

# Assignment #2

## Social Network Analysis of Central Banks' Communications

**EE406: CONTEMPORARY ECONOMIC ISSUES**

SEMESTER 1/2021

FACULTY OF ECONOMICS, THAMMASAT UNIVERSITY

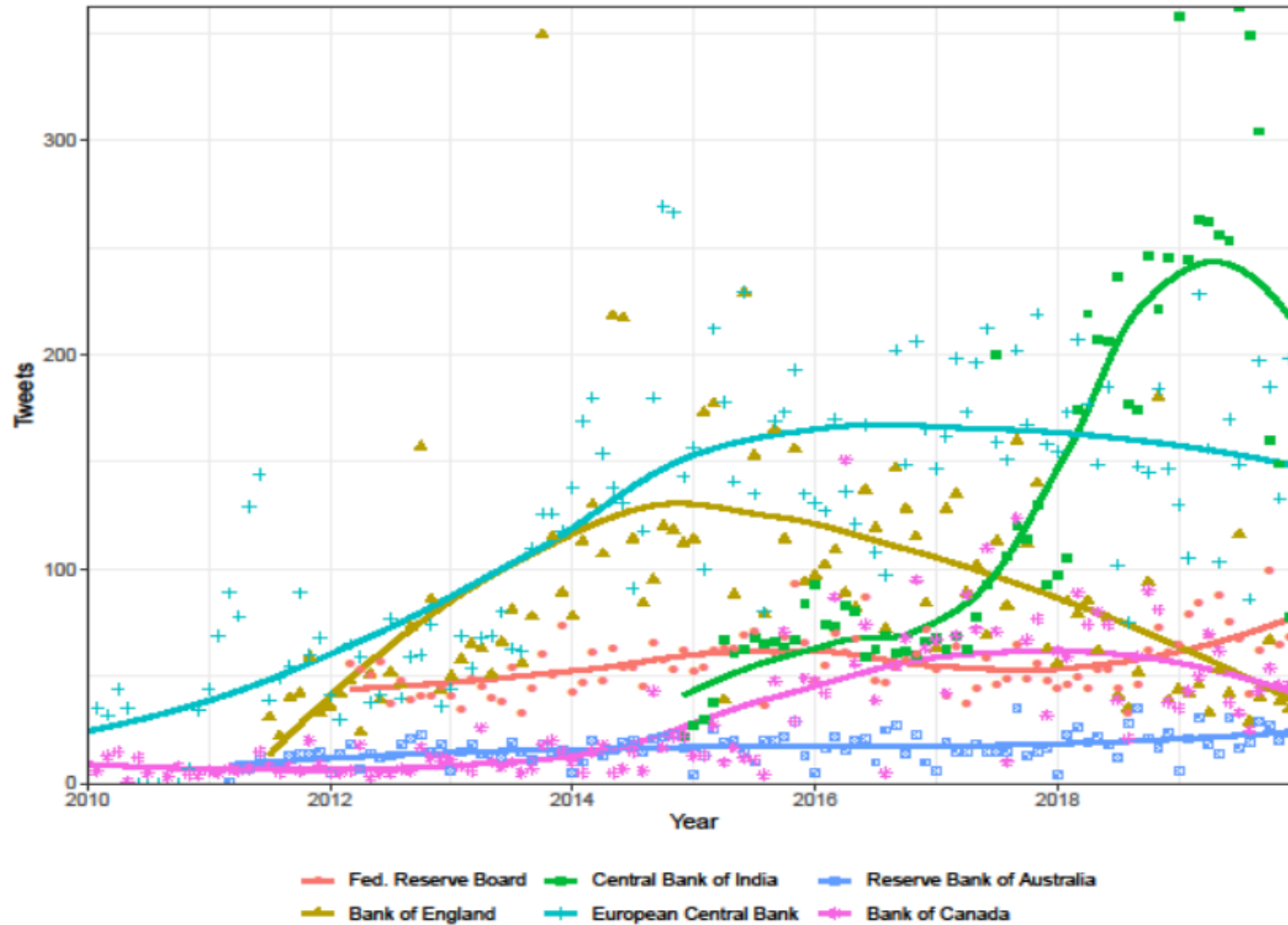
# Assignment #2: Social Network Analysis of Central Banks' Communications

