that '[t]he main observations are that there is no single, quantifiable formula that central banks could use to calculate capital levels'. Instead, studies frequently submit that there are major political and institutional differences across jurisdictions that call for a more case study-based approach to gain a 'qualitative understanding' of the topic (Archer & Moser-Boehm, 2013; Cukierman, 2011, pp. 40-41). I aim to offer exactly this type of approach below.

What *is* surprising, however, is that central banks across the globe are so keen on posting profits (Goncharov et al., 2023) in order to maintain positive balance sheet capital (Diessner, 2023), despite the fact that 'the conventional balance sheet is a completely unreliable guide to and indicator of the financial health and strength of [a] central bank' (Buiter, 2008, p. 5). Why, then, do central bankers insist on maintaining such an accounting fiction? As Kachur et al. (2016, p. 8) observe, 'some consensus' appears to exist that persistent losses and negative capital will lead to a 'political' problem for central banks—a problem which independent monetary policy-makers presumably fear. An often-referenced speech across the literature in this regard is that of former Bank of Japan governor Toshihiko Fukui (2003, p. 8) who noted that 'concern with the soundness of their capital base might not be grounded purely in economic theory but may be motivated rather by the political economic instincts of central bankers' (Cukierman, 2011, p. 35; Stella, 2005, p. 335).[3] However, the nature and sources of these instincts are rarely, if ever, specified. We might think of such fears as the 'specter of central bankruptcy'.

At its core, the commonly assumed reason for why central bankers may fear insufficient capital is that a depletion of said capital could undermine their independence. In particular, it is argued that if its capital were to turn negative for an unspecified period of time, the central bank would have to be recapitalized by its owners—in most cases, by the government. This apparent 'injection of taxpayer money' could be refused or only be granted under certain conditions (Vermeiren, 2019, p. 38), rendering the central bank's room for maneuver dependent on government approval (Jeanne & Svensson, 2004, p. 20; Vaez-Zadeh, 1991, pp. 75–76). However, from the aforementioned vantage point that central bank capital should be considered irrelevant for the operation of monetary policy, these propositions can only appear 'completely circular' (Whelan, 2012, p. 35): In essence, the argument posits that a central bank needs capital for the plain reason that if it lost that capital, it would need it (back).

Beyond political repercussions, central bankers might fear fear itself—that is, financial markets' fear of a 'risk of change' in the institution of central bank independence (Posen, 1995, p. 255). In the words of Ulrich Bindseil and colleagues: 'Financial markets may also *perceive* a reduction of central bank capital as increasing the probability that the relationship (of independence) between the State and central bank will be reviewed and possibly changed' (Bindseil et al., 2004, p. 30, emphasis in original). Yet another source of anxiety is the general public, in the eyes of whom central bankers do not want to appear insolvent and jeopardize their legitimacy (Diessner, 2023). Taken together, the specter of central bankruptcy thus implies that once balance sheet losses surpass some unspecified threshold or once central bank capital turns negative, a range of undesirable consequences might ensue, be these of a political, public, or markets-related nature (or indeed a combination thereof).

Yet, whichever the *source* of backlash that monetary policy-makers fear, any potential *fallout* can be mitigated considerably if institutional arrangements are in place that specify what will happen in case a central bank posts losses or negative capital (Stella, 2005). Some attention in the literature has therefore been paid to the dividend rules of central banks (i.e., how their profits should be allocated) as well as to the (non-)existence of symmetrical rules in the case of losses (Ademuyiwa et al., 2018; Reis, 2015; Schwarz et al., 2014). The entirety of these provisions is also sometimes referred to as constituting a central bank's 'financial independence'. What has been neglected in the extant literature, however—owing to its focus on formal (financial) independence arrangements—is the room for informal interpretation of these very arrangements on behalf of policy-makers. It is here that the issue becomes one of coordination between monetary and fiscal authorities, which I turn to next.

The political economy of monetary-fiscal coordination post-crisis

The financial and economic crises of the past decades have turned many an economic certainty on its head. For one, the problem of systemic financial instability has alerted both scholars and policy-makers to the threat of financial dominance on top of orthodox fears of fiscal dominance (Diessner & Lisi, 2020; Gabor, 2016). An important consequence of this threat is that it has forced central banks to grapple not only with the traditional problem of government interference and activism, but also with the conundrum of government *inaction* (Gabor & Ban, 2016; Woll, 2014). By the same token, the crises have not squared neatly with the problem of *control* loss emphasized in the principal-agent literature. Instead, the notion of *principal* loss would seem to capture the predicament of post-crisis central banking much more succinctly, as the only-game-in-town syndrome strongly suggests (Diessner & Genschel, 2022; Genschel & Tesche, 2020). Monetary policy-makers have reacted to these developments in puzzling fashion. Against central expectations in the delegation literature that autonomous agents seek to maximize their powers and discretion, independent central bankers have at times sought to *limit* both (Mabbett & Schelkle, 2019; Coombs & Thiemann, 2022; cf. Fontan, 2018, p. 163; Gabor, 2018).

