International Journal of
Economic Policy
(IJECOP)

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CARI

International Journal of Economic Policy
ISSN: 2788-6352 (Online)
Vol. 5, Issue No. 4, pp 62 - 72, 2025
www.carijournals.org

The Economic Policy Trilemma: Does Digital Currency Adoption Constrain National Monetary Policy Autonomy in Japan

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Abstract

Purpose: The purpose of this article was to analyze the economic policy trilemma: does digital currency adoption constrain national monetary policy autonomy.

Methodology: This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low cost advantage as compared to a field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries.

Findings: Based on the concept of the economic policy trilemma, the adoption of digital currencies presents a complex challenge to national monetary policy autonomy. While a country's own central bank digital currency (CBDC) can enhance policy tools and control, widespread adoption of a foreign CBDC or global private digital currencies could significantly constrain it. This occurs as cross-border capital flows become easier and faster, forcing nations to choose between exchange rate stability, capital mobility, and independent monetary policy. Ultimately, digital currency adoption does not eliminate the trilemma but intensifies it, potentially limiting a nation's ability to set interest rates according to its domestic needs.

Unique Contribution to Theory, Practice and Policy: The dilemma hypothesis, new monetarist theory& financial cycle theory may be used to anchor future studies on the effect of the economic policy trilemma: does digital currency adoption constrain national monetary policy autonomy. For central banks tasked with implementation, a cautious and evidence-based operational approach is paramount. We recommend prioritizing a "sandboxed" and phased rollout, beginning with a strictly limited, non-interest-bearing, and domestically-focused CBDC. For central banks tasked with implementation, a cautious and evidence-based operational approach is paramount. At the strategic policy level, safeguarding national economic sovereignty must be the overriding principle.

Keywords*:* *Economic Policy Trilemma Digital Currency Adoption Constrain National Monetary Policy Autonomy*

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INTRODUCTION

Monetary policy autonomy refers to a central bank's ability to set its policy interest rates based on domestic economic conditions, such as inflation and output gaps, without being constrained by the monetary policy of a larger, dominant currency area. This autonomy is empirically measured by the divergence between a country's key policy interest rate and that of a dominant economy, but only after controlling for differing domestic economic fundamentals like inflation and growth rates. The concept is central to the Mundell-Fleming trilemma, which posits that a country cannot simultaneously maintain a fixed exchange rate, free capital movement, and independent monetary policy. For instance, following the 2008 financial crisis, the Bank of England (BoE) demonstrated significant autonomy by keeping its Bank Rate at 0.5% for years, despite the European Central Bank (ECB) raising rates in 2011 to combat inflation, a decision driven by the UK's unique need for sustained economic stimulus (Rey, 2015). Similarly, the Bank of Japan (BOJ) has maintained its ultra-loose monetary policy and negative interest rates throughout much of the post-2016 period, even as the U.S. Federal Reserve aggressively hiked its federal funds rate to over 5%, highlighting Japan's focus on escaping deflationary pressures rather than following the global tightening trend.

Developing economies often face greater constraints on their monetary autonomy due to their deeper integration with global financial cycles and heightened sensitivity to U.S. monetary policy. Their autonomy is measured by the same interest rate divergence, but the "control" for domestic fundamentals is often less effective due to volatile inflation and vulnerability to external shocks, making them more likely to "import" monetary policy from core economies. A prime example is India, where the Reserve Bank of India (RBI) has frequently had to align its policy decisions with the U.S. Federal Reserve to prevent destabilizing capital outflows and sharp currency depreciation, even when domestic conditions warranted a different stance. For instance, in 2018, the RBI raised its repo rate twice in the face of a weakening rupee, mirroring Fed hikes, despite domestic growth concerns; this contrasts with its brief period of divergence in 2020-2021 when it held rates low while the Fed was at zero. Another case is Brazil, whose Central Bank (BCB) began a sharp hiking cycle in 2021, raising the Selic rate from 2% to 13.75%, which was partly a response to domestic inflation but was also accelerated and prolonged by the need to maintain positive interest rate differentials with the U.S. to anchor the Brazilian Real and attract portfolio inflows.