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## Motivation

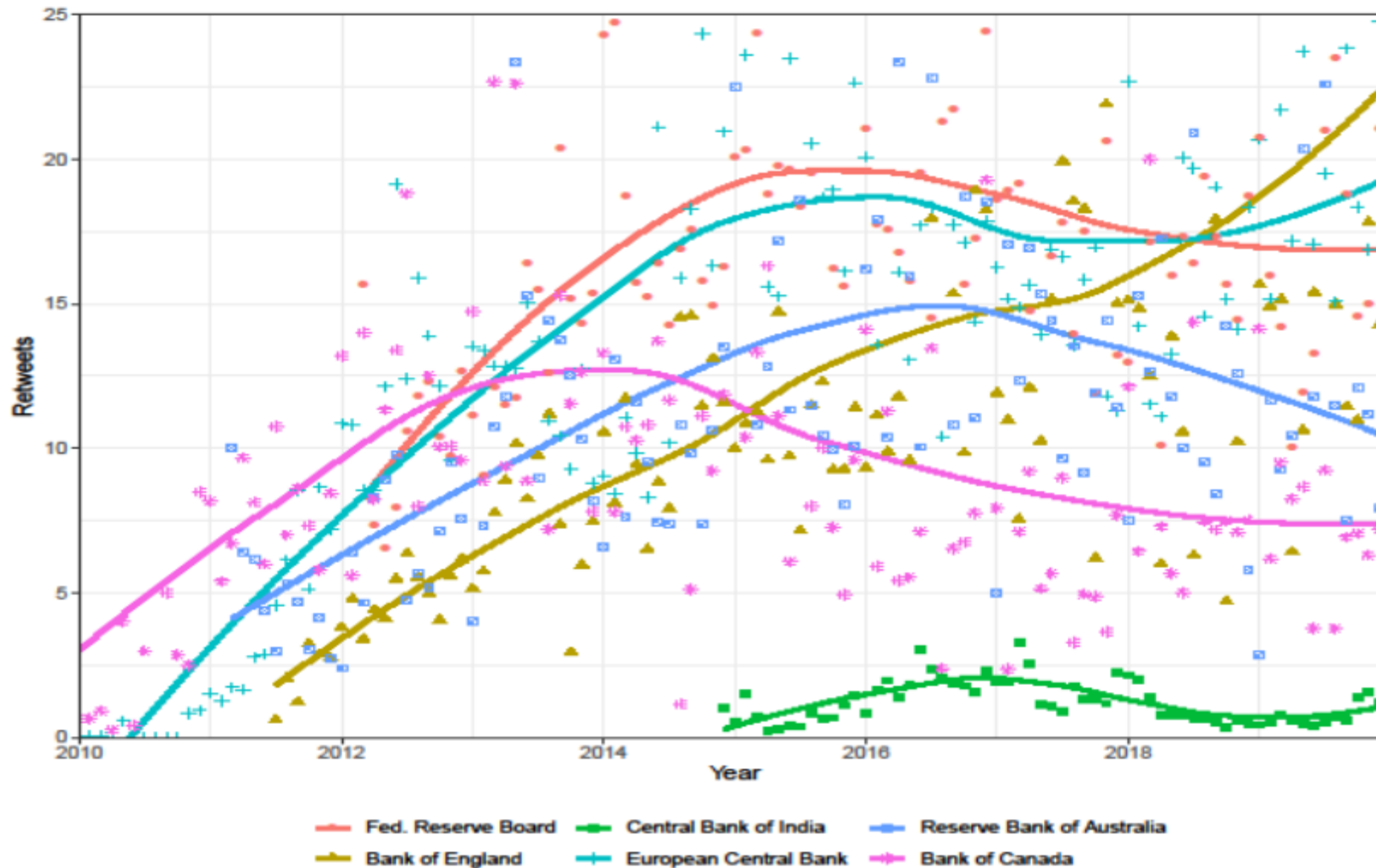
- Since the **penetrations** of **internet** and **mobile phone** have been rapidly increasing in all countries, people are currently **connected via social media applications**.
- Central Banks of many countries have initiated the **new channels** to **communicate with the public**.
- **Twitter** is one of the **most popular social media platforms** that most central banks use as the new medium of communication.
- This new medium allows the **two-way timely communication**, and it also creates the **viral pattern** of **propagation**.

# Tweets from the Board and other central banks



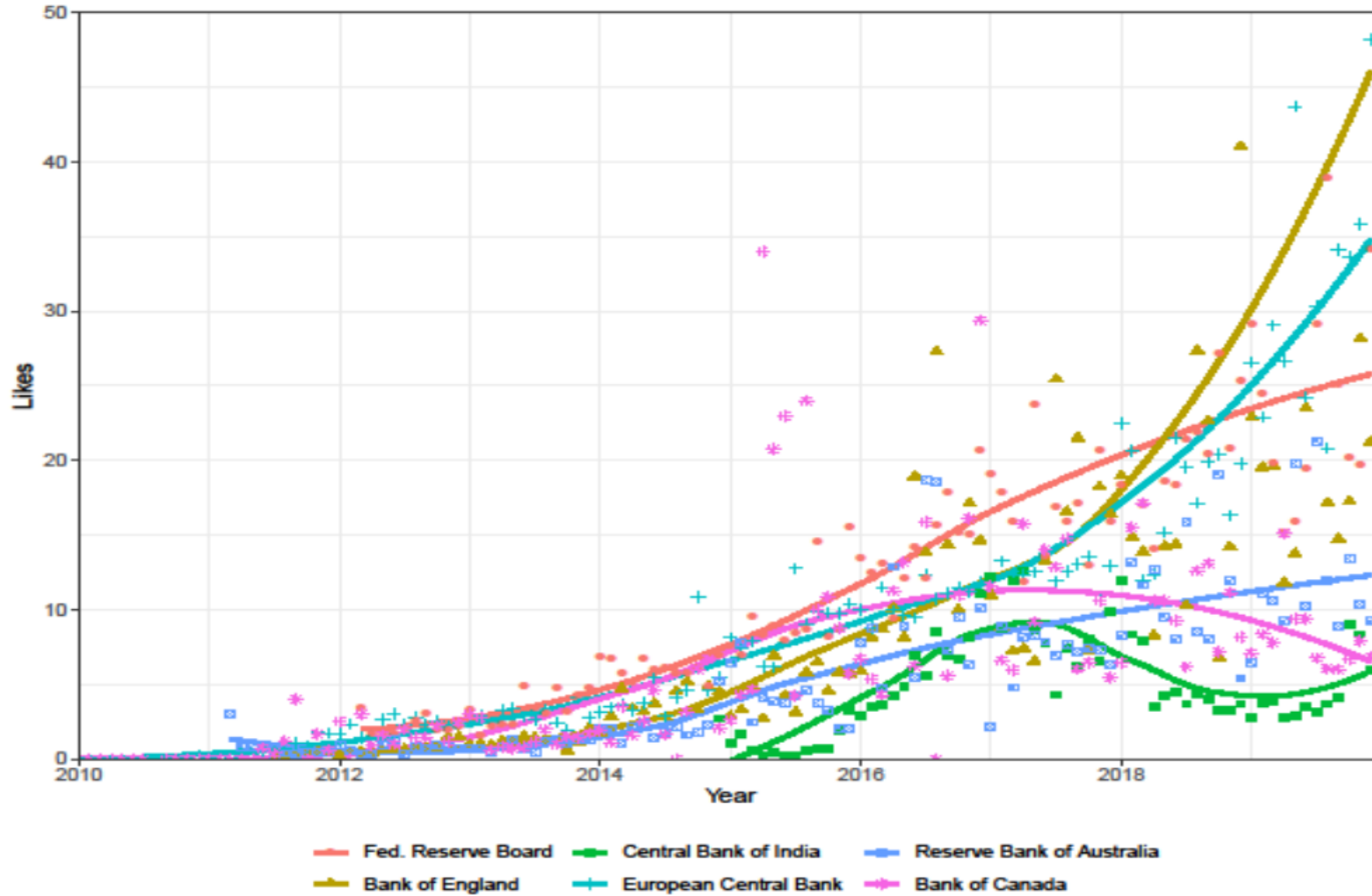
Source: Conti-Brown and Feinstein (2020)

