JMFS
Journal of Management and Financial Sciences

Volume XVIII
•
Issue 58
pp. 89–115
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Financial Situation of Central Banks and its Broader Policy Implications

Abstract

This article explores the consequences (or potential consequences) of an unfavourable financial situation of a central bank, i.e. losses that could lead to the appearance of negative capital. Such a situation is not irrelevant or neutral for an economy. The aim of the article is to identify the links through which the unfavourable financial situation of a central bank (losses, negative capital) affects various components of the economic policy of the state. We adopt two perspectives – firstly, a more aggregated perspective, wherein we simulate the impact of changes in key interest rates on the financial situation of central banks and the implications of these changes for transfers to the state budget; secondly, a more disaggregated perspective, wherein we identify three groups of consequences of the situation: 1) monetary, 2) fiscal, and 3) related to the independence of the central bank and potentially other dimensions of economic policy.

Keywords: central bank, financial result, loss, equity, monetary policy, fiscal policy, economic policy
JEL Classification: E42, E52, E58, E63

1. Introduction

In recent years, several important central banks have shown losses and even negative capital, which are by no means new, unprecedented phenomena in the history of central banking. As reported by Goncharov et al. [2023, p. 3000], among the 155 central banks surveyed for the years 1992–2015, 98 of them (i.e. 63% of the sample) reported a loss at least once during this period. Negative equities were less frequent, but also occurred – e.g. Bell et al. [2023 p. 5] report that in the years 2002–2021, 10 of the 32 central banks of countries classified as emerging economies and/or small open economies had negative equities for short periods, while three of them for a third of this period.

Despite losses and negative capital, these banks continued to conduct their stabilisation activities in a generally efficient manner, i.e. both monetary policy and macroprudential policy (if the latter were included in their mandate). It is also often emphasised that central banks do not need to have profits and positive capital to achieve their statutory goals, or – alternatively – that central banks' losses and negative capital do not limit their effectiveness, adding that the mission of monetary authorities is to achieve public goals, and not generate maximum profits.

A novelty in recent years is that losses (and sometimes negative capital) have also appeared on a large scale in the central banks of advanced countries, i.e. in institutions that previously very rarely (if ever) experienced such a phenomenon. Moreover, as various forecasts indicate, these new phenomena are most likely to be of a long-term nature. In this situation, we hypothesise that, contrary to what is often suggested, the financial situation of central banks is not indifferent (neutral) neither to the monetary policy itself, nor to the fiscal policy, nor to the economic policy as a whole conducted by the state.

This article explores the consequences (or potential consequences) of an unfavourable financial situation of a central bank, i.e. incurring losses, which may ultimately cause the appearance of negative capital of the institution. More precisely, the aim of the article is to identify links in the economy through which the unfavourable financial situation of the central bank (as evidenced by its losses and negative capital) has an impact on other components of economic policy. We adopt two perspectives – in the first, more aggregated perspective, we analyse the impact of changes in key interest rates on the financial situation of central banks and the implications of these changes for transfers to the state budget, while in the second, more disaggregated perspective, we point to three groups of such linkages: 1) monetary, 2) fiscal, and 3) for central bank independence and, as a result, potentially also for other aspects of the state's economic policy.

The study has the following structure. Firstly, we briefly present the financial situation of twelve central banks in the years 2021–2024. In the next section, we analyse whether central banks can go bankrupt and under what conditions – despite incurring losses and showing negative capital – can they continue to effectively conduct stabilisation policies. In the fourth

section, we discuss the main causes of central bank losses in recent years. Against this background, in the following section, we present a simple model of central bank finances, we simulate the impact of changes in the basic interest rates on the financial situation of monetary authorities and their transfers to the state budget, and we also discuss the importance of accounting policy (rules) for the financial data presented by central banks. In the sixth section, we analyse the possible effects of an unfavourable financial situation of central banks, grouped into the three blocks already mentioned: monetary consequences, fiscal consequences, and consequences for their independence, which may allow for changes in various other areas of economic policy. We conclude by summarising our considerations.

2. The financial situation of central banks in 2021–2024

In recent years, we have received an increasing number of signals that central banks are incurring losses, and even showing negative capital. Table 1 lists a dozen central banks and characterises their financial situation for 2021–2024.

Table 1. The financial situation of selected central banks in 2021–2024 (financial result in % of GDP, equity in % of balance sheet total)

Central bank	2021	2022	2023	2024
Bank of England				
- Financial result	0.0	0.1	0.2	0.2
- Equity	0.5	0.5	0.6	0.6
Bank of Japan				
- Financial result	0.2	0.4	0.4	0.4
- Equity	0.6	0.8	0.8	0.8
Bank of Sweden				
- Financial result	0.0	−1.4	0.3	0.0
- Equity[a]	10.2	6.6	8.7	16.0
Czech National Bank				
- Financial result	−0.6	−5.8	0.7	1.9
- Equity	−1.8	−14.9	−12.5	−7.5
Eurosystem:				
European Central Bank				
- Financial result[b]	0.0	0.0	−0.0	−0.1
-- Adjusted result[c]	0.0	−0.0	−0.1	−0.1
- Equity	7.2	7.4	6.6	7.8
Bank of France				
- Financial result	0.0	0.0	0.0	−0.3
-- Adjusted result[c]	0.2	0.2	−0.4	−0.6
- Equity	8.1	9.3	10.6	13.4

cont. Table 1

Central bank	2021	2022	2023	2024
German Federal Bank				
- Financial result	−0.0	−0.0	−0.1	−0.4
-- Adjusted result[c]	0.0	0.0	−0.5	–0.5
- Equity	6.5	7.1	8.0	10.6
National Bank of Slovakia				
- Financial result	0.1	−0.5	0.0	0.0
-- Adjusted result[c]	0.2	−0.5	−0.3	−0.3
- Equity	−1.7	−2.2	−2.6	−1.7
Federal Reserve System				
- Financial result[d]	0.5	0.2	−0.4	−0.3
- Equity[e]	0.7	0.5	−1.0	−2.4
National Bank of Hungary				
- Financial result	−0.1	−0.6	−2.3	−1.0
- Equity	3.0	0.9	−6.8	−6.0
National Bank of Poland				
- Financial result	0.4	−0.5	−0.6	−0.4
- Equity	8.4	4.5	−1.3	1.9
Swiss National Bank				
- Financial result[f]	2.4	−18.0	−1.7	8.4
- Equity	19.3	7.5	7.9	16.8

[a] Calculated as the sum of the following items: "Equity", "Revaluation accounts", "Result for the year", and "Financial risk provision". See e.g. Sveriges Riksbank [2023, pp. 97–98, 112].
[b] As a percentage of eurozone GDP.
[c] "Adjusted result" is the financial result before the creation or release of a provision for financial risk.
[d] The item "Reserve Bank and consolidated variable interest entities net (loss) income before providing remittances to the Treasury" is given as the financial result. See e.g. Fed [2024, pp. 4, 39–47].
[e] Calculated as the difference between the items "Total Reserve Bank capital and consolidated variable interest entities non-controlling interest" and "Deferred asset – remittances to the Treasury." See e.g. Fed [2024, pp. 3, 61–62].
[f] The item "Distributable annual result" is reported as the financial result. See more on it, for example, in Gerlach et al. [2021].
Notes:
(1) equity is assumed to be the sum of share capital, reserves (including retained profits/losses), unrealised gains, risk provisions and profit or loss for the year. Not every central bank calculates and presents its equity in a similar way, e.g. the Federal Reserve System does not include in its equity both the loss of the current year and the uncovered losses of previous years. On the other hand, the Bank of Sweden does not include unrealised gains, the current year's result and the provision for financial risk in its equity;
(2) the data refer to fiscal years, which do not always coincide with calendar years (in the comparison, this reservation applies to the Bank of England and the Bank of Japan).

