

The background is a classical painting depicting several musicians in historical clothing. A woman in a blue dress with a large blue feathered headdress is playing a lute. Other figures are visible, some holding instruments and others looking down at sheet music. The scene is set in a room with a patterned rug.

MONEY SUPPLY RETURNS TO THE PATH OF GROWTH: HAS THE ECB LEARNED FROM THE PANDEMIC?

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October 2026



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Gerrit Van Honthorst, "The Concert", 1623.

Contents

About the author	4
Summary	6
Introduction	7
Money as a response to deficiency	9
Central bank interest rates: the price of reserves, not time	11
The era of excess reserves: quantitative easing	16
Money supply begins to grow again	19
Has the ECB learned its lesson?	23
References	24

About the author

Leonardas Marcinkevičius is a senior analyst at the Lithuanian Free Market Institute and a PhD candidate in Political Science at Kaunas University of Technology. At LFMI, his research focuses on monetary policy, central banking, the European Central Bank, and central bank digital currencies, especially the digital euro.

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Before joining LFMI, Leonardas worked as a business journalist at News Agency ELTA, covering economic policy, central banking, and business news. He has published on praxeological methodology in political science and presented his research at several international conferences

Summary

- This paper examines how ECB monetary policy decisions shape money supply and inflation dynamics in the euro area, drawing on data from 1999 to 2025 and classical monetary theory to argue that the institution has not addressed the underlying drivers of the post-pandemic inflation surge.
- The post-pandemic tightening did not withdraw money from circulation but temporarily halted new money creation; M1 and M3 data confirm that expansion resumed in 2024 following the ECB's return to rate cuts, replicating the same pattern that preceded the inflation surge.
- The Cantillon effect explains how asset-price inflation over the past decade disproportionately benefited capital owners, as newly created money reached financial markets before flowing to lower-income groups.
- The paper concludes that the ECB's claim to have learned from the pandemic is not supported by the data, as the institution continues to respond to short-term external pressures rather than maintaining a stable monetary trajectory.
- As long as key interest rates are set by a monopolistic institution rather than market dynamics, a genuinely neutral rate cannot emerge, and the conditions for future inflation cycles remain in place.

Introduction

After a record surge in inflation, the European Central Bank (ECB) responded by rapidly raising interest rates, but it has now once again entered a phase of monetary policy easing. Following two years of money-supply suppression, growth is once again evident in the euro area. Although Christine Lagarde speaks of ‘lessons learned’, the ECB’s rhetoric appears to be shaped by its need to adapt to external circumstances rather than an analysis of its own decisions.

This paper examines how the ECB’s actions shape money supply and inflation dynamics. It discusses the nature of money and contemporary mechanisms of money creation and analyses the ECB’s interest rate decisions and changes in its balance sheet. The data show that the bank’s decision to tighten the money supply was only temporary and that a new phase of monetary expansion has begun, suggesting that the ECB may not have learned its lesson from the pandemic.

Money is a medium of exchange that provides humans and organisations with a common measure of value. It expands our choices and enables organisations to implement complex processes and allocate scarce resources more efficiently. Without monetisation, it would be difficult to compare the relative value of goods. However, money must remain scarce. Only then can it reflect the limited nature of resources and opportunities. Yet it is precisely this scarcity that is continually being undermined by the ECB’s rapid policy changes.

The president of the ECB, Christine Lagarde, speaks of lessons learned by monetary policymakers (European Central Bank 2025). Nevertheless, the institution’s rhetoric focuses on a changing world that requires adaptation, leading to shifting approaches to monetary policy rather than outlining and implementing a firm trajectory for key interest rates.