Building on these observations, I argue that central bankers' aversion towards recording losses and negative capital on their balance sheets stems from a desire to obtain cooperation and protection from their fiscal counterparts. A key source of this desire is the threat of financial dominance, that is, the compulsion to provide indiscriminate support for the financial system during times of stress, which monetary policy-makers will seek to share responsibility for, if they cannot shirk that responsibility altogether. At the very least, conservative central bankers will seek to obtain some fiscal protection for the accumulation of financial risks on their balance sheets. The ways in which this process will play out for different central banks is likely to be mediated by variations in the institutional design of (financial) independence arrangements. These include the aforementioned formal rules for the distribution and retention of central bank profits (and losses) and the extent to which monetary-fiscal coordination is explicitly foreseen within a central bank's mandate or not. However, *de jure* institutional characteristics are unlikely to fully determine central bankers' coordination efforts. Instead, I submit that policy-makers' *de facto* interpretation of their independence will have a discernible impact on coordination outcomes as well. In particular, how far central bankers are willing to go in terms of seeking fiscal backing depends on whether they interpret such support from their fiscal counterparts to be reconcilable with central bank independence or not.

Given that the argument hinges critically on the interplay between formal institutions (central bank mandates) and informal practices (the interpretation of independence by central bankers), I draw on Gretchen Helmke and Steven Levitsky's (2004, pp. 728-729) path-breaking work in comparative politics which suggests that the formal-informal relationship is structured along two main dimensions: First, whether effective formal institutions are in place or not, and second, whether informal practices exist that serve the same or different purposes from the formal institutions. Depending on the combinations between these two, we can identify four different formal-informal configurations. While useful and intuitive, the authors' framework only incorporates informal practices that will be effective one way or another (Helmke & Levitsky, 2004, p. 727). Although I concur with and allow for the possibility that informal practices *can* be decisive for policy outcomes, I depart from the framework by leaving room for these practices to be ineffective or even counter-productive *as well*, thereby leading to no relevant policy outcome at all—in this case, to an absence of coordination.

This suggests four hypothetical types of monetary-fiscal coordination, summarized in Table 1 below. First, and in line with Helmke and Levitsky, if coordination is formally foreseen and informally interpreted by central bankers to be compatible

Table 1. A typology of monetary-fiscal coordination outcomes.

		Formal institutions for coordination	
		Existent	Inexistent
Informal interpretation of independence	Compatible with coordination	Complementary	Substitutive
	Incompatible with coordination	Subversive	Uncooperative

Source: Author's elaboration adapted from Helmke and Levitsky (2004).

with CBI, the coordination outcome is *complementary*, that is, formal institutions and informal practices complement and mutually reinforce each other. Second, if it is not foreseen but nevertheless deemed to be permissible in practice, coordination is *substitutive*, with informal interpretations filling the gaps left by formal institutions. Third, and departing from Helmke and Levitsky, if coordination is formally foreseen but informally interpreted to be incompatible with CBI, the outcome is *subversive*, meaning that formal institutions and informal practices work at cross-purposes, with the latter undermining the former. And fourth, if it is neither formally foreseen nor thought to be permissible in practice, the outcome is *uncooperative*, meaning that coordination will not be accomplished. Above all, while the first two outcomes (complementary and substitutive) imply that a degree of coordination between monetary and fiscal authorities can be achieved, the latter two (subversive and uncooperative) suggest that coordination will be lacking. The key factor in question is thus whether informal interpretations of central bank independence allow for necessary coordination to take place or not. I now turn to illustrating these claims in the context of three major central banks' post-crisis policies.

Research design and case selection

The focus of the empirical analysis—formal and informal coordination in the case of fiscal backing—is most amenable to a qualitative, small-n research design, which can help mitigate some of the difficulties that large-N studies of central bank capital have faced in the past (Cukierman, 2011; Milton & Sinclair, 2011). Such an approach could rely on either of two methodological strategies, in triangulation with a close reading of policy documents and secondary sources. A mid-sized sample of central banks would lend itself to survey-based research (Schulz, 2017), while a smaller set of case studies can leverage interviews with current and former officials. I opt for the latter approach, due to its novelty in the context of central bank losses and capital (Bank for International Settlements (BIS), 2009; Diessner, 2019), drawing on original fieldwork and 32 elite interviews conducted at the European Central Bank (ECB), the Bank of England (BoE), and the Bank of Japan (BOJ).[4] The case studies cover events between 2008 and 2023.

