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# Virtual Currencies in the Eurosystem: challenges ahead

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# Abstract

- In this study, commissioned by EP Econ as part of its ECB Monetary Dialogue we discuss the challenges and risks that VCs\* (both private VCs and CBDCs) present for central banks in general and for the ECB in particular. We consider border problems and definitional issues (hybrid features of VCs): old legal categories obsolete?

\*The term ‘VC’ or cryptocurrency should be used with caution, as it suggests digital tokens’ status as currency. We propose alternative nomenclature such as ‘**crypto-assets**’.

# ECB – Central Bank Perspective

- **Disruption of traditional central bank mandates**
  - **Monetary stability considerations**
    - **Monetary policy and monopoly of note issue.**
    - The concept and functions of money. Fiat money
    - Money creation via the banking system
    - Legal tender – Estcoin proposals refuted by President Draghi
  - **Financial stability considerations.**
    - Potential impact of VCs on the financial system
- **The regulatory perimeter and the border problems**
  - 1<sup>st</sup> border – border between territorial jurisdictions (sovereignty)
  - 2<sup>nd</sup> border – border between regulated and unregulated activities
  - 3<sup>rd</sup> border – cyberspace vs real world (crypto assets)



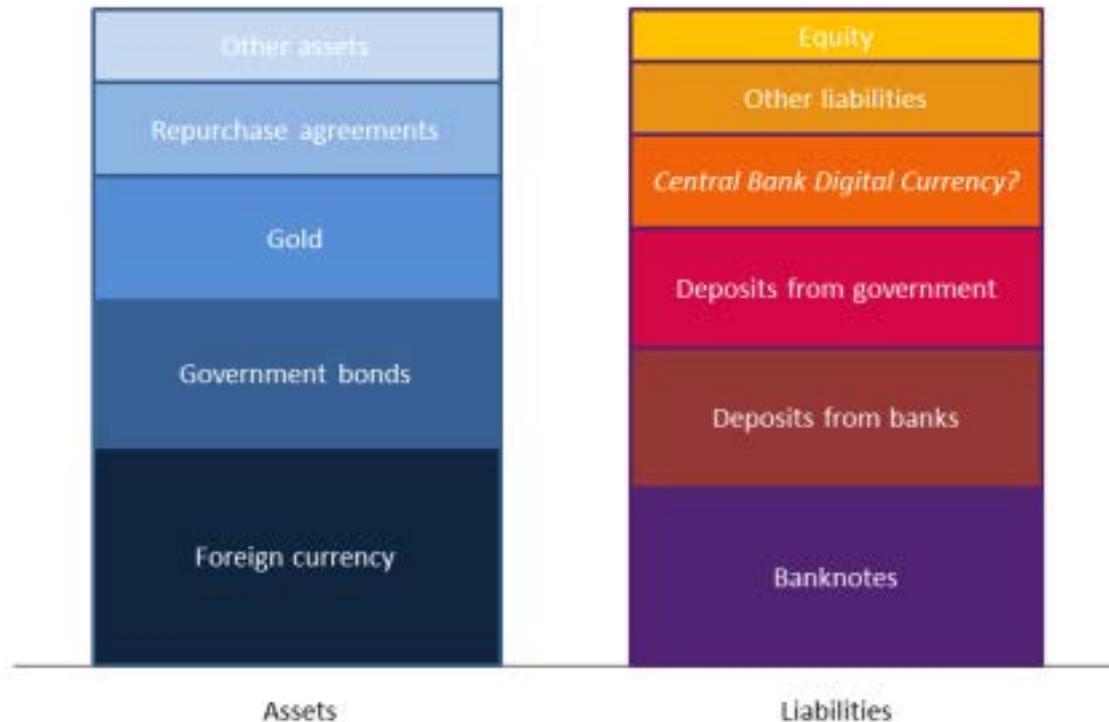
# Types of VCs and challenges for CBs

- **Privately issued VCs/crypto-assets** (such as Bitcoin, Ethereum, Ripple)
  - Economic functions and technical features
  - Originally designed expressly to undermine central bank's role...
  - No official issuer - Old doctrinal debate that goes back to Hayek
  - Risks to financial stability. Disruption... So far negligible
  - Definitional issues: crypto assets/ financial assets.
- **Central Bank Digital Currencies (CBDCs)**
  - Digital form of fiat money which would combine the ease of use of cash with a central bank ledger system to verify transactions
  - E-krona? Studies in Sweden, Norway and other countries
  - IMF paper of November 12, 2018 Casting Light on Central Bank Digital Currencies  
CBDCs might one day offer consumers a faster, cheaper and safer alternative to physical cash and credit cards

## Central Bank Balance Sheets: Past, Present and Future

*James Barker, David Bholat and Ryland Thomas*

<https://bankunderground.co.uk/2017/07/03/central-bank-balance-sheets-past-present-and-future/>



*Hypothetical central bank balance sheet*

What would happen if the ECB issued an e-euro ie a digital representation of ECB liabilities?

# Risks to Financial Stability

- CBDCs - digital bank runs?
- Privately issued VCs may create risks to the stability of the financial system if they continue to grow and to interact and entangle with the regulated financial system. This might occur through
  - (i) regulated entities taking part in VC-based activities directly,
  - (ii) unregulated entities offering mainstream financial services via VCs,
    - Under (ii), there is a chance that the VC-based shadow payments system could grow to systemically important size.
  - (iii) regulated entities lending to investors exposed in the VC market,
  - (iv) regulated entities structuring regulated financial products on underlying VC assets. Further, the unregulated nature of VCs, and the dominance of quasi-anonymous VC schemes, raises challenges in terms of anti-money laundering, CFT and tax evasion

# Border problems



## The regulatory perimeter and the border problems

- 1<sup>st</sup> border – border between territorial jurisdictions (sovereignty)
- 2<sup>nd</sup> border – border between regulated and unregulated activities
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# A third border?

