Three Papers on
The Effects of Corporate Taxes on Banking

Discussion
by

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Corporate Income Taxes and Capital Structure

- Standard capital structure theory predicts that a firm's choice of equity versus debt trades off two main factors:
  1. Equity's disadvantage due to corporate income taxes[1]
  2. Debt's disadvantage due to its direct costs of financial distress and bankruptcy
- A firm's choice equates the marginal tax-adjusted cost of equity to the marginal distress/bankruptcy-adjusted cost of debt.
- Do banks differ from nonbanks with regard to this choice?
- Why do banks choose relatively high debt?

[1] Equity may be tax-advantaged relative to debt at the personal income tax level, but the total tax burden of equity typically exceeds that of debt.

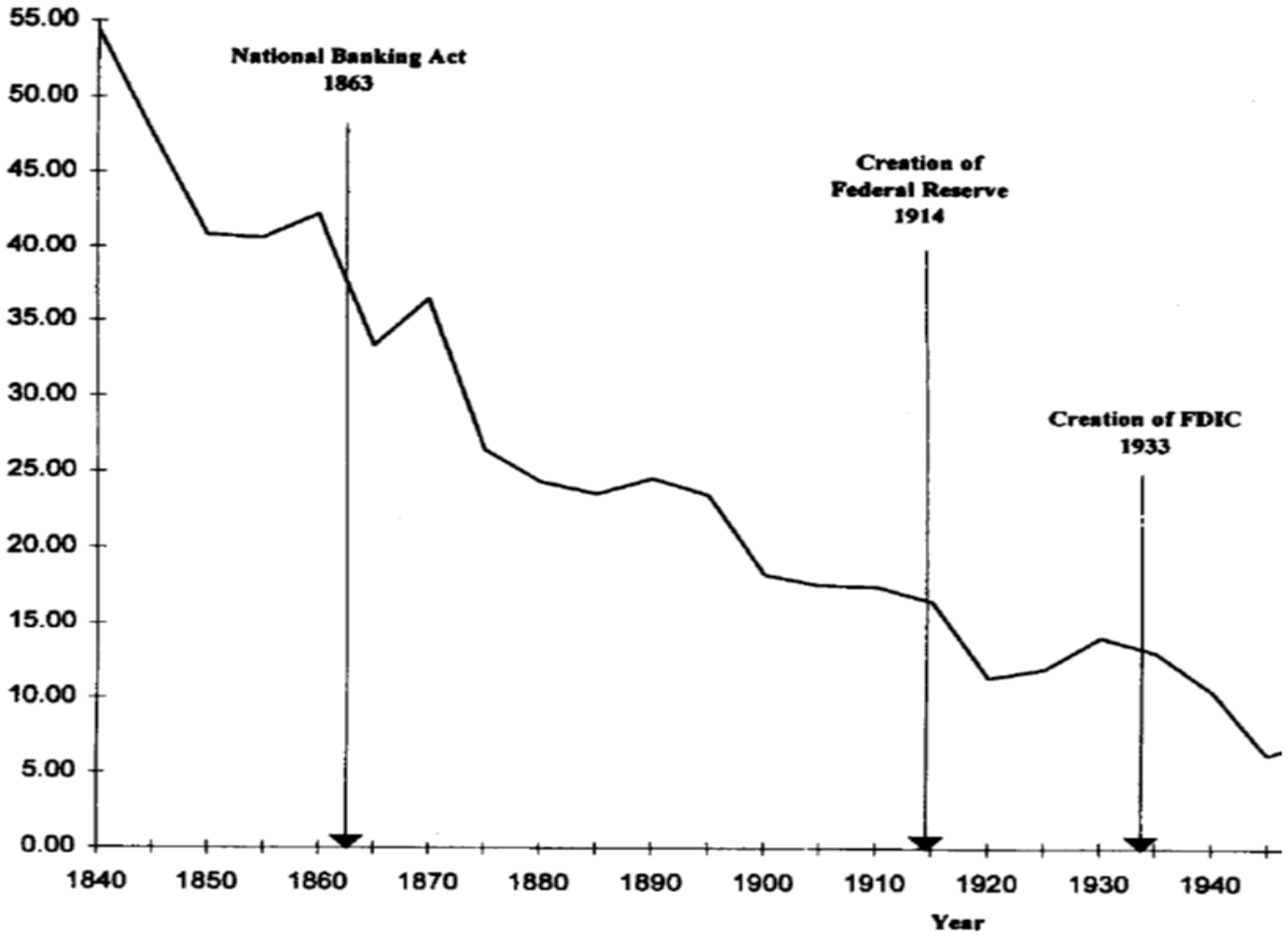
Bank Debt versus NonBank Debt

- Bank debt may differ from nonbank debt because:
  1. Deposits (debt) are essential for banks' transactions services (e.g., Gorton and Pennacchi *JF* 1990)
  2. Government support of banks reduces their direct private costs of financial distress and bankruptcy[2]
- Examples of such government support:
  1. The Federal Reserve Discount Window (lender of last resort).
  2. FDIC deposit insurance and its efficient resolution of failed banks

[2] Small private costs need not imply small social costs of bank distress/failure, e.g. contagion, firesales, or a decline in lending to bank-dependent borrowers.

US Banks' Aggregate Book Equity to Assets (%)

- Leverage rose with the founding of the Fed and FDIC (Berger, Herring, Szegö *JBF* 1995 based on Kwast 1991).



Banks' versus NonBanks' Sensitivity to Corporate Taxes

- Unlike most nonbanks, banks have several close competitors that are **exempt** from corporate taxes:
  1. Credit unions and S-corporation banks
  2. Mutual funds (that invest in syndicated loans)
  3. Special Purpose Vehicles (SPVs) that invest in mortgages, consumer loans, and syndicated loans (CLOs)
- Han, Park, Pennacchi (*JF* forthcoming) show that a rise in a bank's corporate tax rate or equity capital requirement increases securitization (loan selling) if:
  1. The bank's credit screening/monitoring advantage over other intermediaries (e.g. SPVs) is not large
  2. The bank has insufficient low-cost retail deposits to offset the higher cost of taxes

Comments on the Schandlbauer Paper

- Why not perform tests using all US banks (not just listed BHCs)? Ashcraft *JFI* 2008, using a panel of US banks/BHCs, finds a positive (*negative*) relation between a bank's (*BHC's*) state tax rate and its regulatory capital debt/equity.
