QUANT

The complete guide to

STABLECOINS

The digital money that doesn't fluctuate

The rise of stable, programmable money

The financial system is undergoing a profound transformation driven by programmable money and tokenised finance.

At the centre of this evolution are stablecoins, a form of digital money engineered for price stability, 24/7 operability, and integration into regulated financial systems.

Unlike volatile cryptocurrencies like Bitcoin or Ethereum, stablecoins are designed to maintain a constant value, typically pegged 1:1 to fiat currencies such as the British pound, US dollar, or euro.

This makes them practical for use in payments, settlements, and digital asset markets.

Although stablecoins have been circulating since 2014, growth has exploded in recent years, and stablecoins now represent more than 60% of all cryptocurrency transaction volume, up from 35% two years ago.

In this guide, we'll cover everything you need to know.

What are stablecoins?

Stablecoins are blockchain-based digital tokens that maintain a stable value by being backed by reserve assets.

Fiat currencies
(e.g., USD, GBP, EUR)

Government bonds
or cash equivalents

Overcollateralised crypto assets

Algorithmically controlled supply models
less common and riskier

Unlike cryptocurrencies that experience high price volatility, stablecoins are engineered to act like traditional money - but with the programmability and settlement speed of digital assets.

How do stablecoins work?

Stablecoins maintain their value by anchoring to stable reference assets, making them far less volatile than traditional cryptocurrencies and therefore more practical for daily transactions and wealth preservation.

After issuance and asset-pegging, stablecoins enter circulation through blockchain networks that maintain transparent ownership records and transaction histories. This blockchain integration ensures that token holders can seamlessly convert their stablecoins back to traditional currency at consistent exchange rates.

These digital assets frequently serve as intermediaries in the cryptocurrency ecosystem. Traders often convert volatile assets like Bitcoin or Ethereum into stablecoins before exchanging them for conventional currencies such as the US dollar, streamlining the process of accessing and spending their digital holdings.

While price stability positions stablecoins as viable alternatives to traditional cryptocurrencies for commercial use, significant challenges remain. The primary concern revolves around the mechanisms used to maintain price stability, specifically how these currency pegs are managed and whether adequate reserves back the promised value.

Why stablecoins are critical to digital finance

Stablecoins have become foundational to modern financial infrastructure. As of mid-2025, the global market exceeds $200 billion in circulating supply, with institutional adoption accelerating.

Key benefits of stablecoins

Real-time payments	Borderless, low-cost, 24/7 digital transfers
Tokenised asset settlement	Instant settlement of tokenised securities
Programmable workflows	Automation of payroll, escrow, tax logic
Financial inclusion	Access to stable currency in emerging markets
CBDC readiness	Used in pilots by central banks and fintechs

Source: S&P Global — Stablecoin Regulation Gains Global Momentum

How stablecoins maintain price stability

To ensure 1:1 parity with reference assets, stablecoins use several price stability mechanisms:

Reserve backing	Cash, government bonds, or crypto collateral
Redemption guarantees	1:1 redemptions by authorised participants
Market arbitrage	Liquidity providers keep pegs intact
Regulatory transparency	Audits, attestations, and disclosures

Reference: BIS Report on Digital Money and Singleness

Stablecoin architectures: three core models

Fiat-backed stablecoins	Crypto-collateralised stablecoins	Algorithmic stablecoins
Fully backed by fiat or equivalents Held by banks or custodians E.g.: USDC, future GBP stablecoins	Overcollateralised with digital assets like ETH Managed via smart contracts E.g.: DAI	No backing; price managed via algorithms High failure rate (e.g., TerraUSD collapse in 2022) Generally unsuitable for regulated use

Comparing digital money models:

Stablecoins, CBDCs & tokenised deposits

CHALLENGE	ISSUER	BACKING	USE CASE	REACH	PROGRAMMABILITY
Stablecoins	Private entities	Fiat or crypto	Payments, DeFI, settlement	Global	High
CBDCs	Central banks	Central bank money	Domestic payments	National	Moderate
Tokenised deposits	Commercial banks	Bank deposits	Interbank, B2B liquidity	Ecosystem-based	High

UK stablecoin regulation: A strategic opportunity

While the EU's MiCA and the US stablecoin bill are advancing, the UK's regulatory framework remains in development.

A June 2025 report from the Digital Pound Foundation and Innovate Finance highlights a strategic window:

> The UK could host 10–20% of the global stablecoin market — worth up to $40 billion — if it moves swiftly to implement a credible and open regulatory regime.

QUANT

Regulatory readiness would support:

- **The UK's tokenisation strategy**
- **Development of a Digital Pound**
- **Private sector innovation in programmable payments**

Real-word stablecoin use cases

Cross-border payments	Real-time, low-cost global transfers
Tokenised bond settlement	Atomic delivery vs. payment
Programmable escrow	Trigger-based fund release
AI agent payments	Machine-triggered, auditable transactions
Remittances & inclusion	Low-fee transfers in volatile economies

Risks and challenges in stablecoin adoption

While promising, stablecoins face challenges:

Redemption risk

Peg breaks due to reserve shortfalls

Regulation

Different rules across jurisdictions

Disintermediation

Competition with deposit-based products

AML/KYC

Balancing control and innovation

The future of digital money

Stability, programmability, interoperability

Stablecoins are not just crypto alternatives, they are core components of the next-generation financial system.

As the world shifts toward tokenised finance, stablecoins will support:

- Institutional payment networks
- Tokenised capital markets
- Embedded finance and AI payments

The future lies in a **hybrid financial ecosystem** where all forms of digital money work together, **seamlessly, securely**, and **at scale**.

Enabling interoperable stablecoin infrastructure

At Quant, we are building the infrastructure of money that will support regulated digital money, including stablecoins, tokenised deposits and commercial bank money - across public and private financial networks.

We are focused on delivering:

- Interoperability between digital money forms
- Seamless integration with traditional financial systems
- Enabling programmable payments at scale

As a provider of programmable money infrastructure, we deliver the world's most advanced digital asset infrastructure, enabling secure tokenisation, execution and settlement across any network.

Learn why we are the only true end-to-end solution for institutions entering the tokenised economy at quant.network.

Frequently Asked Questions

Stablecoins in 2025

What is a stablecoin in simple terms?

A digital token that maintains a fixed value (like £1) via reserve backing.

Are stablecoins safe?

Yes, when fully backed, audited, and regulated.

Will the UK launch a GBP stablecoin?

Private firms may issue GBP-backed stablecoins once frameworks are approved.

Can stablecoins pay interest?

Some yield-bearing models exist, but UK regulation on this is evolving.

How do stablecoins differ from Bitcoin?

Stablecoins are pegged; Bitcoin's value fluctuates with market demand.

What backs a stablecoin?

Cash, government securities, or crypto collateral.

How do stablecoins improve cross-border payments?

They enable instant, 24/7 global transactions without intermediaries.

What's their role in tokenised finance?

They act as the digital cash layer for settling tokenised assets.

QUANT

Want to learn more?

Speak with our team to explore **enterprise-grade** stablecoin infrastructure.

Book a meeting