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Institute of Actuaries of Australia



How to Destabilise the Financial System - A Beginner's Guide

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Banks in Trouble

MARKETWATCH BULLETIN (4/17/2009)

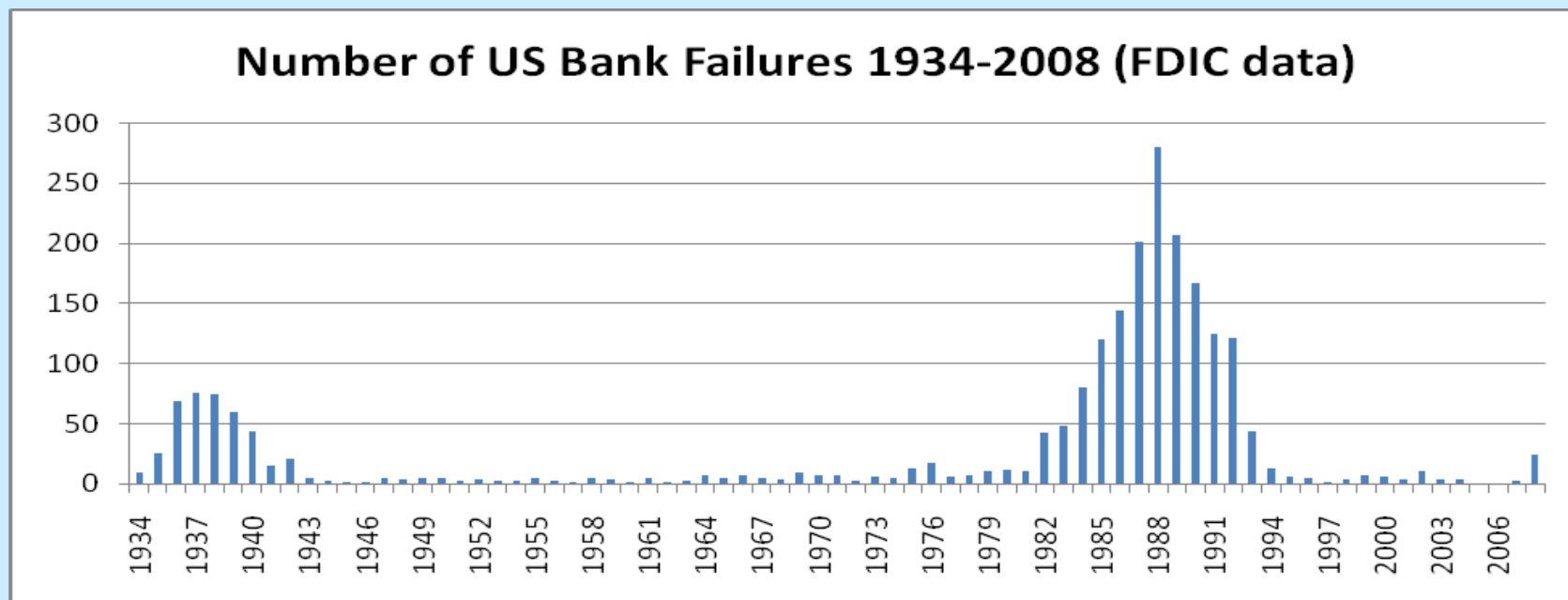
Missouri's American Sterling Bank seized by FDIC;

24th bank failure of 2009

- Size of Problem ?
 - FDIC: ~ 200 US banks are “troubled”
 - Some large, some small (Indymac > \$10 billion FDIC)
 - TARP program = \$700 billion (not enough ?)
 - A global problem
- What can we learn from this GFC?
- What **should** we have learned from the PREVIOUS crisis?



