Corporate Communication vs Operational Behavior in the US Banking Sector

Nikolaos Kliropoulos

June 29, 2026

Research question

- Did the financial crisis change the way banks communicate with the public?
  - Specifically, from pre-2008 risk-taking and profitability rhetoric to post-2008 compliance and prudence rhetoric?
- Do language changes reflect quantitative balance-sheet fundamentals?
- Analysis of 32 large US banks (SIFIs)

Related literature

- Central-bank tone or sentiment influences financial markets
  - Jegadeesh & Wu (2015); Raviv et al. (2024)
- FinBERT as LLM for contextual sentiment
  - Araci (2019); Huang et al. (2020)
- Net interest income (NII) as risk appetite proxy
  - Stiroh (2004); DeYoung & Torna (2013)

Main findings

- Post-2008 language shift, from profitability to compliance-driven narratives, for all large US banks
- However, data show increasing levels and growth rates of risk-taking, for all banks, over 1993-2025
- Evidence suggests strategic use of language to appease regulators, while ”true” underlying risks continue accumulating

Data description

- Sample: 32 large US financial institutions (all SIFIs), 1993-2025
- Textual data
  - 10-K annual filings, n = 1,056, automatically from SEC EDGAR
  - Sections 1A (risk factors) & 7 (management discussion and analysis)
- Quantitative data: Historical NII via Item 8 Financial Statements
  - Automated algorithmic data extraction and organization in panel format

Terminology

- Traditional Banks (TB) vs. Shadow Banks (SB)
  - TB: Depository institutions; enhanced oversight
  - SB: Non-depository financial services institutions; minimal regulation
  - Panel has 15 TBs and 17 SBs
- Non-Interest Income (NII)
  - Income from non-interest-yielding financial services
  - Proxy for income from securitization or shadow activities
- OTD model Originate-to-distribute model (OTD)
  - Short-term profit seeking prioritization

Methodology

- Textual analysis via
  - Annual word frequencies: Dynamic evolution of top 50 industry terms
  - Creation of custom lexicons with words related to short-term (ST) profitability vs. long-term (LT) stability: Annual frequency of each
  - FinBERT financial sentiment classification (contextual probabilities) into positive, negative, neutral categories

- Empirical validation
  - Compare textual language results to quantitative NII data
  - As proxy for shadow activities, NII is associated with ST operating strategies

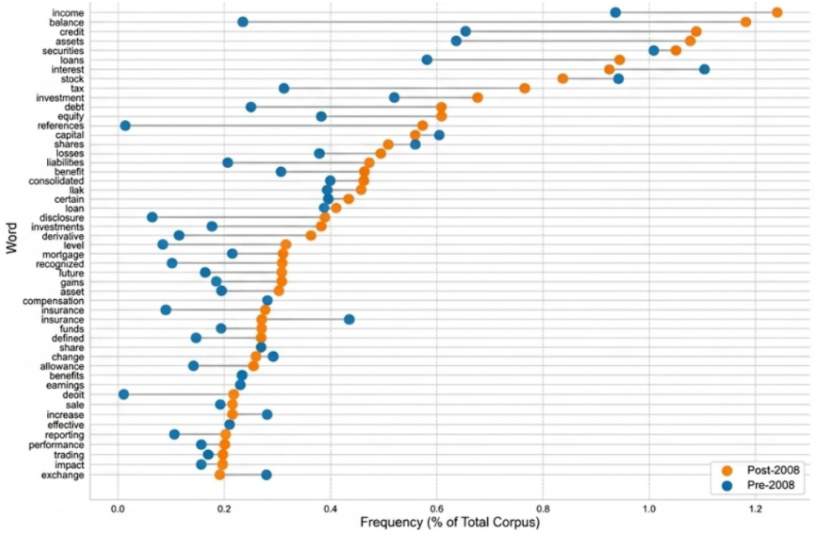
ST profitability lexicon

yield, margin, gain, fee, commission, spread, premium, trading, arbitrage, speculation, deal, transaction, proprietary, prop, leverage, quarterly, short-term, current, fiscal, interim, bonus, compensation, stock, options, shareholder, return, dividend, securities, equity, revenue, growth, acquisition, profit, income, sale, payment, amount, outstanding

LT stability lexicon

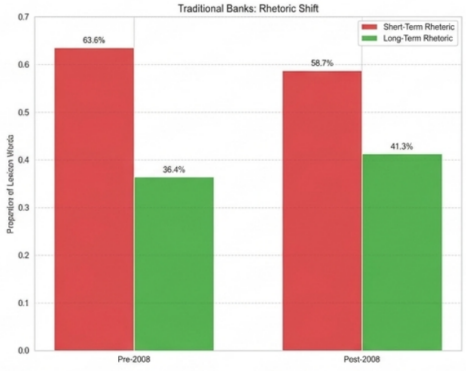
risk, hedging, buffer, reserve, collateral, solvency, liquidity, stress, test, compliance, regulation, basel, dodd-frank, mandate, audit, oversight, governance, capital, sustainability, long-term, resilience, systemic, prudent, stability, retention, transparency, ethics, accountability, conduct, culture, allowance, losses, regulatory, liability, deposits, obligations, impairment, credit, loss, derivatives

