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Abstract

Monetary policy in the euro area faces significant challenges due to the evolving economic landscape marked by the return of inflation, financial instability risks, and the consequences of unconventional monetary policy (UMP) to the operational framework of monetary policy. This article evaluates these key challenges in the context of the European Central Bank's (ECB) mandate and its broader implications. It highlights the unprecedented resurgence of inflation, which has complicated monetary policy decisions and revealed gaps in understanding household inflation expectations. Financial stability, now integral to the ECB's mandate, is strained by trade-offs between short-term and long-term stability, particularly under high-interest rate environments. Finally, UMP has disrupted traditional financial mechanisms and increased dependency on the central bank's liquidity operations.

I. Introduction

The European Central Bank (ECB) plays a pivotal role in the European economic system. As Europe's elected legislator, it is incumbent upon the European Parliament to navigate economic and monetary challenges together with the ECB.* Since 2007, the ECB has found itself at the forefront of combatting a series of unprecedented economic challenges: the Great Financial Crisis (GFC), the sovereign debt crisis, ultra-low/negative interest rates, Covid-19, and finally double-digit inflation. As the importance, scope, and visibility of ECB activities rose during the last 15 years, so has the discourse and scrutiny of its actions. The ECB now foresees its mandate as encompassing not only monetary policy and other issues related to its core mandate, but also broader issues such as inequality, welfare, digitalisation, employment, climate change and the greening of the economy, as well as war and geopolitics.

* SAFE policy papers represent the authors' personal opinions and do not necessarily reflect the views of the Leibniz Institute for Financial Research SAFE or its staff.

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This essay focuses on **three challenges** related to the ECB's primary objective of price stability: the **inflation policy target**, the **effects on financial stability**, and the **operational policy framework**. We consider these of utmost importance for the European Parliament's task to scrutinise the ECB's monetary policy conduct. The other issues, while significant, are not primarily linked to the conduct of monetary policy and discussing them in more detail is beyond the scope of this short essay.

First, inflation has returned in a dramatic fashion and with complexities not previously encountered. While inflation remained around 0% for a long time and the euro area came dangerously close to deflation in the aftermath of the sovereign debt crisis, it re-emerged in an unprecedented, and unexpected way, with a record high in the euro area of 10.6% in October 2022. **Understanding the nature of inflation** and its role in the decision-making of households, firms, and actors in financial markets is of the utmost importance for the future conduct of monetary policy.

Second, financial stability has become a key concern and is now seen as inseparable from the ECB's mandate. Ensuring the resilience of the banking sector, maintaining smooth functioning of the payment systems, and preventing systemic risks are now as essential as the traditional goal of price stability. Therefore, the effective and efficient implementation of monetary policy presents **trade-offs between short- and long-run financial stability risks**.

Finally, the operational framework of monetary policy has undergone a radical transformation. The reliance on short-term interest rates as the principal monetary policy tool has given way to a **range of unconventional monetary policy (UMP) measures**, including asset purchases, replacing the auctioning of reserves with ultra-generous liquidity operations, and even negative interest rates. The ECB's balance sheet has expanded significantly. Before 2007, the size of the Eurosystem's balance sheet was negligible relative to the size of the euro area economy. At its peak, in mid-2022, it reached almost 70% of euro area GDP (ECB, 2023). Such a dramatically different role for a central bank in an economy raises the question of whether this should, or even can, be undone in the future. Ensuring that monetary policy is both efficacious and comprehensible to the citizens of Europe remains a significant task as we move forward in this era of economic complexity and uncertainty.

II. Inflation and expectations about it

Inflation is the most direct way ordinary consumers get in touch with the outcome of monetary policy, and inflation expectations are a key transmission tool of monetary policy and a central determinant of realised inflation. Despite a promise by Christine Lagarde, while a candidate for ECB presidency in 2019, central banks still have a long way to go to fully appreciate the ways ordinary citizens experience inflation and to take into account the heterogeneous ways in which they form their inflation expectations when conducting monetary policy.

