

Banks and Interest Rates

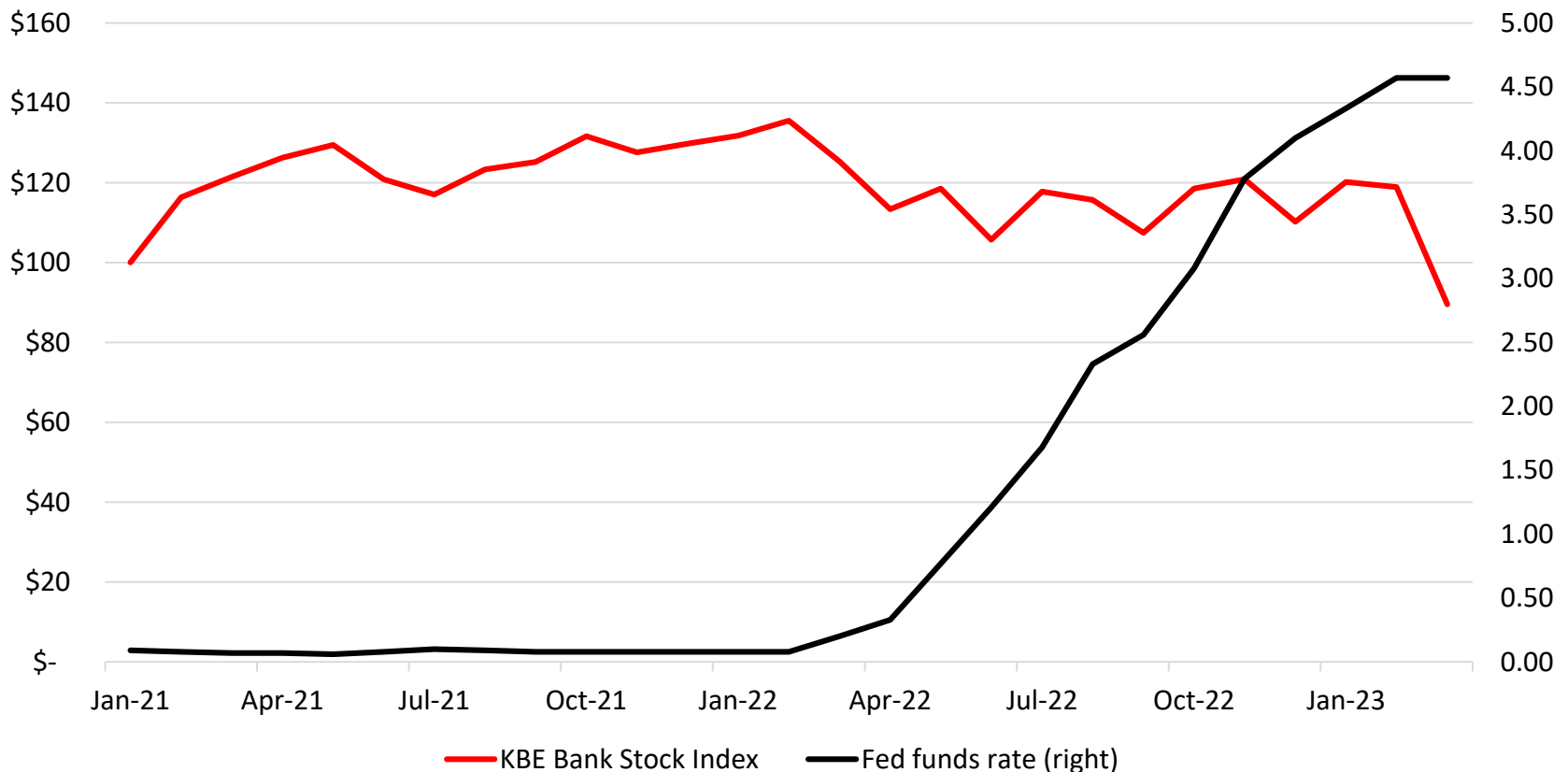
Philipp Schnabl



The Problem

- Since 2021, the Fed has raised short-term rates by 4.5%
 - long-term rates, which reflect expected future short rates, are up 2.5%
- Banks hold \$17T of long-term loans and securities with average duration 4 years
 - implied loss of $0.025 \times 4 \times 17 = \$1.7T$
 - not hidden or complicated
 - very large compared to \$2.2T bank equity

