



EUROPEAN CENTRAL BANK

EUROSYSTEM

System-wide stress testing: insurance data usage

ECB-EIOPA Joint Workshop
on Insurance Reporting

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Overview

- **Workstream on system-wide stress testing (SWST):**

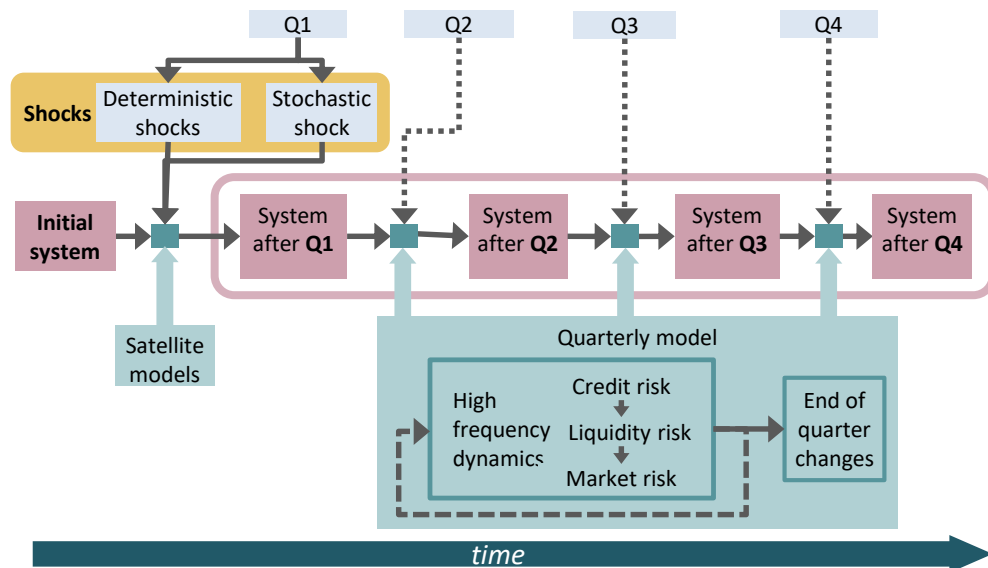
Developing an operational framework using firm-level data to model sector-specific stress at the granular level and allow capturing the effects of interconnectedness within the financial system **covering banks, funds and insurance companies**

- **Until now: Evaluation of (i) the Covid-19 severe scenario of the 2020 ECB Vulnerability Analysis and of (ii) NGFS climate risk scenarios:**

- ‘Shock amplification in an interconnected financial system of banks and investment funds’ by Sydow et al. (2021), ECB Working Paper No. 2581
- ‘Amplification of climate scenarios in an interconnected financial system of banks and investment funds’ (Box 8) in ‘Climate-related risk and financial stability’, ESRB Report (2021)

