

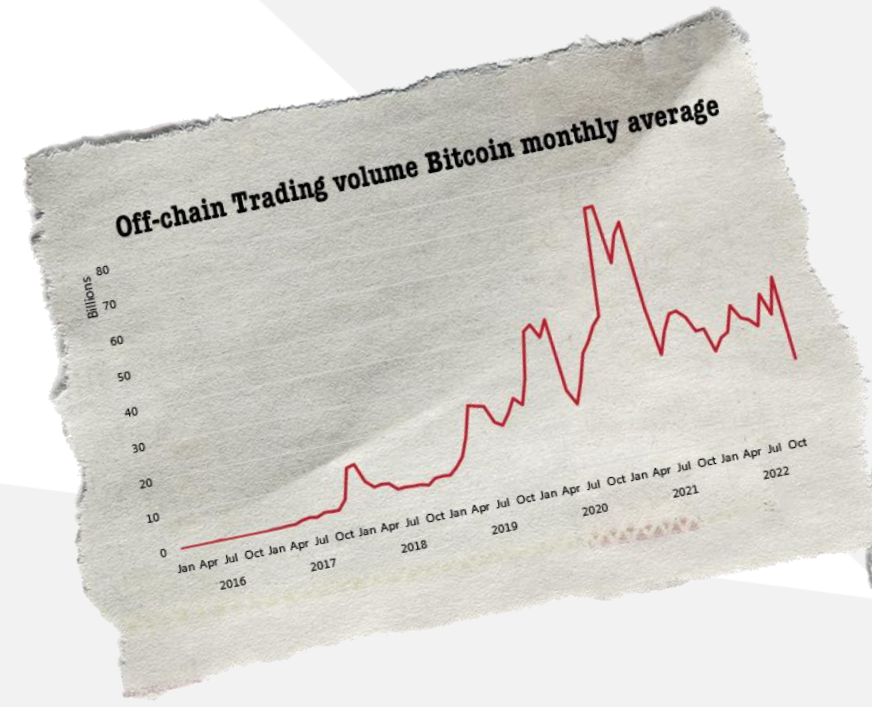


# Project Atlas

## Cryptoanalytics for Central Banks

Jan Paulick & Calin Simon, BIS Innovation Hub Eurosystem Centre  
31 August 2023, Bank of Finland 21st Simulator Seminar, Helsinki

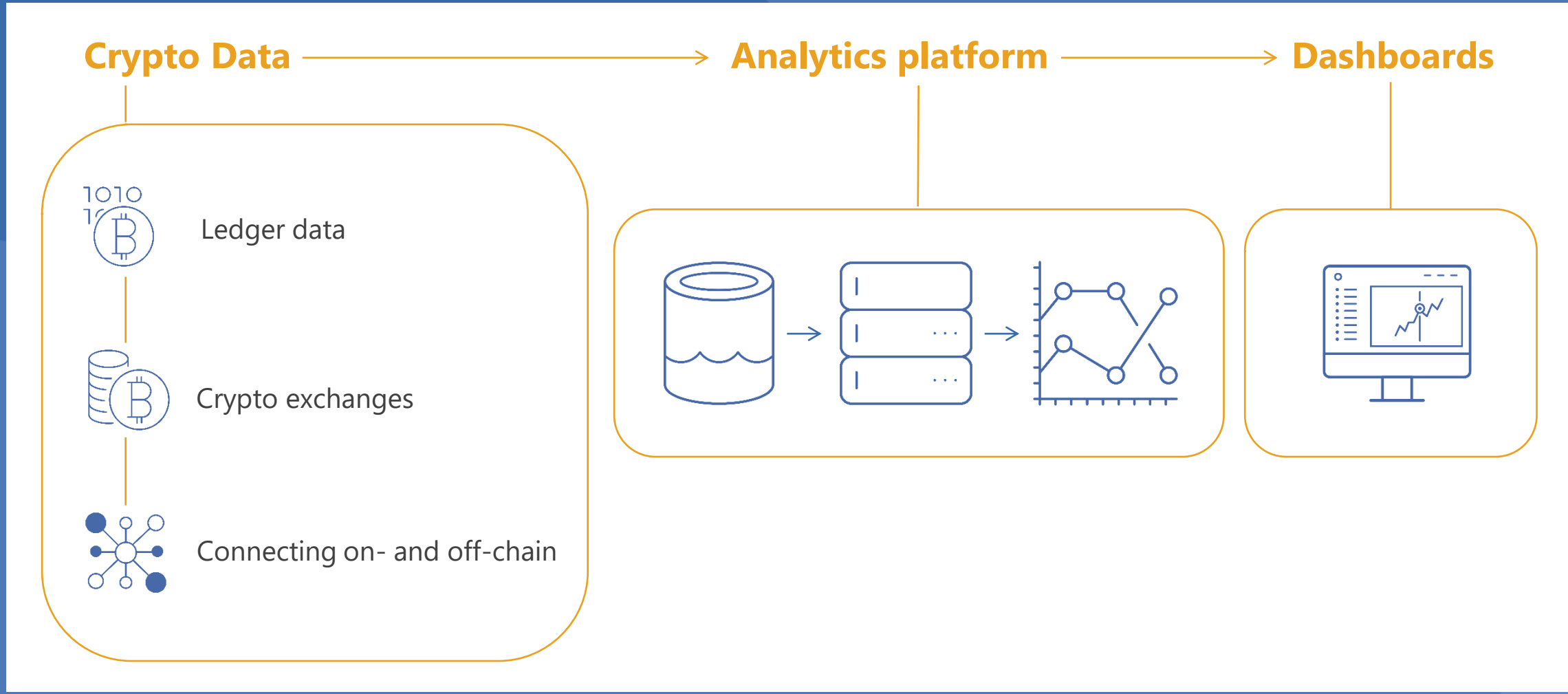
**A lack of reliable data**  
makes assessing the  
macroeconomic relevance  
of DeFi markets difficult