Historical Data on Bank Failures



- About 1500 US Banks failed between 1982 and 1994



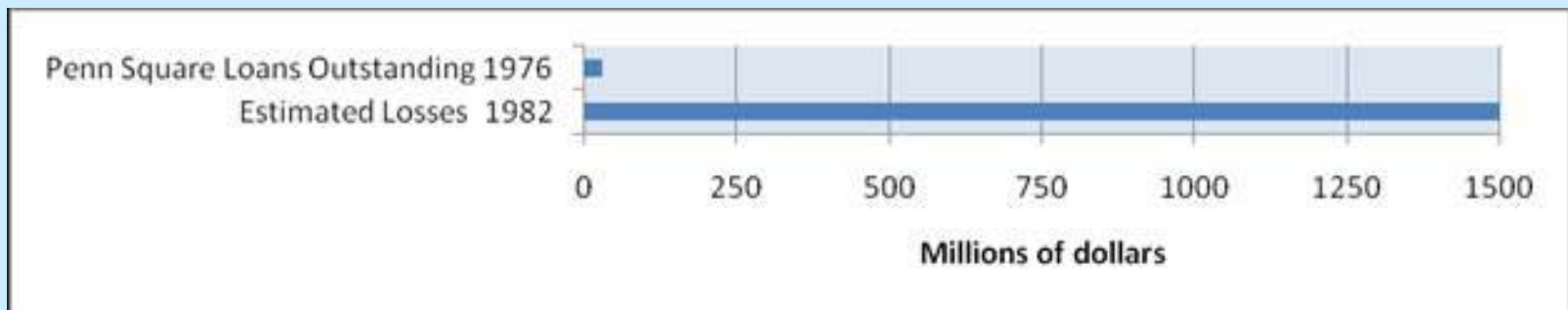
Systemic Risk Case Study

- *“No event since the Great Depression has done more to undermine public confidence in the US Banking System than the failure of Penn Square Bank and the chain reaction of events that stemmed from it”.*
- Penn Square Bank was a one-office bank
- In a shopping centre
- In Oklahoma (?!)
- In 1976: 35 employees: Assets ~ \$30 million



Penn Square's Impact

- By 1982: Had **directly** caused losses > \$1.5 billion
- Collapse affected hundreds of other FIs (~620)
- Caused insolvency of two top-20 US banks
- Local analogy: Dubbo Credit Union -> CBA & ANZ



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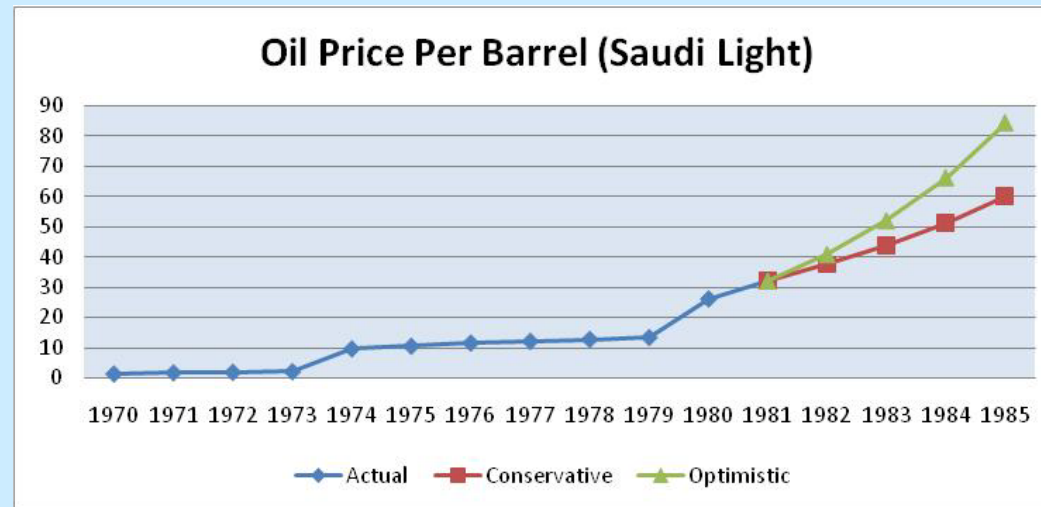
A. So how did such a small bank cause so much trouble ?

