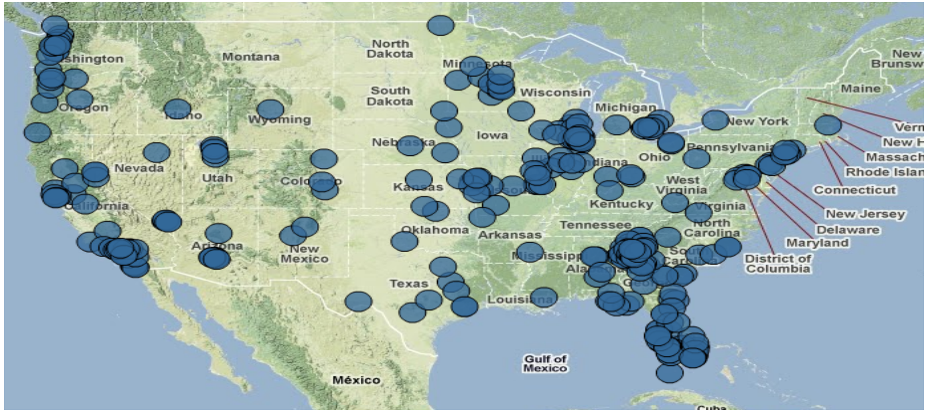
Bank Failure Prediction

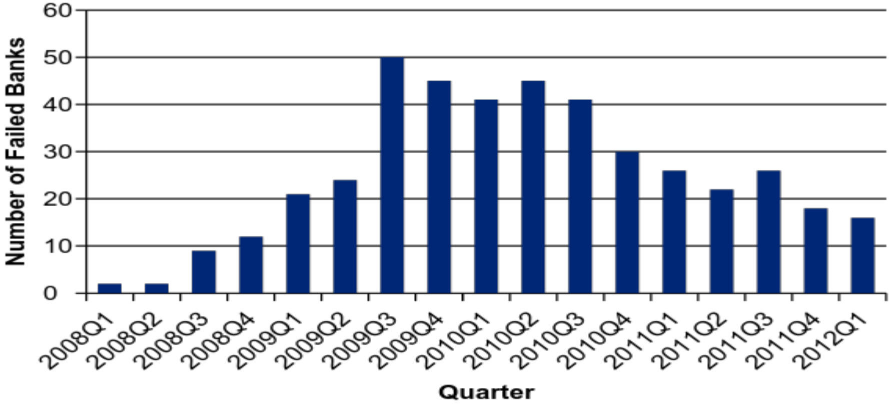
Data Science for Product Managers

Assignment: Preventing Bank Failures

From 2008 - 2011, 430 banks and thrifts went into receivership, with about an $80bn net impact on the FDIC Deposit Insurance fund

As of 2011Q4, the FDIC's problem bank list had 813 institutions with total assets $320bn





Source: [WSJ](#) (left) and FDIC [Failed Bank List](#)

Measures Of Bank Health

Liquidity – the ability to fund future asset growth and/or pay liabilities in a timely manner and at a reasonable cost. Poor financial condition or management reputation may result in reduced access to funding.

Asset churn – measure the annual change in loan portfolio to identify banks expanding rapidly or searching for higher return assets.

Asset yield – higher yield assets compensate for higher risk. A troubled bank may gamble on high risk loans (unsecured or secured by real estate not a 1-4 family residence).

Other indicators – loans become nonperforming, which erodes core equity. A bank seeks high yield deposits from money market funds or private equity funding.

Call Reports As a Source of Data

Each of 7,300+ regulated depositories files Consolidated Reports of Condition and Income (*call reports*) quarterly with the Federal Financial Institutions Examination Council (FFIEC)

Divided among an income statement, balance sheet and capital sections, each Call Report contains about 2,700 data fields from a regulated depository

FDIC and Federal Reserve Bank economists use call report and failed bank transaction data to develop policy recommendations based on:

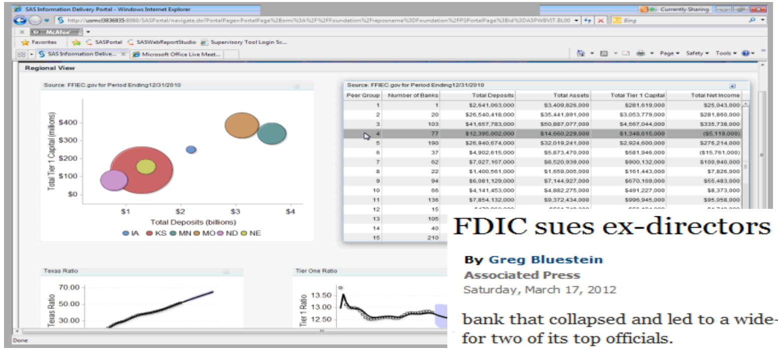
- Credit Quality
- Liquidity Management
- Capital Adequacy
- Compensation Practices

Examining a handful of ratios is straightforward, but the challenge is to identify what matters from hundreds of fields

Applications Of A Bank Failure Prediction Model

Analytics for Regulatory Examination

Identifying Undercapitalized Banks for Acquisition



FDIC sues ex-directors of troubled failed Atlanta bank

By Greg Bluestein
Associated Press
Saturday, March 17, 2012

ATLANTA — Federal bank regulators filed a lawsuit Friday against 10 former directors and officers of a failed Georgia bank that collapsed and led to a wide-ranging criminal investigation and prison time for two of its top officials.

The Federal Deposit Insurance Corporation's complaint accuses the former Omni National Bank officials of negligence and loose lending policies that led to the bank's March 2009 collapse. It seeks to recover more than $37 million in losses that included loans targeting low-income properties.

It names several defendants who have already been charged criminally with their role in the bank's collapse. Jeffrey Levine, the bank's former vice president, was sentenced to five years in prison in 2011 after pleading guilty to cooking the bank's books. And Karim W. Lawrence, another Omni executive, was sentenced to almost two years in prison on charges of taking bribes at the bank.

An attorney for former bank president Irwin Berman, who was also named in the complaint, said his client would be exonerated.

Deloitte.

Looking for the return of unassisted M&A
Banking and securities outlook

Source: Augusta Chronicle (D&O) and Deloitte White Paper (M&A)

Assignment: Bank Failure Prediction and Project Planning

We've created a sample of the bank data from 2007 to 2010 with 12 fields

Modeling: Use the sample data to answer:

- What was the biggest bank at the end of 2009?
- What trends do you observe in net chargeoffs over time?
- Is there a correlation between level of profitability of a bank's investments in securities (here measured by fair value of investments over cost basis) and bank failure?
- What are the top two predictors of bank failure?
- Which banks are most likely to fail in the near future (and why)?