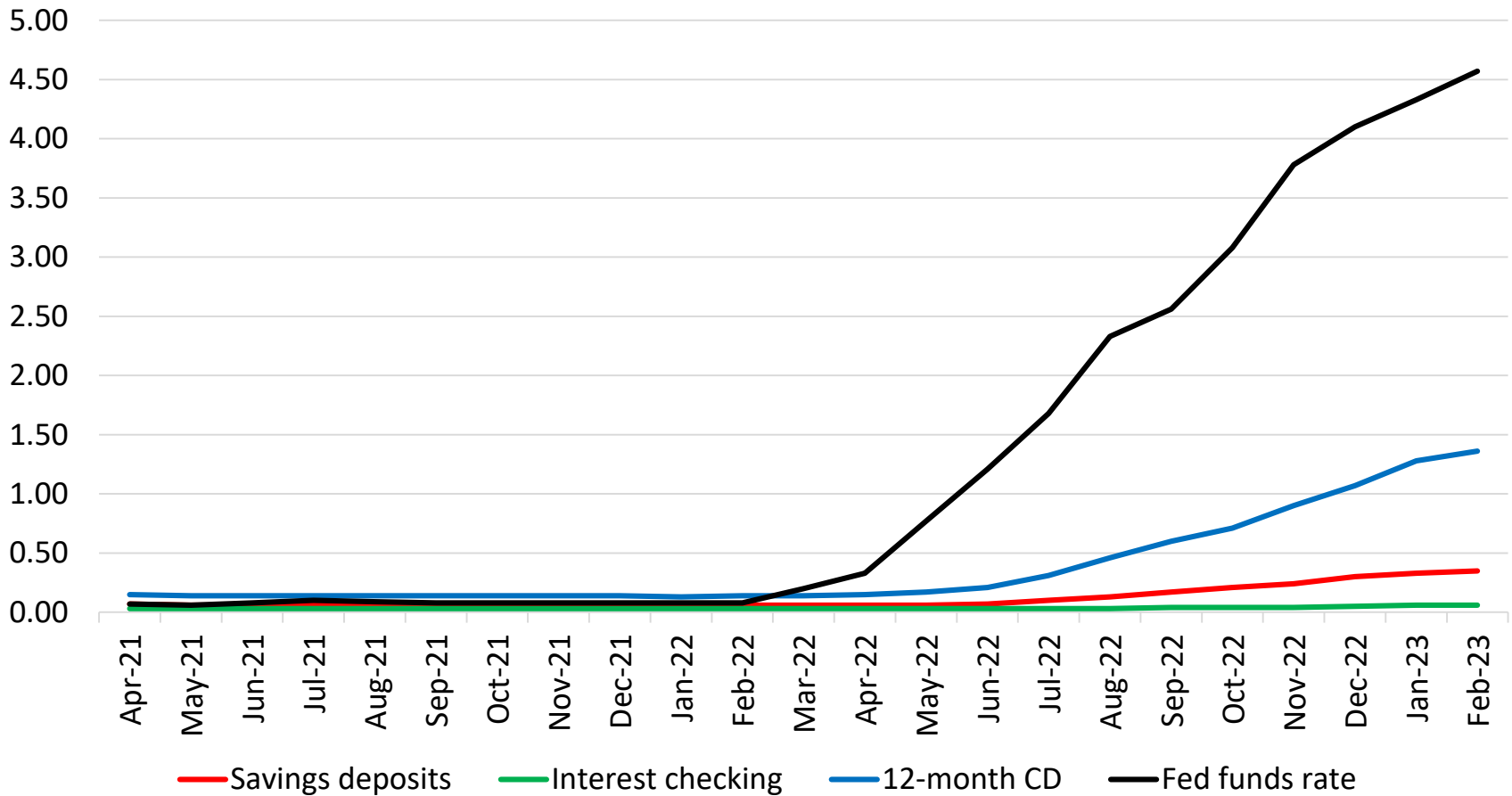
Bank Stocks Held Up Through February; Down 25% in March



