

# What Haven't They Thought of Next?

What Would CBDCs and Digital IDs Do to Expats, Foreign Exchange, Trade Finance and Free Trade Agreements, and What Does Crypto Really Solve?

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The world is rushing toward Central Bank Digital Currencies (CBDCs) and digital identity systems with remarkable enthusiasm, but perhaps with troubling carelessness. Policymakers tout efficiency gains, financial inclusion, and reduced transaction costs. What they don't discuss: what they may not have considered, and that is how these systems will interact with the 304 million people living outside their countries of citizenship; the world's \$7.5 trillion daily foreign exchange market; the multi-trillion dollar international trade finance infrastructure; and, the intricate web of bilateral and multilateral free trade agreements that underpin global commerce.

These are fundamental questions about how the global economy actually functions.

## The Expatriate Paradox

Consider a straightforward scenario: I'm a U.S. citizen with permanent residency in Uruguay and Mexico, and have lived abroad a long time. I practice law from Uruguay. My law license is in Mexico. I have clients everywhere, and Mexican partners and service providers. I receive fees from clients worldwide. I pay our Uruguay electric bill to UTE (Uruguay's state utility) in Uruguay pesos. Sometimes I transfer funds to the United States, and to service providers in Mexico. Under current systems, this is

mundane. I hold accounts at Uruguayan, Mexican and US banks. Currency conversions happen through established foreign exchange markets with transparent pricing and regulatory oversight.

Now imagine the CBDC world that central banks are designing. Will my digital wallet be tied to my U.S. citizenship or my Uruguayan and/or Mexican residencies? If citizenship-based, can I legally hold Uruguayan and Mexican digital pesos? If residence-based, what happens to my access to digital dollars for transactions with U.S. parties? Does Mexico's Banco de México recognize my Mexican permanent residency status for digital peso access, or does my U.S. citizenship create barriers?

These questions have no clear answers. To date, the architects of CBDC systems appear not to have asked them. The flawed assumption seems to be that everyone lives in their country of citizenship. Roughly 3.6% of the world's population live outside their country of citizenship. This flawed assumption could be catastrophically wrong for anyone engaged in cross-border commerce.

The problem compounds when we consider and count dual nationals, stateless persons, refugees with travel documents, and the millions of people like me with legitimate residence in multiple jurisdictions. Are we all simply excluded from digital currency systems? Do we maintain legacy accounts while the rest of the world moves to CBDCs? The silence on these questions is concerning and deafening, even if not so salient.

## The Foreign Exchange Question Nobody's Answering

The global foreign exchange market processes approximately \$7.5 trillion in transactions daily. This is not speculative trading. Most of this volume represents real economic activity: companies pay foreign suppliers, expatriates support families, tourists spend abroad, pension funds rebalance portfolios, and multinational corporations manage cash flows across subsidiaries.

CBDCs threaten this infrastructure through a mechanism that proponents either misunderstand or deliberately ignore: disintermediation of the FX market itself.

If CBDCs operate on closed-loop platforms with on-platform currency conversion, who provides the liquidity for peso-to-dollar conversions at 3 AM when a Uruguayan company needs to pay a U.S. supplier? Currently, this liquidity comes from a global network of banks, market makers, and institutional traders operating 24/7 across time zones. Their compensation comes from bid-ask spreads, which are teeny-tiny price differences that accumulate into profitability across trillions in daily volume.

Remove that spread through “efficient” on-platform conversion at central bank rates. Do we eliminate the profit motive for providing liquidity? Central banks could act as market makers themselves, but this would require them to hold massive reserves of foreign CBDCs and provide round-the-clock trading operations. Have any central banks budgeted for this? Built the systems? Negotiated the reciprocal arrangements with other central banks?

Alternatively, CBDCs could remain off-platform for currency conversion, routing through existing FX markets. But this defeats the purpose of a CBDC system and adds friction rather than reducing it. Users would need to exit the CBDC platform, convert through traditional mechanisms, and re-enter the foreign CBDC platform — creating three transaction points instead of one. That is a lot of friction for a new system. Most people do not have the patience or attention span.

The third option: hybrid systems with some conversions on-platform and others off, which could create arbitrage opportunities that could destabilize both systems. Smart money would exploit price differences between on-platform and off-platform conversion rates, and thereby potentially force central banks either to subsidize conversions (expensive) or restrict them (defeating the purpose).

None of these models has been stress-tested against the reality of \$7.5 trillion in daily cross-border payments. The assumption appears to be that “technology will solve it,” which is magical thinking.

