



# Bank Complaints in US between 2012 and 2017

## Introduction

I am interested in complaint data from the Consumer Financial Protection Bureau for the period 2012-2017 to find insights for further adjustments.

## Dataset

Source: [Bank and Credit Card Complaints \(kaggle.com\)](#)

## Tools

1. google could console (To analyze the dataset by using SQL)
2. Tableau Public (To visualize the dataset by making a dashboard)

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## Analysis

Task 1: Find Max, min, mean of house prices, and the number of houses in this dataset issue for bangking\_complain between 2014

```
SELECT
    issue AS issue,
    COUNT(issue) AS amount_issue
FROM `smart-window-401507.Project_SQL_PORTFOLIO.bank_complains`
WHERE date_received >= '2014-01-01' AND date_received <= '2014-12-31'
GROUP BY issue
ORDER BY amount_issue DESC;
```

Row	issue	amount_issue
1	Account opening, closing, or management	6442
2	Deposits and withdrawals	3966
3	Problems caused by my funds being low	1929
4	Making/receiving payments, sending money	1255
5	Using a debit or ATM card	1073

- Account opening, closing, or management = 6442 times

- Deposits and withdrawals = 3966 times
- Problems caused by my funds being low = 1929 times
- Making/receiving payments, sending money = 1255 times
- Using a debit or ATM card = 1073 times

Task 2: Find the top 10 bank companies that received complaints in the United States in 2014

```
SELECT
    company,
    COUNT(issue) AS amount_issue
FROM `smart-window-401507.Project_SQL_PORTFOLIO.bank_complains`
WHERE date_received >= '2014-01-01' AND date_received <= '2014-12-31'
GROUP BY company
ORDER BY amount_issue DESC
LIMIT 10;
```

Row	company	amount_issue
1	Bank of America	2427
2	Wells Fargo & Company	2363
3	JPMorgan Chase & Co.	1666
4	U.S. Bancorp	716
5	PNC Bank N.A.	663
6	TD Bank US Holding Company	584
7	Citibank	494
8	SunTrust Banks, Inc.	427
9	Capital One	370
10	Regions Financial Corporation	337

- Bank of America = 2427 times
- Wells Fargo & Company = 2363 times
- JPMorgan Chase & Co. = 1666 times
- U.S. Bancorp = 716 times
- PNC Bank N.A. = 663 times
- TD Bank US Holding Company = 584 times
- Citibank = 494 times
- SunTrust Banks, Inc. = 427 times
- Capital One = 370 times
- Regions Financial Corporation = 337 times

task 3: Compare the top 10 complaint problems that occurred in each bank between 2014-2016.

```
SELECT
    company,
    COUNT(CASE WHEN date_received >= '2014-01-01' AND date_received <= '2014-12-31' THEN issue ELSE NULL END) AS issues_2014,
    COUNT(CASE WHEN date_received >= '2015-01-01' AND date_received <= '2015-12-31' THEN issue ELSE NULL END) AS issues_2015,
    COUNT(CASE WHEN date_received >= '2016-01-01' AND date_received <= '2016-12-31' THEN issue ELSE NULL END) AS issues_2016
FROM `smart-window-401507.Project_SQL_PORTFOLIO.bank_complains`
```

```

WHERE (date_received >= '2014-01-01' AND date_received <= '2014-12-31') OR
      (date_received >= '2015-01-01' AND date_received <= '2015-12-31') OR
      (date_received >= '2016-01-01' AND date_received <= '2016-12-31')
GROUP BY company
ORDER BY issues_2014 DESC, issues_2015 DESC, issues_2016 DESC
limit 10;

```

Row	company	issues_2014	issues_2015	issues_2016
1	Bank of America	2427	2925	3243
2	Wells Fargo & Company	2363	2329	3066
3	JPMorgan Chase & Co.	1666	2006	2581
4	U.S. Bancorp	716	750	891
5	PNC Bank N.A.	663	652	766
6	TD Bank US Holding Company	584	613	584
7	Citibank	494	598	2091
8	SunTrust Banks, Inc.	427	552	669
9	Capital One	370	448	570
10	Regions Financial Corporation	337	418	353

- Bank of America
  - 2427 times in 2014
  - 2925 times in 2015
  - 3243 times in 2016
- Wells Fargo & Company
  - 2363 times in 2014
  - 2329 times in 2015
  - 3066 times in 2016
- JPMorgan Chase & Co.
  - 1666 times in 2014
  - 2006 times in 2015
  - 2581 times in 2016
- U.S. Bancorp
  - 716 times in 2014
  - 750 times in 2015
  - 891 times in 2016
- PNC Bank N.A.
  - 663 times in 2014
  - 652 times in 2015
  - 766 times in 2016
- TD Bank US Holding Company
  - 584 times in 2014
  - 613 times in 2015
  - 584 times in 2016
- Citibank

