

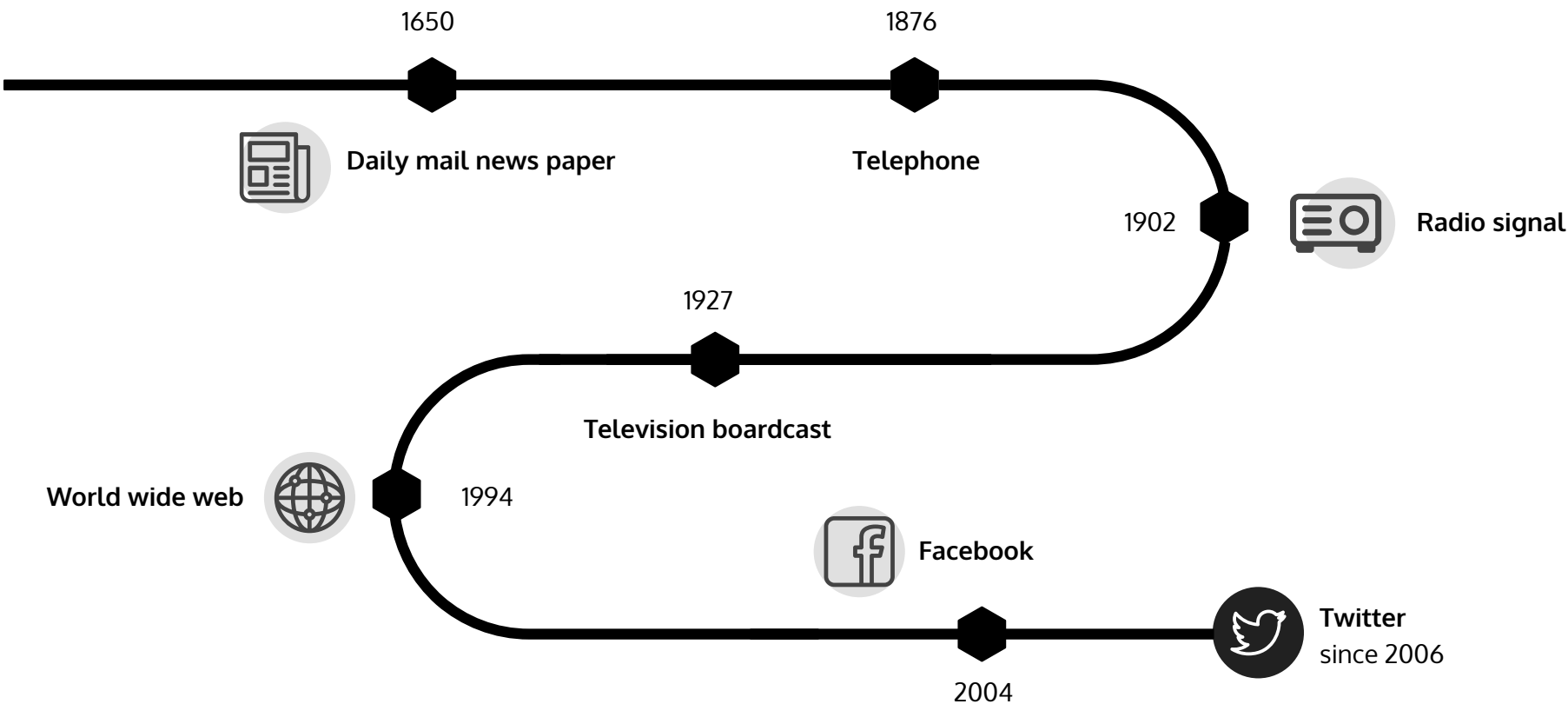


Analysis of the central banks social network usage

EE406

Introduction:

Since early history, humans have relied on technology to improve a communication



List of interested central bank's Tweeter accounts

Banque de France



Central bank of **France**

Twitter information:



