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Central Bank Digital Currencies, Stablecoins and Monetary Sovereignty: A Theoretical Analysis of Currency Competition and Financial Stability in Emerging Economies

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ABSTRACT

Central banks in emerging economies now compete for the money holdings of their own citizens against a rival that earlier generations of policymakers never faced: dollar-denominated stablecoins that can be bought, held and spent from a mobile phone without passing through the domestic banking system. Several of these same central banks, Nigeria's among them, have responded by issuing retail central bank digital currencies, often with disappointing uptake. The literature on currency substitution predates both instruments, and the literature on digital currencies has been written mostly for advanced economies in which the domestic currency is itself the safe asset. This paper closes that gap by developing a theoretical account of currency choice in an economy where households and firms allocate liquid balances among domestic bank deposits, a retail central bank digital currency and a foreign stablecoin, and where that allocation responds to inflation, convertibility restrictions, transaction costs and trust in public institutions. The analysis draws on peer-reviewed research published between 2023 and 2026, checked against Crossref and publisher records and screened for retractions. It shows that stablecoin adoption is best understood as a digital form of dollarisation, one that weakens monetary transmission and erodes the deposit base through the same mechanisms that physical dollarisation did, but at lower cost and with less friction; that a retail central bank digital currency, however well designed, cannot reverse this where the inflation and trust problems that drive substitution remain unresolved; and that the design levers available to a central bank, namely remuneration, holding limits, programmability and offline capability, trade adoption against bank disintermediation and surveillance in ways that are sharper in emerging economies than elsewhere. Six propositions are derived, and regulatory options spanning prohibition, integration and tolerance are evaluated against Nigeria's experience with the eNaira and with cryptocurrency restrictions. The paper recommends that emerging-economy central banks treat digital-currency policy as a question of macroeconomic credibility first and payment technology second.

Keywords: central bank digital currency; stablecoins; cryptocurrency; monetary sovereignty; currency substitution

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1. INTRODUCTION

Monetary sovereignty has always been contested at the margin. Residents of high-inflation economies have held foreign banknotes under mattresses, kept dollar deposits where the law allowed it and moved savings abroad where it did not. What is new is the ease of acting on the impulse. A stablecoin pegged to the United States dollar can be acquired on a peer-to-peer platform in minutes, held in a self-custodied wallet beyond the reach of deposit regulation and used to settle a cross-border invoice or a family remittance without a foreign-exchange licence. The transaction costs that once rationed foreign money to the wealthy have collapsed, and the policy rate reaches a shrinking share of the liquid balances in the economy.

Emerging-economy central banks have not been passive. The Central Bank of Nigeria launched the eNaira in October 2021, among the first large economies to issue a retail central bank digital currency (CBDC), eight months after a circular of February 2021 directing banks to close the accounts of customers dealing in cryptocurrencies; the restriction was relaxed only in December 2023, when banks were permitted to serve licensed virtual-asset businesses through designated accounts. These are matters of public record. Dafe (2026), by its title, frames the eNaira as a quest for infrastructural autonomy under financial subordination, and this paper extends that framing: a sequence in which the state first raised the cost of the private digital alternative and then issued its own is most naturally read as a defence of the currency. Neither measure delivered what the sequence implies. Contemporaneous reporting recorded that peer-to-peer trading grew after the circular, and eNaira uptake remained limited, for reasons Ozili and Náñez Alonso (2024) catalogue in their survey of the obstacles facing the eNaira and other early retail CBDCs. The episode is instructive because it was an early, deliberate and well-resourced attempt to use a CBDC as a defence against currency substitution.

The academic literature has only partly caught up. There is a mature body of work on CBDC design, concerned chiefly with whether a central bank liability available to the public will drain deposits from banks and raise the cost of credit (Keister & Sanches, 2023; Chiu et al., 2023; Niepelt, 2024), almost all of it set in economies where the domestic currency is the asset people run to, not from. A younger literature on stablecoins asks what holds their pegs and what happens when the peg breaks (Lyons & Viswanath-Natraj, 2023; Briola et al., 2023), again largely from the perspective of the currency to which the coins are pegged. The classical literature on currency substitution has the right setting but was built for an era of banknotes and bank deposits, and its recent revival has been driven by the Argentine case (Fares et al., 2025) and by models of deposit dollarisation in emerging economies (Ferrante & Gornemann, 2026) rather than by digital instruments. What is missing is an account that puts the three strands together where their interaction matters most: an economy with persistent inflation, an imperfectly convertible currency, limited institutional trust and a population already comfortable with mobile money.

