

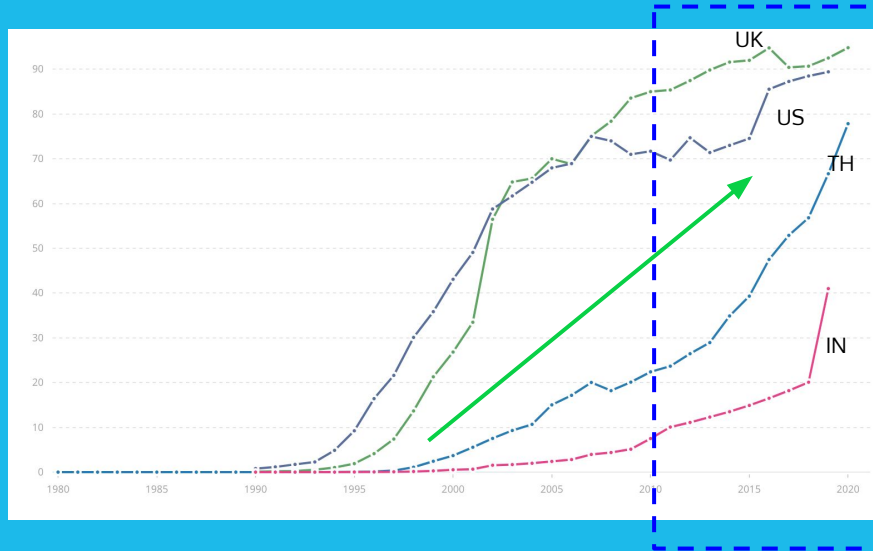
Social Network Analysis

Central Banks' Communication

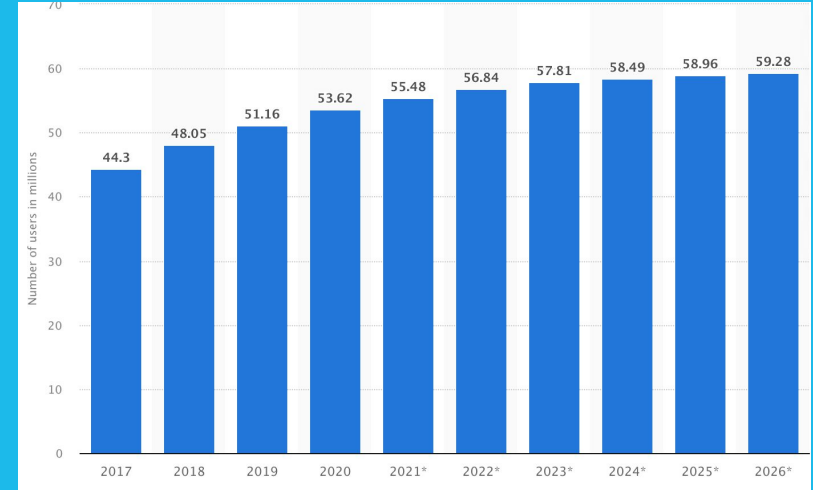


Introduction and Project's background

Sharply increased in market penetration of individual internet users



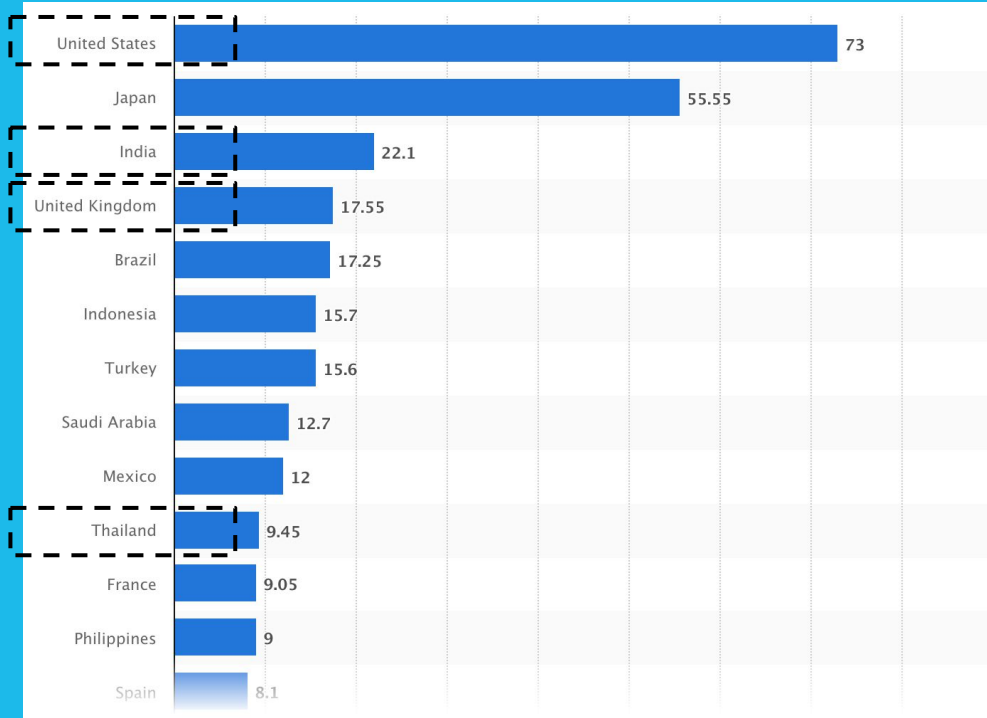
The diagram shows the internet user over 40 years. A significantly increases since 1990 in selected countries and shaply increase in market penetration of internet media