Join since Dec, 2010



Followers: 39.2K

De Nederlandsche Bank



Central bank of **the Netherlands**

Twitter information:



Join since March, 2011



Followers: 19.9K

The Deutsche Bundesbank



Central bank of **Germany**

Twitter information:



Join since Aug, 2012



Followers: 31.4K

European Central Bank



Central bank of **the Eurozone**

Twitter information:

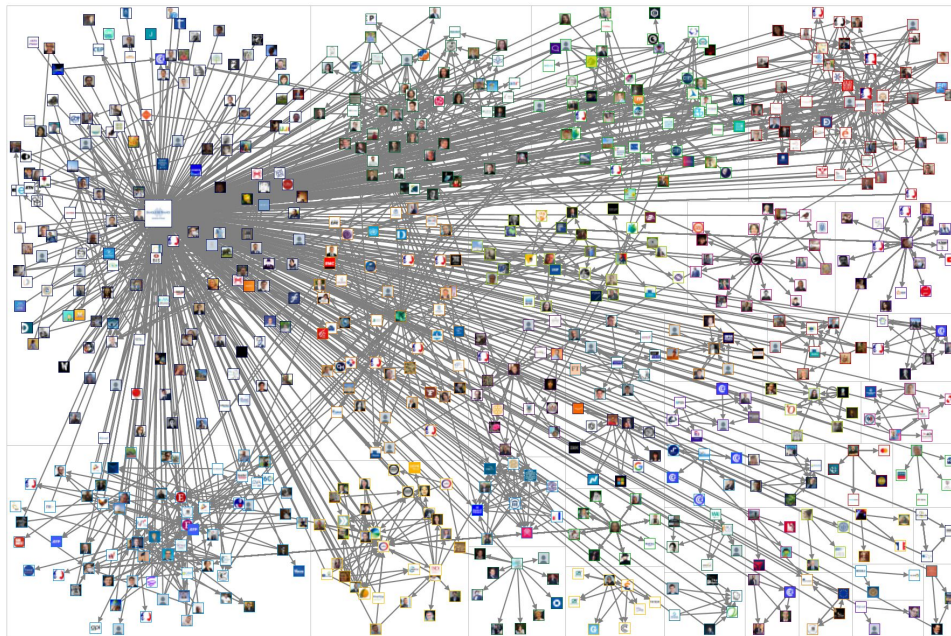


Join since Oct, 2009



Followers: 642.2K

The central bank of France has effectively communicate with many group of people



Vertices : 693

Unique Edges : 1454

Total Edges 2559

Maximum Geodesic Distance (Diameter) : 4

Average Geodesic Distance : 2.688968

Graph Density : 0.00359082150989665

Modularity : 0.45

tweets : 18

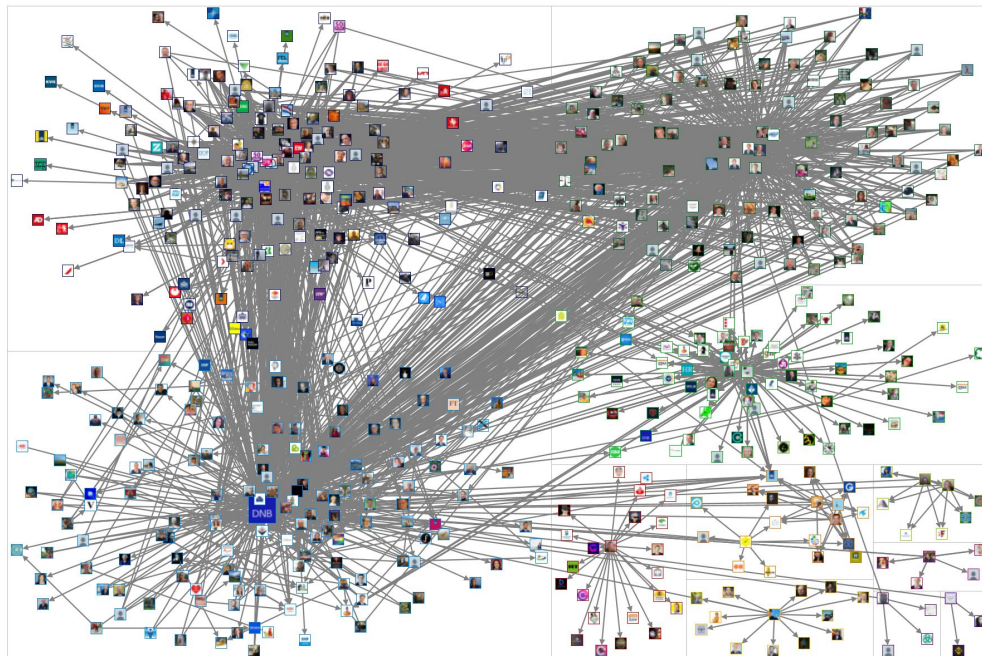
mentions : 1098

mentions in retweet : 869

replies : 135

retweets : 432

The central bank the netherlands has high rate of engagement but has low rate of modularity