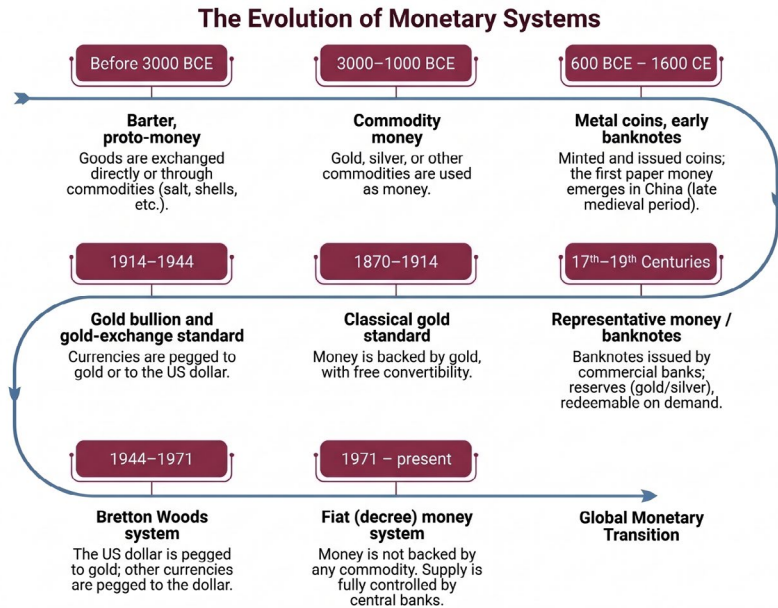
These circumstances, together with data indicating a gradual return to monetary expansion, raise the question of whether the ECB has truly learned its lesson from the inflation surge during the COVID-19 pandemic. This paper evaluates how the ECB's monetary policy decisions shape money supply in the EU. First, it outlines the nature of money, then it examines contemporary mechanisms of money creation. Finally, it analyses the ECB's interest-rate policy and balance-sheet dynamics.

Money as a response to deficiency

Exchange and labour are the only means of creating useful and necessary commodities for people. Economist Carl Menger (1840–1921) theorised that money emerged as a spontaneous market response to the limitations associated with the direct exchange of goods. The more marketable a good, the easier it is to exchange. This spontaneous emergence of a universally accepted good made it possible to solve the so-called double-pronged of the ‘wants problem’: for exchange to occur, both parties must simultaneously want each other’s goods or services (Menger 1982).

The three main functions of money are usually listed as follows: a medium of exchange, a unit of account, and a store of value. However, as the economist Ludwig von Mises (1881–1973) noted, ‘all other functions which people attribute to money are merely particular aspects of its fundamental and sole function: medium of exchange’ (Mises 1998: 398).

Figure 1: The evolution of money



It is true that in recent decades, money has increasingly been defined as debt. In 2014, a well-known article by the Bank of England noted, ‘Money in the modern economy is simply a special form of IOU, or, in accounting terms, a financial asset’ (Bank of England 2014). This means that, from an accounting perspective, each monetary unit is someone else’s liability.

Such a definition reflects the accounting logic of the modern monetary system. Still, it does not negate the essence of Mises’ theory: even if fiat money is, in accounting terms, a debt instrument today, it functions as money only because it is universally accepted as a medium of exchange, largely due to regulation and legal-tender status. However, the conception of money as debt applies only to the current fiat money system (see Figure 1), not to classical commodities or representative money.

It must be acknowledged that although money emerged as the most efficient medium of exchange in a decentralised way, in today’s economy, it is regulated through legal-tender status and decisions by public authorities such as central banks that influence its supply.

Central bank interest rates: the price of reserves, not time

Interest is the price of time

The economist Eugen von Böhm-Bawerk (1851–1914) explained that interest rates reflect the choice that economic actors make between saving and borrowing, i.e., their time preference.

The law of time preference states that people value the possibility of consuming goods in the present more highly than consuming the same goods in the future.

In a market setting, natural interest rates can emerge from changes in economic actors' time preferences. When the desire to consume here and now increases, interest rates rise, encouraging people to save money. When people become more inclined to save, interest rates fall, thereby creating a greater incentive for consumption.

A natural interest rate would ideally reflect people's willingness to postpone present consumption.

In a free market, the demand and supply of capital determine interest rates.



*Eugen von Böhm-Bawerk
(1851–1914)*

In the contemporary monetary system, money supply depends not on natural market dynamics but on the decisions of a state institution, such as the ECB. By setting key interest rates and purchasing securities, a central bank directly determines the quantity of reserves present in the financial system.