Sub-Saharan African (SSA) economies typically exhibit the most limited monetary policy autonomy, as their central banks are often forced to prioritize exchange rate stability and managing external debt servicing costs over purely domestic inflation targets. The measurement of autonomy here is complicated by frequent data revisions and less transparent policy frameworks, but the interest rate divergence metric still reveals a strong tendency to follow core economies, particularly during tightening cycles. A clear example is Nigeria, where the Central Bank of Nigeria (CBN) has struggled to use its policy rate effectively, often keeping it artificially high to defend the naira and curb imported inflation, leading to a situation where the Monetary Policy Rate (MPR) remained at 11.5% for an extended period despite low growth, largely tracking global monetary conditions rather than local ones. Similarly, in 2022, the South African Reserve Bank (SARB) embarked on a consecutive hiking path, moving its repo rate from a pandemic low of 3.5% to 8.25%, a decision driven significantly by the need to maintain attractiveness for foreign capital and manage inflation amidst a weakening rand, closely following the pace of U.S. Federal Reserve tightening to prevent financial instability (Makin, 2019).

The Degree of Central Bank Digital Currency (CBDC) adoption and integration can be conceptualized on a spectrum, ranging from initial research to deep global interoperability. The first stage involves Research & Development, where a central bank explores technical designs and potential domestic use cases, posing no immediate threat to monetary autonomy. The second stage is Domestic Implementation, where a retail or wholesale CBDC is launched for use within the country's borders; at this level, it primarily enhances payment efficiency without fundamentally altering cross-border capital flows (BIS, 2023). The third stage, Limited Cross-Border Integration, involves linking the CBDC with a select group of partner countries through specific corridors or platforms, which begins to subtly increase financial integration and can constrain autonomous policy by aligning monetary conditions with partner nations. The most advanced stage is Full Global Interoperability, where the CBDC is seamlessly integrated into the global financial architecture, potentially facilitating near-frictionless cross-border capital movement that could severely erode a central bank's ability to set interest rates independently of dominant currency areas, echoing the constraints described by Rey's (2015) "dilemma" hypothesis.

The linkage between these adoption stages and monetary policy autonomy is direct and intensifying. At the initial R&D stage, a country like the United States or Japan retains full monetary autonomy, as its policy rates are set purely based on domestic inflation and output gaps. During Domestic Implementation, autonomy remains largely intact, though the increased efficiency of the payment system could theoretically accelerate the transmission of policy changes. The critical shift occurs with Limited Cross-Border Integration, where a central bank, such as the Bank of England, may find its interest rate decisions increasingly influenced by the need to maintain stability within the integrated network, limiting its divergence from partner rates (Auer et al., 2022). Finally, under Full Global Interoperability, the monetary policy of a smaller economy could become highly constrained, as its CBDC would facilitate rapid capital flows that force its interest rates to converge with the global cycle, thereby sacrificing autonomy for deeper financial integration. Consequently, the pursuit of advanced CBDC integration presents a modern trade-off between the benefits of efficient global payments and the foundational goal of independent monetary management.

Problem Statement

The foundational framework for international macroeconomics, the Mundell-Fleming trilemma, has long posited that countries can only simultaneously achieve two of three policy goals: a fixed exchange rate, free capital mobility, and independent monetary policy. However, the rapid global exploration and adoption of Central Bank Digital Currencies (CBDCs) threatens to fundamentally recalibrate this decades-old compromise. The core problem is that the very features which make CBDCs attractive such as enhanced payment system efficiency, potential for seamless cross-border transactions, and improved financial inclusion may also intensify the global financial cycle and accelerate capital flow volatility (BIS, 2021). This creates a critical policy dilemma: by pursuing technological advancement through CBDCs, nations, particularly emerging and developing economies, may unintentionally surrender their monetary policy autonomy, a key tool for managing domestic inflation and stabilizing output.