Vertices : 567

Unique Edges : 1936

Total Edges : 4420

Maximum Geodesic Distance (Diameter) : 4

Average Geodesic Distance : 2.808756

Graph Density : 0.00817955764952231

Modularity : 0.287119

tweet : 0

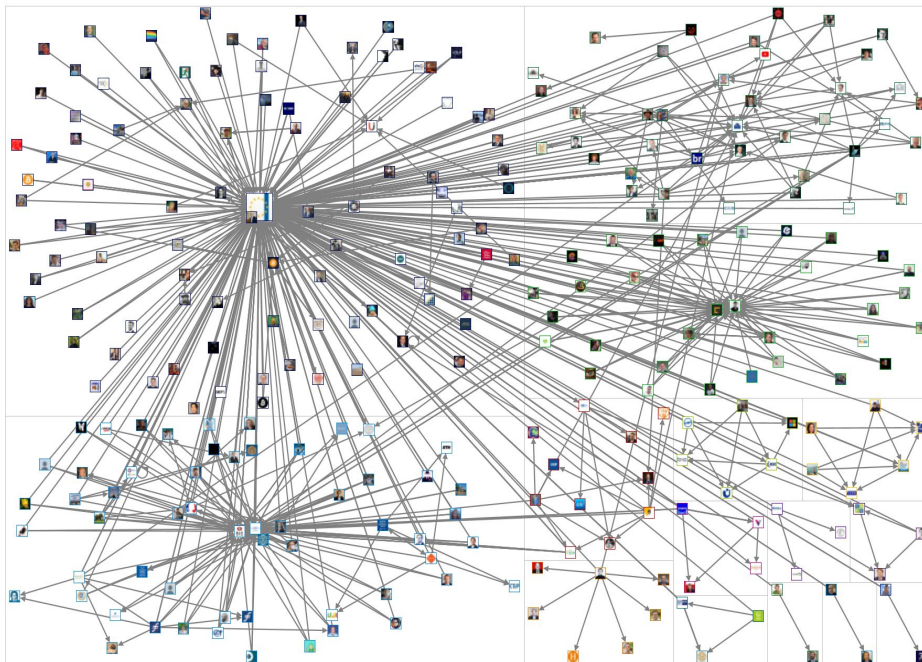
mentions : 1441

mentions in retweet : 2321

replies : 186

retweets : 468

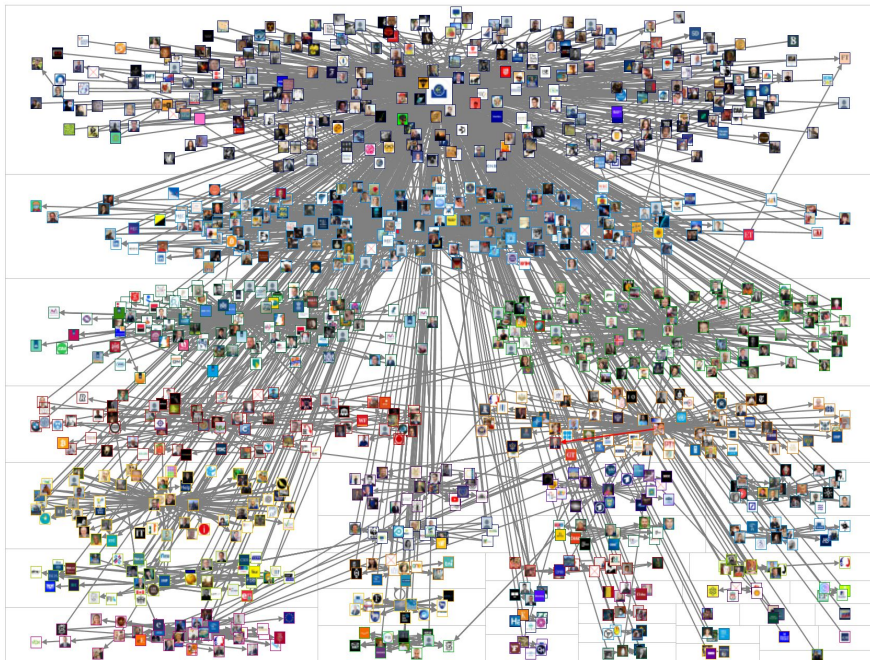
Duestch Bundes Bank has effectively communicate with many group of people.



Vertices : 275
Unique Edges : 515
Total Edges : 736
Maximum Geodesic Distance (Diameter) : 4
Average Geodesic Distance : 2.366387
Graph Density : 0.00784339747843397
Modularity : 0.452559

Tweets : 61
Mentions : 413
Mentions in retweet : 2454
Replies to : 3
Retweets : 1795

ECB shows a high connectivity with many people on social networks



Vertices : 1167

Unique Edges : 2141

Total Edges : 4428

Maximum Geodesic Distance (Diameter) : 4

Average Geodesic Distance : 2.776074

Graph Density : 0.00200261331851767

Modularity : 0.421425

Tweets : 364

Mentions : 3142

