Karlsruher Institut für Technologie
Fakultät für Wirtschaftswissenschaften
Institut für Volkswirtschaftslehre (ECON)

Bachelor Thesis in Macroeconomics

„US commercial banks“

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(Topic 1)

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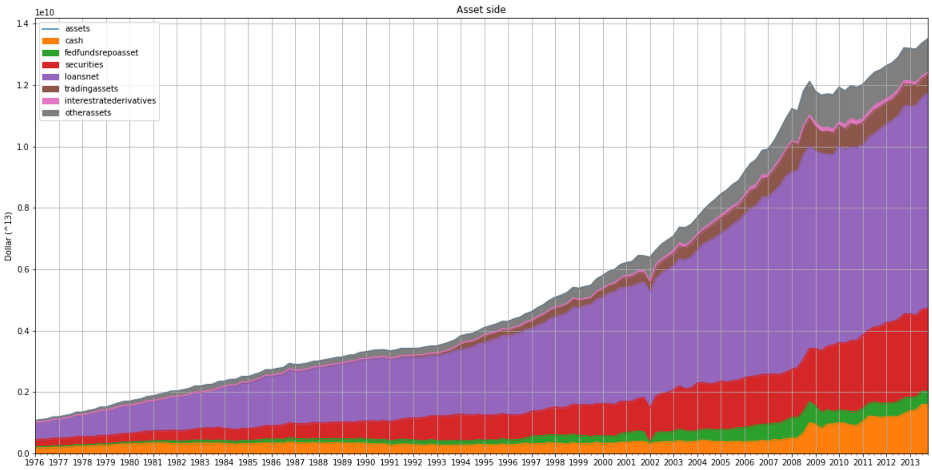
2 Main part

2.1 General look at us banks

Figure 1: Asset side

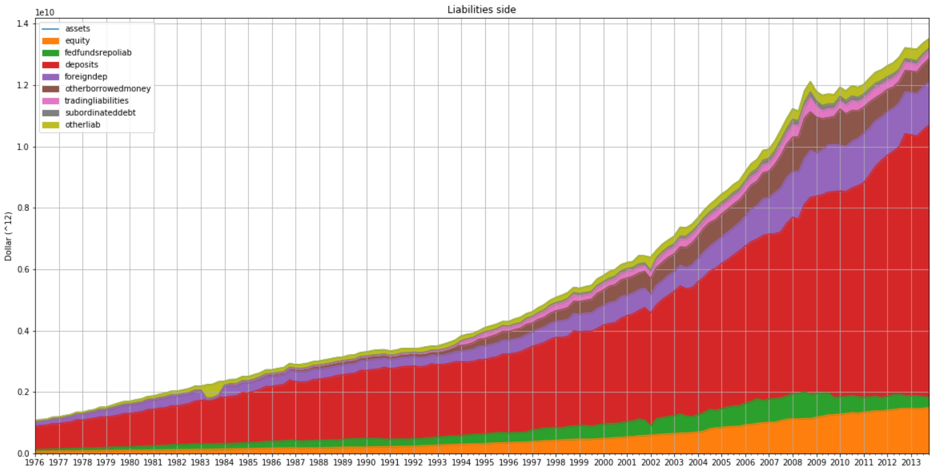


Graph description: The graph shows the aggregates of the main variables from the asset side of the balance sheet over time.

Key Observations:

- loans make up the largest share of assets
- share of trading assets have risen
- loans and trading assets have risen more than securities
- drop in assets in 2002 and 2008