Step 1: Asset-Price Bubble

“Large swings in asset prices figure prominently in many accounts of financial instability. Indeed, a boom and bust in asset prices is perhaps the most common thread running through narratives of financial crises”



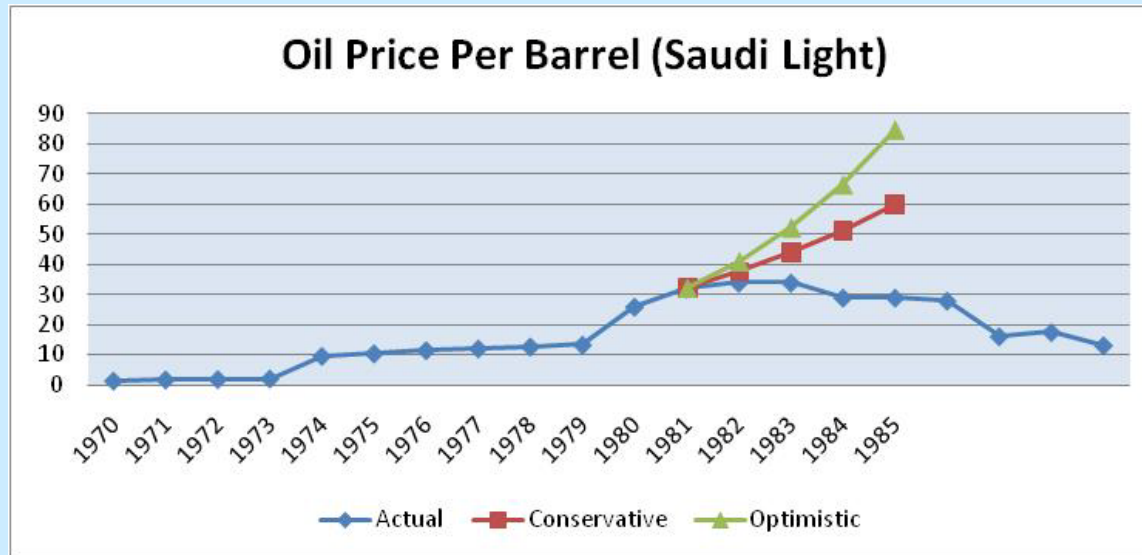
The Energy Boom



- 1973 – First Oil Shock, \$12 (Yom Kippur War, OPEC cartel)
- 1978 – Second Oil Shock, \$34 (Shah of Iran deposed)
- Worldwide Boom in oil exploration
- Experts all agreed : \$60 per barrel (optimists: “85 in ‘85”)



The Asset-Price Bubble Bursts



- Experts all wrong – oil price falls after 1981 (“Invisible hand”)
 - Penn Square started Oil & Gas Department in 1976
 - Became insolvent in July 1982
- ~ 600 other Texas / Oklahoma banks go down in next decade (24%)



Q. Higher reserves during booms ?

- **With hindsight**, bubbles are identifiable.
- **At the time:** All the experts agreed prices would go up.
- Nay-sayers not welcome. JK Galbraith:
“Strongly reinforcing the vested interest in euphoria is the condemnation that the reputable public and financial opinion directs at those who express doubt or dissent.”
- Usually: *“This time it’s different.”*
- Lending in the public interest (Patriotic duty).



Did the Oil Bust cause Penn Square's failure?

- Yes ...
- And No – MOST banks in Texas and Oklahoma survived.
- Even during a bubble, it is possible to follow prudent lending practices.

- Penn Square Bank did not:

“In the end they went under because of poor lending practices, not simply because they were lending to the energy business.

They were lending on terms that no other bank in its right mind would touch ...

The lead examiner told me that if oil prices were \$100 a barrel they still would have gone broke.”