Mentions in retweet : 12180

Replies to : 117

Retweets : 6547

ECB has the highest vertices , France Deutsche and ECB has similar amount of modularity.

Banque de France



De Nederlandsche Bank



The Deutsche Bundesbank



European Central Bank



Vertices:	693	567	275	1167
Unique Edges:	1454	1936	515	2141
Total Edges:	2559	4420	736	4428
Maximum Geodesic Distance:	4	4	4	4
Average Geodesic Distance:	2.688968	2.808756	2.366387	2.776074
Graph Density:	0.003590822	0.008179558	0.007843397	0.002002613
Modularity:	0.45	0.287119	0.452559	0.421425

Unsurprisingly, ECB is the most active on the Twitter of all

Banque de France



De Nederlandsche Bank



The Deutsche Bundesbank



European Central Bank



Tweets:	18	0	61	364
Mentions:	1098	1441	413	3142
Mentions in retweet:	869	2321	2454	12180
Replies:	135	186	3	117
Retweets:	432	468	1795	6547

In-Degree Centrality

- **banquedefrance**
- **bundesbank**

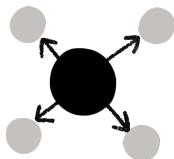
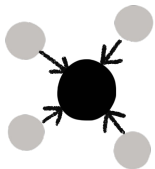
The central bank
of Germany