## Trade Finance: The Infrastructure They Forgot Exists

Trade finance is invisible until it breaks. Letters of credit, documentary collections, banker's acceptances, and trade credit insurance exist because international trade involves counterparty risk across jurisdictions with varying legal systems and enforcement mechanisms. These instruments do not just move money. They allocate risk, establish trust between unknown parties, and create enforceable obligations across borders.

Consider a letter of credit, perhaps the most fundamental trade finance instrument for centuries. A Brazilian importer orders textiles from a Peruvian exporter who cannot ship without payment assurance. The importer's Brazilian bank issues a letter of credit which promises payment upon presentation of shipping documents meeting specific terms. The exporter's Peruvian bank confirms the letter, and guarantees payment in the exporter's jurisdiction. When the exporter ships goods and presents documents, banks verify compliance and release payment. If disputes arise, our centuries long-established legal frameworks or international conventions (like UCP 600) govern resolution.

These systems work because banks act as trusted intermediaries, documents provide verifiable evidence of performance, and international law provides predictable dispute resolution. They exist because direct payments between unknown parties across borders is too risky for either party to accept.

How do CBDCs replace this? If the answer is "they don't need to because letters of credit will continue functioning in a CBDC world," then we are acknowledging that CBDCs do not actually solve the fundamental problems of international trade. If the answer is "smart contracts on blockchain platforms will replace letters of credit," then we must address several questions:

What happens when shipping delays occur, documents are lost, or goods do not match specifications? Current trade finance has established processes for amendments, discrepancies, and dispute resolution. Smart contracts execute automatically based on pre-defined conditions. But what happens when real-world conditions do not match those definitions?

Who bears liability when a smart contract malfunctions, gets exploited through code vulnerabilities, or fails to account for changed circumstances? Under current systems, banks have capital requirements, insurance, and legal liability. Who provides this in a decentralized CBDC platform?

How do international trade conventions like UCP 600, Incoterms, and the UN Convention on International Sales of Goods interact with code-based smart contracts? These legal frameworks required decades of trial-and-error to develop and harmonize. They exist because international commerce requires shared rules. We cannot simply replace them with code without addressing the legal infrastructure.

The trade finance industry processes over \$10 trillion annually in documented international trade transactions. Nobody implementing CBDCs appears to have a plan for how this continues to function.

## Free Trade Agreements: The Silent Victim

Free trade agreements contain specific provisions about payments, financial services, and monetary policy. The United States-Mexico-Canada Agreement (USMCA), for instance, includes detailed chapters on financial services, cross-border trade in services, and monetary policy. These provisions were negotiated based on assumptions about how money moves between countries; assumptions that CBDCs potentially violate.

Article 17.3 of USMCA guarantees financial institutions the right to provide cross-border financial services. If CBDCs replace or restrict traditional banking for international transactions, does this violate trade obligations? If Mexico implements a CBDC that restricts Americans' ability to hold or transfer digital Mexican pesos, is this a non-tariff barrier under USMCA Chapter 2?

Most Free Trade Agreements include "most favored nation" provisions. If Country A gives Country B's citizens certain financial access rights, it must extend those rights to all FTA partners. How do citizenship-based CBDC systems comply with these obligations? If Uruguay's CBDC grants preferential access

to MERCOSUR residents, does this violate WTO principles or bilateral investment treaties?

Consider the General Agreement on Trade in Services (GATS), which governs international trade in financial services. GATS includes specific commitments about market access and national treatment for foreign financial service providers. If CBDCs eliminate the role of correspondent banking, which is how foreign banks currently access another country's payment system, is this a violation of GATS commitments?

These are hardly Chicken Little concerns or edge cases. These are fundamental contradictions between new technology and existing legal frameworks (which tension is ages old; technology always advances faster than law, because all the law can do is catch up when confronted with a cognizable set of facts that ends up litigated or confronting policy makers in a legislature or rule-making body).

Dispute resolution under trade agreements is slow, expensive, and typically resolved through diplomatic channels. Imagine discovering three years into CBDC implementation that the system violates multiple free trade agreements. The economic disruption of having to unwind or modify the system would be measured in trillions.

## The Free Trade Zone Problem

This issue becomes acute in free trade zones, which exist in legal and regulatory limbo by design. These zones offer tax advantages, simplified customs procedures, and regulatory flexibility specifically to encourage international trade and investment. Over 7,000 free zones operate globally, which host companies that process, manufacture, or distribute goods across borders.