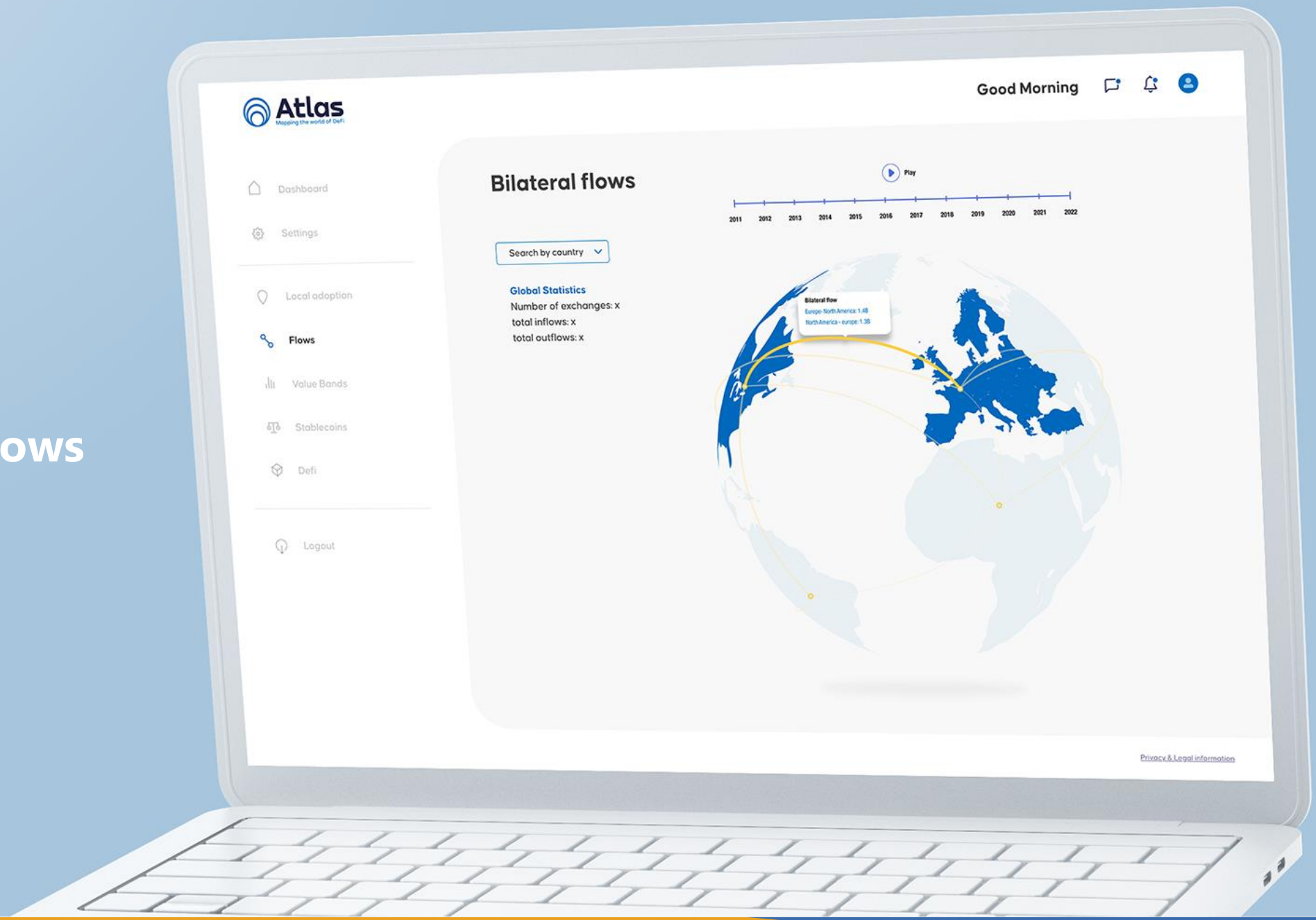
**70% of unregulated  
exchange transactions  
are wash trading:  
NBER study**

