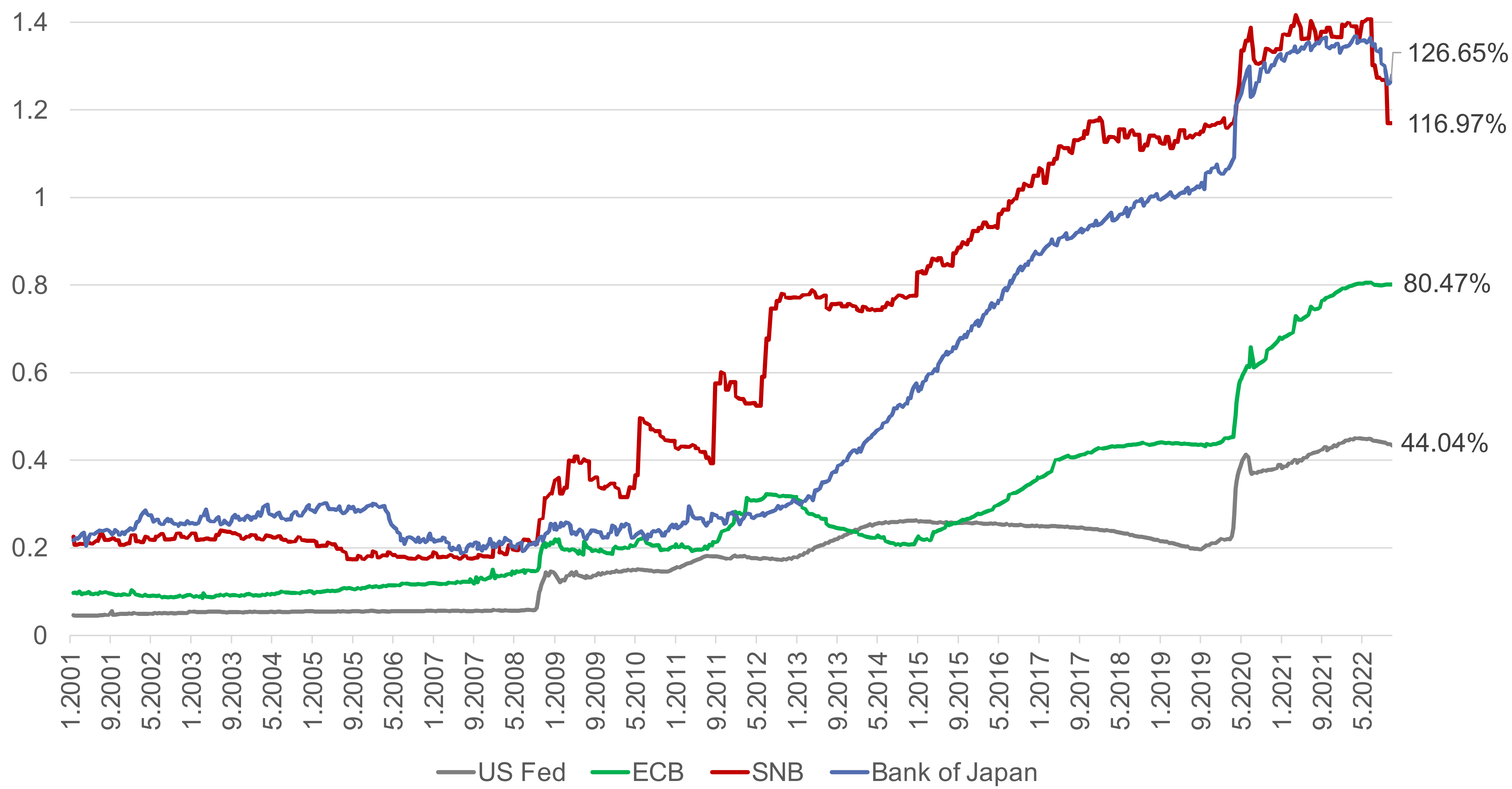
Size and Composition of Central Bank Balance Sheets

Randall S. Kroszner
Booth School of Business
Former Governor Federal Reserve

The SNB and its Watchers Conference
Bern, November 11, 2022

Great Transformation of Central Bank Balance Sheets: Size



Assets as a Share of GDP

Central Bank's Total Assets from Bloomberg as of 11/08/2022

GDP (Real Gross Domestic Product: Economic Research Division, Federal Reserve Bank of St. Louis as of November 8th, 2022

Great Transformation of Central Bank (CB) Balance Sheets

- Composition

- Lengthen maturities
- Commercial paper
- Corporate debt
  - High yield “junk”
- Corporate equity (not permitted in US)
- Real estate securities, e.g., MBS
- Foreign securities
- Swap lines
- Municipal debt
- “Main Street” lending

With the Great Transformation comes new risks

"To illustrate what this means in concrete terms given the current size of our balance sheet, I would like to give two examples. First, assuming nothing else changes, a 1% appreciation of the Swiss franc against the major currencies would immediately lead to a loss of CHF 10 billion. Second, a 5% rally on the equity markets would result in a profit of CHF 10 billion."