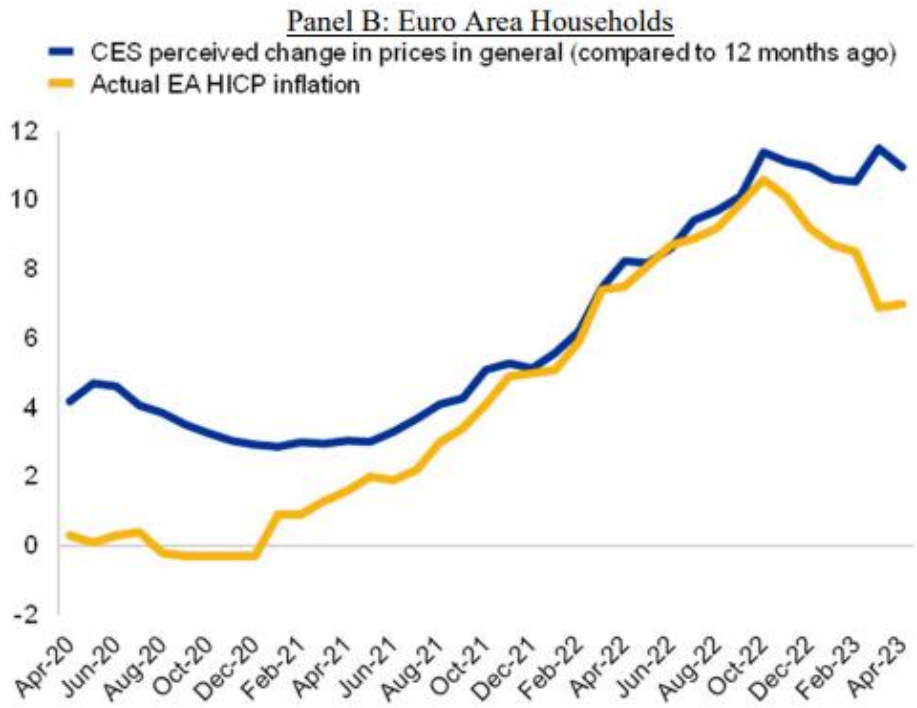
There is ample empirical evidence for mismatches between inflation and inflation expectations.

- First, households **overestimate current inflation**. Coibion et al. (2022) asked 25,000 Americans in 2018 what they thought the average inflation rate in the US was, and less than 20 percent of survey participants answered "about 2 percent". Almost 40 percent reported a number higher than 10 percent.
- Second, households tend to **overestimate future inflation**. Using data from the New York Federal Reserve survey of consumer expectations, D'Acunto et al. (2021a) find that between 2011 and 2018, men on average expected inflation to rise to about 4 percent over 12 months, while women expected a rate of 6 percent (a difference that holds regardless of financial literacy). In fact, inflation averaged below 2 percent.
- Third, there is evidence of a **"gender gap" in inflation expectations**. On average, women expect higher inflation than men, but only in households where women do all the grocery shopping. In families where the male household head occasionally does the shopping, the gap disappears.
- Fourth, it turns out that households rank **grocery shopping** as the most relevant source of information (D'Acunto et al., 2021b). The price series that central banks typically ignore in their conduct of monetary policy are the **key driver of consumers inflation expectations**, raising the concern that central banks, including the ECB, implement policies that are misguided and hurt average consumers.
- Fifth, **not all price changes matter equally**. When they occur in categories that are important to or used more regularly by consumers—such as milk and eggs—immediate increases in overall inflation expectations can be observed, both in times of low and high inflation. Households also tend to pay **more attention to price hikes than cuts**. These factors explain why families updated their inflation expectations in the summer of 2021, when most central banks continued to preach the gospel of temporary inflationary pressures—prices rose in the categories consumers cared about most. These findings also imply that household inflation expectations will take time to readjust to lower levels of inflation. If central banks do not take these patterns into account, they will risk keeping policy rates too high for too long, hurting especially disadvantaged parts of the population, such as longer income consumers (Bergman et al., 2021).
- Finally, there is another factor that contributes to household inflation expectations: messaging. **More complex policies** are more difficult to explain and therefore **less likely to shape expectations**, as highlighted by a comparison of the impact of pre-announced future consumption tax increases with central bank forward guidance (D'Acunto et al., 2022). Through the lens of the New Keynesian model, the standard model used for monetary policy

analysis by central banks, both policies should have the same effect on inflation expectations. But they differ quite substantially in their complexity and required understanding of economics. Most consumers understand to go out and buy new larger ticket items before taxes increase, but they are less likely to understand the implications of low policy rates in the future, which will then trigger higher inflation. Hence, the traditional way of central bank communication with expert audiences threatens the effectiveness of their own policies.