Free zone companies by nature operate between jurisdictions. The import inputs from Country A, processes them in Country B's free zone, and exports products to Country C. Their financial flows are deliberately international. Suppliers in multiple countries; customers in multiple countries; employees from

multiple countries; and often investors or parent companies from yet other countries.

If CBDCs restrict or complicate cross-border payments, free zones lose their competitive advantage. If digital identity systems are citizenship-based rather than residence-based, free zone employees may lose financial access. If trade finance mechanisms cannot seamlessly translate to CBDC platforms, then entire “just-in-time” inventory management that makes free zones viable could collapse.

The irony is that governments promote both CBDCs and free zones, apparently without recognition that CBDC architecture could undermine the economic rationale for the zones they have spent billions and decades to develop.

## What We Are Actually Building

Step back and look at what is being constructed: a global financial system where citizenship or residence determines access, where currency conversion mechanisms are undefined, where trade finance infrastructure is ignored, and where existing legal frameworks around international commerce are potentially violated. This system is being implemented rapidly, with pilot programs already underway, with full rollouts planned within years to months.

The counterargument is typically that these issues will be resolved through “international cooperation” and “technical standards.” This assumes a level of coordination that has never existed in international finance.

The Basel Accords took decades to develop and still face implementation challenges. The Foreign Account Tax Compliance Act (FATCA) has created chaos for Americans abroad, and remains unresolved thirteen years after enactment. The assumption that dozens of countries will seamlessly coordinate CBDC systems while they address expatriate access, FX liquidity, trade finance integration, and FTA compliance is delusional.

## Project mBridge and the Wholesale Distraction

Central banks are not entirely ignoring cross-border issues. Projects like mBridge (connects China, Hong Kong, Thailand, and the UAE) and Project Icebreaker (explores retail CBDC cross-border payments) demonstrate awareness of international dimensions. But these projects focus primarily on wholesale (bank-to-bank) transactions, not retail reality.

mBridge aims to reduce settlement times and costs for large institutional transactions. This is important, but irrelevant to the American permanent resident in Uruguay or Mexico trying to pay an electric bill. Project Icebreaker explores cross-border retail CBDC payments, but operates as a pilot with four participating central banks under controlled conditions. Scaling this to 195 countries, 304 million expatriates, thousands of currency pairs, and trillions in daily transactions is not an engineering problem. This is a potentially unsolvable coordination problem.

The existence of these projects is often cited as evidence that central banks do address cross-border challenges. Really, while they acknowledge the existing challenges, they remain far below at-scale solutions.

## A Modest Proposal: Answer the Questions First

I do not suggest we should scrap or not develop useful digital currencies or digital identity systems. Technology that genuinely improves financial inclusion, reduces transaction costs, and enhances security would benefit billions of people. But improvement requires understanding current systems deeply enough to avoid breaking them.

Before proceeding with CBDC implementation, several challenges require definitive solutions:

First, resolve the expatriate question. Will digital wallets be citizenship-based, residence-based, or hybrid? How will dual nationals, permanent residents, and people with legal status in multiple jurisdictions access CBDCs? This is not a technical

question. This is a key policy choice with profound implications for 304 million people.

Second, explain the FX mechanism explicitly. Will currency conversion happen on-platform, off-platform, or through hybrid systems? Who provides liquidity? What happens to the \$7.5 trillion daily market that currently handles this? If the answer is “we’ll figure it out during implementation,” the responsible answer is to delay implementation until it is solved.

Third, map trade finance dependencies comprehensively. Letters of credit, documentary collections, and banker’s acceptances exist because they solve real problems in international commerce. What specifically replaces these instruments in a CBDC world? How do smart contracts handle documentary discrepancies, amendments, and disputes? Who bears liability for contract failures?

Fourth, conduct actual stress tests against real-world scenarios; not theoretical models, but concrete cases: “A Mexican permanent resident in Uruguay receives payment from a U.S. client, converts to Uruguayan digital pesos, pays a Brazilian supplier in digital reais, and remits profits to a Mexican account. Show every step, every conversion, every compliance check, and every failure point.” Run this scenario a million times with different jurisdictions, currency pairs, and transaction types. When the system can handle this reliably, it might be ready for deployment.

Fifth, analyze free trade agreement compliance proactively. Before implementing CBDCs, conduct legal analysis of how the proposed system interacts with USMCA, MERCOSUR, the African Continental Free Trade Area, RCEP, and other major trade agreements. If the system potentially violates treaty obligations, resolve those conflicts before deployment, rather than inefficient lawsuits or arbitrations.