Step 2: Sub-Prime Lending

- *When people use the term “subprime debt crisis”, they usually mean the **borrowers** are subprime.*
- *You can’t have subprime borrowers without subprime **lenders**.*
- *Subprime lenders ignore the basic precepts of banking (i.e. Don’t lend money to people who probably can’t pay it back)*

Penn Square

*“In the past we have had irresponsible borrowers,
and in the past we have had irresponsible lenders,*

*but what we had here, and are having to witness the consequences of, is the
meeting of the irresponsible borrower and the irresponsible lender.”*



OCC Description of Subprime Lending (1988)

- CEO lacking experience / integrity
- Poor corporate governance
- Rapid growth
- Concentration of risk
- Sub-prime borrowers (borrowers with high credit risk)
- Over-lending (lend so much borrower can't afford repayments)
- Collateral based lending
- Low doc lending
- Insider deals
- Poor management of bad debts
-**Penn Square Bank ticked every box.**



Sub Prime Lending at Penn Square

- CEO – Beep Jennings and The Four Seasons
- Corporate governance ? – ineffective, uninformed, not even there
- Rapid growth ? – from \$30m to \$520m in 6 years (~60% p.a.)
- Concentration of risk ? – 80% Oil and Gas
- Low doc ? – loan approval for \$M written on cocktail napkins
- Collateral – high LVRs and dubious valuations



Penn Square Lending

- Subprime borrowers
 - Made loans money to people who are insolvent
 - Made more loans to people who defaulted (no loan losses)
 - Just a temporary downturn - oil prices will go up again soon.
“There are no bad deals. Every deal can be corrected with money”
(Bill Patterson, Penn Square VP)
- Insider deals
 - Lent \$342 million to companies related to one bank director
 - Including \$50 million just days before bank closed
 - FDIC: 20% of problem loans



More recent descriptions of Subprime Lending

- Basle Committee on Banking Supervision (2000)
 - Common Sources of Major Credit Losses
- Office of Inspector General, Dept of Treasury
Material Loss Reviews on all failed banks
where FDIC cost > \$25 million or 2%

It's déjà vu all over again.



Step 3: Setting A Bad Example

- Penn Square was growing by 70% p.a
- *Q. Where did all that growth come from?*
- A. By stealing customers from other banks.
 - *“The reason customers left downtown banks and went to Penn Square was that word got around that all you had to do was go see Bill Patterson. He was like the bad girl in the sophomore class whom all the senior boys called up for a date.”*

Penn Square was reporting excellent profits



Step 4: Originate-to-Distribute

- The Financial Stability Forum has said the OTD business model created problems by
 - Incentive to lower underwriting standards
 - Incentive for loan originators to be economical with the truth
 - Loan originators have liquidity risks if they can't sell loans when the market turns down
 - May not be a clean transfer of risk (recourse)
- Penn Square was a pioneer in using the OTD business model