Source: own analysis based on the annual reports of the central banks mentioned. GDP: AMECO database (data as of 19 May 2025).

Table 1 presents the calculations for twelve central banks. These are mainly banks whose finances we have been observing and analysing for a long time[1] (the Eurosystem, the central banks of Japan, Poland, Sweden, Switzerland, the United Kingdom, the United States), or

[1] See Polański and Szadkowski [2020, 2021, 2022a, 2022b]. On the situation in other central banks (of the Central and East European countries belonging to the EU) in a longer period than currently examined, see Karaś and Kil [2025].

banks that are either known for a fairly long history of incurring losses and negative capital (the Czech National Bank) or have reported losses in recent years (the National Bank of Hungary). For the Eurosystem, we do not show data for the entire system, as we have done in our previous studies,[2] but only for its four institutions, i.e. the European Central Bank (ECB) and three of the national central banks – the German Federal Bank (Bundesbank), the Bank of France and the National Bank of Slovakia. The first two national banks are the largest institutions of the Eurosystem.[3] The National Bank of Slovakia, on the other hand, was added not only because of the loss it incurred in 2022, but above all because of the negative capital reported in the period under review. For Eurosystem institutions, we not only report the officially published final financial result, but also in adjusted form, i.e. the financial result before the financial risk provision is created or released. We do this because, in the case of the Eurosystem, financial risk provisions have a similar function to reserve funds, which are increased or reduced as part of the distribution of the financial result, except that in the case of risk provisions, this is done before the financial result is determined. It is therefore appropriate to present an adjusted financial result for Eurosystem banks that reflects the actual financial result of their activities.

It is easy to see that in the group of banks listed in Table 1, only one – i.e. the Bank of Japan – achieved a clearly positive financial result in all the years under review (and showed positive equity, like a number of other banks listed in the table).

On the other hand, the "record holder" in negative figures was the Swiss National Bank, whose loss in 2022 reached the equivalent of 18% of the country's GDP. The losses in 2022 were also significant for the Bank of Sweden (the Riksbank). Central banks from Central and Eastern Europe have also been mentioned due to the permanent negative capital (Czechia and Slovakia) and the recorded losses in recent years, which led to the creation of negative capital (Poland only in 2023, Hungary).

Further analysis will clarify the developments presented in Table 1. At this stage it is sufficient to note that available projections for the world's major central banks suggest that challenges such as sustained losses, negative (or understated) capital, and limited or absent contributions to state budgets are likely to persist for the foreseeable future.[4] This outlook is reinforced by the simulation presented in Section 5. It is also worth noting that in the case of central banks of small open economies, where the financial situation is largely shaped by exchange rate fluctuations and related changes in the valuation of foreign reserves, reliable forecasting is particularly difficult.

[2] See the items mentioned in the previous footnote.

[3] At the end of 2023, their balance sheet totals accounted for 27% and 17% of the aggregate Eurosystem balance sheet total, respectively, and were the highest for Eurosystem banks. It should be borne in mind that several other Eurosystem central banks reported losses during this period (e.g. the central banks of Austria, Belgium and the Netherlands).

[4] See e.g. Belhocine et al. [2023], Faria-e-Castro and Jordan-Wood [2023], Cecchetti and Hilscher [2024], Holzman [2024, pp. 16–17] and references provided there.

3. Can a central bank go bankrupt?

In light of the above-mentioned situation, in this section we ask questions about whether central banks can go bankrupt, as well as about the conditions under which – despite incurring losses and showing negative capital – they can continue to efficiently conduct stabilisation policies, especially price stability-oriented monetary policy.

So, can a central bank go bankrupt? The answer to this seemingly trivial question is not as simple as it may seem.

Technically speaking – no. A modern central bank cannot go bankrupt, i.e. it will always be able to meet its obligations in the national currency, e.g. service its debt. There is one fundamental reason for this, which concerns only central banks operating in the modern monetary system, i.e. in the fiat (fiduciary) system. Let us recall that in such a system, money can be formally and technically created by the central bank without restriction,[5] because it does not have to be covered by some rare good (usually precious metals) that would limit its creation. At the same time, the central bank has a monopoly on the creation of this money (i.e. central bank money), so no one else can create money in a given (specific) currency. What is more, this central bank money has the status of legal tender, i.e. one that cannot be refused by law in the settlement of transactions.[6] The concept of legal tender usually refers to physical cash [Bossu et al., 2020, p. 8], but non-cash central bank money (funds of commercial banks and the state budget held in accounts with the central bank), used in interbank settlements, has a similar status in practice (in this case, it is usually referred to as the final settlement of transactions with such money). Technically speaking, central banks in the fiat monetary system create money as legal tender by making expenditures. Thus, the central bank can always pay its liabilities expressed in the national currency, and in this sense it cannot go bankrupt.[7] In some countries – e.g. in Poland – the impossibility of central bank bankruptcy is further reinforced by legal provisions.[8]

Under the current conditions of the modern monetary system, the central bank is always able to provide funds to the domestic economy, including liquidity to entities operating on the interbank money market. Even with losses and negative capital, the central bank can inject liquidity thereby influencing interbank interest rates and maintaining effective control over monetary policy.

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[5] We are disregarding the case of a currency board arrangement here, because a central bank operating under such an arrangement undertakes to cover its issuance with the money of another country at a fixed exchange rate.

[6] In many countries, the role of legal tender is also played by coins issued by mints subordinate to fiscal authorities.

[7] The situation could be different if the central bank issued its debt liabilities (bills, bonds) denominated in a foreign currency. It is then possible, at least theoretically, to imagine a situation in which the central bank would not have the necessary reserves of foreign currency to service and redeem this debt [e.g. Buiter 2008].

[8] For example, Article 58 of the Act on the NBP states succinctly: "The NBP cannot be declared bankrupt." [Sejm, 1997].

A second factor worth mentioning here is that until recently, central banks were perceived as naturally, or structurally, profitable [Long, Fisher, 2024, p. 1], as income is generated during the creation of money by the central bank, i.e. seigniorage. This income meant that central banks usually generated a positive financial result, also showing positive equity.[9]

Both factors have made it impossible for central banks to technically go bankrupt, although from the perspective of today's experience, the first of them is of key importance for the functioning of monetary authorities. But can the central bank go bankrupt due to factors other than those mentioned above, which we referred to as technical?

Researchers from the Bank for International Settlements and the Bank of the Netherlands conducted a study of the history of the Bank of Amsterdam (Amsterdamsche Wisselbank), the predecessor of modern central banks, functioning in the years 1609–1820.[10] These dates alone indicate that this institution operated under a different monetary system than the current one (i.e. in the commodity money system). It was the precursor of modern monetary authorities in the sense that from a certain point in its existence it created money (in the form of deposits, based on which certificates were also issued), practically without restrictions, and at a certain moment to an extent unacceptable to economic agents. As a result, the bank gradually lost credibility, which manifested itself, among other things, in its losses and negative capital, leading to a further loss of credibility. The bank was eventually closed, with its place being taken by the Bank of the Netherlands, which is still operating today.

Thus, technically speaking, the Bank of Amsterdam could continue to create money, but the gradual erosion of trust in the latter and the decline in the credibility of its issuer resulted in liquidation of the bank, and thus the tangible bankruptcy of the institution. The case of the Bank of Amsterdam reminds us that there are limits to fiat issuance that go beyond the practical absence of technical limits to the creation of such money. This limit is trust in money and the credibility of the institution issuing it [Polański, 2008a, pp. 60–61; Ehrmann, 2024].

Of course, the case of the bank in question describes a unique situation. However, if we combine this story with the fact that central banks are still often perceived as structurally profitable, and therefore expected to show positive own capital, a change in this situation and the appearance of losses and negative capital may contribute to a decrease in the credibility of the central bank, and consequently to a reduction in the effectiveness of its policy, although not its literal bankruptcy.

