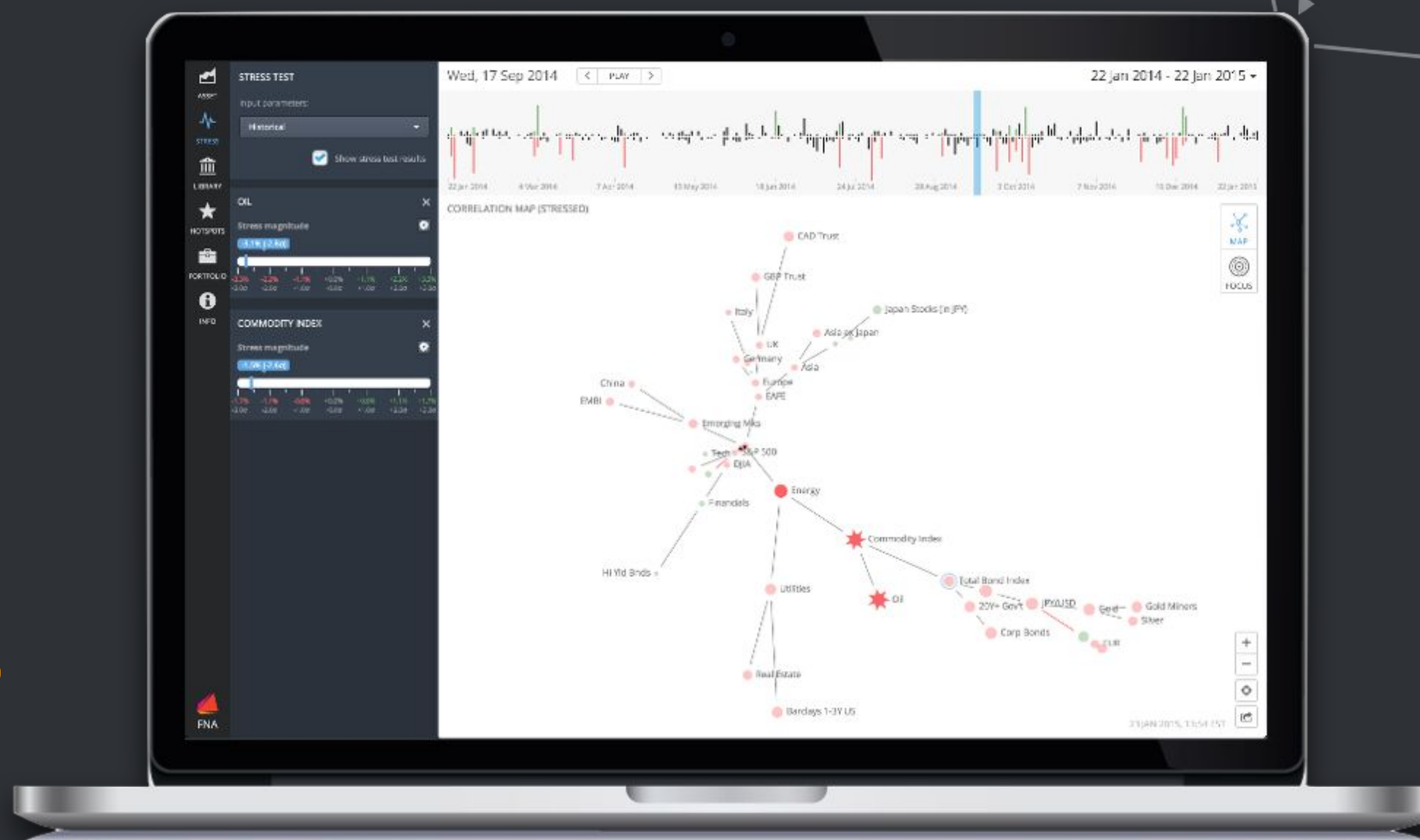# Transactional data, analytics and algorithms