Figure 2: Liabilities side

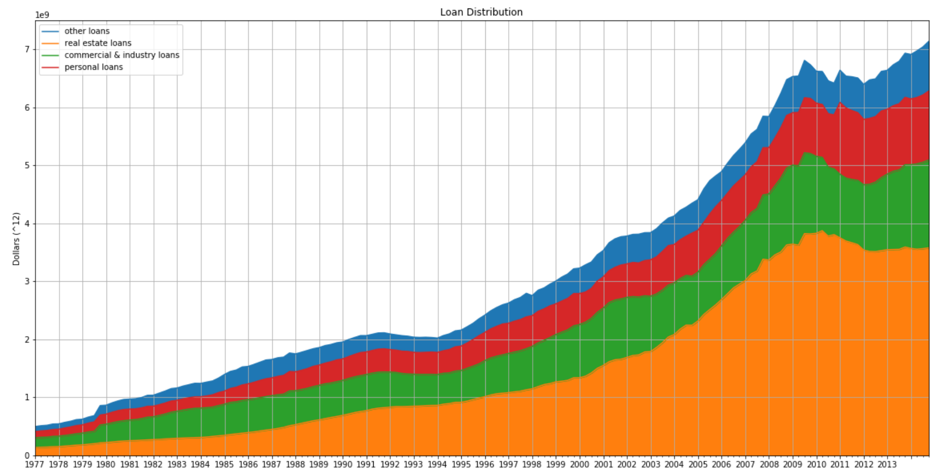


Graph description: The graph shows the aggregates of the main variables from the liabilities side of the balance sheet over time.

Key Observations:

- deposits as main source of funding

Figure 3: Loans



Graph description: It shows the share of loan types of total loans over time.

Key Observations:

- real estate loans has largest share

Figure 4: Top10 asset share

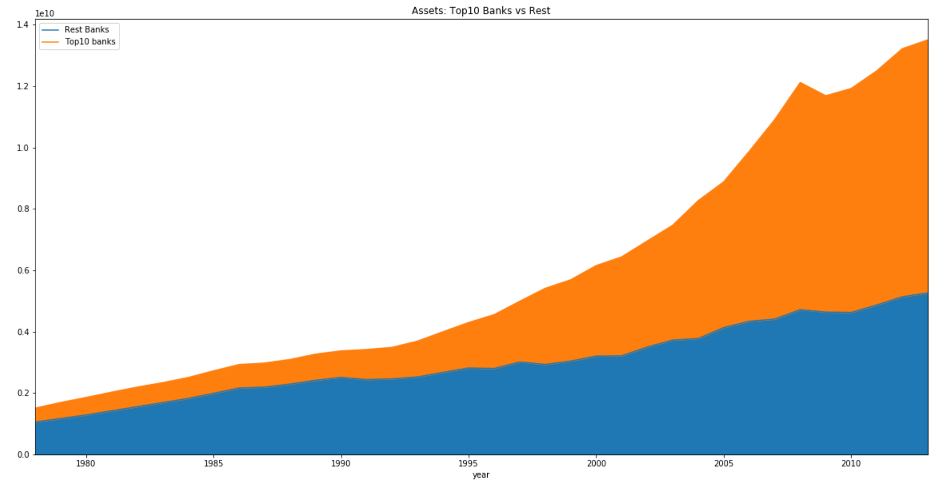


Figure 5: Rise of Top10 asset share

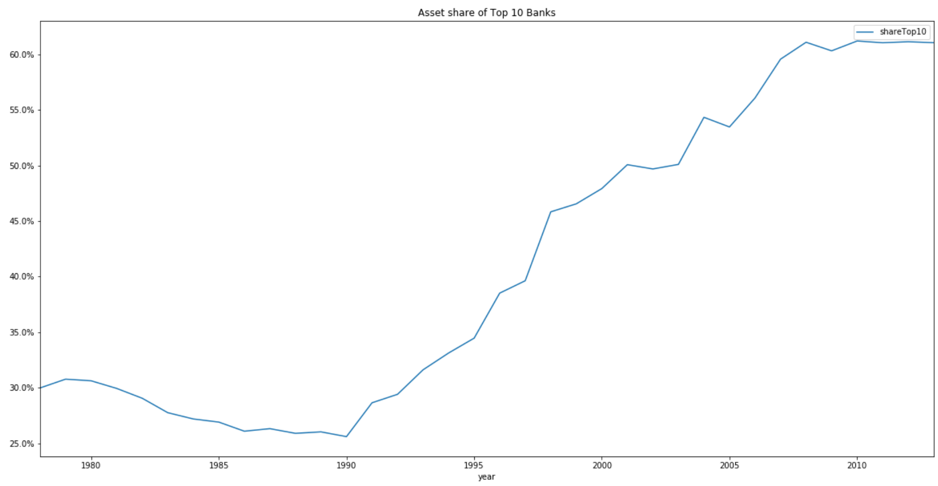
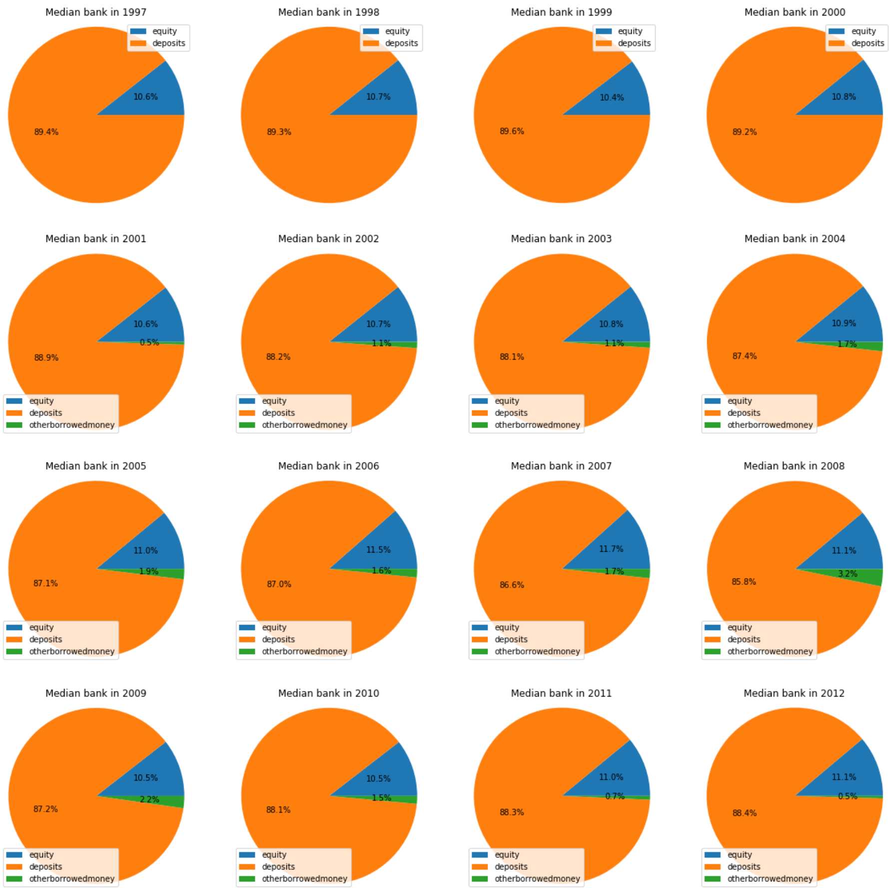


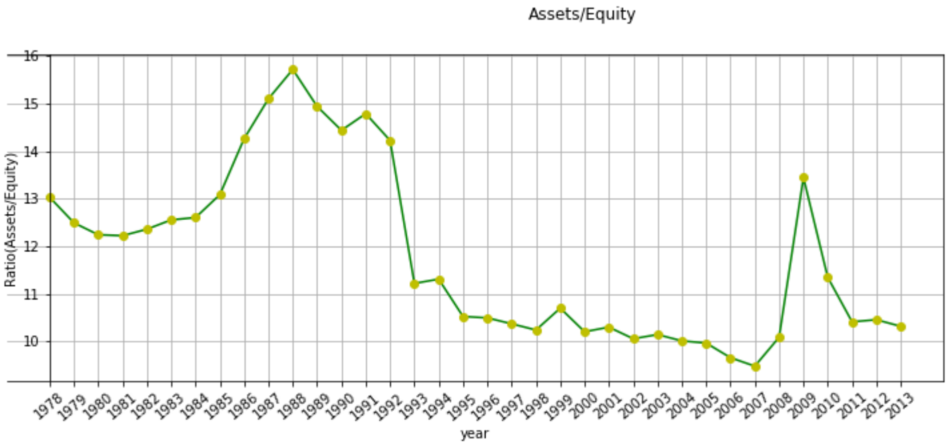
Figure 6: Median bank financing over time



2.2 Looking into leverage

Throughout the analysis the definition of accounting leverage (assets/equity) is used. Equity is calculated by total assets minus total liabilities. In addition, for risk analysis banks belonging a bank holding company were aggregated. Hence, the dataset which was used contained bhcs and independent banks.