Thomas J. Jordan
113th Ordinary General Meeting of Shareholders of the Swiss National Bank
30 April 2021

What should the CB look like?

- Should balance sheets return to being "lean and clean"?

- What are the costs and benefits of a larger balance sheet and (size) having different risk exposures beyond government securities (composition)?

“Optimality,” Objectives, and Unintended Consequences

- When considering how best CB balances sheets should evolve, we must consider objectives for the CB and what purpose(s) of balance sheet can achieve in furthering those objectives

- Price Stability
- Monetary Policy Transmission/Growth/Employment
- Financial Stability
- Exchange Rate (discussed in previous panel so will skip)
- Fiscal – distributions to the confederation and the cantons

"Optimality," Objectives, and Unintended Consequences

- **Might these objectives conflict?**

- **How to make trade-offs?**

- **Is to possible to "exit" smoothly?**

- **What is the line between monetary and fiscal policy and what are the implications for central bank independence?**

- **Can there be unintended consequences?**

- **Political economy?**

Monetary Policy Transmission

- Breakdown of intermediation

- Ensure smooth and rapid transmission of monetary policy to the real economy (distinct from Financial Stability)
  - Example: Purchase of MBS to reduce spread to Treasuries and reduce mortgage borrowing costs during 2008/09 crisis

➔ Temporary so return to "lean and clean"

Financial Stability

- Case A: Temporary response to specific market dysfunctions

- Breakdown of Commercial Paper market in US in 2008
- Breakdown of US Treasury securities markets March 2020
- Breakdown of UK Gilts market Sept 2022

➔ Crucial to be temporary (ideal is "self liquidating") and targeted so not consistent with large balance sheet

- Commercial paper facilities vs COVID for Fed
- Unintended consequences
  - "Reach for yield" and excess risk taking, asset price volatility

➔ Who bears potential losses?

- BoE has requested Treasury to indemnify

Financial Stability

- Case B: Structural changes in markets and regulation (Duffie et al 2022)

- Increases in capital and liquidity requirements plus regulations like the Volcker rule
- Reduction in liquidity and increase in fragilities in markets

➔ Structural change so rationalizes a potentially substantially larger balance sheet over the long run relative to pre-2008

Financial Stability

- Case C: Use the composition of the balance sheet strategically to reduce stability risks

- Stein et al 2016: "crowd out" excess private sector reliance on short-term debt

➔ Goodhart "rule"?

- Once the central bank explicitly uses the composition of the balance sheet strategically, will it change how the private sector responds?
- Worthwhile, however, to explore whether there can be financial stability benefits of strategic composition choices

Price Stability

- Do large increases in the size of CB balance sheets to fight deflation necessarily “end in tears” with high inflation?

- Clearly not
  - Fed post 2009 – inflation below 2 percent target for a decade
  - Bank of Japan – decades of QE with persistently low inflation
  - SNB – inflation has been low but inflations and expectations rising

- But it can

- Post-COVID QE and fiscal expansion (in US) on steroids
- Key is the increase excess reserves vs increase in the money supply
  - Milton Friedman repeatedly drew this distinction

➔ If the balance sheet large, great care needed to manage incentives to hold reserves vs credit creation and money supply growth

➔ Central banks “own” inflation regardless of its source so crucial to manage inflation expectations which is can be more challenging with a large/growing balance sheet