The reasoning behind this case selection is as follows. Among major central banks, the ECB's and the BoE's formal arrangements for fiscal backing differ starkly, with the BoE having received an official fiscal indemnity for its operations, while the ECB has not. The extant literature tends to explain discrepancies of this sort with the difficulty of achieving coordination in a formal institutional setting in which the central bank's fiscal counterpart is not a unified treasury (as in the UK) but a collective of finance ministries (as in the Eurozone) (Illing & König, 2014;

Papadia et al., 2018). However, the inclusion of an additional case can nuance this simplistic interpretation and can help uncover the role of informal practices—namely, a case in which a unified fiscal counterpart and formal institutions for coordination *do* exist, yet, where coordination outcomes resemble those of the ECB more than those of the BoE.

While the US Federal Reserve (Fed) is the most common point of reference in the IPE literature (see, inter alia, Goodhart, 2015; Sahasrabuddhe, 2019; Musthaq, 2023; Kaya, 2022), the Bank of Japan arguably makes for a more fruitful comparison in this context for at least two reasons. First, the BOJ has experienced many of the issues of concern to this study—including the specter of balance sheet losses and negative capital—much earlier than its counterparts in the Western world and should thus provide ample ground for learning (Gabor, 2014; Moschella, 2024). Second, the Fed's (financial) independence is uniquely contingent upon its relations with the US Congress (Binder & Spindel, 2017; Conti-Brown, 2016). By contrast, for the ECB, the BoE, and the BOJ, the role of the legislature in monetary affairs is relatively subdued. The coordination problem thus lies primarily between the monetary and fiscal authorities in each case, which improves their comparability. Having said this, I shall draw out a number of relevant insights for the US case in the concluding discussion as well.

Case studies

Taking the above considerations into account, the case studies are structured as follows. First, I briefly present and discuss the formal (financial) independence arrangements in each case and demonstrate how unconventional monetary policies and financial dominance concerns gave rise to fears about balance sheet losses and negative capital. Second, I trace the informal practices of each central bank to address these fears and explain their relative success (or failure) in obtaining coordination from their fiscal counterparts. Third, I provide a concise synthesis that ties the three case studies together. Finally, I conclude by teasing out the wider implications of the analysis for students of delegation to independent agents more generally, and for the political economy of central banking and monetary-fiscal coordination in particular.

Bank of England: coordination to avoid 'complete independence'

The Bank of England formally gained policy autonomy from Her Majesty's Treasury (HMT) in 1997, when operational independence was bestowed on the nine-seat monetary policy committee (MPC). At the same time, it enjoys neither goal nor target independence (Schonhardt-Bailey, 2013, pp. 19-20), with its inflation target being formulated by the Chancellor of the Exchequer. In terms of financial independence arrangements, the BoE's balance sheet has recorded a 'small capital base' of £2.3 billion until mid-2018 (Allen, 2017, pp. 4-5) and the Bank has relatively few means at its disposal to tap into seigniorage revenues: Since 1928, the monetary income earned by its Issue Department is transferred to the National Loans Fund immediately after expenses.[5] As for the BoE's Banking Department—the unit conducting central bank operations other than issuing banknotes—a profit-sharing agreement was formally agreed with HMT in 1984, whereby post-tax profits are evenly shared between the two institutions (Bibow, 2018, pp. 28, 32).

The meagre capital base and limited capacity for profit retention made the BoE acutely aware of the specter of balance sheet losses which could have driven its capital into negative territory during the 2008 financial crisis (Interviews 1, 14). According to the minutes of court of governors and non-executive directors (NedCo) meetings from the first half of 2009, the idea of seeking a capital injection from HMT was contemplated openly at the time. However, while it was generally deemed 'appropriate to discuss the Bank's capital position' and even though 'the Treasury had accepted the need to review the Bank's capital', the view prevailed that '[i]t was not felt to be the right time at present' to do so (Bank of England, 2009, p. 442).

Instead, BoE policy-makers pursued a different strategy to obtain fiscal backing. When the Bank launched its bond-buying programmes in response to the crisis, it did so by setting up separate entities with separate balance sheets: First for its Special Liquidity Scheme of April 2008, and later for its quantitative easing (QE) programmes from January 2009 onward which were conducted through a special purpose vehicle, the Asset Purchase Facility Fund. Crucially, the fund came to be 'fully indemnified', meaning that 'any financial losses as a result of the asset purchases are borne by HM Treasury, and any gains are owed to HM Treasury' (Bank of England, 2017b, p. 4). The indemnity manifested itself through a formal exchange of letters between the BoE and HMT, with the former firmly in the driving seat: Despite the appearance of 'a formal request for permission' (Bateman & van 't Klooster, 2023, p. 10), the letters were essentially 'pre-written with spaces left blank' for the amounts of purchases that the BoE planned to conduct, which simply 'had to be inserted' and were then signed off swiftly by the Chancellor (Interview 1). How did the BoE manage to obtain successive indemnities from the government, and why would it seek those in the first place?