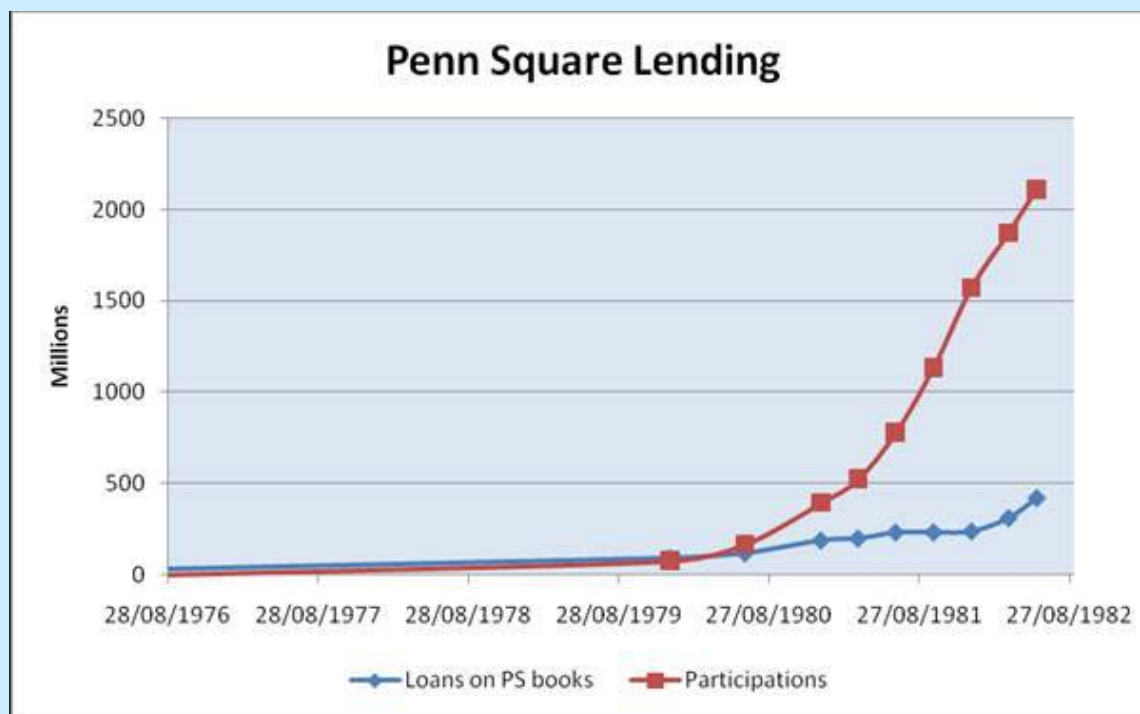


Penn Square and the OTD Model

- In the 1980s this was called **“loan participations”**
 - Small banks would ask upstream banks to fund part of any large loans
 - Make a loan for \$100,000: send \$99,000 upstream (**)
 - Charge 1% for commission and servicing the loans
 - Highly profitable
 - (NB “Overparticipations” problem at Penn Square)
- **All the problems with OTD identified by the FSF in 2009 happened 25 years ago at Penn Square**



Loan Participations



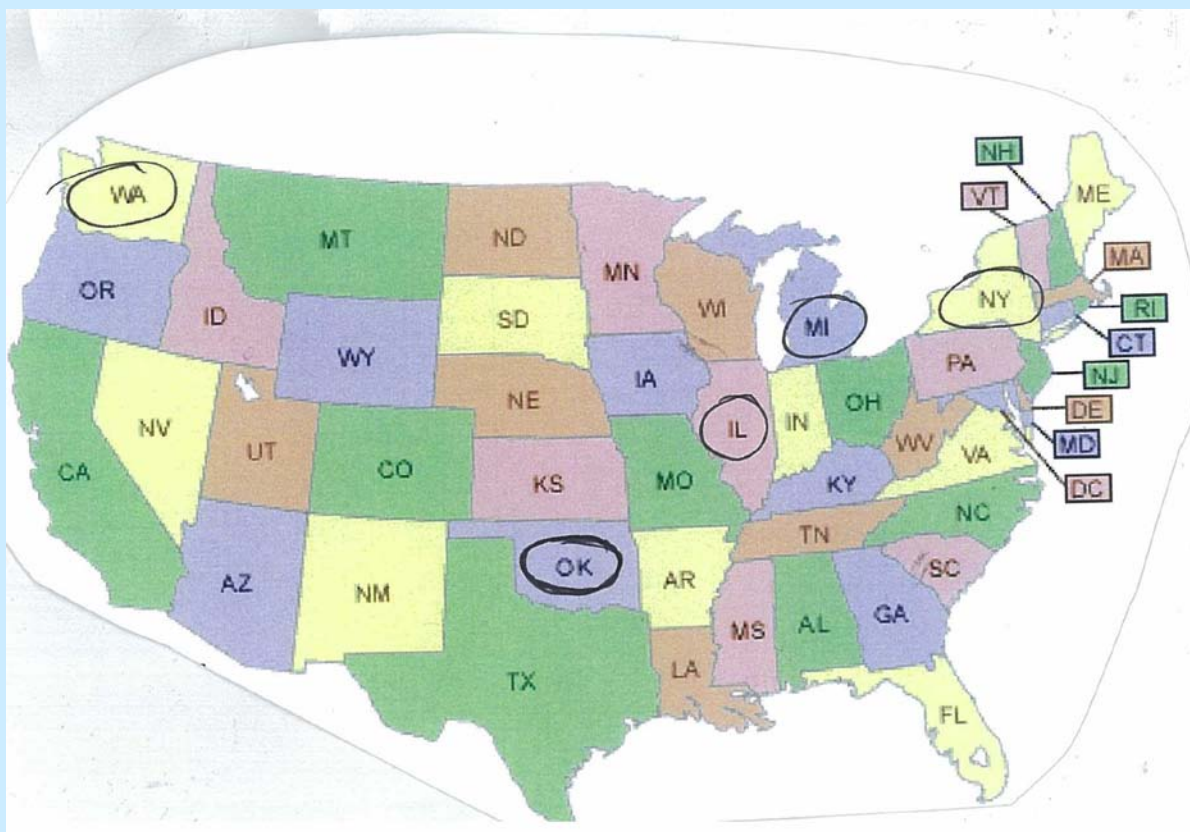
More than \$2 billion of loan participations.