These trends of inflation and expectation misalignment are clearly visible in the euro area (Graph 1). Recent survey data from the ECB show that a gap opened up again between current inflation perceptions of households and realized inflation, after temporarily closing during the recent surge in inflation (Weber et al., 2023). This re-emergence raises the concern of increasing the persistence of core inflation, because employees are able to bargain for higher wages in tight labour markets. Another concern is the "stagflationary" view of many households. When they expect higher inflation, they think worse economic times are ahead (Weber et al., 2022). Clear and targeted communication by the ECB could alleviate this concern, but the current conduct of central bank communication does not fit this bill.

Graph 1: Inflation and inflation perception in the euro area Source: Weber et al., 2023, p. 32.



Graph 1: illustrates actual inflation and average perceived inflation in the euro area between April 2020 and April 2023, using the euro area Harmonised Index of Consumer Prices (HICP) and data from the ECB Consumer Expectation Survey, Source: Weber et al., 2023, p. 32.

Taken together, the current conduct of monetary policy and its communication by the ECB fall short of effectively managing the expectations of the audiences that they should target. Individuals in

Box 1: Unconventional Monetary Policy

UMP are all central bank policy tools other than the conventional change of the short-term interest rate. While widely used in the aftermath of the GFC, UMP has been part of the central bank toolkit for decades to achieve policy goals. The ECB employed core elements of UMP such as asset purchase programmes for government and corporate bonds (Quantitative Easing), negative interest rates, liquidity provisions to banks, and foreward guidance. UMP's purpose is to bring the inflation up to target and encourage economic activity. As of July 2022, the ECB has discontinued reinvestment and new purchases in an attempt to decrease liquidity (Quantitative Tightening).

general do not have well-anchored inflation expectations, contrary to conventional central bank wisdom. People focus on the price changes of relevant individual goods, often ignored by central bank's focus on core inflation, and pay more attention to price increases than cuts, increasing the persistence of the recent surge of inflation on inflation expectations and raising the welfare costs of inflation. Central banks could manage the expectations of households if they used simple messages. But the medium that transmits the message and the identity of the messenger matter. Reaching ordinary families, who typically do not follow official releases, remains the biggest challenge for central banks. Creative and clear communications could fill the gap, but it needs to be targeted at different sub-populations, otherwise central banks risk to redistribute from parts of the population that is inattentive to their communication and policy actions to populations that pay attention and react to the policy intervention.

III. Monetary policy and financial stability

The return of inflation in the euro area and the resulting monetary policy measures also pose challenges to financial stability, as they have **impacted the profitability and asset allocation of European banks** in the short term and interfered with the unwinding of UMP in the long term. The effects of interest rate changes resulting from monetary policy decisions on operational activities of banks are well-known. Financial intermediaries transform short-term, secure deposits into long-term, risky loans (Heider et al., 2019). The turbulence experienced by several US banks and Credit Suisse in response to the increase in interest rates illustrates this issue. When banks issue long-term investment loans or mortgages with fixed interest rates and extended maturities during a period of zero interest rates, the market value of such loans declines significantly once the ECB or the Federal Reserve raise interest rates. Around 30% of US banks would have negative equity value if forced to realize these losses on their balance sheets (Jiang et al., 2023). In Europe, smaller banks in particular engaged in commercial real estate lending with such long-term fixed interest rate loans (Abbassi et al., 2024).

Despite these challenges, **European banks have become more profitable** since the increase in interest rates and have reported the best figures in years. How can the losses on the asset side be reconciled with this outcome? There are two reasons: Firstly, under current accounting regulations, the market-based losses on these loans do not need to be realised as they are held to maturity. The fact that banks may not earn sufficient interest rates during the long maturity of the loan will primarily manifest in the future. Secondly, on the asset side, banks have not transferred the higher interest rates to their customers. In fact, banks have maintained low deposit rates and evidence suggests that these rates are slow to adjust (Lu et al., 2024). This creates a franchise value of deposits for banks that is significantly higher under higher monetary policy rates than under lower rates (Drechsler et al., 2021). In summary, banks charge higher interest rates on newly issued loans and earn higher interest on their reserve holdings with the central banks (Fricke et al., 2024).