- **bis_org**



Bank for International
Settlements

- educfi_bdf
- education_gouv
- afd_france
- inseefr

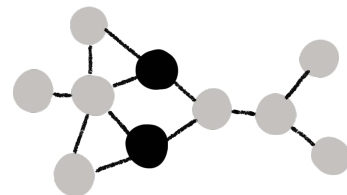
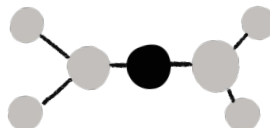


Out-Degree Centrality

- **banquedefrance**
- nr37921716
- szignago
- bobnguema
- raimondoosvaldo
- trialvideos
- doctor_fujisawa
- directfrigo
- teco_economie
- 2800denim

Betweenness Centrality

- **banquedefrance**
- nr37921716
- bobnguema
- trialvideos
- ah_cmia
- 2800denim
- directfrigo
- phkunter
- mayrwal726
- ls_thomasr



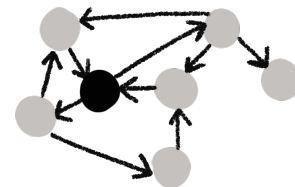
Eigenvector Centrality

- **banquedefrance**
- **bundesbank**
- **bis_org**
- educfi_bdf
- szignago
- education_gouv
- iedom_ieom



PageRank

- **banquedefrance**
- nr37921716
- **bundesbank**
- **bis_org**
- trialvideos
- bobnguema
- directfrigo
- educfi_bdf
- szignago
- afd_france



In-Degree Centrality

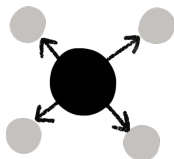
- **dnb_nl**
- **mvrooijen**

Member of Senate

- klaasknot
- **wkoolmee**

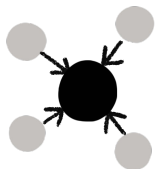
Minister of Social Affairs and Employment

- netspar
- cpbnl
- pieteromtzigt
- eduardbomhoff



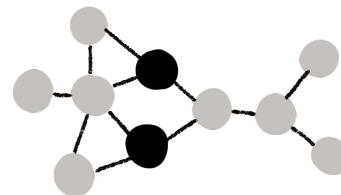
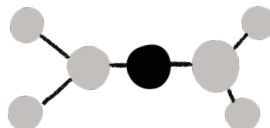
Out-Degree Centrality

- _tag_hi_
- ansklaasenmeco1
- jawotil
- spacecourtplant
- geentweet
- rgbhackr
- hazenberg_m
- westerhofgerri1
- nicojchulst
- aadmurk



Betweenness Centrality

- **dnb_nl**
- _tag_hi_
- spacecourtplant
- apanalis
- westerhofgerri1
- ansklaasenmeco1
- **mvrooijen**
- dichar_
- wbhoekstra
- klaasknot

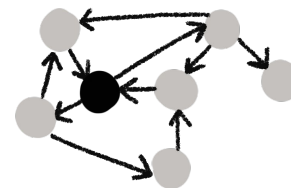


Eigenvector Centrality

- mvrooijen
- **dnb_nl**
- klaasknot
- wkoolmees
- netspar
- cpbnl
- 50pluspartij
- pieteromtzigt
- eduardbomhoff
- wbhoekstra

PageRank

- **dnb_nl**
- _tag_hi_
- **mvrooijen**
- klaasknot
- **wkoolmees**
- spacecourtplant
- apanalis
- netspar
- cpbnl
- pieteromtzigt



The Deutsche Bundesbank (The central bank of Germany)

In-Degree Centrality

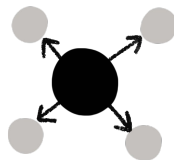
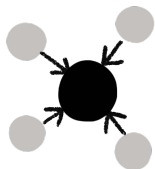
- **bundesbank**
- **banquedefrance**

The central bank of France

- **bis_org**
- jamielcrawleycd
- coindesk
- sdullien
- **ecb**

European central bank

- btcverstehenpod



Out-Degree Centrality

- **bundesbank**
- drueckauf
- frank_vanlerven
- philippasigl
- gunterfehliger
- galactik_views
- euphoniclogic
- fs_firecenter
- outlaw__mike
- edhecrisk



