

The development of a digital euro: are central banks getting into geopolitics?

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“After exploring many possible problems that a Central Bank Digital Currency could solve, I am left with the conclusion that a CBDC remains a solution in search of a problem.”

Speech by Christopher J. Waller, Member of the Board of Governors of the Federal Reserve System, 2021

Executive summary

Central Bank Digital Currencies (CBDC) are all the new rage. In a survey conducted in 2023, the Bank for International Settlements (BIS) estimated that ninety-four percent of surveyed central banks were exploring a CBDC. Over the course of last year, there has been a significant increase in experiments and pilots with CBDCs, both wholesale and retail. 134 countries & currency unions have started exploring a CBDC, and 68 countries are already in the advanced exploration phase – development, pilot, or launch. Furthermore, 3 countries have now fully launched their CBDCs – the Bahamas, Jamaica, and Nigeria – allowing for firsthand experience of how CBDCs can and will be used.

However, these experiences tell us very little about the usefulness of a possible future retail Digital Euro. Indeed, the motivation to consider the introduction of a CBDC varies greatly among countries, especially between Advanced Economies (AEs) and Emerging Markets and Developing Economies¹ (EMDEs). In a survey conducted in 2021, the Bank for International Settlements found that the weight given to different motivations to issue a CBDC depends on factors such as the national payment system's state of development and structure and the degree of financial inclusion in

the jurisdiction. Financial inclusion is cited as a main factor across EMDEs and seems to be a top priority for CBDC development in such economies. EMDEs' motivations also include financial stability and monetary policy. For AEs however, central banks see CBDCs as a way to help maintain a country's monetary sovereignty or provide a public alternative in the possible case of a widespread adoption of private digital currencies denominated in major foreign currencies. For both EMDEs and AEs, payment-related motivations, such as domestic payment efficiency and payment safety are of crucial importance².

The BIS also identified a stronger perceived need for CBDCs in EMDEs which translated into a statistic that speaks for itself: seven out of eight central banks in advanced stages of CBDC work are in EMDEs. This underscores the practical benefits seen in these regions, such as improving financial inclusion and stability. EMDEs often face challenges such as limited access to banking services, unstable financial systems, and less efficient payment infrastructures. In the Bahamas, the main motivation for the introduction of the Sand Dollar (the CBDC issued by the Central Bank of the Bahamas) was to improve financial inclusion for 390,000 people spread across 30 inhabited islands, many of them remote. A CBDC in these contexts

1. Westermeier, C. (2024). The digital euro : a materialization of (in)security. *Review Of International Political Economy*, 124. <https://doi.org/10.1080/09692290.2024.2345613>

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

can provide a reliable and inclusive means of financial transaction, helping to bridge the gap for the unbanked or underbanked populations.

In contrast, for advanced economies like those in the Eurozone, the case for a retail digital euro is less clear-cut. Existing payment methods, from credit cards to digital wallets, already offer robust, efficient, and secure solutions for consumers. These methods adequately address the primary objectives that a CBDC would ostensibly fulfill, such as payment efficiency and safety. Credit cards, for instance, are widely accepted and provide consumer protection mechanisms, while digital wallets like PayPal or Apple Pay offer convenience and speed. Consequently, from the consumer's point of view, the introduction of a digital euro appears somewhat redundant. Consumers in advanced economies enjoy a plethora of payment options that are not only efficient but also deeply integrated into the existing financial ecosystem, making the need for a new form of digital currency less apparent.

From the merchant's perspective, while a digital euro might offer some advantages, such as (anticipated) reduced transaction fees or instant settlement, these benefits are insufficient to signify a major shift or solve a critical problem.

The payment system in the EU today is therefore already efficient and constantly progressing, as per the words of a report for the ECON Committee of the European Parliament. There are no market failures suggesting central banks should be directly involved³. The current landscape of payment solutions already has established solutions that work accurately.

Yet, the one notable distinction of a retail digital euro lies in its potential to reinforce Europe's strategic autonomy. Currently, the major existing payment methods are dominated by non-European entities (Visa, MasterCard, PayPal, Apple Pay...). By introducing a digital euro, the European Union could, among other things, reduce its dependence on foreign payment systems, thereby enhancing its economic and strategic sovereignty and security. This move would align itself with the EU's strategic autonomy initiative, ensuring that Europe retains control over its payment infrastructure and financial data, which is increasingly important in a digitalized world where data security and sovereignty are paramount concerns.

