EUROPEAN CENTRAL BANK

EUROSYSTEM

Developments in Crypto-Assets Policy and Regulation

A central bank perspective

27 October 2020

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The views expressed here do not necessarily reflect those of the ECB

Overview

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- Classification of assets
- ECB stablecoin taxonomy

2 Analysis on implications of stablecoins

- Dynamic risk assessment
- Scenarios
- Implications on central bank tasks: focus on monetary policy, financial stability, market infrastructures and payments

3 Regulatory and oversight considerations

4 Conclusions

Classification of assets

Liability of central bank	Liability of a private entity	Not a liability
i. Cash: physical form, to general public ii. Central bank deposits: digital form, limited access	i. Commercial bank money ii. E-money iii. So-called “stablecoins” that entail a claim/liability on an identifiable entity	i. Crypto-assets

central bank digital currency

Focus on stablecoins: ECB taxonomy

	issued on the receipt of:	"collateralised" by:	redeemable at:
Tokenised funds	funds (i.e. cash, deposits or electronic money)	funds and/or close substitutes (i.e. secure, low-risk, liquid assets)	market value of the collateral at the time of redemption or face value of the stablecoin
Off-chain collateralised stablecoins	assets held through an accountable entity (e.g. securities, commodities, or crypto-assets in custody with an intermediary)	assets held through an accountable entity (e.g. securities, commodities, or crypto-assets in custody with an intermediary)	market value of the collateral at the time of redemption
On-chain collateralised stablecoins	crypto-assets held directly on the distributed ledger	crypto-assets held directly on the distributed ledger	market value of the collateral at the time of redemption
Algorithmic stablecoins	crypto-assets or given away for free	no collateral – value of stablecoin is based purely on the expectation of its future market value	not redeemable

Stability vis-à-vis currencies

ECB risk assessment: crypto-assets vs stablecoins

- The crypto-assets market is not static. Stablecoins are currently a small yet growing/dynamic part of this market and could overturn current risk assessment

Crypto-assets (2019)	Stablecoins/stablecoin arrangements
• are volatile and highly speculative • do not fulfil money functions and do not currently have implications for monetary policy • do not pose a material risk to financial stability in the euro area: combined value is small relative to the financial system • EU financial institutions not materially exposed • can hardly enter financial market infrastructures	• mitigate volatility and aim at mainstream use cases in retail payments • if used as store of value*, could (adversely) impact monetary transmission • could reach a scale of operations (global stablecoins) such that they may give rise to financial stability risks (via internal fragilities, links with financial sector) • can qualify as payment systems and/or payment schemes and as such present the same risks

* It should be noted that stablecoins are not immune from low interest rate environment but might have some room for cross-subsidisation

Implications of stablecoins depend on the scenario

1st Scenario	2nd Scenario	3rd Scenario
"Crypto-assets accessory function"	*"New payment method"*	*"Alternative store of value"*
• *need to safely store crypto-asset revenues without cashing out/leaving the crypto-asset ecosystem* • *lack of (perceived) safety and ease of use to compete with established payment means*	• *convenience, user-friendliness* • *aptness for use cases and user segments that are typically underserved by existing solutions* • *credible risk mitigations*	• *user demand for a cheap store of value* • *attractive remuneration rates*
Continuation of current status of the market → bound to change?	*Compatible with the emergence of new stablecoin initiatives and stablecoin types with high levels of price stability vis-à-vis fiat currencies (e.g. tokenised funds)*	

- *4th scenario: the central bank issues a CBDC with technical and functional features similar to those of stablecoins, making their value proposition redundant (at least for domestic payments) → not in scope, CBDC being analysed on its own merits*

Implications of stablecoins on central bank tasks

	Monetary Policy	
	New payment method (2nd Scenario)	*Alternative store of value (3rd Scenario)*
Policy constraints		Substitution out of assets yielding negative interest to the point where further cuts in key policy rates no longer transmit to other interest rates in the economy
Monetary policy transmission via banks	Reduced bank fees and commission income but no significant impact on funding conditions	Banks shift from deposits to more expensive sources of funding, thereby potentially increasing cost of credit for households and small firms
Liquidity, safe asset demand and money markets	Reduced demand for ECB liquidity but ability to steer short-term money market rates not affected	Increased demand for safe assets (by some stablecoins' reserves) affects asset price formation, collateral valuation, money market functioning and monetary policy space
Monetary policy operations		Smaller Eurosystem balance sheet and less seigniorage income, scarcity of eligible assets for central bank policy operations such as asset purchases and open market operations

Implications of stablecoins on central bank tasks

	Financial stability	
	New payment method (2nd scenario)	*Alternative store of value (3rd scenario)*
Liquidity run	• Depending on the stablecoin design, its value may be exposed to risks inherent in non-zero risk investments • Liquidity runs could occur: - in the absence of fixed-value redemption guarantees, if end users realise that collateral assets are losing value - even if the arrangement guarantees a fixed value, in the event of e.g. cyber-attack/operational issuer	Substantial redemptions of stablecoins could be amplified to the extent that end users misconceive stablecoin holdings as a substitute of bank deposits
Contagion effects	In the event of a run, the liquidation of assets to cover redemptions could have negative contagion effects on the financial system, particularly debt markets where the stablecoin initiative plays a role as significant investor and banks (through multiple channels)	

Implications of stablecoins on central bank tasks

	Payments and market infrastructures	
	New payment method (2nd scenario)	*Alternative store of value (3rd scenario)*
Risks posed by stablecoins in their transfer function	• Multiplicity of functions and entities involved raises questions around governance • Use of DLT entails both potential benefits and drawbacks of distributed setups (e.g. in terms of operational reliability, resilience). • In a cross-jurisdictional context and/or on a global scale, heightened legal risks may arise	
Implications for the retail payments market	• Current European and global retail payments landscape could be altered. Europe's dependence on global players might increase • Integration with consumer platforms to maximise user convenience and expedite take-up (e.g. through incentives) might affect the level playing field in payment services • EU market fragmentation and lack of interoperability	

Need for regulation and oversight to manage risks

"Technological innovation can produce great economic benefits for the financial sector […]

At the same time, these arrangements pose multifaceted challenges and risks […]

*As underlined by the recent report of the G7 working group dedicated to these issues, global "stablecoin" projects and arrangements **should not come into operation until all of these risks and concerns are properly addressed.**"*

Excerpt from the Joint statement by the Council and the Commission on "stablecoins" of December 2019

Eurosystem oversight frameworks

Payment scheme

Eurosystem oversight standards for payment instruments → Eurosystem oversight framework for electronic Payment Instruments, Schemes and Arrangements

→E-money or "other payment instrument that is used SEPA-wide" → "digital payment tokens"

Payment system

Systemically important payment system

or

Retail payment system → Potential clarifications on the definitions and expectations

Concluding remarks

- Under plausible scenarios, range of instruments to manage the impact of stablecoins on its mandate and tasks, e.g. oversight frameworks

- Application of these tools needs to be underpinned by adequate, internationally coordinated regulation
  - The general principle “same business, same risks, same rules” should guide regulatory efforts to ensure a level playing field and prevent regulatory arbitrage
  - Further work may be necessary for international standard setting bodies to address emerging risks (e.g. on prudential treatment)

- The Eurosystem continues monitoring the evolution of the stablecoins market to be able to respond to rapid changes in all possible scenarios
  - This task may entail fostering central bank innovations to cater for a changed payments environment and altered conditions for the exercise of a central bank’s core mandate