# Mean retweets of the Board and other central banks



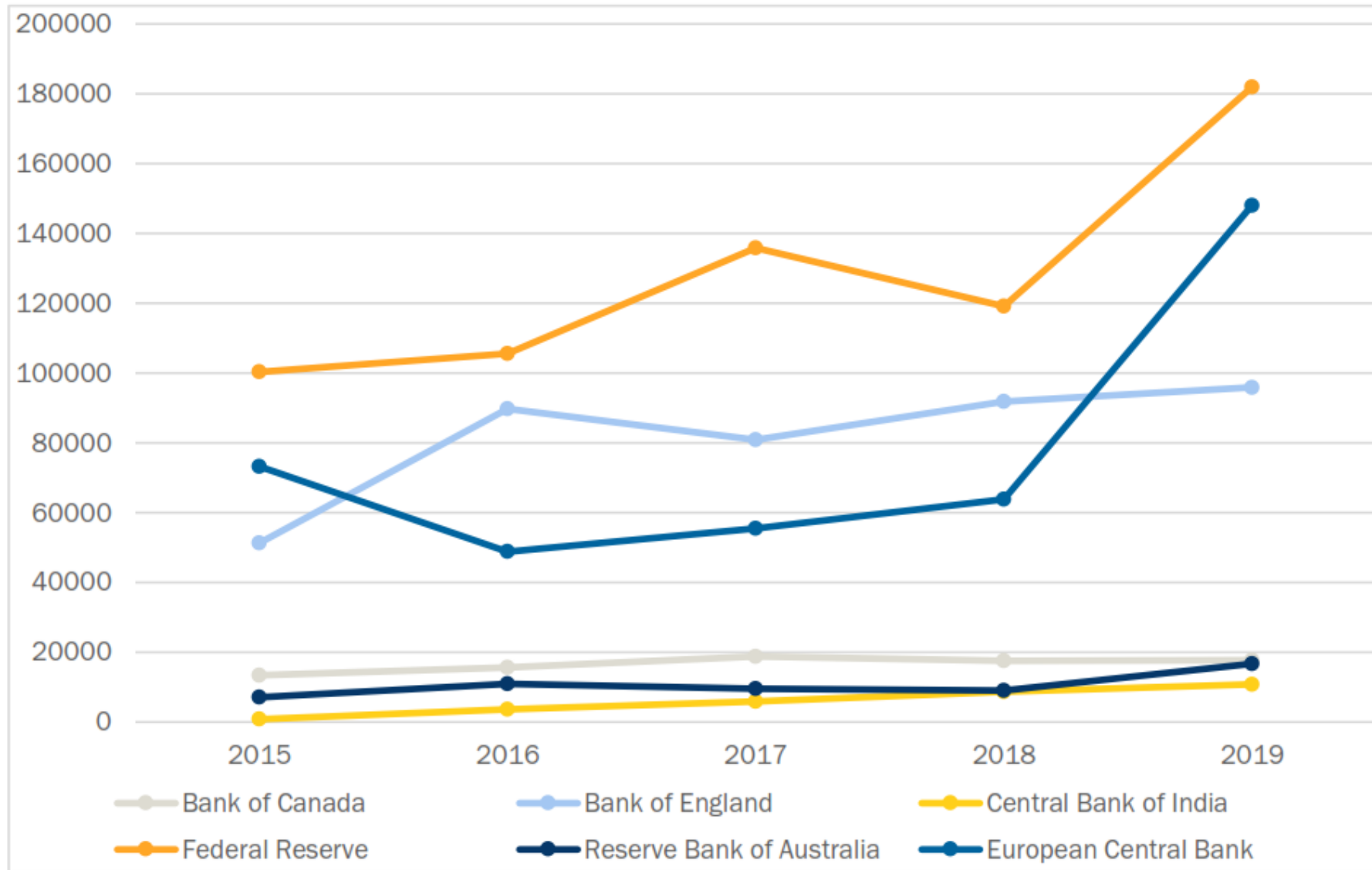
Source: Conti-Brown and Feinstein (2020)