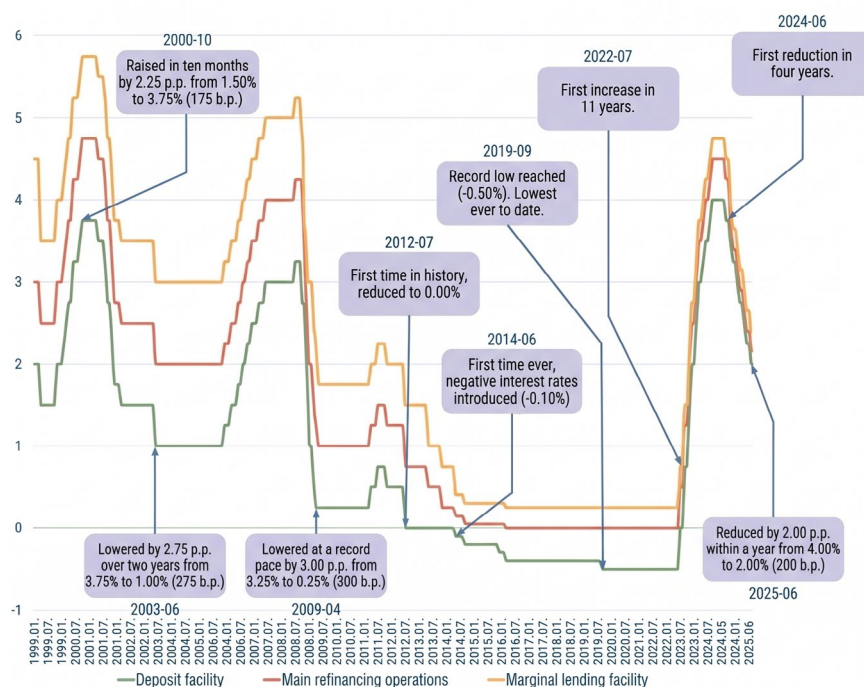
It is important to emphasise that today, market interest rates influenced by the ECB have nothing in common with those of a freely functioning market. They do not reflect the real relationship between savings and expenditures. This is why centrally administered interest rates are among the most fundamental sources of market distortion in current times.

Table 1. Monetary policy instruments and their effects

Interest rate	Mechanisms	Effects
<i>Deposit facilities</i>	Commercial banks receive a predetermined interest return for holding reserves at the central bank.	A 'floor' below which the interbank interest rate usually does not fall. Commercial banks will not lend to other banks at a lower rate, because they can hold funds more safely and profitably at the central bank.
<i>Main refinancing operations</i>	Commercial banks can borrow additional reserves from the central bank for one week, pledging collateral.	Although this rate previously functioned as the main ECB monetary policy channel, its importance has diminished in a system of excess reserves. The system now relies on a 'floor' rather than a 'corridor'.
<i>Marginal lending facilities</i>	Commercial banks can borrow additional reserves from the central bank overnight, pledging collateral.	A 'ceiling' above which the interbank interest rate usually does not rise. Commercial banks will not borrow from other banks at higher rates if they can obtain funds more cheaply from the central bank.

The current monetary system operates on a **fractional reserve** basis. This means that when banks issue a loan, they simultaneously create a new deposit, i.e., new money. These funds are not taken from other clients' accounts; they appear both as an asset and a liability on the bank's balance sheet. Such a system is possible only because of a central bank that provides reserves. Without its support, banks would not be able to lend as freely as they do beyond their existing reserves.

Figure 2: ECB key interest rates, 1999–2025



Some economists argue that the main factor influencing money supply is not the central bank itself, but the willingness of commercial banks to lend, which depends on regulatory requirements, interest rates, and risk assessment (Bank of Lithuania 2023). Nevertheless, even under this view, the central bank remains a crucial intermediary. It sets the conditions, such as reserve price, availability, and interest rate policy, upon which commercial banks' behaviour depends (see Table 1). In this way, interbank interest rates are set, which ultimately determine how actively banks lend and how much new money is generated in the economy.

The neutral interest rate

Many interest rate decisions are based on the concept of a neutral interest rate, formulated at the end of the nineteenth century by the Swedish economist Knut Wicksell.

According to this concept, there exists an interest rate level that neither stimulates inflation nor deflation. This rate reflects the point at which the market rate coincides with the equilibrium between real savings and investment.



*Knut Wicksell
(1851–1926)*

Central banks, including the ECB, claim to monitor this ‘invisible’ threshold. However, it is impossible to determine it precisely. ECB President Christine Lagarde has publicly acknowledged this. In theoretical discussions, this rate is often considered to be around 2%.

The problem is that interest rates are set by a monopolistic institution rather than being established by the market. As a result, a truly neutral, spontaneously formed rate does not exist. Therefore, any talk of a ‘return to the neutral rate’ is, in essence, speculation.

A genuinely neutral interest rate would be one formed in a free market through the relationship between voluntary saving and investment decisions that balance postponed consumption and expenditures over time.

