



A COMPREHENSIVE ANALYSIS OF FINANCIAL PERFORMANCE : INSIGHTS FROM A LEADING BANKS

Project based Experiential Learning Program





A Comprehensive Analysis of Financial Performance: Insights from a Leading Banks

Milestone 1: Define Problem/Problem Understanding:

Activity 1: Specify the business problem.

- * Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. The term is also used as a general measure of firm's overall financial health over a given period.
- * Analysis and investors use financial performance to compare similar firms across the same industry or to compare industries or sectors in aggregate.
- * Financial performance analysis is a multifaceted approach to evaluating a company's financial performance. It is the process of examining a business enterprise's financial records, statements, tools and processes.

Activity 2: Business requirements.

* The business requirements for analyzing the performance and efficiency of banks in world include identifying KPIs, comparing performance across different countries and states, identifying patterns and trends over time, identifying affecting factors, creating interactive dashboards and reports, identifying areas for improvement, making data-driven decisions, comparing to the industry average and creating forecasting models for future performance. The ultimate goal is to gain insights and improve performance through data visualization techniques.

Activity 3:Literature survey:

*Our industry leaders are constantly providing and sharing insightful knowledge on topics including factors impacting consumer behavior and banking ,consumer expectations and our overall economy. In this article,we share our top insights from experts,Tom Alif,Risk Consulting Leader,Anna Fisher,VP of identity & Fraud Consulting ;and Jennifer Cox,Bussiness Solutions Engineer Leader at Equifax.

Skip to a specific session to learn our top insights pertaining to that topic:

*Elevated Economic Uncertainty Fueling changes in consumer banking.

*staying competitive in an uncertain Landscape.

Elevated Economic Uncertainty Fueling changes in consumer banking:

*Empower yourself to test various data sources or implement the data at the go.

Recently ,Tom Alif,Risk,Consulting Leader at Equifax,explained the importance of data and working with data when it comes to the elevated economic uncertainly our world is facing today.Alif mentions," To first start off is,in order to have access to it,you have to

have access to it. And, if you have not enabled yourself to either test various data sources or to have them implement it at the go, then that's where things could be more problematic".

*In order to adapt, one would need to have the data first to know whether to adapt or not. Alif has worked with large amounts of alternative data and continued to describe how you can test, evaluate, and know what the data looks like, which according to Alif, is a process called configurable modeling. Configurable modeling is when one analyzes multiple data sources which can include specialty finance data, credit data, and other data that could be affecting the economy. By examining the order, which is best, which is worse, and top attributes for underwriting a credit card in near prime space, you will be able to know what data you have available and how you can pull and use that data.

*Take a logical approach when it comes to obtaining alternative data, it is important to take a logical approach. Jennifer Cox, Business Solutions engineer Leader at Equifax explained that one does not need to receive the most obscure alternative data to maximize their policies. As Alif mentioned previously, examining data as simple as phone bill data and car data can provide enough information for one to analyze and be able to

think logically about what would make the most impact.

*Consumers are in the driver's seat lately, there has been increase on digital to drive transactions. Before COVID-19, we here at Equifax worked on loans with a subprime lender face-to-face with about 1500 branches. However, once COVID-19 hit, over 75% of these loans were done online. This was a new area for these businesses to transact in and unfortunately they had to react very quickly.

*Good credit isn't enough anymore, a frictionless experience is good credit isn't enough anymore. In fact, according to Anna Fisher, VP of identity & fraud Consulting at Equifax, we have seen that if you can't provide a frictionless experience for consumers, 25% of them will abandon the process and move on and do something different. That being said, it is important to try to find that balance between "having your cake and eating it too".

Staying Competitive in an Uncertain Landscape:

*Identify new customers by adopting new practices Retail banks and fintechs are starting to adopt practices that help consumers say yes more, while making sure they do not risk falling inclusion is one way to have many more consumers included.

Alternative data sources can help credit files paint a broader picture of a consumer. Many of these consumers qualified for credit opportunities that may not have existed for them before. Incorporating alternative data sources can help banks and financial institutions say 'yes' to more customers-helping meet the need for credit on demand and access to credit.

*Harness Digital Enablement Every consumer and bank's security is at risk especially when it comes to fraud. Synthetic identity fraud is on the rise, and consumers are increasingly aware of such risks.

*Leverage and segment when continuing to foster your existing relationships, improve your customer experience, and grow your share of wallet, it is important to leverage data and segmentation. Banks and financial institutions need to make sure they are meeting the evolving demands of their existing customers. This starts with looking at how they can increase share of wallet with their customers, while identifying customers that have additional assets and growth potential.

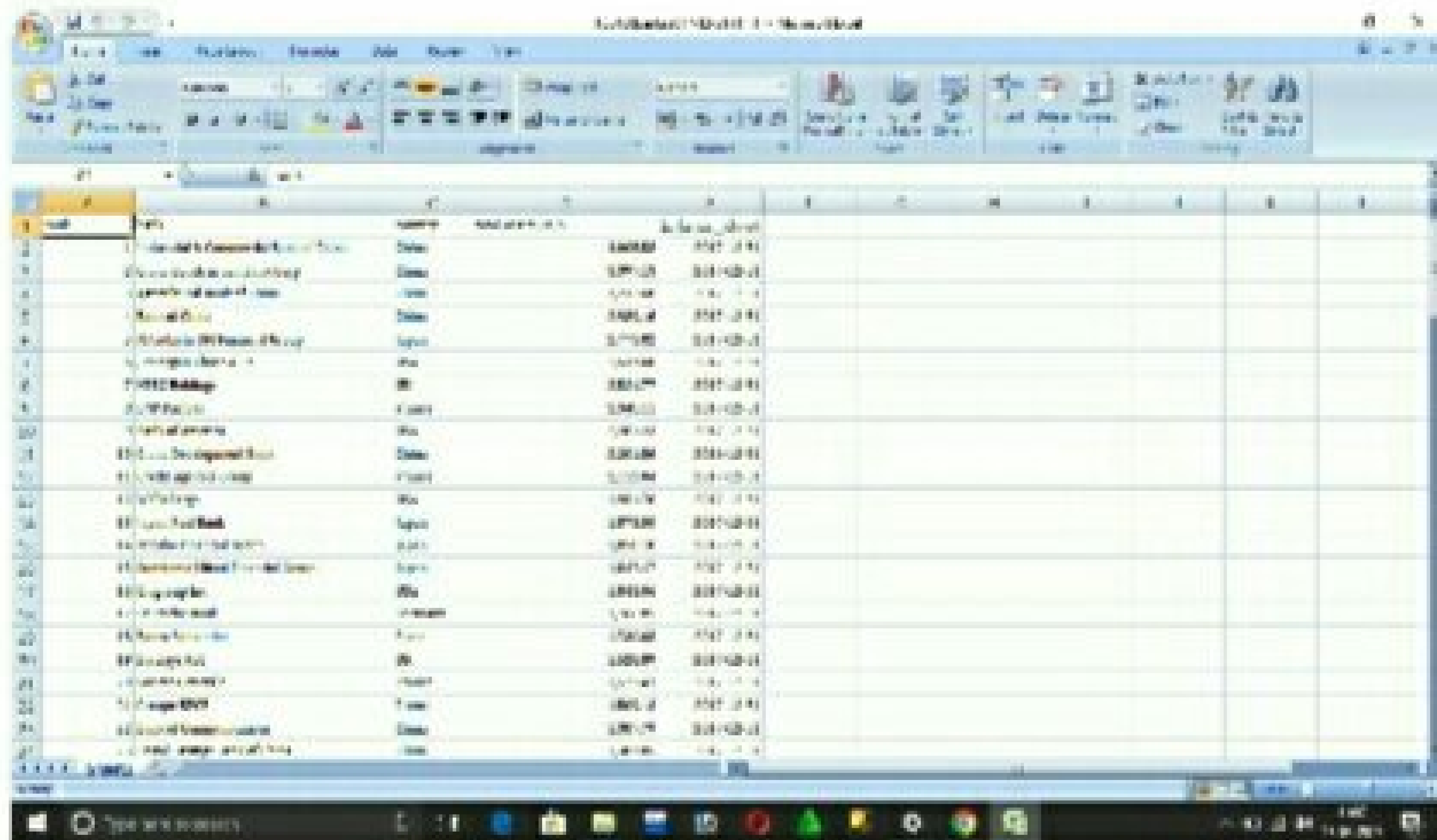
Activity 4: Social or Business Impact. Social Impact:

* Financial analysis of banks can have a significant social impact by identifying areas where the bank's operations or lending practices may be causing harm to vulnerable communities or perpetuating inequality. For example, a financial analysis might reveal that a bank is heavily invested in fossil fuel companies, contributing to climate change, or that the bank is disproportionately denying loans to minority-owned businesses, perpetuating economic discrimination

*Business Model/Impact: Financial analysis of banks can have a significant impact on the business operations of the bank itself and its competitors. For example, a financial analysis can help the bank identify areas where it is underperforming compared to its peers, such as in terms of profitability or asset quality. This information can then be used to develop strategies for improving the bank's performance, such as by reducing costs, increasing revenue, or improving risk management practices.

Milestone 2: Data Collection & Extraction from Database:

Activity 1: Downloading the dataset:



The screenshot shows a Microsoft Excel spreadsheet with the following data:

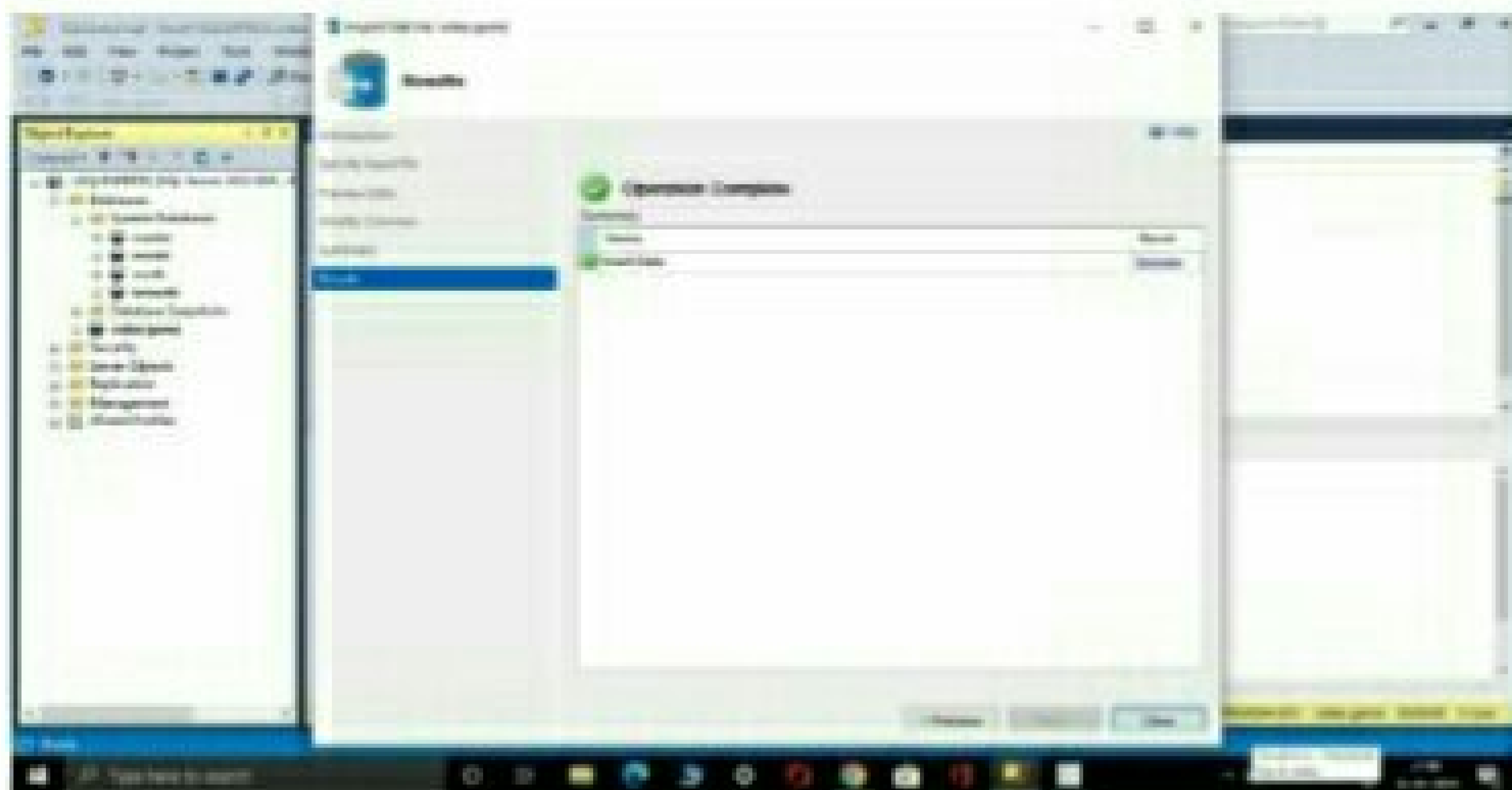
Rank	Bank	Country	Total Assets (\$B)	Rank of Bank among the world
1	Bank of America	USA	2,399.00	1
2	Wells Fargo	USA	1,950.00	2
3	Citigroup	USA	1,700.00	3
4	JP Morgan Chase	USA	1,600.00	4
5	Bank of China	China	1,500.00	5
6	Industrial Bank of Japan	Japan	1,400.00	6
7	Bank of India	India	1,300.00	7
8	Bank of Korea	Korea	1,200.00	8
9	Bank of Taiwan	Taiwan	1,100.00	9
10	Bank of Thailand	Thailand	1,000.00	10
11	Bank of Vietnam	Vietnam	900.00	11
12	Bank of Indonesia	Indonesia	800.00	12
13	Bank of Malaysia	Malaysia	700.00	13
14	Bank of Singapore	Singapore	600.00	14
15	Bank of Hong Kong	Hong Kong	500.00	15
16	Bank of Australia	Australia	400.00	16
17	Bank of New Zealand	New Zealand	300.00	17
18	Bank of South Africa	South Africa	200.00	18
19	Bank of Brazil	Brazil	100.00	19
20	Bank of Mexico	Mexico	50.00	20