- Paper's tests exploit time series increases in state tax rates.
  - Would like to see results with tax rate decreases included.
  - There is more cross-sectional than time series variation in state tax rates. Possible cross-sectional tests by comparing banks at state borders?
- Results of tax increases need to be evaluated with the possibility that the bank's loan selling might have increased.
- States tend to increase corporate and personal taxes together. Personal tax rises have greater impact on the cost of S-corp bank equity because income is immediately realized.

Comments on the Schepens Paper

- In 2006 Belgium allowed a notional interest deduction for equity equal to the 10-year government bond rate.
  - Would make sense to use same notional interest for debt.
  - Was there a change in the relative tax on equity versus debt at the personal level?
- The paper matches 35 Belgian banks to other European banks based on a "nearest neighbor" propensity score.
  - This exercise is critical to the validity of the diff-in-diff equity ratio regressions.
  - However, the matching appears to be careful and accurate.
- Finding that new policy increased Belgium banks' equity ratios by 24% highlights the sensitivity of bank leverage to corporate taxes.
  - Did change affect banks' assets (asset risk, loan growth)?

Comments on the Gong & Ligthart Paper

- Funding constrained banks are defined as those with relatively high loan growth and high deposit interest expense.
  - Rather than loan growth, might the paper use loan levels relative to retail deposits?
- Measure of a bank's securitization is ABS/MBS issuance by SPVs sponsored by the bank to the bank's total assets.
  - Most loans in an SPV are probably originated by sponsor, but some could be originated and sold by other banks.
  - This can explain why paper finds no tax effects for a subsample of only OECD small banks. Might these banks sell (SME) loans to larger institutions that pool and securitize them?

Conclusions

- There is a debate on the wisdom of requiring greater bank equity capital (e.g., Admati et al. versus DeAngelo and Stulz).
  - However, all sides agree that corporate income taxes raise the private, after-tax cost of bank equity.
- This session's three papers show that bank behavior is sensitive to this after-tax equity cost.
- Higher bank capital requirements or taxes will cause tax-exempt intermediaries to fund loans that may be inadequately credit screened/monitored.
- Why does regulatory policy advocate greater equity while tax policy discourages it? Politics prevents an obvious reform?
- Second best reforms, such as requiring properly-designed CoCos, should be explored.