Evidence from public speeches and elite interviews suggests that the answer is two-fold. First, the Bank had already flagged much ahead of the global financial crisis that if it ever were to conduct bond purchases, these would require fiscal backing and political support. Speeches by Mervyn King and Paul Tucker, for example, emphasized as early as 2004 that if the UK economy 'were in a liquidity trap' where 'interest rates are at their zero lower bound', this would create 'a need to co-ordinate with government', up to a point where effective monetary policy 'relies on successful cooperation between central bank and finance ministry' (King, 2004, p. 16; Tucker, 2004, p. 35). According to decision-makers involved at the time, raising these issues upfront was an attempt at doing away with the 'element of surprise' in case the central bank was to incur substantial losses (Interview 14), thereby roping in the government to 'accept responsibility' for these (Interview 10).

Second, when the crisis did erupt, the BoE signaled its resolve towards self-limitation in case the Treasury were unwilling to provide fiscal protection. In the words of several former members of the MPC, the indemnity was deemed to be 'necessary for unconventional policy to work' (Interviews 4, 14), to the extent that if it had not been granted, 'we would not have carried out the policy' (Interview 10). Importantly, however, the provision of successive indemnities was not just perceived to be a technical fix to protect the BoE from the specter of losses—as a mere substitute for retaining more profits or increasing its capital base—but was closely connected to policy-makers' interpretation of the limits to their own independence. As one former executive puts it, 'higher capital does not resolve the fundamental issue of who takes fiscal policy decisions', given that carrying out bond purchases without fiscal backing would amount to 'asking for too much independence' (Interview 10), while another explains that 'the indemnity was about tying the Treasury into the rescue of the financial sector', in light of the fact that 'central bank independence does not mean *complete* independence' (Interview 1).

Once the dust of the financial crisis had settled, the BoE and the Treasury complemented their implicitly agreed responsibilities with a series of formal Memoranda of Understanding (MoUs) that took no less than five years to negotiate.[6] This included an MoU clarifying the 'financial relationship' between the two institutions and endowing the BoE with a capital target of £3.5 billion as well as a ceiling and a floor guaranteed by HM Treasury (2018). The agreement has been applauded by some as 'future-proofing' the BoE's financial independence (Sandbu, 2018), as it leaves the Bank with ample discretion in terms of managing the size of its balance sheet while removing any uncertainty over who bears the financial responsibility for potential losses resulting from that management. However, and remarkably, the MoU has also entrenched the explicit need to inject fiscal resources into the central bank as soon as accounting losses surpass the threshold implied by the floor of the new target (Giles, 2022), thus setting the stage for sizeable, visible, and potentially awkward quasi-automatic transfers from the Treasury to the BoE.[7]

Both of these characteristics—discretion for the Bank in terms of self-limitation, and awkwardness for the Treasury—have come to a head in recent years. During the 'mini-budget' saga of Liz Truss's short-lived administration in September and October 2022, for example, the BoE initially hesitated to respond, fueling market expectations that it was doubling down on its earlier announcement of quantitative tightening (QT) (Onaran, 2022, pp. 13-14). The Bank then intervened briefly but forcefully to counter disruptions in the pensions market by purchasing gilts on a large scale for thirteen days (Hauser, 2022), only to make it clear that it would resume QT at its own discretion by the end of October again, thereby contributing to the eventual downfall of the government (Coggan, 2023). On top of this, the fiscal bill for QT has been growing with each of the Bank's interest rate hikes. At the time of writing, the required transfers from the Treasury to the BoE were estimated to amount to no less than £150 billion in total, up from an earlier estimate of £100 billion (Strauss, 2023). While the sheer size of the fiscal injections needed to cover the BoE's losses raises the question of how advisable a fully explicit coordination regime in the case of fiscal backing truly is, the mini-budget saga raises a deeper set of questions altogether about democratic accountability and the power to influence the fate of a UK government.

European Central Bank: non-coordination to preserve 'full independence'

Since its inception in 1998, the ECB has been perceived as one of the most independent central banks in the world. Its 'unprecedented' independence stems not only from the lack of a Eurozone fiscal authority or government that it could be independent 'from' in the first place (Goodhart, 1998), but also from the relative vagueness of its mandate which has conferred a considerable degree of 'goal independence' onto the central bank (De Grauwe, 2018, pp. 176-177). In addition, the ECB's *financial* independence is largely implicit and has remained one of the least formally defined and developed dimensions of its autonomy (De Lhoneux, 2006, pp. 169–170; Scheller, 2006).

The European Treaties stipulate that ECB profits should be distributed to the EU national central banks (NCBs) as its official 'shareholders' (Treaty on the Functioning of the EU, Art. 29), while any losses are first to be offset against a buffer of retained earnings called the 'general reserve fund' (TFEU, Art. 33(2)). Losses exceeding the fund (which is limited to the size of the ECB's capital base; Art. TFEU 33(1)) can further be matched by drawing on the national central banks' current—and presumably future—monetary income. The Treaties remain silent, however, on what ought to happen if the ECB or the national central banks were to record a loss large enough to wipe out their capital bases. At best, there appears to be an implicit assumption that the 'endowment' (Interview 12) of the central bank with a certain amount of capital—initially set at €5 billion (Art. 28(1))—entails a requirement for it to be recapitalized by the national central banks if that endowment were to fall below zero (Interview 13). It is also assumed that the ECB would be able to carry losses and negative capital forward on its balance sheet for an unspecified number of years (Bunea et al., 2016), although this assumption has yet to be put to the test.