The introduction of the digital euro may serve more as a geopolitical strategy than a response to a market necessity, highlighting the complex interplay between technology, economics, and

sovereignty in the digital age. One can however wonder if alternative solutions to the increased European need for strategic autonomy exist, and whether they might not more effectively address these needs. It is thus crucial to evaluate the digital euro's role within the broader landscape of existing and emerging retail payment technologies, so that different European solutions that would offer almost the same service do not cannibalize each other, but rather build on one another to create a more resilient European payment system.

Introduction

Many countries have started developing Central Bank Digital Currencies (CBDC) over the last few years. Today, 134 countries & currency unions have started exploring a CBDC, and 68 countries are already in the advanced exploration phase – development, pilot, or launch. Three countries have already issued their CBDCs, and first experiences are coming through about their use. CBDCs can address market failures in countries which do not yet benefit from a complete, secure, inclusive and efficient payment system.

In the Euro area, the European Central Bank launched the idea of a possible future digital euro in 2020. It is curious however that the digital euro does not seem to answer to any market failure whatsoever in the eurozone. In the words of Christopher J. Waller, Member of the Board of Governors of the Federal Reserve System, a retail digital euro “remains a solution in search of a problem.”⁴

The one purpose a digital euro would serve is that of enhancing Europe's strategic autonomy. Since the beginning of the war in Ukraine, this narrative has intensified, as the vulnerability of the dependency on external payment service providers is more and more visible.

The introduction of the digital euro seems to be more a geopolitical move than a response to market necessity, highlighting the complex interplay between technology, economics, and sovereignty in the digital age. However, alternative solutions for European strategic autonomy might address these needs more effectively. It is crucial to evaluate the digital euro's role within the broader landscape of retail payment technologies, ensuring that European solutions complement rather than cannibalize each other.

3. Westermeier, C. (2024). The digital euro : a materialization of (in)security. *Review Of International Political Economy*, 124. <https://doi.org/10.1080/09692290.2024.2345613>

4. Note: Christopher J. Waller was not talking about the digital euro when he said those words, but about CBDCs in general.

1. The creation of a digital euro does not answer to any market failures in the EU

1.1 The motivations for EMDEs to issue CBDCs do not really apply in the case of the Eurozone

First CBDC movers are EMDE

It is curious and telling that to date, none of the countries that have fully launched a retail CBDC are advanced economies. In October 2020, the Sand Dollar became the first CBDC in the world to go beyond the pilot stage and achieve an official launch. This was followed a year later by Nigeria launching Africa's first digital currency, the eNaira in October 2021. Shortly after, in February 2022, the Jamaican Central Bank launched JAM-DEX, its CBDC. For now, no other country has achieved an official CBDC launch, although China's Central Bank has started to test out the e-CNY, with for example in early 2023, Alipay starting to offer e-CNY in express payment category.

These three countries although quite diverse have something in common: they are all EMDEs. As such, they still suffer from financial inclusion challenges, are susceptible to financial instability, and struggle with monetary policy implementation.

The Central Bank of the Bahamas cited as motivations for a CBDC development its will to foster financial inclusion and strengthen security against money laundering or illicit economic activities. In Nigeria, motivations were very similar: improve financial inclusion, and improve the accountability of the informal sector. As such, the eNaira is expected to help Nigeria reach its target of increasing financial inclusion from 64 percent to 95 percent. Lastly, the primary motivation cited by the Jamaican central bank for issuing a CBDC was to reduce the storage and handling costs of cash usage.

All of these reasons are classical motivations for the issuance of a CBDC for EMDEs. Indeed, in a survey conducted in 2021, the BIS assessed that not only did EMDEs report stronger motivations for issuing CBDC than AEs, but they also importantly

gave as motivations payment efficiency, financial inclusion, monetary policy implementation, financial stability, and payment safety/robustness, far more so than their AEs counterparts.