Activity 1.1: Understand the data:

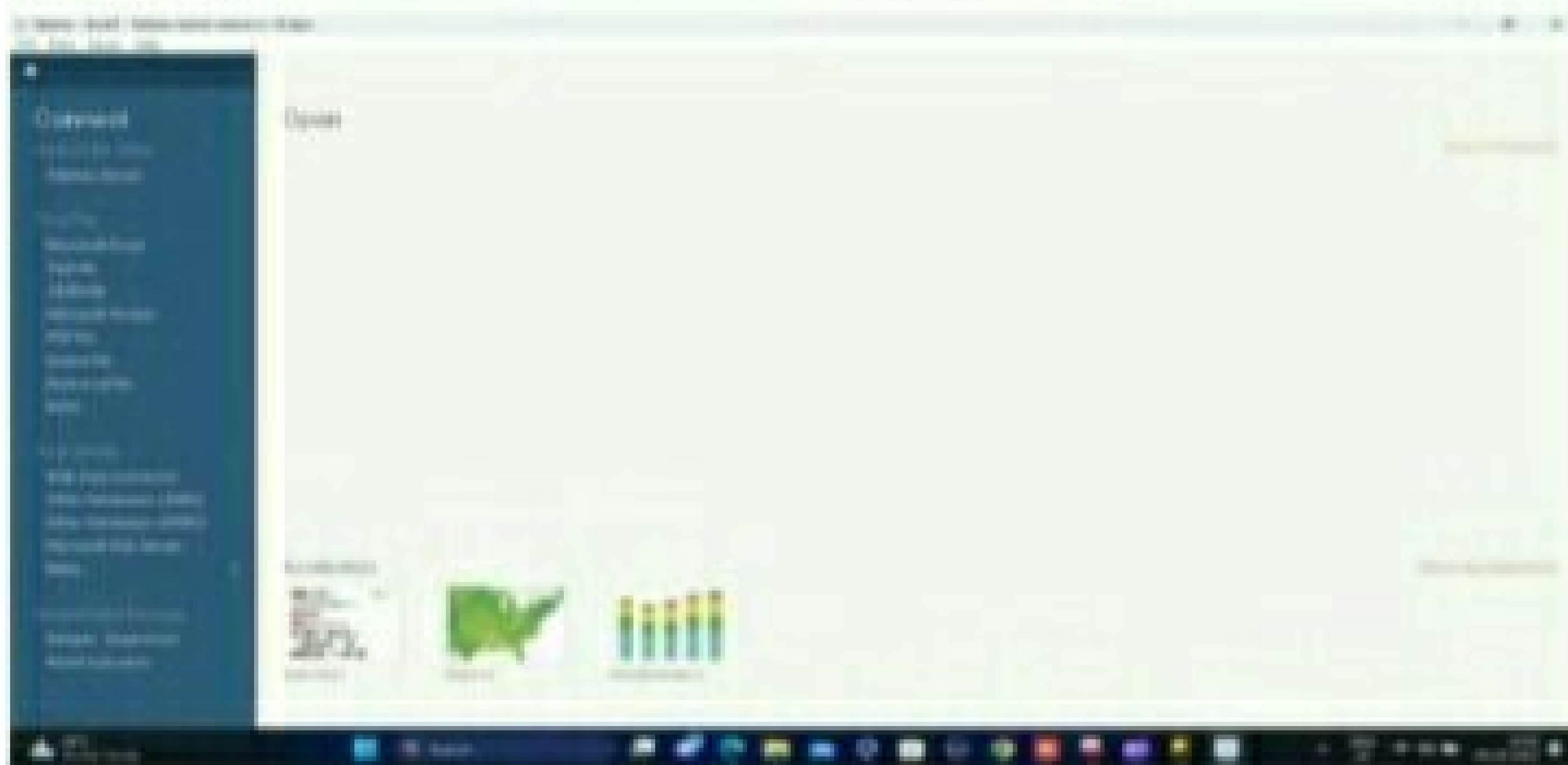
Data contains all the meta information regarding the columns described in the CSV files

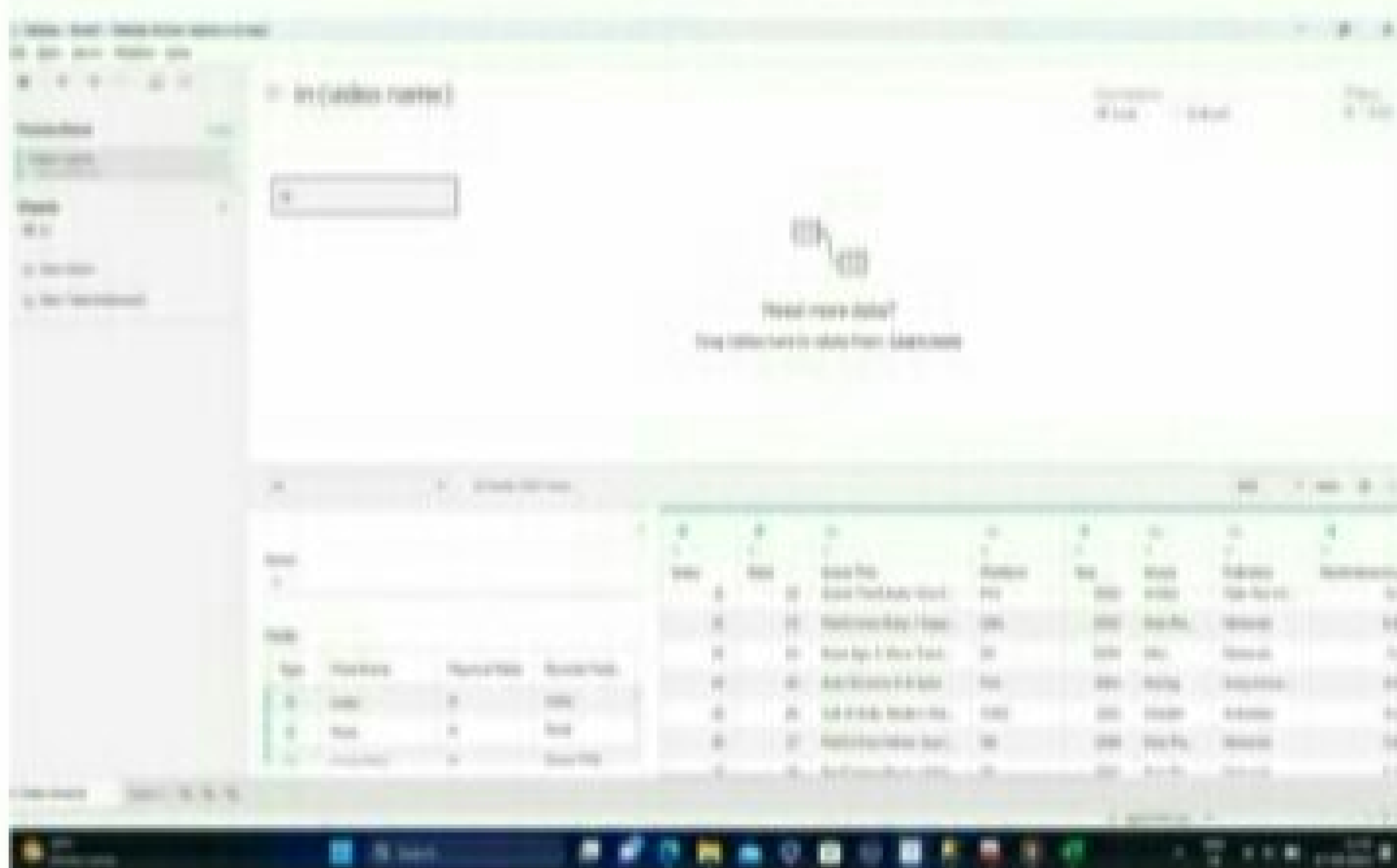
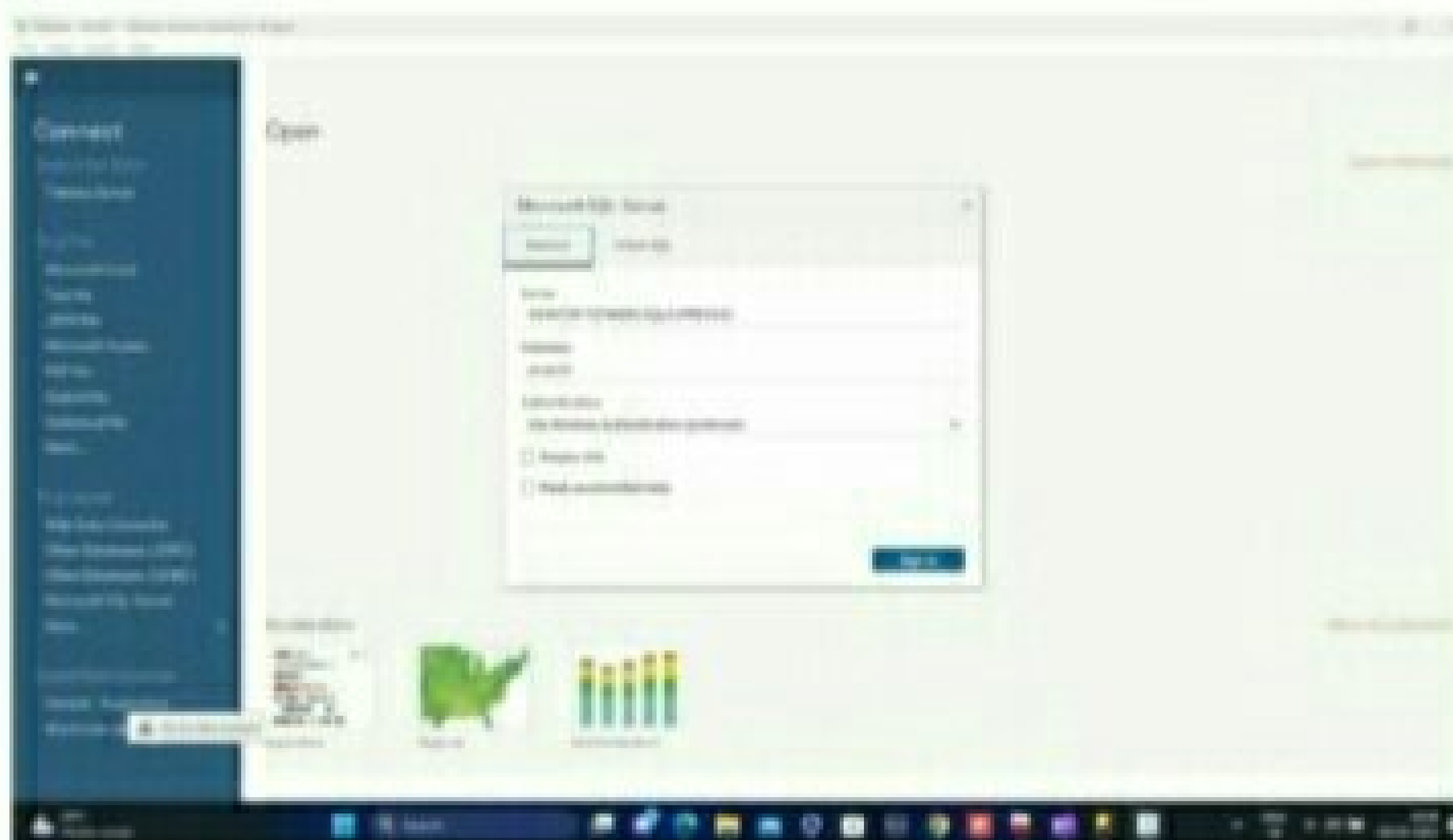
Column Description of the Dataset: 1. bank: Name of the bank 2. Country: In which country the bank is operating 3. Total Assest: Total assets of the banks 4. Rank : Rank of the bank among the world 5. landmass : Under which continent the bank belongs to.