These formal arrangements and implicit assumptions notwithstanding, the ECB repeatedly displayed a wariness towards taking risks onto its balance sheet during the global financial and Eurozone crises (Diessner & Lisi, 2020), suggesting a lack of effective coordination in terms of who is to take financial responsibility for its crisis policies. Among a flurry of *ad hoc* measures aimed at the protection of its balance sheet, the central bank announced that it would double its capital base with paid-up contributions from the national central banks in December 2010 (European Central Bank (ECB), 2010), puzzling market participants and expert observers alike with the move (Financial Times (FT), 2010). One implication of the announcement has been the latent constraint that it placed on the otherwise 'wide discretion over monetary policy' and 'extensive powers to intervene in financial markets' that the ECB's mandate formally affords (Art. 18 & 20; Mabbett & Schelkle, 2019, p. 12), by signaling that losses from the use of these powers that exceed its capital would not be acceptable to the central bank. As a result, the decision was interpreted as sending a 'stern reminder' and 'powerful signal to government leaders' that crisis policies 'aren't without risk' (Wall Street Journal (WSJ), 2010).

At the same time, however, the ECB's discretionary doubling of its capital base has remained a one-off, due to the fact that it was made possible by an EU Council regulation which 'establishe[d] a limit for future increases in the ECB's capital' to the tune of 'an additional amount of up to EUR 5000 million' (EC Regulation 1009/2000). Any further top-ups in its capital or, by implication, the general reserve fund, would therefore require a new or amended regulation first. Consequently, the measure was not perceived as offering sufficient fiscal protection at the time (Interviews 2). Instead, the ECB president ventured to send an informal and thus far unpublished letter to the president of the Eurogroup in an attempt to alert Eurozone finance ministers to their hypothetical obligation to financially support the central bank in case its risk-taking were to result in losses that exceeded its capital base (Interview 13). The letter was eventually responded to by the Eurogroup president, in the affirmative (Interview 31).

The lengths to which the ECB went to make clear to governments that it was 'sovereign in taking those decisions' and would therefore not be 'embarking on a quid pro quo' (Interview 13) suggest that these were uncooperative moves rather than substitutive ones. When asked about why ECB monetary policy-makers did not consider coordinating with the Eurogroup in a more explicit fashion like the Bank of England had done with the UK Treasury, a former executive board member stressed that the scope for monetary-fiscal coordination in the Eurozone was understood to be limited by the need to preserve the 'highest quality of independence' which the ECB enjoys, compared to other central banks which were deemed to be 'non-fully independent' (Interview 13).

One might be tempted to submit that this self-interpretation made no difference to the ECB's crisis management in practice and that the central bank succumbed to the pressure of financial dominance anyway without displaying too much care for its balance sheet, as suggested by its pledge to 'do whatever it takes to preserve the euro' in 2012 or by the launch of its Asset Purchase Programme in 2015. Yet, the opposite is arguably true. The damaging effects of non-coordination in the name of a strict separation between monetary and fiscal policy, defended most ardently by German hawks on the ECB's governing council, did not manifest themselves in *preventing* needed policy action altogether, but in *delaying* a more forceful use of the ECB's balance sheet substantially (Honohan, 2018, pp. 15-17). This delay stood in marked contrast to the central bank's major peers across the globe and contributed to needlessly letting the Eurozone drift into a Japanese-style 'deflationary regime' (ibid.; Posen, 2012; Rostagno et al., 2019; Braun et al., 2022).

The elusiveness of monetary-fiscal coordination to achieve fiscal backing in the Eurozone has meant that the extent to which an actual recapitalization of the ECB could be carried out smoothly—with each member state chipping in through its national central bank—remains an open question to date. One cop-out strategy has been to offload some balance sheet risks to the NCBs themselves: What enabled the ECB to overcome internal opposition to its belated QE programme was the decision to minimize loss-sharing by means of conducting 80% of government bond purchases *via* the NCBs (Vermeiren, 2019). The specter of central bankruptcy has thus effectively been outsourced to the member states (Buiter, 2020). That bond purchases under the more recent Pandemic Emergency Purchase Programme of 2020 and under the potential (if ever activated) Transmission Protection Mechanism of 2022 are conducted through the ECB's balance sheet once again has restored the Eurosystem's inherent capacity to provide risk-sharing to some extent (see Schelkle, 2017). However, this does not do away with the fact that most NCBs continue to be on the hook for large-scale losses from QE and, more importantly, that it remains unclear what exactly will happen in each case when these losses materialize throughout the post-pandemic tightening of monetary policy (Maduro et al., 2021, pp. 4, 6-7; Reichlin et al., 2021, pp. 56-59). A string of nervous news headlines and 'profit warnings' across different member states in 2022 and 2023 attests to the challenges ahead in this respect (Chazan & Arnold, 2023; Moller-Nielsen, 2022; Treeck, 2022).

