

The background of the slide is a photograph of the Federal Reserve Bank of New York building. The building is a large, classical-style structure made of light-colored stone with many windows. An American flag is flying from a pole on the left side of the building. To the left of the main building, other skyscrapers are visible in the background. A brown banner with white text is positioned across the middle of the image.

FEDERAL RESERVE BANK *of* NEW YORK

Monitoring Risky Banks: Integrating Solvency and Funding

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The views expressed in this presentation are those of the author and do not necessarily reflect the views of the Federal Reserve Bank of New York or the Federal Reserve System.

Pillars of Effective Supervision

- Recent Basel Committee study* identifies three key pillars of effective supervision:
 - Risk identification and assessment
 - Remediation and enforcement
 - Collaboration and transparency
- Follows a logical flow:
 - See something (risk ID and assessment)
 - Say something (supervisory intervention and follow-up)
 - Do something (remediation)
 - Do something with consequences (enforcement)
 - Share information with other supervisors (collaboration and transparency)
- My focus today: risk ID and assessment
 - How can supervisors know which banks are becoming riskier and thus deserve more supervisory attention?

* “Lessons on Supervisory Effectiveness – A Literature Review” (July 2025)



Identifying (Potentially) Insolvent Banks

- Conventional measures of bank capital are grounded in accounting rules that do not always account for the timing of payments or changes in market rates and prices
- Hence, critical risks to banks are not reflected in these measures:
 - Market risks (e.g., interest rate risk)
 - Liquidity/funding risks, especially from deposits
- Would a solvency measure that incorporates the timing of payments and integrates funding risk better capture the risks of individual banks and of the banking system?

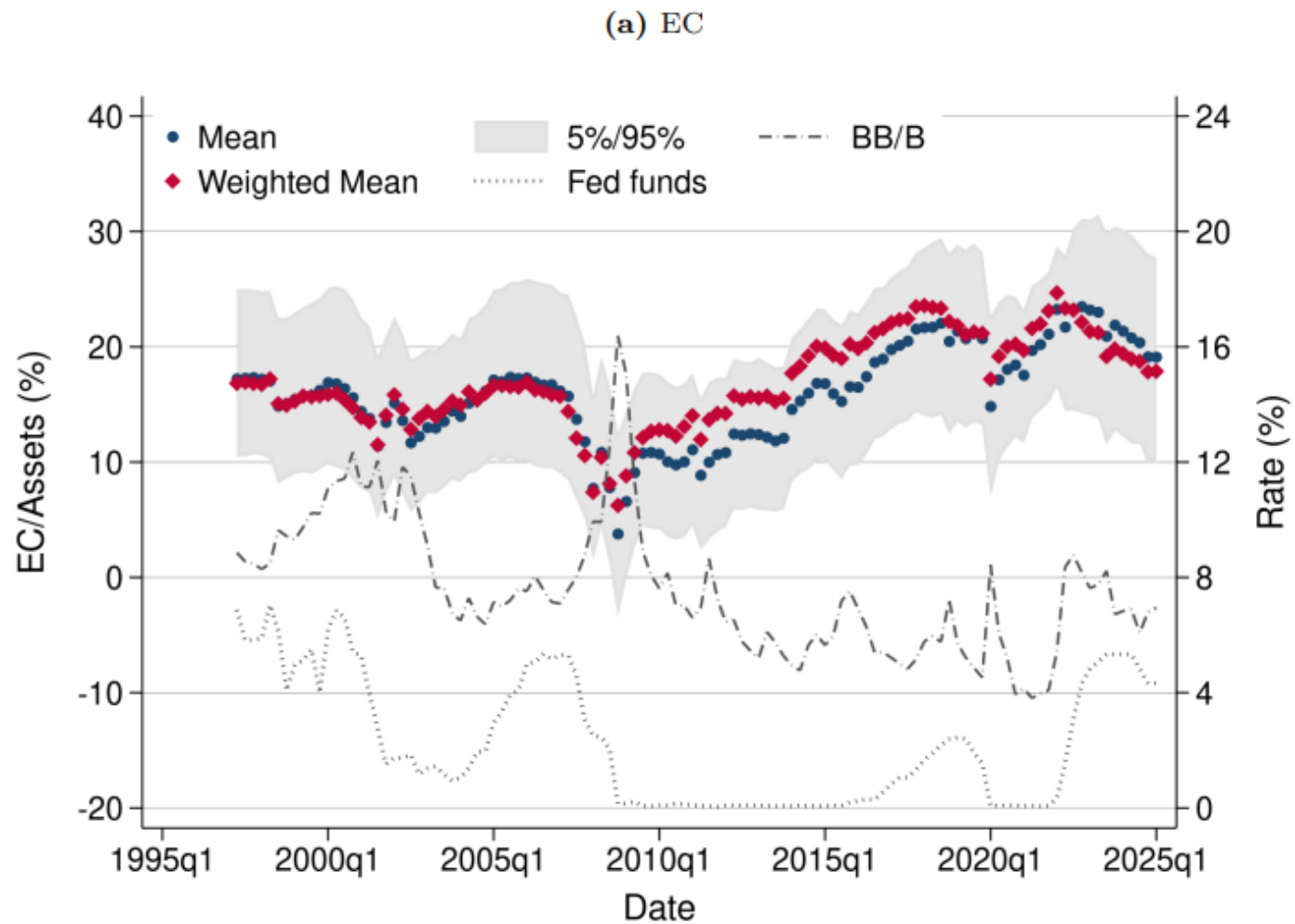


“Bank Economic Capital” (Joint with Matt Plosser)