This paper offers such an account. Its purpose is to analyse, theoretically, how the coexistence of a retail CBDC and foreign stablecoins affects monetary sovereignty and financial stability in emerging economies, and to derive propositions that can guide empirical work and policy. Three questions organise the analysis: under what conditions a foreign stablecoin erodes the central bank's control over domestic monetary conditions; whether a retail CBDC can restore that control, and through which design features; and which regulatory stance toward private digital currencies best serves an economy that cannot credibly stop its citizens holding foreign money. Nigeria anchors the discussion because it ran the relevant experiments earlier and more completely than almost anyone else.

2. LITERATURE REVIEW

2.1 CONCEPTUAL REVIEW

Monetary sovereignty, as used here, is the capacity of a national authority to determine the unit of account, the medium of exchange and the terms on which

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liquidity is supplied within its jurisdiction, and to have those determinations bind. A currency that is legal tender but which residents avoid for savings has formal sovereignty without substantive sovereignty. Currency substitution is the replacement of domestic money by foreign money in one or more of its functions, and dollarisation the special case in which the substitute is the United States dollar. A distinction is conventionally drawn between real dollarisation, in which prices and contracts are set in the foreign unit, and financial dollarisation, in which assets and liabilities are denominated in it; what matters for this paper is the result of Fares et al. (2025) that a high-inflation economy in which foreign currency is widely held is more volatile and harder to stabilise, with Argentine evidence that demand for the foreign unit rises alongside exchange-market pressure and the interest rates meant to contain it.

A central bank digital currency is a digital liability of the central bank available, in its retail form, to households and firms; it differs from reserves in its accessibility and from deposits in carrying no credit risk. A stablecoin is a privately issued crypto-asset pegged to a reference asset, usually the dollar, and backed by reserves held by the issuer. The two are often treated as rivals, but they occupy different positions in the hierarchy of money: a CBDC is sovereign money in digital form, a dollar stablecoin a private claim on foreign sovereign money held by residents of a third country. For the emerging-economy central bank the relevant comparison is therefore not between two technologies but between domestic and foreign money as stores of value, with the digital wrapper lowering the cost of the foreign option. The CBDC literature has not generally framed the question this way: the critical survey by Dionysopoulos et al. (2024) organises the field around the motivations for issuance, the design choices and the arguments about monetary policy and financial stability, whereas placing competition between domestic and foreign money at the centre is the authors' own framing.

Trust enters this picture in two ways that are easy to conflate. Trust in the issuer concerns whether it will honour its liability, refrain from debasing it and refrain from acting administratively against those who hold it; trust in the platform concerns whether balances and transaction histories are safe from theft, operational failure and observation by third parties, the state included. A domestic CBDC carries no credit risk, but it is the instrument most exposed to the state's observation, so it scores well on only part of the platform dimension and, in a high-inflation economy, poorly on the issuer dimension; a foreign stablecoin carries issuer and peg risk but is largely opaque to the domestic state. Section 4 carries both dimensions as a single state variable, institutional trust, because both concern what the holder expects the domestic state to do with its money and its information. Dutch survey evidence shows that intended adoption of a CBDC rises with trust in the central bank, with distrust of commercial banks, with the weight respondents place on privacy and security, and with the interest rate on offer (Bijlsma et al., 2024), and survey evidence on the privacy calculus shows that prospective users dislike disclosing personal information to a CBDC but will set the concern aside where the instrument offers enough convenience, ease of use and credibility (Jabbar et al., 2023). Both findings come from settings in which the issuer is trusted, which understates the force of the issuer dimension where the state has a record of freezing accounts or imposing capital controls.