London, 5 Feb. '16

Paytech2016
Panel discussion

Dr. Kimmo Soramäki
Founder
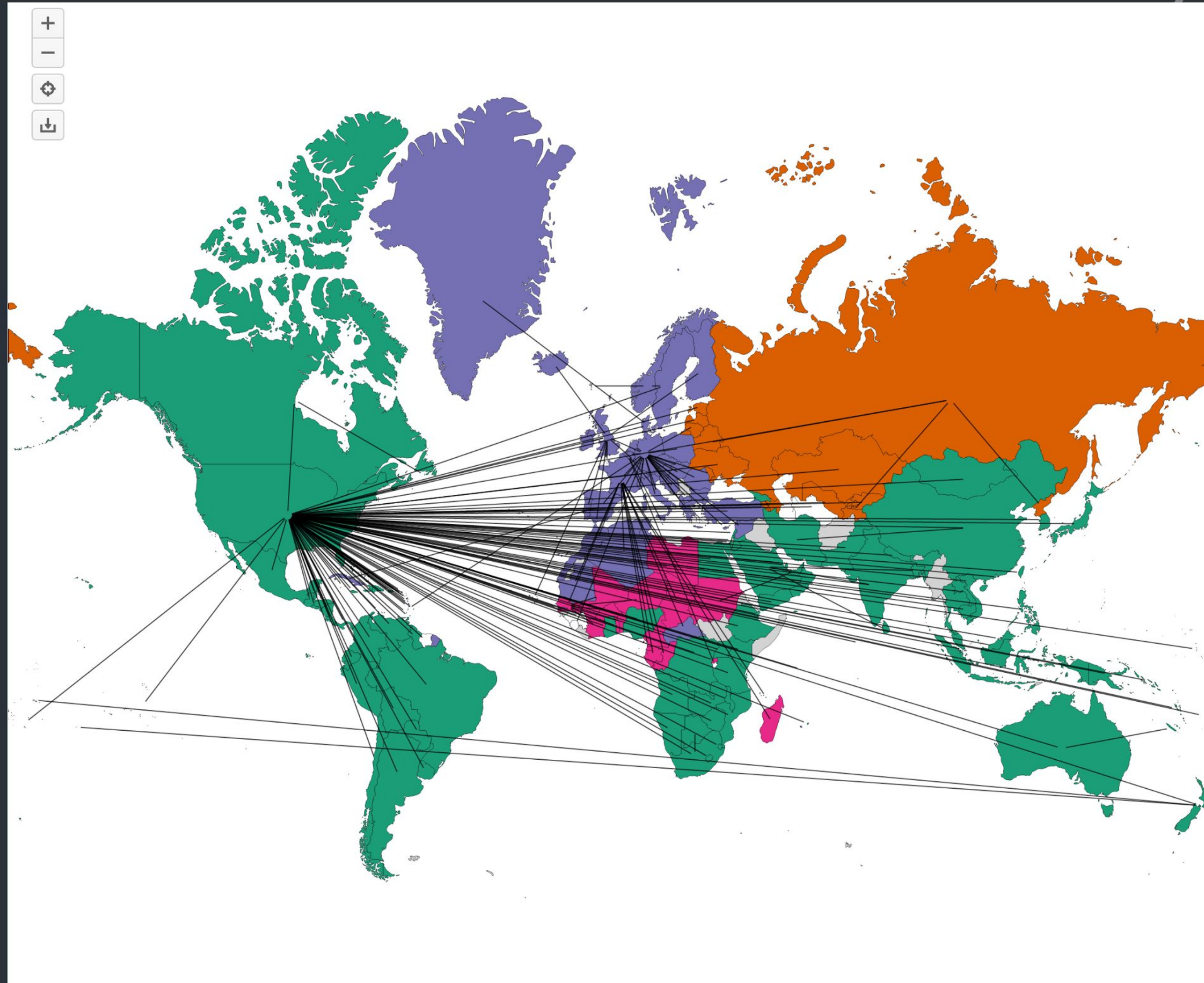Financial Network Analytics

www.fna.fi

International Payments

SWIFT Payment Flows, Communities

This visualization shows the communities defined by the flow of SWIFT MT103 messages across countries in July, 2013. Communities are defined by the algorithm of **Clauset, Newman, and Moore**, and represented by colors. Greyed-out countries (e.g., Somalia and Iraq) are those for which no data is available.

The links represent the maximum-spanning tree of the network defined by number of messages sent between countries. The maximum-spanning tree filters down to the most important links so that the core network structure is more easily visible. The countries with more than one link in the tree tend to be "hubs," for example Germany and the United States.