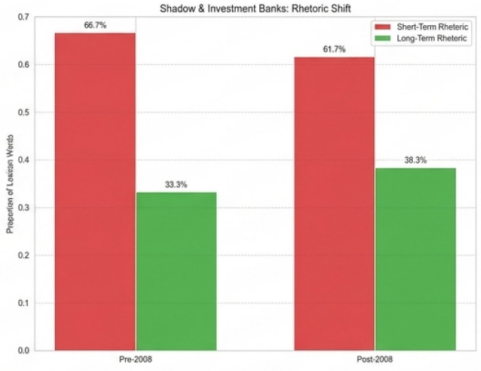
Annual word frequencies for top 50 words



- liabilities: 20% frequency (pre-crisis) $\rightarrow$ 50% (post-crisis)
- disclosure: 10% $\rightarrow$ 40% occurrence; regulatory anchoring

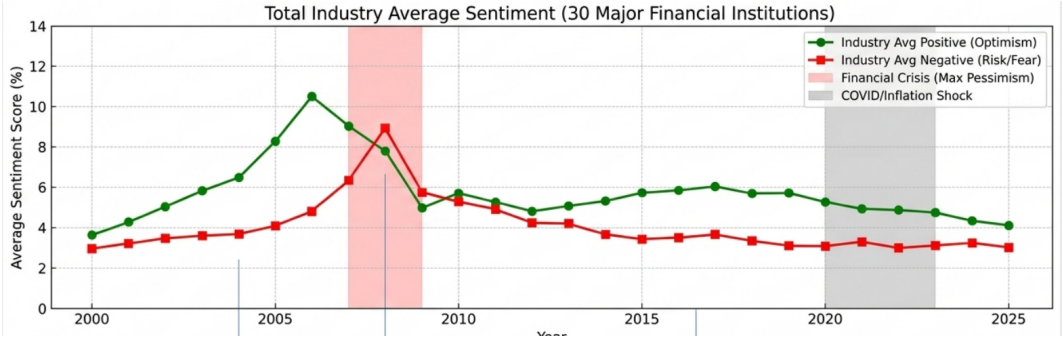
Annual lexicon frequencies: TBs vs SBs





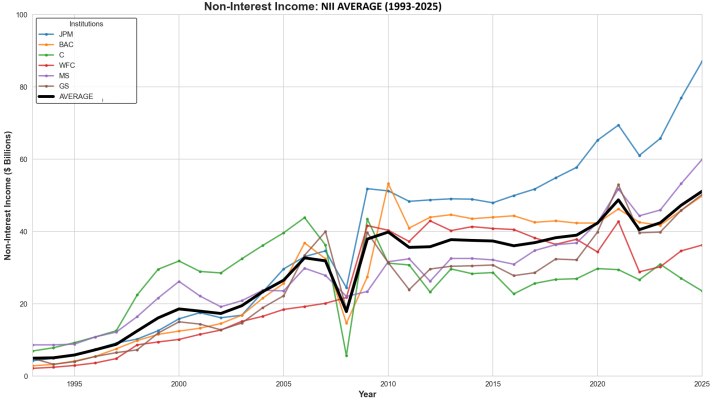
- TBs (left) and SBs (right) reduce ST language frequency (red) by roughly 5pp post-2008 (second set of bars) and correspondingly increase LT language by 5pp post-2008
- Lexicon frequency suggests language similarities across banks, interesting given how different they are

Annual Sentiment



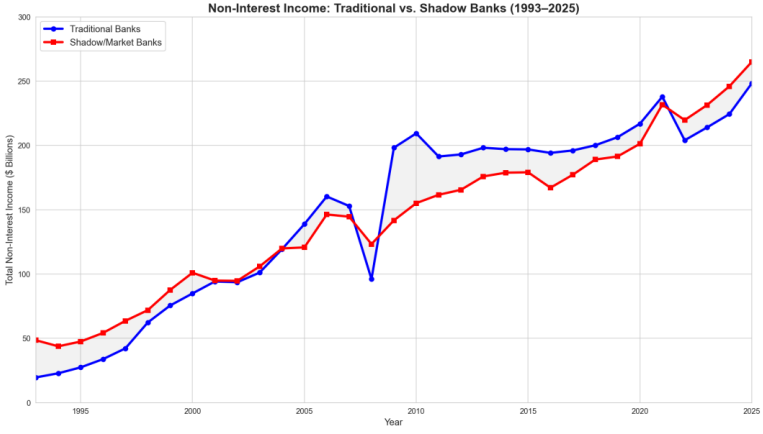
- Positive sentiment (green) spikes in 2006, negative sentiment (red) in 2008
- Post-2014, move toward equal fractions of positive and negative sentiment

Quantitative data: NII



- Bank average (black) increases from less than \$10 bn in 1993 to \$30 bn in 2007, continues increasing trend to \$50 bn in 2025, after brief 2008-9 decline
- JPM leads

NII: TBs vs SBs



- Similar NII amounts and growth trajectories

Conclusions

- Post-2008 language shift, from profitability to compliance-driven narratives, for both TBs and SBs
- However, NII data exhibit increasing levels and growth rates throughout the period (except 2008-2009), for both TBs and SBs
  - NII is a proxy for riskier activities, such as securitization
- Evidence suggests strategic use of language to appease regulators, while ”true” underlying risks continue accumulating
- Highlights need for data disclosures to central banks and to the public