Sixth, establish reversibility mechanisms. If CBDCs break critical infrastructure (which they could) we must have the ability to roll back. That means maintaining parallel systems until certainty exists that new ones work. It means gradual migration rather than forced adoption. It means treating this as the experimental

technology it is, rather than give in to it all as inevitable progress.

## The Crypto Alternative: Different Problems, Not Total Solutions

The cryptocurrency industry offers an apparent answer to CBDC concerns: decentralized stablecoins like USDT and USDC, or purpose-built cross-border payment tokens like XRP and XDC. These systems claim to solve exactly the problems CBDCs create: instant cross-border transfers, 24/7 liquidity, no citizenship restrictions, and integration with existing financial infrastructure.

The pitch is seductive. An American permanent resident in Uruguay could hold stablecoins pegged to dollars, pesos, or reais, converting between them instantly through decentralized exchanges. XRP's payment protocol promises to bridge any currency pair in seconds. Stellar and XDC target precisely the trade finance and cross-border payment problems that CBDCs ignore.

But scratch beneath the marketing and the fundamental questions remain unanswered, and just relocated to a different technological substrate.

## Stablecoins: The Peg Problem

Stablecoins claim to solve currency conversion through cryptocurrency pegged to fiat currencies. USDC supposedly equals one U.S. dollar. UXD supposedly equals one Uruguayan peso. Convert between them on a decentralized exchange, and we have solved the FX problem without banks or central banks.

Except what maintains that peg? Current stablecoins maintain dollar pegs through reserves. Circle holds actual dollars (theoretically) backing USDC. But this just moves the trust question from "do you trust your bank?" to "do you trust Circle's auditors?" When Tether faced questions about its reserves, the

entire stablecoin ecosystem wobbled. When Silicon Valley Bank collapsed, USDC briefly lost its peg because Circle held reserves there.

For a stablecoin ecosystem to support \$7.5 trillion daily in foreign exchange volume, we must have massive reserves in every major currency. Who would hold these reserves? Where? Under what regulatory oversight? If the answer is “algorithmic stablecoins maintain pegs through smart contracts rather than reserves,” we’re back to trusting code to perform economic functions that have always required institutional backing. The Terra/Luna collapse demonstrated what happens when algorithmic pegs fail: \$60 billion evaporated in days.

More fundamentally, stablecoins do not eliminate the expatriate question; they obscure it. Can a U.S. citizen legally hold stablecoins while residing in Uruguay? Does holding USDC constitute having a foreign financial account reportable under FATCA? What happens when Uruguay implements its digital peso CBDC and decides that all peso-denominated transactions must use the official CBDC rather than private stablecoins? Do free trade agreements guarantee the right to use private stablecoins across borders, or can countries prohibit them?

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## XRP and Cross-Border Payment Protocols: Liquidity Is Not Magic

Ripple's XRP and similar payment-focused cryptocurrencies claim to solve cross-border settlement by using cryptocurrency as a bridge currency. Rather than hold Mexican and Uruguayan pesos and facilitate direct exchange, financial institutions hold XRP. Convert pesos to XRP, transfer XRP globally in seconds, convert XRP to dollars. Settlement times drop from days to seconds.

This works until we ask where the liquidity comes from. Someone still must be willing to buy pesos and sell XRP at the moment of conversion. Someone must buy XRP and sell dollars at the other end. The protocol does not create liquidity; it assumes it exists and provides rails for accessing it.

If XRP actually captured significant foreign exchange volume, it would face the same liquidity provision questions as CBDCs. Who provides 24/7 liquidity across thousands of currency pairs? What is their compensation? How do we prevent the price of XRP itself from becoming volatile due to its use as a bridge currency, and if XRP's price fluctuates while our transaction is processing, who bears that risk?

The XRP system also does not address trade finance. A letter of credit exists because an exporter cannot trust an importer to pay after receipt of goods, and an importer cannot trust an exporter to deliver goods that match specifications after receipt of payment. XRP handles the payment rail; it does not allocate risk, verify documents, or provide recourse when disputes arise. We could build smart contracts on XRP's ledger which attempt to replicate letters of credit, but then we are back to the same questions: who verifies documents, what happens when real-world conditions do not match code parameters, and who bears liability for failures?

## XDC and Trade Finance Tokenization: Digitalizing Is Not Solving

XDC Network specifically targets trade finance, claiming to tokenize letters of credit, bills of lading, and other trade instruments. This is a more sophisticated approach than simple payment rails, because it attempts to recreate trade finance infrastructure on blockchain.