Nevertheless, despite losses and negative capital, central banks – as already mentioned – most often (at least in developed countries) efficiently conducted their stabilisation activities, operating in a broader institutional arrangement that allows them to continue their stabilisation activities, i.e. the government – like the central bank – is interested in maintaining a low

[9] As we shall see, not without significance for their profitability was also the fact that until recently (i.e. until the outbreak of the financial and economic crisis in 2008) the central banks of developed countries generally operated in the conditions of liquidity deficit in the banking sector.

[10] See Bolt et al. [2023] and Bell et al. [2024].

inflation rate. In such a situation, it is the entire, broader system of economic power in the country that is credible, which is conducive to the effectiveness of the central bank, even if it shows a defective financial situation.

4. Central bank losses: a new problem?

As already stated, the phenomena of losses and negative equity are nothing new in the history of central banking. However, their scale, and especially their appearance in institutions that have so far been perceived as structurally profitable, and consequently solvent, require a brief explanation before we move on to the fundamental problem for this article, i.e. the issue of the effects of the appearance of permanent losses and negative capital of central banks.

As a result of the far-reaching easing of monetary policy, not only by lowering interest rates, but also by purchasing assets from banks (quantitative easing – QE) and other lending operations providing banks with liquidity, which began in many countries in 2007–2008, the liquidity of the banking sector in these countries changed very deeply, i.e. the liquidity shortage was transformed into a liquidity surplus.[11] On the other hand, the emergence of a situation of excess liquidity (i.e. an increase in central banks' liabilities to commercial banks beyond their liquidity needs as a sector) entailed profound changes in the implementation of monetary policy [Lavoie, 2022, pp. 231–244]. From the perspective of interest, the key issue was that central banks had significantly reduced their traditional open-market liquidity-providing operations and that there was a decline in demand for their refinancing loans, which limited the role of the central bank's base (reference) interest rate as a factor shaping its income. However, this rate gained key importance in relation to banks' reserves in the central bank, but in this case it became a cost factor for the monetary authorities. This is even more so because the resulting excess liquidity is usually deposited in the form of reserves, i.e. the position of central bank liabilities.

This necessarily brief description of developments in the interbank money market and in the finances of central banks needs some elaboration, in particular with regard to certain banks listed in Table 1. The course of events outlined in the previous paragraph is most appropriate for institutions such as the Bank of England, the Federal Reserve System (Fed), the Riksbank, and to a lesser extent the Eurosystem, for which QE operations started in full only in 2015. However, in the case of the Bank of Japan, it should be mentioned that it started this type of operations much earlier, at the beginning of the century (in 2001 to be exact). On the other hand, the Swiss National Bank did not conduct QE operations – in its case, such a role (i.e. providing the banking sector with additional liquidity) was played by the purchase of assets denominated in foreign currencies conducted to limit the appreciation of the franc.[12]

[11] For more see e.g. Hartmann and Smets [2018], Borio [2023], Holzmann [2024, pp. 12–13], and Buch and Schnabel [2025].

[12] For more on the bank's experience, see Cwik and Winter [2024].

The situation developed differently in post-socialist countries (e.g. in Poland, but also in Czechia, Hungary and Slovakia until the latter joined the eurozone). In the banking systems of these countries, excess liquidity persisted for a long time – e.g. in Poland practically from the beginning of the economic and political transformation initiated in 1989–1990 [Polański, 1994; Polański, 2025]. In the four countries currently mentioned, the excess liquidity was primarily caused by strong capital inflows from abroad.

Parallel to these processes, the decline in the importance of seigniorage in the revenue of many central banks has been underway for a long time [Polański, Szadkowski, 2022b]. This phenomenon was related to the tendency to reduce cash circulation (particularly sharply visible in Sweden) and the strong decline in interest rates since 2008.

All these phenomena intensified in 2020 due to the Covid-19 pandemic, especially as interest rates dropped again or were maintained at a very low level, and QE operations were resumed. However, at the end of the following year, inflation began to intensify, which accelerated significantly after the outbreak of the full-scale war in Ukraine (February 2022), resulting in central banks starting to raise interest rates in the autumn of 2021, and significantly accelerating this process next year (they also began to gradually withdraw from QE operations – by early 2025, only the Bank of Japan had not yet started to significantly reduce its portfolio of assets purchased under these operations[13]). As a consequence of interest rate growth, losses of the monetary authorities appeared, as the costs of interest rates on the banks' reserves in the central bank increased rapidly, while the profitability of previously purchased assets remained low, generating limited revenue for central banks (relative to the expenses incurred). In other words, interest rate risk materialised in these banks, leading to a deterioration in their financial situation.[14] In the case of small open economies, loss tendencies were amplified by the appreciation trend of their currencies – in the group of institutions discussed here, we are primarily referring to the central banks of Czechia, Hungary, Poland, and Switzerland.

However, the situation of losses of central banks was mainly related to their stabilisation policies, which they pursued to limit two major economic crises (of the end of the first decade of the 21st century and the one related to the Covid-19 pandemic). There is little doubt that these actions were necessary and on balance largely successful. Yet, such an assessment does not change the fact that their cost was the appearance of central banks' losses, sometimes leading to their negative capital.

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The appearance of losses and negative equity, especially when they are of permanent nature, as suggested by the aforementioned forecasts of the development of the financial situation for the world's leading central banks, cannot remain without impact on other phenomena taking

[13] For more details on the Bank of Japan's unconventional monetary policy (and the beginning of its reversal) see Aoki and Ueda [2025].

[14] Except for the Bank of England, which adopted a different model of financing the purchase of debt securities, transferring interest rate risk to the government. See Section 6.2.

place in the economy, and therefore is not irrelevant or neutral to it. Below we analyse this impact from two perspectives, both of which are macroeconomic in nature, although the first is more aggregated and the second more disaggregated. The first one is more in line with the situation of central banks in large economies such as the US or the eurozone, while the second perspective allows us to consider the diversity of institutional arrangements in central banks, as well as to take into account the specificity of small open economies.

5. Consequences of the unfavourable financial situation of a central bank: the first perspective

5.1. A simple model of a central bank's finances and simulation assumptions

To better understand the discussed subject of central bank losses and the formation of their capital, it is worth looking at the basic relationships between the main variables describing their finances. The simplified balance sheet of a central bank presented below roughly corresponds to the structure of the basic assets and liabilities of the monetary authorities of large economies that used unconventional monetary policy instruments (QE operations), such as the US Federal Reserve or the Eurosystem.[15]

Table 2. Structure of the simplified balance sheet of a central bank (in %)

Assets	Share	Liabilities	Share
Financial instruments, including:	100	Cash	30
- QE portfolio	100	Bank reserves, including:	70
- other monetary policy assets	0	- required reserves	25
		Equity	0
Total assets	100	Total liabilities	100

Source: own elaboration.

Let us therefore adopt the following simplified structure of a central bank's balance sheet. On its asset side, we have only financial instruments that generate income in the form of interest. On the liability side, there are three elements: 1) cash issued by the central bank (non-interest-bearing), 2) interest-bearing funds of commercial banks kept in their accounts with the central bank (bank reserves), and 3) central bank equity (non-interest-bearing). We assume that this is the original structure of the central bank's balance sheet, which will then evolve along with the changes in individual balance sheet items described below.

[15] At the end of 2023, the QE portfolio accounted for 95% of the assets of the Fed's balance sheet and 68% of the Eurosystem's. On the liabilities side, the share of banks' cash and reserves accounted for around 30% and 60% for the Fed and 23% and 50% for the Eurosystem, respectively.