- We calculate “Economic Capital” (EC), a solvency measure based on the present values of assets, liabilities, and necessary expenses
 - Incorporates the timing of payments
- We use publicly available regulatory report data (Call Reports) for nearly all U.S. commercial banks from 1997:Q2 to 2025:Q1
- Many technical assumptions and much detailed modeling, all described in our paper
- Key point is that EC provides an integrated measure that can be used to assess the impact of funding/liquidity risk on solvency
 - Can also explore other scenarios involving movements in interest rates, credit spreads, modeling/parameter assumptions about prepayments, deposit price sensitivities, and other factors



EC has increased since the GFC, reaching new highs

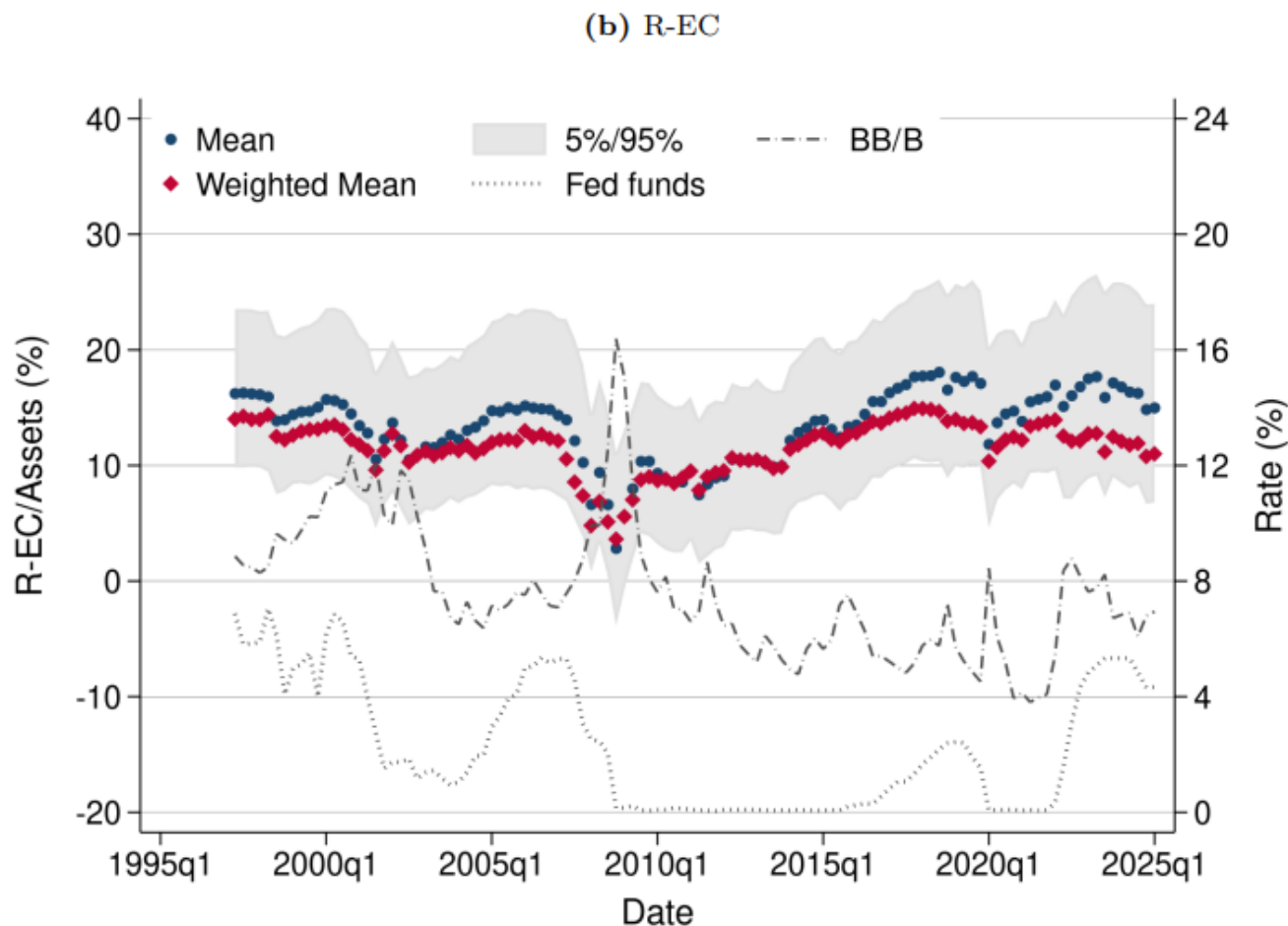


“Run” Economic Capital

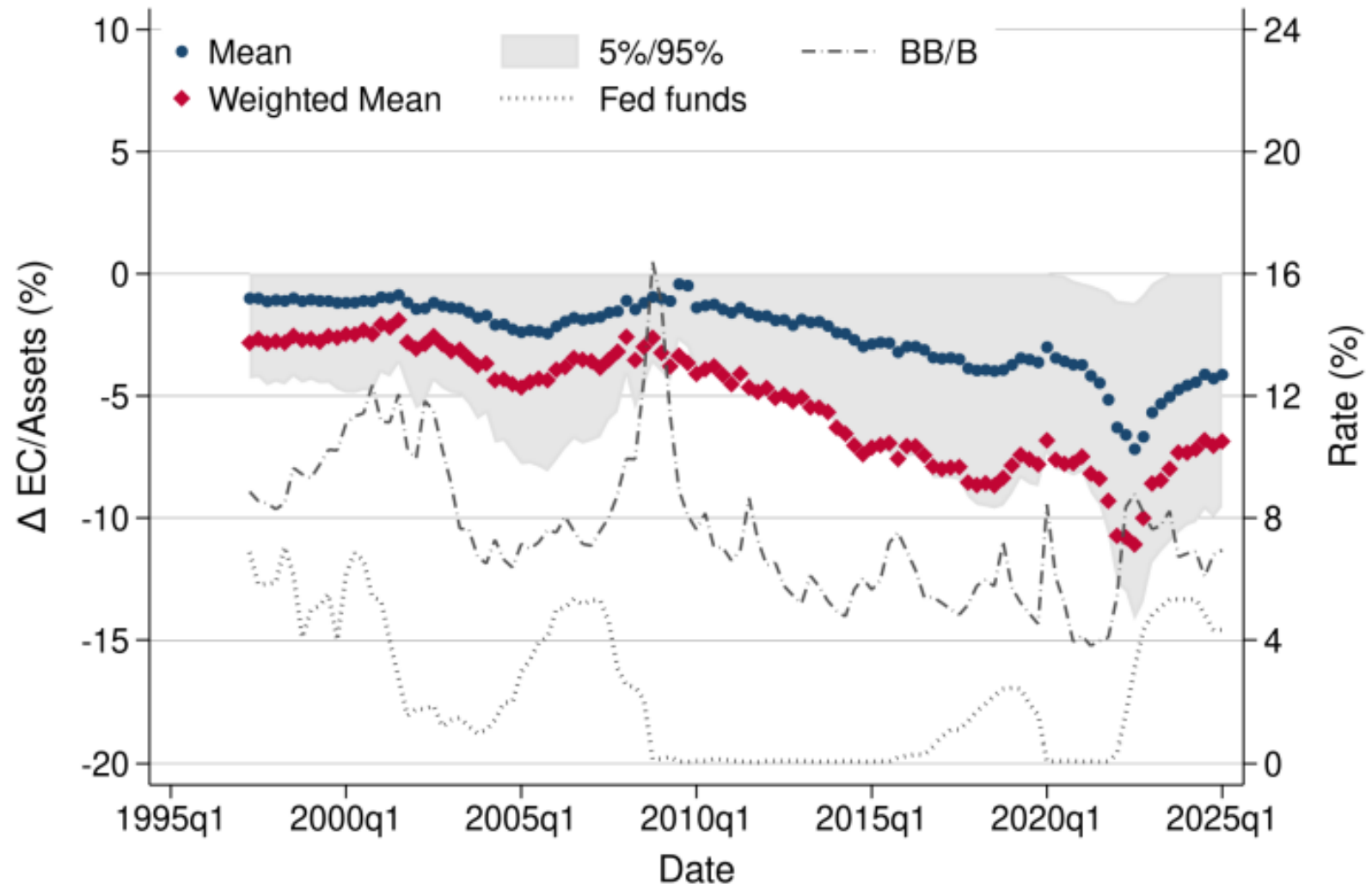
- We calculate a second version of EC that assumes banks have experienced a deposit run: “Run” EC (R-EC)
- In practice, we do this by assuming that all uninsured deposits are replaced with market-rate financing
 - Raises the present value of liabilities and decreases EC
 - R-EC is always less than or equal to EC
- Key idea is to assess solvency after a run
 - If a bank continues to be solvent after a run, it is less likely to experience a run because depositors would be whole after the run