FNA

Interbank payments

Korean Interbank Network

This visualization shows payment flows in BoK-Wire+, the Korean interbank network. Nodes denote participants, and links net payment flows between the participants. The size of the nodes scales with SinkRank, a network-based measure of systemic importance. Links represent payment flows and links widths scale with the value of payments sent.

The nodes are colored according to the group that the participants belong to: Blue = Domestic banks, Red = Foreign Bank Branches, Green = Financial Investment Companies, Orange = Other.

The node layout is based on the banks' core-periphery classification. Core banks are densely connected among themselves and placed on the inner circle. Periphery banks have fewer links, mainly to core banks, and are placed on the outer circle.
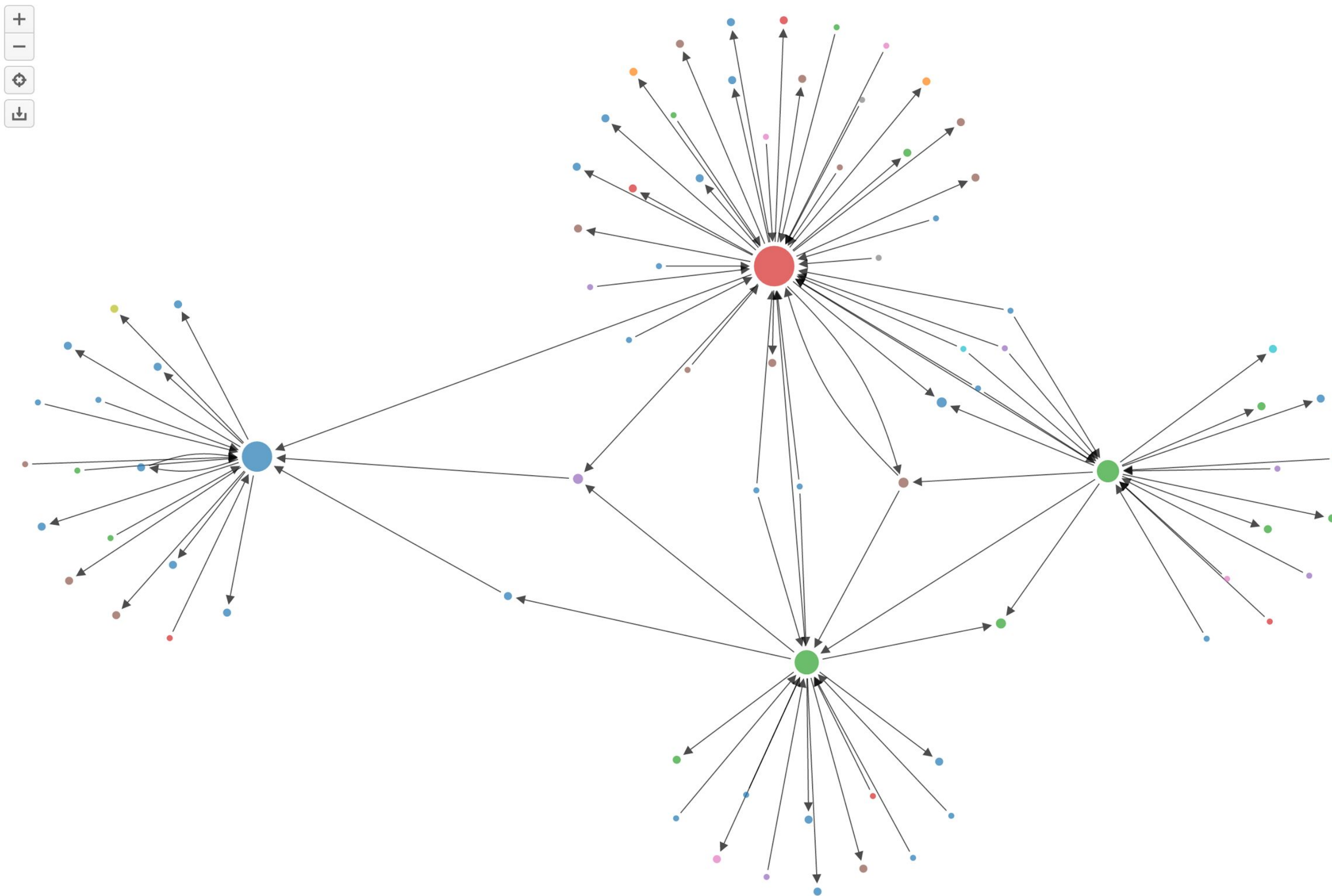
MAPPINGS