Betweenness Centrality

- **bundesbank**
- philippasigl
- gunterfehliger

- **bis_org**

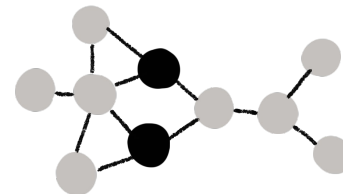
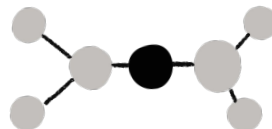
- frank_vanlerven

- **eu_srb**

Single resolution board

Government Agency

- **banquedefrance**
- galactik_views
- euphoniclogic
- oesch13767736



Eigenvector Centrality

- **bundesbank**
- **banquedefrance**
- **bis_org**

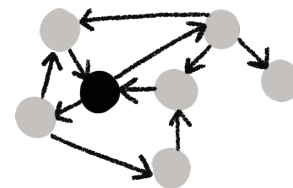
- jamielcrawleycd
- coindesk
- sdullien

- **ecb**
- drueckauf
- franceensuisse
- fs_firecenter

PageRank

- **bundesbank**
- **bis_org**
- **banquedefrance**

- jamielcrawleycd
- sdullien
- coindesk
- **ecb**
- philippasigl
- gunterfehliger
- btcverstehenpod



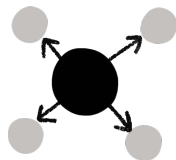
The European Central Bank (ECB)

In-Degree Centrality

- ecb
- lagarde

Christine Lagarde

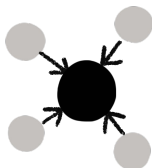
President of the ECB



isabel_schnabel

Executive board member of ECB

- hecparis
- time
- wef

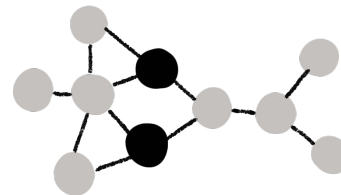
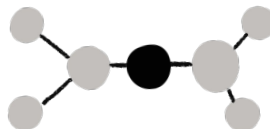


Out-Degree Centrality

- _tag_hi_
- geentweet
- movvavr
- 10ramon10
- soltovil
- logistico14
- wmacklawd
- gunterfehliger
- maria_conney
- ethicaldavid

Betweenness Centrality

- ecb
- _tag_hi_
- geentweet
- movvavr
- lagarde
- wmacklawd
- maria_conney
- ethicaldavid
- gunterfehliger
- rbabanksoleprop



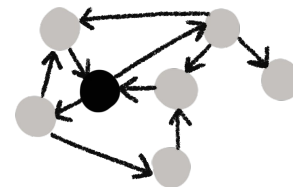
Eigenvector Centrality

- ecb
- lagarde
- isabel_schnabel
- bloombergtv
- dm_rubenstein
- northmantrader
- hecparis
- imfs_frankfurt
- zero hedge
- bachmannrudi

Bloomberg
TELEVISION

PageRank

- ecb
- lagarde
- _tag_hi_
- geentweet
- isabel_schnabel
- movvavr
- northmantrader
- bloombergtv
- dm_rubenstein
- wmacklawd



There is some adjustment needed, in order to achieve affective communication on social media



Use **more communication formats** such as short videos or infographics to increase the accessibility and interest of information to attract more audiences.



Let authorities such as priminister, executive directors, or influential economists **promote tweets by retweets or mentions official account** to spread the informations



Create **separate english account to communicate with foreigners** and activate more with diversity of content suitable for younger generation or people without economics knowledges



Create **space for economics related people to debate or educate publics** with current issues or more knowledges about economics

Thank you

Members

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Saranya piyapanee (6304641373)

Chanon Siripanasan (6304640193)