- 494 times in 2014
- 598 times in 2015
- 2091 times in 2016
- SunTrust Banks, Inc.
  - 427 times in 2014
  - 552 times in 2015
  - 669 times in 2016
- Capital One
  - 370 times in 2014
  - 448 times in 2015
  - 570 times in 2016
- Regions Financial Corporation
  - 337 times in 2014
  - 418 times in 2015
  - 353 times in 2016

task 4: Find out which tool received the most complaints in 2014?

```
SELECT
  submitted_via,
  COUNT(issue) AS amount_issue
FROM `smart-window-401507.Project_SQL_PORTFOLIO.bank_complains`
WHERE date_received >= '2014-01-01' AND date_received <= '2014-12-31'
GROUP BY submitted_via
ORDER BY amount_issue DESC
```

Row	submitted_via	amount_issue
1	Web	6676
2	Referral	4622
3	Phone	2202
4	Postal mail	894
5	Fax	269
6	Email	2

- Web 6676 times
- Referral 4622 times
- Phone 2202 times
- Postal mail 894 times
- Fax 269 times
- Email 2 times

task 5: Find out which tool people submitted the most complaints in 2014-2016.

```
SELECT
  submitted_via,
```

```

COUNT(CASE WHEN date_received >= '2014-01-01' AND date_received <= '2014-12-31' THEN issue ELSE NULL END) AS issues_2014,
COUNT(CASE WHEN date_received >= '2015-01-01' AND date_received <= '2015-12-31' THEN issue ELSE NULL END) AS issues_2015,
COUNT(CASE WHEN date_received >= '2016-01-01' AND date_received <= '2016-12-31' THEN issue ELSE NULL END) AS issues_2016

FROM `smart-window-401507.Project_SQL_PORTFOLIO.bank_complains`
WHERE (date_received >= '2014-01-01' AND date_received <= '2014-12-31') OR
      (date_received >= '2015-01-01' AND date_received <= '2015-12-31') OR
      (date_received >= '2016-01-01' AND date_received <= '2016-12-31')
GROUP BY submitted_via
ORDER BY issues_2014 DESC, issues_2015 DESC, issues_2016 DESC;

```

Row	submitted_via	issues_2014	issues_2015	issues_2016
1	Web	6676	8825	12619
2	Referral	4622	5293	5751
3	Phone	2202	2155	2402
4	Postal mail	894	648	808
5	Fax	269	220	268
6	Email	2	0	2

- Web
  - 6676 times in 2014
  - 8825 times in 2015
  - 12619 times in 2016
- Referral
  - 4622 times in 2014
  - 5293 times in 2015
  - 5751 times in 2016
- Phone
  - 2202 times in 2014
  - 2155 times in 2015
  - 2402 times in 2016
- Postal mail
  - 894 times in 2014
  - 648 times in 2015
  - 808 times in 2016
- Fax
  - 269 times in 2014
  - 220 times in 2015
  - 268 times in 2016
- Email
  - 2 times in 2014
  - 0 times in 2015
  - 2 times in 2016

task 6: Find the top 10 states with the most complaints in 2014.

```

SELECT
    state,
    COUNT(issue) AS amount_issue
FROM `smart-window-401507.Project_SQL_PORTFOLIO.bank_complains`
WHERE date_received >= '2014-01-01' AND date_received <= '2014-12-31'
AND state IS NOT NULL
GROUP BY state
ORDER BY amount_issue DESC
limit 10;

```

Row	state	amount_issue
1	CA	2043
2	FL	1426
3	NY	1252
4	TX	872
5	NJ	692
6	PA	648
7	IL	582
8	GA	551
9	MD	489
10	VA	435

- California 2043 times
- Florida 1426 times
- New York 1252 times
- Texas 872 times
- New Jersey 692 times
- Pennsylvania 648 times
- Illinois 582 times

task 7: Identify the bank in California that received more than 20 complaints regarding problems in 2014.

```

SELECT
    state,
    company,
    COUNT(issue) AS amount_issue
FROM `smart-window-401507.Project_SQL_PORTFOLIO.bank_complains`
WHERE date_received >= '2014-01-01' AND date_received <= '2014-12-31'
AND state IS NOT NULL
AND state = 'CA'
GROUP BY state, company
having amount_issue >= 20
ORDER BY state , amount_issue DESC;

```

Row	state	company	amount_issue
1	CA	Bank of America	519
2	CA	Wells Fargo & Company	437
3	CA	JPMorgan Chase & Co.	295
4	CA	U.S. Bancorp	169
5	CA	Citibank	104
6	CA	Union Bank	52
7	CA	Bank of the West	42
8	CA	Capital One	25
9	CA	PayPal Holdings, Inc.	24
10	CA	Comerica	23
11	CA	USAA Savings	22
12	CA	Ally Financial Inc.	21
13	CA	Synchrony Financial	20

- Bank of America 519 times
- Wells Fargo & Company 437 times
- JPMorgan Chase & Co. 295 times
- U.S. Bancorp 169 times
- Citibank 104 times
- Union Bank 52 times
- Bank of the West 42 times
- Capital One 25 times
- PayPal Holding, Inc. 24 times
- Comerica 23 times
- USAA Savings 22 times
- Ally Financial Inc. 21 times
- Synchrony Financial 20 times

task 7: Find the number of Bank of America settlements in California in 2014.

```

SELECT
    issue,
    COUNT(issue) AS amount_issue
FROM `smart-window-401507.Project_SQL_PORTFOLIO.bank_complains`
WHERE date_received >= '2014-01-01' AND date_received <= '2014-12-31'
AND state = 'CA'
AND company = 'Bank of America'
GROUP BY issue
ORDER BY amount_issue DESC;