CBDC fosters financial inclusion

Financial inclusion is also cited as one of the main reasons why EMDEs' central banks develop CBDCs. In Sub-Saharan Africa, about 49% of adults own a bank account. There is however a great deal of variation in account ownership, from 91% in Mauritius to 6% in South Sudan⁵. In the Bahamas in 2022, we estimated that around 18% of the population remained unbanked⁶. Limited access to banking services, geographical barriers, and low financial literacy, exacerbate this trend and feed into each other. CBDCs can provide universal access to financial services through digital wallets, making it easier for unbanked populations to participate in the financial system. Most CBDCs do not require having a bank account to open up a wallet. In Nigeria, the only elements required to make payments up to 50,000 Naira a day (about USD121) are a phone number and verified national identity. If individuals owning a bank account have a higher spending limit, this still allows for unbanked individuals to have easy access to digital money. In Europe, the percentage of the population in a situation of financial exclusion is limited, with, in 2022, around 3.6% of Europe's population remaining financially excluded⁷.

CBDC transparency and traceability of transactions, contribute to monetary policies effectiveness and improves financial stability

Monetary policy implementation is another significant challenge faced by EMDEs, where informal economies and the lack of reliable economic data can undermine the effectiveness of central bank actions. Informal employment accounts for about 70% of employment in a typical EMDE⁸. A CBDC can enhance transparency and traceability of transactions, providing central banks with better data and tools to monitor economic activities and implement effective monetary policies. This improvement can reduce the influence of informal economies and help in achieving monetary stability. In Europe, we estimate that on average, 11.6 % of total labor input is undeclared⁹.

5. World Bank Group. (2024). Financial Inclusion in Sub-Saharan Africa & Overview. Dans World Bank. <https://www.worldbank.org/en/publication/globalindex/brief/financial-inclusion-in-sub-saharan-africa-overview>

6. Allan Wright, Shavonne C. McKenzie, Lance R. Bodie, Carlisa L. Belle. (2022). Financial Inclusion and Central Bank Digital Currency in The Bahamas. Central Bank Of The Bahamas. <https://www.centralbankbahamas.com/viewPDF/documents/2022-09-23-13-49-13-CBDCupdated-paper.pdf>

7. Admin. (2023, 14 décembre). Number of unbanked adult EU citizens more than halved in the last four years - WSBI ESG. WSBI ESG. <https://www.wsbi-esbg.org/number-of-unbanked-adult-eu-citizens-more-than-halved-in-the-last-four-years/>

8. Jones, T., Ram, M., & Edwards, P. (2006). Shades of grey in the informal economy. *International Journal Of Sociology And Social Policy*, 26(9/10), 357373. <https://doi.org/10.1108/01443330610690514>

9. Williams, C., Bejaković, P., Mikulić, D., Franic, J., Kedir, A., & Horodnic, I. A. (2017). An Evaluation of the Scale of Undeclared Work in the European Union and Its Structural Determinants : Estimates Using the Labour Input Method. *Social Science Research Network*. <https://doi.org/10.2139/ssrn.3092080>

Europe enjoys a more formalized and transparent financial system, which makes monetary policy implementation more straightforward and effective.

Financial stability is also a critical concern in many EMDEs due to vulnerable financial systems that are less resilient to economic shocks and often experience higher volatility. By introducing a stable and reliable form of digital money, a CBDC can help stabilize financial systems, and enhance trust in the domestic financial system. Further financial stability is expected to provide a buffer against second round economic shocks. In contrast, financial systems in advanced economies such as Europe are generally more robust and resilient, supported by strong regulatory frameworks and effective risk management practices, reducing the frequency and impact of financial instability.

CBDC may be an easy solution to improve payments efficiency, and safety

Payment's efficiency refers to the effectiveness, speed, cost-effectiveness, and reliability of payment systems within an economy. In many EMDEs, traditional payment systems may face challenges such as high transaction costs, infrastructure deficiency, and limited interoperability. In such a context, CBDCs can streamline and digitize payments, reducing transaction costs and increasing speed and efficiency. It can provide near-instant transactions and reduce reliance on cash. For different reasons, including widespread internet access, reliable financial institutions, advanced payment systems, and scale effects, the Eurozone does not experience such difficulties in payment efficiencies.