After the financial crisis in 2008, the ECB held key interest rates at absolute lows. Following a decade-long negative interest rate policy, the ECB began tightening rates in July 2022, raising the deposit facility rate from –0.5 to 4% within a year (a total of 450 basis points). However, in June 2024, the course was reversed. The rate was reduced to 2%. These decisions directly affected money supply dynamics (see Section 4). Now, economists are debating whether the central bank should consider reducing interest rates below the level considered ‘neutral’.

Thus, it has become clear that as long as central banks set key interest rates, natural interest rates, i.e., those that would balance real savings and capital returns, cannot emerge. The market lacks the ability to determine the price of time and risk independently. Moreover, over the past decade, central banks have injected massive amounts of reserves into financial markets through quantitative easing programmes, further distorting incentives for saving and investment.

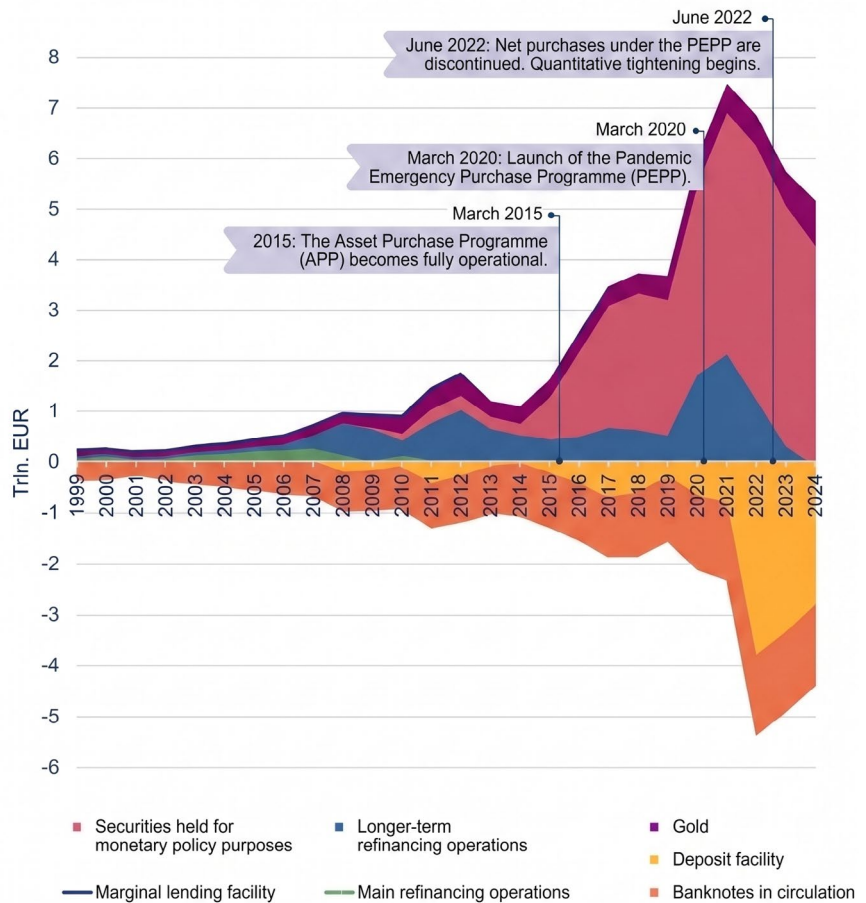
The era of excess reserves: quantitative easing

Over the past decade, the ECB has experimented with new instruments of money creation. Before 2008, the bank applied an interest rate corridor framework. This system relied on a range defined by the marginal lending facility rate (the ‘ceiling’) and the deposit facility rate (the ‘floor’), within which interbank interest rates (such as Euribor) fluctuated freely in response to liquidity needs.

However, once quantitative easing was introduced and excess reserves accumulated in the system, interest rates naturally settled at the lowest possible level: the deposit facility rate. As a result, the system transitioned from a ‘corridor’ to a so-called ‘floor’ system, in which short-term interest rates are no longer determined by credit demand fluctuating within a range defined by the ECB, but by the remuneration it pays on reserves held.

