Who Controls Money?

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Viktoria Royeck

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Name: Viktoria Royeck
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Who Controls Money? Cryptocurrencies, Gold, and the Struggle for Financial Sovereignty

1. Introduction

At first glance, gold and cryptocurrencies, most prominently Bitcoin, share a defining economic characteristic: scarcity. Both assets derive value, at least in part, from constrained supply, positioning themselves as alternatives to inflation-prone fiat currencies. However, this apparent similarity obscures a more consequential distinction. The way scarcity is produced, and the extent to which it is embedded in systems of political authority, differ fundamentally, raising important questions for financial stability, regulatory capacity, and international security.

Bitcoin's scarcity is algorithmically fixed and fully transparent. The protocol enforces a hard cap of 21 million units, a limit that cannot be altered without broad consensus across the network. As of early 2026, approximately 19.6 million bitcoins have been mined, representing more than 93 percent of the total supply (Glassnode, 2026; CoinMarketCap, 2026). The remaining issuance follows a predetermined schedule, decreasing through halving events roughly every four years, which reduces the rate of new supply by 50 percent. This implies that more than 99 percent of all bitcoins will be mined by around 2035, with full issuance only reached gradually thereafter (Glassnode, 2026). In this sense, Bitcoin represents a form of scarcity that is not only limited but fully predictable in advance.

Gold, by contrast, is characterized by physical scarcity shaped by geological and economic constraints. Approximately 205,000 metric tons of gold have been extracted throughout human history, with annual production adding around 3,000 to 3,500 metric tons, corresponding to a growth rate of roughly 1.5 to 2 percent (World Gold Council, 2023). Estimates of remaining underground reserves suggest approximately 50,000 metric tons, although these figures are subject to change depending on price developments, technological innovation, and geopolitical access to deposits (United States Geological Survey, 2024). Gold's scarcity is therefore not fixed but evolves in response to economic and political conditions.

Gold remains deeply integrated into the state-centric financial system. Central banks collectively hold more than 35,000 metric tons of gold reserves, including substantial holdings within the Eurosystem (World Gold Council, 2023). These reserves serve multiple functions: they hedge against currency risk, support confidence in monetary policy, and provide resilience in periods of geopolitical uncertainty. In this context, gold contributes to the stability of existing financial structures and remains embedded in systems of public authority.

Cryptocurrencies, by contrast, operate in a partially deterritorialized financial environment. Bitcoin enables peer-to-peer transactions without reliance on central banks or regulated intermediaries, thereby reducing the effectiveness of traditional oversight mechanisms. While this may increase efficiency and financial accessibility under certain conditions, it also complicates regulatory enforcement, particularly in cross-border contexts (Financial Action Task Force, 2023).

For European policymakers, this divergence raises concrete challenges. The implementation of regulatory frameworks such as MiCA reflects an effort to reassert oversight over digital asset markets within the European Union. However, the decentralized architecture of cryptocurrencies may limit the effectiveness of jurisdiction-based regulation, particularly where transactions occur outside regulated platforms or across fragmented legal regimes (European Central Bank, 2023).

The comparison between gold and cryptocurrencies is not merely economic but concerns the structure of monetary authority itself. Gold

reinforces a system in which states and central banks retain a central role in managing trust and stability. Cryptocurrencies, by contrast, introduce parallel mechanisms that may, under certain conditions, operate beyond or alongside these structures. This distinction has direct implications for sanctions enforcement, anti-money laundering frameworks, and the broader capacity of states to govern financial flows in an increasingly digital and transnational environment.

2. Shared Logic: Scarcity

Despite their structural differences, gold and Bitcoin share a core economic logic: both derive value from constrained supply relative to demand. This principle, often described as scarcity-driven valuation, has historically underpinned the role of commodities as stores of value and has been explicitly replicated in the design of cryptocurrencies.

Gold's economic function has long been linked to its relative scarcity. The total above-ground stock of gold grows slowly compared to other commodities, with annual production increasing supply by approximately 1.5 to 2 percent (World Gold Council, 2023). This low and relatively stable growth rate contributes to gold's high stock-to-flow ratio, a key metric used to assess an asset's ability to preserve value over time. Historically, assets with high stock-to-flow ratios, such as gold and silver, have demonstrated resilience against inflationary pressures.

Bitcoin adopts and formalizes this logic in digital form. Its issuance schedule mimics, and in some respects exceeds, the scarcity characteristics of gold. The programmed supply cap of 21 million units and the declining issuance rate create an increasingly constrained flow of new supply relative to existing stock. Following the 2024 halving event, Bitcoin's annual supply growth fell below 1 percent, placing it in a similarly restrictive supply regime (Glassnode, 2026). This engineered scarcity has contributed to its frequent characterization as "digital gold."