2.2 THEORETICAL REVIEW

The theory of CBDC and bank intermediation has settled on a few results that frame everything else. Keister and Sanches (2023) show that a CBDC can raise the efficiency of exchange but, by competing with deposits, can raise banks' funding costs and reduce investment, with the balance depending on whether the CBDC competes with cash, deposits or both. Chiu et al. (2023) overturn the presumption that CBDC competition must shrink lending: where banks have deposit-market power, an appropriately remunerated CBDC forces them to pay more for deposits and can expand both deposits and credit. Chiu and Davoodalhosseini (2023) find that a cash-like CBDC does more for consumption and welfare than a deposit-like one and can even crowd in bank intermediation. Niepelt (2024) shows that a CBDC can supply liquidity more efficiently than deposits unless the central bank has to refinance the banks it drains and that refinancing is costly, so that the balance-sheet consequences turn on the terms of recycling; Kim and Kwon (2023) reach the complementary result that CBDC deposits reduce bank credit supply unless the central bank lends them back to the banks, in which case stability can improve. Burlon et al. (2024) characterise an optimal quantity of CBDC in a bank-based economy at which

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the gains in liquidity services and funding stabilisation are balanced against disintermediation; Bellia and Calès (2025) estimate, from a panel of euro-area banks, that a large take-up of a digital euro displacing deposits could substantially challenge bank profitability, especially for large banks and small deposit-reliant ones; and Bacchetta and Perazzi (2025), modelling CBDC as an imperfect substitute for deposits under monopolistic competition in banking, find that an interest-bearing CBDC can raise welfare through seigniorage, a lower opportunity cost of money and redistribution away from bank owners.

The thread running through these contributions is that design is destiny: remuneration, quantity limits and the central bank's balance-sheet policy determine whether a CBDC complements or cannibalises the banking system. What the theory has not done, with the partial exception of Schilling et al. (2024), is ask what happens when the CBDC is not the safest asset available. Schilling et al. show that a central bank involved in financial intermediation, whether directly through a CBDC or through other instruments, can secure at most two of efficiency, financial stability and price stability, and that a commitment to price stability can itself cause a run on the central bank. In an emerging economy the run need not be into the CBDC at all; it can be out of the domestic currency altogether, into a foreign stablecoin whose attractiveness the central bank does not control, in which case the design of its own instrument is beside the point.

The theory of stablecoins has been shaped by the question of what keeps the peg. Lyons and Viswanath-Natraj (2023) show that peg stability for the largest dollar stablecoin depends on arbitrage by investors with access to the issuer's primary market, and that the 2019 reforms which widened that access roughly halved the size of peg deviations. Hoang and Baur (2024) find strong evidence of excess price variation in stablecoins, with returns, volatility and volumes that are highly correlated with Bitcoin's, which suggests that the peg is loosest when the wider crypto market is most disturbed. Briola et al. (2023) dissect the May 2022 collapse of the algorithmic Terra–Luna system, tracing its fragility to the system's dependence on the Anchor protocol and identifying the events that triggered the crash. For an emerging economy, a stablecoin held as a dollar substitute therefore carries peg risk its holders may not price, resolved by foreign institutions over which the domestic authority has no influence.

2.3 EMPIRICAL REVIEW

Direct empirical evidence on stablecoin adoption in emerging economies is thinner than the policy debate implies, and most of what exists concerns bitcoin. Graf von Luckner et al. (2023), using high-frequency data from two of the world's oldest and most extensive centralised peer-to-peer bitcoin markets, covering the currencies of more than 160 countries, develop a method to detect crypto vehicle transactions that move capital across borders and find that bitcoin has become an increasingly important channel for receiving remittances and evading capital controls in emerging markets, with event studies of Venezuela and Argentina. Giménez Roche et al. (2025) find that bitcoin volume on decentralised exchanges across countries responds to economic and monetary freedom, capital controls and institutional quality, with purchases and sales reacting to capital restrictions in opposite directions. Alvarez et al. (2023) study the official attempt to promote crypto use in El Salvador and find that despite legal-tender status and large incentives bitcoin was little used as a currency, with privacy and security concerns prominent among the barriers.

