Old-Fashioned Deposit Runs

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Federal Reserve Board of Governors

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Motivation
Facts about 2008 runs
Do deposit runs still happen?

A leading principles textbook, 2011 edition:

“Today, bank runs are not a major problem for the U.S. banking system or the Fed. The federal government now guarantees the safety of deposits at most banks, primarily through the Federal Deposit Insurance Corporation (FDIC). Depositors do not run on their banks because they are confident that, even if their bank goes bankrupt, the FDIC will make good on the deposits.”

A central banker, in 2010:

“Commercial banks and thrift institutions had been exposed to runs prior to the creation of deposit insurance.”

(FDIC insurance began in 1934.)
Establishing basic facts about bank runs in 2008

I create a list of bank runs using authoritative accounts from public sources:

- Reviews of failed banks, published by regulators,
- Bankruptcy court documents,
- Financial Crisis Inquiry Commission documents,
- Senate Investigative Committee documents,
- Testimony by federal regulators, and
- SEC filings, other news releases from banks

Unconventional data sources.
## Runs at large institutions

### Table 1: Deposit outflows at large institutions

<table>
<thead>
<tr>
<th>Institution</th>
<th>Start of outflow</th>
<th>Duration of outflow</th>
<th>Size of outflow</th>
<th>Deposit base</th>
<th>Percent outflow</th>
<th>Monthly rate (hypothetical)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wachovia</td>
<td>4/15/2008</td>
<td>2 weeks</td>
<td>$15b</td>
<td>$414b</td>
<td>3.6%</td>
<td>7.8%</td>
</tr>
<tr>
<td></td>
<td>9/15/2008 (Lehman)</td>
<td>5 days</td>
<td>$8.3b</td>
<td></td>
<td>2.0%</td>
<td>11.8%</td>
</tr>
<tr>
<td></td>
<td>9/26/2008 (WaMu)</td>
<td>8 days</td>
<td>$10b</td>
<td></td>
<td>2.4%</td>
<td>9.0%</td>
</tr>
<tr>
<td>Washington Mutual</td>
<td>7/11/2008 (IndyMac)</td>
<td>23 days</td>
<td>$9.1b</td>
<td>$186b</td>
<td>4.9%</td>
<td>6.5%</td>
</tr>
<tr>
<td></td>
<td>9/8/2008</td>
<td>16 days</td>
<td>$18.7b</td>
<td></td>
<td>10.1%</td>
<td>18.6%</td>
</tr>
<tr>
<td>National City</td>
<td>3/15/2008 (Bear Stearns)</td>
<td>2 days</td>
<td>$5b</td>
<td>$98b</td>
<td>5.1%</td>
<td>55.6%</td>
</tr>
<tr>
<td></td>
<td>7/11/2008 (IndyMac)</td>
<td>5 days</td>
<td>$4.5b</td>
<td></td>
<td>4.6%</td>
<td>25.3%</td>
</tr>
<tr>
<td></td>
<td>9/15/2008 (Lehman)</td>
<td>25 days</td>
<td>$4.5b</td>
<td></td>
<td>4.6%</td>
<td>5.7%</td>
</tr>
<tr>
<td>Sovereign</td>
<td>7/11/2008 (IndyMac)</td>
<td>?</td>
<td>$0.74b</td>
<td>$47b</td>
<td>1.6%</td>
<td>17.6%</td>
</tr>
<tr>
<td></td>
<td>9/1/2008</td>
<td>1 month</td>
<td>$2.9b</td>
<td></td>
<td>6.2%</td>
<td>6.2%</td>
</tr>
<tr>
<td>IndyMac</td>
<td>6/27/2008</td>
<td>2 weeks</td>
<td>$1.55b</td>
<td>$18.5b</td>
<td>8.4%</td>
<td>17.6%</td>
</tr>
</tbody>
</table>

Notes: The deposit base is the total deposits according to the 6/30/2008 call report figures except for Wachovia and IndyMac, where I use 3/31/2008 figures. I combine multiple banks or thrifts within a holding company where appropriate.
Figure 1: Washington Mutual deposit levels

Notes: Consumer and small business deposits. Source: Declaration of Thomas Blake to the United States Bankruptcy Court, District of Delaware, Chapter 11 Case No. 08-12229 (MFW), available from the author.
Wachovia

Source: FRB document titled “Wachovia Case Study” released by the Financial Crisis Inquiry Commission
More comprehensive data

Daily deposit data from individual banks:
- Savings and transaction deposits
- Time deposits.
- Individual responses are confidential.