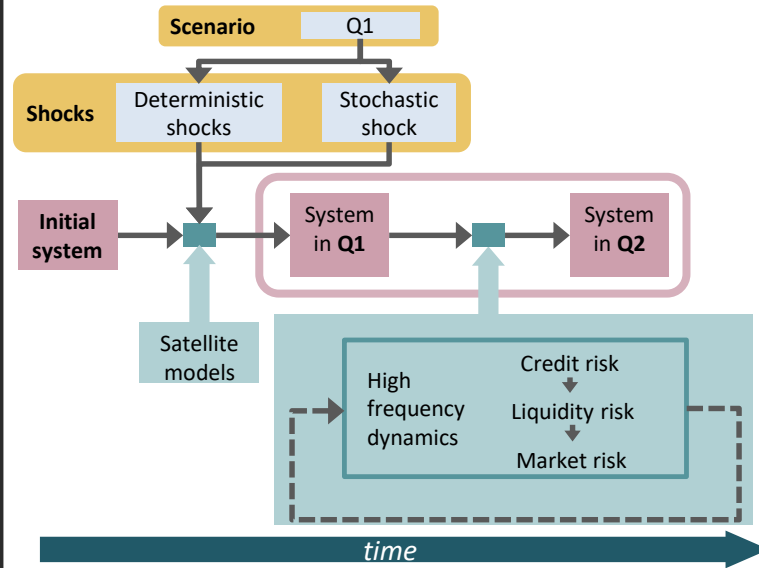
System-wide stress testing framework

Plan



Sectors: Banks, funds and insurers

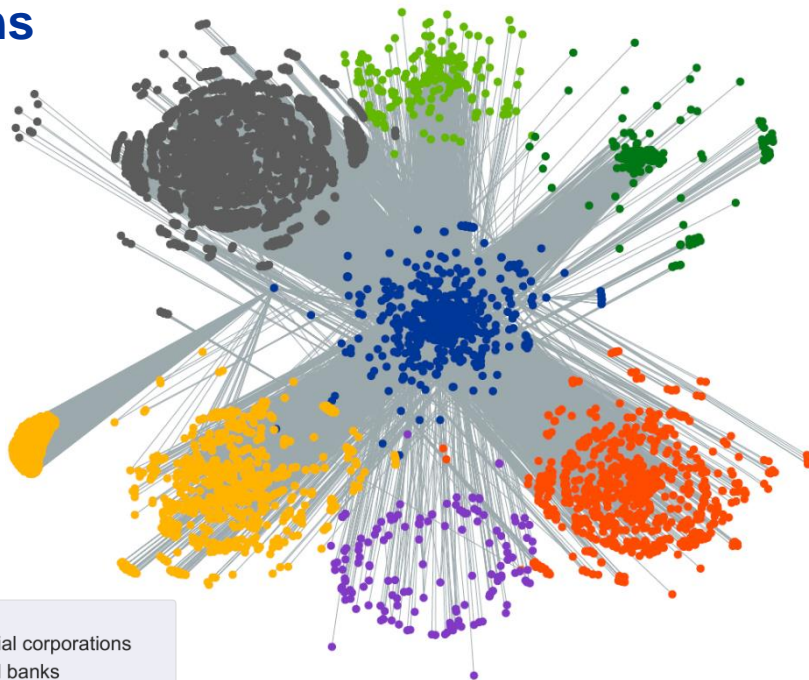
Status quo



Sectors: Banks and funds

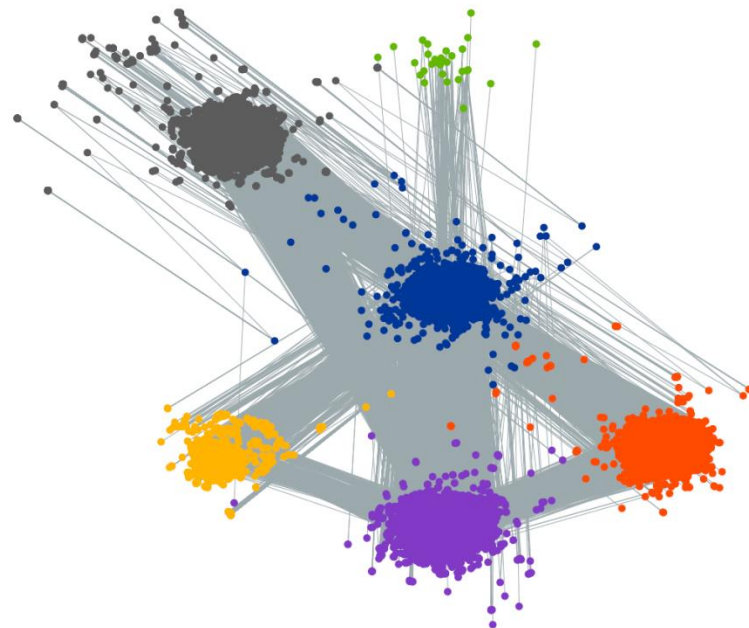
Our exposure networks: 377 banks, 12655 funds

Loans



An edge represents a loan from a bank to another entity in a given sector. Granular loan data are covering 21% of total bank assets.

Securities holdings



An edge shows that a bank/fund holds assets issued by another entity in a given sector. Granular securities data are covering 7% of total bank assets.

Next steps

- **Extend** two-sector implementation of the SWST network with euro area SHS-S data (ISIN-level) and Solvency II data (country-level) for insurance corporations
- **Cooperation** with EIOPA and two academics on insurance modelling aspects
- **Implementation** of SWST framework in other NCAs
- ECB working paper as **documentation** of extended three-sector SWST model
- **Application** of SWST model for important policy questions (e.g. climate risk, monetary policy)

References: System-wide stress testing

For more details, see ECB WORKING PAPER SERIES - No. 2581:

‘Shock amplification in an interconnected financial system of banks and investment funds’

by Sydow et al. (2021)

<https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2581~63c8ffb7dc.en.pdf?8a567fb4ed1bba41721c678c32e6ab09>

For a climate risk application, see Box 8 **‘Amplification of climate scenarios in an interconnected financial system of banks and investment funds’** in ESRB Report (July, 2021):

‘Climate-related risk and financial stability’

<https://www.esrb.europa.eu/pub/pdf/reports/esrb.climateriskfinancialstability202107~79c10eba1a.en.pdf?71a273dc36a85ef05c8bed530466f900>

Thank you for your
attention!