- ‘Global computer-based communications cut across territorial borders... **a new boundary, made up of the screens and passwords that separate the virtual world from the real world of atoms, emerges...** Many of the jurisdictional and substantive quandaries raised by border-crossing electronic communications could be resolved by **one simple principle: conceiving of Cyberspace as a distinct “place” for purposes of legal analysis** by recognizing a legally significant border between Cyberspace and the “real world”.’

Johnson & Post, ‘Law and Borders - The Rise of Law in Cyberspace’ (1996) 48(5) *Stanford Law Review* 1367.

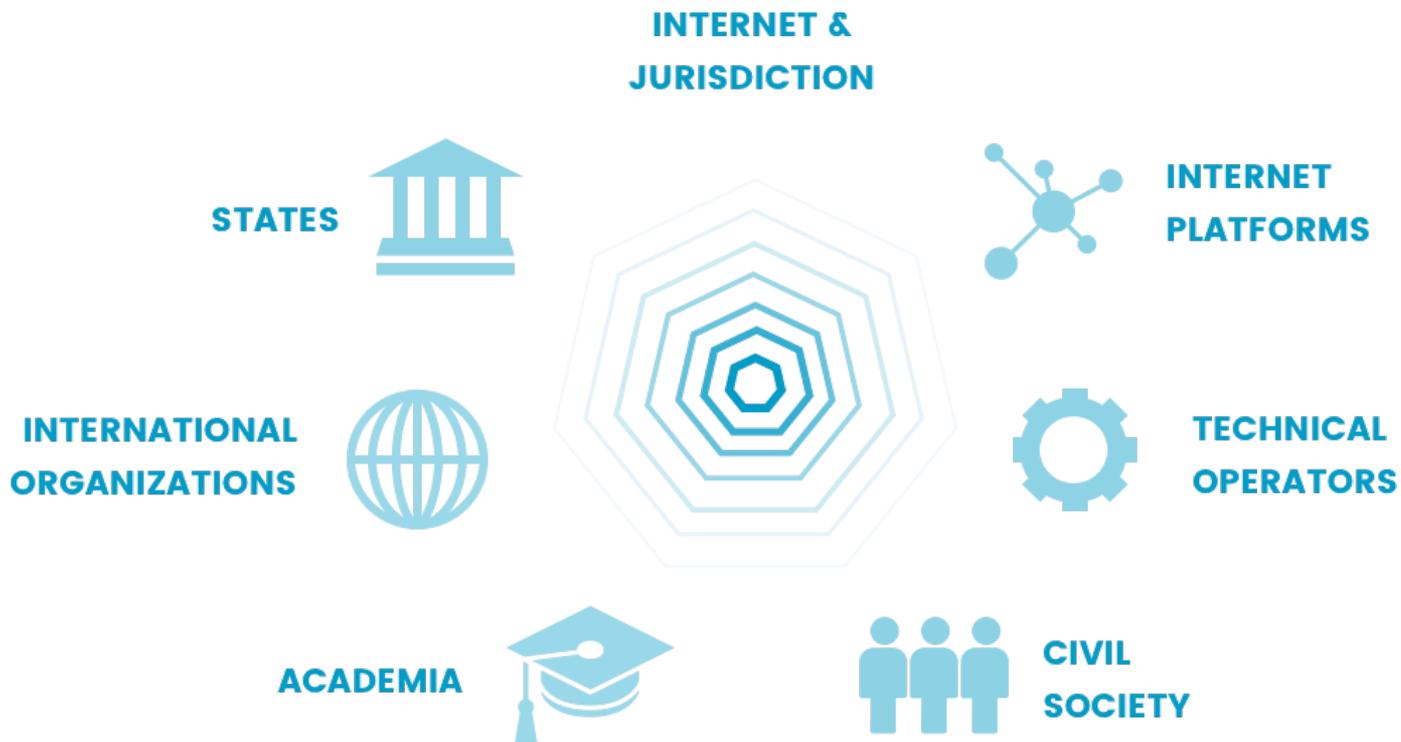
# ‘Cyberspace’ *versus* ‘world of atoms’?



- ‘What sorts of entities are these, which can be brought into being simply by drawing lines on a map?’
- Barry Smith, ‘On Drawing Lines on a Map’ in A.U. Frank, W. Kuhn and D.M. Mark (eds.), *Spatial Information Theory. Proceedings of COSIT '95* (Springer 1995), 475.



# Towards a coherent theory of Internet jurisdiction



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# Conclusion

- One major challenge for legal accommodation of VCs will be conceptual
- Conceptual development ('theorising the digital real') long overdue and welcome
- Challenge to territorial sovereignty and position of nation-states related to techno-libertarian agenda of crypto movement
- Work needed to work out what comes next in terms of jurisdiction
- Public law elements of Internet jurisdiction important, especially legitimate state interests in financial stability

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# Conclusion

- Most regulators have taken a ‘watch and wait’ approach to avoid stifling beneficial innovation.
- So far the impact of privately issued VCs is negligible. However there are risks and challenges.
- We recommend vigilance and pro-active and coordinated action at the EU level to prevent regulatory arbitrage by market participants and a ‘race to the bottom’ by national regulators.
- The debate about CBDCs is still in its infancy.