For Nigeria, Abdurrahaman et al. (2026) survey 417 respondents across the six geopolitical zones and find that the emotional value people attach to cryptocurrency and their trust in it raise the intention to adopt, while its perceived financial value lowers it. Ozili (2023b) shows from internet search data that interest in eNaira, fintech and financial-inclusion information move together, which suggests that the public placed the official digital currency within the same field of financial innovation as the private alternatives rather than treating it as a different kind of money. Ozili and Náñez Alonso (2024) identify the factors that have limited adoption of early retail CBDCs, the eNaira among them, and show that negative media sentiment about CBDCs in general fed into sentiment about the eNaira. Dafe (2026), on the evidence of its title, situates the eNaira in the political economy of financial subordination and frames its introduction as a quest for infrastructural autonomy; the inference that the gap between that aspiration and the outcome reveals the limits of a technological response to a macroeconomic problem is the paper's own.

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The macroeconomic setting that makes these findings bite is documented by Iliyasu (2026), who shows that Nigerian inflation persistence has been high and rising since 2016, that periods of high persistence coincide with substantial second-round effects, and that the inflation-targeting regime adopted in January 2024 may therefore involve prolonged disinflation if it relies mainly on aggressive tightening. Ferrante and Gornemann (2026) model deposit dollarisation in an emerging economy where dollar deposits are held mainly by wealthier households, who are partly insulated, and show that after a devaluation poorer households cut consumption sharply. Ante (2025) finds, among remittance senders surveyed in the United States, that digital and financial literacy each raise the likelihood of adopting stablecoins for cross-border transfers, with continued use then driven by satisfaction and perceived usefulness, which suggests that the population most able to take up the foreign instrument is the one that literacy and inclusion programmes are designed to enlarge. Regulatory experience is accumulating fastest in the European Union, where Minto (2024) documents coordination problems between the Markets in Crypto-assets Regulation and payment-services law that, on the authors' reading, any emerging economy attempting regulated integration would inherit.

3. MATERIALS AND METHODS

This is a theoretical paper. Its method is conceptual synthesis and analytical model-building rather than estimation, and its claims are propositions to be tested rather than findings established. The design has three stages: identifying the decision problem facing households and firms with access to three liquid instruments and the variables that govern the allocation among them; tracing the consequences of that allocation for monetary transmission, the deposit base and financial stability where the domestic currency is not the safe asset; and deriving propositions, with Nigeria as an anchoring case that illustrates rather than tests them.

The evidence base consists of peer-reviewed journal articles with a volume year between 2023 and 2026, identified through bibliographic searches and the authors' reading of the field. Metadata were checked against Crossref and, where Crossref lacked volume, issue or pages, against the publisher or OpenAlex record. Records were screened for retraction, correction and expression-of-concern notices using the editorial-update data Crossref carries from Retraction Watch; none carried such a notice. Working papers, policy reports, conference proceedings and preprints were excluded even where influential, so some relevant central-bank research is not cited, a cost accepted in exchange for a reference list that is wholly verifiable.

Judgements about what a source supports were made conservatively: results derived for an advanced economy are cited for the mechanism, not the magnitude; empirical findings are attributed at the level of generality their authors use, and extensions are marked as the authors' own; where the cited evidence concerns bitcoin rather than stablecoins the text says so and marks the extension as the paper's own analogy; and figures that could not be sourced to a verified reference were omitted rather than approximated. Descriptive statements of institutional record, such as the dates of the eNaira launch, of the February 2021 banking restriction on cryptocurrency transactions and of its December 2023 relaxation, and the contemporaneous reporting that peer-to-peer trading grew after the restriction, are matters of public record reported for context and carry no evidential weight. Two cited items are advance online publications (Bacchetta & Perazzi, 2025; Dafe, 2026); the second, whose abstract was unavailable, is cited only for the framing its title states. Generative artificial-intelligence tools assisted with drafting and with the management of references; every citation and substantive claim was verified by the authors, who take full responsibility for the content. The propositions are consistent with the evidence reviewed but have not been estimated, and the framework abstracts from informal dollar cash markets and mobile-money float, which a full model would include.