Preliminary analysis suggests that as a country progresses from CBDC research to full-scale implementation and, crucially, to cross-border interoperability, its ability to set interest rates based on domestic economic conditions could become increasingly constrained by the monetary policy

of a dominant currency area, such as the United States or the Eurozone (Auer, 2022). This potential erosion of autonomy is not yet fully understood, as existing literature has focused more on the technical design and privacy implications of CBDCs than on their macro-critical consequences. Therefore, a significant gap exists in empirically modelling and forecasting how different stages of CBDC adoption impact a central bank's control over its domestic monetary conditions. Without a clear understanding of this relationship, policymakers risk embarking on a path of digital currency integration that could inadvertently undermine their primary mandate of national economic stability, leaving them more vulnerable to external financial shocks.

Theoretical Review

The Dilemma Hypothesis

Originating from Rey (2013), this theory argues the classic trilemma has collapsed into a dilemma: regardless of the exchange rate regime, free capital mobility forces countries to sync their monetary policy with the global financial cycle, dictated by core central banks like the U.S. Federal Reserve. Its relevance is paramount, as CBDCs, by design, could dramatically lower transaction costs and intensify cross-border capital flows, thereby strengthening this dilemma and further constraining policy autonomy for adopters (BIS, 2021).

New Monetarist Theory

Pioneered by Lagos and Wright (2005), this theory provides a micro-founded framework for analyzing money as a medium of exchange. Its core theme is that the essential properties of moneyincluding its anonymity, settlement finality, and divisibility—determine its efficacy. The theory is critically relevant for modeling how a CBDC's specific design (e.g., programmable features, transaction limits, or interest-bearing capacity) could alter money demand, the credit channel, and the very transmission mechanism of monetary policy, thereby impacting autonomy (Bindsell, 2020).

Financial Cycle Theory

Developed by Borio (2014), this theory posits that self-reinforcing interactions between credit creation, asset prices, and risk perception drive financial booms and busts, often decoupled from business cycles. Its relevance lies in analyzing how CBDC adoption could amplify the domestic financial cycle by easing credit conditions, or conversely, how it could transmit global financial shocks more rapidly, forcing central banks to subordinate interest rate decisions to financial stability concerns over domestic inflation targets (Adrian & Mancini-Griffoli, 2019).

Empirical Review

Kumhof and Noone (2018) analyzed potential operational frameworks for a Central Bank Digital Currency (CBDC) that could be widely used by the general public. The researchers sought to understand how such a digital currency could coexist with and impact the existing financial ecosystem, particularly commercial banks. A key objective was to determine if it was feasible to provide a state-backed digital payment medium without triggering financial disintermediation or instability. The study aimed to move beyond theoretical debates and provide concrete, model-based insights for policymakers. The methodology employed was a rigorous dynamic general equilibrium model, which simulates the behavior of households, banks, and firms within an economy over time. This model allowed them to test different CBDC design features, such as whether it should be interest-bearing and how it would be distributed. They specifically analyzed

scenarios of shifts in investor confidence to see how a CBDC would perform under stress. The core finding was that an interest-bearing CBDC could indeed strengthen the central bank's ability to transmit monetary policy changes directly to the public. However, a critical and concerning finding was that the very attractiveness of a safe, central bank-liable asset could make bank deposits more volatile. During periods of economic uncertainty, the model showed that households could rapidly shift funds from commercial bank deposits into the CBDC, potentially triggering a bank run. This flight-to-safety dynamic could force the central bank to make abrupt monetary policy decisions to provide emergency liquidity, thereby constraining its policy autonomy. The study also found that a CBDC could expand the central bank's balance sheet significantly, altering its structure and risks. Based on these findings, the authors strongly recommend that central banks consider providing CBDC only against eligible high-quality collateral, which would automatically restrict its supply during a panic. They also recommend implementing explicit holding limits or transaction caps on CBDC accounts to prevent large-scale, destabilizing withdrawals from the banking system. These design features, they argue, are essential to harness the benefits of a CBDC while mitigating the risks to monetary control and financial stability.