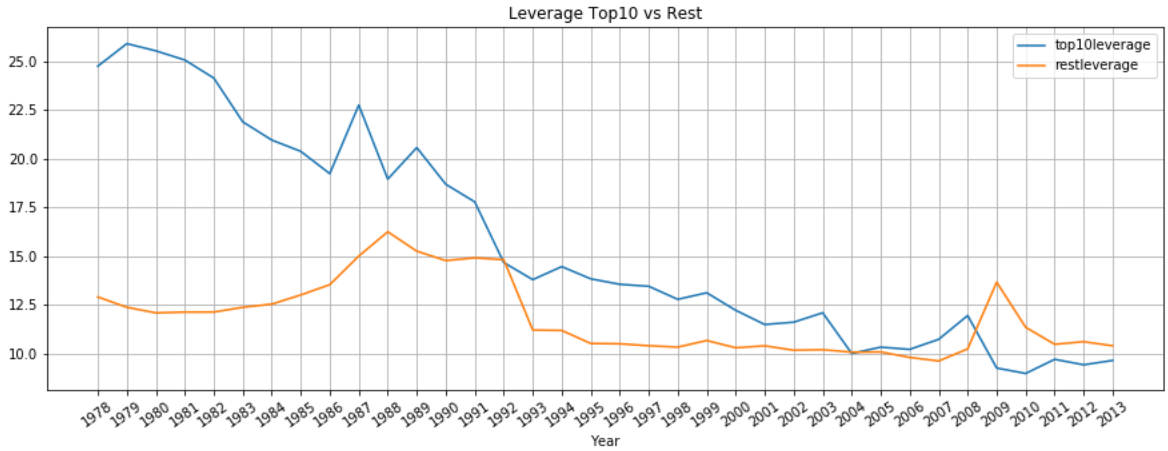
Figure 7: Average Leverage over all years



Graph description: The graph shows the average leverage (assets/equity) for every year over all banks. Banks with equity or assets below zero are excluded.
Key Observations:

- Overall Leverage did fall over time
- Spike in leverage in year 2008/2009
- Leverage lowest in 2007
- Small spike in year 1999
- Introduction of Basel 1 in 1988 might have lead to continuously decrease in leverage

Figure 8: Leverage Top 10 vs Rest over all years

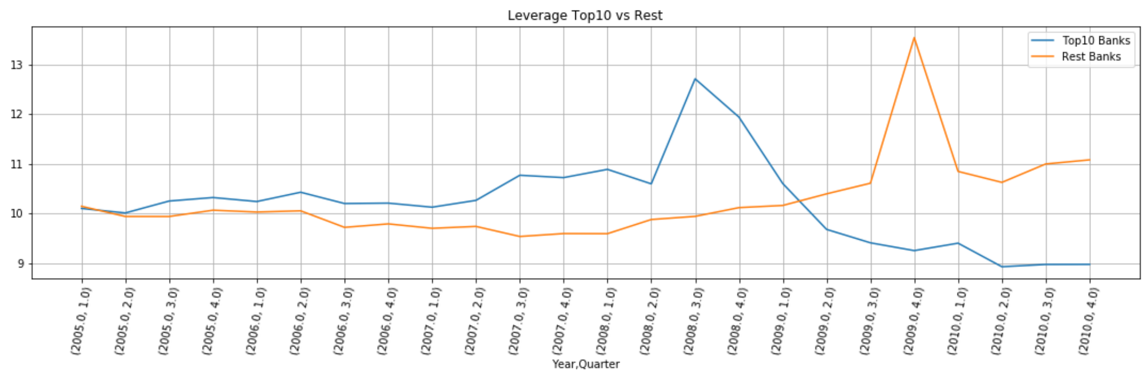


Graph description: Since the top 10 banks share of assets did rise up to 60% in 2013, it is important to differentiate. The graph shows the average leverage (assets/equity) for every year quarter 4.
Blue Line: Top 10 Banks by assets
Orange Line: All banks beside the top 10