4. RESULTS AND DISCUSSION

4.1 RESULTS

Consider a household or small firm in an emerging economy deciding how to hold its liquid balances. Domestic bank deposits pay a rate the central bank influences, are insured up to a limit and are exposed to inflation and administrative restriction. A retail CBDC is a direct claim on the central bank with no credit risk, may or may not pay interest, may carry a holding limit, loses value to inflation at the same rate as deposits and is highly visible to the state. A foreign

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stablecoin is a private dollar claim that pays no interest in its basic form, carries issuer, peg and operational risk and is largely invisible to the domestic state. The holder cares about expected real return, the cost of making payments, the probability of losing access to its balances and how much of its financial life others can observe.

The allocation depends on four state variables. Expected inflation sets the real-return penalty on domestic money of either form and raises the relative return on the foreign instrument directly. Convertibility sets the shadow price of acquiring it: where the official rate is unavailable at scale the parallel premium is the cost of entry, and where capital controls bind a digital asset held outside the banking system is the cheapest way round them. The evidence for that last claim comes from bitcoin: Graf von Luckner et al. (2023) document that peer-to-peer bitcoin has become an important channel for remittances and for evading capital controls in emerging markets, and Giménez Roche et al. (2025) find that decentralised-exchange bitcoin volumes respond to capital controls; the framework extends the mechanism to dollar stablecoins by analogy, on the reasoning that a dollar-pegged asset serves the circumvention purpose at least as well as a volatile one. Transaction costs determine how much return the holder will forgo for a convenient payment instrument, and mobile-money and peer-to-peer platforms have lowered these costs for the foreign instrument far more than for the domestic one. Institutional trust, which subsumes the issuer and platform dimensions of Section 2.1, sets the perceived probability that domestic balances will be frozen, redenominated or inflated away, and the perceived cost of being observed; the finding that CBDC adoption responds to trust in the issuer and to privacy (Bijlsma et al., 2024; Jabbar et al., 2023) applies with greater force where the issuer has previously acted against holders of its own currency. Table 1 summarises how each instrument scores on these dimensions and how the Nigerian case illustrates each.

Table. 1. Instrument characteristics, state variables and the Nigerian illustration

Dimension	Domestic bank deposit	Retail CBDC	Foreign stablecoin	Nigerian illustration
Expected real return	Nominal rate less domestic inflation; often negative in real terms	Zero or policy-set rate less domestic inflation	Approximately zero nominal less foreign inflation; plus expected depreciation gain	Persistent, elevated inflation with second-round effects (Iliyasu, 2026) makes the foreign unit the higher-return store of value
Credit and peg risk	Bank default risk, partly insured	None	Issuer reserve and peg risk; algorithmic designs can collapse (Briola et al., 2023)	Holders are assumed here to price peg risk loosely relative to naira depreciation risk
Convertibility cost	None for domestic use; FX access rationed	None for domestic use; no FX function	Parallel-market premium to acquire; near-costless to move abroad	Decentralised-exchange bitcoin volumes respond to capital controls and monetary freedom (Giménez Roche et al., 2025); the parallel premium is taken here as the stablecoin's entry cost by analogy
Payment convenience	High domestically via mobile and card rails	High domestically if merchant acceptance exists; offline capability extends reach	High for cross-border and online; low for local retail	eNaira uptake remained limited (public record); Ozili and Náñez Alonso (2024) catalogue the obstacles facing the eNaira and other early retail CBDCs
Visibility to the state	High	Very high by design	Low; self-custody is opaque	The 2021 banking restriction on crypto transactions (public record) raised the value of opacity, on the framework's logic
Transmission of policy rate	Direct	Direct if remunerated	None	Growing stablecoin share shrinks the rate-sensitive base

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Source: authors' synthesis of the cited literature.

The framework's central result follows from comparing how the three instruments respond to a tightening of domestic monetary policy. Deposit rates follow the policy rate with a lag that depends on bank market power, a remunerated CBDC follows immediately, and the stablecoin does not respond at all, because its return is set abroad. The share of liquid balances held in stablecoins is therefore the share of the money stock that is insensitive to the policy rate, and as it rises the central bank must move its rate further for a given effect on demand. This is the digital analogue of the finding that currency substitution makes inflation harder to control (Fares et al., 2025), with the difference that substitution now occurs at lower cost and outside domestic bank balance sheets: dollar deposits in domestic banks at least remain within the regulated perimeter and can be reserve-required, while stablecoin balances in self-custody cannot.