80% of loans originated by Penn Square went upstream.

NB Loans accelerated **after** oil prices fell (bailout customers).



Penn Square's Originate-to-Distribute Model



Continental Illinois (#7)

\$1 billion (80%)

Seafirst (#19)

\$500 m (90%)

Chase Manhattan (#3)

\$275 m (40%)

Michigan National

\$200m (50%)

+ 84 other banks



Q. Why did CI take \$1 billion of lousy loans from PSB?

- Bribery
- Buy-backs
- Fraud
- Poor Risk Management (other loans too)
- Growth / Profit Objectives

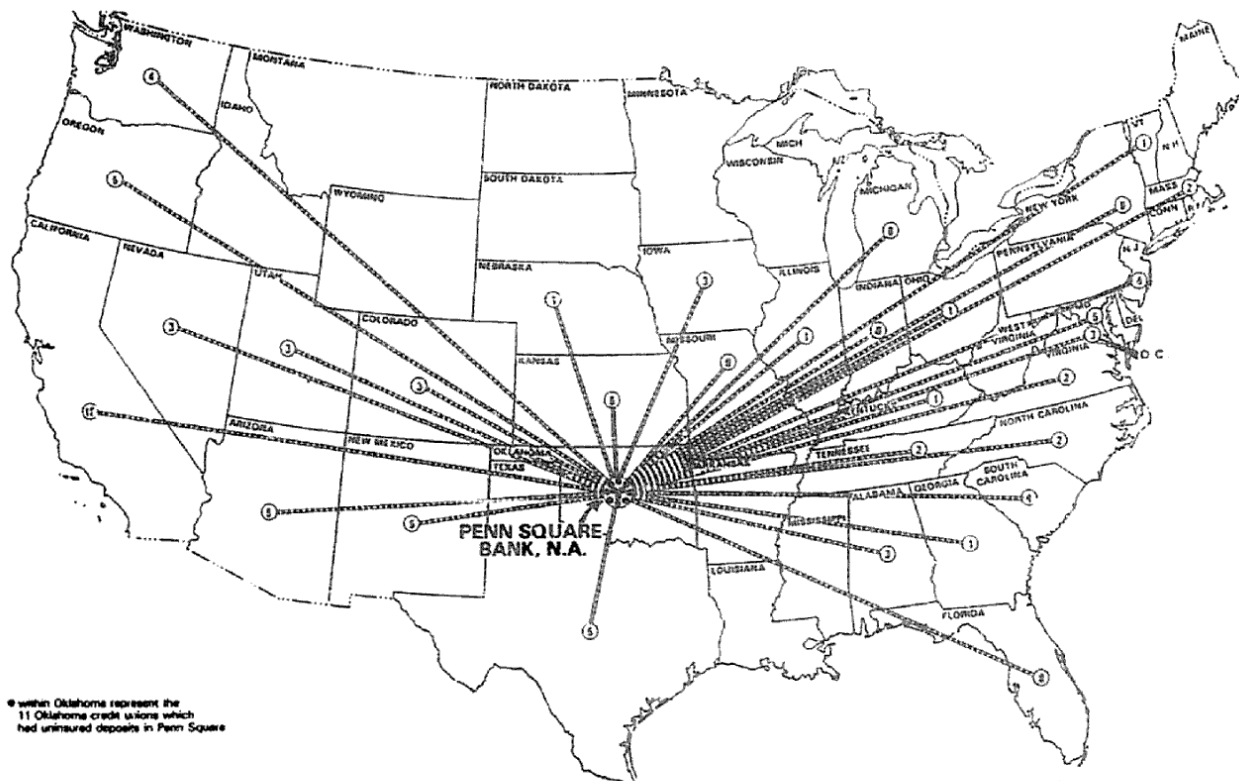


Step 5: Hot Money Funding

- *Q. Penn Square lent \$500 million on its own books. Where did a small shopping center bank get the money to lend ?*
- A. They bought it.
- 60% of Penn Square deposits came from selling CDs via money brokers.
- 532 financial institutions from across the country (mostly credit unions) had deposits at Penn Square when it went broke.



FEDERALLY INSURED CREDIT UNIONS WITH UNINSURED DEPOSITS IN PENN SQUARE BANK, N.A.



© within Oklahoma represent the 11 Oklahoma credit unions which had uninsured deposits in Penn Square

270

Prepared by Banking, Finance, and Urban Affairs Committee Staff

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FDIC Reaction

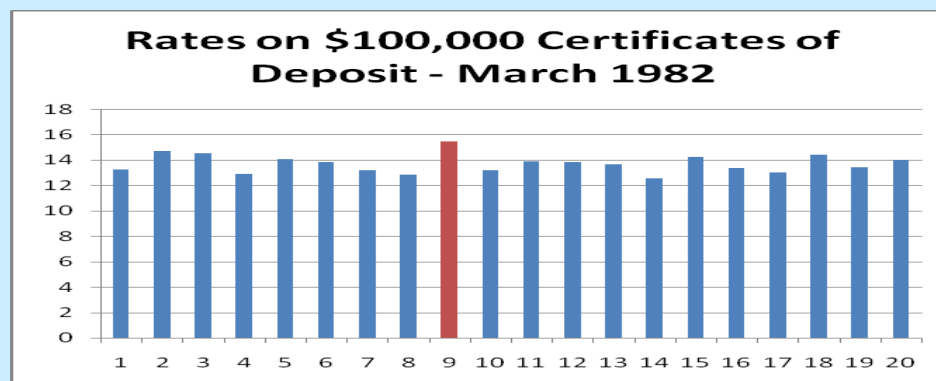
Many of the FIs which had purchased Penn Square CDs were already weak themselves.

Top officials of the OCC in Washington ordered the examiners at Penn Square to identify the uninsured depositors at Penn Square - credit unions, savings and loan institutions, and others with more than \$100,000 on deposit at Penn Square.

As the names of the victims spewed out of a telecopier in the Comptroller's sixth-floor communications room, the regulators, standing over the machine, shook their heads incredulously, saying "Oh, shit. Oh, shit."



Step 6 : Independent Expert Advice on Risk



- *Q. Why did all those credit unions invest at Penn Square?*
- A. Highest interest rates (by far)
- *Q. But didn't they know high-return / high risk?*
- A. The Money brokers assured them PSB was safe.



Expert Independent Advice?

- Assurances from the money brokers (\$140 million)

- We are experts on financial analysis
- We have done thorough checks
- Our motto is “safety first”
- Later: we were deceived by false accounts.

- Commission Arrangements

*“Fees paid to one of these brokers were reportedly calculated in an unconventional manner apparently resulting in costs to Penn Square Bank significantly in excess of industry norms”
(FDIC)*



The First United Fund

- FDIC: Banks with high level of brokered funds were very likely to become insolvent. Money broking simply
“allowed sick little banks to finance dubious activities and then become big problems”.