# Mean likes for the Board and other central banks



Source: Conti-Brown and Feinstein (2020)

# Mean likes for the Board and other central banks



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## Research tasks

**Task #1:** Create the network charts of twitter messages originated from 4 central banks

- Use NodeXL to download data and generate the network charts (with subgroups)

**Task #2:** Compare the number of main messaging activities among 4 twitter networks

- Numbers of tweet, retweet, replies to, and MentionsInRetweet

**Task #3:** Compare the key network statistics among 4 twitter networks

- Vertices, Unique Edges, Total Edges, Maximum Geodesic Distance (Diameter), Average Geodesic Distance, Graph Density, Modularity

**Task #4:** Summarize the key findings based on these comparison results

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## Presentation Dates: September 22 & 24, 2021

- PowerPoint: the [format of consulting company](#) (PowerPoint with texts and graphs/diagrams)
- Submit the presentation file in the [submission box](#) on [Moodle \(by September 21, 2021 \(11.00pm\)\)](#).
- Presentation session : [12 minutes](#)
- Q & A session : [3-5 minutes](#)
- Sequence of presentation : [from draw](#)

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- Length of presentation: [12-15 pages](#)

- Structure of presentation

**Part 1** – Introduction and project's background

**Part 2** – Sources of data

**Part 3** – Briefs of analytical methodologies

**Part 4** – Results

- Task #1 (with the network chart of each central bank's twitter messages)
- Task #2 (using a table to compare these indicators)
- Task #3 (using a table to compare these network statistics )
- Task #4
- Other related tools and data are welcome

**Part 5** – Policy recommendations (i.e. future expansions for these central banks to improve their communication via Twitter)

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## Grading Criteria

### **Quality of report (60%)**

- appropriate methodologies (20%)
- critical reasoning in result analysis and policy recommendation (20%)
- format of PowerPoint (comprehensive graphical communication and concise text explanation) (10%)
- on-time submission (10%)