Activity 2: Storing Data in DB & Perform SQL Operations:



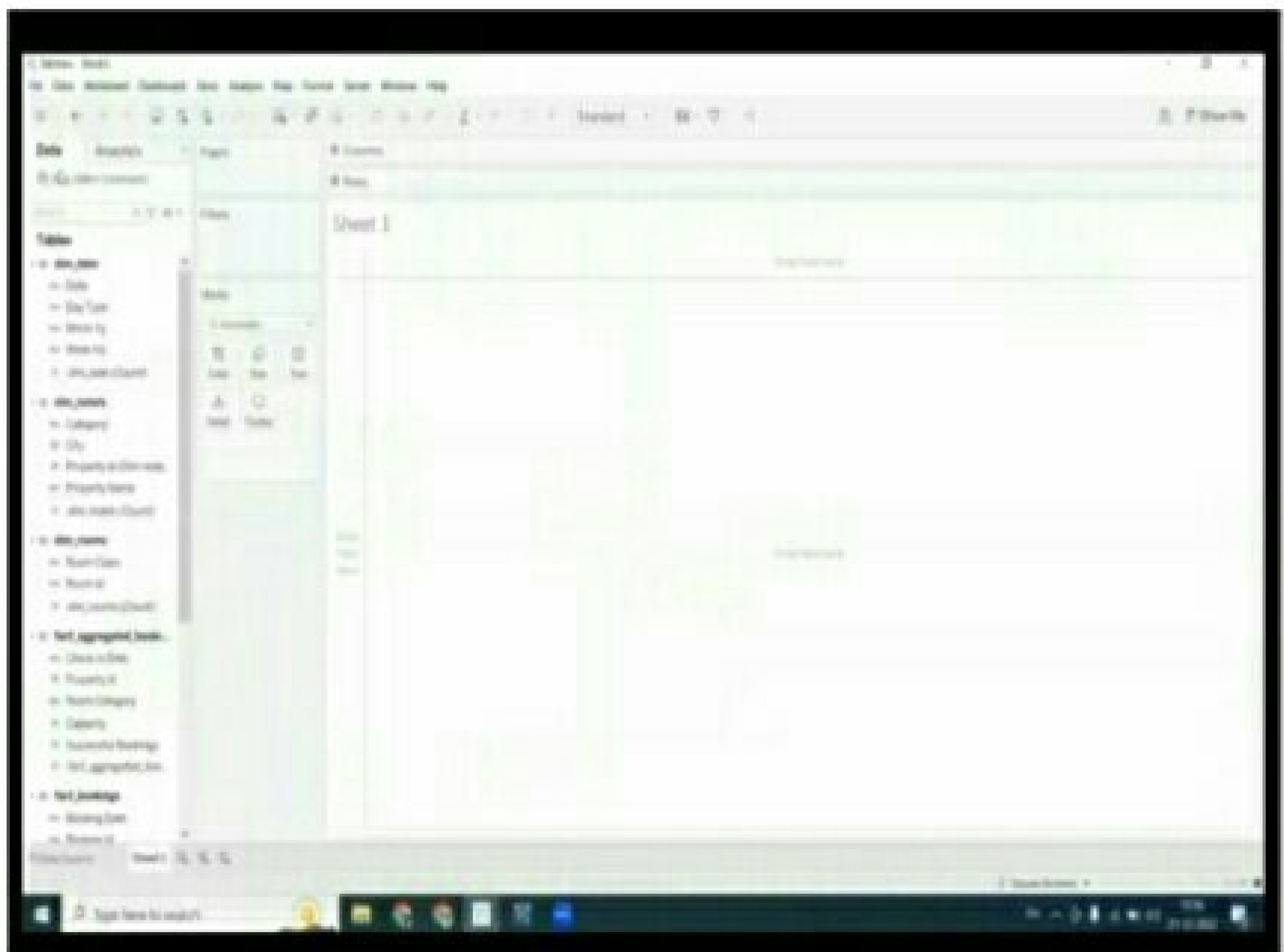
Activity 3: Connect DB with Tableau :





Milestone 3: Data Preparation:

Activity 1: Prepare the Data for Visualization:



Milestone 4: Data Visualization:

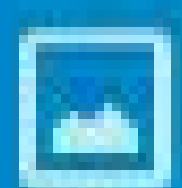
Activity 1: No of Unique Visualizations:

*The number of unique visualizations that can be created with a given dataset. Some common types of visualizations that can be used to analyze the performance and efficiency of banks include bar charts, line charts, heat maps, scatter plots, pie charts, Maps etc. These visualizations can be used to compare performance, track changes over time, show distribution, and relationships between variables, breakdown of revenue and customer demographics, workload, resource allocation and location of banks.

Activity 1.1 : Top banks according rank and assets:

Rank	Bank name	Total assets (2021) (US\$ billion)
1	 <u>Industrial and Commercial Bank of China Limited</u>	5,536.53
2	 <u>China Construction Bank</u>	4,762.46
3	 <u>Agricultural Bank of China</u>	4,575.95
4	 <u>Bank of China</u>	4,206.53
5	 <u>JP Morgan Chase</u>	3,743.57
6	 <u>Mitsubishi UFJ Financial Group</u>	3,176.84
7	 <u>Bank of America</u>	3,169.50
8	 <u>HSBC</u>	2,953.64
9	 <u>BNP Paribas</u>	2,905.83
10	 <u>Crédit Agricole</u>	2,674.35
11	 <u>Citigroup Inc.</u>	2,291.41
12	 <u>SMBC Group</u>	2,176.94
13	 <u>Japan Post Bank</u>	1,998.98
14	 <u>Postal Savings Bank of China</u>	1,981.53
15	 <u>Mizuho Financial Group</u>	1,957.87
16	 <u>Wells Fargo</u>	1,948.07
17	 <u>Barclays</u>	1,874.40
18	 <u>Bank of Communications</u>	1,836.38
19	 <u>Banco Santander</u>	1,814.90
20	 <u>Groupe BPCE</u>	1,724.12
21	 <u>Société Générale</u>	1,665.47
22	 <u>Deutsche Bank</u>	1,505.74
23	 <u>Toronto-Dominion Bank</u>	1,486.40
24	 <u>Goldman Sachs</u>	1,463.99
25	 <u>China Merchant's Bank</u>	1,455.94
26	 <u>Royal Bank of Canada</u>	1,376.79

Rank	Bank name	Total assets (2021) (US\$ billion)
27	 Industrial Bank (China)	1,354.25
28	 China CITIC Bank	1,266.08
29	 Shanghai Pudong Development Bank	1,251.38
30	 Crédit Mutuel	1,249.36
31	 Intesa Sanpaolo	1,215.74
32	 Lloyds Banking Group	1,200.41
33	 Morgan Stanley	1,188.14
34	 UBS	1,117.18
35	 China Minsheng Bank	1,094.48
36	 ING Group	1,081.87
37	 NatWest Group	1,058.86
38	 UniCredit	1,042.50
39	 Scotiabank	978.48
40	 China Everbright Bank	929.08
41	 Norinchukin Bank	927.77
42	 Bank of Montreal	908.62
43	 La Banque postale	878.32
44	 Commonwealth Bank	836.05
45	 Credit Suisse	829.12
46	 Standard Chartered	827.82
47	 Banco Bilbao Vizcaya Argentaria	818.21
48	 Ping An Bank	774.70
49	 CaixaBank	773.38
50	 Rabobank	727.37
51	 DZ Bank	713.38
52	 Australia and New Zealand Banking Group	709.01

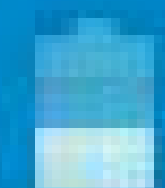


VoLTE

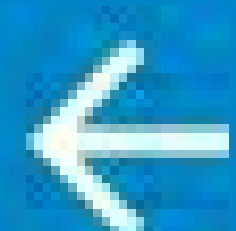
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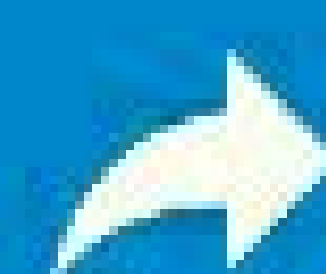
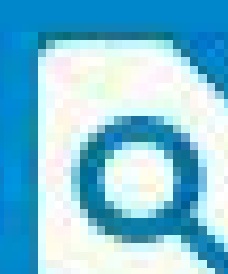
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Milestone 4.docx



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Rank	Bank name	Total assets (2021) (US\$ billion)
53	State Bank of India	694.90
54	Westpac	677.88
55	Canadian Imperial Bank of Commerce	676.95
56	National Australia Bank	670.70
57	Resona Holdings	662.32
58	Nordea	648.64
59	Danske Bank	602.01
60	U.S. Bancorp	573.28
61	KB Financial Group Inc	557.35
62	PNC Financial Services	557.19
63	Sumitomo Mitsui Trust Holdings	553.87
64	Huaxia Bank	550.75
65	Sberbank of Russia	548.58
66	Shinhan Bank	544.14
67	Truist Financial Corp	541.74
68	Commerzbank	6 / 11
69	DBS Bank	508.89
70	China Guangfa Bank	493.36
71	Bank of Beijing	474.36
72	ABN AMRO	453.90
73	The Bank of New York Mellon	444.44
74	Capital One	432.38
75	Nonghyup Bank	425.58
76	Hana Financial Group	421.81
77	Bank of Shanghai	411.53
78	OCBC Bank	402.16

Rank	Bank name	Total assets (2021) (US\$ billion)
79	Bank of Jiangsu	400.75

eMudhra







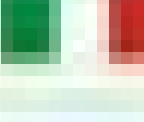

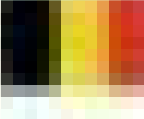

Apply for DSC with Aadhaar OTP

APPLY NOW >

Activity 1.2: Top banks according to total assets:

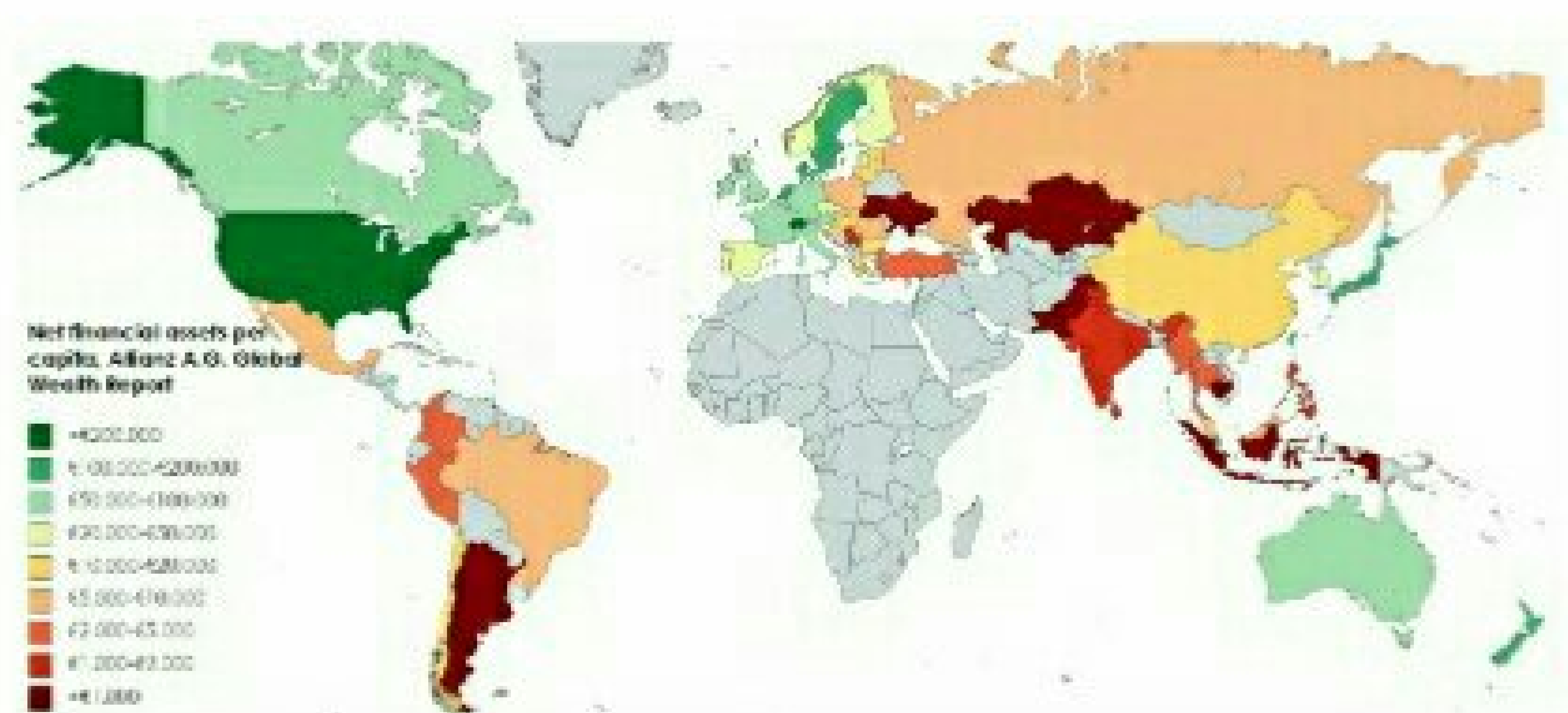
Banks by country or territory

Number of banks in the top 100 by total assets ^[1]

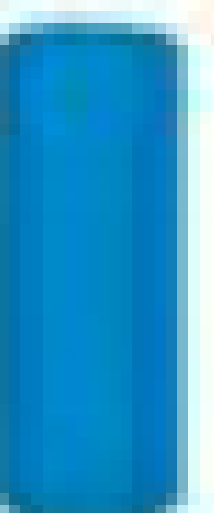
Rank	Country	Number
1	 China	19
2-	 United States	12
3 -	 Japan	8
4	 United Kingdom	6
	 France	6
	 South Korea	6
	 Canada	6
8	 Germany	5
9	 Australia	4
10	 Brazil	3
	 Netherlands	3
	 Singapore	3
	 Spain	3
	 Sweden	3
	 Switzerland	3
16	 Italy	2
17	 India	1
	 Austria	1
	 Belgium	1
	 Denmark	1
	 Finland	1
	 Norway	1
	 Russia	1
	 Qatar	1

See also




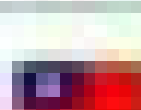


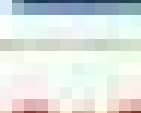


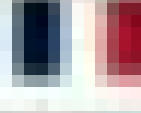

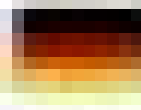





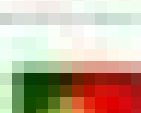
Activity 1.3: Top banks according to country based on total assets:

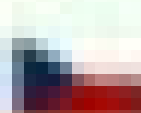



Activity 1.4: Top 10 Countries with assets proportion:



List by Allianz A.G. (2022)

Rank	Country	Mean net financial assets per capita (EUR)
1	 <u>United States</u>	259,780
2	 <u>Switzerland</u>	237,110
3	 <u>Denmark</u>	180,610
4	 <u>Sweden</u>	146,530
5	 <u>Taiwan</u>	136,220
6	 <u>Singapore</u>	134,150
7	 <u>New Zealand</u>	132,170
8	 <u>Netherlands</u>	125,510
9	 <u>Canada</u>	125,290
10	 <u>Israel</u>	106,220
11	 <u>Belgium</u>	100,650
12	 <u>United Kingdom</u>	100,830
13	 <u>Japan</u>	100,720
14	 <u>Australia</u>	99,400
15	 <u>Ireland</u>	77,610
16	 <u>France</u>	70,320
17	 <u>Italy</u>	71,820
18	 <u>Germany</u>	69,290
19	 <u>Austria</u>	67,930
20	 <u>Malta</u>	50,330
21	 <u>Spain</u>	40,480
22	 <u>Finland</u>	38,360
23	 <u>South Korea</u>	38,230
24	 <u>Norway</u>	35,720
25	 <u>Portugal</u>	28,860
26	 <u>Slovenia</u>	25,400

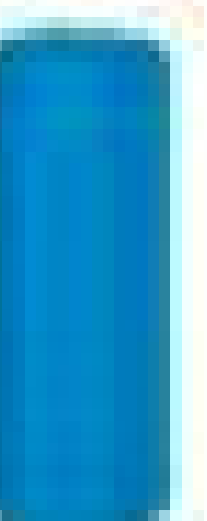
Rank	Country	Mean net financial assets per capita (EUR)
27	 <u>Czech Republic</u>	24,380
28	 <u>Estonia</u>	22,560

Activity 1.5Country with total assets using funnelchart in increasing order:

Email Conversion Rate



Activity 1.6: Total assets analysis according to year and quarter:



Balance Sheet

Asset Type	FY - 1	FY - 2
	Prior Year	Current Year
Current Assets	600	600
Fixed Assets	(96)	(80)
Other Assets	0	0
Current Liabilities	500	350
Long-term Liabilities	0	0
Owner Equity	0	300
Total Assets	504	520
Total Liabilities & Stockholder Equity	504	700
Balance	0	(180)

Balance Sheet

	FY-2020	FY-2021
Asset Type	Prior Year	Current Year
Current Assets	600	600
Fixed Assets	(100)	(85)
Other Assets	0	0
Current Liabilities	500	350
Long-term Liabilities	0	0
Owner Equity	0	350
Total Assets	500	515
Total Liabilities & Stockholder Equity	500	700
Balance	0	(185)

Assets

		FY-2020	FY-2021
Asset Type	Description	Prior Year	Current Year
Current Assets	Cash	600	600
Current Assets	Investments		
Current Assets	Inventories		
Current Assets	Accounts receivable		
Current Assets	Pre-paid expenses		
Fixed Assets	Property and equipment		
Fixed Assets	Leasehold improvements		
Fixed Assets	Equity and other investments		
Fixed Assets	Less accumulated depreciation (Negative Value)	(100)	(85)
Other Assets	Charity		
Total Assets		500	515

Liabilities

		FY-2020	FY-2021
Liability Type	Description	Prior Year	Current Year
Current Liabilities	Accounts payable		350
Current Liabilities	Accrued wages		
Current Liabilities	Accrued compensation	500	
Current Liabilities	Income taxes payable		
Current Liabilities	Unearned revenue		
Long-term Liabilities	Mortgage payable		
Owner Equity	Investment capital		350
Owner Equity	Accumulated retained earnings		
Total Liabilities & Stockholder Equity		500	700

Milestone 5: Dashboard:

A dashboard is a graphical user interface (GUI) that displays information and data in an

organized, easy-to-read format. Dashboards are often used to provide real-time monitoring and

analysis of data and are typically designed for a specific purpose or use case. Dashboards can be

used in a variety of settings, such as business, finance, manufacturing, healthcare, and many

other industries. They can be used to track key performance indicators (KPIs), monitor

performance metrics, and display data in the form of charts, graphs and tables.

Activity 1- Responsive and Design of Dashboard:





Milestone 6: Story:

A data story is a way of presenting data and analysis in a narrative format, intending to make the

information more engaging and easier to understand. A data story typically includes a clear

introduction that sets the stage and explains the context for the data, a body that presents the data

and analysis logically and systematically, and a conclusion that summarizes the key findings and

highlights their implications. Data stories can be told using a variety of mediums, such as reports,

presentations, interactive visualizations, and videos.

Activity 1- No of Scenes of Story:

The number of scenes in a storyboard for a data visualization analysis of the performance of banks will depend on the complexity of the analysis and the specific insights that are trying to be conveyed. A storyboard is a visual representation of the data analysis process and it breaks down the analysis into a series of steps or scenes.