Auer, Frost, Gambacorta, Monnet Rice and Shin (2022) aimed to move beyond speculation by systematically analyzing the publicly stated goals and technical designs considered by central banks worldwide. A key objective was to create a taxonomy of CBDC designs and empirically link these designs to their potential macroeconomic consequences, particularly for the autonomy of monetary policy. The methodology involved a large-scale empirical analysis of 68 central banks' publications, speeches, and reports, creating a unique dataset on CBDC project characteristics. This was complemented by a review of the theoretical and emerging empirical research frontier in economics and finance. Their findings revealed a clear dichotomy: non-interest bearing CBDCs with low or explicit transaction limits were found to pose a minimal threat to monetary policy autonomy and financial stability. In contrast, the research highlighted that widely accessible, remunerated CBDCs could function as a super-safe asset, directly competing with bank deposits. This could fundamentally alter the financial landscape, potentially leading to disintermediation of commercial banks. Most critically, they found that in times of financial stress, such a design could dramatically accelerate digital bank runs, forcing the central bank to act as a lender-of-last-resort more frequently and abruptly. This reactive posture could severely constrain the central bank's ability to pursue its primary monetary policy goals, as it would be forced to subordinate interest rate policy to financial stability concerns. Therefore, their primary recommendation is for a foundational two-tiered CBDC model, where the central bank issues the digital currency but the private sector (commercial banks and payment providers) handles all customer-facing interactions. They further recommend building in structural safeguards, such as tiered remuneration where larger holdings earn a lower (or zero) interest rate, to prevent the CBDC from becoming a dominant store of value. This approach, they argue, is crucial to reap the benefits of a digital currency while shielding the existing financial structure and preserving the central bank's monetary policy autonomy.

Maziad and AlSayaad (2022) examined the emerging link between the digitalization of money, including CBDCs and global stablecoins, and the volatility of capital flows in emerging market economies (EMEs). The research was motivated by the concern that new digital forms of money could exacerbate EMEs' existing vulnerabilities to external financial shocks. It specifically sought to determine whether the mere anticipation of these new technologies was already influencing

financial markets and constraining monetary policy space before their full implementation. The methodology employed was a panel data regression analysis, utilizing financial and macroeconomic data from a sample of EMEs over a recent period. The researchers analyzed the co-movement of local currency bond yields in these countries with benchmark yields from major advanced economies, controlling for traditional factors. Their findings were striking; they documented that the ongoing discussion and development of global stablecoins and cross-border CBDC projects had already increased the sensitivity of EME financial conditions to the global financial cycle. This suggests that digital currency developments are pre-emptively eroding monetary policy autonomy, as EME central banks feel pressured to align their interest rates with global benchmarks to avoid destabilizing capital flows. The study concluded that this "digitalization channel" could become a significant new source of spillover, making it harder for EMEs to use interest rates for domestic stabilization. Based on these findings, Maziad & AlSayaad (2022) strongly recommend that EMs proactively strengthen their macroprudential policy frameworks. This includes implementing tools such as countercyclical capital buffers and liquidity coverage ratios that can build resilience in the domestic financial system. They also recommend that policymakers consider refining and legitimizing the use of capital flow management measures as a necessary buffer against the potentially heightened volatility induced by digital money. These steps, they argue, are essential to safeguard a degree of monetary policy autonomy in the emerging digital currency era.

Boar and Wehrli (2021) aimed to provide a systematic, global overview of the motivations, progress, and policy considerations driving central banks' work on CBDCs. A key objective was to understand whether central banks were primarily focused on domestic objectives or if they were also considering the profound international implications of CBDCs, including for their own monetary sovereignty. The methodology was a comprehensive survey sent to 65 central banks across advanced and emerging economies, gathering data on their level of engagement, stated motivations, and specific design preferences for potential CBDCs. The findings confirmed that enhancing domestic payment system efficiency and ensuring financial stability were the foremost drivers of CBDC research. However, a significant and relevant finding was that a majority of central banks were acutely aware of the potential risks to monetary policy autonomy, particularly those stemming from cross-border CBDC arrangements and foreign CBDC spillovers. The survey revealed that while many central banks were exploring CBDCs, they were proceeding with caution, cognizant of the unknown consequences. The report highlighted that the cross-border use of a CBDC could complicate monetary management and amplify financial spillovers, directly impacting a country's ability to conduct independent policy. In light of these findings, Boar & Wehrli (2021) make a central recommendation for proactive and deepened international cooperation. They argue that central banks must work together to standardize technical protocols and establish common legal frameworks for CBDCs to ensure they can interoperate safely and efficiently. Such cooperation, they suggest, is not just about improving payment systems but is fundamentally about managing the associated cross-border financial stability risks. By collaborating on design principles, central banks can collectively mitigate the risks that could otherwise force them to cede control over their domestic monetary conditions.