The Deposit Franchise

- What makes banks special is issuing deposits
 - people like deposits for their convenience and safety
 - willing to accept very low deposit rates
- When rates rise, deposits become much more profitable for banks
 - “deposit beta” only 0.2 – deposit rates rise only 0.2% for every 1% Fed funds rate increase
 - banks capture the other 0.8 x Fed funds rate

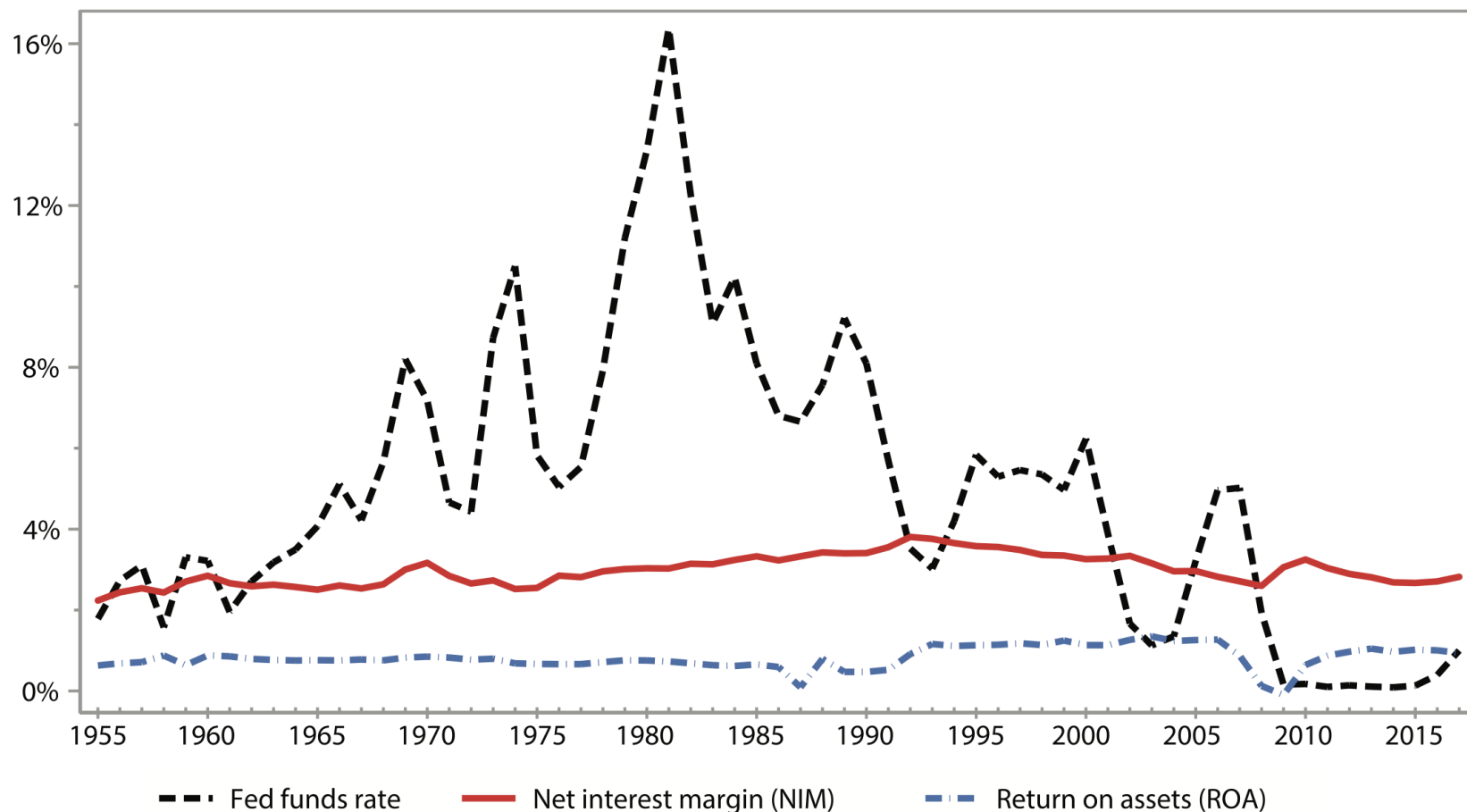
Deposit Rates



The Deposit Franchise Hedge

- There are \$17.5T of deposits
 - average deposit rate about 0.9%
 - banks earning $4.5 - 0.9 = 3.6\%$ deposit spread
 - $0.036 \times 17.5 = \$630\text{B}$ more income per year!
- Enough to offset losses on assets in 3 years
 - deposits went from unprofitable to extremely profitable
 - baseline estimate suggests a full offset
 - explains why bank stocks didn't fall through Feb