The researchers found that in  
some exchanges, the wash trading  
volume can go as high as 80%.

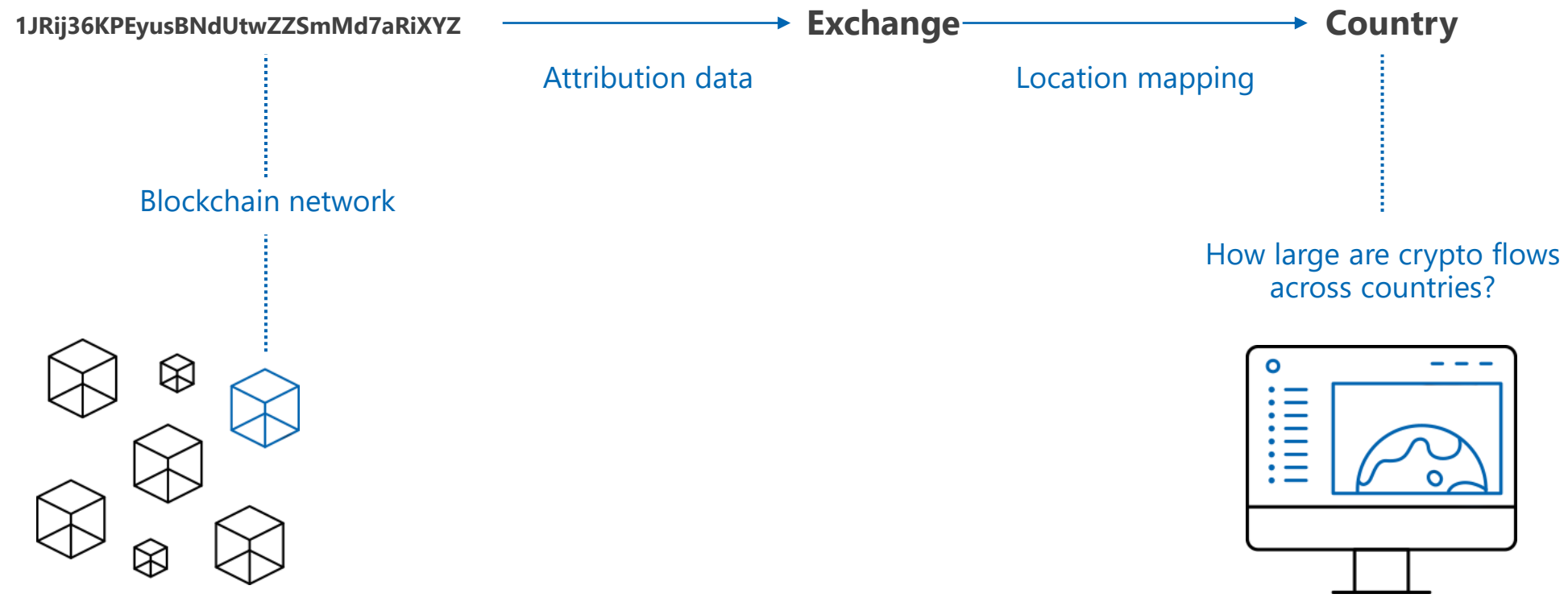
# Project Atlas Overview



# Visualising cross-border flows