With respect to assets, we assume that financial instruments are denominated in the domestic currency, and consist of debt securities (called the QE portfolio) and short-term receivables from commercial banks (called other monetary policy assets).

In our reasoning, debt securities (QE portfolio), but not necessarily Treasury securities, were purchased in earlier periods under the quantitative easing policy. Their yields and annual coupons are equal to the central bank's reference rate in the first period. These securities are not mark-to-market, but recognised at their original purchase price.[16] The value of debt securities in each period (e.g. a year) is increased by accrued interest and reduced by the payment of a coupon and the redemption of securities maturing in a given period. We assume that 5% of the original stock is redeemed every year. The central bank does not reinvest the funds obtained from the redemption of securities, which means that after 20 periods, the original QE portfolio will mature completely.

We also assume that if the reserves of commercial banks as a sector fall below the required reserve, banks will borrow the missing funds from the central bank. As a result, central bank's assets will include short-term claims from commercial banks due to liquidity-providing operations (i.e. other monetary policy assets), such as repo-type transactions. They will bear interest at the current central bank reference rate.

On the liability side of the central bank's balance sheet, we assume that cash will grow at a rate of 2% per annum, which, as already indicated, is an interest-free liability of the central bank, while commercial bank reserves bear interest at the current central bank reference rate. In each period, the value of this item will increase by its remuneration and distribution of the central bank's profit from the previous period,[17] although with reserves reduced by the growing demand for cash, as well as by the coupons paid on debt securities purchased by the central bank and their redemption for a given period (QE portfolio). We also assume that banks are obliged to maintain a minimum required reserve equal to 25% of the original balance sheet total of the central bank, with the amount of the required reserve increasing in nominal terms each year by 2%.[18] If marginal lending is needed to meet the minimum required reserve, the reserves are increased by the amount of the lending (i.e. other monetary policy assets) and decreased by the amount of interest paid on it.

The amount of a central bank's equity in a given period is influenced by both the financial result generated in that period and the effects of distribution of the financial result for the previous period, with the profit generated in each period increasing the equity, which is reduced by the losses incurred in this period. The financial result for a given period is equal to the difference between the income from interest on assets (i.e. securities purchased as part of QE operations – QE portfolio, and possible loans granted to banks – other monetary policy

[16] Such an accounting framework is applied to securities purchased as part of QE, for example, by the Fed and the Eurosystem's central banks.

[17] This is because the contributions from the central bank's profit to the state budget (or dividend payments) are ultimately settled in the accounts of commercial banks with the central bank.

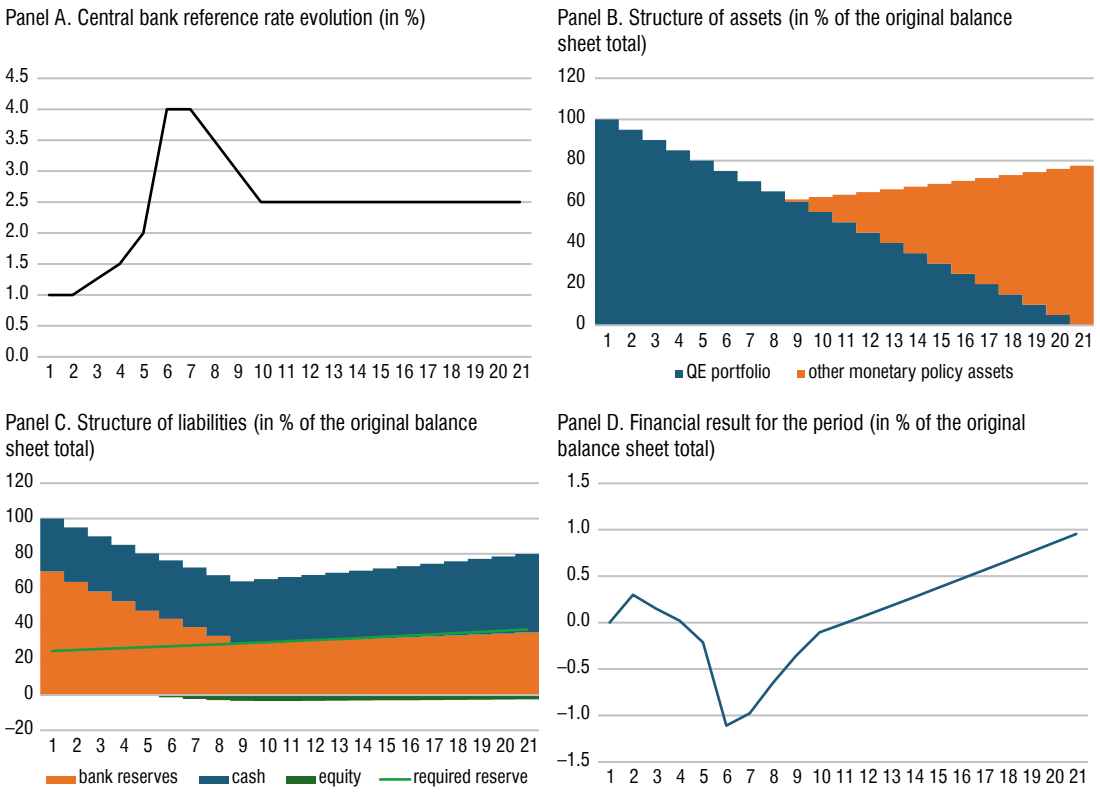
[18] Let us note that the constant growth rate of cash and the required reserve assumes a constant growth rate of demand for cash and bank deposits, i.e. a constant money stock structure.

assets) and the interest expenses on liabilities (bank reserves). We assume that the central bank does not incur any operating costs,[19] while if a profit is generated, it is distributed in the next period, resulting in a reduction in equity and a simultaneous increase in bank reserves. On the other hand, if the central bank incurs a loss, we assume that it is neither covered in the current period (e.g. through recapitalisation – i.e. by covering the loss by the government and/or shareholders), nor in subsequent periods (e.g. through profits generated in subsequent years). We have adopted zero as the initial value of equity to illustrate the impact of various accounting principles on its size (see Section 5.3) and the impact of financial result distribution principles on central bank profit transfers (see Section 6.2).

5.2. Simulation of a central bank's financial position in response to interest rate changes

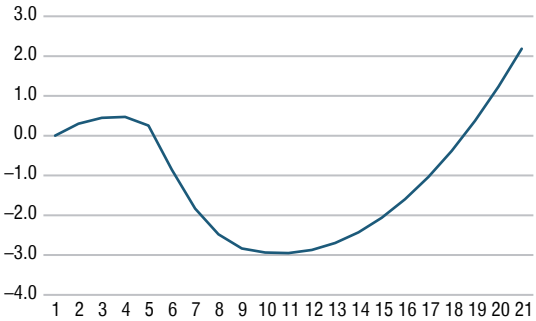
Based on the simplified balance sheet of the central bank in Table 2, the following presents a simulation of the impact of changes in the central bank's reference rate on its financial variables (see Figure 1).

Figure 1. Central bank finances in response to reference rate

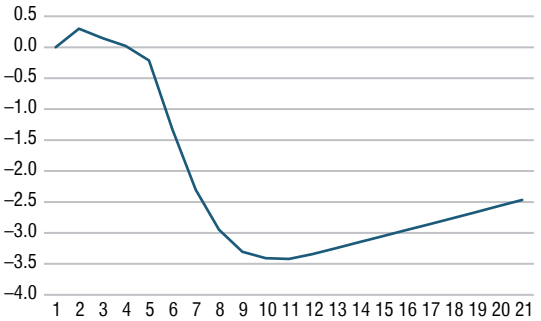


[19] In the study already cited by Goncharov et al. [2023, p. 2995], it is reported that in the sample they examined, the costs in question corresponded to only about 2% of the value of total assets of central banks.