Proposition 1. Stablecoin adoption by residents is an increasing function of expected domestic inflation, of the parallel-market premium and of the perceived probability of administrative action against domestic balances, and a decreasing function of the transaction cost of acquiring and using the stablecoin. Because the last of these has fallen secularly, the threshold level of inflation at which substitution becomes material is lower than it was for physical dollarisation.

Proposition 2. The share of resident liquid balances held in foreign stablecoins is the share of the effective money stock that does not respond to the domestic policy rate. Monetary transmission weakens in proportion, and the central bank must move its policy rate further to achieve the same stabilisation.

The second consequence concerns the deposit base. The CBDC literature has shown that a drain from deposits into a domestic CBDC can be offset by central-bank recycling of the funds (Niepelt, 2024; Kim & Kwon, 2023) or contained by limiting the quantity the CBDC absorbs (Burlon et al., 2024), although a large take-up could substantially challenge bank profitability (Bellia & Calès, 2025). None of these remedies is available for a drain into stablecoins: the central bank cannot lend back funds that have left the country's monetary system, and it cannot cap holdings of an instrument it does not issue. The disintermediation that the advanced-economy literature treats as a design problem is, for an emerging economy, an exogenous shock to bank funding. Banks with market power may respond by raising deposit rates, the mechanism by which Chiu et al. (2023) find that CBDC competition can expand credit, but that result depends on the competing instrument being domestic.

Proposition 3. Stablecoin adoption reduces the domestic deposit base by an amount that cannot be offset by central-bank balance-sheet policy, and raises bank funding costs by an amount that depends on deposit-market competition. The effect on credit supply is negative in the absence of deposit-market rents; only where banks had previously extracted large rents from depositors can the loss of funding be offset by the repricing that competition for the remaining deposits forces on them.

What, then, can a retail CBDC do? It can improve the domestic instrument on payment convenience, credit risk and, through offline capability, reach; it cannot improve it on the dimensions that drive substitution, namely expected real return, visibility and the perceived probability of administrative action. To the holder a CBDC is domestic money with a better interface and a worse privacy profile. Only where the reason for holding stablecoins is payment convenience, distrust of banks or lack of connectivity does the CBDC compete on favourable ground, and in economies with developed mobile-money systems that ground is narrow. This is why the eNaira could not answer the problem it was launched to address, and why promoting a digital instrument by fiat and subsidy produced so little use in El Salvador (Alvarez et al., 2023).

Proposition 4. A retail CBDC reduces stablecoin adoption only through the payment-convenience and bank-credit-risk channels and, where offline capability extends it to the unconnected, through reach. Where substitution is driven by inflation, convertibility restrictions or institutional distrust, the introduction of a CBDC has no first-order effect on the stablecoin share, and its visibility to the state can raise that share at the margin.

The design levers the central bank does control have to be assessed in this light. Remuneration raises the CBDC's return and, following Chiu et al. (2023), can be set to discipline bank deposit pricing; but interest on a CBDC in a high-inflation economy adds to the

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central bank's quasi-fiscal cost and closes the real-return gap with the foreign unit only if the rate exceeds expected depreciation, at which point it has become a capital-control instrument. Holding limits protect the banking system from a domestic run into the CBDC and, on the authors' reading, also limit the central bank's exposure to the run risk that Schilling et al. (2024) associate with its involvement in intermediation, but they cap the CBDC's usefulness as a store of value and so cede that function to the stablecoin. Programmability has been proposed for targeted transfers, but every increment of programmability is an increment of visible state control, and the authors infer from the privacy-calculus evidence on reluctance to disclose personal information to a CBDC (Jabbar et al., 2023), which does not itself address programmability, that it is likely to lower adoption among exactly the holders most likely to substitute. Offline capability extends reach to the unconnected and competes with the stablecoin where the stablecoin is weak, since self-custodied crypto cannot be spent without connectivity.