R-EC: less evidence of post-GFC increase, especially for big banks

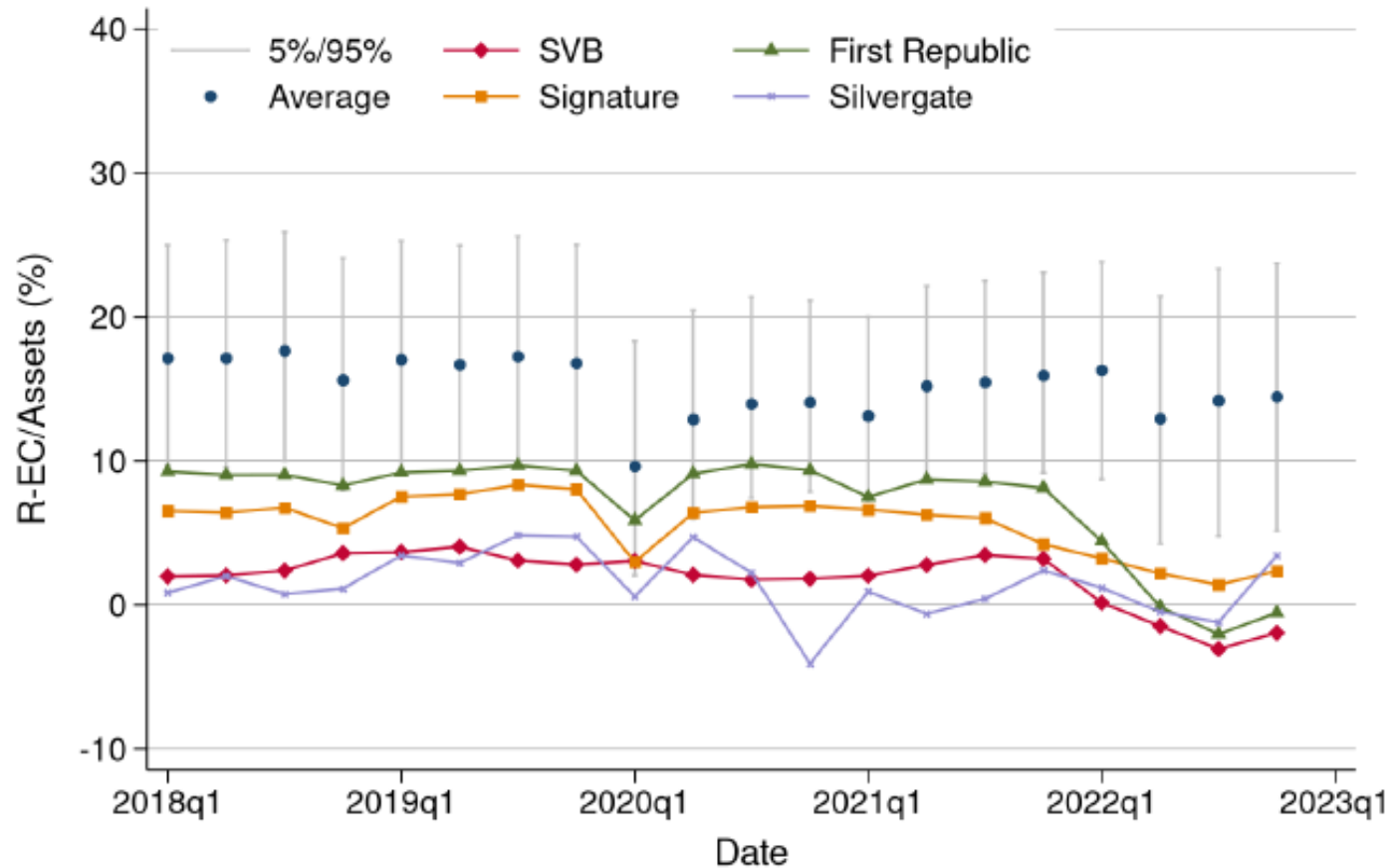


EC/R-EC gap: industry exposure to deposit risk has grown, especially for large banks



R-EC identifies 2023 failing banks many years ahead

(b) R-EC



Conventional solvency measures did not identify failing banks as clearly

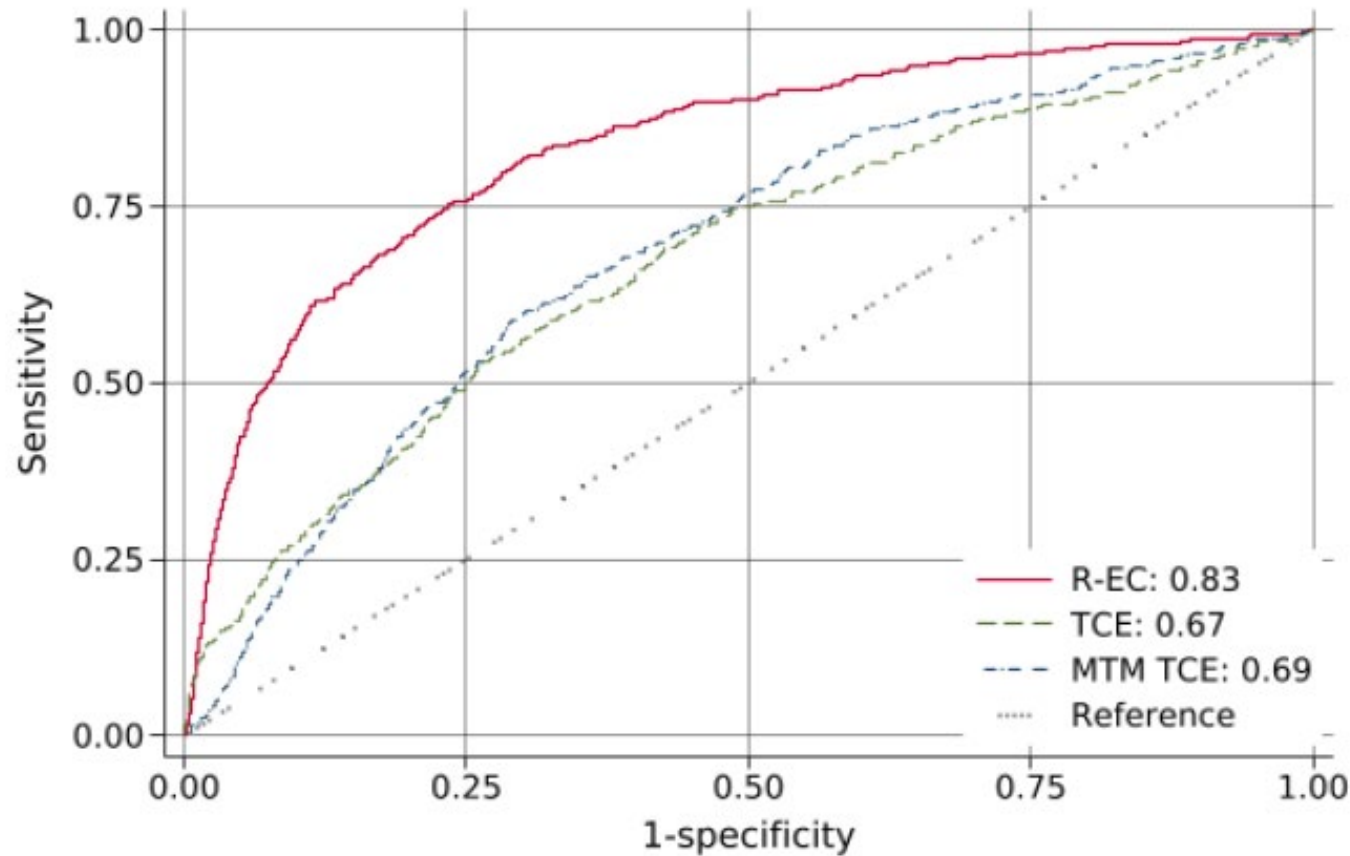
Ranking of Banks with Assets of \$10 Billion or More Under Different Solvency Measures As of 2021: Q4

	R-EC		EC		TCE		MTM TCE	
	Rank	%	Rank	%	Rank	%	Rank	%
Silvergate	1	2.37	49	21.93	103	9.62	119	9.62
Silicon Valley	2	3.21	20	18.83	16	6.95	63	6.34
Signature	3	4.24	15	18.21	2	6.02	55	6.12
First Republic	10	8.37	30	20.15	9	6.65	83	7.15
Industry (> \$10b)	69.45	13.78	68.70	22.58	68.58	8.67	67.12	6.45