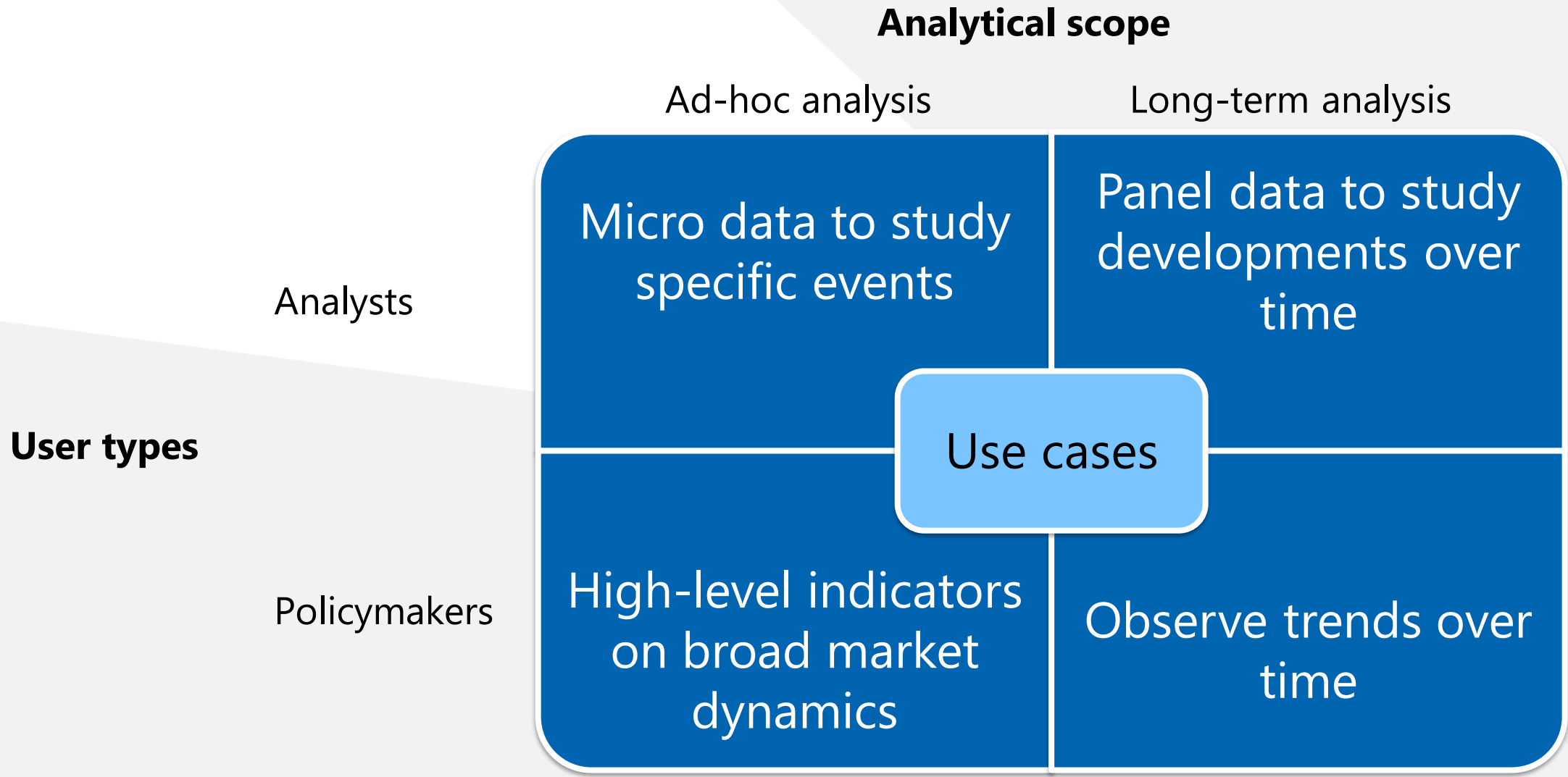


# Deriving cross-border flows

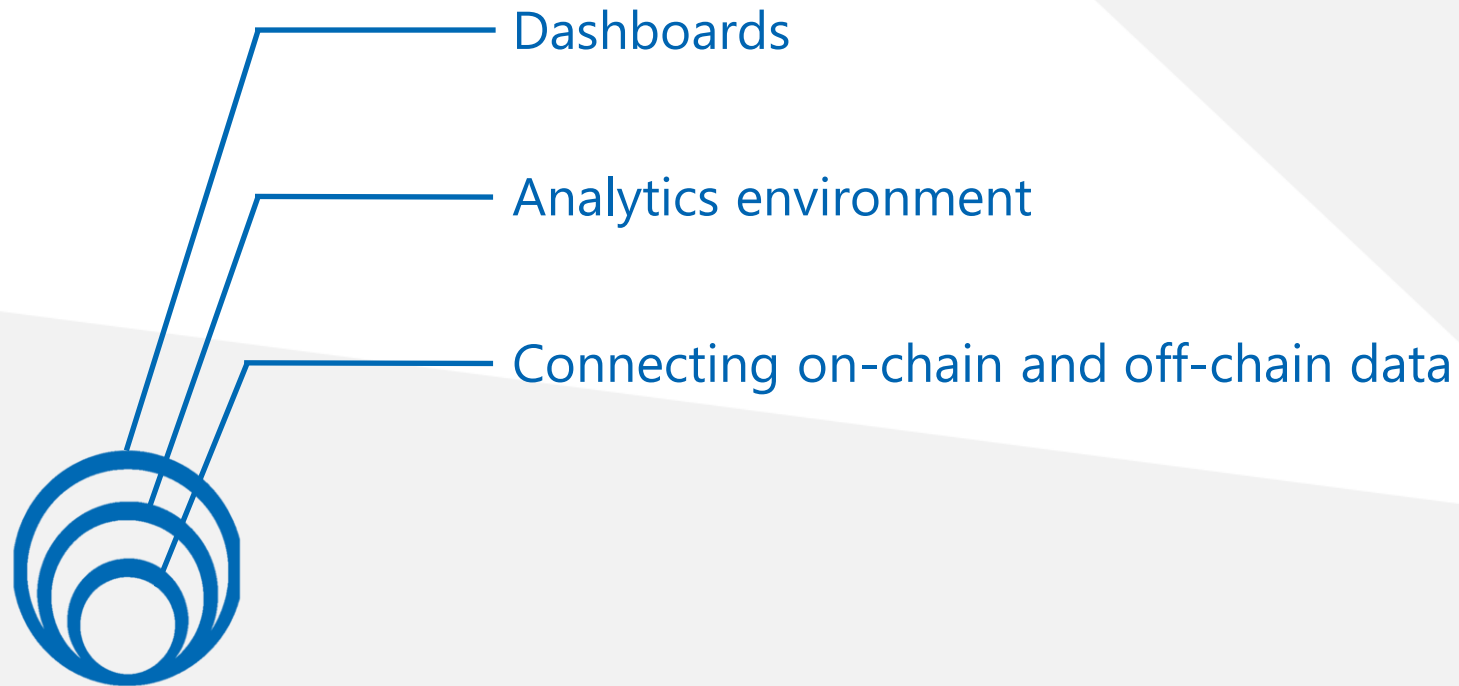


# Demo

# Use case coverage



## Ja sillä sipuli (That's an onion) – The Atlas layers



➤ **End-to-end inhouse solution**

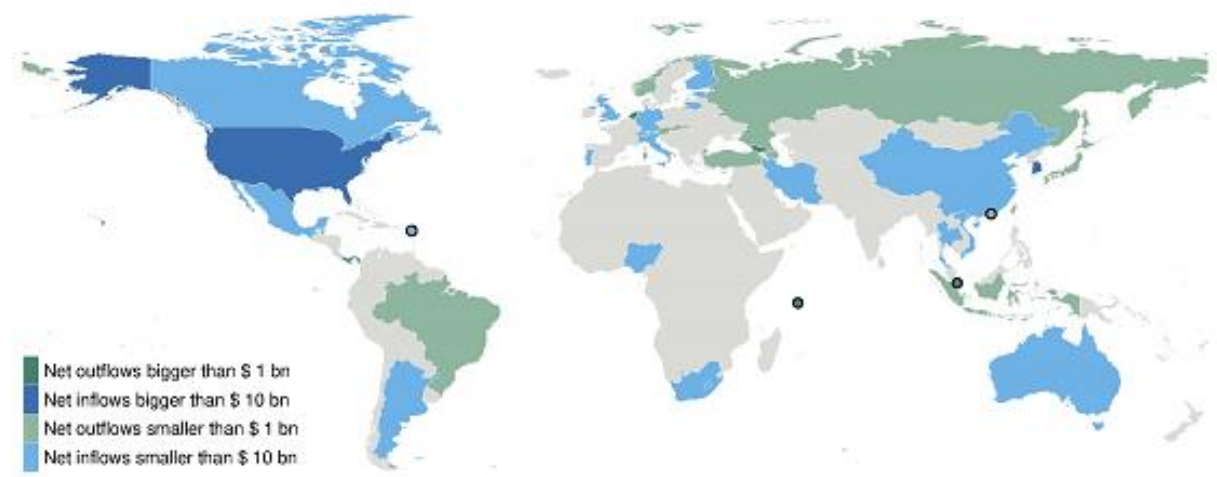


# First outputs based on Atlas data

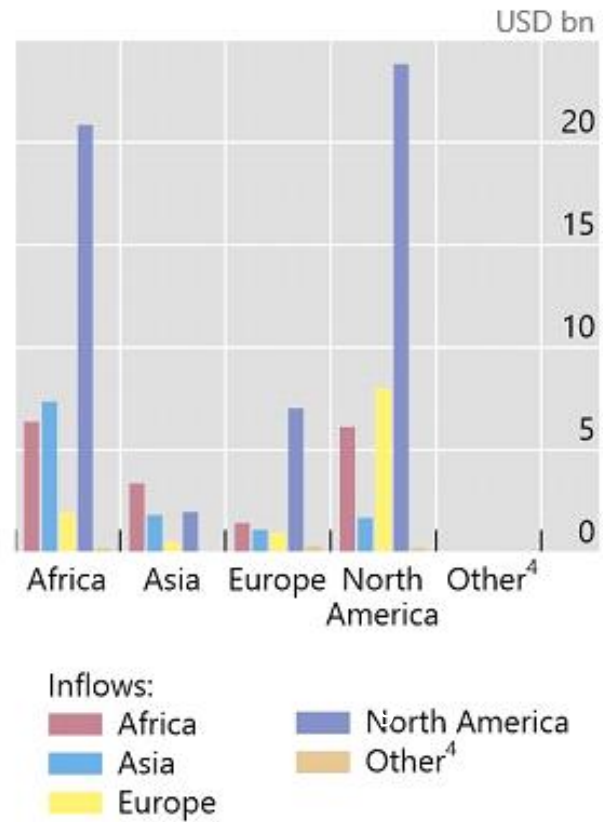
## Cross-border flows between exchanges<sup>1</sup>