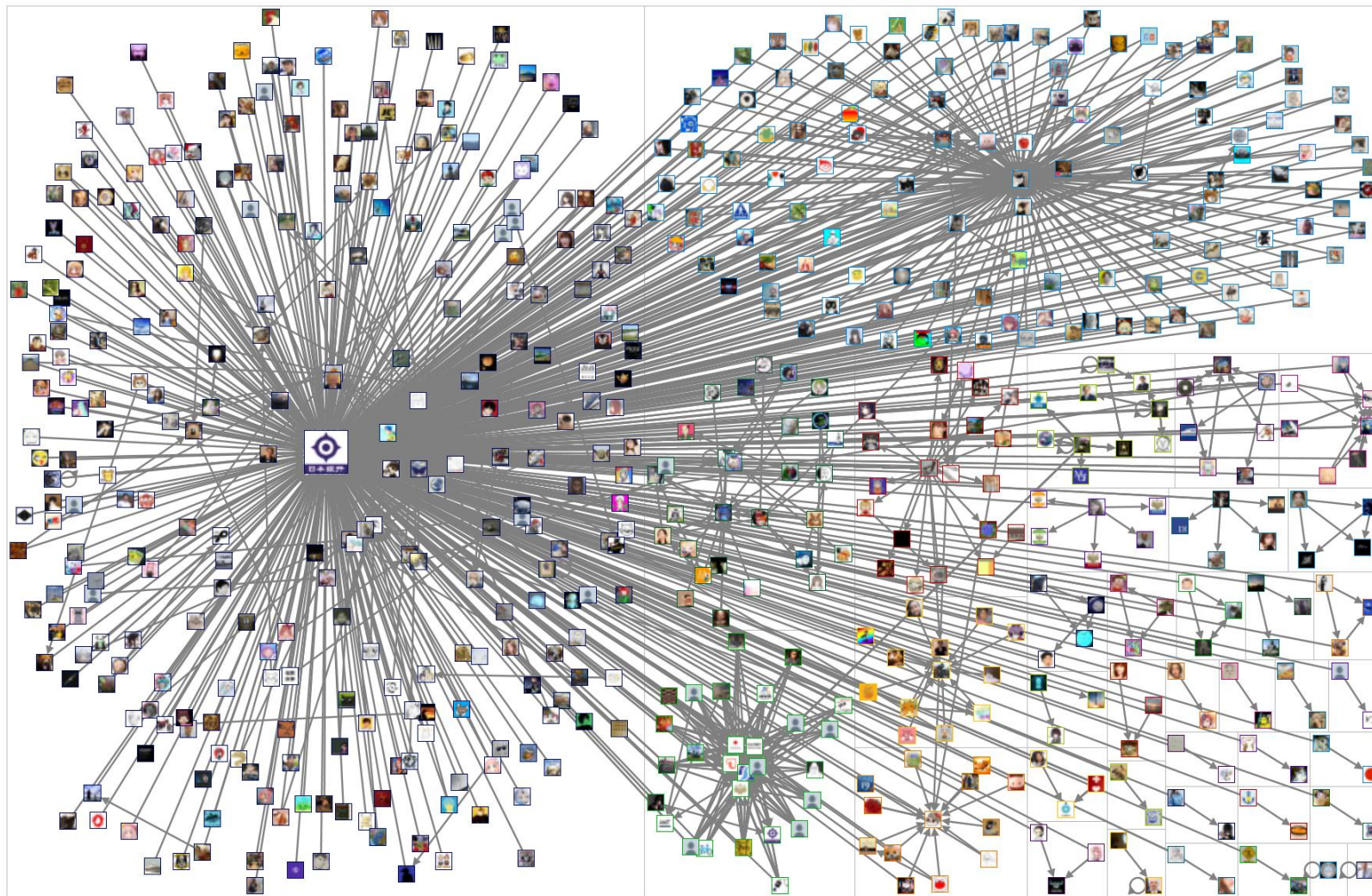
### **Quality of presentation (40%)**

- convincing verbal explanation (20%)
- comprehensive Q&A (20%)

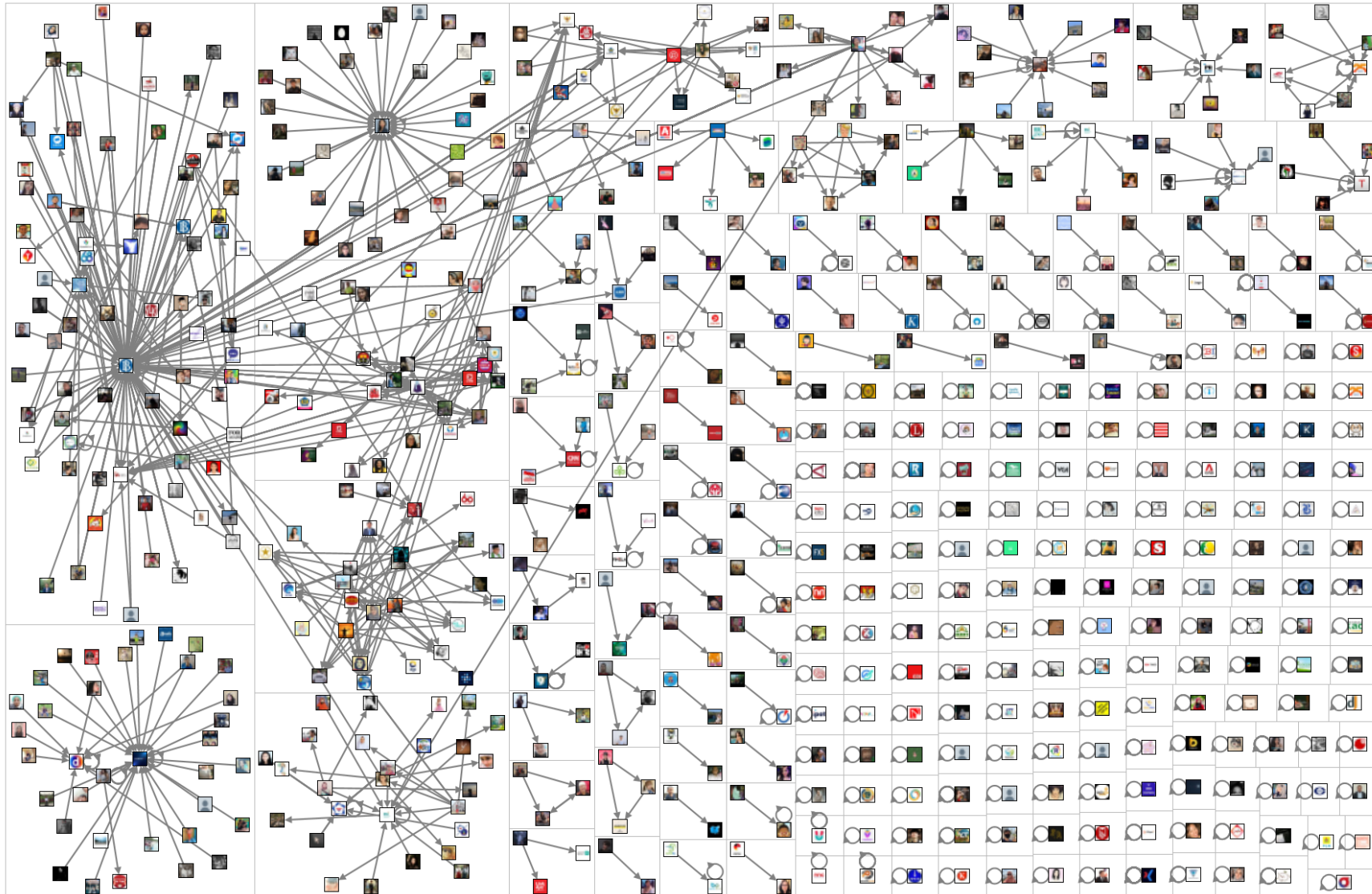
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# Examples of Twitter message networks of central banks (created by NodeXL)