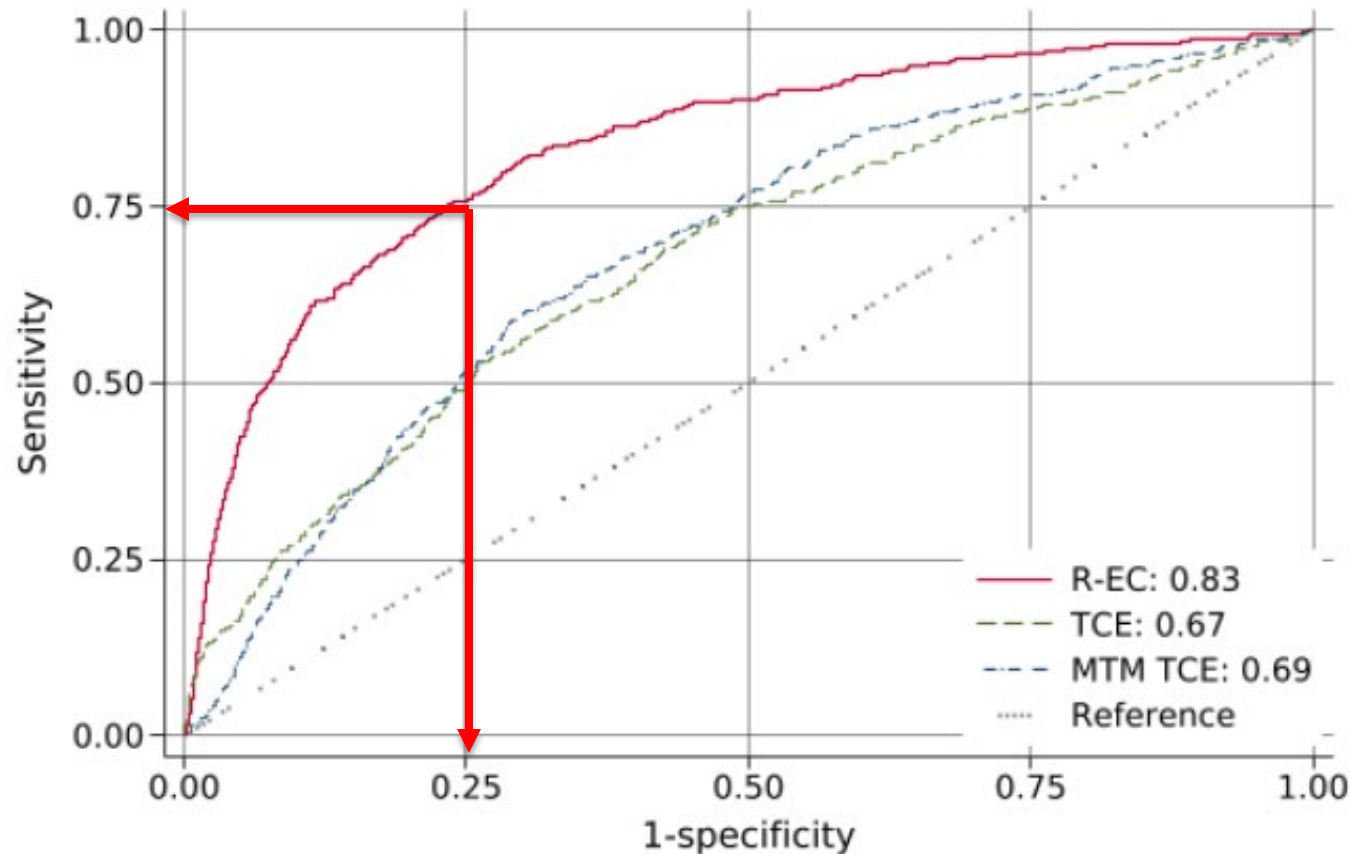
R-EC outperforms in identifying failing banks from the entire sample period (it's not just 2023)