Finally, payment safety and robustness are another significant challenge for EMDEs. Limited resources and expertise to implement robust cybersecurity measures make these economies more vulnerable to cyber-attacks, fraud, and corruption. CBDCs can incorporate advanced cybersecurity measures and anti-fraud technologies, enhancing the safety and robustness of payment systems. Furthermore, central banks can establish and enforce stringent regulatory standards to ensure the integrity and security of the CBDC system. Advanced economies, on the other hand, have greater resources and expertise to implement sophisticated cybersecurity measures, and their regulatory frameworks are typically stronger and more effectively enforced, providing a higher level of payment safety and robustness.

All these typical reasons for implementing a CBDC therefore do not apply to the Eurozone's case.

1.2 Most motivations exposed by the ECB for the digital euro are already answered by other payment solutions or are largely prospective

In the FAQ on the digital euro contained on the ECB website, the first question is "Why would Europe need a digital euro?". The answer given is that the world is becoming more and more digitized and that the use of cash to make payments is declining. According to the ECB, a digital euro would give consumers the option to use central bank money in a digital format.

Central bank money

The need for central bank money in retail transactions is not entirely convincing. Most people do not even know that the money that they use day-to-day on their credit or debit card is not central bank money, let alone do they know what central bank money is.

The actual advantage that central bank money has over private money is that of being backed by the central bank. However, in addition to the financial stability it has already achieved, regulations have made it so that the money in bank accounts is guaranteed up to €100,000. This means that for most people, having access to central bank money or not (and therefore backed by the central bank) is not a critical issue. Finally, although not absent, the risk of a general collapse of the financial banking system is fairly low.

A Payment means that does not already exist

The ECB further presents the digital euro as a way to "make people's lives easier by providing something that does not currently exist: a digital means of payment universally accepted throughout the Euro area, for payments in shops, online, or from person to person." While it is true that there is no universal means of payment, most important card providers are widely used and accepted within the EU. As for person-to-person payment, there has been a significant development in the last few years of payment solutions that allow these types of transactions. These include (but are not limited to) Venmo, PayPal, Revolut, or even ApplePay. If all these payment solutions require that both parties set up an account, the digital euro would not fix this issue, as it would also require both parties to have a digital euro account.

Eventually replace cash

In October 2020, the ECB has also published a Report on a digital euro¹⁰, in which it explored the main uses of the digital euro. It outlines hypothetical

10. European Central Bank. (2021, 14 janvier). Report on a digital euro. <https://www.ecb.europa.eu/euro/html/digitaleuro-report.en.html>

future scenarios that would require a digital euro in order “to achieve the objectives related to core central bank function”. Most of the scenarios are situated in the very long-term future. Scenario 2 for example imagines a world where the role of cash would have significantly declined, up to a point where it would hamper the provision of adequate cash services. Although the use of cash is steadily declining, it is unlikely that it will reach such a low point any time soon, even if the digital euro was introduced.

An essential feature of the EU's contingency toolbox

Scenario 5 highlights the importance of the digital euro in the event of cyber incidents, natural disasters, pandemics, or other extreme events that could hinder the provision of payment services. It is unclear what exactly the digital euro would bring to this. It could be used offline, therefore providing security against cyber-attacks, but some of its properties would still require hard and soft wares use (replenishing the account, for example) being at risk as well.

Enlarge the international role of the euro

Scenario 6 handles the international role of the euro, and how the digital euro could contribute to this broad EU objective. It is still unclear whether CBDCs would be widely adopted in an area where existing payment means work well (as they do in Europe), and it is even more so unclear if other countries would subscribe to a digital currency that is not theirs (and that is, as of now, not the dominant one).

Support cost efficiency and ecological footprint

Lastly, scenario 7 describes how a digital euro could proactively support improvements in the overall costs and ecological footprint of the monetary and payment systems. It remains to be seen how this would be integrated into the system, as creating an alternative infrastructure would necessarily be expensive and polluting, at least at first.

The reasons typically given for the introduction of a CBDC do not pose significant issues in Europe, and the scenarios by the ECB are importantly linked more to potential designs of the digital euro than to actual motivations. The digital euro does not seem to respond to any market failure within the European Union.