Fiscal

- "Earnings" are returned to the fiscal authorities

- Rules for distributions to confederation and cantons

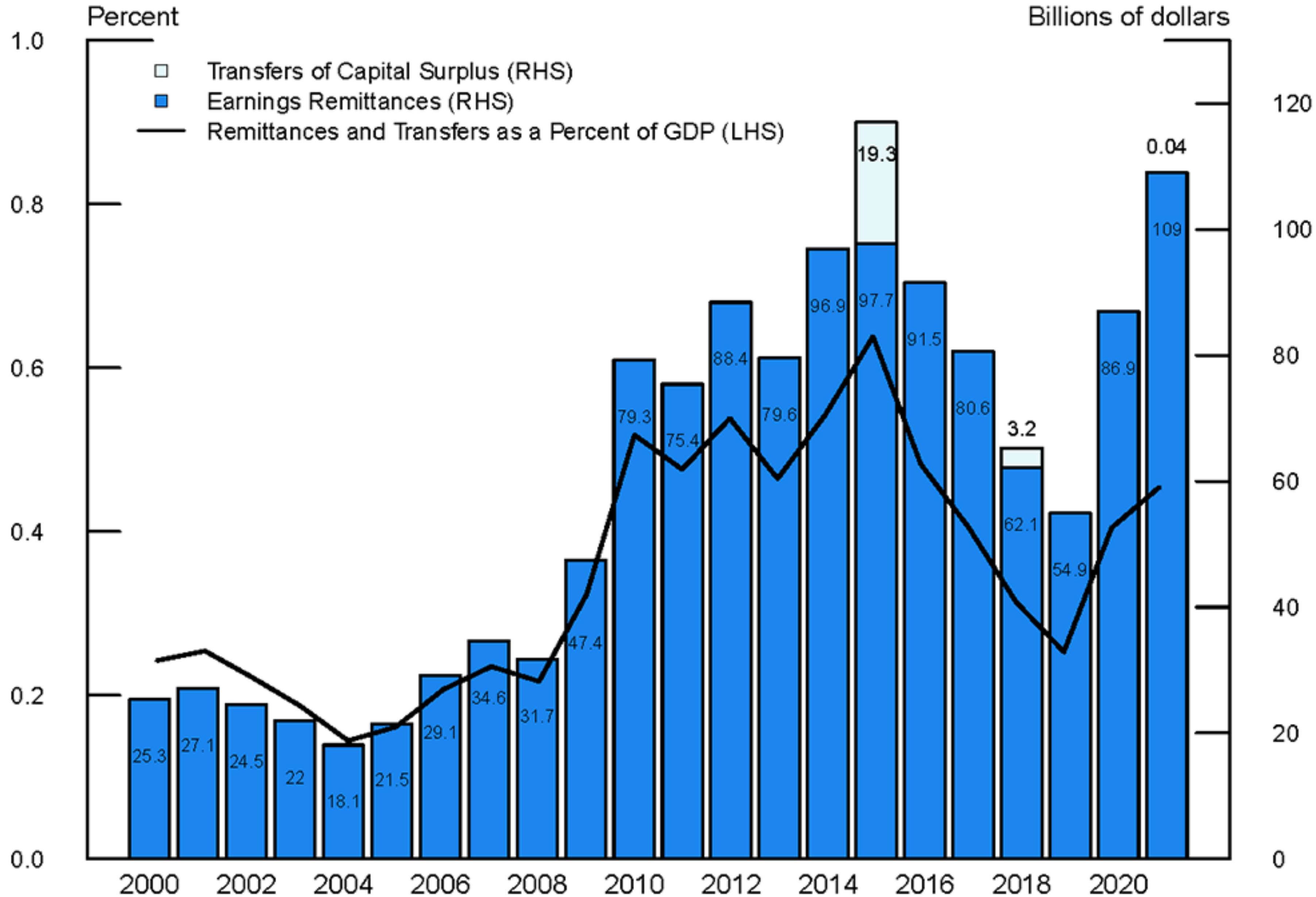
- Larger balances sheets have, until recently, been associated with higher distributions

- But also opens up the possibility of more volatility and substantial and sustained losses

- Also, what are financial stability consequences of "exit"?