(a) 8-quarter



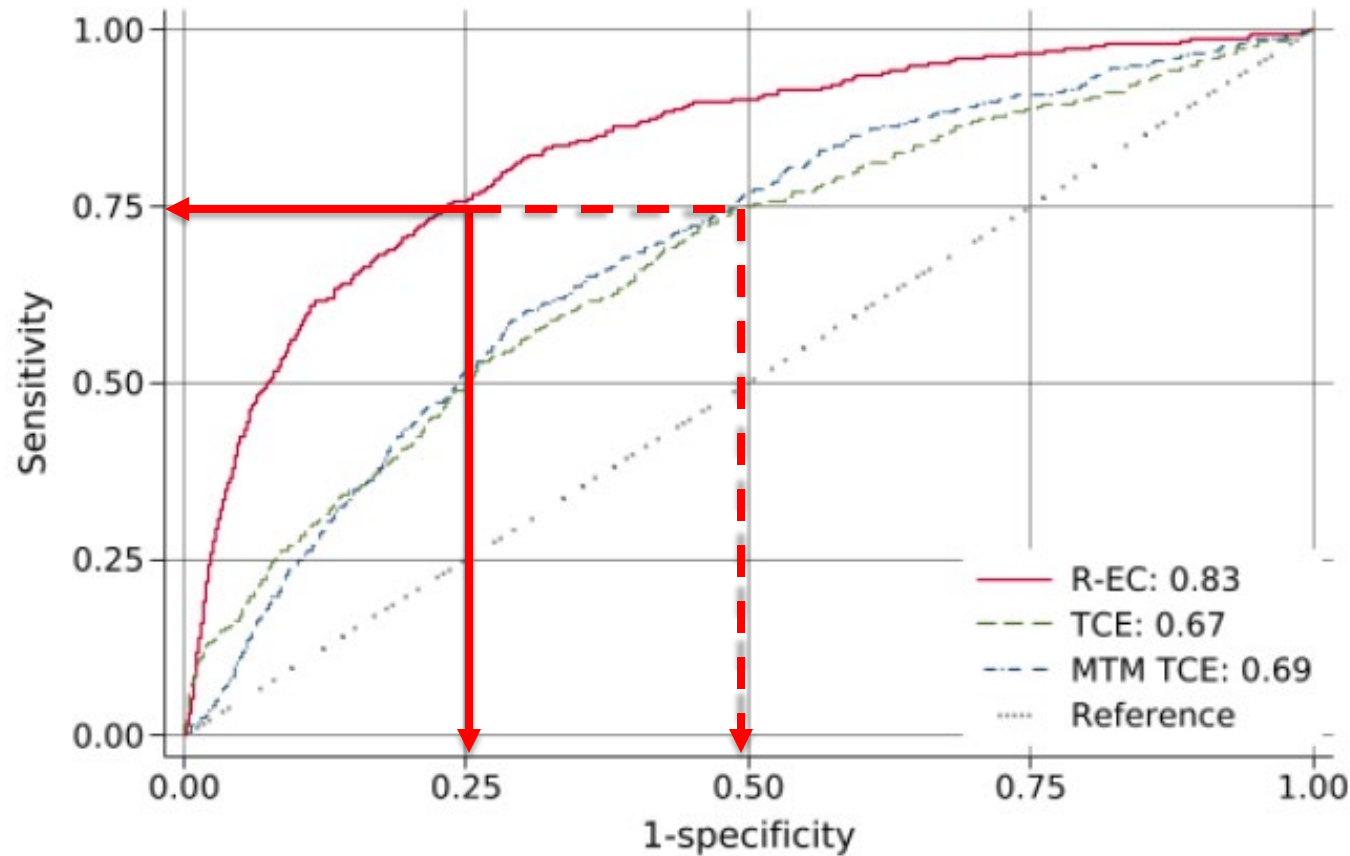
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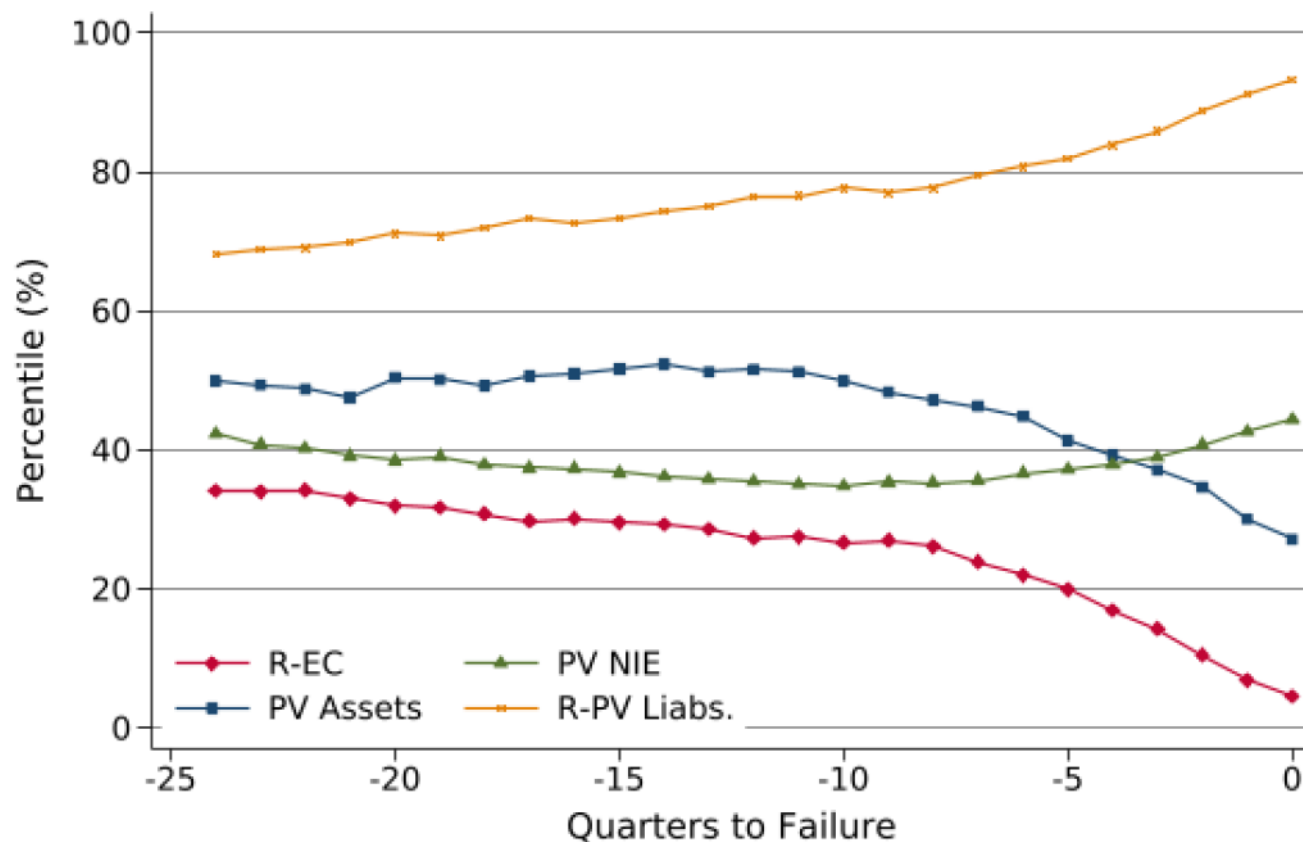