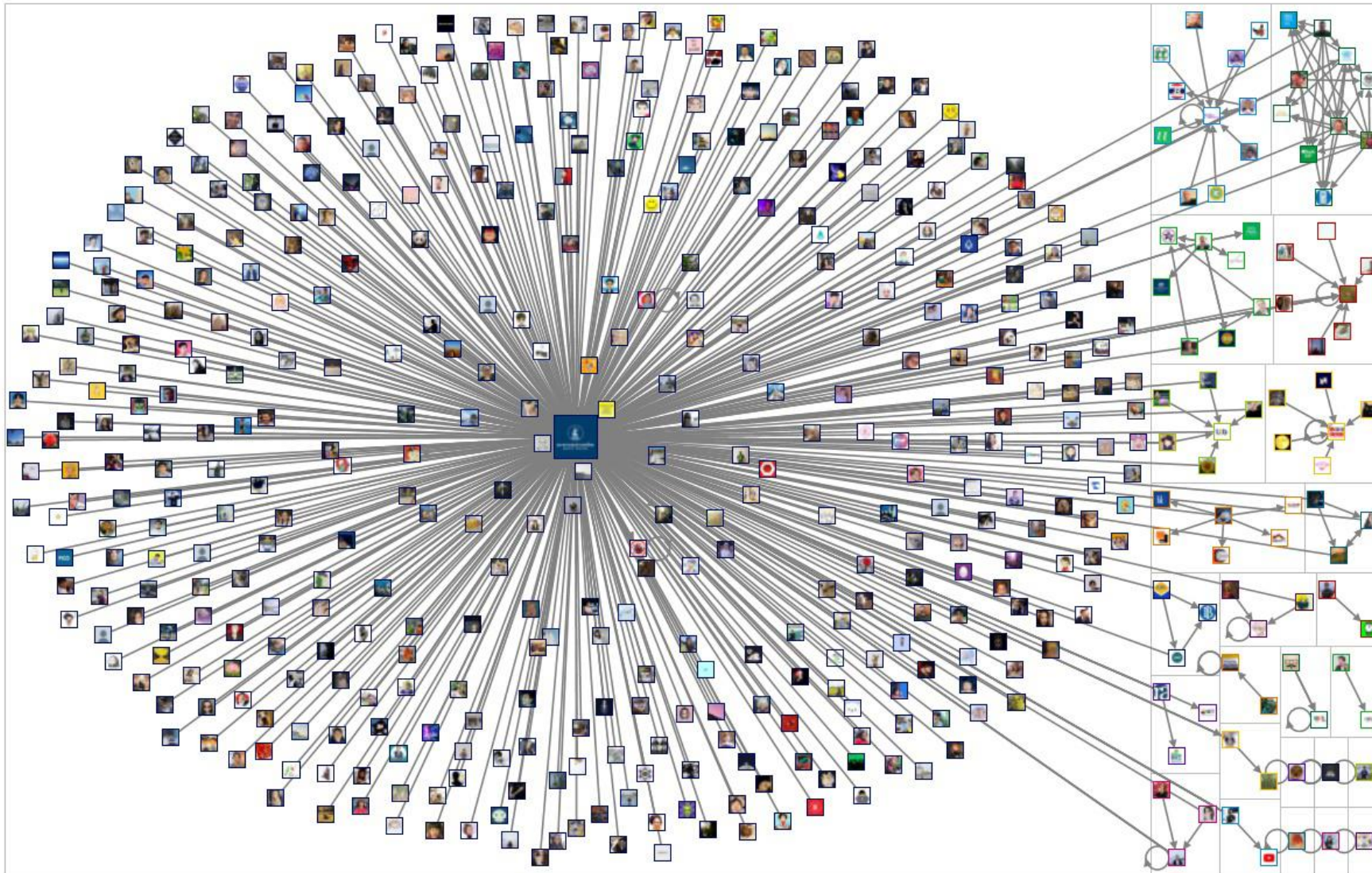
# Bank of Japan (@Bank\_of\_Japan\_j)