Graph 8

### A. Net flows by country<sup>2</sup>



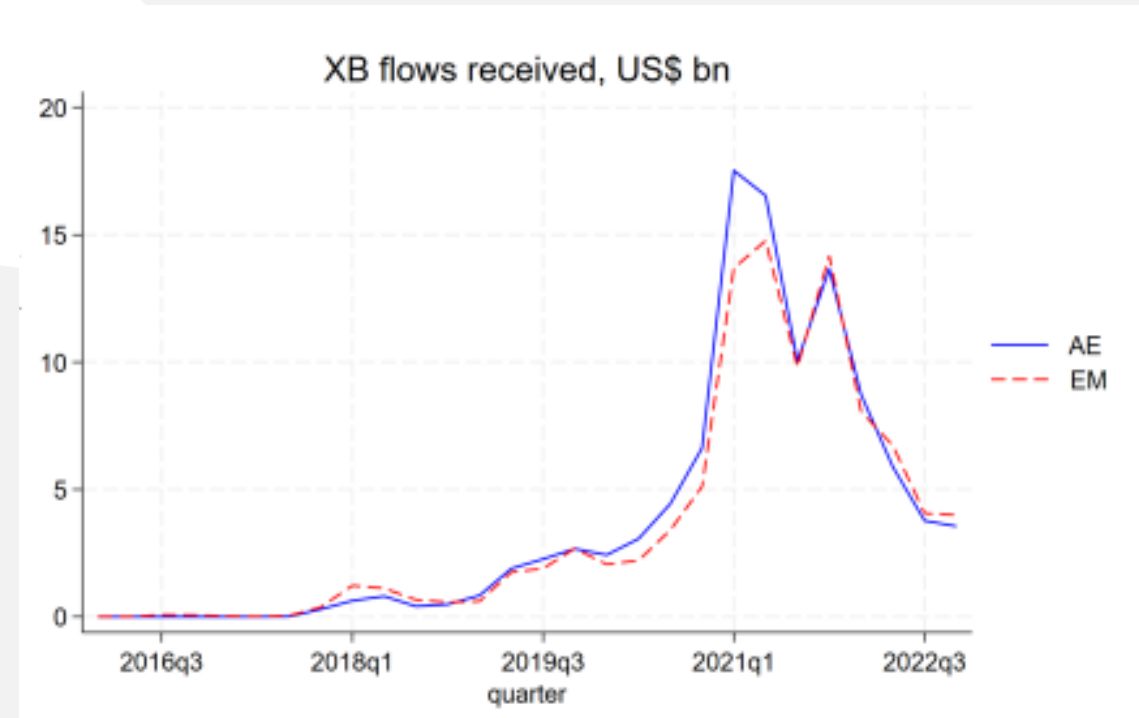
### B. Inflows by continent<sup>3</sup>



[The crypto ecosystem: key elements and risks \(bis.org\)](https://www.bis.org)

# Structural analysis

- Explaining Bitcoin capital flows
  - Dependent variable: quarterly gross **inflows as share of GDP**
- Independent variables
  - Bitcoin price
  - Fed funds rate
  - 10y-US yield
  - US corp. BBB spread
  - US GDP growth
  - Financial development index
  - Chinn-Ito index (measure of financial openness)