In particular: the First United Fund

- *The Typhoid Mary of the S&Ls*
- 27 banks which were FUF customers failed
- Not just bad luck.
- CEO indicted on 144 criminal charges
 - (Mafia, Teamsters Union, kickbacks, hitmen, linked financing, unusual “suicides”, etc etc)



Brokered Funds - this time around

- FDIC : many of the banks that failed in 2008 sharply increased their brokered deposits in the year before failing
- E.g. IndyMac
 - August 2007 - \$1.5 billion
 - March 2008 - \$6.9 billion
 - July 2008 – run on the bank, closed
- Hot money creates liquidity risk (as soon as the market turns down)



Step 7: Selling Credit Insurance without Capital

- Even with brokered money and loan participations, Penn Square was having trouble finding enough money to bail out its insolvent customers in 1981-1982
- Solution: Issue “standby letters of credit”
- For a small fee
- Allowed customers to borrow from other banks
- Any Problem? No capital to cover credit risk. (\$500 m)
- Not a problem! Off balance sheet, who will know?



Step 8: Dealing with the Regulators

- The Regulator knew PSB was badly managed.
- Every bank exam listed many many problems.
- Penn Square Strategy
 1. Ignore them
 2. If pressed - Placate them (delay delay delay)
 3. If really pressed – Fiddle the accounts

[See IndyMac MLR for a repeat performance, and GAO 2009 report criticising OCC for not being aggressive enough in recent crisis.]



Step 9: Dealing with the Auditors

- 1977-1980 Ernst & Young kept complaining and they qualified the accounts in 1980.
- Sept 1981 – PSB made large loans on favourable terms to all 11 partners of Oklahoma branch office of Peat Marwick.
- November 1981 – Hired Peat Marwick as auditor
- Surprise: No qualifications on 1981 accounts!
- Peat Marwick was sued by the FDIC, participant banks, money brokers, credit unions for hundreds of millions.
- All cases settled out of court [confidential].



Alternative Ways to Undermine Confidence in Financial Statements

- Go directly to accounting authorities and ask for reporting standards to be changed?
- Method used in the Depression:
 - Allow use of out-of-date valuations



Step 10: The Lehman effect

- Penn Square was the Lehman Brothers of the 1980s.
- The first large bank failure where depositors lost money.
- FDIC usually arranged takeovers.
- This time – impossible AND undesirable.

“Penn Square Bank permanently altered the public’s perception of banker infallibility and the shape of banking regulation in the United States.”



CI: Too Big To Fail?

- Continental Illinois effectively in zombie mode after Penn Square (jokes?). Dripped out loan loss information.
- Rumours start run-on-the-bank in May 1984.
- Government announced TBTF policy for CI
 - Estimated 50-200 other banks would fail if CI failed
 - FDIC bought \$4.5 billion toxic assets
 - Injected \$1 billion capital
 - Improved systemic stability
- Legislation was passed in 1991 to limit bailouts (moral hazard).
- TBTF policy seems to be making a comeback now.



Loss of Confidence

- ***Congressman at the Hearings into the Failure of Penn Square: What have you learned?***
- ***Penn Square Depositor: Well, I think there are a couple of things here.***
- ***No. 1, I have always thought that the large bankers knew what they were doing. And it appears that maybe they don't.***
 - ***I am of the opinion now that with the economy in a recession, that a large bank – any bank – could go under....***
- ***Second, I have learned that you can't trust the audit reports anymore.***



RESULTS

- *Runs on the bank (any bank)*
- *Risk Margins on CDs widen*
- *Cuts in Interest rates*
- *Bank share prices fall*
- *Lending contracts*



How to Destabilise the Financial System Lessons from Penn Square Bank

- 1. Asset-Price Bubble
- 2. Sub-Prime Lending
- 3. Race to the Bottom
- 4. Originate to Distribute Model
- 5. Reliance on Hot Money (Liquidity Risk)
- 6. Reliance on Independent (?) Expert (?) Advice
- 7. Selling Credit Insurance without Capital
- 8. Regulatory Inertia
- 9. Quality of Independent (?) Audit
- 10. Managing the Wind-up



Conclusion

It's hard to think of new ways to destabilise the financial system. Most of the good methods have already been used.