Key Observations:

- Leverage of top 10 banks tends to be higher
- Trend of falling leverage is similar

Figure 9: Leverage Top10 vs Rest detailed look into crisis

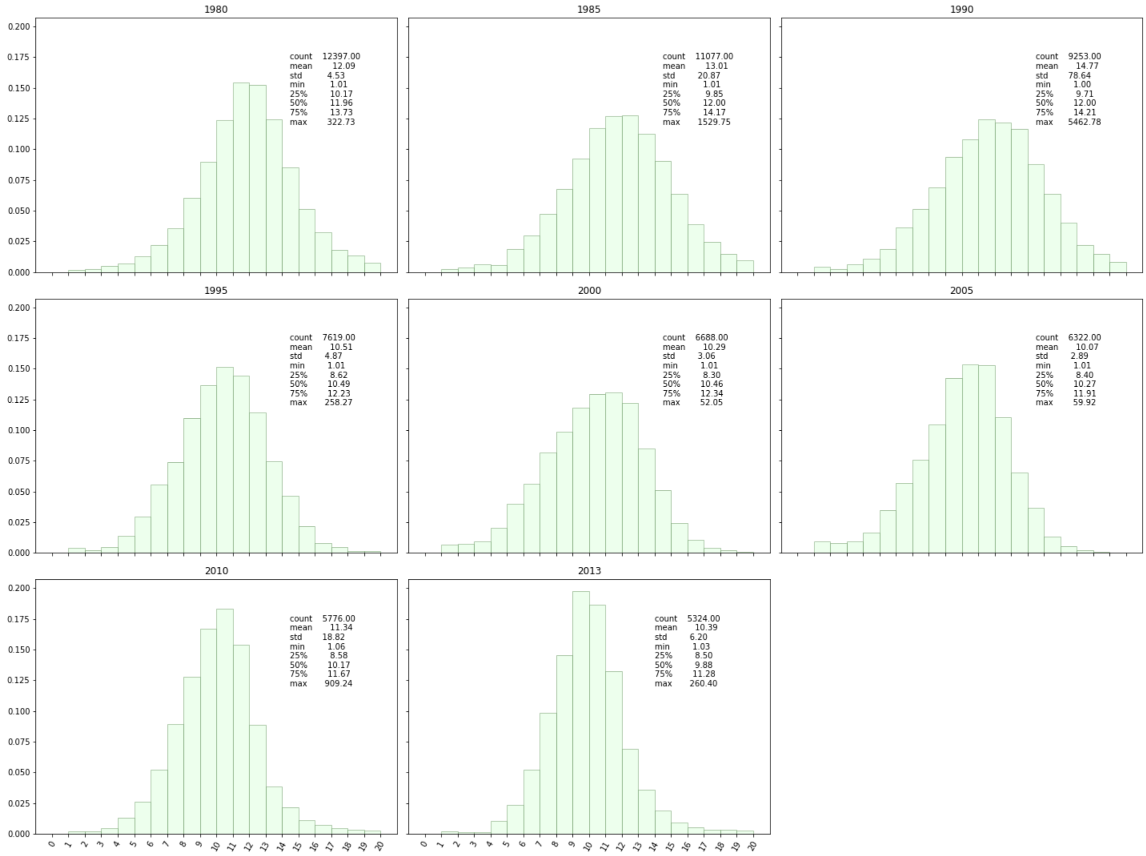


Key Observations:

- Top10 banks leverage peak in year 2008/3 before the rest banks leverage peak in year 2009/4 (theory of risky assets from big banks to small transfer?)