```

Row	issue	amount_issue
1	Account opening, closing, or management	223
2	Deposits and withdrawals	155
3	Problems caused by my funds being low	68
4	Using a debit or ATM card	38
5	Making/receiving payments, sending money	35

- Account opening, closing, or management 223 times

- Deposits and withdrawals 155 times
  - Problems caused by my funds being low 68 times
  - Using a debit or ATM card 38 times
  - Making/receiving payments, sending money 35 times
- 

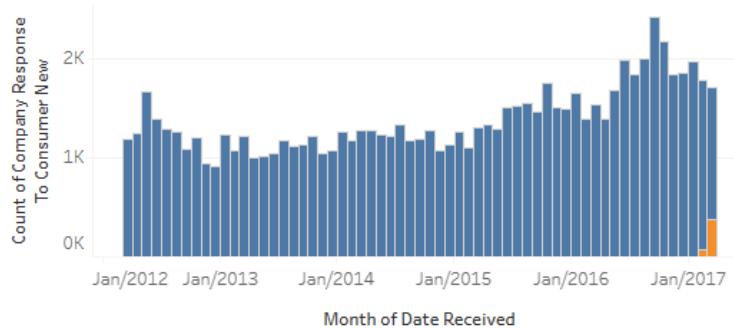
## Data

link: [https://public.tableau.com/shared/M6QKGSRBW?:display\\_count=n&origin=viz\\_share\\_link](https://public.tableau.com/shared/M6QKGSRBW?:display_count=n&origin=viz_share_link)

In my data visualization, this dashboard contains:

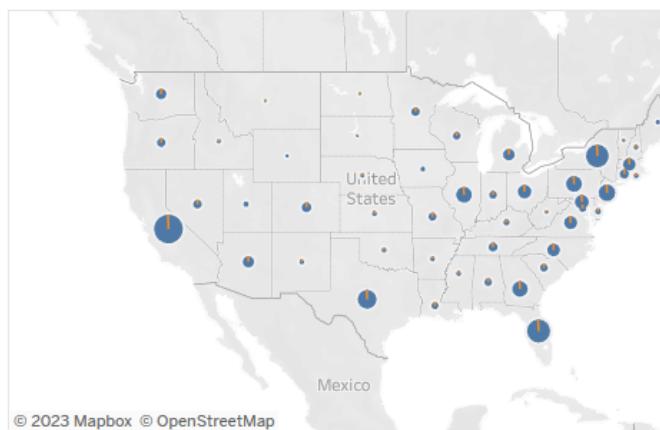
- The total bank complaints in the US between 2012 and 2017.

**Complaints by Month**



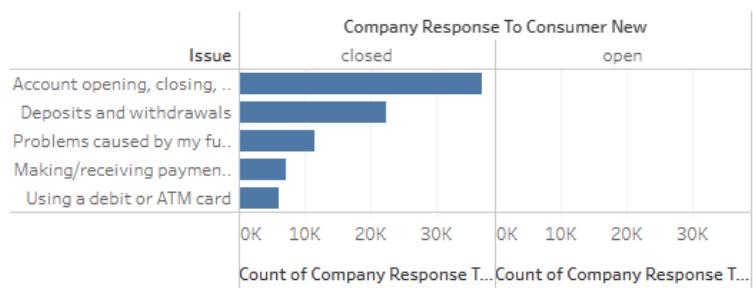
- Geography bank complaints in the US between 2012 and 2017, separated by state.

**Complaints by State**



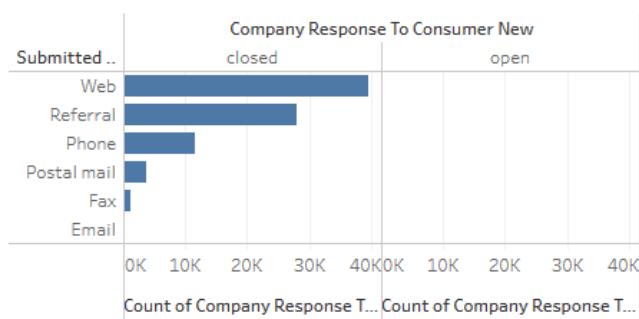
- Bank complaints in the US are categorized by reason and the number of closed and open case.

## Complaints by Reason



- Bank complaints in the US are categorized by submitted by via and the number of closed and open case.

## Submitted by Via



- Filter by Data Received, closed or open cased, state

### Date Received

3/1/2012                                  4/9/2017

### Company Response To Consumer

(All) ▾

### State

(All) ▾

## Conclusion

In the analysis, we found that:

1. Bank complaints in the US are caused by Account opening, closing, or management and least by Using a debit or ATM card.
2. Bank complaints in the US are most commonly submitted via the web.
3. The state with the most bank complaints is California.