However, the equivalence implied by this comparison remains limited. While both assets rely on scarcity, the mechanisms through which scarcity translates into value differ in practice.

Gold has historically exhibited relatively low volatility and stable demand across economic cycles, whereas Bitcoin's price dynamics remain highly sensitive to speculative flows and macroeconomic conditions (Bank for International Settlements, 2023; International Monetary Fund, 2023). This suggests that scarcity alone does not guarantee the characteristics typically associated with a stable store of value.

3. Divergence: State Power

While gold and Bitcoin share a scarcity-based logic of value, their roles within the international financial system diverge fundamentally due to their relationship to state power and institutional control. This divergence

is not merely conceptual; it has direct implications for financial governance, regulatory enforcement, and international security.

Gold is deeply embedded in state-based monetary systems. Central banks remain among the largest holders of gold, collectively controlling more than 35,000 metric tons of reserves (World Gold Council, 2023). Within the European context, institutions such as the European Central Bank and national central banks continue to treat gold as a strategic reserve asset, particularly in periods of monetary uncertainty. In 2022 and 2023, central bank gold purchases reached their highest levels in decades, reflecting increased demand for assets perceived as politically neutral and resilient to financial sanctions (World Gold Council, 2023).

Gold's integration into the international financial system is closely linked to its role in reinforcing state authority. It is held within regulated institutions, accounted for in national balance sheets, and, if necessary, can be mobilized to support currency stability or international payments. Importantly, gold operates within a framework that remains ultimately subject to political control. States can restrict their movement, regulate their trade, or leverage them as part of a broader economic strategy.

Bitcoin, by contrast, operates outside this institutional architecture. Transactions are validated through decentralized consensus mechanisms rather than centralized authorities, and ownership is not inherently tied to identity within a regulated system. This enables cross-border value transfers without reliance on traditional intermediaries such as banks or messaging systems like SWIFT. While this architecture increases efficiency and reduces transaction barriers, it also limits the capacity of states to monitor and control financial flows.

This structural difference has become increasingly relevant in the context of international sanctions and illicit finance. Reports by Chainalysis estimate that illicit cryptocurrency transactions reached tens of billions of US dollars annually in recent years, including ransomware payments, darknet market activity, and sanctions-related transactions (Chainalysis, 2024). Although these flows represent only a small share of total crypto activity, they illustrate how decentralized financial systems can be used to bypass traditional enforcement mechanisms.

The implications are particularly visible in the context of sanctions regimes. Following the imposition of financial sanctions on Russia after the invasion of Ukraine in 2022, policymakers raised concerns about the potential use of cryptocurrencies to circumvent restrictions on cross-border payments and asset transfers. While empirical evidence suggests that large-scale sanctions evasion via cryptocurrencies remains constrained by liquidity and traceability limitations (International Monetary Fund, 2023), smaller-scale transactions and network-based financing mechanisms remain difficult to fully control.

For European policymakers, this creates a structural contradiction between decentralized infrastructure and jurisdiction-based regulation.

On the one hand, regulatory frameworks such as MiCA aim to integrate crypto-assets into existing supervisory regimes. On the other hand, the underlying architecture of decentralized networks limits the extent to which control can be fully reasserted. This raises questions about the long-term effectiveness of jurisdiction-based regulation in a financial system where value transfer can occur across borders without centralized intermediaries.

In this context, the contrast between gold and Bitcoin reflects changing patterns of financial control.

4. Systemic Risk & Security

The divergence between gold and cryptocurrencies is particularly evident in their respective implications for financial stability. While gold has historically functioned as a stabilizing asset during periods of economic stress, cryptocurrency markets have exhibited pronounced volatility and episodic systemic disruptions, raising concerns about spillover risks into the broader financial system.

Empirical data illustrate the scale of this volatility. Bitcoin has experienced multiple boom-and-bust cycles over the past decade, with price declines exceeding 70 percent during major corrections, including the downturns of 2018 and 2022 (Bank for International Settlements, 2023). In contrast, gold prices have historically shown lower volatility and have often increased during periods of market uncertainty, reinforcing their role as a safe-haven asset (International Monetary Fund, 2023).

The events of 2022 provide a particularly instructive case. The collapse of the Terra-Luna ecosystem erased approximately USD 40–60 billion in market value within weeks, triggering a broader loss of confidence across crypto markets. This was followed by the failure of several major crypto firms, including lending platforms and exchanges, culminating in the bankruptcy of FTX, at the time one of the largest global cryptocurrency exchanges. Estimates suggest that total crypto market capitalization declined by more than USD 1 trillion during this period (BIS, 2023; IMF, 2023).