Nevertheless, since 2018, discussion has increasingly focused on an ‘exit’ strategy from the excess reserves system. Yet this exit has been repeatedly postponed. Even as the euro area economy showed signs of recovery, the ECB refrained from abandoning balance-sheet expansion. In 2019, asset purchases were resumed, and later, in response to the pandemic, an additional and even larger-scale instrument known as the Pandemic Emergency Purchase Programme was introduced. This demonstrated that even during economic recovery, the central bank remained dependent on quantitative easing.

Figure 3: ECB balance sheet by monetary policy instruments, 1999–2024



In March 2024, however, the ECB finally announced a new operational monetary policy framework (European Central Bank 2024). The document emphasises that future liquidity provision to the banking system will be based on short-term and longer-term refinancing operations conducted at key policy rates, rather than on large-scale asset purchases. Although the new framework is determined more by a fixed methodology than individual decisions, it clearly signals an intention to retreat from quantitative easing. Consequently, the termination of pandemic-related programmes marked a significant turning point in monetary policy. The ECB is abandoning an instrument that it had used for years, which had directly contributed to rapid money supply growth.

At first glance, quantitative easing may appear to be merely a series of asset-swap transactions. However, the substantial increase in commercial banks' reserves implies a greater capacity to expand lending and, thus, the money supply. Moreover, market anticipation of ECB purchases pushes up asset prices in advance, further expanding the money supply. Combined with low interest rates, quantitative easing was one of the main factors that enabled the rapid growth of the money supply during the pandemic period.

Money supply begins to grow again

The Cantillon effect

Newly created money does not enter the economy evenly. The first recipients of new money benefit because they can purchase goods and assets before prices rise. Those who receive the money later (often lower-income groups) will face higher prices by the time it reaches them. This phenomenon is known as the Cantillon effect, named after the economist Richard Cantillon, who first described it.

This distorts market logic: benefits accrue not necessarily to the most productive actors, but to those who are 'closer' to newly created money. As a result, social tension and fragmentation increase.

Over the past decade, this effect has been particularly visible in the sharp rise in asset prices, such as housing and equities, which has disproportionately benefited those who already own capital. This is a classic manifestation of the Cantillon effect.

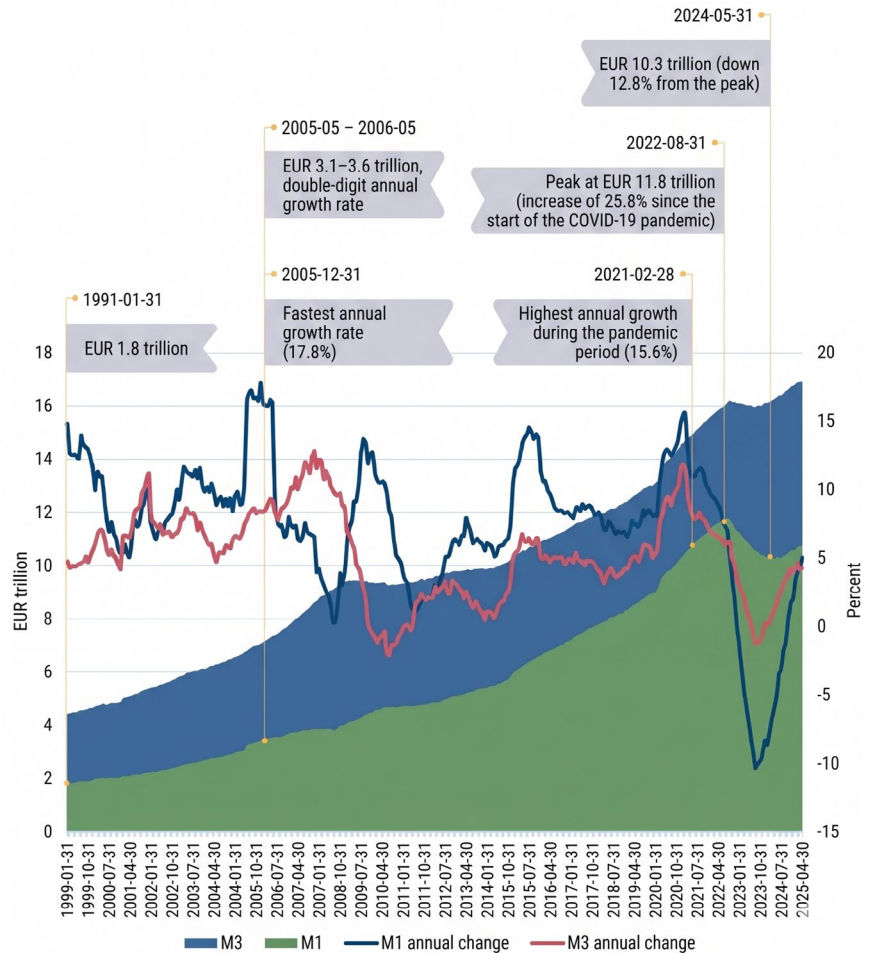


Richard Cantillon
(1680–1734)