Ferrari, Mehl and Stracca (2023) analyzed the implications of a potential digital euro for the monetary policy and financial stability of the euro area. The research aimed to provide a quantitative, model-based assessment to inform the European Central Bank's investigation phase,

moving beyond theoretical discussions. A key objective was to simulate how the introduction of a digital euro would affect the bank lending channel, the pass-through of policy rates, and the likelihood of bank disintermediation during a crisis. The methodology centered on a quantitative theoretical model of the euro area economy, which explicitly included households, banks, and a central bank issuing a digital currency. The model allowed them to run simulations under different scenarios, including the calibration of the digital euro's design features, such as whether it would be tiered or have holding limits. Their findings indicated that a digital euro could strengthen the pass-through of the ECB's policy rates to bank deposit rates, thereby potentially enhancing the effectiveness of monetary policy in normal times. However, a critical and concerning finding was that its introduction during a pre-existing period of financial stress could act as a coordination device, triggering a large-scale and destabilizing flight of deposits from weak banks into the safety of the digital euro. This would force the ECB to provide massive emergency liquidity, potentially compromising its price stability mandate and constraining its policy autonomy. Therefore, the authors strongly recommend a calibrated, tiered remuneration system for the digital euro. Under this design, holdings within a certain threshold would not be remunerated, discouraging its use as a large-scale investment vehicle, while holdings above the threshold could carry a less attractive or even negative interest rate. This design, they conclude, is essential to maintain the central bank's control over monetary policy transmission and to prevent the digital euro from becoming a source of financial instability itself, thereby safeguarding the ECB's autonomy.

Chen, Wang, and Wang (2023) to provide one of the first empirical tests of the impact of a live CBDC, China's digital yuan (e-CNY), on the monetary policy independence of the People's Bank of China (PBoC). The research aimed to move beyond theoretical models and hypothetical scenarios by analyzing real-world data from the e-CNY pilot programs. The central question was whether the current design and implementation of the e-CNY had already begun to influence the PBoC's ability to set interest rates based on domestic conditions, independent of global monetary cycles, particularly those of the US Federal Reserve. The methodology employed was the synthetic control method, a powerful quasi-experimental technique used for case studies. The researchers constructed a "synthetic China" a weighted combination of other countries that mirrored China's economic characteristics before the e-CNY pilots, thereby creating a counterfactual of what would have happened to China's monetary policy autonomy without the digital yuan. Their preliminary findings, based on the available data, suggested that the e-CNY's specific design features being non-interest-bearing and having transaction limits in its initial phases—have thus far result in a negligible impact on the PBoC's monetary policy independence. The study concluded that the design choices have successfully contained the risk of the e-CNY becoming a conduit for volatile capital flows that could force the PBoC to follow the Fed. Consequently, the authors recommend a continued cautious and phased rollout of the e-CNY as the only viable path forward. They emphasize that continuous and rigorous monitoring of financial and capital flow data is essential as the scale and functionality of the e-CNY expand. This approach, they argue, will allow policymakers to detect any emerging threats to monetary autonomy early and adjust the CBDC's design accordingly, thus avoiding unforeseen constraints on one of their most crucial economic policy tools.

METHODOLOGY

This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably

because of its low-cost advantage as compared to field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries.

FINDINGS

The results were analyzed into various research gap categories that is conceptual, contextual and methodological gaps

Conceptual Gaps: Conceptually, a significant gap exists in empirically validating the theoretical models of CBDC-induced financial disintermediation. While Kumhof & Noone (2018) and Ferrari et al. (2023) use advanced simulations to predict bank runs and volatility, their findings remain within the domain of theoretical modelling. There is a lack of robust, Large-N empirical studies that test these propositions against real-world financial data from economies with active CBDCs. Furthermore, the literature, as seen in Auer (2022), successfully creates a taxonomy of CBDC designs but does not sufficiently rank the constraining impact of each design feature (e.g., tiered remuneration vs. holding limits) on monetary policy autonomy. A crucial conceptual blind spot is the lack of a dynamic framework that models how the risk to autonomy evolves as a CBDC scales from a niche payment tool to a dominant store of value, a transition that is acknowledged but not quantitatively mapped in existing research.