Financial Performance Dashboard

Klipfolio®

Reviewed: 11/10/2016

\$23.5M YTD

Quick Ratio | Current Ratio | Debt-Equity

1.9:1
current ratio is higher

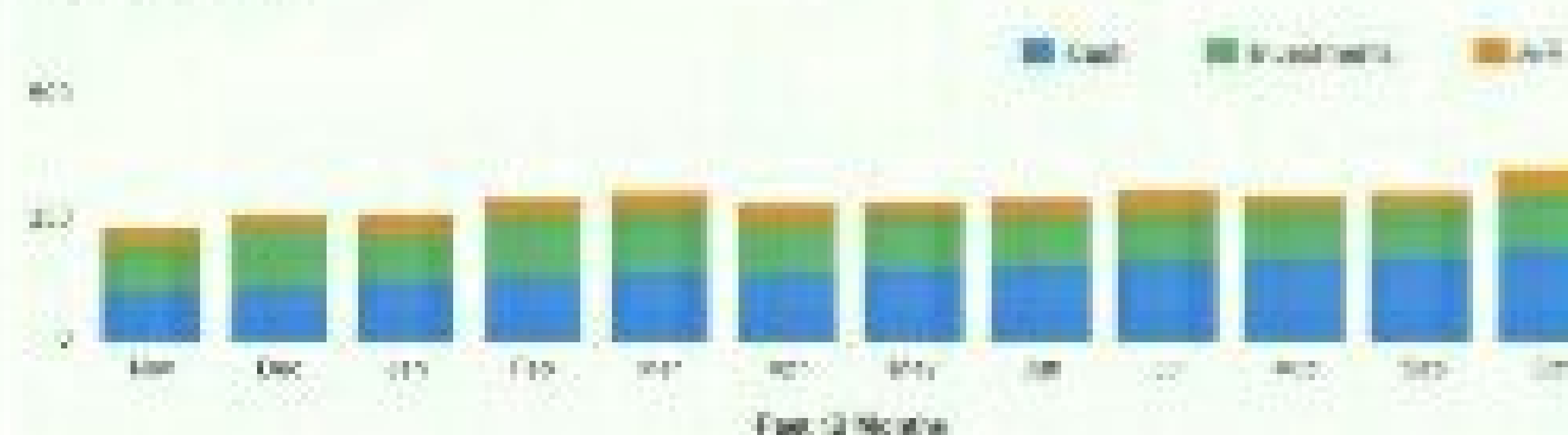
2.5:1
current ratio is higher

0.7:1
debt-equity ratio is higher

Global Financial Performance



Chart: Total Assets



© 2016 Klipfolio

Financial Performance Dashboard - Klipfolio®

www.klipfolio.com

Reviewed by: Klipfolio®

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Leads This Month



Key Conversion Metrics



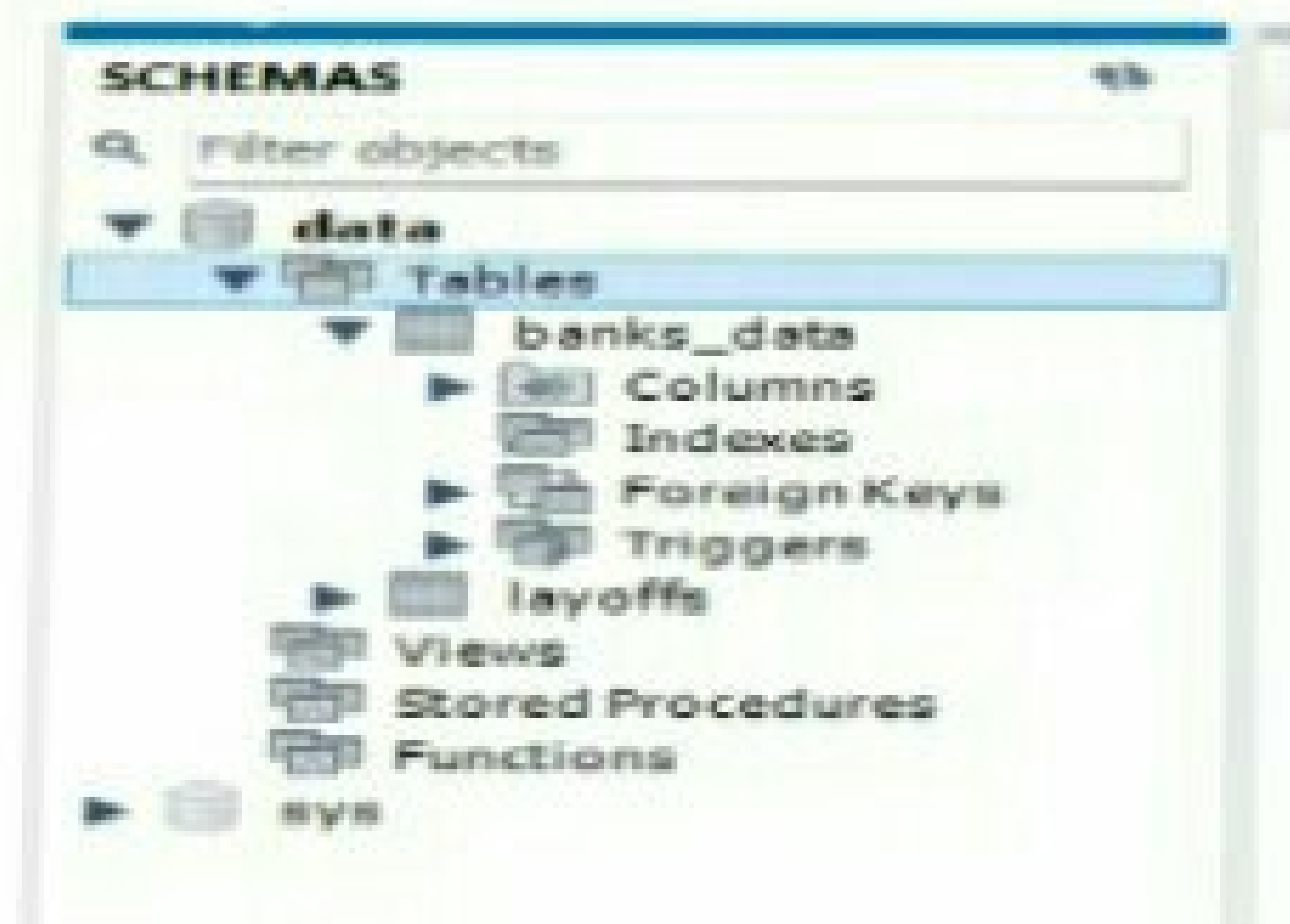
Milestone 7: Performance

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Testing

Activity 1: Amount of Data Rendered to DB

- The amount of data that is rendered to a database depends on the size of the dataset and the capacity of the database to store and retrieve data.
- Open the MySQL Workbench, go to the database then click to expand the tables, select the table and click on (i) button to get the information related to table such as column count, table rows etc.



Navigator

SCHEMAS

Filter objects

- data
 - Tables
 - banks_data**
 - Columns
 - Indexes
 - Foreign Keys
 - Triggers
 - Views
 - Stored Procedures
 - Functions
 - sys

Administration Schemas Information

Query 1 layoffs layoffs **data.banks_data**

Info Columns Indexes Triggers Foreign keys Partitions Grants DDL

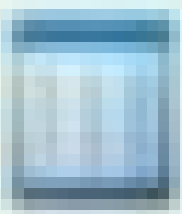
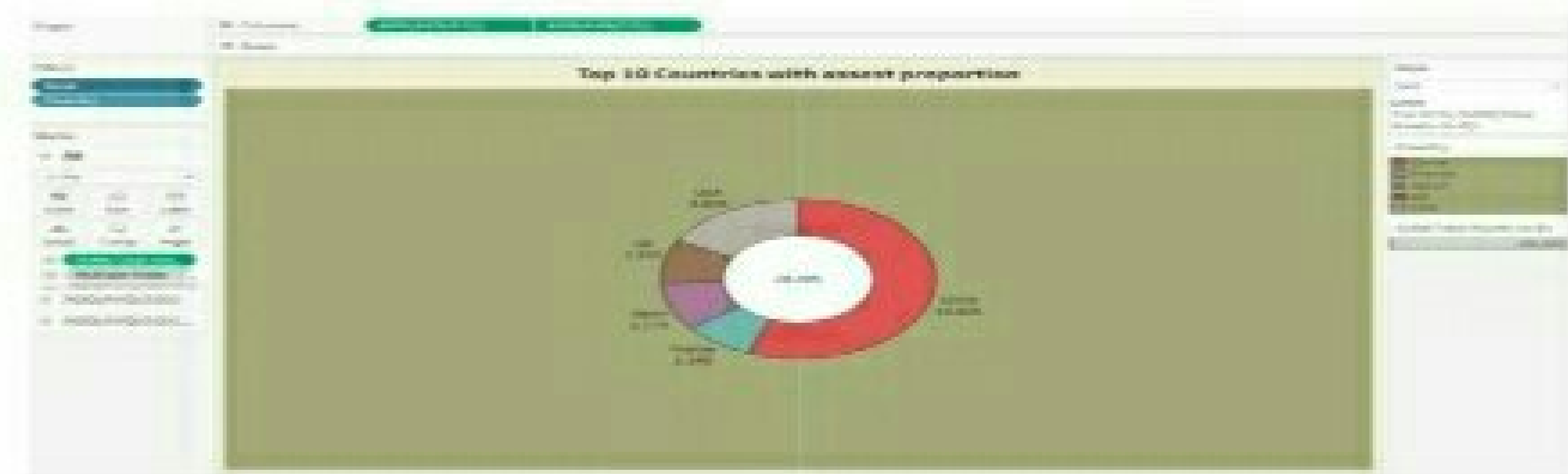
 **data.banks_data**

Table Details

Engine:	InnoDB
Row format:	Dynamic
Column count:	5
Table rows:	120
AVG row length:	136
Data length:	16.0 KB
Index length:	0.0 bytes
Max data length:	0.0 bytes
Data free:	0.0 bytes
Table size (estimate):	16.0 KB
File format:	
Data path:	C:\ProgramData\MySQL\MySQL Server 8.0\Data\data\banks_data.ibd
Update time:	2023-01-25 19:14:05
Create time:	2023-01-25 19:14:05

Information on this page may be outdated. Click [Analyze Table](#) to update it.

Activity 2: Utilization of Data Filters



Activity 3: No of Calculation Fields

World Bank Country or Territory or Region	Rank country in GDP, 2021 -	Global rank -	2021 Available data -
Hong Kong	265.02	1	1990 - 2021
Macao	271.29	2	1991 - 2021
China	274.79	3	1995 - 2021
Qatar	285.05	4	1970 - 2021
South Korea	181.59	5	1961 - 2021
Switzerland	185.89	6	1965 - 2021
Japan	187.82	7	1960 - 2021
Cambodia	189.21	8	1992 - 2021
New Zealand	191.79	9	1960 - 2021
Malaysia	195.82	10	1960 - 2021
Thailand	199.82	11	1960 - 2021
Australia	199.91	12	1960 - 2021
Romania	199.94	13	1960 - 2021
Vietnam	199.95	14	1992 - 2021
USA	199.99	15	1960 - 2021
Norway	199.99	16	1960 - 2021
France	199.99	17	1960 - 2021
Mauritius	199.99	18	1960 - 2021
Jordan	199.99	19	1960 - 2021
Saudi	199.99	20	1960 - 2021
Nepal	199.99	21	1960 - 2021
Spain	199.99	22	1960 - 2021
Italy	199.99	23	1960 - 2021
Portugal	199.99	24	1960 - 2021
Colombia	199.99	25	1960 - 2021

World Bank Country or Territory or Region	Rank country in GDP, 2021 -	Global rank -	2021 Available data -
Cape Verde	199.99	26	1990 - 2021
Finland	199.99	27	1960 - 2021
Netherlands	199.99	28	1960 - 2021
Austria	199.99	29	1960 - 2021
European Union	199.99	30	1960 - 2021
Egypt	199.99	31	1960 - 2021
Mexico	199.99	32	1960 - 2021
Germany	199.99	33	1970 - 2021
Pol	199.99	34	1960 - 2021
India	199.99	35	1970 - 2021
Chile	199.99	36	1960 - 2021
Panama	199.99	37	1960 - 2021
Turkey	199.99	38	1960 - 2021
Turkmenistan	199.99	39	1960 - 2021
Belgium	199.99	40	1960 - 2021
Indonesia	199.99	41	1970 - 2021
Israel	199.99	42	1960 - 2021
Sweden	199.99	43	1960 - 2021
Namibia	199.99	44	1960 - 2021
Paraguay	199.99	45	1960 - 2021
Bolivia	199.99	46	1960 - 2021
Armenia	199.99	47	1990 - 2021
Georgia	199.99	48	1990 - 2021
Honduras	199.99	49	1960 - 2021
Saint Lucia	199.99	50	1960 - 2021
Belize	199.99	51	1960 - 2021

1:00 PM		1:48 (20)	
South Africa	74.39	82	1909 - 2021
Senegal	74.14	83	1960 - 2021
Algeria	72.45	84	1964 - 2021
India	72.4	85	1950 - 2021
Costa Rica	71.88	86	1960 - 2021
Jamaica	71.47	87	1962 - 2021
Maldives	71.15	88	1968 - 2021
Philippines	71.02	89	1948 - 2021
Sweden	70.79	90	1919 - 2021
Montenegro	69.69	91	2002 - 2021
U. S. Virgin Is.	69.64	92	1960 - 2021
Ant. & Barb.	67.1	93	1978 - 2021
Poland	66.81	94	1980 - 2021
Rwanda	66.69	95	2001 - 2021
Australia	65.21	96	1971 - 2021
Rep. P. Macedonia	64.73	97	1993 - 2021
Polynesia	64.57	98	1961 - 2021
D. Salvador	63.33	99	1968 - 2021
Palestine	62.12	70	1988 - 2021
Bulgaria	61.91	71	1901 - 2021
Grenada	61.89	72	1977 - 2021
Paraguay	61.61	73	1979 - 2021
Bosnia & Herz.	61.42	74	1997 - 2021
Colombia	60.1	75	1960 - 2021
Serbia	59.89	76	1967 - 2021
Albania	60.78	77	1968 - 2021

2:00 PM		2:48 (20)	
Bangladesh	59.3	79	1974 - 2021
Samoa	58.86	79	1962 - 2021
Hungary	57.66	80	1991 - 2021
St. Vincent &	56.64	81	1979 - 2021
Mongolia	52.77	82	1991 - 2021
Malaysia	52.65	83	1963 - 2021
Peru	51.87	84	1969 - 2021
Islandia	49.8	85	1944 - 2021
Ghana	49.68	86	1966 - 2021
Armenia	48.94	87	1992 - 2021
Kazakhstan	47.86	88	1991 - 2021
Uzbekistan	46.99	89	2012 - 2021
Mozambique	46.41	90	1986 - 2021
Pakistan	45.93	91	1960 - 2021
Mexico	45.11	92	1960 - 2021
Senegal	44.11	93	1960 - 2021
Slovenia	43.99	94	2000 - 2021
Indonesia	43.39	95	1980 - 2021
Botswana	42.4	96	1966 - 2021
Lithuania	41.53	97	1992 - 2021
Marshall Is.	41.8	98	1990 - 2021
Mal	40.62	99	1967 - 2021
Kosovo	40.01	100	1998 - 2021
Togo	39.87	101	1969 - 2021
Uganda	39.88	102	1962 - 2021
Rwanda	38.24	103	1964 - 2021

Scatter Plot			Full
Ivory Coast	34.85	104	1960 - 2021
Guinea Rep.	33.82	105	1960 - 2021
Comoros	32.89	106	1960 - 2021
Ireland	31.99	107	1960 - 2021
Uruguay	31.66	108	1960 - 2021
Myanmar	31.62	109	1960 - 2021
Ukraine	30.44	110	1992 - 2021
Moldova	30.17	111	1995 - 2021
Kazakhstan	30.03	112	1993 - 2021
Maldives	29.99	113	1967 - 2021
Nicaragua	29.8	114	1963 - 2021
Kyrgyzstan	28.38	115	1995 - 2021
Albania	28.25	116	1960 - 2021
Lesotho	27.71	117	1978 - 2021
Djibouti	27.7	118	1985 - 2021
Swaziland	27.18	119	1978 - 2021
Armenia	26.15	120	1990 - 2021
Sierra	25.99	121	1960 - 2021
Zambia	23.97	122	2009 - 2021
Madagascar	23.63	123	1963 - 2021
North Korea	21.88	124	1960 - 2021
Uganda	21.14	125	1960 - 2021
Angola	20.87	126	1995 - 2021
Guernsey Isl.	20.51	127	1978 - 2021
El Salvador	20.41	128	1960 - 2021
Iraq	19.94	129	1960 - 2021