Proposition 5. Each CBDC design lever trades adoption against either bank disintermediation or surveillance. Remuneration and the absence of holding limits raise adoption at the cost of disintermediation; programmability raises policy usefulness at the cost of adoption; offline capability raises adoption at no cost to either, and is the design margin on which an emerging-economy CBDC has a comparative advantage over private alternatives.

The regulatory question follows. Prohibition, whether by banning bank access for crypto transactions or by outlawing holdings, raises the stablecoin's transaction cost and so lowers its share, but by less than the authorities expect, because the cost falls on the on-ramp rather than on the holding and peer-to-peer markets reconstitute the on-ramp outside the banking system. Contemporaneous industry and press reporting, public record rather than peer-reviewed evidence, recorded that peer-to-peer trading in Nigeria grew after the 2021 restriction, which on the framework's logic means the restriction relocated activity more than it reduced it and made the flows harder to see; that decentralised-exchange bitcoin trading responds to capital restrictions at all (Giménez Roche et al., 2025) is consistent with that reading. Integration, meaning licensed intermediaries, reserve disclosure and exchange activity inside the regulated perimeter, accepts the stablecoin's existence and trades nominal monetary control for visibility, consumer protection and tax reach, at a legal cost of which the coordination problems Minto (2024) documents between the European crypto-asset and payment-services regimes give some measure. Tolerance preserves monetary control nominally while losing it in practice, and leaves holders exposed to peg risk of the kind the Terra–Luna collapse demonstrated (Briola et al., 2023).

Proposition 6. Prohibition lowers the stablecoin share by less than the transaction cost it imposes, because it shifts activity to channels where marginal cost is low and visibility lower still. Regulated integration raises visibility and consumer protection without materially changing the share, which the macroeconomic state variables determine. Neither stance restores monetary sovereignty; only a fall in expected inflation, a narrowing of the parallel premium through restored convertibility, and a fall in the perceived probability of administrative action do.

4.2 DISCUSSION

The framework rests on an assumption that deserves scrutiny: that holders treat the foreign stablecoin as a close substitute for dollar deposits and physical dollars, so that the classical analysis of dollarisation transfers. The evidence is mixed in a way that strengthens the argument. Stablecoin prices show excess variation that is highly correlated with Bitcoin's (Hoang & Baur, 2024), and the peg is maintained by arbitrageurs with access to the issuer's primary market (Lyons & Viswanath-Natraj, 2023), so an informed holder would demand a risk premium over dollar deposits. That premium is small against the expected depreciation of a currency with the inflation persistence Iliyasu (2026) documents, and a dollar deposit in a domestic bank is itself exposed to the administrative risks the holder is trying to escape. The stablecoin is an imperfect substitute for the dollar but a better one than the domestic currency.

A second objection is that the framework understates what a CBDC can do for financial inclusion, a benefit that Ozili (2023a) argues CBDCs, fintech and cryptocurrency can all deliver by giving unbanked adults a channel into formal finance, and one that the eNaira and many emerging-economy CBDC projects have claimed for themselves. Proposition 5 gives the offline lever its due, but inclusion and sovereignty are

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different objectives. A newly included household that watches its first CBDC balance lose value learns the lesson the already-included learned, and the digital and financial literacy that Ante (2025) finds to raise stablecoin adoption is what the inclusion programme supplies. Inclusion through a CBDC in a high-inflation economy may widen the population capable of substituting.

The framework also inverts the policy implications of the advanced-economy CBDC literature, whose central worry is that a CBDC will be too successful and drain the banks, and whose recommendations therefore run toward quantity limits (Burlon et al., 2024) and toward setting remuneration and the terms on which banks are refinanced (Niepelt, 2024). The emerging-economy worry is that the CBDC will be ignored because it does not address the reasons people leave the currency. Schilling et al.'s (2024) trilemma still applies, but its horns differ: the run that threatens stability is a run out of the currency, and the central bank chooses between accommodating it with reserves it may not have and suppressing it with restrictions that drive the activity underground.