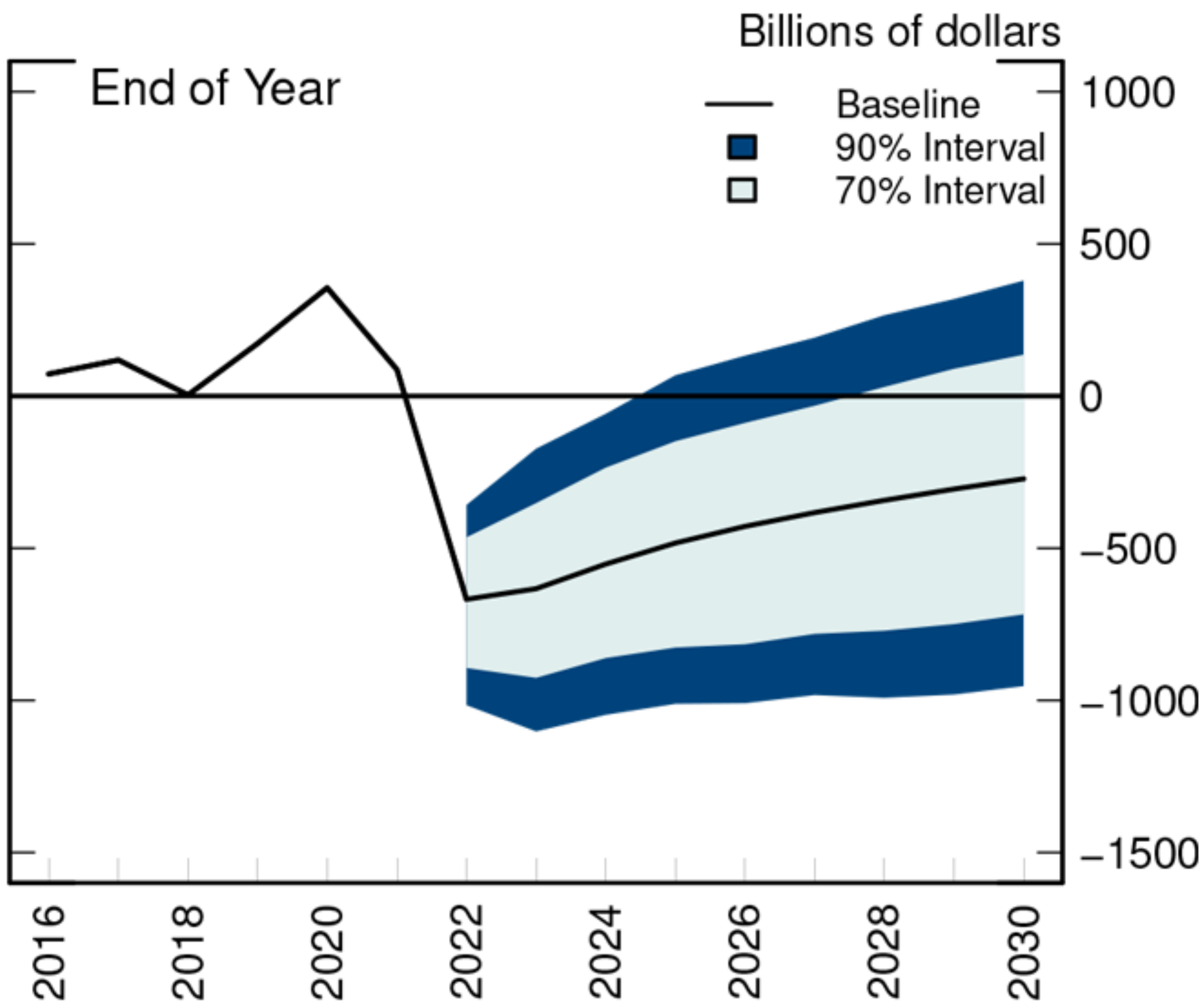
➔ How to make the right risk/reward trade-offs?
➔ Political economy of fiscal "dependence" on central bank "profits"?