Iraq	19.94	129	1960 - 2021
Niger	18.21	130	1960 - 2021
Comoros	17.27	131	1982 - 2021
Cyprus	16.62	132	1975 - 2021
Nigeria	16.4	133	1960 - 2021
Guinea	14.81	134	1989 - 2021
Libya	12.08	135	1963 - 2021
Tajikistan	12.06	136	1996 - 2021
Haiti	11.51	137	1960 - 2021
Zimbabwe	9.01	138	1979 - 2021
DR Congo	8.51	139	2000 - 2021
Sudan	7.87	140	1960 - 2021

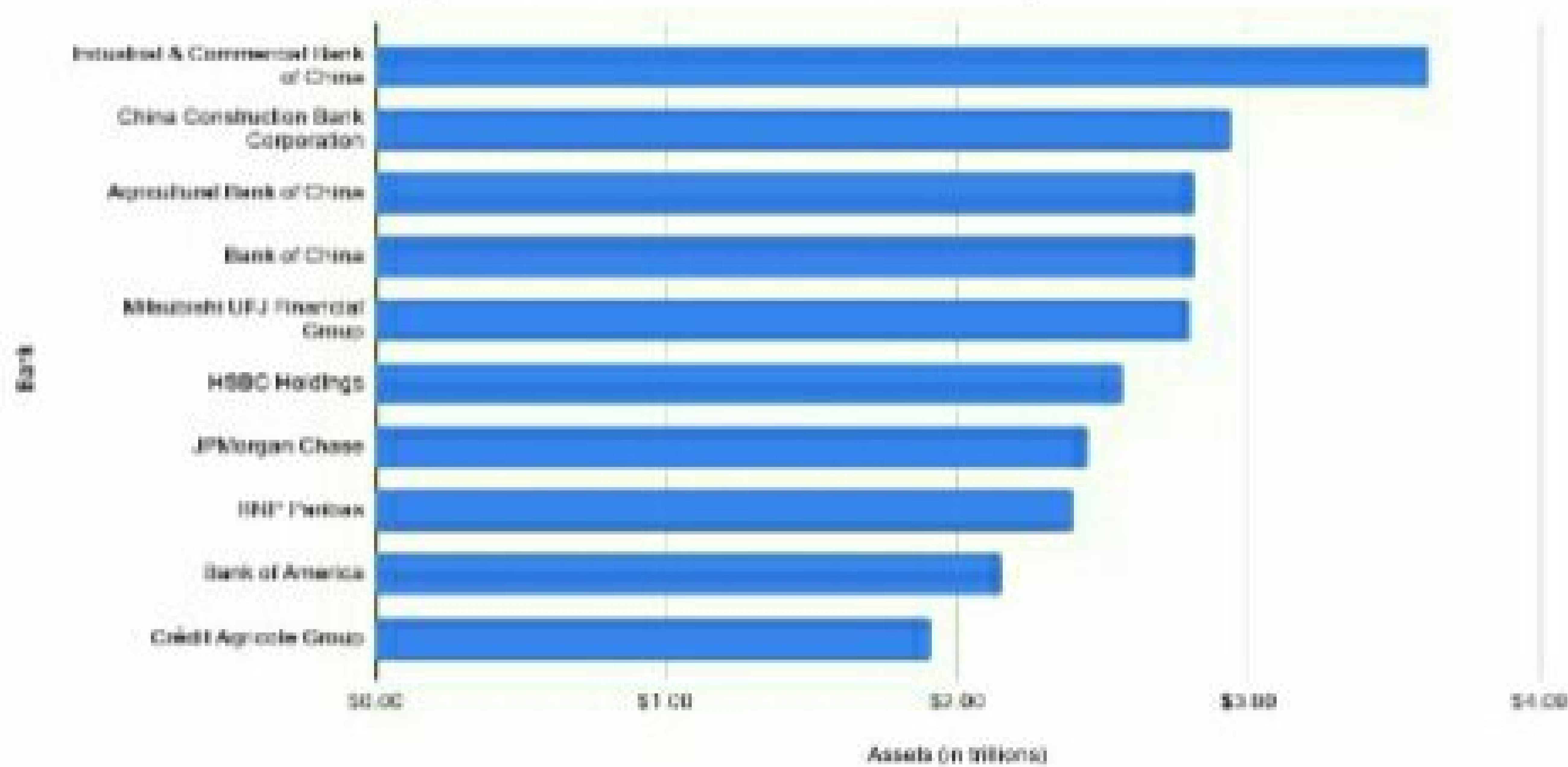
Company	Promethee	Entropy Promethee	GRA	Entropy GRA	Mosca Ratio	Mosca Reference	Entropy Copras	Market Value	Average Return
Akisa Enerji	27	24	12	38	12	11	28	35	31
Anadoluh Cam	29	29	10	8	24	24	31	30	18
Arcelik	32	32	31	22	30	34	33	14	17
Ascham	7	7	8	16	7	10	10	2	12
BIM	8	10	7	12	20	31	9	6	6
Coca-Cola	31	33	34	19	33	35	34	18	23
Dogan Sirkeler	2	2	2	10	5	6	2	26	4
EPK Eczacibasi	9	12	6	2	6	5	6	31	35
Emlak Konut GYO	26	27	13	6	16	37	17	21	38
Feka	21	28	17	14	27	29	24	7	28
Filenir	5	6	11	13	8	9	12	5	16
Ford Otomotiv	11	9	19	15	21	15	11	8	11
Global Yatirim	38	38	36	32	31	13	36	37	30
Hacı Ömer Sabancı	33	31	15	34	23	18	23	10	21
İpek Dogal	6	5	4	4	4	4	4	36	20
Kandemir	19	20	23	7	19	19	27	34	32
Koc Holding	28	26	30	25	32	27	32	1	9
Kona Altın	1	1	1	3	1	2	1	17	7
Kona Anadolu	4	4	3	1	3	3	3	25	10
Mavi Giyim	24	21	27	9	29	30	22	33	22
Migros	25	35	38	37	38	38	38	27	15
Pegasus Hava	13	13	14	36	11	20	8	28	27
Peckin	10	8	22	20	9	7	13	15	36
SASA Polyester	16	14	21	23	13	12	14	23	24
Soda Sanayi	14	15	5	5	2	1	19	20	1
Sivacam	3	3	20	18	18	14	5	12	8
Tav Havalimanları	22	22	28	11	25	26	29	16	5
Tekfen Holding	12	11	16	21	17	28	15	19	2
TİTY	30	30	33	24	26	21	30	9	34
Tofaş	20	18	32	29	34	17	16	13	25
Türkiye Cam	17	19	24	26	22	16	26	24	14
Tapas	18	16	9	17	10	8	7	3	3
Türk Telekom	25	25	37	31	37	22	37	11	26
Türkcell	36	36	25	35	15	23	21	4	19
Uludağ Çelik	15	17	29	28	35	25	18	22	13
Vestel Elektronik	37	37	35	33	36	36	35	32	29
Yutac	23	23	26	30	28	32	25	38	33
Zorlu Enerji	34	34	18	27	14	33	20	29	37