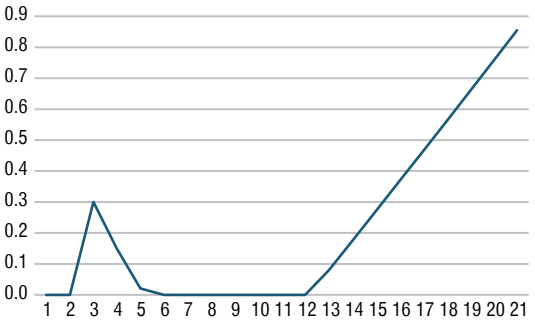
Panel E. Accumulated financial result (in % of the original balance sheet total)



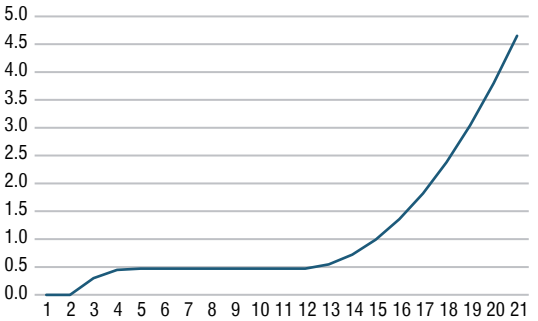
Panel F. Central bank equity (% of original balance sheet total)



Panel G. Transfers to the state budget for a given period (in % of the original balance sheet total)



Panel H. Cumulative transfers to the state budget (in % of the original balance sheet total)



Note: the "original balance sheet total" is the balance sheet total at the end of the first period (see Table 2).

Source: own elaboration.

Firstly, when studying the proposed path of changes in the central bank's reference interest rates (Panel A), we can observe that the trend corresponds to what has already happened (since 2020) and is highly expected to occur in subsequent periods (from the summer of 2025), which suggests a very low level of central bank interest rates as a starting point in the first period, increasing dramatically because of surging inflation, and then remaining at a relatively high level for several periods, only falling gently in the following periods, but to a level higher than observed at the beginning.

Against this background, we observed a change in the structure of the bank's assets and liabilities (Panels B and C[20]). Looking at the assets side, we can observe a gradual decline in the size of the QE portfolio due to its redemption. Along with a decline in the QE portfolio, the share of bank reserves held in the central bank (Panel C) also decreases. When bank reserves reach the level of required reserves (Panel C), a further decline in the QE portfolio forces banks to apply to the central bank for loans to meet the required reserve requirement. Hence, we observe an increase in other monetary policy assets (Panel B), with the banking

[20] Here and in subsequent panels, we use values related to the amount of the original balance sheet total at the end of the first period (where we assume that it is equal to 100%).

sector moving from surplus to deficit banking sector liquidity. In addition, in accordance with the adopted assumption, on the liabilities side we can observe a steady increase in demand for cash, which – on the one hand – reduces the liquidity of the banking sector, while on the other hand, is conducive to the increase in the seigniorage.

Moreover, looking at the central bank's financial result (Panels D and E), we notice a slow decline to negative values (losses), which is the result of comparing income from the portfolio of low-yield debt securities held with the growing interest expenses on banks' reserves as a result of rising central bank reference rates. However, because of the constant reduction of the portfolio of QE securities with low yields and its replacement with other monetary policy assets remunerated at the central bank's reference rate, the central bank – through seigniorage[21] – generates profits in subsequent periods (Panel D). This is even more evident when we look at the central bank's cumulative financial results, and after the initial decline and negative results, in subsequent periods, the total profits exceed the losses incurred and the central bank returns to profitability (Panel E).

If we look at the evolution of central bank equity (Panel F), then in addition to the discussed financial result, it is equally influenced by the adopted distribution principles of the financial result. Assuming in our model that all profits generated by the central bank are transferred to the state budget (Panel G) and losses are accumulated in the equity, we end up with negative equity (Panel F). At the same time, there is an appropriate equivalence, i.e. in each period, the cumulative financial result (Panel E) is equal to the sum of equity (Panel F) and accumulated transfers to the state budget (Panel H).

As previously mentioned, we shall further examine the impact of various financial result distribution principles on the analysed figures (see Section 6.2), although we can already see that the adopted initial structure of the monetary authorities' balance sheet, the assumptions regarding further changes in the balance sheet, and the adopted path of changes in the central bank's reference rates are of significant importance for the size of the central bank's financial result and equity and, consequently, for the size of transfers to the state budget, thus affecting the fiscal situation of the state.

5.3. Profit, loss and central bank equity – the role of accounting policies

After presenting a simple model of a central bank's balance sheet and a simulation carried out on its basis, it is important to add a key caveat, especially when comparing the financial results of central banks and their equity position (e.g. as we did in Table 1), as well as the profits distributed (see Sections 5.2 and 6.2). Namely, in practice, central banks apply different accounting principles (or accounting policies).

[21] Non-interest-bearing cash on the liabilities side results in a surplus of interest-bearing assets over interest-bearing liabilities. See more on this subject in studies of the authors of this text mentioned in the first footnote.

Let us recall that a central bank's financial performance is reflected in the amount of the financial result calculated periodically (usually annually) and the change in equity. The method of determining the financial result, in turn, depends on the accounting principles applied, with the latter being the accepted rules for identifying the elements characterising the financial situation of the bank, their valuation and recognising the effects of this valuation in the financial result or the bank's equity.

The accounting principles applied by central banks are designed to reflect the true and fair view of the bank's finances. Central banks use different accounting principles, as they have different balance sheets in terms of their structure and contents, and manage their assets and liabilities in different ways. Most often these are international financial reporting standards, local accounting standards or accounting standards directly dedicated to individual central banks, or standards created specifically for the needs of the European monetary union (so-called ECB standards).

The above-mentioned accounting policies are most often differentiated by the approach to the method of valuation of assets and the recognition of the effects of this valuation. With regard to the method of valuation of assets, mark-to-market valuation can be used (valuation of assets at current market value) – or valuation at historical cost (i.e. valuation at purchase price adjusted for possible coupon accruals less impairment). In the case of using mark-to-market valuation, the method of recognising the effects of this valuation may also vary, with the most common being to include them in the financial result, which is sometimes recognised in the bank's equity. An asymmetric approach is also used, i.e. an increase in market value (unrealised gains) is recognised in the central bank's equity, while a decrease in market value (unrealised losses) is included in the bank's financial result.[22] This asymmetric approach is used, for example, in the ECB's standards for the valuation of assets in foreign currencies (so-called foreign reserves) held by banks.

It should be noted that the more the principles of market valuation and recognition of its effects on the central bank's financial result are applied, the greater its volatility, although the accounting principles adopted by the central bank do not affect its financial result or equity in the long run.[23]

A good illustration of these statements is the following example. As previously stated, central banks have recently been using unconventional monetary policy, characterised by the purchase of debt securities (in the case of the Swiss National Bank – assets in foreign currencies), which in turn resulted in the emergence of surplus liquidity of the banking sector (and thus the aforementioned increase in central banks' liabilities to commercial banks beyond their liquidity needs). As a result, central banks' balance sheets have come to be characterised by the mismatch between the interest rate on assets (long-term financial instruments with fixed low yields) and liabilities (current liabilities in the form of bank reserves at the variable

[22] See also the first note under Table 1.