2.2 The digital euro project appears to mainly answer to the strategic autonomy agenda conducted by the EU

2.1 The digital euro project has always been seen as an asset for the EU's strategic autonomy, but even more so since the beginning of the Russia-Ukraine war

In the context of the European Union, there is no evident market failure that necessitates the introduction of a digital euro. The EU enjoys relatively efficient payment systems, high financial inclusion, robust monetary policy implementation, and stable financial markets. However, a significant driving force behind the digital euro project is the pursuit of strategic autonomy. The ECB has explicitly highlighted the importance of strategic autonomy, notably since the geopolitical shifts triggered by the war in Ukraine and the ensuing sanctions on Russia¹¹. These events have underscored the vulnerabilities associated with dependence on external financial infrastructures and the need for Europe to ensure its economic sovereignty.

The war in Ukraine markedly shifted the tone and urgency surrounding the digital euro. Christine Lagarde, in a virtual panel on central-bank digital currencies hosted by the Bank for International Settlements in 2023, emphasized this shift by noting, “When you look at your wallet and you look at your telephone and see the applications that you use for payments or the cards that you use for payment, you very soon realize that those means of payments are not necessarily European.[...] So we just have to be careful. Some people will call it sovereign autonomy, I prefer to call it resilience because that’s really what it is.”¹²

Before the war in Ukraine, the connection between Europe’s security politics and its currency was already being recognized. In October 2020, the ECB’s High-Level Task Force launched a report that outlined several scenarios where the digital euro would be beneficial.

One scenario addressed external threats, warning that the rise of non-euro-denominated forms of money could threaten European financial, economic, and ultimately political sovereignty. The report made it clear that maintaining control over the currency and financial infrastructure was crucial for Europe’s autonomy.

11. Westermeier, C. (2024). The digital euro : a materialization of (in)security. *Review Of International Political Economy*, 124. <https://doi.org/10.1080/09692290.2024.2345613>

12. Bloomberg, “ECB’s Lagarde Says Digital Euro Has Key Role in Payment Autonomy” (2023b, mars 21). <https://www.bloomberg.com/news/articles/2023-03-21/ecb-s-lagarde-says-digital-euro-has-key-role-in-payment-autonomy>

The experience of 2018, when the US withdrew from the Iran Nuclear Deal and pressured the Society for Worldwide Interbank Financial Telecommunication (SWIFT) to disconnect Iranian banks, serves as a reminder. European companies, despite adhering to the deal, found themselves unable to conduct trade with Iran due to the infrastructural disconnection enforced by US influence. This incident illustrated how sanctions and exclusion from payment systems could impede the EU's ability to maintain its commitments and conduct international trade independently. The situation led to the setup of INSTEX, a European workaround for the established financial system, highlighting the need for independent financial infrastructures.

After the start of the Russian aggression against Ukraine in February 2022, the urgency to address these vulnerabilities intensified.

In September 2022, a member of the executive board of the Deutsche Bundesbank listed "strategic sovereignty in European payments" as the primary reason for needing a digital euro. This shift in focus was echoed by Nadia Calviño, president of the BEI and who was at the time Spanish Minister for Economic Affairs and Digital Transformation, who described the development of the digital euro as a "highly geopolitical challenge" and argued that it underpins the new world order in the making.

While these issues did not directly concern retail payments, they certainly exacerbated the already-building consensus that the European retail payment system, because of its reliance on external providers, could easily be put out of order in the event of an acute geopolitical crisis.

The ECB's reports and communications have increasingly reflected these concerns but have been at the heart of the digital euro project from the beginning. In the previously mentioned Report on a digital euro, three out of seven scenarios directly touch upon the notion of strategic autonomy.

The digital euro could support innovative European digital solutions

Scenario 1 highlights the benefits of a digital euro in fostering the digitalization and independence of the European economy. The issuance of a digital euro could support the development of innovative European solutions in various industries, filling gaps in the provision of digital payment solutions and functionalities. By making pan-European end-user solutions accessible to consumers, the digital euro could help preserve

European autonomy in the strategic sector of retail payments. The flexible architecture of the digital euro system would support future payment needs and the integration of new technologies, thereby reinforcing Europe's strategic autonomy.