The diagram shows the number of users in thailand in the past recent 4 years and also show 6 years forecasted and the trend is still ongoing more than 70% of total population

Introduction and Project's background

Twitter has been in the top-rank position of number of active user account along with Instagram and Facebook in most of the countries.



The percentage market share of the Twitter in the most of the selected countries

2nd

THAILAND

United States

United Kingdom

Based on the data, four selected countries have the top numbers of active twitter account in the world with the second ranking of share on social media. It reflects the behavior of human that have the alternative channel of perceiving the news and information announced by many officials.

Sources of Data

All of the data will be obtained from the twitter platform and will be used to run further analysis



Twitter



Bank of England



Federal Reserve



Bank of Thailand



Bank of India



NodeXL



Microsoft Excel

Briefs of Analytical methodologies



The data information to run the analysis from the four selected central banks will be extracted from the twitter account



After the completion of the imported-data, NodeXL will be used to visualizing the network diagram

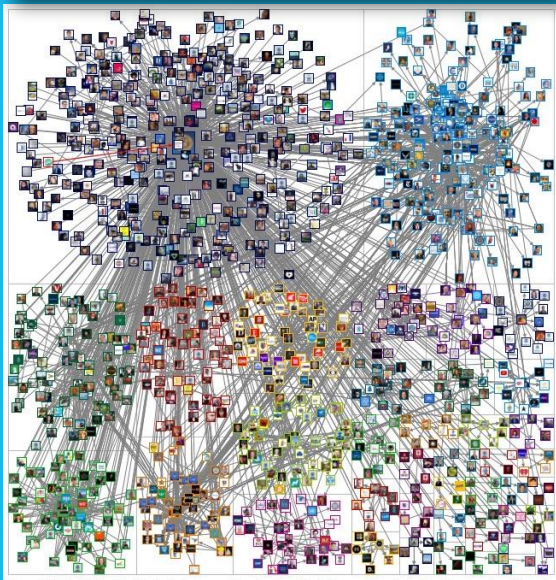


Microsoft Excel will be used in the final process to compile all information including network statistic, indicators ,and results

Results: Networks charts of twitter messages originated from 4 central banks

Most of the selected central banks have a high traffic communication on the twitter platform that can be verified by the network statistics

Federal Reserve



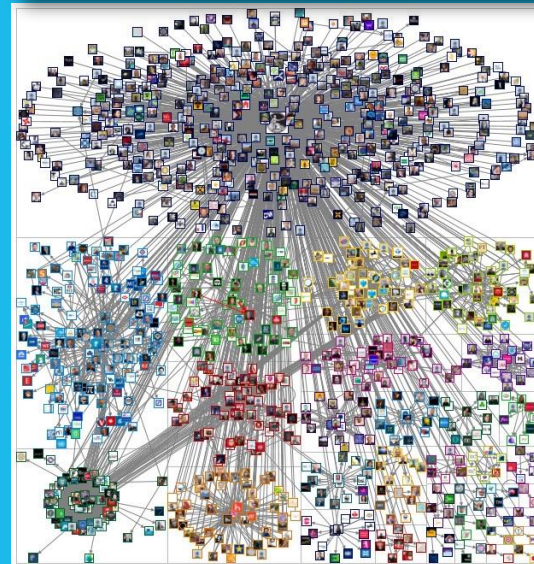
Created with NodeXL Pro (<http://nodexl.codeplex.com>) from the Social Media Research Foundation (<http://www.smrfoundation.org>)

FED has the highest number of subgroup and connectively through Twitter higher than other 3 official banks.