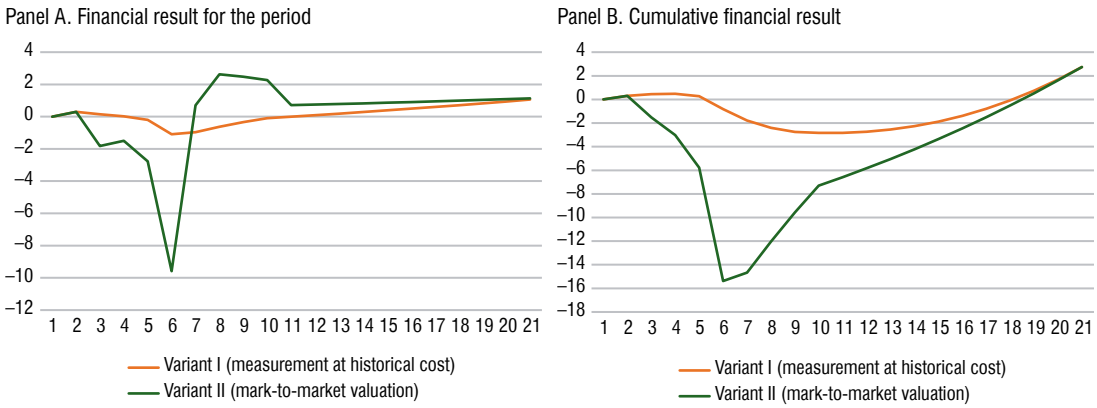
[23] More information on accounting principles in various central banks can be found in Archer and Moser-Boehm [2013], and Szadkowski [2019, pp. 63–94].

central bank reference rate). This interest risk, which was inherited in central banks' balance sheets, began to materialise when they started (from autumn 2021) the cycle of raising their reference short-term interest rates in response to surging inflation, with rising interest rates resulting in central banks incurring losses, as mentioned in Section 4. However, the pattern of incurring these losses depends on the accounting principles applied by central banks.

Based on our simple model of central bank balance sheet presented in Section 5.1, we can observe the development of basic financial variables depending on the accounting principles applied, assuming the path of changes in the short-term reference rates of the central bank as in Figure 1 (Panel A).

We assume a distinction in relation to the accounting principles adopted for the valuation of financial instruments, i.e. we consider two variants of valuation. In Variant I (measurement at historical cost), the debt securities held (QE portfolio) are measured at the purchase price, with the income from them – shown in the financial result – equal to the yield observed in the first period. In turn, in Variant II (mark-to-market valuation), these assets are measured at market values at the end of each period, and the effects of the valuation changes are recognised in the central bank's profit or loss. See Panel A in Figure 2.

Figure 2. Impact of accounting policies on the central bank's financial result (in % of the original balance sheet total)



Note: As in Figure 1.

Source: own elaboration.

Those central banks that use market valuation for their assets will record high losses in a short period of time before returning to reporting profits (see Figure 2, Panel A), which applies, for example, to the central bank of Sweden or, above all, Switzerland (see Table 1). On the other hand, those central banks that value purchased assets at historical cost will show smaller losses, although over a longer period (see Figure 2, Panel A), which is the case for the ECB, the Eurosystem national central banks, and the US Fed (see Table 1). However, in both cases, the cumulative financial result generated by the monetary authorities will be eventually the same regardless of the accounting principles adopted (see Figure 2, Panel B).

6. Consequences of the unfavourable financial situation of a central bank: the second perspective

The simulation, carried out under the first, highly aggregated, perspective showed the consequences of an unfavourable financial situation of the monetary authorities for their transfers to the state budget. Let us now consider the consequences of an unfavourable financial situation of a central bank, i.e. its losses, resulting in negative equity, in a more disaggregated perspective, i.e. in three areas: (1) monetary, (2) fiscal, and (3) on the independence of the central bank and the economic policy of the state as a whole.

6.1. Monetary consequences

First, we focus on the monetary implications of a central bank's adverse financial situation, i.e. on the immediate implications for the conduct of monetary policy.

An important factor leading to the losses of central banks was, as already mentioned, the emergence of surplus liquidity in banking systems. As we recall, in highly developed countries such a situation arose primarily as a result of the quantitative easing policy (in Switzerland it was the purchase of foreign assets), while in post-socialist countries the situation of excess liquidity had existed for a long time.

In Section 4, we mentioned that in most central banks, excess liquidity is deposited mainly in the form of reserves of commercial banks kept in central banks. These reserves are remunerated, which, in the case of central banks raising interest rates since autumn 2021, resulted in a sharp increase in interest expenses. This then led to losses, followed by voices calling for changes in the interest rate on reserves, the most famous being a study by De Grauwe and Ji from mid-2023, in which these authors demanded the abolition of the interest rate on required reserves[24] [De Grauwe, Ji 2023]. This happened in the case of several central banks. Already in July 2023, the Eurosystem announced the abolition of the remuneration of required reserves, followed by the central banks of Czechia and Switzerland (in the latter case sight deposits that are held to meet minimum reserve requirements stopped being remunerated as of December that year[25]).

The decision to eliminate the interest rate on required reserves was made in connection with the socially unacceptable interest expenses of central banks and the resulting losses. In its September 2023 announcement on the decision to reduce the interest rate on reserves to zero, the Czech National Bank wrote directly: "…[The] Bank took this step to lower the cost of implementing monetary policy…" [CNB, 2023]. Thus, it confirmed that central bank losses, and more specifically their reasons, may also affect the monetary policy instruments.[26]

[24] Let us note that the interest rate on required reserves became popular in the 1990 s. Previously, these reserves were unremunerated and were said to be a 'quasi-tax' for commercial banks. See Polański [2008b, p. 139].

[25] See Swiss National Bank [2024, pp. 60, 227].

[26] See also Holzmann [2024, p. 17] on ECB's similar motivation to reduce the interest rate on required reserves to zero.

It should be emphasised that the decisions of central banks to abandon reserves remuneration concerned only the required reserve. Commercial banks' reserves in excess of the reserve requirement continue to bear interest at central bank interest rates (with the partial exception of Switzerland, where reserves in excess are remunerated at the policy rate minus a discount).

Another important remark should be made in this section. When central banks apply a monetary policy operating system involving a symmetric corridor of interest rate fluctuations on the interbank money market, as is the case in Poland, conventional liquidity absorption instruments (e.g. bills, debt certificates, or repurchase operations) are subject to interest at the reference rate level. On the other hand, when central banks use the so-called floor system as their operating framework, as is the case with the Fed and the Eurosystem,[27] then commercial banks make daily deposits with interest rates at the deposit facility rate. It is therefore worth noting that central banks' departure from the symmetric corridor of interest rate fluctuations and the transition to the floor system resulted in lower interest expenses. Importantly, this may also discourage a return to an operational system based on a symmetric interest rate fluctuations corridor.

6.2. Fiscal implications

It is often emphasised, e.g. Bell et al. [2023, p. 5], that central bank profit transfers are relatively small (taking into account the size of the state budget). Indeed, this is usually the case, and they largely depend on the adopted accounting policy and the principles of profit distribution. However, there are cases where the funds transferred by the central bank are quite material. For example, in the United States in the second decade of this century, the annual value of profit transfers exceeded 0.5% of US GDP, reaching 3.5% of the total revenues of the federal government.[28] This was a time when relatively high-yield assets were still purchased in QE operations, while the Fed's expenses were relatively low due to strongly reduced interest rates.

Using the model of the central bank's balance sheet, presented together with the simulation assumptions in Section 5.1, we can analyse the development of basic financial variables due to the different principles of distribution of the central bank's result. As a base variant, let us assume the case of monetary authorities, which transfers all the profit generated to the state budget, while keeping the losses uncovered in the bank's equity (Variant I[29]). In practice, this is not the present case, but it is a good starting point for comparison with other practical solutions.

Another variant is when the central bank transfers the profits generated to the budget on the condition that it covers losses from previous years (Variant II), which means that in the

[27] As a result of the crisis that began in 2008, these institutions introduced and still use in their operations a 'floor' system, in which the short-term interbank interest rate, being the operational target of the central bank, is determined by the deposit rate of the interest rate corridor. On interest rate corridors and their variations, see a detailed analysis in the aforementioned work by Lavoie [2022, pp. 231–241]. See also Bindseil and Fotia [2021, pp. 43–47], and Borio [2023].