Fed Remittances and Transfers to the U.S. Treasury



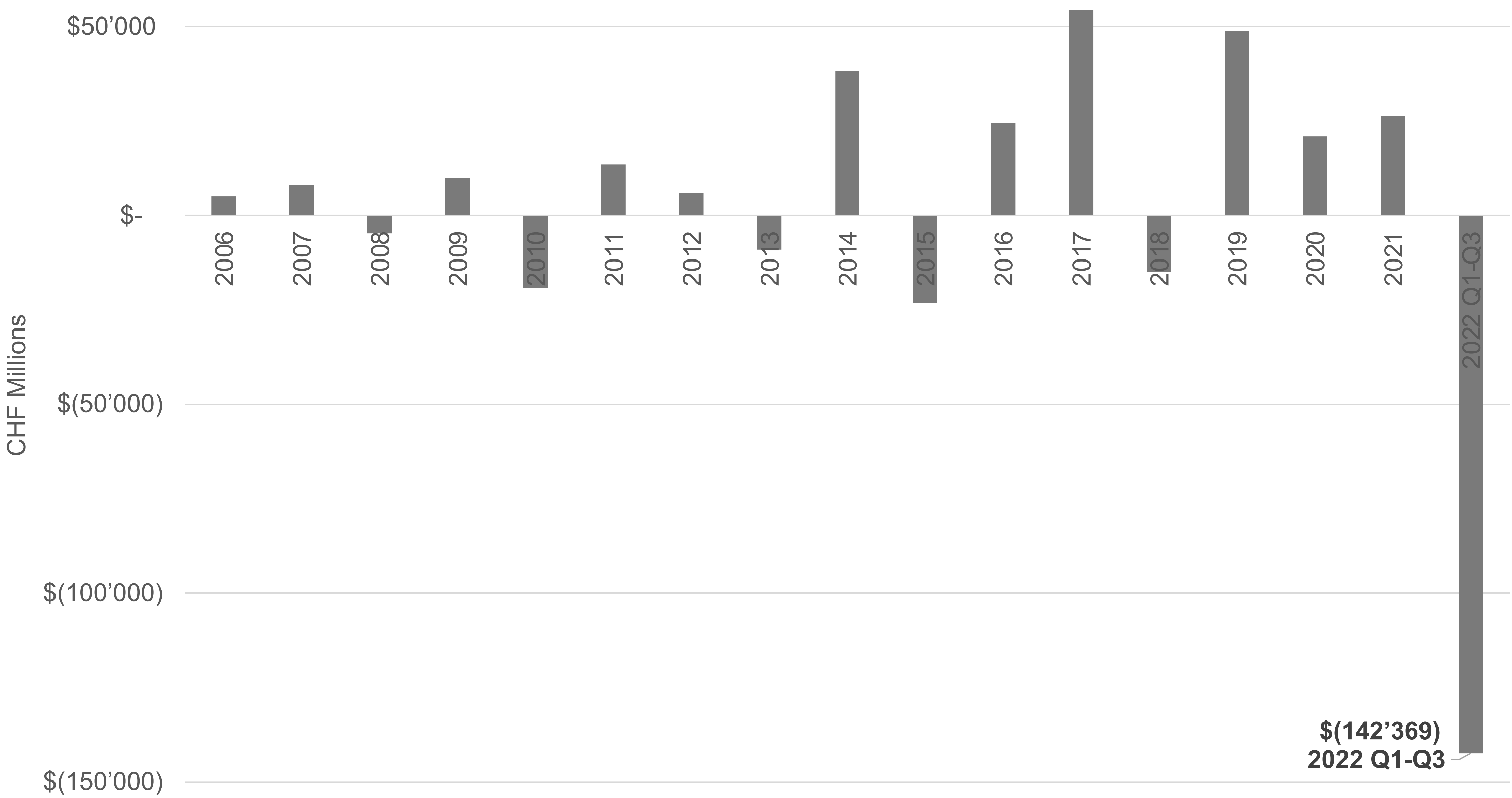
Source: Fed Notes: An Analysis of the Interest Rate Risk of the Federal Reserve's Balance Sheet, (July 15, 2022). Note: The light blue bars indicate transfers of Reserve Bank capital surplus from the Federal Reserve to the Treasury. The transfers in the amounts shown were necessary to reduce aggregate Reserve Bank surplus to prevailing aggregate surplus limitations. Source: Board of Governors of the Federal Reserve System; Bureau of Economic Analysis

Unrealized Gains/Losses



Source: Fed Notes: An Analysis of the Interest Rate Risk of the Federal Reserve's Balance Sheet, Federal Reserve, (July 15, 2022)

SNB Annual Result



Selected data from the SNB Annual Reports 2006-2021 and September 2023 Interim Report

Political Economy Risk

- Should "profits" and "distribution" be a motivation for a larger balance sheet?

- Fiscal "dependence" and could raise questions about central bank independence
- Risk of direction of central bank purchases/lending
  - In COVID responses, US Congress directed the Treasury to work with the Fed to leverage certain lending programs
  - Substantial increase in risk?
  - Desire to "offset" negative impacts of higher interest rates on particular groups
- SNB as hedge fund?
  - Could the CHF risk it's privileged status if the SNB explicitly tries to take advantage of it?
  - Another version of Goodhart Rule

Conclusions

- While many of the arguments support only a temporary increase in CB balance sheets in response to particular risks, there may be structural reasons for central banks to have permanently higher balance sheets than pre-2008

- We don't have a benchmark model for "optimal" size

- Structural factors do suggest substantially larger than before
- Potential financial stability consequences of "exit"

- To the extent that larger balance sheets are associated with a composition that involves substantial risk and volatility, it could subject the central bank to more political involvement

- Difficult to have a dynamically consistent pay-out rule

- Bottom line: I would argue NOT too lean but keep it CLEAN!