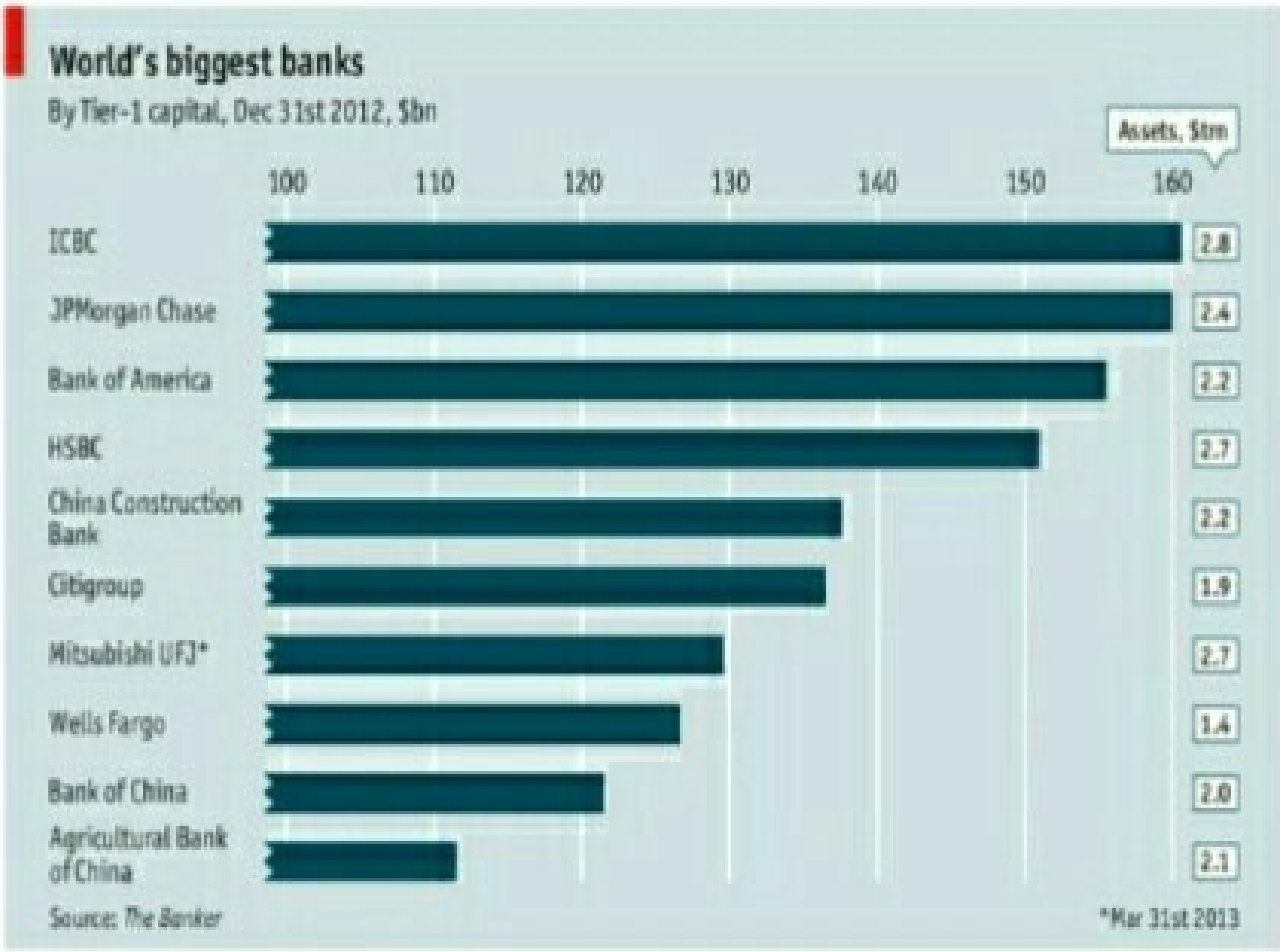
Source: Authors' calculations

Activity 4: No of Visualizations/ Gra

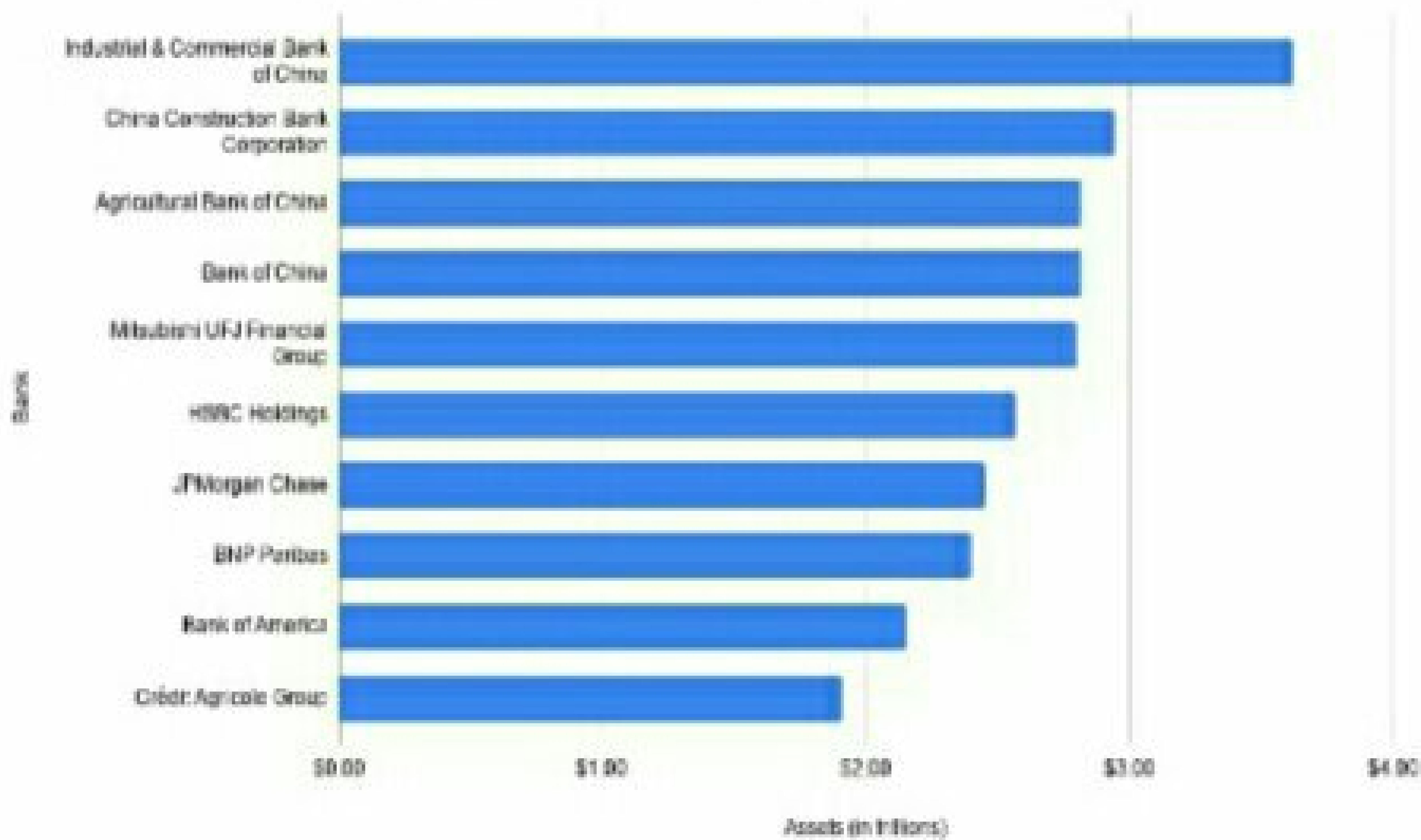
1. Top banks according rank and assets

Largest Banks in the World by Assets



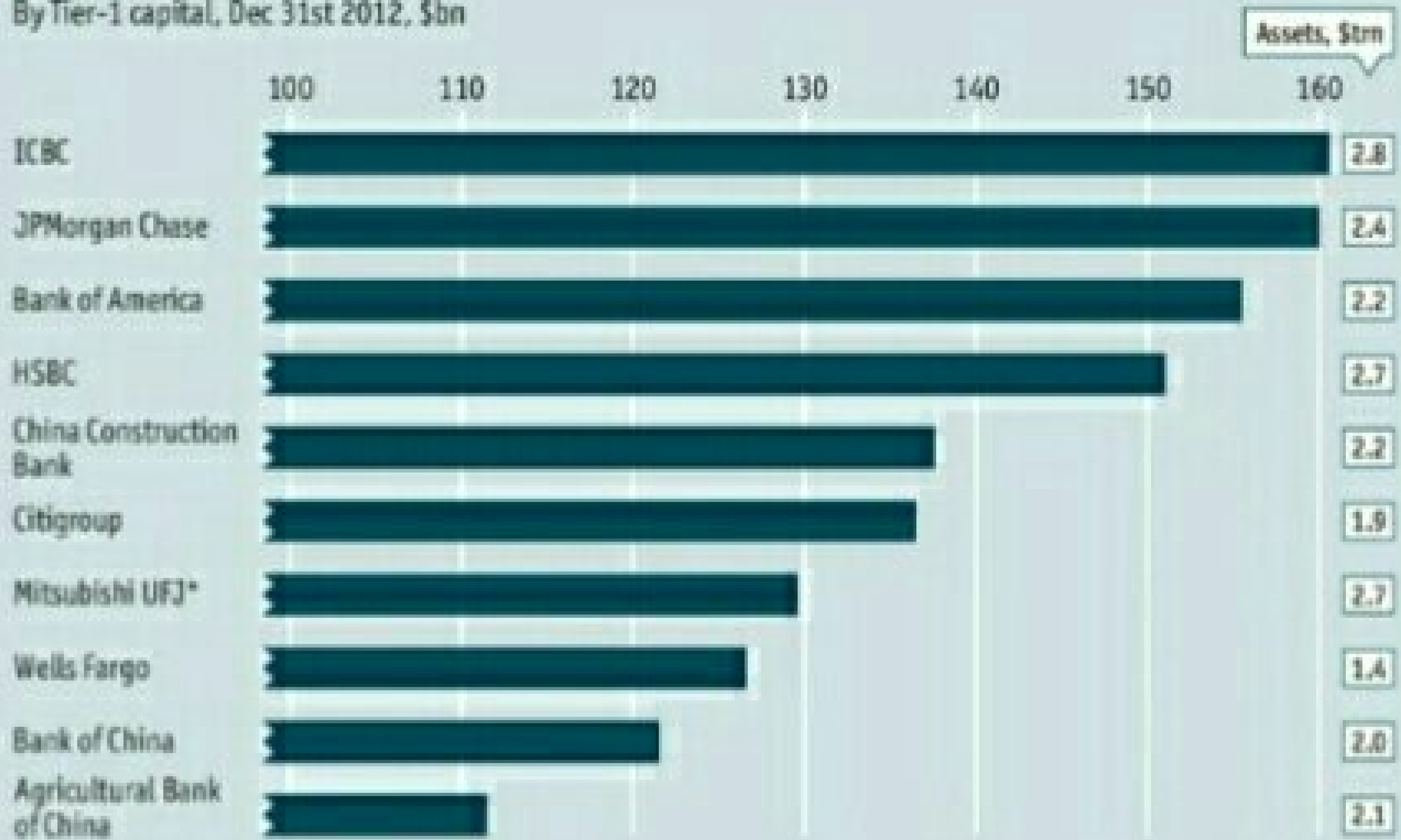


Largest Banks in the World by Assets



World's biggest banks

By Tier-1 capital, Dec 31st 2012, \$bn



Source: The Banker

*Mar 31st 2013

2. Top banks according to total assets

Company Name	Last Price	% Change	Gross Block	Net Block	CWIP	Total Assets
HDFC Bank	1,572.55	1.36	6,083.67	6,083.67	0.00	2,068,535.05
ICICI Bank	836.45	1.57	9,373.82	9,373.82	0.00	1,411,297.74
Axis Bank	837.55	0.81	4,363.22	4,363.22	209.13	1,175,178.11
Kotak Mahindra	1,691.20	1.63	1,643.72	1,643.72	0.00	429,428.40
IndusInd Bank	1,020.45	0.31	1,754.17	1,754.17	94.51	401,074.58

Bank - Private

Company Name	Last Price	% Change	Gross Block	Net Block	CWIP	Total Assets
HDFC Bank	1,572.55	1.36	6,083.67	6,083.67	0.00	2,068,535.05
ICICI Bank	836.45	1.57	9,373.82	9,373.82	0.00	1,411,297.74
Axis Bank	837.55	0.81	4,363.22	4,363.22	209.13	1,175,178.11

IDBI Bank	46.65	5.07	9,540.41	9,540.41	396.56	361,415.36
Yes Bank	15.02	-0.87	2,009.04	2,009.04	124.08	316,220.23
Federal Bank	128.43	0.86	605.76	605.76	28.18	220,946.31
IDFC First Bank	55.21	-0.27	1,281.81	1,281.81	79.41	190,181.61
Bandhan Bank	307.45	-1.49	414.58	414.58	173.30	138,866.55
JK Bank	46.54	-0.63	1,910.60	1,910.60	43.08	130,602.41

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South Ind Bk	17.74	2.96	752.01	752.01	59.05	100,052.42
RBL Bank	141.75	0.18	466.56	466.56	81.55	106,208.58
Karnataka Bank	139.40	-0.04	818.16	818.16	0.00	92,048.55
Kanar Vysya	99.55	1.12	463.63	463.63	14.86	80,043.72
AU Small Financ	589.79	0.86	608.67	608.67	13.90	69,0
City Union Bank	130.69	0.62	214.65	214.65	0.00	61,538.91

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IDBI Bank	46.65	5.07	9,540.41	9,540.41	396.50	301,419.36
Yes Bank	15.02	0.87	2,009.04	2,009.04	124.08	318,220.23
Federal Bank	128.40	0.85	605.76	605.76	28.18	220,946.31
IDFC First Bank	55.21	-0.27	1,281.81	1,281.81	79.41	150,181.61
Bandhan Bank	207.45	1.49	414.58	414.58	173.30	128,866.55
JK Bank	46.54	0.63	1,910.60	1,910.60	43.08	130,602.41

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South Ind Bk	17.74	2.90	752.01	752.01	59.05	100,052.42
RBL Bank	141.75	0.18	466.56	466.56	81.55	106,298.58
Karnataka Bank	139.40	-0.04	818.16	818.16	0.00	92,040.55
Karur Vysya	99.55	1.12	463.63	463.63	14.86	80,043.72
AU Small Financ	589.70	0.86	608.67	608.67	13.90	69,0
City Union Bank	130.50	0.62	214.65	214.65	0.00	61,530.91

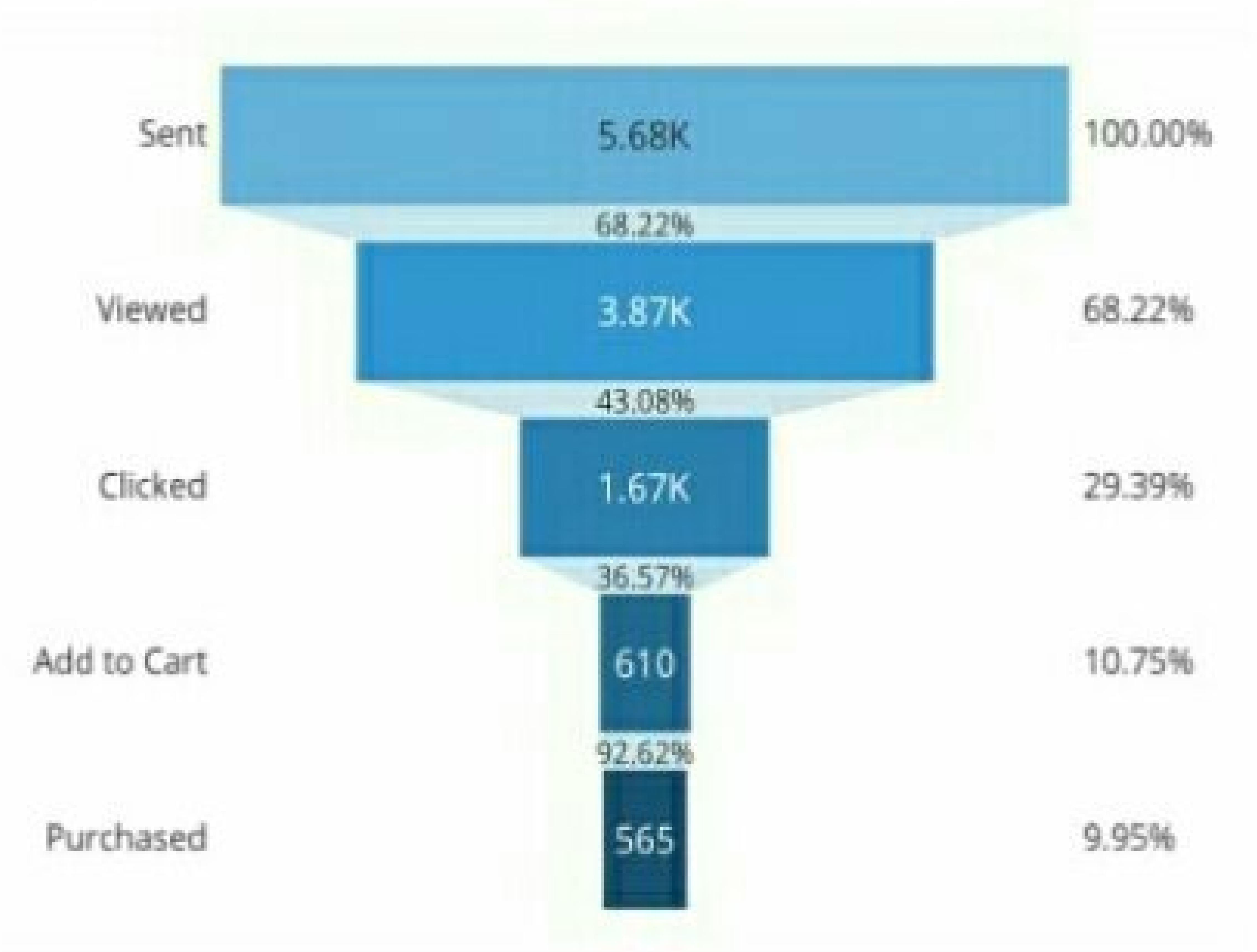
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TMB	424.45	0.18	210.84	210.84	0.00	52,858.49
DCB Bank	100.35	2.44	608.36	608.36	52.82	44,840.14
Equitas Bank	68.17	5.84	189.27	189.27	11.18	26,951.90
CSB Bank	231.35	3.37	287.86	287.86	0.00	25,356.27
Get App						
Ujivan Small	23.75	-2.30	243.60	243.60	5.79	23,604.46
Dhanlaxmi Bank	15.00	0.20	221.00	221.00	0.00	13,795.75