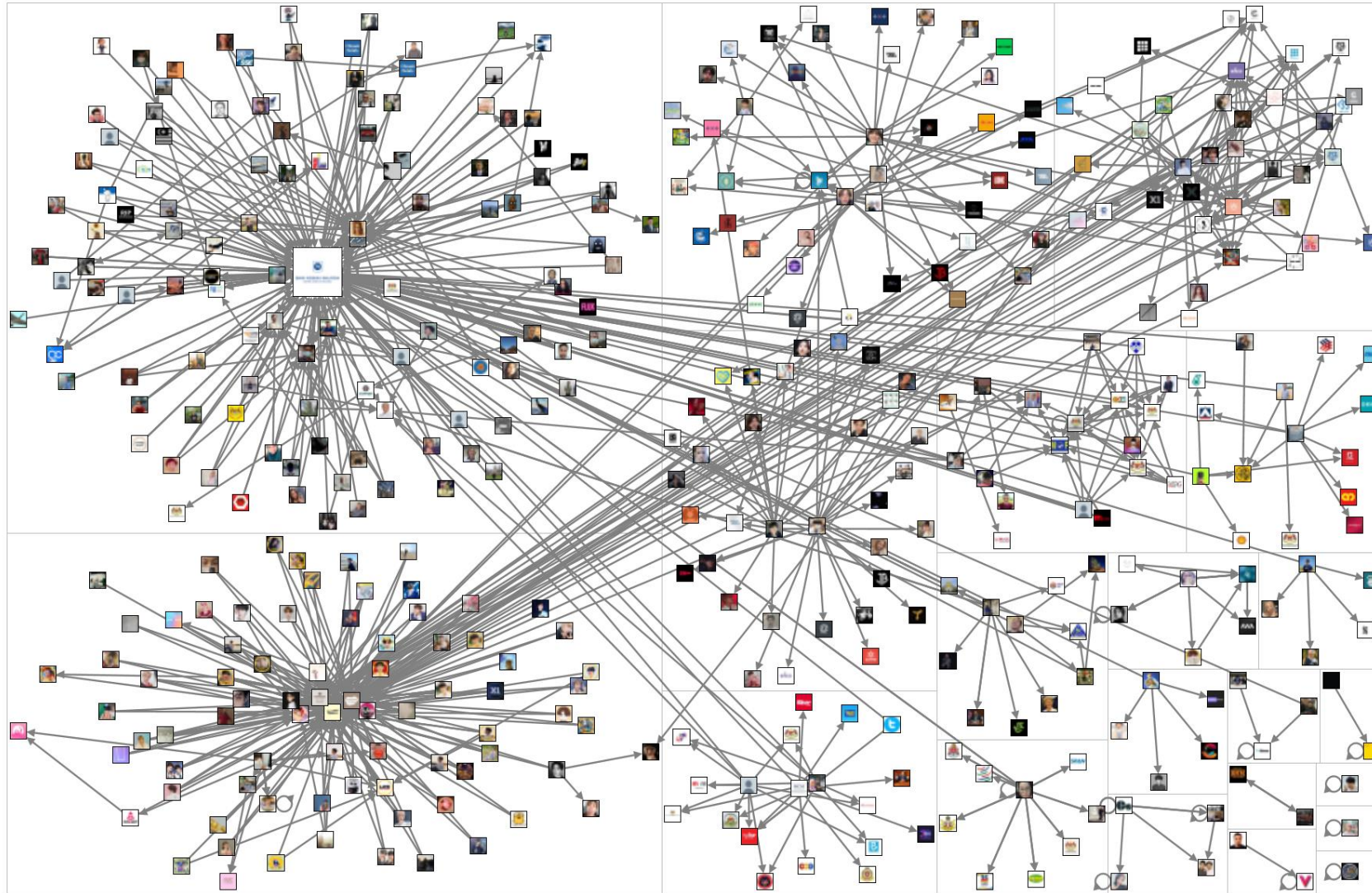
# Bank Indonesia (@bank\_indonesia)



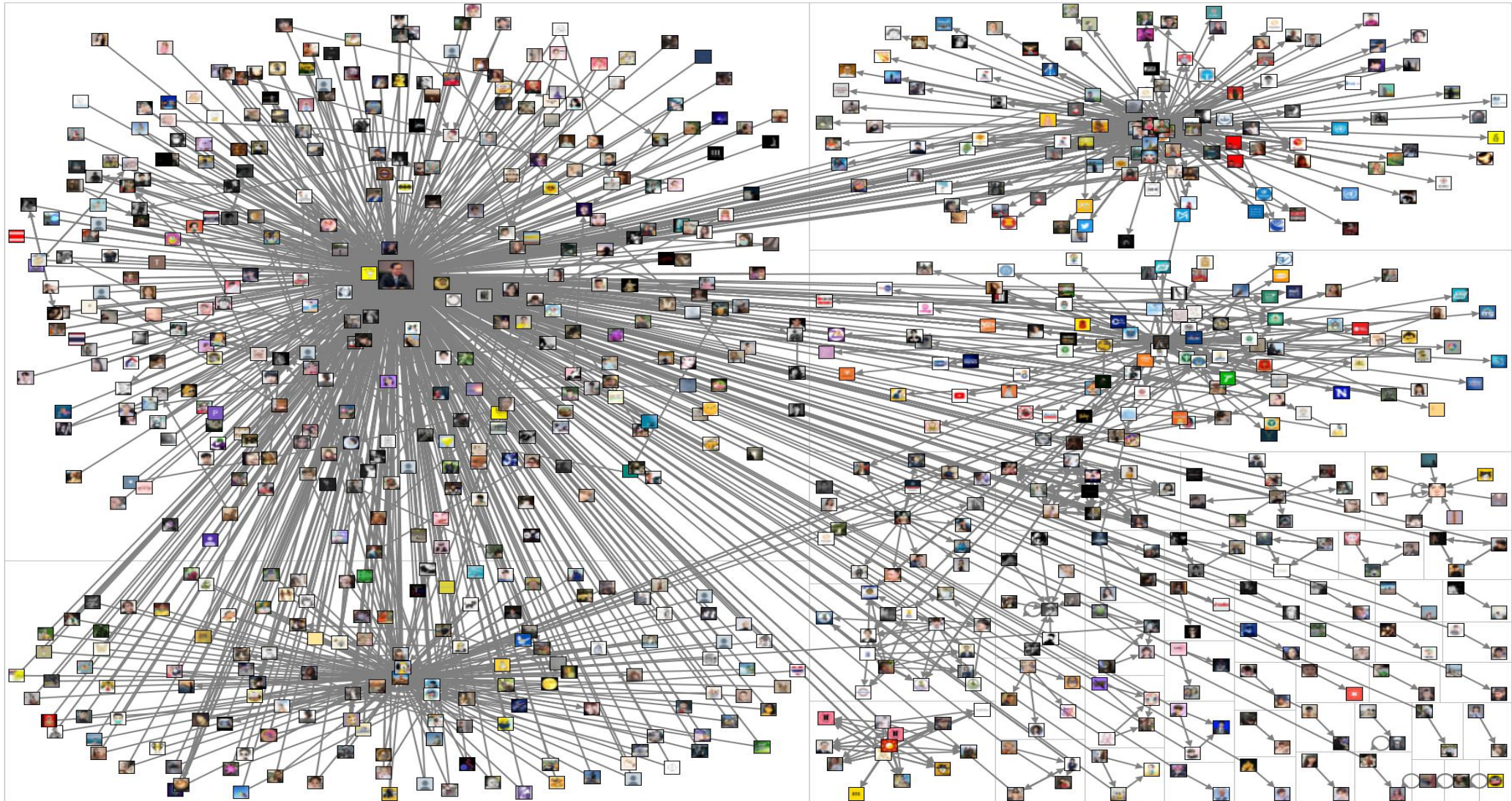
# Bank of Thailand (@bankofthailand)