[28] We cite data after Faria-e-Castro and Jordan-Wood [2023], and Cecchetti and Hilscher [2024].

[29] This variant is adopted in Section 5.1.

periods immediately following the loss suffered, generated profits are allocated first in order to cover it. This approach is followed by many central banks, such as the Fed, and most of the Eurosystem's national central banks.

Variant III provides for the transfer of profits to the state budget and the recapitalisation of the central bank (coverage of the loss) by the fiscal authority each time the bank records a loss. A similar solution is provided by the Bank of Sweden and the National Bank of Hungary.[30]

Finally, the last variant (Variant IV) is primarily the case of the Bank of England, see Archer and Moser-Boehm [2013, pp. 39–40], assuming the incorporation of a central bank's subsidiary, which buys debt securities as part of the QE operation against the funds borrowed from central bank.[31] In this situation, the fiscal authority is the beneficiary of all profits of the created subsidiary, bypassing the central bank, but also automatically covering its losses. As a result, as we can see in Table 1, the Bank of England did not experience losses in 2021–2024.

Table 3 presents a summary of the four variants of distribution of the financial result analysed below.

Table 3. Variants of the central bank's financial result distribution arrangements

Variant	Rules for the distribution of the financial result	Example
Variant I (baseline)	Profits are transferred in full to the state budget and losses are retained in the bank's equity	-
Variant II	Profits are transferred to the state budget after covering losses from previous years	Federal Reserve System, most of the Eurosystem's national central banks
Variant III	Profits are transferred to the state budget and losses are recapitalised by the fiscal authority	Bank of Sweden, National Bank of Hungary
Variant IV	Establishment of a subsidiary responsible for conducting QE operations with the transfer of benefits and risks to the fiscal authority	Bank of England

Source: own elaboration.

Figure 3 presents a simulation of the development of a central bank's financial result and its equity, as well as the impact of transfers to the state budget on public debt. The evolution of central bank interest rates is assumed as in Section 5.1 (Figure 1, Panel A) and accounting policies are consistent with the valuation at historical cost presented in Section 5.3.

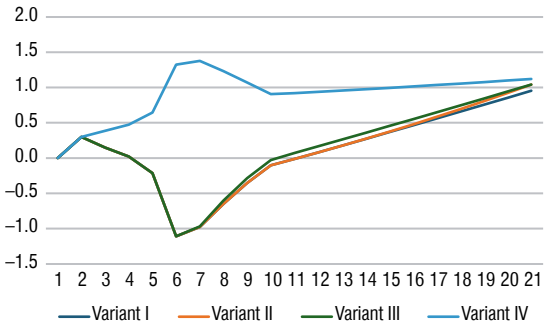
Analysing the financial result (Panel A in Figure 3) we can see that in most variants (i.e. except for Variant IV) it developed in an analogous way. In Variant IV, all profits and losses related to the QE portfolio were attributed directly to the fiscal authority, with it covering all losses related to the increase in the central bank reference rate. This can be observed in the largest increase in public debt for Variant IV (Panel D).

[30] However, in the latter case, this is not an automatic solution (in the sense that the government is not absolutely obliged to recapitalise the central bank when the central bank suffers a loss).

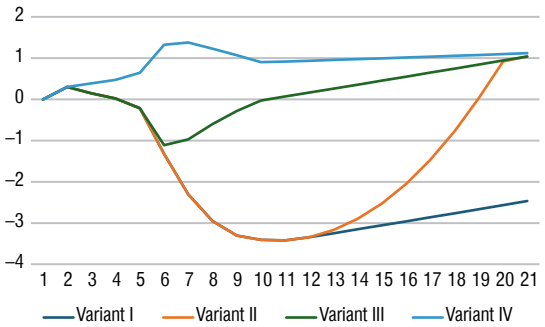
[31] To be precise, there were two such companies at the Bank of England: the 'Bank of England Asset Purchase Facility Limited', established in 2009 and still operating today, and the much smaller 'Covid Corporate Financing Facility Limited', operating only in 2020–2022.

Figure 3. Impact of a central bank's financial result distribution arrangements on its financial result, equity and public debt (in % of the original balance sheet total)

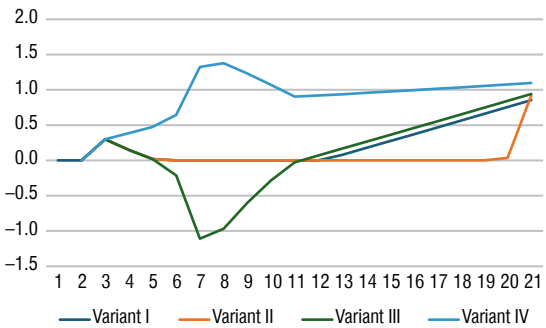
Panel A. Profit or loss of the central bank for the period



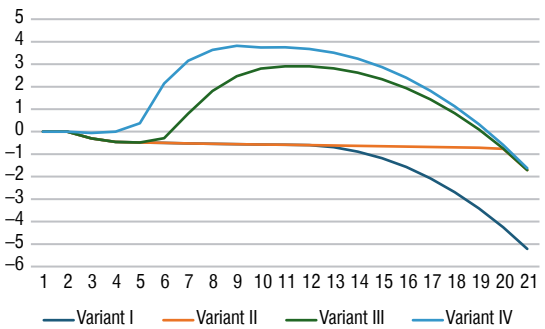
Panel B. Central bank equity



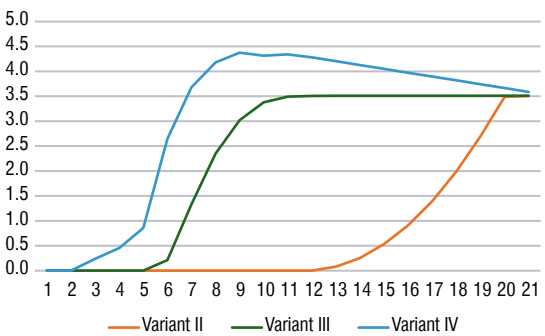
Panel C. Transfers to/from the state budget for the period



Panel D. Impact of a central bank's financial result distribution arrangements on public debt



Panel E. Impact of a central bank's financial result distribution arrangements on the public debt calculated as the difference compared to Variant I



Notes:

(1) The amount of public debt in each period is influenced by its amount from the previous period adjusted as follows:

- increased by: transfers to the central bank due to its recapitalisation, costs of servicing public debt from the previous period (bearing interest at the current central bank reference rate) and payments of interest on the loan received from the central bank to finance the QE portfolio (in the case of Variant IV, bearing interest at the current central bank reference rate);
- decreased by: transfers from the central bank due to its profit distribution and interest income from the QE portfolio (in the case of Variant IV).

(2) Original balance sheet total is the balance sheet total at the end of the first period (see Table 2).

Source: own elaboration.

On the other hand, if we look at the central bank's equity (Panel B), we can see that it was different for each of the variants. First, however, let us note that in Variant IV, the equity is always positive, which is a result of the bank's positive financial result. This is because, as we have already noted, in the case of Variant IV the central bank was not exposed to interest rate risk related to the QE portfolio. It should also be noted here that as in the case discussed in Section 5.1, if the central bank transfers all profits to the state budget and accumulates losses incurred in equity, its equity remains negative throughout (Variant I).

The situation is different if the central bank can cover losses with future profits, as in Variant II. In this case, we see that losses result in negative equity, but it eventually returns to positive values in the long run. Equity returns to positive values even more quickly if the central bank is recapitalised (Panel C and negative transfers for Variant III). However, in each of the analysed cases, except for Variant I, where the loss remains in equity, the equity at the end of the analysed period is at the same positive level, which means that regardless of how the fiscal authority participates in the central bank's losses related to the QE portfolio, the financial result and the bank's equity end up at a similar level. There are, however, differences in the adjustment period.