Measure:
- Percent of institutions with outflows of at least 5 percent, over a 20 business day period, lasting for 4 days.
Percent with large outflows:
Time deposits

Percent with large inflows:

![Graph of largest 100 institutions with data points indicating large inflows and outflows. The graph shows two red vertical lines marking Indymac (July 11) and Lehman (Sep 15). The x-axis represents the day of the year, and the y-axis represents percent. Two curves are shown: one for 2008 and another for the average of 2003-2007.]
Wachovia

Introduction
2008 runs
Uninsured deposits
History of large depositors
The design of deposit insurance
Conclusion

Figure 2: Wachovia deposit levels

Notes: These charts are reproduced from an internal Federal Reserve Board document, "Wachovia Case Study", released to the public by the Financial Crisis Inquiry Commission (FCIC) and cited on p. 304 of the FCIC report. (http://www.fcic.gov/documents/view/994.) NOW stands for negotiable order of withdrawal, which are similar to checking deposits. The document does not give a definition of "core" deposits, but that terminology typically includes transaction, savings, and small time deposits and excludes brokered deposits. Therefore, the other three charts are subsets of the top left chart but do not form a cover of the set of core deposits. Finally, in the upper left chart, AG Edwards was a broker-dealer acquired by Wachovia in 2007, but whose money market accounts were kept in a separate part of the Wachovia bank holding company and not integrated into the commercial bank. The "sweeps" from AG Edwards accounts likely refers to money market funds transferred from the AG Edwards subsidiary, perhaps intended to be temporary.
Large depositors
Quick facts about 2008

Washington Mutual:

- 25 percent of outflows from accounts with more than $500 million each.
- 70 percent of outflows from uninsured deposits.
- Lost 13 percent of its uninsured deposits in one run; 2 percent of insured.

Sources: Office of Thrift Supervision document titled "WaMu Ratings", released by the Financial Crisis Inquiry Commission; Senate Permanent Committee on Investigations Exhibits.
Quick facts about 2008

Corporate transaction accounts:

- Cited prominently in descriptions of runs at Washington Mutual, Wachovia, Citibank, National City, Sovereign,...

- Wachovia: “corporate customers began to pull uninsured deposits.”
  
  Source: Federal Deposit Insurance Corporation Document titled "Memo to the FDIC Board of Directors, Re: Wachovia,” released by the Financial Crisis Inquiry Commission.

- National City: “particularly in business transaction accounts and other accounts in excess of the FDIC insurance limit.”
  
  Source: SEC filing.

- Citi: “these concerns [that depositors might start a run] were substantiated by significant corporate withdrawals (i.e. a run)”
  
  Source: SIGTARP report.
Response of FDIC most telling. (2008-10-16)

- Creation of unlimited insurance for noninterest-bearing transaction accounts
- “mainly payment-processing accounts, such as payroll accounts used by businesses.”
- “We’re trying to address the problems that we’ve seen with, you know, these noninterest-bearing transaction accounts, these corporate accounts leaving banks.”
Large deposits in historic perspective
Introduction

2008 runs

Uninsured deposits

History of large depositors

The design of deposit insurance

Conclusion

Percent of deposits covered by insurance

![Graph showing the percent of deposits covered by insurance from 1940 to 2010. The graph compares Bank Insurance Fund and Combined Bank and Savings Association Insurance Fund.](graph.png)
5 percent sample of banks that suspended from 1929-1933.