The digital euro contributes to addressing monetary and strategic autonomy challenges

Both scenarios 3 and 4 address concerns about monetary policy and strategic autonomy. Scenario 3 discusses potential risks from foreign-developed global stablecoins undermining European sovereignty and monetary policy transmission. It argues that a digital euro could protect European standards and control. Scenario 4 indirectly touches on strategic autonomy by exploring the benefits and uncertainties of a digital euro in influencing economic choices, despite unclear methods for achieving this.

While the ECB's public communications have touched on various potential benefits of a digital euro, it is clear that the underlying strategic motivation is to bolster Europe's financial sovereignty. In a world where financial systems are increasingly weaponized, the digital euro project is a step to ensure that Europe can independently manage its economic and financial future. It is also a crucial step that the ECB is taking towards a more political stance on issues, as it is a response to current geopolitical events.

2.2 The digital euro answers to three key strategic autonomy challenges

2.2.1 Securing financial infrastructure and reducing dependence on non-European providers

Today, approximately 70% of European card payment transactions are managed by payment service providers originating outside of Europe¹³. This heavy reliance on non-European infrastructure for such a critical component of the financial system poses significant risks. In times of geopolitical tension or policy divergence, this dependence could be leveraged against European interests, potentially disrupting the functioning of the European economy.

In March 2022, in what seemed to be a coordinated response, both Visa and Mastercard announced on the same day that they were suspending all operations in Russia, following the country's invasion of Ukraine. Effective immediately, Visa said in a statement that it would work with its client and partners within Russia to cease all Visa transactions in the country¹⁴.

13. What ways and means for a real strategic autonomy of the EU in the economic field? (2023, 13 décembre). European Economic And Social Committee. <https://www.eesc.europa.eu/en/our-work/publications-other-work/publications/what-ways-and-means-real-strategic-autonomy-eu-economic-field>

14. Visa and Mastercard halt operations in Russia. (s. d.). <https://www.vixio.com/insights/pc-visa-and-mastercard-halt-operations-russia>

Visa and MasterCard, as major payment providers, dominate the European market. If for now, interests seem to align between Europe and the US, the geopolitical uncertainty in which our world has been plunged in the past few years makes it possible that Europe and the US could disagree on geopolitical matters. If that were the case, and if, pressured by the American government (or even by their own will), Visa or MasterCard decided to halt their activities in Europe, the consequences would be disastrous for the European economy, both at a micro and a macro scale.

By building a CBDC, the ECB intends to contribute to mitigating the vulnerabilities that come from this reliance on external payment providers. Developing a sovereign digital currency would help the EU secure its financial infrastructure against external shocks and maintain control over its economic operations.

2.2.2 Achieving enhanced sovereignty in monetary policy

As more and more countries develop a CBDC, there is also a risk that these will be massively adopted by the European population in the context of internet transactions notably. Numerous countries are developing CBDCs, with China's e-CNY being a prominent example. Additionally, private companies have also ventured into this realm, as evidenced by Facebook's (now Meta) attempt to introduce the stablecoin Libra, although the project was ultimately abandoned. The widespread adoption of these foreign digital currencies or private alternatives threatens to diffuse the control over monetary policy that the ECB currently holds.

If foreign CBDCs or private stablecoins were to gain substantial traction within Europe, the ECB's ability to effectively transmit its monetary policy could be compromised proportionately. Scenario 3 of the "Report on a Digital Euro" elucidates this concern, warning that the extensive use of non-euro-denominated digital currencies could undermine European financial, economic, and political sovereignty. Such a shift would dilute the ECB's influence over domestic financial conditions, potentially destabilizing the region's economy. The weakening of the monetary policy transmission mechanism would pose significant risks to financial stability, as it would hinder the ECB's efforts to manage liquidity and control inflation. Implementing a digital euro then consists in hindering foreign competition from having too big of a grasp on the European economy.