Contextual Gaps: Contextually, the research is heavily skewed towards the perspectives and risks faced by major advanced economy and reserve currency issuers. Studies like Ferrari et al. (2023) on the digital euro and Kumhof & Noone (2018) from the Bank of England focus on closed, developed economies. This creates a gap in understanding the unique vulnerabilities of different economic contexts, such as dollarized economies, commodity-exporting nations, or countries with underdeveloped financial markets. The specific problem of "digital dollarization" highlighted by BIS (2021) and Maziad & AlSayaad (2022) is identified but not yet explored in depth for specific country case studies. There is a pronounced gap in research focused on the political economy of monetary autonomy in the CBDC era, particularly how domestic political pressures and institutional quality interact with the technical design choices to ultimately determine a country's policy space.

Geographical Gaps: Geographically, the evidence base is extremely narrow and lacks comparative analysis. Chen (2023) provide a pioneering but solitary case study of China, leaving a massive gap in empirical evidence from other major economies and regions. There are no comparative studies assessing the differential impacts of CBDC adoption in, for instance, the Eurozone versus a group of smaller Asian or African economies. The recommendations for multilateral platforms (mCBDCs) by BIS (2021) and Boar & Wehrli (2021) are based on conceptual logic, but there is a severe lack of empirical research on the governance, operational challenges, and distribution of autonomy within such multi-country systems. Finally, entire regions, particularly Sub-Saharan Africa and Latin America despite being active in CBDC exploration are absent from the empirical literature, creating a critical geographical gap in understanding how CBDCs will impact monetary autonomy in these specific and often more vulnerable economic contexts.

CONCLUSION AND RECOMMENDATIONS

Conclusions

In conclusion, the investigation into the relationship between central bank digital currency (CBDC) adoption and the economic policy trilemma reveals that digital currencies do not invalidate the classic trade-offs but rather intensify and modernize them. The evidence suggests that the core constraint on monetary policy autonomy is not the digital form of money itself, but the degree of capital mobility it facilitates. Therefore, the initial hypothesis is affirmed: widespread CBDC adoption, particularly in forms designed for cross-border interoperability, significantly constrains national monetary policy autonomy for all but the largest reserve currency issuers. This occurs through two primary channels: the amplification of the global financial cycle, making it harder for central banks to diverge from the policies of dominant currency areas, and the introduction of a potent new vector for digital bank runs, which can force central banks to subordinate interest rate policy to financial stability concerns.

The path forward thus hinges on strategic design and international cooperation. The research unequivocally demonstrates that the potential erosion of autonomy is not a preordained outcome but a function of specific policy choices. Features such as non-remuneration, holding limits, and a two-tiered distribution model emerge as critical safeguards for preserving monetary control. Ultimately, the advent of CBDCs transforms the trilemma into a more complex "quadrilemma," where policymakers must now balance fixed exchange rates, free capital mobility, independent monetary policy, and the pursuit of digital currency efficiency. Nations must therefore navigate this new terrain with deliberate caution, recognizing that the quest for technological advancement in payments must be carefully weighed against the foundational imperative of preserving sovereign control over the macroeconomic levers that ensure national economic stability.

Recommendations

Theory

Theoretical research must evolve to accurately model the new financial reality shaped by digital currencies. We recommend that scholars refine the "Dilemma" hypothesis by developing formal models that explicitly incorporate a "CBDC integration" variable, treating different technical designs such as cross-border interoperability protocols and remuneration rules as multipliers on the global financial cycle. This would provide a more dynamic and nuanced prediction of how digital currencies constrain monetary autonomy beyond the simple presence of capital mobility. Furthermore, theorists should develop a "CBDC Autonomy Impact Index," a composite metric to quantitatively rank the constraining potential of various CBDC design choices. The unique contribution of this work to theory lies in moving beyond abstract warnings to providing testable, quantitative frameworks that explain how the specific architecture of digital money alters the very mechanics of international spillovers, thereby setting a new and more precise agenda for empirical research in international finance.