<table>
<thead>
<tr>
<th>Demand deposit classification</th>
<th>Percent of initial deposits</th>
<th>Percent decline</th>
<th>Percent of overall deposit decline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government deposits</td>
<td>13.0</td>
<td>-17.8</td>
<td>5.6</td>
</tr>
<tr>
<td>Certificates of deposit</td>
<td>0.6</td>
<td>-54</td>
<td>0.8</td>
</tr>
<tr>
<td>Other accounts, smaller than $5,000</td>
<td>35.3</td>
<td>-27.7</td>
<td>26.1</td>
</tr>
<tr>
<td>Under $1,000</td>
<td>17.2</td>
<td>-15.3</td>
<td>8.9</td>
</tr>
<tr>
<td>$1,000 to $5,000</td>
<td>18.1</td>
<td>-39.4</td>
<td>17.2</td>
</tr>
<tr>
<td>Other accounts, larger than $5,000</td>
<td>48.0</td>
<td>-57.5</td>
<td>67.0</td>
</tr>
<tr>
<td>$5,000 to $25,000</td>
<td>20.4</td>
<td>-48.9</td>
<td>24.3</td>
</tr>
<tr>
<td>$25,000 and up</td>
<td>27.6</td>
<td>-63.8</td>
<td>42.7</td>
</tr>
<tr>
<td>Other (inactive or unknown size)</td>
<td>3.1</td>
<td>-6.8</td>
<td>0.5</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>-40.2</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Krost (1938)
Reflections on the FRB study

Disproportionality:

- Large depositors had easier methods of withdrawing deposits.
  - Inter-bank transfers.
  - Checks.
  - Storing in other forms of wealth.
  - Insider connections and information.

- Modern runs resemble these “old-fashioned” runs.
The design of deposit insurance
Initial design

Interim system with $2,500 limit made permanent.

- Realization that 98-99 percent of deposit accounts were fully covered.
- Instead of extending partial insurance to deposits above the threshold.
Debate during 1930s

Deliberate decision to leave large depositors uninsured:

- Belief that large depositors had access to good information
  - Able to effectively discipline banks.
  - Not in need of protection.

- Avoid greater cost to FDIC.
Debate during 1930s

See this opinion about large depositors espoused by:

- FDIC officials in 1930s (Crowley, Fox, Jones)
- OCC officials in 1930s (O’Connor)
- Fed officials in 1938 (Krost study) and 1950 (Staff study, Goldenweiser)
- Former Treasury secretaries McAdoo and Glass
- Academics: Viner (1936), Preston (1935)
- Various places in congressional testimony

Large previous literature on design of DI and the debate during the 1930s. Discussion of large depositors noted by some, e.g. Flood (1991), but mostly as asides.
FRB in 1950

“It is extremely unlikely, however, that the large banks holding the bulk of large deposits would be permitted to close, in view of the experience of the mid-1930s. In effect, then, large depositors in these banks enjoy 100 per cent protection...”
Predictions that came true

Preston in 1933

“In the banking crisis in March the withdrawals and transfers by corporation treasurers was a leading cause of embarrassment to banks. Bank “runs” may still be a hazard even if 99 per cent of the depositors are fully covered and have confidence in the solvency of the Insurance Corporation.”
Conclusion
Conclusion

Two things surprised me after writing this paper:

- I don’t understand the “quiet period” in US banking as much as I thought I did.
  I also don’t understand why the bank holiday was successful.

- Would large depositors flee a failing systemically important institution in the future, or will they expect to receive 100 percent insurance? I think this is an open question.
Deposit concentration

Typical data on deposit concentration:

- Percent of deposits were in accounts that exceeded $X.
- In 1918
  - Threshold of $5,000 (roughly $76,000 today)
  - The largest 2.2 percent of accounts held 55 percent of deposits.
  - (National banks only)
# Measures of deposit concentration since 1933