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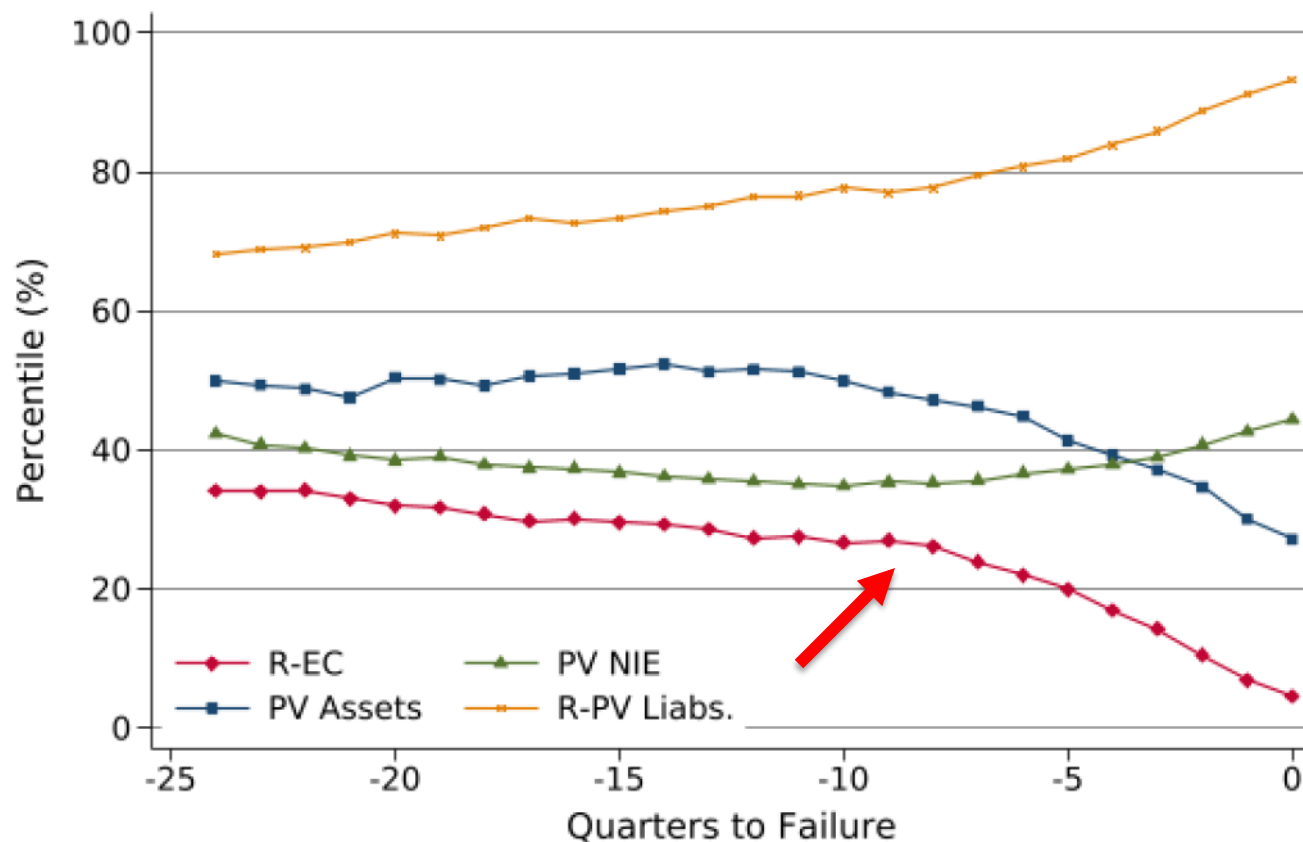
Key element: liability values increase well before failure