These episodes highlight structural vulnerabilities within the crypto-financial ecosystem. Unlike traditional financial institutions, many crypto platforms operate with limited regulatory oversight, opaque balance sheets, and significant maturity and liquidity mismatches. The absence of lender-of-last-resort mechanisms further amplifies systemic risk, as liquidity shocks can rapidly translate into insolvency.

From a financial stability perspective, a key question is whether such disruptions remain contained within the crypto sector or pose risks to the broader financial system. To date, spillover effects have been relatively limited, primarily due to the still modest integration of crypto assets into traditional banking and financial markets (Financial Stability Board, 2023). However, this insulation may diminish as institutional exposure

increases, including through investment funds, payment systems, and potential links to stablecoin infrastructures.

Stablecoins represent a particularly important transmission channel. Designed to maintain a stable value, often pegged to fiat currencies, they have become a critical component of crypto market infrastructure. Yet their stability depends on the credibility and liquidity of underlying reserves. The collapse of algorithmic stablecoins such as TerraUSD demonstrated how quickly confidence can erode, triggering large-scale withdrawals and market contagion (BIS, 2023).

In contrast, gold does not exhibit comparable systemic risk dynamics. Its market structure is relatively transparent, its supply is not subject to rapid expansion or contraction, and it is not reliant on leveraged financial intermediaries in the same way as crypto assets. While gold prices fluctuate, these movements rarely generate cascading failures across financial institutions.

For policymakers, cryptocurrencies introduce a distinct category of financial risk, including leverage, liquidity stress, and contagion.

As the scale and integration of crypto markets continue to grow, the likelihood of systemic interactions with traditional finance may increase. This raises important questions for regulators regarding capital requirements, market oversight, and crisis management frameworks, particularly in jurisdictions such as the European Union, where efforts to regulate crypto assets are advancing but remain incomplete.

5. Case Studies

The growing adoption of cryptocurrencies has introduced new challenges for international security, particularly in the areas of illicit finance, sanctions enforcement, and the governance of cross-border financial flows. While illicit activity represents only a small share of total crypto transactions, estimated at less than 1 percent of overall volume, its absolute scale and strategic implications remain significant (Chainalysis, 2024). Illicit cryptocurrency transactions reached approximately USD 20–25 billion annually in recent years, including ransomware payments, darknet market activity, fraud, and sanctions-related transactions (Chainalysis, 2024). The characteristics of these flows, speed, pseudonymity, and global accessibility, create enforcement challenges that differ fundamentally from those in traditional financial systems.

Ransomware provides a particularly illustrative case. The 2021 Colonial Pipeline attack in the United States resulted in a ransom payment of approximately USD 4.4 million in Bitcoin, demonstrating how cryptocurrencies can facilitate attacks on critical infrastructure with direct economic and security consequences. While a portion of the funds was later recovered, the case highlighted both the traceability and the operational challenges associated with enforcement.

State-linked actors have also leveraged cryptocurrency ecosystems. The Lazarus Group, widely associated with North Korea, has been linked to large-scale cyber theft operations involving crypto-assets, with cumulative proceeds estimated in the hundreds of millions to billions of US dollars over multiple incidents (IMF, 2023; FATF, 2023). These activities illustrate how digital assets can be integrated into broader strategies of sanctions evasion and revenue generation.

Following the imposition of sanctions on Russia after its 2022 invasion of Ukraine, policymakers raised concerns about the potential use of cryptocurrencies to bypass financial restrictions. While current evidence suggests that large-scale sanctions evasion remains constrained by liquidity and transparency limitations (International Monetary Fund, 2023), cryptocurrencies may still facilitate smaller-scale transactions and reduce reliance on monitored financial channels.

For European policymakers, this creates a complex risk landscape. Regulatory initiatives such as Markets in Crypto-Assets (MiCA) and strengthened anti-money laundering frameworks represent efforts to extend oversight into digital asset markets. However, the decentralized and transnational nature of these networks complicates enforcement. Transactions can be routed across multiple jurisdictions and platforms, limiting the effectiveness of traditional regulatory tools.

These cases show that cryptocurrencies are already affecting the practical enforcement of sanctions, AML measures, and critical infrastructure protection.

6. Conclusion

Gold and cryptocurrencies do not just represent different forms of scarcity. They point to different limits of state control. Gold remains tied to institutions that states can use, monitor, and mobilize when needed. Cryptocurrencies do not.

This difference has practical consequences. States can still regulate exchanges and impose rules at the edges, but they cannot fully control systems that are designed to operate without them. That gap matters. It reduces the reach of sanctions, weakens oversight of cross border flows, and makes parts of the financial system harder to govern.

The result is not a sudden loss of control, but a gradual shift. Financial authority becomes less concentrated and more contested. If that trend continues, the main challenge for policymakers will not be how to integrate cryptocurrencies into existing rules, but how to operate in a system where those rules no longer apply everywhere.

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