Stable Net Interest Margin

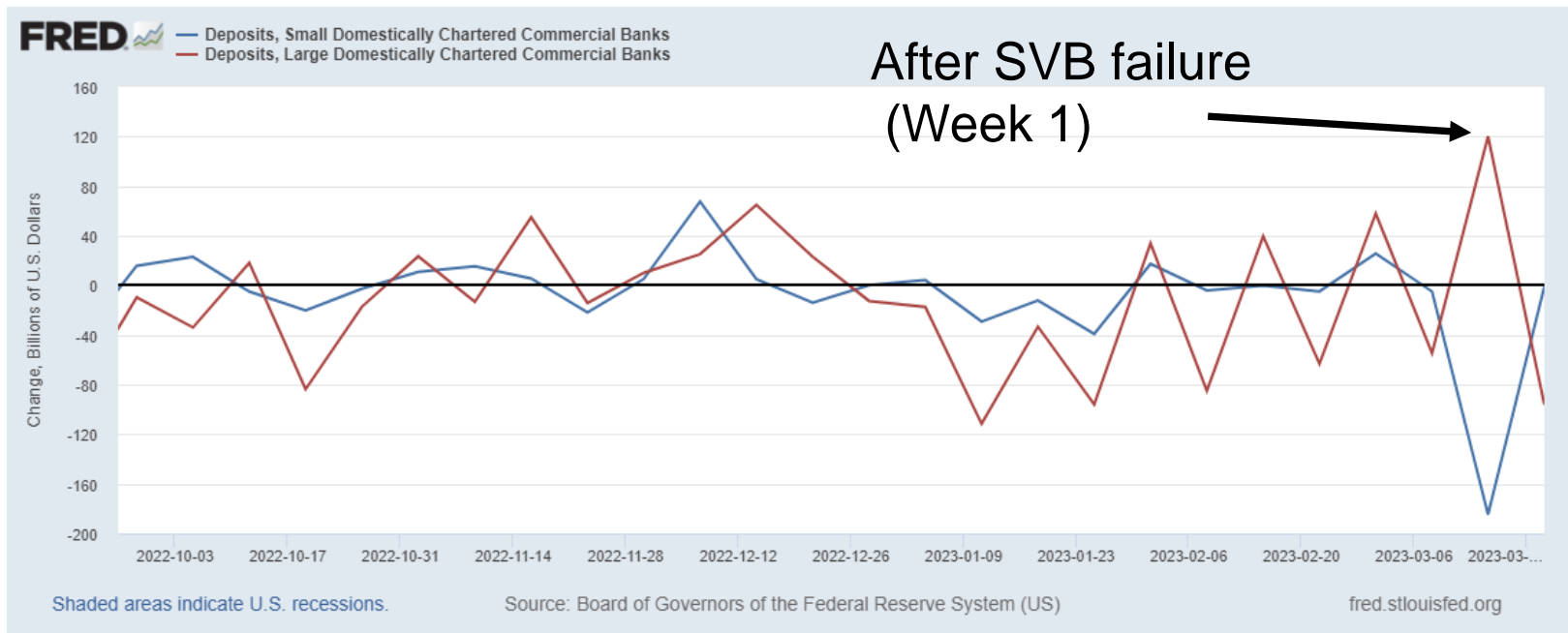


Source: Drechsler, Savov, and Schnabl (Journal of Finance 2021)

Risks

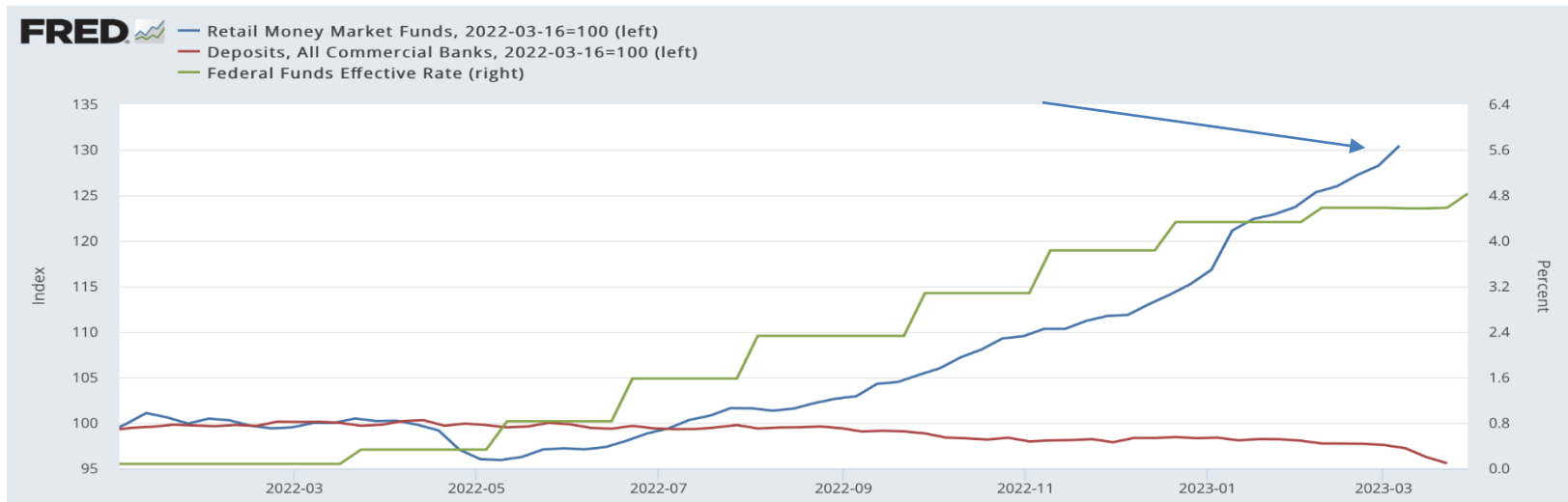
- The deposit hedge only works if most deposits stay in the bank
 - depositors may run if they are uninsured
 - a bank run destroys the deposit franchise and the hedge fails
 - deposit betas may rise if depositors seek out higher-paying alternatives
 - if the deposit beta doubles to 0.4, only 1/3 of losses offset
 - the risk is larger for regional banks (big banks could see betas fall)
- Key risks going forward are to the deposit franchise

Small Bank → Large Bank Deposit Flows



- After SVB failed, \$160B in deposits went from small to large banks
- Last week, flows from small to large banks stopped

Bank deposits → Money Market Funds



- Deposit outflows from banks to MMFs before SVB: \$20B/week
- After SVB failed, outflows increased to \$116B (~0.7% of deposits)
- Last week, outflows declined to \$66B