

Signals without scale

Stablecoins, retail payments and market infrastructure

A market infrastructure lens on retail stablecoin use | empirical evidence and policy implications

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Views expressed are those of the authors and do not necessarily reflect official positions of De Nederlandsche Bank.



Growing interest — Limited evidence



Market developments

merchant integrations
platform experiments
issuance initiatives



Regulation

MiCAR framework
consumer protection
monetary sovereignty



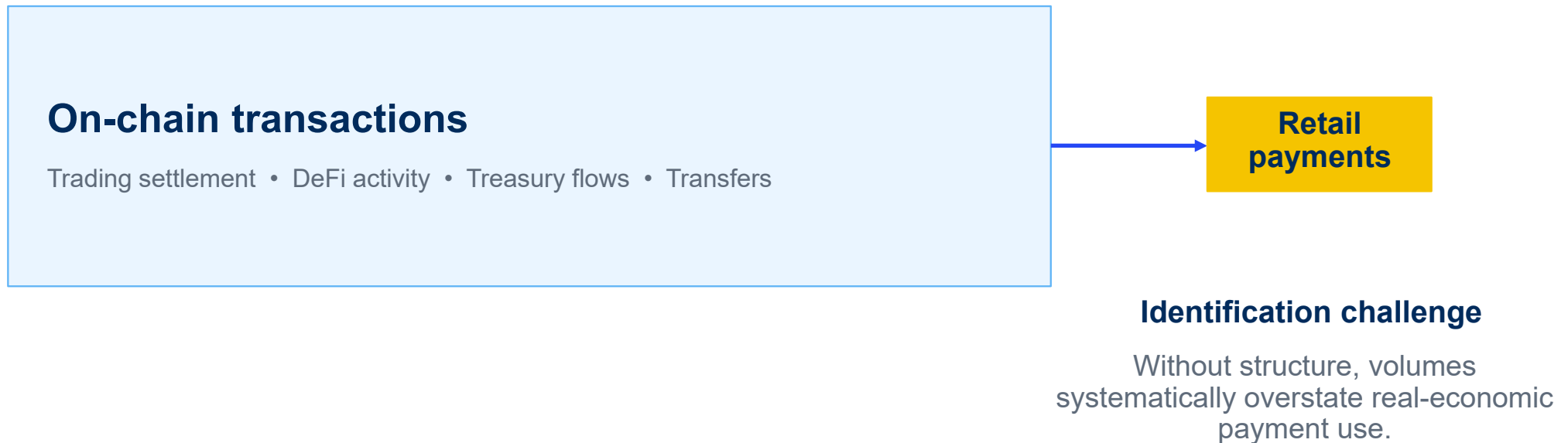
Payment system

future architecture
retail rails
settlement models

Perception is moving faster than robust evidence on actual retail use.

Volume ≠ retail use

Raw stablecoin transaction volumes mix many activities that only look payment-like.



Retail
payments are
infrastructure-
dependent

A stablecoin becomes a retail payment instrument only when the surrounding chain supports consumer–merchant transactions.



Infrastructure lens

The asset is not enough: adoption depends on the integration of rails, interfaces, acceptance, conversion and rules.

Three empirical identification models



Smart-contract mediated

Merchant payment flow executed through smart-contract infrastructure.



One-time address model

Unique recipient address generated for an individual purchase.



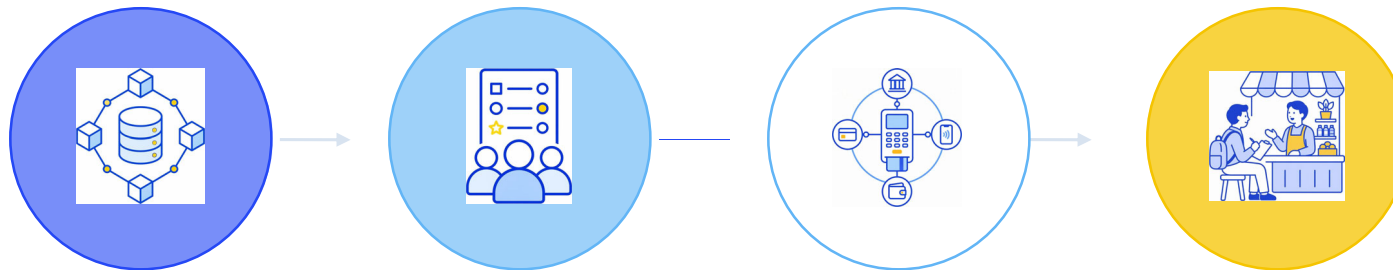
Wallet-to-wallet

Direct transfer from consumer wallet to merchant wallet.