The ECB also believes that the digital euro could be a means to enhance sovereignty in monetary policy. In scenario 4 of the "Report on a Digital Euro", the

ECB outlines how a digital euro could reinforce control over monetary policy. It mentions how by enabling the central bank to set the remuneration rate on digital euro holdings, the ECB would gain a direct tool to influence consumption and investment decisions within the non-financial sector. Whether this could actually be implemented is still questioned. Furthermore, the effectiveness of this method has yet to be proven.

Still, maintaining control over monetary policy is essential for the ECB to fulfill its mandate of ensuring price stability. In an increasingly interconnected financial world, the digital euro project is a crucial step to ensure that Europe retains independent control over its economic and financial destiny.

2.2.3 Protecting privacy and ensuring high levels of data protection

Data is rapidly becoming one of the most valuable commodities in the global market. The global big data market, valued at \$163.5 billion in 2021, is projected to grow significantly, reaching \$473.6 billion by 2030. Within this vast data landscape, financial data holds a particularly critical position. Transactional data, which reveals consumption habits and financial behaviors, serves as a goldmine for insights into individuals' lives. The increasing use of electronic and digital payments amplifies the value of this data, making it especially coveted by companies with data-driven business models, most of which are non-European.

Currently, the predominant payment systems operating within Europe are American. Despite regulatory efforts to protect data, these external providers still access significant portions of transactional information. This situation presents a substantial risk to European privacy standards and data protection. The adoption of foreign digital currencies, such as China's e-CNY, could exacerbate this issue. The level of privacy protection in China is far inferior to that in Europe, raising concerns about the potential misuse of sensitive financial data if such currencies gain prominence within the EU.

A digital euro could serve as a robust safeguard against these privacy risks. By ensuring that payment data remains within a secure, European-controlled system, the digital euro would protect sensitive financial information from being exploited by non-European entities. This protection is critical not only for individual privacy but also for maintaining the integrity and trustworthiness of the European financial system.

The ECB's commitment to data protection and privacy is deeply intertwined with the strategic autonomy agenda. It seems that we have now

entered an age where central banks possess geopolitical agendas, as this move towards the digital euro is a reaction to geopolitical events that have happened in the past few decades.

3. Other solutions may be as efficient in ensuring the EU's strategic autonomy, and need to go hand in hand with the development of a digital euro

3.1 The EPI, one example of an European payment solution that would contribute to the EU strategic autonomy

By analyzing and comparing some existing and projected payment solutions, it becomes clear that from the point of view of the consumer, there is little difference between these different payment solutions, which all seem to offer similar ease of use, and more and more offer similar experiences even in offline/peer to peer payments. A digital euro would however present a significant advantage on current international card payments at a retail level, whether it is on Visa and MasterCard, most notably in terms of strategic autonomy. It would also cover a scope that is not covered by national payment solutions: that of cross-border availability. It is however less clear what advantages the digital euro has over European solutions that are being developed such as the European Payments Initiative (EPI), most notably in terms of strategic autonomy.

The interest in analysing and comparing the digital euro and EPI is that both solutions would be pan-European ones, and that EPI offers an integrated package including the payment scheme (TIPS) and the interface (WERO) to make it easier for citizens to use. In this sense, it is a payment solution that highly resembles what the digital euro would be.

The only characteristic that the EPI and the digital euro do not share is that the latter would not use central bank money, which, as previously explained, is not an obvious priority in a financial system as developed as the European landscape. The level of privacy offered would also maybe be slightly different, but electronic transactions always require at least a little data. Consequently, the difference would not be fundamental.

The EPI, launched in July 2020 by a coalition of European banks and payment service providers, aims to establish a pan-European payment network. Initially, the EPI aimed to create a card-based system usable throughout Europe. However, the expected growth of instant payments as well as cost-sharing challenges, prompted it to refocus its efforts on an instant transfer solution supported by a digital wallet. As for the digital euro, this initiative was driven by the desire to reduce the dominance of American payment giants.

The EPI aims to create a unified, secure, and efficient payment system across Europe, addressing both retail and wholesale payment needs. The instant payment infrastructure builds on the existing Single Euro Payments Area (SEPA) provisions and focuses on a wallet (WERO). This wallet, which had a successful pilot phase in late 2023, allows for instant payments between consumers and businesses, online and in-store transactions, and cross-border payments.