<table>
<thead>
<tr>
<th>Date</th>
<th>Percent of accounts over threshold</th>
<th>Deposits held by accounts over threshold</th>
<th>Threshold in 1933 dollars</th>
<th>Insurance limit at the time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Highest threshold: $50,000</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>May 1933</td>
<td>0.15</td>
<td>44.6</td>
<td>$50,000</td>
<td>N/A</td>
</tr>
<tr>
<td>Oct 1933</td>
<td>0.15</td>
<td>48.2</td>
<td>$50,000</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Highest threshold: $25,000</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sep 1938</td>
<td>0.28</td>
<td>49.4</td>
<td>$23,000</td>
<td>$5,000</td>
</tr>
<tr>
<td>Sep 1941</td>
<td>0.36</td>
<td>56.9</td>
<td>$22,100</td>
<td>$5,000</td>
</tr>
<tr>
<td>Oct 1945</td>
<td>0.53</td>
<td>50.7</td>
<td>$18,100</td>
<td>$5,000</td>
</tr>
<tr>
<td>Sep 1949</td>
<td>0.56</td>
<td>48.1</td>
<td>$13,700</td>
<td>$5,000</td>
</tr>
<tr>
<td>Sep 1951</td>
<td>0.60</td>
<td>50.6</td>
<td>$12,500</td>
<td>$10,000</td>
</tr>
<tr>
<td><strong>Highest threshold: $100,000</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sep 1955</td>
<td>0.15</td>
<td>36.9</td>
<td>$48,500</td>
<td>$10,000</td>
</tr>
<tr>
<td>Nov 1964</td>
<td>0.17</td>
<td>37.2</td>
<td>$41,900</td>
<td>$10,000</td>
</tr>
<tr>
<td>Jun 1966</td>
<td>0.16</td>
<td>37.9</td>
<td>$15,000</td>
<td></td>
</tr>
<tr>
<td>Jun 1968</td>
<td>0.18</td>
<td>36.4</td>
<td>$37,400</td>
<td>$15,000</td>
</tr>
<tr>
<td>Jun 1970</td>
<td>0.18</td>
<td>35.6</td>
<td>$33,500</td>
<td>$20,000</td>
</tr>
<tr>
<td>Jun 1972</td>
<td>0.21</td>
<td>38.0</td>
<td>$31,100</td>
<td>$20,000</td>
</tr>
<tr>
<td>Jun 1980</td>
<td>0.32</td>
<td>35.5</td>
<td></td>
<td>$100,000</td>
</tr>
<tr>
<td><strong>Highest threshold: $250,000</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan 1983</td>
<td>not given</td>
<td>29.2</td>
<td>$32,630</td>
<td>$100,000</td>
</tr>
</tbody>
</table>
Example: Detroit

Union Guardian Trust

- Withdrawals of about $1.5 million from January 1, 1933 to Feb 11, 1933
- Famous role for Henry Ford
- Enormous concentration of withdrawals. Some examples from the Pecora Hearings:

<table>
<thead>
<tr>
<th>Company</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>U. G. T. Co., Agt. W. S. Knudsen</td>
<td>$40,300.00</td>
</tr>
<tr>
<td>Crowley Milner Company</td>
<td>$50,000.00</td>
</tr>
<tr>
<td>General Foods Corporation</td>
<td>$50,000.00</td>
</tr>
<tr>
<td>Campbell Ewald Company</td>
<td>$170,000.00</td>
</tr>
<tr>
<td>H. P. Cristy</td>
<td>$10,000.00</td>
</tr>
<tr>
<td>Pacific Steel Boiler Corp</td>
<td>$180,000.00</td>
</tr>
<tr>
<td>Allied Jewish Campaign</td>
<td>$10,000.00</td>
</tr>
<tr>
<td>Detroit Auto Club</td>
<td>$10,000.00</td>
</tr>
<tr>
<td>Sundry Items</td>
<td>$61,231.62</td>
</tr>
</tbody>
</table>
Example: Detroit

CD Withdrawals, ordered from smallest to largest, at the Union Guardian Trust, as a percent of total CDs:

Data from Pecora Hearings
Example: Toledo


- Withdrawals by “a few working class Toledoans... didn’t amount to much. The real trouble came when a few major corporations, tipped off by bank insiders, decided to pull the plug.”
- ”Large corporations were quick to pull the plug. Electric Auto-Lite... withdrew $865,990.”
- “The Willys-Overland Company... pulled out $720,122 in July.”
- “Owens-Illions Glass cashed out $230,604.”
- “Kroger Foods withdrew $573,881.”
- “Ford Motor claimed $99,966…”
- “In all, local businesses took over three million dollars out of the frozen bank.”
Calomiris and Wilson *AER* 1997:
“The Commercial and Financial Chronicle provided a detailed account of the runs on Chicago banks... these reports emphasized that long lines of individual depositors formed at banks... people from all parts of the city seemed to converge on the Loop in hysterical fear and anxiety.”