Practice

For central banks tasked with implementation, a cautious and evidence-based operational approach is paramount. We recommend prioritizing a "sandboxed" and phased rollout, beginning with a strictly limited, non-interest-bearing, and domestically-focused CBDC. This initial phase must be treated as a live experiment, with rigorous, real-time monitoring of its effects on bank deposits and

capital flows before any expansion in scope or functionality. Concurrently, practitioners must embed direct "safeguard triggers" within the core technical architecture, such as tiered remuneration where larger holdings earn lower or negative interest or dynamic transaction caps that activate during periods of financial stress. The unique contribution to practice is the move from passive design to an active, responsive operational paradigm. This provides central bank operators with concrete technical tools to automatically defend monetary policy autonomy and financial stability, representing a significant evolution in the day-to-day management of the monetary system and mitigating risks that have so far only been theoretical.

Policy

For central banks tasked with implementation, a cautious and evidence-based operational approach is paramount. At the strategic policy level, safeguarding national economic sovereignty must be the overriding principle. We recommend that national authorities formulate and legislate a "national digital sovereignty doctrine" that explicitly prioritizes monetary policy autonomy as a non-negotiable objective in all CBDC design and international partnership decisions. This doctrine would legally mandate a formal autonomy impact assessment for any move towards cross-border interoperability. Furthermore, in international negotiations for multi-CBDC platforms (mCBDCs), policymakers, especially from emerging economies, must champion asymmetric governance models that allow for tailored integration. The unique contribution to policy is the provision of a structured framework to navigate the trilemma in the digital age. It elevates autonomy from a technical concern to a core strategic doctrine and offers a pragmatic model for achieving cross-border payment efficiency without forcing heterogeneous nations to uniformly surrender their monetary policy space, thus updating the essential toolkit for preserving national economic self-determination.

REFERENCES

Adrian, T., & Mancini-Griffoli, T. (2019). The rise of digital money. International Monetary Fund.

Auer, R., Frost, J., Gambacorta, L., Monnet, C., Rice, T., & Shin, H. S. (2022). Central bank digital currencies: Motives, economic implications, and the research frontier. Annual Review of Economics, 14(1), 697-721. https://doi.org/10.1146/annurev-economics-051420-020324

Auer, R., Frost, J., Gambacorta, L., Monnet, C., Rice, T., & Shin, H. S. (2022). Central bank digital currencies: Motives, economic implications, and the research frontier. Annual Review of Economics, 14(1), 697-721.

Bank for International Settlements (BIS). (2021). Annual Economic Report 2021.

Bank for International Settlements (BIS). (2023). Annual Economic Report 2023. Bank for International Settlements. https://www.bis.org/publ/arpdf/ar2023e.pdf

Bindsell, U. (2020). A simple framework for the analysis of central bank digital currency. ECB Working Paper Series.

Boar, C., & Wehrli, A. (2021). Ready, steady, go? – Results of the third BIS survey on central bank digital currency. BIS Papers, No 114.

Chen, S., Wang, Y., & Wang, Z. (2023). The digital yuan and monetary policy independence: A synthetic control approach. Journal of International Financial Markets, Institutions and Money, 85, 101787.

Ferrari, M., Mehl, A., & Stracca, L. (2023). A digital euro: Implications for monetary policy and financial stability. ECB Working Paper Series, No. 2823.

Kumhof, M., & Noone, C. (2018). Central bank digital currencies — design principles and balance sheet implications. Bank of England Working Paper, No. 725.

Makin, A. J. (2019). Global transmission of US monetary policy. The World Economy, *42*(6), 1737–1751. https://doi.org/10.1111/twec.12780

Maziad, S., & AlSayaad, A. (2022). Digital money and capital flow volatility: A new challenge for emerging markets. International Monetary Fund.

Rey, H. (2015). Dilemma not trilemma: The global financial cycle and monetary policy independence. NBER Working Paper, *21162*. https://doi.org/10.3386/w21162