Banks in Crisis?
Panel Discussion
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Some Opening Question

• Is it like 2007/8 or more like S&L crisis in the 1980s?
  • Default/credit risk vs. interest rate risk
• Which inning? Bear Stearns or Lehman moment?
• Run from small to large banks?
  • Signature bank, SVB, .... First Republic (?), ...
  • Credit Suisse
• Does this limit central banks’ inflation fighting (Financial Dominance)?

• Hard landing now? Recession? What about my job prospects?
  Tech industry
# Skeletal bank balance sheet

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reserves</td>
<td>Deposits</td>
</tr>
<tr>
<td>Loans to customers</td>
<td>... insured</td>
</tr>
<tr>
<td>Securities</td>
<td>... uninsured</td>
</tr>
<tr>
<td>available for sale</td>
<td>Loans from Fed ($\approx 0$)</td>
</tr>
<tr>
<td>held to maturity (smaller)</td>
<td><strong>Net worth</strong></td>
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## A little more detail: the problem

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<td></td>
</tr>
<tr>
<td>held to maturity (many sold)</td>
<td></td>
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<tr>
<td>Net worth (shrunk)</td>
<td></td>
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Deposits at FDIC-reporting U.S. banks

$20 trillion

1985  '90  '95  2000  '05  '10  '15  '20

Note: Uninsured deposits calculated by subtracting estimated insured deposits from total domestic deposits.
Source: Federal Deposit Insurance Corp.
A little more detail: the quick fix

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The big question: Who goofed?

• Or rather how do you apportion the blame between poor management and poor supervision?

• We don’t know yet. (There were several “matters requiring attention” and “matters requiring immediate attention.”)

• A relevant fact: In 2018, Congress amended Dodd-Frank (2010) to raise the line defining which banks are large enough to be systemically important, and hence subject to tougher standards and closer supervision, from $50 billion to $250 billion in assets.

• SVB was about $212 billion.
How could SVB merit the “systemic risk exception”?

• By itself, certainly not.

• But many other large (but not giant) banks have lots of uninsured deposits and absorbed large capital losses on bonds.

• SVB was an extreme case, but not unique.

• If the dominos start falling,...
What led to downfall of SVB and Signature Bank?

Unstable sources of funding:
- Around 95% of SVBs deposits uninsured
- Concentrated in particular industry (e.g., fintech and crypto)
- Insufficient liquidity to meet outflows without selling assets

Undercapitalized interest rate risk on the banking book:
- Large positions in US treasuries, valued at cost
  - E.g., SVB announcement of emergency sale of assets to meet liquidity requirements triggered large mark to market losses
  - Viscous cycle with further incentive to run for both banks as capital appeared to be insufficient

Other villains à la Blinder:
- **Governance flaws**: Bank boards, Boards of uninsured business deposits
- **Regulatory failures**: deficient capital and liquidity regulations for medium-sized banks
  - much stricter rules in place in other countries
- **Supervisory shortcomings**: MRAs, MRIAs too slow
Was Fed intervention a bailout?

Goal of BTPF: reduce risks associated with unrealized losses in the US banking system (estimated at $600 Billion)

Terms:
- Loans up to one year
- Collateral includes US treasuries, MBS, agency debt valued at par
- Eligible borrowers – banks, savings ass., credit unions, etc
- Backstopped by Treasury funds from the Exchange Stabilization Fund ($25 Billion)

Was this a bailout?
- “No losses will be borne by taxpayers”
  - President Biden, 13 March
  - FDIC losses borne by surviving banks (special assessments), equity and debt holders not bailed out
  - DoJ and SEC opened investigations into SVB

Still...TBTF subsidy and moral hazard
- Effectively removing deposit insurance limit
- Fed lending not fully collateralized (not following Bagehot)
- FIs that had insufficient capital and liquidity benefited from TBTF
Fallout was mixed:

- Failures weren’t related to crypto per se, although the rout in crypto over last year was one trigger for liquidity issues (i.e., prompted deposit withdrawals)
- Some stablecoins broke peg (e.g., Circle’s USDC) on worries about exposures of reserve fund to SVB
  - e.g., Circle held 8% of reserve fund in SVB
- Bitcoin and other unbacked crypto gained
  - Could be in part because of changed expectations for FF rate

Fundamentals same, but conditions more difficult:

- This was a classic bank run, so doesn’t change potential advantages/risks of crypto
- “Be your own bank” is an illusion, as many have found out the hard way (from Mt. Gox onwards)
- But, crypto still needs safe bridges to TradFI, and these may become more difficult to achieve
  - safe DeFi that serves the real economy may have long development lags
Question:
How to allocate the interest rate risk across members?


• Each faces private idiosyncratic preference shock:
  \[ U_0 = pu(c_1) + (1 - p)u(c_2) \]

• Two technologies (assets):
  • Return on short-term asset \( r_t \) is known between 0 and 1, but not between 1 and 2
  • Return on long-term asset \( R \) is relatively high and known between 0 and 2

• There are two undiversifiable risks
  • Valuation risk of long-term asset
  • Reinvestment opportunity risk of short-term asset

• Incentive constraint of the late consumers not withdrawing early: \( c_2 \geq r_1 c_1 \)
## Effects of short-term interest rate hike

<table>
<thead>
<tr>
<th></th>
<th>Early consumers</th>
<th>Late consumers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital loss on long-term assets</td>
<td>↓</td>
<td>0</td>
</tr>
<tr>
<td>Income gains on short-term assets</td>
<td>0</td>
<td>↑</td>
</tr>
<tr>
<td>Incentive constraint</td>
<td>↓</td>
<td>↑</td>
</tr>
</tbody>
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### Numerical example: Return on those who deposited 100 at date 0

\[ r_0 = 1.2, \quad r_1 = \begin{cases} 1.2 \\ 1.3 \end{cases}, \quad R = 1.5, \quad p = 0.2 \]

<table>
<thead>
<tr>
<th></th>
<th>withdrawn early</th>
<th>Withdrawn late</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low rate: ( r_1 = 1.2 )</td>
<td>120</td>
<td>150</td>
</tr>
<tr>
<td>High rate: ( r_1 = 1.3 )</td>
<td>116.3</td>
<td>151.2</td>
</tr>
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• Incentive constraint is critical with alert depositors with access to financial market

• When early consumers have to bear the risk of capital loss on long-term assets, they need to hold both safe deposit and equity

• In the medium run, income gains on assets can compensate the initial capital loss on long-term assets → equity price of banks may rise

• Numerical example:
  • Bank with 80% of total asset in long-term asset
  • The value of long-term assets falls by 10% with short-term interest rate hike → capital loss is 8% of total asset
  • Suppose the interest rate spread between asset and liability rises by 1.5% annual → bank can recover the loss in $8/1.5 = 5.3$ years