Three complementary models translate raw blockchain transactions into retail-payment approximation.

Mixed-method evidence

Each source captures a different dimension of adoption; the conclusion rests on consistency across four complementary datasets.



Blockchain data Consumer survey DNB consumer diary Fieldwork & interviews

transaction patterns
from Mercurius

awareness, ownership
and use cases

everyday payment
behaviour

merchant and PSP
operational evidence

Triangulation: stable evidence comes from converging signals across transactions, attitudes, actual payment choices and field evidence.

Signals without scale

Observable, but economically marginal



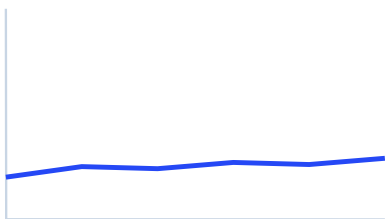
negligible scale
fragmented structure
crypto-adjacent contexts

Most observed activity remains concentrated in USD-denominated stablecoins

Different infrastructure, different outcomes

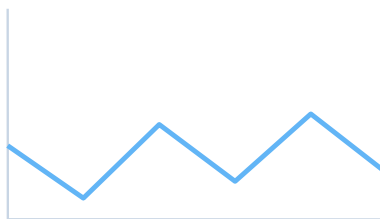
The three empirical models show distinctive patterns in transaction value and stability.

Smart-contract mediated



higher value
more stable

One-time address model



mixed values
episodic patterns

Wallet-to-wallet



lower value
more volatile

Disclaimer: Graphs are not to scale.

Low
awareness,
limited use

No evidence of mainstream consumer adoption: stablecoins are mainly linked to crypto-related activity.

Low

Awareness

Low

Ownership

Rare

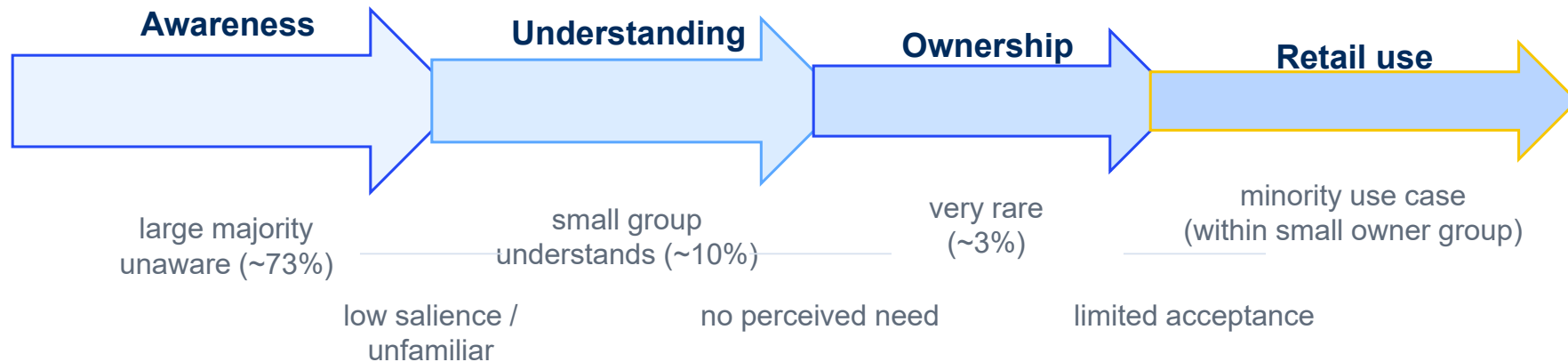
Everyday usage

Where held, stablecoins are primarily used for trading or investment rather than retail transactions.