Three boundary conditions should be stated. The framework assumes that the stablecoin remains convertible at the issuer, which depends on regulation in the issuer's jurisdiction. It treats inflation expectations as exogenous, though a central bank that anchored them would, by the logic of Proposition 1, remove the principal driver of substitution without any digital instrument, leaving convertibility, administrative risk and transaction cost to determine how much of it persisted. And it abstracts from distribution, which Ferrante and Gornemann (2026) show to be a first-order matter, since dollar deposits are held mainly by wealthier households, who are partly insulated, while poorer households cut consumption sharply after a devaluation.

The propositions are stated so that they can be tested. Proposition 1 implies that peer-to-peer stablecoin volume across countries should be explained by inflation, the parallel premium and administrative risk, controlling for connectivity; the research designs exist, since Graf von Luckner et al. (2023) show how vehicle transactions can be identified in peer-to-peer trade data and Giménez Roche et al. (2025) relate cross-country decentralised-exchange volumes to capital controls and institutional conditions, but both concern bitcoin, so a direct test requires stablecoin-specific data those studies do not supply. Proposition 2 implies that pass-through from the policy rate to lending and deposit rates should decline as resident stablecoin holdings rise, which requires residency-based measures official statistics do not yet provide. Proposition 6 implies that restrictions should be followed by a rise in peer-to-peer volume relative to exchange volume, which Nigeria's own data after 2021 can test.

5. CONCLUSION AND RECOMMENDATION

This paper has argued that dollar stablecoins continue currency substitution by other means, at lower cost and outside the regulated balance sheets where dollarisation used to leave at least a trace. The consequences for monetary transmission and the deposit base are those the dollarisation literature identified, now operating at lower thresholds and beyond the reach of reserve requirements. A retail central bank digital currency competes with the stablecoin on convenience, credit risk and reach, but not on the real return, convertibility and institutional trust that drive substitution, which is why the eNaira did not function as the defence against private digital money it was meant to be. The design levers a central bank controls trade adoption against disintermediation and surveillance, and only offline capability avoids the trade. Regulatory stances toward stablecoins alter chiefly the visibility and safety of substitution and reduce its extent only modestly, because the state variables that drive it lie outside the regulator's reach.

The recommendations follow. Central banks in high-inflation emerging economies should treat their CBDC projects as payment-infrastructure investments with inclusion objectives and stop presenting them as instruments of monetary sovereignty, because the gap between claim and outcome damages the credibility on which sovereignty rests; and since inclusion through a CBDC does not by itself reduce substitution and may enlarge the population able to substitute, the inclusion objective has to be pursued on its own merits rather than as a defence of the currency. Design should favour offline capability and simple onboarding over programmability and interest, and holding limits should be set in the knowledge that they signal the instrument's limited role as a store of value. Toward stablecoins, regulated integration is preferable to prohibition: licensing intermediaries,

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requiring reserve attestation for coins marketed domestically and bringing exchange activity inside the perimeter will do little to reduce substitution but will make it observable, taxable and safer, whereas prohibition, as the public record of the Nigerian episode suggests, reduces it by less than the cost it imposes and transfers most of the activity to channels that are harder to see. Above all, the policy that reduces substitution is the one that removes its cause: a credible disinflation, a unified and convertible exchange rate and a demonstrated unwillingness to act administratively against holders of domestic balances will do more for monetary sovereignty than any digital instrument, and a central bank that pursues the instrument instead of the cause will have built a better interface for a currency people still do not want to hold.

6. CONTRIBUTION TO EXISTING KNOWLEDGE

The paper brings three literatures that have developed in isolation into a single framework set where their interaction is consequential. The CBDC design literature is extended from a two-instrument world of deposits and CBDC to one in which a foreign stablecoin is the holder's outside option, and its results on remuneration, holding limits and recycling are shown to carry different, in places inverted, implications there. The stablecoin literature's findings on peg maintenance and fragility are connected to the allocation decision in an emerging economy, where the relevant comparison is with a depreciating domestic currency rather than with the dollar, and the dollarisation literature is updated for an instrument that substitutes at lower cost and outside the banking perimeter. Six propositions specify testable relationships among inflation, convertibility, trust, transaction costs, stablecoin adoption, monetary transmission and bank funding, and the regulatory analysis gives a structured basis for choosing among prohibition, integration and tolerance, anchored in the economy that ran the relevant experiments earliest.

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