EUROPEAN CENTRAL BANK

EUROSYSTEM

Discussion

“Interest Rate Risk in Banking”

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Contribution of paper

Contribution of paper: Deposit beta ≠ Duration

Develop and estimate a model of the “franchise value” of a bank as a function of the duration of the banks’ assets and liabilities

Shows that in the data, banks tend to have positive (not negative) duration, implying that interest rate hikes negatively impact franchise value

The positive duration comes from the median bank earning a positive spread from lending that exceeds its operating costs

Low deposit betas do not imply a negative duration because, although deposit spreads rise with interest rates, the value of deposits does not

Finds that most banks engage in cash-flow hedging, but not duration-hedging (cf. Begenau, Piazzesi and Schneider 2025)

Franchise value of most banks can withstand recent interest rate hikes

Comment 1: Interest rate risk

Paper convincingly shows that banks have **positive** duration and that the literature fails to recognize that value of deposits is interest rate insensitive

Paper does so by basically equating interest rate risk to duration risk

(while accounting for differences between floating and fixed-rate assets and stickiness of deposits)

Banks report that interest rate hikes will **raise** the value of their equity, which is at odds with a positive duration → Authors conclude this contradiction is due to **misperception** from regulatory guidance

Another possibility is that duration risk does not fully capture all aspects of interest rate risk

Comment 1: Interest rate risk ≠ Duration risk

Convexity: Duration assumes linear changes in rates. However, large rate moves can have nonlinear effects

Non-parallel shifts: Duration assumes uniform rate changes, but short-term and long-term rates may move differently

Loan prepayments: When rates rise, loan prepayments and refinancing decline, increasing net interest income (i.e., loans collect interest for longer)

Funding liquidity risk: If a bank faces unexpected withdrawals or needs to roll over debt at higher rates, it may struggle to maintain stable funding

Market liquidity risk: If a bank needs to sell assets to manage risk, market conditions may make it difficult to do so without losses

Comment 2: Franchise value

Paper defines "**franchise value**" as the present value of the interest rate spreads on the bank's deposits and loans, net of operating costs, to basically equate interest rate risk to duration risk

The bank is solvent as a going concern if the franchise value exceeds book equity + (marked-to-market gains on securities minus debt issuance)

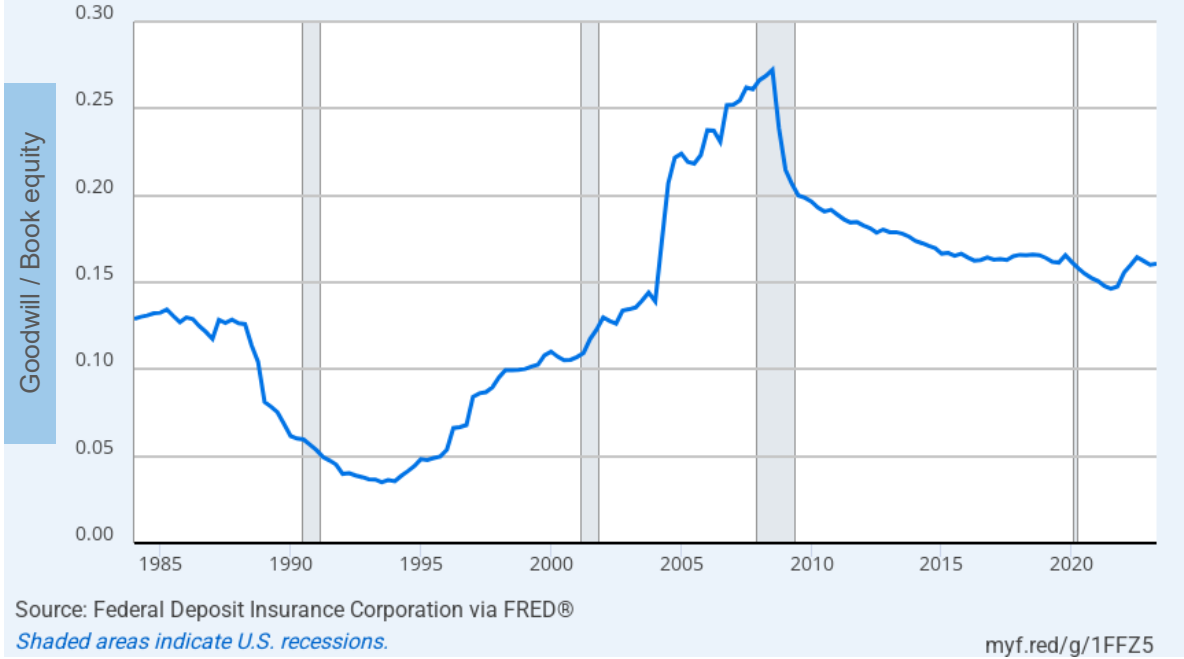
In the banking literature, franchise value is defined as the difference between the market value of the bank assets minus their replacement cost, where replacement cost is book value of assets **minus goodwill**

→ Goodwill should be taken out of the replacement cost!