Adoption frictions accumulate

Retail adoption breaks down at multiple stages — not at a single point.

LISS panel (NL)



Interpretation: Adoption fails cumulatively across stages — consistent with “signals without scale”.

Adoption is infrastructure conditional

Potential adoption rises when stablecoins are easy to use, embedded, broadly accepted and trusted.

Baseline: low willingness to adopt (14,03%)



Ease of use

like card / contactless

scenario willingness

22.56%



Merchant acceptance (NL)

broad acceptance at shops

scenario willingness

22.76%



App integration

embedded in familiar apps

scenario willingness

17.02%



Foreign merchant acceptance

easy foreign payments

scenario willingness

19.42%

Retail adoption is infrastructure conditional — not simply demand constrained; even favourable scenarios remain below mainstream payment instruments.

Stablecoin use remains niche and fragmented

Stablecoin use is fragmented and concentrated in specific user types.

Unaware majority

never heard of stablecoins
no perceived need
no adoption pathway

Curious non-users

aware but not using
open to adoption under
conditions
constrained by usability and
acceptance

Crypto-native users

small minority
ownership concentrated
use mainly for trading /
investment

Retail payments remain marginal across all segments

Interpretation: No broad-based consumer base — adoption remains niche and crypto-adjacent.

Limited acceptance and practical frictions

Merchant adoption remains narrow: local ecosystems can emerge, but frictions prevent broader diffusion.



Small retail store

low transaction volumes
low awareness
refund and process frictions



Local crypto-payment ecosystem

crypto acceptance networks can form
but remain geographically and socially bounded

Monitor infrastructure — not just volumes

Policy relevance may emerge through non-linear integration into existing payment systems and platforms.



Current scale is negligible. Future relevance depends on where infrastructure shifts occur.

Working paper publication

Planned publication on the DNB website in Q4 2026

Register now

Today

Discussion & feedback

Questions and comments from this session can help sharpen the final version.

Q4 2026

Online via DNB

The working paper is planned to be made available on DNB's website.

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Scan the code to open a pre-filled request email.

QR email request



Scan to receive the paper once published

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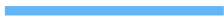
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Where would retail adoption emerge?

If stablecoins gain traction, the trigger is likely to be an infrastructure shift rather than gradual organic uptake.



**Consumer
wallets**



**Merchant
acceptance**



**Platform
integration**



Discussion question: which channel would move first — and why?

Annex - further background slides

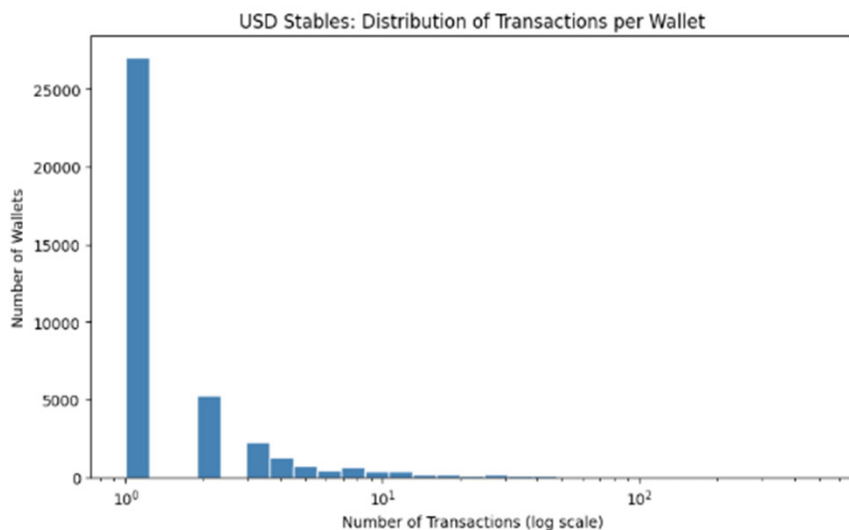
Three operational models reveal different payment patterns