ECB monetary policy decisions directly affect the money supply in the euro area.¹ Following the decisions taken during the COVID-19 pandemic, such as zero interest rates and large-scale asset purchases, the money supply (both M1 and M3) increased sharply (see Figure 4). However, in 2022, during the tightening phase when interest rates were raised and securities purchases were halted, this growth came to an abrupt end.

¹ Monetary aggregates: M1 comprises currency in circulation and overnight deposits (the most liquid component). M2 includes M1 and short-term deposits (with maturity of up to two years). M3, the broadest aggregate, includes M2 and longer-maturity financial instruments, such as money market fund shares/units and debt securities with maturities of up to 2 years.

Figure 4: Money supply in the euro area, 1999–2025

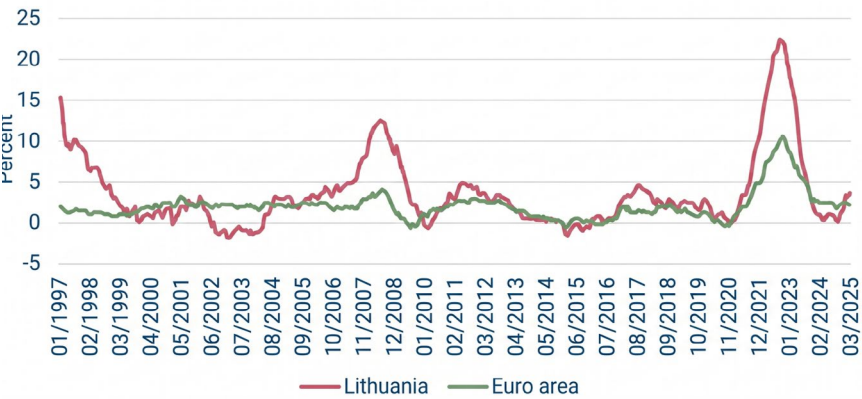


M1 declined significantly, as higher interest rates prompted households and businesses to shift funds from current accounts into term deposits. After a long period, deposit interest rates once again encouraged saving. Because M3 includes term deposits, this broader aggregate declined less sharply, i.e., money shifted from one form to another. In other words, even after the historic tightening of monetary policy, the money created during the pandemic was not withdrawn from circulation; instead, it was reallocated across monetary forms, while the creation of

new money was temporarily halted. Nevertheless, this tightening was sufficient to suppress the acceleration of inflation.

However, in 2024, once the ECB began cutting interest rates, the money supply started to increase again. This is particularly evident in M1, since the return to an accommodative monetary policy gradually reduces incentives to hold funds in term deposits. Growth in M3 has also accelerated, indicating that newly created money is once again entering the economy. These data show that money supply dynamics are not accidental. They clearly reflect central bank actions. Money supply, in turn, remains one of the primary drivers of inflation.

Figure 5: Annual inflation changes in Lithuania and the euro zone, 2000–2025



Although inflation is most often criticised for eroding purchasing power, the problem does not end there. A persistent environment of rising prices distorts economic logic itself: incentives for long-term planning weaken, people become more inclined to borrow rather than save, and postponed consumption is discouraged. A culture of artificial consumerism and living ‘on credit’ is fostered as money loses its value while prices continue to rise.

Has the ECB learned its lesson?

In summary, contemporary money supply creation mechanisms demonstrate the direct influence of central bank decisions on the amount of money in the economy. Although the ECB's post-pandemic policy indicates a shift away from quantitative easing toward more traditional interest rate regulation, it essentially confirms that money supply remains institutionally managed. These changes indicate a degree of readiness to abandon instruments that have proven ineffective. Yet the rapid return to money-supply expansion suggests that inflation dynamics and their social consequences remain insufficiently assessed.

As a result, the lessons learned by the central bank remain limited. Rather than focusing on the stability of the monetary system and purchasing power, the ECB continues to follow short-term external impulses, thereby risking a repetition of past mistakes.

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