BOE also have high connectively and subgroup as well.

This can convey that FED and BOE can connect and communicate with people through twitter effectively.

Bank of England

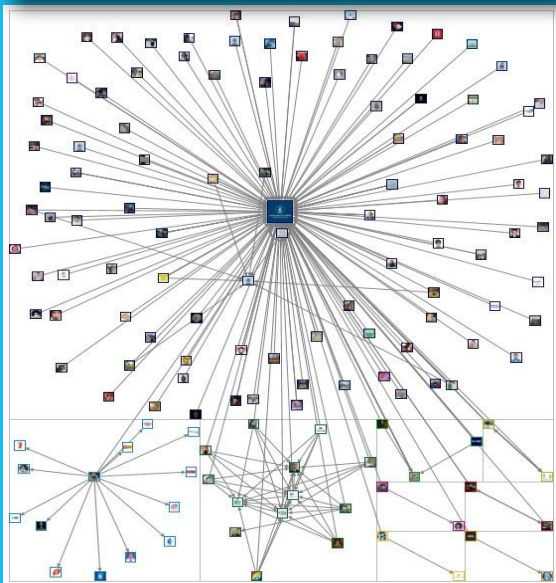


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Bank of Thailand

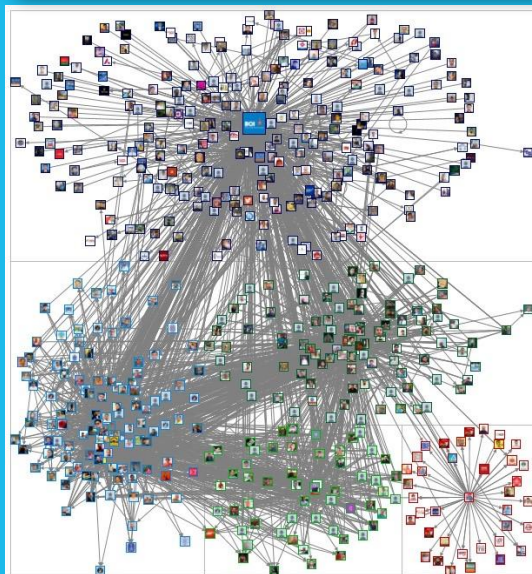


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BOT has the smallest size of subgroup and connectivity through Twitter.

This implies that BOT fails to communicate with public compared to other official banks.

Bank of India



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Results: number of main messaging activities among 4 twitter networks

	Federal Reserve	Bank of England	Bank of Thailand	Bank of India
Number of tweet	9	13	30	23
Number of retweet	287	578	159	911
Number of replies to	610	254	17	852
Number of mentions in retweet	756	1853	41	3611

Results: Key network statistics among 4 twitter networks

	Federal Reserve	Bank of England	Bank of Thailand	Bank of India
Graph Matrix	Value	Value	Value	Value
Graph Type	Directed	Directed	Directed	Directed
Vertices	1207	1158	141	563
Unique Edges	1882	2980	169	2096
Total Edges	7638	3874	280	7099
Maximum Diameter	4	4	4	4
Average Diameter	2.917	2.638	2.212	2.442
Graph Density	0.00174	0.00248	0.00968	0.00926
Modularity	0.254	0.607	0.388	0.240

Summarized the key findings

1

From the network charts and results, we enable to interpret that central bank can used twitter as an effective communication channel to the public.

2

Even the BOI has highest tweet and retweet ratio, the bank has substantially low subgroups compared to FED and BOE along with the complexity of the communication traffic.

3

Concerning to communication efficiency point, both BOE and FED have significantly high vertices value compared to that of BOI and BOT. This implies that BOE and FED enable to manage the distribution of data to the public effectively. Moreover, from value of Modularity we enable to interpret that BOE is really success to create suitable allocation data to each public group.

Policy recommendations

1

Government should focus and improve on overall internet access

2

If central bank aims to use twitter as a medium for communication to public, they must focus more on human resources management on this chanel

3

Government must attempt to encourage other government agency for communication with public via this chanel as well as an economy of scale.



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Thank you