Figure 11. Components of R-EC prior to bank failure This figure plots the percentile for the components of R-EC in the run-up to bank failure in order to illustrate the importance of both assets, liabilities and expenses in assessing risk. Percentiles are calculated quarter-by-quarter.



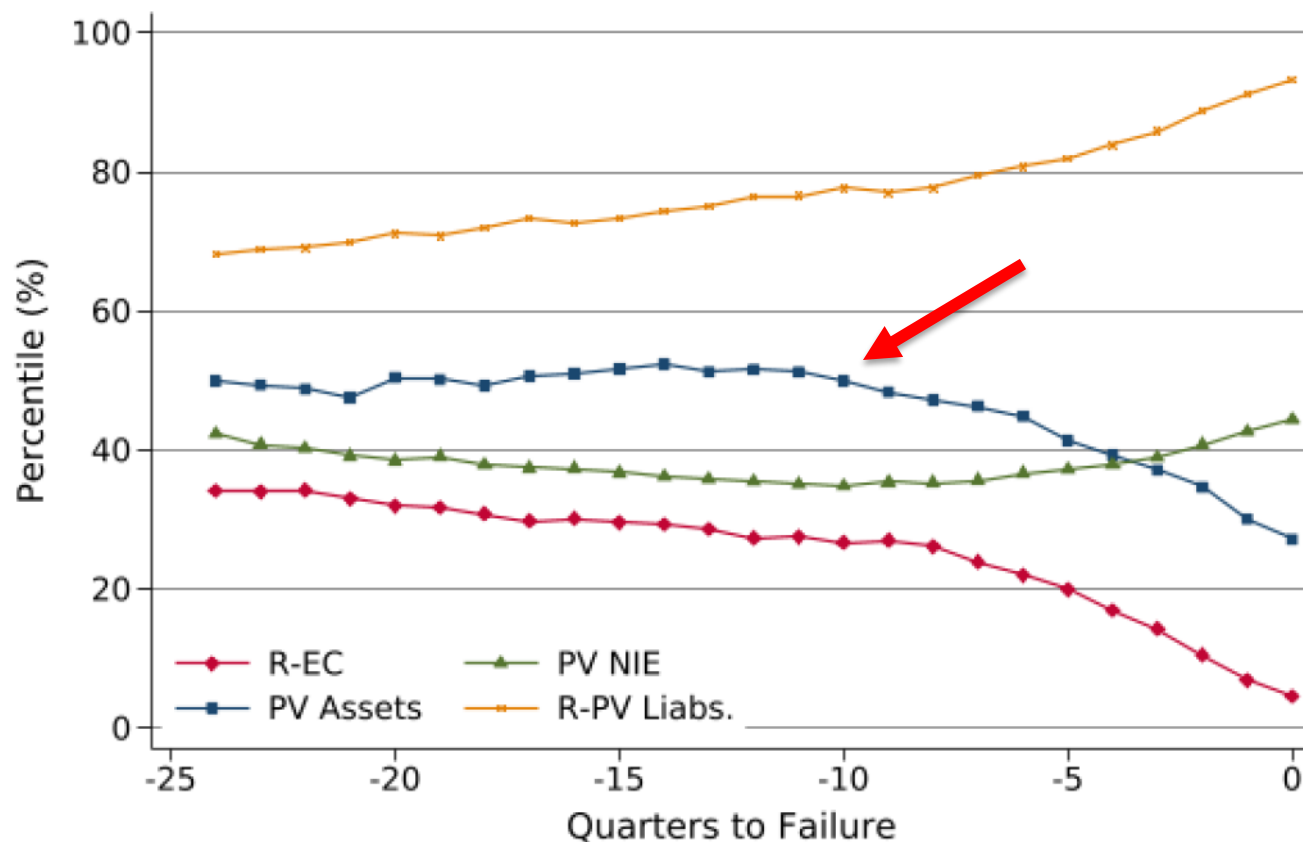
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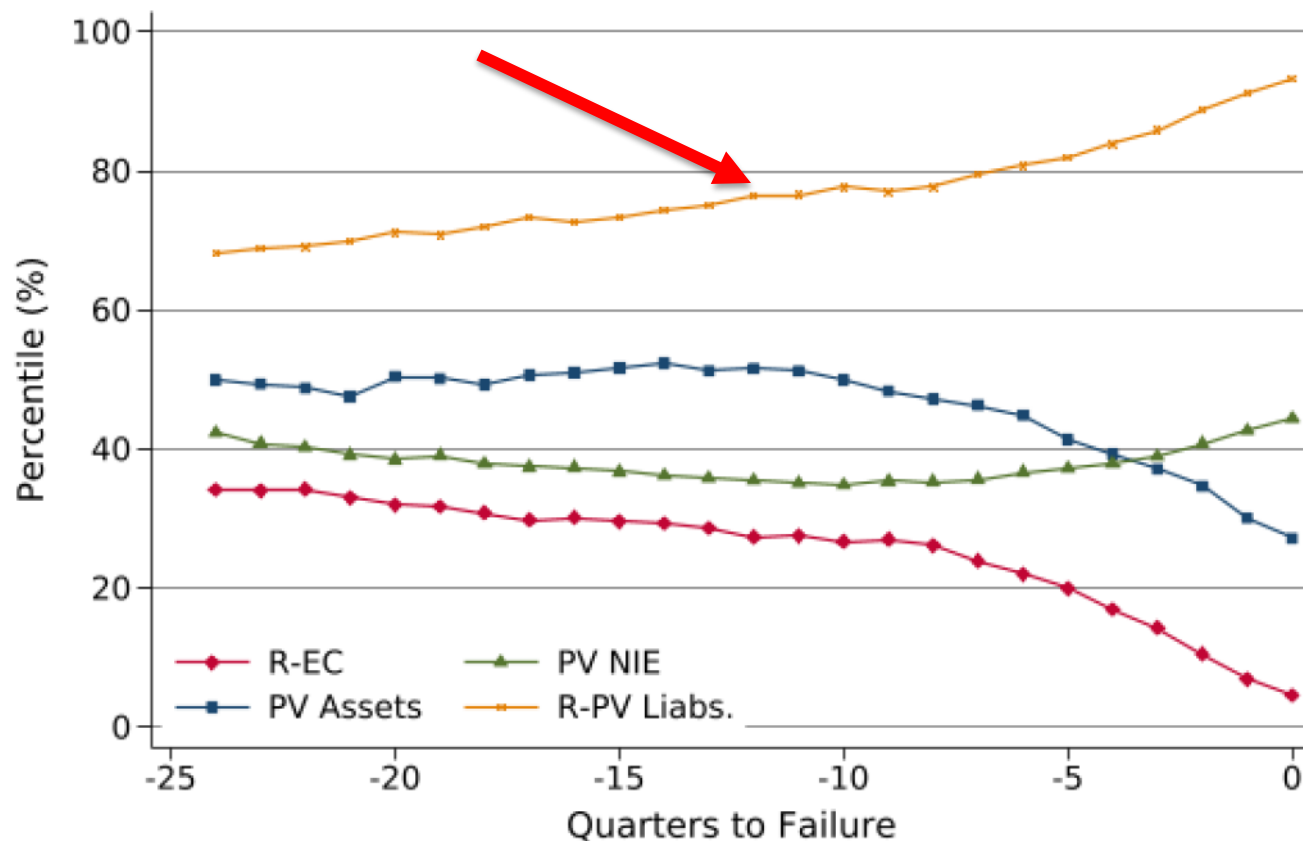
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Summary

- Economic capital is a useful measure for identifying heightened insolvency and run risk that could be incorporated into the supervisory toolkit
- EC and R-EC suggest industry and large bank exposure to deposit funding risk has increased since the GFC
- Key element is considering both sides of the balance sheet
 - Measures that only mark down assets cast too wide a net