Franchise value reflects long-term value **beyond** just its tangible assets such as brand, customer relationships, branch network, and quality of risk management!

Banks have sizeable nontangible assets

Figure 1. Goodwill of US banks (fraction of book equity)



17% today

Comment 2: Franchise value under QE and QT

Interest rate risk originates not only from Fed rate policy but also **QE and QT**

- QE inflated asset prices for banks, boosting their franchise values
- QT hurts the value of long-duration bonds, but the Fed has been cautious with QT

Authors assume **realized gains on securities** do not impact franchise value

- This makes sense to the extent that they are one-off gains
- However, if banks reinvest realized gains into the franchise, it could boost franchise value

Overall, asset purchases have probably been a net **wealth transfer** to banks

Not clear whether most banks would have been able to withstand sharp interest rate hikes without these wealth transfers

Comment 3: Going beyond interest rate risk

What explains **low** M/B ratios (<< 1) of banks like Citigroup, Bank of America?

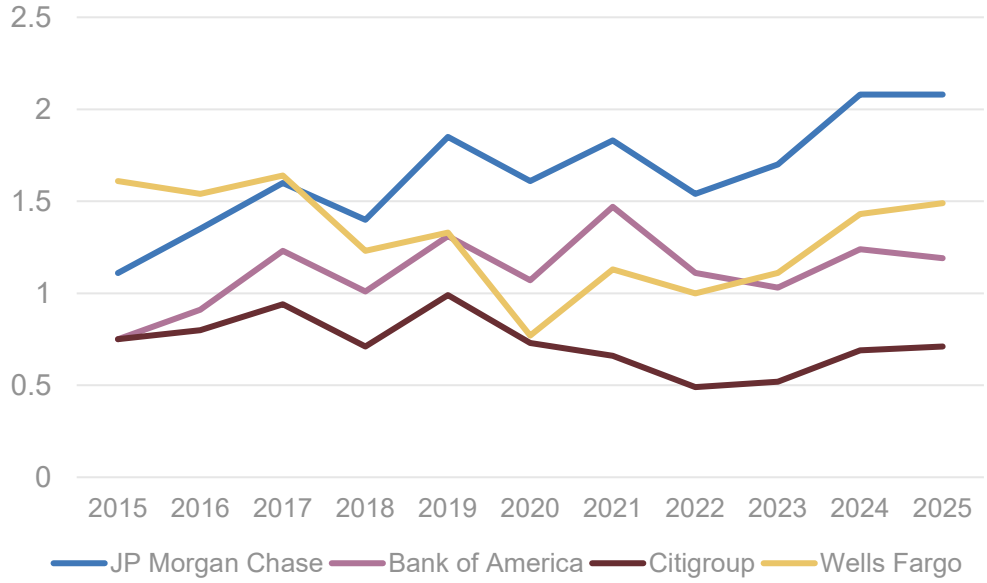
- Substantial goodwill
- Poor quality of equity (preferred stock, deferred tax assets)
- Substantial illiquid (level 3) assets that cannot be liquidated at fair value
- Legacy assets that are worthless
- Zombie banks? During GFC, technically insolvent banks were rescued

Cross-section: What is driving franchise value, beyond duration? Customer relationships? Quality of risk management?

Time-series: What is the evolution of franchise value over time? What is the role of distance, market concentration, and competition from nonbanks?

Bank heterogeneity in M/B over the interest rate cycle

Figure 2. M/B ratios of 4 largest US banking groups, 2015-today



Source: Bloomberg

Summing up

Great paper, that enriches and clarifies the debate on deposit betas

Duration of a bank's franchise value is positive (not negative)

Improves our understanding of how interest rate risk is shaped by duration

There is more to interest rate risk management of banks, but this is for another paper

For now, I would be less sanguine about banks' interest rate exposures

THANK YOU!