Bank of Japan: non-coordination to avoid 'loss of independence'

The Bank of Japan was officially granted instrument and target autonomy in 1998 through a revision of the BOJ Act which enshrined decision-making powers in its policy board (BOJ Act, Art. 14, 15). The revision leaves room for interpretation with regard to the BOJ's independence.[8] While the central bank's autonomy 'shall be respected' (Art. 3(1)), the Act also stipulates that the BOJ 'shall always maintain close contact with the government' (Art. 4). Moreover, the Ministry of Finance (MOF) 'may request the [BOJ] to conduct the business necessary to maintain stability of the financial system' (Art. 38.1), and it retains powers of approval over several of the central bank's administrative functions, including its operating budget (Art. 7, 11, 51). As such, an ample degree of coordination between the BOJ and the MOF is formally foreseen, at least in principle.

In terms of financial independence arrangements, the BOJ is endowed with a conspicuously small—and thus essentially symbolic—capital base of ¥100 million (less than $1 million) (Art. 8(1)). Moreover, the central bank shall retain no more than five percent of any surplus 'as a reserve fund', but it may retain more 'when it finds it especially necessary' and 'upon authorization from the Minister of Finance' (Art. 53). What is most striking about the BOJ's financial independence is that the BOJ Act *removed* existing provisions under which the central bank had been 'legally indemnified against losses' by the government, thus creating 'ambiguity' as to what would happen in case such losses were to materialize (Muguruma, 2018; Park et al., 2018, p. 95). Put differently, doing away with fiscal protection was seen as a prerequisite to sever the links between monetary and fiscal policy in Japan in the first place (Interviews 17, 29). The striking tension between obtaining fiscal backing while maintaining autonomy from the Ministry of Finance (MOF) would render the BOJ particularly susceptible to the fear of central bankruptcy in later years.

Amid persistent deflationary pressures after the collapse of Japan's asset price bubble in the early-1990s, the BOJ notoriously became the first central bank to adopt a zero-interest rate policy in 1999, followed by a small-scale round of QE in 2001 (Moschella, 2024; Park et al., 2022). Before embarking on the latter, however, BOJ policy-makers voiced strong concerns over the central bank's capital position, which were met with incredulity by Western economists at the time (Krugman et al., 1998; Meltzer, 1999; cf. Fujiki et al., 2001). Ben Bernanke (1999, p. 24), for one, lamented a 'self-induced paralysis' at the BOJ, finding it 'disturbing' that such 'trivial considerations as the distribution of paper gains and losses between the monetary and fiscal authorities might block needed policy actions'.[9]

Although the BOJ's experience with unconventional monetary policy and its fears of central bankruptcy had thus been far from new, the Great Recession of the late-2000s and early-2010s greatly exacerbated both, owing to the quantitative and qualitative easing (QQE) policies implemented under the banner of Abenomics. In light of a rapid expansion of the BOJ's balance sheet, the onset of major losses has frequently been portrayed as merely a matter of time in Japanese policy debates—and as all but certain upon exit from QQE (Fueda-Samikawa & Takano, 2018; Fujiki & Tomura, 2017). The way the BOJ has dealt with these concerns shares some similarities, but also bears marked differences, to its peers in the UK and the Eurozone. Unlike the BoE, the Japanese central bank has not obtained a formal fiscal indemnity from the government. Moreover, and unlike the ECB, it does not seem to have sought to extract an informal recapitalization promise from its fiscal counterpart either.[10]

Instead, and similarly to some national central banks in the Eurosystem, BOJ policy-makers have settled on retaining ever-larger parts of central bank profits while limiting pay-outs to the MOF (Interview 17; Muguruma, 2018). This has required a recalibration of the central bank's accounting rules in line with Article 53 of the BOJ Act, which came into effect in November 2015 (Interview 18). The impact of profit retentions is clearly identifiable in the BOJ's balance sheet and can be traced precisely to the second half of the fiscal year 2015. Whereas the BOJ's 'provision for possible losses on bonds transactions' had stagnated at around ¥2.2 trillion for most of the preceding decade, it nearly tripled from late-2015 onwards and stood at over ¥6 trillion in 2023 (around $50 billion under 2015 exchange rates) (Bank of Japan, 2013b, 2015, 2016a, 2016b, 2016c, 2018, 2023).