Nevertheless, this situation warrants the attention of supervisors, regulators and policymakers. Most deposits with low rates are short-term. Bank customers have started to adapt to the new interest rate environment by transferring deposits from sight deposits to term deposits or redirecting them to non-bank money market funds or alternative investment opportunities offering higher yields. Such a shift could significantly alter the profitability of many European banks, as only the negative externalities of high interest rates will persist over time and become a source of considerable instability. The future trajectory of inflation rates in Europe will play a significant role. If inflation rates decrease as projected, the ECB may reduce interest rates, thereby narrowing the spread between low-rate long-term fixed interest rate loans and the prevailing market rate. Conversely, a further increase in inflation rates — potentially driven by wage hikes resulting from collective agreements or further escalations in energy prices due to global instabilities—might necessitate further increases in the ECB policy rate. In such a scenario, the threats to financial stability would amplify.

One **potential measure that policymakers** could consider is to **restrict** banks from **distributing their current profits as dividends** to their shareholders, thereby ensuring that additional equity buffers are available in case losses on assets need to be realised. Furthermore, adjustments to accounting rules could be contemplated, mandating banks to apply market valuation to their assets (Admati and Hellwig, 2024) or **requiring a more precautionary assessment of the interest rate risk** and the consequent increase of provisions to this regards that would largely reduce the current accounting earnings.

Additionally, UMP measures implemented by the ECB prior to 2021 have long-term ramifications for the economy. Overall, UMP measures contribute to long-term beneficial outcomes for financial stability, such as an increased availability of short-term secure assets, potentially lowering financial vulnerabilities as banks maintain higher reserves and lessen the discrepancy in maturity periods

(Greenwood et al., 2016). Moreover, UMP measures also diminish the interconnectedness between sovereigns and banks, as well as between sovereigns and corporations, by reducing the financial instability stemming from varied fiscal capabilities across Europe (Jappelli et al., 2023).

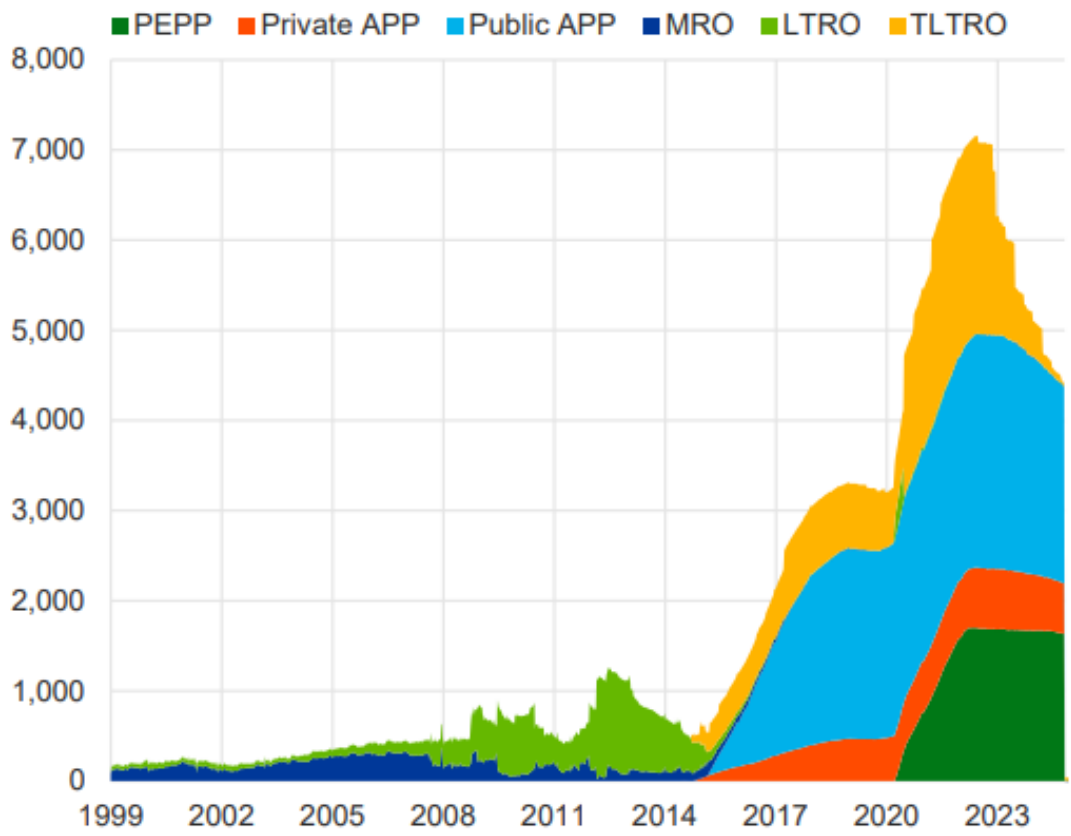
However, the ECB's balance sheet has expanded significantly due to these operations (Graph 2). While there is a broad consensus that these programmes have contributed to increases in inflation rates and provided additional liquidity to financial intermediaries and the corporate sector, the unintended consequences of these policies for the real economy have not been thoroughly understood. One key aspect is that the compressed term premium might distort prices and expectations of central bank interventions and may induce the financial sector to take riskier positions than it would otherwise do (Brunnermeier, 2023).