3. Top banks according to country based on total assets

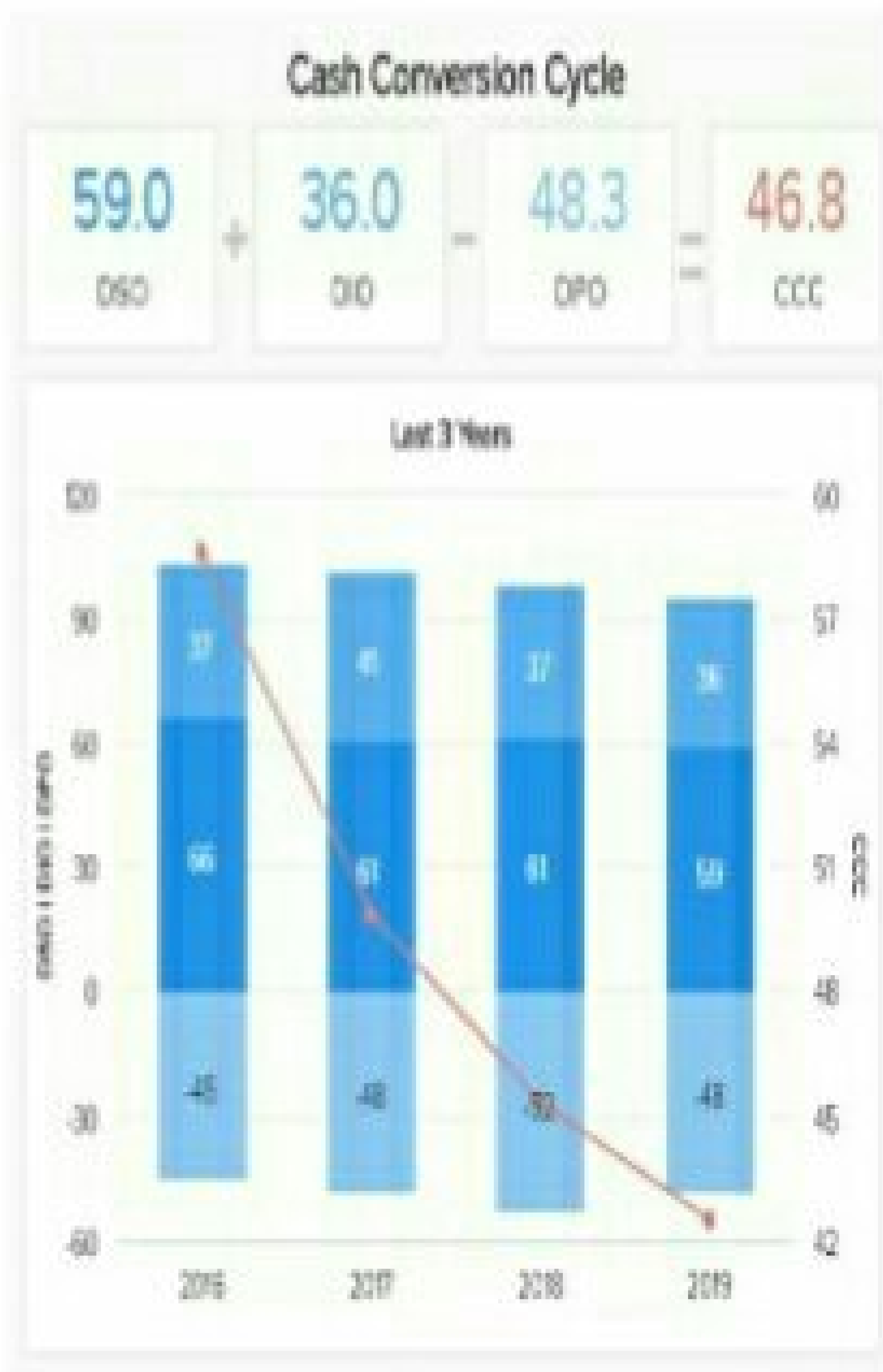
Rank	Bank	Country	Total Assets (USD billion)
1	Industrial & Commercial Bank of China	China	3,549.88
2	China Construction Bank Corp	China	2,981.85
3	Mitsubishi UFJ Financial Group	Japan	2,901.34
4	Agricultural Bank of China	China	2,818.89
5	Bank of China	China	2,656.07
6	HSBC Holdings	UK	2,608.15
7	JPMorgan Chase & Co	US	2,466.10
8	BNP Paribas	France	2,417.00
9	Bank of America	US	2,186.61
10	Japan Post Bank	Japan	2,022.02
11	Deutsche Bank	Germany	2,006.71
12	Credit Agricole Group	France	1,970.40
13	Mizuho Financial Group	Japan	1,923.72
14	China Development Bank	China	1,904.34
15	Wells Fargo	US	1,889.24
16	Barclays PLC	UK	1,810.61
17	Citigroup Inc	US	1,818.77
18	Sumitomo Mitsui Financial Group	Japan	1,764.69
19	Societe Generale	France	1,624.97
20	Banco Santander	Spain	1,494.39
21	Groupe BPCE	France	1,357.34
22	RBS Group	UK	1,314.11
23	Bank of Communications	China	1,200.63
24	Postal Savings Bank of China	China	1,163.10
25	Lloyds Banking Group	UK	1,142.22

4. Top 10 Countries with assets proportion



5. Country with total assets using funnel chart in increasing order





6. Total assets analysis according to year and quarter

Asset P&L	2021		
Country or	Bank assets to GDP	Global rank	Available data
China (incl)	203.62	1	1993 - 2021
Malawi	201.22	2	1991 - 2021
Poland	112.35	3	1995 - 2021
United	259.62	4	1972 - 2021
South Korea	181.86	5	1965 - 2021
Germany	103.03	6	1955 - 2021
Japan	169.92	7	1952 - 2021
Finland	146.55	8	1955 - 2021
New Zealand	111.19	9	1962 - 2021
Malaysia	165.22	10	1965 - 2021
Ireland	112.62	11	1962 - 2021
Australia	148.18	12	1952 - 2021
Sweden	145.86	13	1955 - 2021
Norway	126.12	14	1962 - 2021
US	136.22	15	1965 - 2021
Denmark	113.75	16	1962 - 2021
France	125.27	17	1952 - 2021
Switzerland	125.17	18	1955 - 2021
Jordan	122.24	19	1962 - 2021
Russia	176.22	20	1965 - 2021
India	123.51	21	1962 - 2021
Spain	119.65	22	1972 - 2021
Italy	118.45	23	1955 - 2021
Portugal	111.62	24	1962 - 2021
Belgium	111.25	25	1965 - 2021

Asset P&L	2021		
Country or	Bank assets to GDP	Global rank	Available data
Spain (excl)	103.45	26	1992 - 2021
Finland	105.14	27	1955 - 2021
Netherlands	101.52	28	1952 - 2021
Austria	104.12	29	1955 - 2021
Luxembourg	103.67	30	1962 - 2021
Egypt	100.81	31	1965 - 2021
Kazakhstan	97.52	32	1965 - 2021
Germany	95.92	33	1972 - 2021
Fiji	95.45	34	1961 - 2021
Malta	94.27	35	1972 - 2021
Ghana	90.25	36	1965 - 2021
Denmark	90.5	37	1955 - 2021
Turkey	90.24	38	1962 - 2021
Turkmen	88.8	39	1965 - 2021
Ukraine	92.92	40	1962 - 2021
Burkina Faso	80.65	41	1977 - 2021
Israel	75.45	42	1955 - 2021
Myanmar	79.17	43	1962 - 2021
Guinea	78.85	44	1965 - 2021
Uganda	77.79	45	1962 - 2021
Russia	77.25	46	1965 - 2021
Armenia	76.5	47	1952 - 2021
Georgia	76.24	48	1962 - 2021
Indonesia	76.5	49	1965 - 2021
UNIT LUX18	74.52	50	1962 - 2021
Belize	74.22	51	1975 - 2021

8:00 PM			Full
South Africa	74.94	62	1965 - 2021
Senegal	74.14	64	1960 - 2021
Algeria	72.46	66	1964 - 2021
India	72.4	65	1960 - 2021
Costa Rica	71.94	65	1960 - 2021
Jamaica	71.47	67	1960 - 2021
Maldives	71.14	68	1960 - 2021
Philippines	71.03	69	1960 - 2021
Czechia	70.79	63	1963 - 2021
Montenegro	64.64	61	2003 - 2021
Tr & Tobago	64.63	62	1960 - 2021
Ast & Barb	67.1	63	1975 - 2021
Poland	66.81	64	1990 - 2021
Russia	66.64	66	2001 - 2021
Seychelles	66.21	66	1973 - 2021
North Macedonia	64.73	67	1993 - 2021
Estonia	64.32	68	1995 - 2021
El Salvador	63.33	69	1965 - 2021
Palestine	63.13	70	1996 - 2021
Bulgaria	61.41	71	1991 - 2021
Grenada	61.84	72	1977 - 2021
Vanuatu	61.61	74	1979 - 2021
Borneo & Moz.	61.42	74	1997 - 2021
Colombia	60.1	75	1960 - 2021
Surina	59.89	76	1997 - 2021
Albania	59.78	77	1994 - 2021

8:00 PM			Full
Bangladesh	59.2	76	1974 - 2021
Guinea	58.86	79	1962 - 2021
Hungary	57.69	80	1993 - 2021
St. Vincent &	54.64	81	1975 - 2021
Mongolia	52.77	82	1961 - 2021
Paraguay	52.68	83	1960 - 2021
Peru	51.87	84	1960 - 2021
Ecuador	49.8	85	1960 - 2021
Guatemala	49.66	86	1960 - 2021
Slovenia	48.64	87	1993 - 2021
Kenya	47.86	88	1963 - 2021
Dzibokstan	46.47	89	1918 - 2021
Mozambique	45.41	90	1960 - 2021
Pakistan	45.33	91	1960 - 2021
Mexico	45.11	92	1960 - 2021
Senegal	44.11	94	1960 - 2021
Belarus	43.33	94	2009 - 2021
Indonesia	43.29	95	1960 - 2021
Botswana	42.4	96	1972 - 2021
Lithuania	41.68	97	1996 - 2021
Romania	40.8	98	1981 - 2021
Mali	40.82	99	1967 - 2021
Burkina Faso	40.81	100	1960 - 2021
Togo	39.87	101	1960 - 2021
Latvia	35.88	102	1996 - 2021
Rwanda	35.74	103	1964 - 2021

Milestone 8: Web integration

Publishing helps us to track and monitor key performance metrics and to communicate results and progress. help a publisher stay informed, make better, decisions, and communicate their performance to others.

Publishing dashboard and reports to tableau public

Step 1: Go to Dashboard/story, click on the share button on the top ribbon



Step 2: Once you click on connect it will ask you for the tableau public username and password



Activity 1 : Embed Dashboard & Story with Web Bootstrap