While these achievements have been welcomed by BOJ policy-makers as a 'step in the right direction' (Interview 17), they involve a painstaking annual procedure in which the central bank identifies a desired amount of retained earnings which then requires MOF approval (Interview 26; Nikkei Asian Review, 2015), leaving much scope for subversion in the future. The process has not been rendered any easier by the fact that relations among macroeconomic policy elites in Japan have tended to be fraught ever since the revision of the BOJ Act, which was seen as empowering the BOJ at the expense of the MOF (Cargill, 2005; Park et al., 2018, ch. 4; Takahashi, 2017). As a result, mutual suspicion between monetary and fiscal authorities has led to a situation in which central bankers perceive their hard-won autonomy as difficult to reconcile with explicit monetary-fiscal coordination (Interviews 18, 28, 29), encapsulated by the view that 'ex ante coordination means a loss of independence' (Interview 30).

Synopsis of case studies

Looking across the three cases affords drawing three overarching conclusions. First, coordination between monetary and fiscal authorities on the issue of fiscal backing can take a variety of forms, including public and non-public letter-writing (to solicit explicit or implicit indemnification or recapitalization) as well as recurring negotiations over the distribution (and retention) of central bank profits. Second, what matters for effective coordination outcomes is not the existence of a unified fiscal counterpart *per se*, but the ways in which relations between monetary and fiscal authorities are perceived and upheld, as the contrast between the Bank of England and the Bank of Japan on the question of fiscal indemnities suggests. Third, and most important, central bankers' interpretation of their own independence—and in particular the extent to which independence is believed to allow for or even require coordination with their fiscal counterparts (as displayed in the case of the BoE but not in the cases of the ECB or the BOJ)—is a key ingredient for achieving such coordination (cf. Quaglia & Verdun, 2023). Taken together, the case studies exhibit the following coordination outcomes in Europe and Japan post-2008 (Table 2).

While formal institutions and informal interpretations of independence have been complementary in the case of the UK, the interpretation of independence as

Table 2. Monetary-fiscal coordination outcomes in Europe and Japan post-2008.

		Formal institutions for coordination	
		Existent	Inexistent
Informal interpretation of independence	Compatible with coordination	Complementary UK	Substitutive —
	Incompatible with coordination	Subversive Japan	Uncooperative Eurozone

Source: Author's elaboration adapted from Helmke and Levitsky (2004).

irreconcilable with coordination has led monetary and fiscal authorities to work under conditions of suspicion and subversion in the case of Japan, and to uncooperative and delayed policy action in the case of the Eurozone. At a more general level, and surprisingly for canonical accounts of delegation to autonomous agencies, the politics of fiscal backing across the three cases illustrates how independent central banks can seek to attain self-limitation rather than power-maximization at times. What matters to monetary policy-makers in this regard is not merely the achievement of a technical fix to protect themselves from negative capital, but rather the attainment of a political commitment to take responsibility for crisis policies.

Conclusion and outlook

That the political economy of central banking has been subject to tremendous change in recent years is an understatement. The pandemic-induced economic shock and the resulting financial disruptions brought about yet another round of balance sheet expansion by central banks at an even steeper pace, and this time not only in high-income but also in middle-income countries (Tooze, 2021). This might lead us to conclude that central banks across the globe have faced little to no constraints on their monetary operations after all, including from the specter of losses and the desire for additional fiscal backing. A look beneath the surface reveals a more nuanced picture, however.

While not part of this paper's cross-case comparison for the aforementioned reasons, the example of the US Federal Reserve in the first year of the pandemic can be particularly instructive here. Although the Fed undoubtedly acted decisively to avert the onset of another Great Recession—including by invoking the 'unusual and exigent circumstances' of Section 13(3) of the Federal Reserve Act—it did so only with the formal approval of the Secretary of the Treasury and, more importantly, on the basis of a vast fiscal guarantee that had to be authorized by the US Congress (Tankus, 2020). A striking consequence of these limitations has been that a substantive part of the Fed's crisis programmes ultimately went unused (Smith & Fox, 2020), before the Trump administration single-handedly decided to pull the plug on them altogether (Politi & Platt, 2020). One might argue that the underutilization of Fed support was a cunning ploy to save money while nonetheless doing what was necessary to stabilize the financial system through sheer promises alone (analogous to the ECB's whatever it takes of 2012; see Gilchrist et al., 2021), but it did have material consequences for those reliant on these programmes: By far the most underused facilities turned out to be those pledged for municipalities, paycheck protections, and a number of Main Street initiatives—while financial sector support programmes were generously disbursed—throwing the distributional politics of emergency central banking into sharp relief (Claveau et al., 2022; Smialek, 2023).

The need for difficult distributive decisions and for improved monetary-fiscal coordination can be expected to become yet more pressing in the coming years, as policy-makers seek to strike an all but impossible balance between tightening monetary policy in the face of a post-pandemic and war-induced inflationary upsurge, maintaining financial stability, and avoiding recession. For instance, a painful dilemma between price stability and financial stability in the context of monetary policy normalization appears to have become widely accepted by now: Either central banks maintain loose policies and fuel inflation, or they tighten policy too much and risk financial turmoil. However, a way out of this conundrum arguably exists. It hinges on enabling central banks to incur and withstand large-scale balance sheet losses (Buiter, 2023; Goodhart & Pradhan, 2021)—turning the dilemma into a trilemma, according to which policy-makers will have to accept one of the following three instabilities: Price instability, financial instability, or central bank insolvency. The latter option prevails if monetary authorities raise interest rates to achieve price stability *and* continue to purchase assets in order to maintain financial stability and support the wider economy, meaning that the value of these very assets will erode and wipe out their capital bases. Compared to high inflation, financial instability, or recession, negative balance sheet capital would seem to be the lesser evil. Yet, how best to achieve such a 'benign insolvency', given the plethora of monetary-fiscal arrangements described above?