Unwinding UMP measures may pose challenges as well, as the banking system has accumulated both on- and off-balance-sheet demandable claims as a result of these policies, which cannot be easily reversed through tightening (Acharya et al., 2023). This is especially pertinent considering the ECB's gradual approach. Even in times of interest rate hikes, the ECB continued to purchase bonds and provide extensive liquidity to European banks. The unwinding of unconventional monetary policies may directly impact financial stability. The ECB's corporate bond purchases as part of its quantitative easing (QE) have led to a shift in bank lending from large corporates listed on the bond market to real estate firms (Berg et al., 2023). Consequently, real estate prices have surged significantly beyond levels explainable by fundamentals. Following the increase in interest rates, real estate asset valuations have declined. It remains to be seen to what extent banks will be affected by additional asset losses in the event of insolvencies among commercial real estate firms due to changes in monetary policy rates.

IV. Central bank balance sheet and operational framework

The changes to the operational framework pose a third challenge for the ECB: how to best implement its monetary policy stance in the economy via the financial system. In fighting the various crises over the last two decades, the ECB has moved to an operational framework that maintains a massive structural liquidity surplus. Such a framework can help alleviate immediate liquidity squeeze risks in the banking system, creating a beneficial effect although even with plentiful excess reserves, liquidity squeezes can still happen in certain money markets (for example the U.S. repo market crisis of September 2019).

Graph 2: Financial assets held by the ECB



Graph 2: showcases the total amount of financial assets held by the ECB in billion euros as a result of refinancing operations, i.e. the main refinancing operations (MRO), longer-term refinancing operations (LTRO), and targeted longer-term refinancing operations (TLTRO) and asset purchase programmes for corporate (private APP) and government (public APP) assets, as well as the the Pandemic Emergency Purchasing Programme (PEPP), Source: ECB, 2024.

The ECB's **large-scale liquidity operations and massive purchase of safe assets** (sovereign bonds) has **impacted the functioning of markets** considerably in at least three major ways. First, the large-scale liquidity operations have **flooded the banking system with central bank reserves and changed the incentives of banks**. For example, the Long-Term Refinancing Operations (LTRO) have reinforced the nexus between banks and their sovereign (Carpinelli and Crosignani, 2021, Crosignani et al., 2020). Banks did not use the liquidity injection by the ECB to extend lending to the economy, but to purchase government bonds, which may have contributed to the severeness of the sovereign debt crisis. The ECB then modified its liquidity operations and made them conditional on banks' lending volume (the so-called Targeted LTROs), but this created a new set of problems in terms of steering short-term interest rates. The increase in bank lending goes hand in hand with an increase in bank deposits and other short-term, possibly runnable, bank liabilities. In order to manage the liquidity risk of these liabilities, **euro area banks** require reserves and **have thus become dependent on the ECB operating with a liquidity surplus also in the future**. In such an environment, the classic demand for reserves by

banks has broken down and the relationship between central bank reserves and short-term interest rates has become unclear (Lopez-Salido and Vissing-Jorgensen, 2023).

Second, **the ECB's interventions have replaced money markets,** especially unsecured ones. Reduced money market activity impairs the ability of banks to monitor counterparty risk and to properly manage liquidity risk (Rochet and Tirole 1996, Heider et al., 2015, Corradin et al., 2020). The presence of excessive central bank liquidity can displace interbank market activities, deterring banks from actively managing their liquidity and contributing to the incorrect pricing of liquidity risks. As Borio (2023) suggests, when there is no penalty for holding excess liquidity, banks might neglect daily liquidity management, posing a threat to financial stability by inadequately managing and pricing liquidity risk. Such a scenario **increases the system's susceptibility to liquidity crises**, potentially necessitating more significant central bank interventions than if liquidity risks were accurately assessed and priced.