FILTERS

SETTINGS

DATA

INFO

FNA
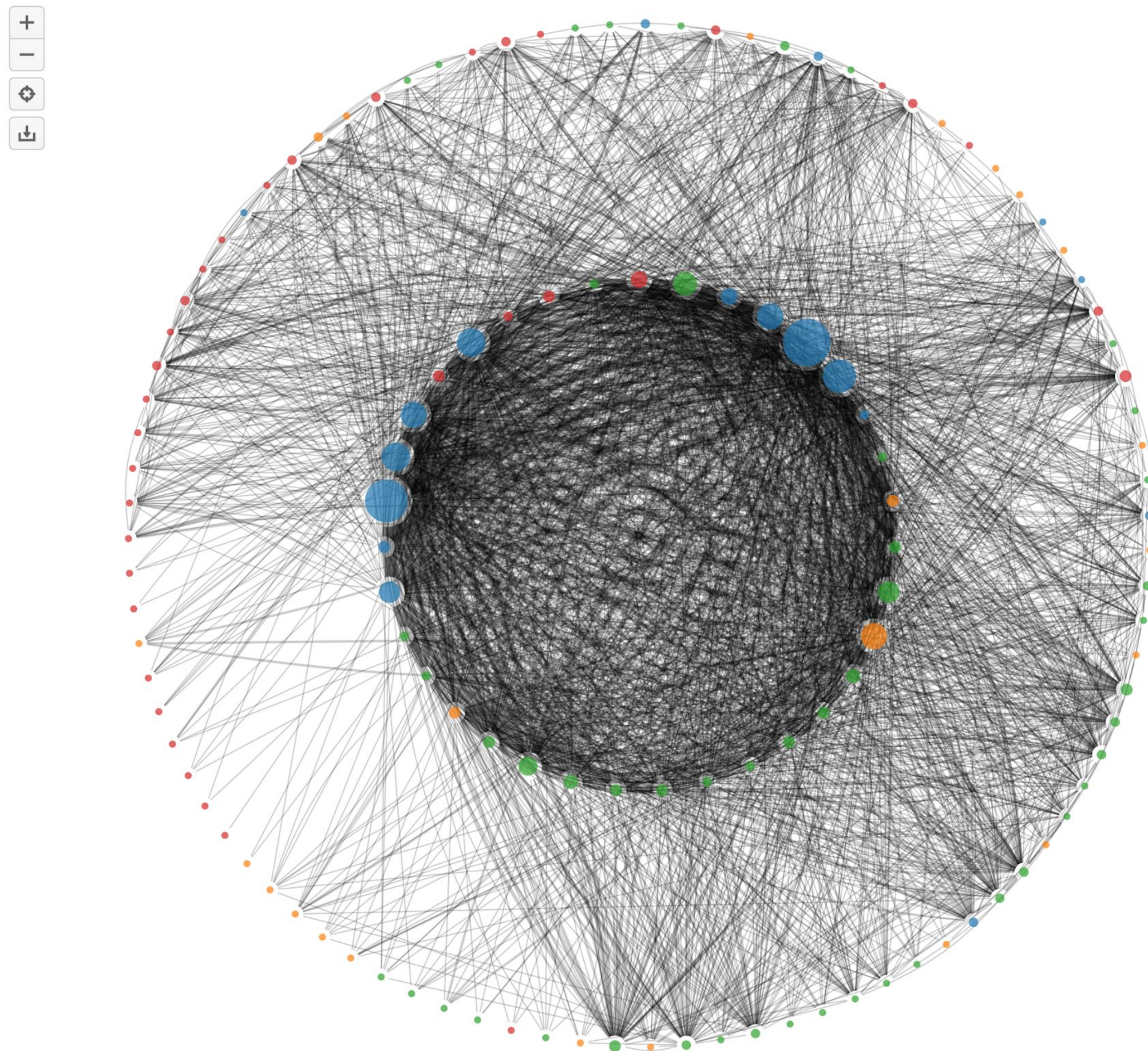
03 FEB 2016, 20:00 EST

Intercompany Payments

MAPPINGS

FILTERS

SETTINGS

DATA

FNA

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Mapping Financial Networks

Thank You!   www.fna.fi

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