But tokenizing a letter of credit does not eliminate the underlying problems. A Brazilian importer and Peruvian exporter still need to agree on terms, verify documents, and resolve disputes when goods do not match specifications. Conversion of paper documents to tokens might increase efficiency, but it does not change the fundamental trust and verification problems.

More critically, for tokenized trade finance to replace current systems, every bank, every shipping company, every customs authority, and every commercial party globally would need to adopt the same standards. UCP 600 required decades to develop, because international trade requires harmonized rules. Creation of a parallel tokenized system will not eliminate the need for legal frameworks; it will create the need to develop entirely new ones while somehow maintaining compatibility with existing legal obligations.

When a tokenized letter of credit dispute arises, what law governs? If a smart contract on XDC Network automatically releases payment but the physical goods are defective, what recourse does the buyer have? Current trade finance operates under well-established international conventions and national laws. Tokenized alternatives exist in legal ambiguity, which is precisely what trade finance exists to eliminate.

## The Regulatory Paradox

The deeper problem with crypto solutions is that they only work in regulatory gaps. Stablecoins, XRP, and tokenized trade finance thrive in the space between traditional banking and government-issued digital currencies precisely because they are not yet comprehensively regulated.

But if these systems actually succeed and replace traditional finance, i.e., if they capture significant portions of the \$7.5 trillion daily FX market or the \$10 trillion annual trade finance volume, then governments would regulate them comprehensively. At that point, they would face the same questions as CBDCs: citizenship versus residency access, compliance with free trade agreements, integration with existing legal frameworks, and mechanisms for dispute resolution.

We cannot simultaneously claim to replace the global financial system and remain outside regulatory frameworks. The moment crypto succeeds, it will be regulated to resemble what it replaced.

## Different Problems, Not Solutions

Cryptocurrency advocates are correct that decentralized systems avoid some CBDC problems. No central bank can unilaterally restrict access based on citizenship. No single government can shut down a truly decentralized network. Cross-border transfers do not require correspondent banking relationships.

But they create different and potentially worse problems: volatility risk that does not exist in fiat currency; smart contract vulnerabilities that cannot be fixed once deployed; legal ambiguity about jurisdiction and recourse; dependence on private companies maintaining stablecoin reserves. And the fundamental question of whether “trustless” systems actually eliminate trust or just redistribute it to code, algorithms, and the people who write them.

Most critically, crypto does not solve the coordination problems. For cryptocurrency to handle expatriate financial access, foreign exchange liquidity, trade finance infrastructure, and free trade agreement compliance, it would require the same global coordination that CBDC implementation requires. The technology is different, but the political and economic challenges are identical.

The choice is not between flawed CBDCs and perfect crypto solutions. It is between different implementations of the same unsolved problems. We are selecting which technology to use before determining what problems we must solve first, and whether any technology can actually solve them.

## The Cost of Getting This Wrong

The stakes are difficult to overstate. If CBDC implementation accidentally eliminates expatriates' ability to conduct financial transactions in their countries of residence, 304 million people become economically stranded. If it disrupts foreign exchange markets without viable replacement mechanisms, trillions in daily commerce grind to halt. If it breaks trade finance without providing alternatives, global supply chains collapse. If it violates free trade agreements, decades of trade liberalization unravel through disputes and retaliation (we already know this from recent tariff chaos).

These are the reasonably foreseeable consequences of implementing complex systems without understanding their interaction with existing infrastructure. The rush to implement CBDCs resembles the old programming wisdom: "Weeks of coding can save you hours of planning."

We are building a global financial system that could accidentally eliminate the ability to conduct international commerce, restrict the financial rights of hundreds of millions of legal residents, and destroy trillion-dollar markets that policymakers may not know exist in their grand, interconnected scale.

Perhaps we should ask “what haven’t they thought of next?” before we discover the answer through economic mess or worse, catastrophe.

The burden of proof should rest with those implementing revolutionary changes to systems that currently do function. Before disruption of the infrastructure that enables global commerce, they should demonstrate (not simply assert or assume), but prove that new systems will work at least as well as what they replace.

That demonstration has not occurred. Until it does, perhaps the wisest course is not to move forward boldly, but to stop and think carefully about what we are actually building and what we might accidentally destroy. From my perspective, the real choice is not “CBDCs or crypto?,” but “why are we so eager to replace systems that currently work with systems whose problems we do not fully understand?”