Third, the ECB's asset purchases cause a **scarcity of safe assets** with widespread consequences across financial markets. The scarcity leads to exceptionally low or negative repo rates for high-quality sovereign bonds (Arrata et al., 2020). These are unexpected short-term consequences of UMP that have perverse effects both in the liquidity of the cash bond market, in the functioning of the repo market, and in a systematic mispricing of the derivative markets (Pelizzon et al., 2016, 2024). The key challenge the ECB faces is that the scarcity of safe assets and the dysfunction of money markets may **impair the transmission of both conventional and unconventional monetary policy going forward**. Moreover, the ECB, like most central banks, exited its decade-long accommodative monetary policy cycle by first raising rates, rather than by first reducing its balance sheet. This sequencing creates two problems for the conduct of monetary policy. First, the impact QE has on secured money markets dampens the effect QE has on the term premium, a reduction of which is the main objective of QE in the first place (Jappelli et al., 2024). Second, the scarcity of government bonds reduces the transmission of policy-rate hikes to money market rates and to the term structure of interest rates (Nguyen et al., 2023).

A large balance sheet may also constrain the ECB in its future actions. Holding vast amounts of government bonds as a consequence of UMP exposes a central bank to significant losses once it tightens interest rates again (Sims 2016). While a central bank's exclusive right to print money secures its financial stability in theory, an "accounting insolvency" can arise, leading to political challenges in areas where laws mandate government recapitalisation. This risk could undermine confidence in the central bank's effectiveness in controlling inflation (Brunnermeier 2023, Del Negro and Sims 2015) and managing financial emergencies in the future.

The ECB has started to recognise some of these issues, and on March 13, 2024 it announced some changes to its operational framework for implementing monetary policy. In our view, these changes are marginal. The ECB continues to operate with a structural surplus of liquidity and maintains its current toolbox with long-term refinancing operations and structural portfolio of securities that it buys. None of this addresses the question of how the ECB will be able to orchestrate an exit from ultra-generous liquidity provision together with its interest rate setting and how to reactivate private, integrated money markets in the euro area.

V. Policy outlook

The ECB faces mounting challenges in navigating the complexities of monetary policy within an increasingly volatile economic environment. The resurgence of inflation demanded a nuanced approach, not only to manage price levels but also to address the divergence between actual inflation and public perception. While the ECB has made progress to return inflation to its 2% target, misaligned inflation expectations continue to risk undermining the ECB's policy effectiveness. To bridge this gap, the ECB must enhance its communication strategies, simplifying messages and targeting diverse sub-populations to ensure households comprehend the implications of monetary decisions. Clearer messaging can reduce the risk of prolonged inflationary expectations.

Financial stability, now a central focus of monetary policy, presents additional hurdles. While higher interest rates have temporarily bolstered bank profitability, they also expose structural vulnerabilities within financial institutions, particularly in fixed-interest-rate portfolios and deposit dynamics. For example, the shift in depositor behavior toward higher-yield investments threatens long-term bank profitability, requiring a recalibration of supervisory frameworks. The monetary dialogue with the European Parliament plays a crucial role to coordinate policy activities and to determine whether policymakers should mandate stronger equity buffers and revisit accounting rules to proactively account for potential market risks. At the same time, regulatory adaptations must be integrated into the ECB’s broader monetary strategy to prevent fragmented oversight and to mitigate systemic risks.

Finally, the ECB’s operational framework poses additional challenges, given its reliance on structural liquidity surpluses and unconventional monetary policy tools. These measures, while effective during crisis periods, have disrupted traditional financial mechanisms, including interbank lending and risk pricing. Excess liquidity has weakened market discipline, creating dependencies on central bank interventions and amplifying vulnerabilities in times of policy normalization. The scarcity of safe assets, driven by extensive asset purchase programs, has further constrained the transmission of both conventional and unconventional monetary policy tools. Addressing these issues requires a careful

unwinding of the ECB's balance sheet, prioritizing transparency and gradual implementation to restore private market functionality without inducing financial instability.

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