A look into the distribution of leverage

Figure 10: Distribution 1980-2013

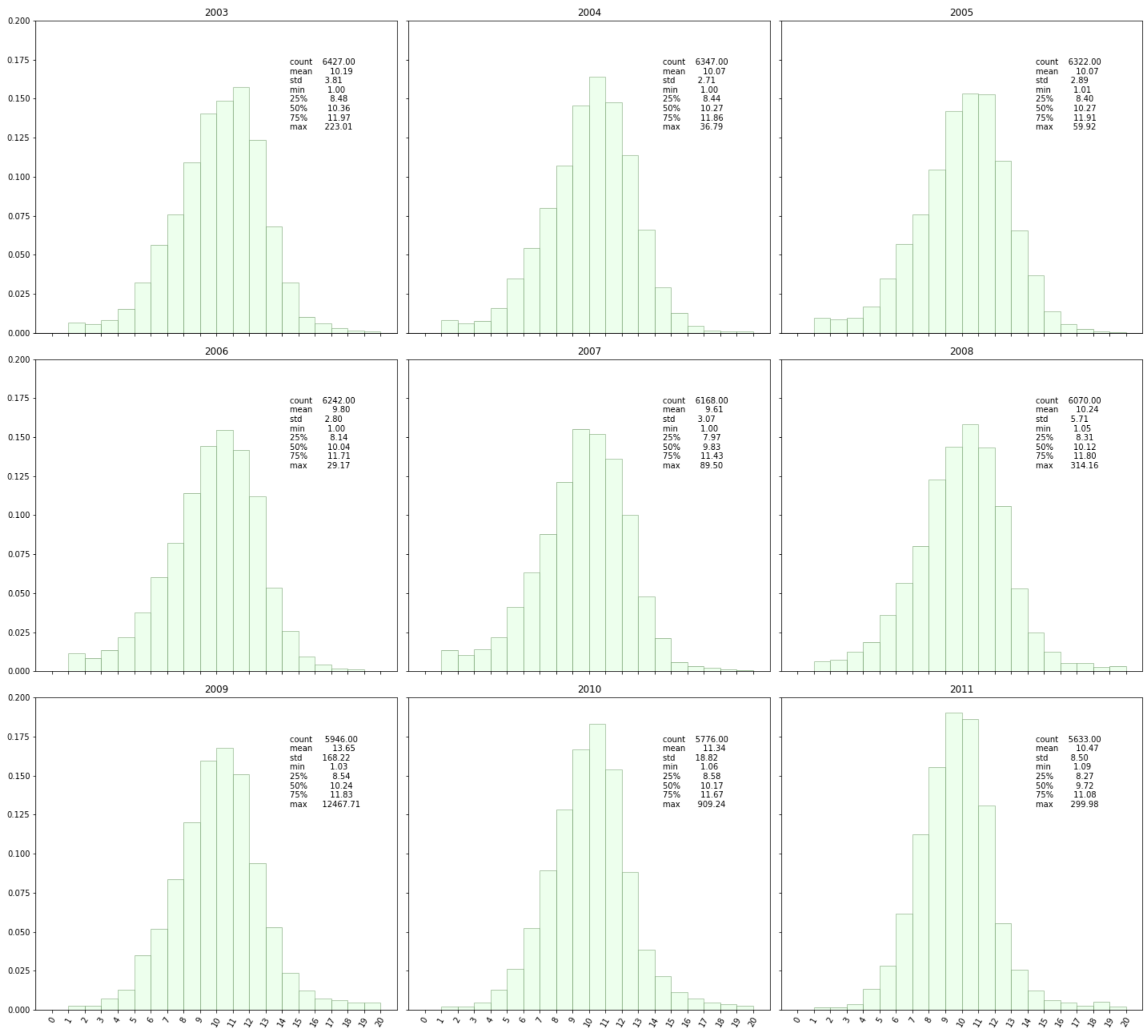


Graph description: Counts are normed to 1. Only leverage ratios between 0-20 are accounted for. The others are seen as outliers. Leverage ratios are always from quarter 4.

Key Observations:

- large standard deviation in year 2010 with 18.82
- less and higher bars in 2013 indicate higher homogeneity in 2013 compared to the years before.

Figure 11: Distribution in crisis 2003-2011



Graph description: Counts are normed to 1. Only leverage ratios between 0-20 are accounted for. The others are seen as outliers. Leverage ratios are always from quarter 4.

Key Observations:

- Increasing homogenity over time.
- extremely high standard deviation in year 2009 with 168.22

3 Conclusion