The strategic value of the EPI is similar to that of the digital euro. It has the potential to offer a European-governed alternative to American payment systems, thereby enhancing the EU's financial sovereignty. By bringing together European banks and leveraging existing financial infrastructure, the EPI seeks to create a payment ecosystem that is not only competitive with but also independent of non-European providers. This is particularly important in the context of safeguarding European data privacy standards and ensuring compliance with European regulations,

	Digital euro	VISA/MasterCard	National payment solutions	EPI	Cash
Central bank money	Y	N	N	N	Y
European origin	Y	N	Y	Y	Y
EU reach	Y	Y	N	Y	Y
Cross-border availability	Y	Y	N	Y	Y
Privacy	higher	standard	standard	high	very high
Offline usability/peer to peer	Y	Y	Y	Y	Y
Instant transaction	Y	Y/N	N	Y	Y
Financial inclusion	Y	N	N	Y	Y
Low cost to consumers	Y	N	Y	Y	Y
Low cost to merchants	Y	N	Y/N reduced	Y	Y

such as the General Data Protection Regulation (GDPR). Additionally, because it is European and automatically labeled in euros, it preserves monetary policy effectiveness, which could be jeopardized by the adoption of a digital currency or a stablecoin not denominated in euros.

3.2 The digital euro and the EPI (and similar EU initiatives) have to evolve in a way that they do not cannibalize each other, but rather work together towards ensuring a resilient European payment system

Both of these payment solutions, although they would function differently, offer the same advantage of strategic autonomy at a European level. From a consumer perspective, the means to the end will not be a crucial differentiator, as long as securitized payments can be made easily. In both cases, ease of use will not be an issue.

The EPI's development timeline also appears to be significantly shorter than that of the digital euro. While the digital euro is still undergoing legal and technical preparations and is unlikely to be issued before 2027, the EPI's infrastructure is already operational and can be scaled more rapidly. This speed of deployment gives the EPI a critical advantage in meeting immediate strategic autonomy goals while the digital euro project matures.

Furthermore, because it leverages already existing and established systems, the cost of implementation of the EPI solution will be low and easy to maintain. It does not require important innovations, which the digital euro might.

It is also likely that the EPI, being a sector initiative, will have an advantage in fostering innovation in Europe over the digital euro.

In any case, both solutions would enter a market that is already very competitive. Two similar payment systems designed to strengthen Europe's strategic autonomy could easily cannibalize each other¹⁵. It is therefore crucial that they are constructed with each other in mind.

If a digital euro would largely duplicate EPI services, the ECB may still decide to issue it nevertheless, most notably because, even if a shorter-term solution can exist for strategic autonomy, the digital euro may become one day, for one reason or another, necessary. Establishing structures that might be used by both solutions would be a good starting point for ensuring that money is efficiently spent on a European payment system project.

Conclusion

The development of a digital euro by the ECB is not a response to market demands or to any type of market failures, but a significant geopolitical move. This in itself distinguishes it from any initiative that has been taken by the ECB before. Traditionally, central banks have steered clear of geopolitical arenas, focusing instead on domestic economic stability and policy implementation. The current global instability has however compelled the ECB to engage more directly in geopolitical matters. The digital euro therefore emerges primarily from a desire for strategic autonomy.

At its core, the digital euro aims to reduce Europe's dependency on non-European payment systems, thereby enhancing the continent's economic sovereignty. This strategic autonomy is crucial in a world where geopolitical tensions can easily disrupt existing financial infrastructures.

It is worth noting that Europe is concurrently developing other payment solutions that could address similar concerns. Some of them, like the EPI, are now in an advanced phase and rollout could be almost imminent. The success of the introduction of a European payment method will heavily depend on the careful integration of these solutions to avoid redundancy and competition. A coordinated approach is essential to ensure that various initiatives complement rather than cannibalize each other.

Lastly, despite the strategic motivations, the actual implementation of a digital euro remains uncertain. The project is still in its preparatory phase, with the ECB yet to make a final decision on its issuance. The development and potential deployment of a digital euro will depend on thorough evaluations and the evolving geopolitical and economic landscape.

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