## Structural analysis of flows

International Bitcoin flows by country groups

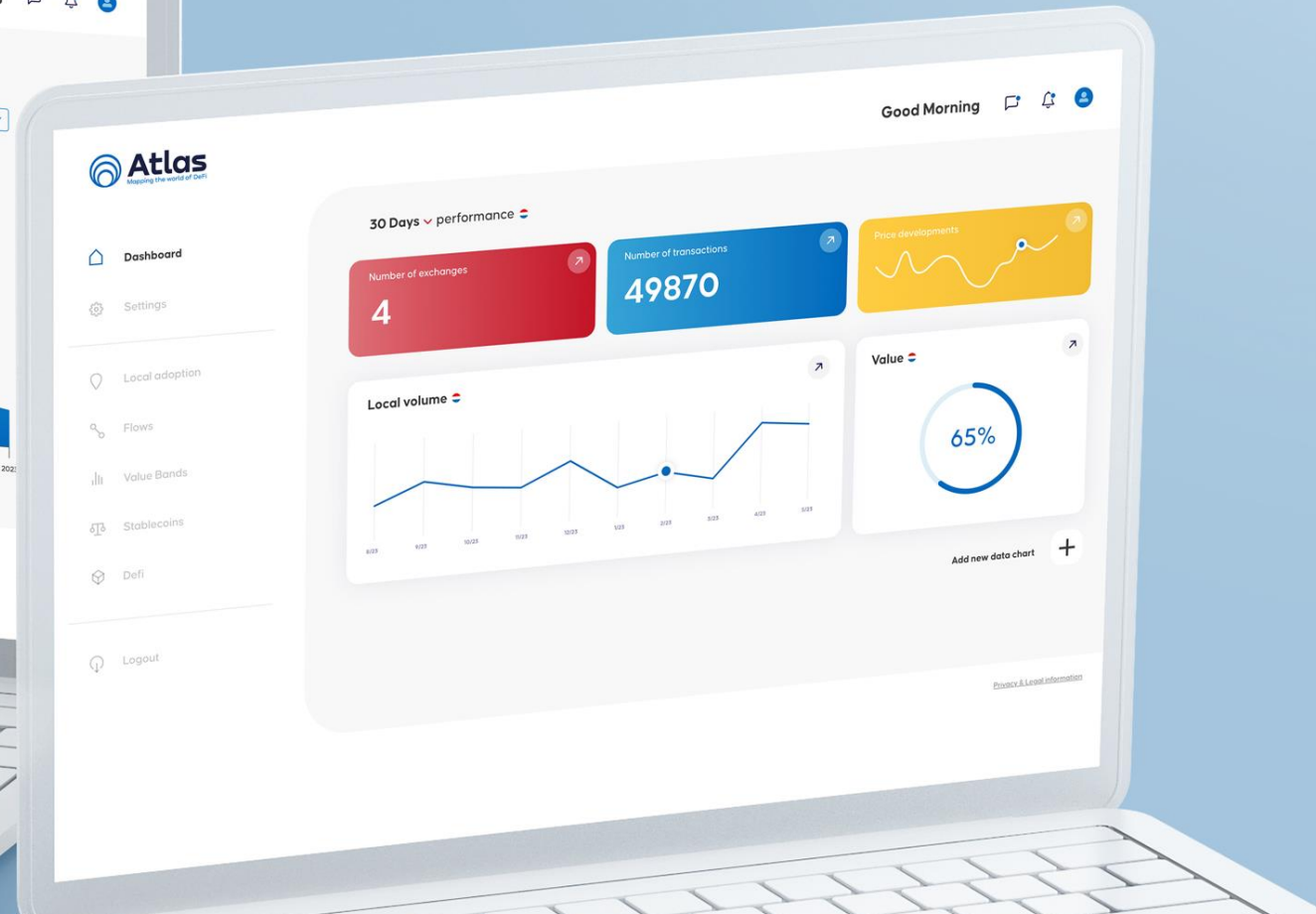
Sample	(1) All countries	(2) Emerging Markets	(3) Adv. economies
Bitcoin US\$ (log & lag)	0.020** (0.009)	0.024** (0.011)	0.012** (0.005)
Fed funds rate (%)	-0.015 (0.010)	-0.015*** (0.004)	-0.013 (0.013)
10y-US yield (%)	-0.035* (0.017)	-0.045* (0.026)	-0.015** (0.006)
US corp. BBB spread (%)	-0.039* (0.019)	-0.050* (0.027)	-0.021 (0.015)
US GDP growth (% , lag)	0.002 (0.001)	0.002** (0.001)	0.001 (0.002)
Financial development index (lag)	0.014 (0.020)	0.085 (0.071)	-0.016 (0.012)
Chinn-Ito index (std., lag)	-0.007 (0.012)	0.006 (0.022)	0.023 (0.022)
N	1,623	1,121	502
R2 adj	0.030	0.031	0.443
No of countries	79	56	23

Note: \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$ . The dependent variable is the quarterly gross flow of Bitcoin received by each country as a percentage share of GDP.

# Conclusion

- Combination of data allows calculating new indicators
- Atlas can support central banks around the world
- Better understanding of crypto markets is vital for assessment of risks and potential

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# For more info on Project Atlas and beyond



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- Research & publications
- Innovation**
- Committees & associations
- Central bank hub
- Statistics
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**Hub Centres**

Themes

## BIS Innovation Hub Centre - Eurosystem

The BIS Innovation Hub Eurosystem Centre opened on 28 March 2023. It is a joint effort by the BIS and all Eurosystem central banks.





# Contact us if you want to get involved!



Contact us at:  
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[eurocentre@bisih.org](mailto:eurocentre@bisih.org)

## BIS Innovation Hub Eurosystem Centre Advisor Info Event 4<sup>th</sup> September

The **BIS Innovation Hub Eurosystem Centre** is offering the unique possibility to join its team and work at the forefront of financial and technological innovation. Ever wondered what it's like to work at the BIS Innovation Hub? Join us for the Advisor Info Event on the 4<sup>th</sup> September to engage with **Raphael Auer, Centre Head and the teams Advisors**, where we will discuss all things Innovation Hub, Eurosystem Centre and our running projects. Join us to learn more about the opportunity to join this innovative and dynamic team.



Registration link