# Bank Negara Malaysia (@BNM\_official)

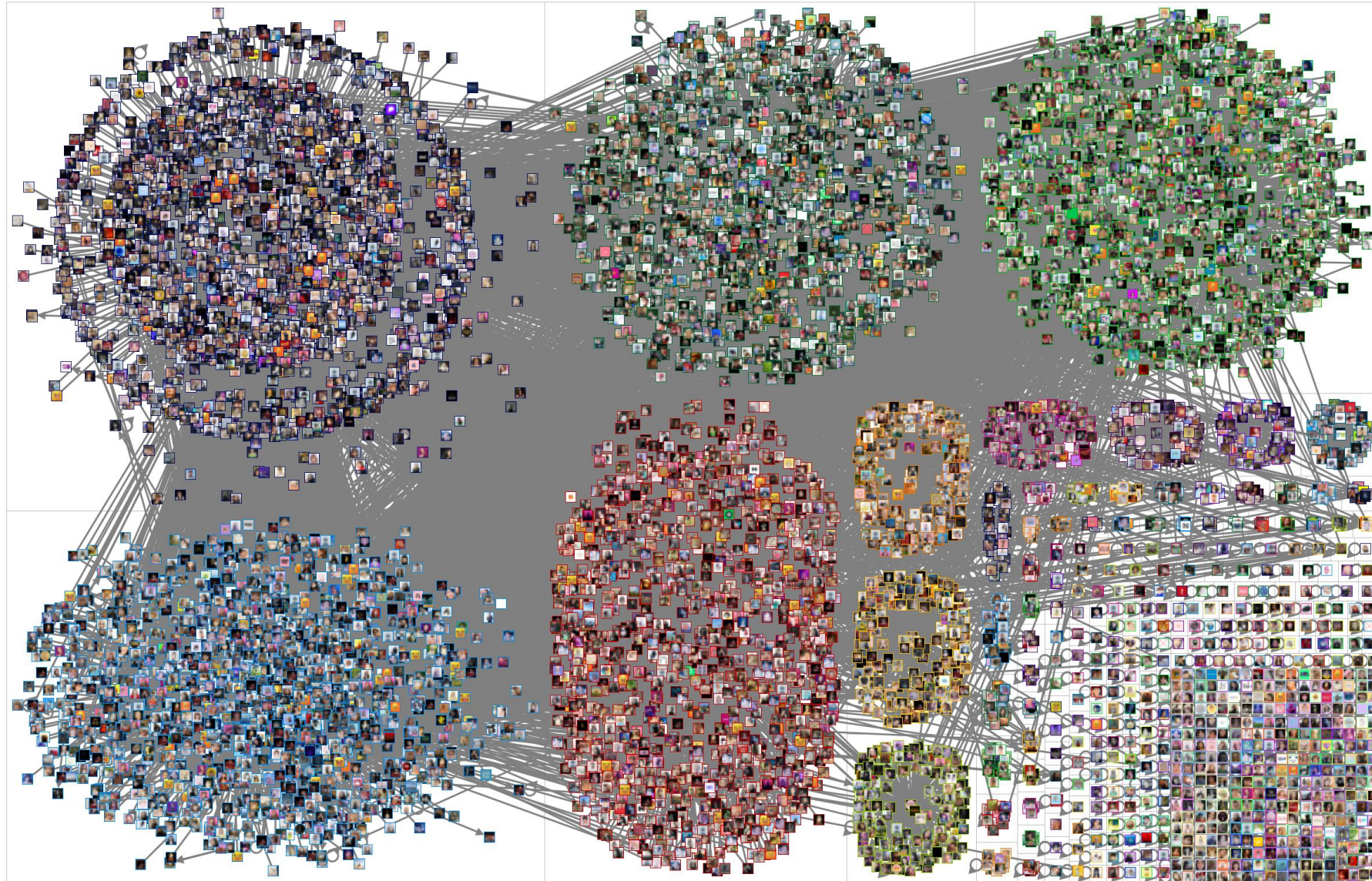


# ประยุทธ์ จันทร์โอชา (@prayutofficial)



# LISA -- BLACKPINK (#LALISA)

Social media network connections of "LALISA"



Created by Puttansong (2021)