Annex A · detailed comparison

Smart-contract mediated	One-time address model	Wallet-to-wallet
Payment setup Merchant uses payment service provider or payment infrastructure	Payment setup Merchant generates unique payment address per transaction	Payment setup Customer pays directly to merchant wallet
Structure Most structured environment	Structure Intermediate level of structure	Structure Least structured environment
Retail classification Highest confidence retail classification	Retail classification Moderate confidence retail classification	Retail classification Lowest confidence retail classification
Transaction values Higher average transaction values	Transaction values Mixed transaction values	Transaction values Lower transaction values
Key limitation Misses retail flows outside identified service providers	Key limitation Depends on classification assumptions	Key limitation Greater risk of capturing non-retail transfers

Key message No single model provides a complete picture; together they provide triangulating evidence on retail stablecoin activity.

Observed pattern



Interpretation

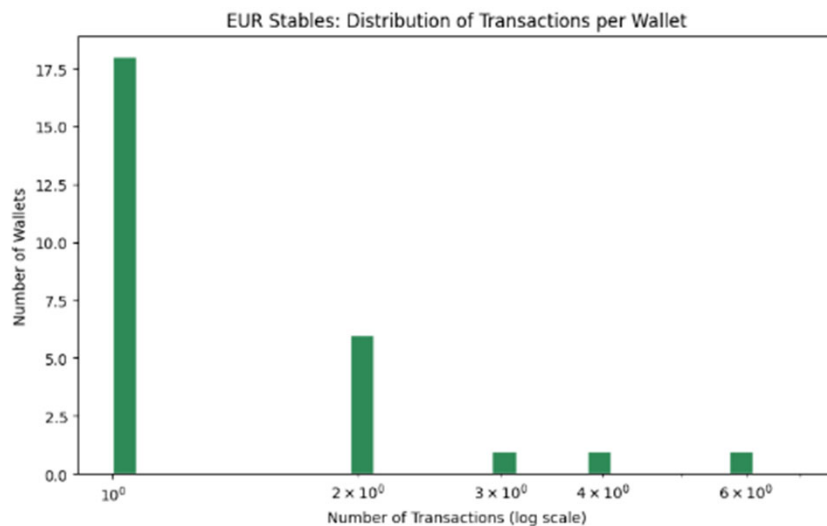
No signal of everyday retail adoption

- Signals are concentrated rather than broad-based
- Patterns are episodic, not habitual
- Retail relevance remains niche and crypto-adjacent

Key messages

- Most observed users transact only once or very infrequently.
- Activity is concentrated in a relatively small set of users and payment arrangements.
- Repeat usage remains limited.
- Results do not point to widespread everyday payment use.

Observed pattern



Interpretation

No signal of everyday retail adoption

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Consumer demand remains weak despite growing attention

Annex C · LISS survey
evidence

Awareness

~73% unaware of stablecoins

Only a small group understands the product (~10%), leaving stablecoins low-salience for most consumers.

Ownership

~1% of population owns stablecoins

Ownership is very rare and concentrated; retail payments are a minority use case within this small group.

Willingness to use

13–23% scenario-based willingness

Favourable scenarios such as easier use, merchant acceptance and app integration raise stated willingness, but from a low baseline.

Barriers

3 recurring frictions

Low salience / unfamiliarity, no perceived need and limited acceptance all restrict mainstream uptake.

Takeaway Potential adoption increases when usability improves, but scenario-based willingness remains below mainstream payment instruments.

Four datasets, one conclusion

Annex D · evidence
synthesis

Evidence source	Main finding
Blockchain analysis	Retail stablecoin payments can be observed, but volumes remain limited
LISS consumer survey	Awareness, ownership and intended use remain low
DNB consumer diary data	Stablecoin payments are largely absent from everyday payment behaviour
Amsterdam & Arnhem fieldwork	Limited merchant and consumer engagement; use cases remain niche
Overall conclusion	Signals of activity, but no evidence of scale

Bottom line Different methods, different datasets, same conclusion: stablecoins have moved beyond theory, but have not yet become a mainstream retail payment instrument.