The situation is similar when we look at transfers from the central bank to the state budget (Panel C). We can see that in each of the variants, except for the aforementioned Variant III, the central bank either makes transfers to the state budget or does not make any payment. Nevertheless, at the end of the analysed period, when the QE portfolio is fully redeemed and the central bank generates profits again, the amount of the transfer is at a similar level in each of the variants.

Now let us look at the financial situation of the fiscal authority. First, we investigate how the public debt itself would develop depending on the adopted variant of the distribution of the central bank's financial result (Panel D). We can see that the best situation in terms of public debt soundness is in the case of Variant I, with the fiscal authority benefitting only from the profits of the central bank, without incurring direct financial consequences in the case of losses of the central bank.

On the other hand, in a situation where the central bank has the ability to cover losses with future profits (Variant II), then – as we can see – public debt has been at a similar level for most of the analysed period, equal to the first payments from profit. This is because in subsequent periods, the central bank first incurs losses and then covers them with future profits. Only when it covers these losses fully does it begin to transfer subsequent profits to the state budget again. In the last analysed periods, we have therefore been observing a decrease in public debt. It is also worth adding that although the bank incurs losses for seven periods, the lack of payment to the state budget occurs for as many as 14 periods.

The situation is different (Variant III) if the fiscal authority decides to recapitalise the central bank, leading to a sharp increase in public debt and its slow decrease in the following periods, and the transfer of subsequent profits of the central bank to the state budget.[32]

[32] Recapitalisation, however, improves the structure of the central bank's liabilities and accelerates the return to generating profits by the central bank (by one period compared to Variant II).

A similar situation occurs when the central bank delegates to the fiscal authority all the risks and benefits related to the QE portfolio (Variant IV). In such a case, the public debt grows even faster than in Variant III, although, as in the previous cases (except for Variant I), at the end of the analysed period, public debt is at the same level. On the other hand, if we take the variants that provide for the participation of the fiscal authority directly or indirectly in the central bank's losses (i.e. Variants II, III and IV) compared to Variant I, where the fiscal authority does not participate in the central bank's losses in any way, then the observed increase in public debt (Panel E) is equal to the decrease in equity (Panel B).

Thus, regardless of the adopted and applied form of distribution of the central bank's financial result, central bank losses incurred are reflected in higher public debt, the difference being in the adjustment period of discussed variables. In other words, despite the institutional separation between fiscal and monetary authorities, it is the fiscal authority that ultimately bears the financial consequences of the monetary authority's activities.

6.3. Implications for central bank independence and other potential aspects of economic policy

The emergence of the situation described above, i.e. a long-term state in which governments bear the consequences of central bank losses, may significantly affect the mutual relations between fiscal power and monetary power. Changes in this area have been taking place for a long time, i.e. at least since the beginning of the QE policy, and in the case of Japan, since the beginning of this century. Namely, the significant increase in the issuance of Treasury securities has meant that central banks have to take into account the position of fiscal authorities in their interest rate policy to an increasing extent – and this is not only because a significant part of them has remained in the assets of central banks as part of QE programmes, but also, and perhaps above all, because the interest rate policy is important for the prices of securities purchased by other entities. Thus, a situation has emerged, not for the first time in the history of macroeconomic policy, referred to as fiscal dominance [see also Sargent and Wallace, 1981].

However, due to the emergence of losses and negative capital of central banks, the situation of fiscal dominance may be further exacerbated, because – as we have just said – the fiscal authority ultimately bears the financial consequences of the activities of the monetary authorities. Thus, an additional channel of influence of the fiscal authorities (government) on the central bank may be created, especially strong when the government recapitalises the central bank and political wrangling takes place.[33]

Can the growing economic dependence of central banks on fiscal authorities remain indifferent to macroeconomic policy or, more broadly, to economic policy as a whole? As we mentioned in the third section of this study, the experience so far shows that central banks, at

[33] For example, as was recently the case of the Riksbank. In 2024, after heavy discussions, it was recapitalised with less than a third of the amount originally requested. See Sveriges Riksbank [2024]. See also Table 1.

least in developed countries, have been able to efficiently conduct stabilisation policies despite the emergence of losses and negative capital. However, observing the discussion on economic policy and the challenges it faces, this may not continue to be the case. The funding needs of economic policy, in connection with demographic processes (ageing societies; see Goodhart and Pradhan 2020) and pursuing active structural policies (pro-innovation, climate, armaments) [EBRD, 2024; Mazzucato, 2024], will increase. This, in turn, will lead to increasing pressure from the fiscal authorities on the monetary authorities, which may materialise more easily than in the past due to the growing dependence of central banks on governments. In this context, it should also be mentioned that schools of thought are gradually gaining in importance, indicating that fiscal dominance is a desirable, or even normal, situation in a modern market economy [Qanas, Sawyer, 2023; Rochon, 2023, pp. 266–267; Wray, 2015].

So far, many of the consequences of fiscal dominance remain largely invisible to outside observers, while the statutes of central banks are not changed in a way that limits their independence in conducting stabilisation policies [Romelli, 2024].[34] The phenomena described in this article are largely long-term in nature, which may make the effects of fiscal dominance more obvious over time. It is already signalled that some of the central banks of highly developed countries are losing credibility [Ehrmann, 2024], i.e. the basis for conducting effective monetary policy in the fiat money system.

7. Conclusion

To recap: the central bank is the key institution of the monetary system of the modern market economy, or more broadly – its financial system. The financial situation of central banks, understood as their financial result and capital position, is therefore not indifferent – as we have tried to show – neither to the monetary policy itself, nor to the fiscal policy, nor to the economic policy as a whole conducted by a given state.

The analysis carried out in the article indicated three types of effects. Firstly, in the monetary area, i.e. primarily for instruments used in the conduct of monetary policy. Secondly, for fiscal authorities and the financial independence of central banks. Thirdly, the latter may affect the autonomy of the monetary authorities in relation to the fiscal authorities and enable deeper changes in the state's economic policy. However, can anything fundamentally change regarding the effectiveness of central banks' activities, including the achievement of their stabilisation objectives?

Contrary to the concerns expressed in the previous section, these changes may not necessarily lead to a decrease in the effectiveness and efficiency of the central bank's policy. In the new relationship between monetary and fiscal authorities that is emerging, central bank

[34] See, nevertheless, Lagarde [2025], who stresses that 'the de facto independence of central banks is being called into question in several parts of the world.' See also Jeffrey [2025].

stabilisation policies may become less independent (or more dependent) on other public sector entities, potentially providing for greater coordination of activities between various state agencies and their policies. However, whether the existing stabilisation goals are pursued by central banks in these new conditions depends – as we have mentioned – on the entire broader institutional structure (or set-up) of the state. If state authorities (primarily governments) are interested in stabilising the economy, central banks will be able to continue to participate effectively in this process. In the opposite situation (i.e. the lack of consistent emphasis on the need for economic stability by governments), a fundamental problem may arise for the conduct of monetary policy and other stabilisation policies.

Considering the well-described and discussed post-World War II experiences regarding economic policy and monetary control (i.e. the negative effects of the dynamic time inconsistency [Kydland, Prescott, 1977] and – as mentioned above – fiscal dominance), there is a chance that this will not happen. In order to reduce the likelihood of unfavourable development of the described situation, greater emphasis must be placed both in broadly understood economic education and in social communication (not only conducted by monetary authorities) on reminding of adverse phenomena that occurred in connection with the reduction of the decision-making independence of central banks and their stabilisation mission [Brunnermeier, 2023]. The importance of public opinion in this respect cannot be overestimated.

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