The Fed can provide some inspiration in this regard as well. Its accounting rules allow recording negative profits in a so-called 'deferred asset', which permits the central bank to carry losses forward on its balance sheet until monetary policy operations return to profitability in the future (English & Kohn, 2022). This type of managed (not to say stealth) central bankruptcy was also precisely the course of action that the German Bundesbank chose to pursue throughout the 1970s (Bibow, 2018), when it suffered major losses on its dollar reserves due to the appreciation of the Deutschmark amid the demise of the Bretton Woods system (Rademacher, 2022). The Fed and Bundesbank cases illustrate the fourth and final type of 'substitutive' monetary-fiscal coordination (Table 2), in the sense that informal and discretionary balance sheet management by the central bank which is tolerated by the fiscal authority can work as a substitute for formal fiscal protection. Such an approach would seem more elegant—or at least less disruptive—than the quasi-automatic fiscal injections seen in the case of the Bank of England (or the Swedish Riksbank).[11] This article would predict that the success or failure of any such coordination effort will depend less on the formal institutional design of central bank independence, and more on the ways in which that independence is interpreted and practiced as allowing for necessary coordination or not. The upshot of that finding is that it falls to policy-makers themselves to reinvent their relations, if monetary-fiscal coordination is to live up to the great expectations of its numerous advocates.

Notes

1. These range from Europe (e.g., the Bundesbank and Czech National Bank), to Asia (e.g., the Bank of Israel and Bank of Korea), to South America (e.g., the Central Bank of Chile), and

beyond (Vaez-Zadeh, 1991; Bank for International Settlements (BIS), 2009). On the experience of the Bundesbank, see Bibow (2018) and Buetzer (2022, p. 23).
2. In this tradition—going back to Phillip D. Cagan's (1956) work on the monetary dynamics of hyperinflationsBuiter and Rahbari (2012) as well as Sascha Buetzer (2022) compute 'non-inflationary loss absorption capacities' for different central banks, based on the net present value of future seignorage income.
3. As Cecchetti and Schoenholtz (2015, no page number) aptly suggest: 'If you ask monetary economists whether we should care if a central bank's capital level falls below zero (even for an extended period of time), most will say no. Pose the same question to central bank governors, and the answer in nearly every case will be yes'.
4. The majority of interviewees (18) were at the top-executive level, with the rest at senior-staff level. Interviews were semi-structured, recorded, and transcribed, and prior written consent as well as research ethics approval were sought (see supplementary appendix for an overview).
5. Symmetrically, a potential deficit 'is not taken against income but is settled by a transfer from the National Loans Fund' (Bank of England, 2017a, p. 138).
6. This is analogous to how the Bank has come to 'lobby' its political principals for a greener mandate in recent years (Jackson & Bailey, 2023).
7. We can think of compulsory fiscal injections of this sort as 'Zugzwang recapitalization', parallel to Daniela Gabor's (2022) Zugzwang quantitative tightening. The problem is exacerbated considerably if the central bank marks its assets to market and records unrealized losses, as in the case of the Swedish Riksbank in 2023 (Lindberg & Ronkainen, 2023; Rolander, 2023).
8. The BOJ was granted 'autonomy' rather than independence because, under Japan's post-war constitution, no entity can be formally independent within the state. As a result, according to a former policy board member, 'people never fully understood what central bank independence actually means' (Interview 29).
9. Ironically, the former Fed chairman came to express many of these 'trivial considerations' himself 15 years later, warning that a raid on the Fed's capital would be 'not good optics or good precedent' (Bernanke, 2015, no page number). Reflecting on his prior critical assessment of Japanese monetary policy at a BOJ conference in 2017, he quipped that being a practitioner made him 'a little bit more sympathetic to central bankers' than he had been as an academic (Bernanke, 2017, p. 23).
10. Although the existence of an informal agreement has been insinuated in the context of a joint statement issued by the BOJ and the government at the outset of QQE (Bank of Japan, 2013a; Orphanides, 2018, p. 16), interviewees disconfirm that it entails either indemnification or recapitalisation (Interviews 17, 18, 26).
11. Another way to mitigate large-scale losses would be to reduce (or end) the remuneration of commercial bank reserves (De Grauwe & Ji, 2023). Central bankers in the Eurozone and beyond seem poised to go down this route, if only tentatively and incrementally so far (see European Central Bank (ECB), 2023).

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