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Capital Market Integration and Growth Across the United States

EUROPEAN CENTRAL BANK
EUROSYSTEM

Capital Market Integration and Growth Across the United States

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Motivation:

- Capital markets still regionally fragmented, both in developing countries and modern currency unions (EZ)
- Large debate on merits and drawbacks of EU Capital Market and Banking Union

Research Questions:

- What causes the geographic integration of capital markets within a currency union?
- How does the mobility of financial capital enabled by these markets affects growth across regions?

Setting:

- Digitize historical data to study the US banking system *before* branching deregulation (1953-83).

Results:

Despite no change in regulation, **financial markets became more integrated in this period.**

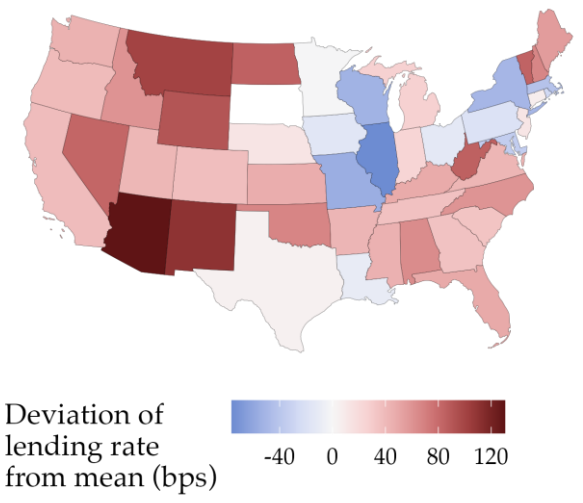
- Rise in nominal rates due to Great Inflation caused 51% of this integration: «*nominal rate channel*» of financial integration.
- High nominal rates push households to move liquidity away from unremunerated deposits and towards national money markets, which redistribute across regions.

Financial integration had **large effects on GDP growth in initially capital-scarce regions** of the US

- Firms borrow at lower cost and could expand production, bids up wages and returns to physical capital.
- Leads to in-migration and investment.

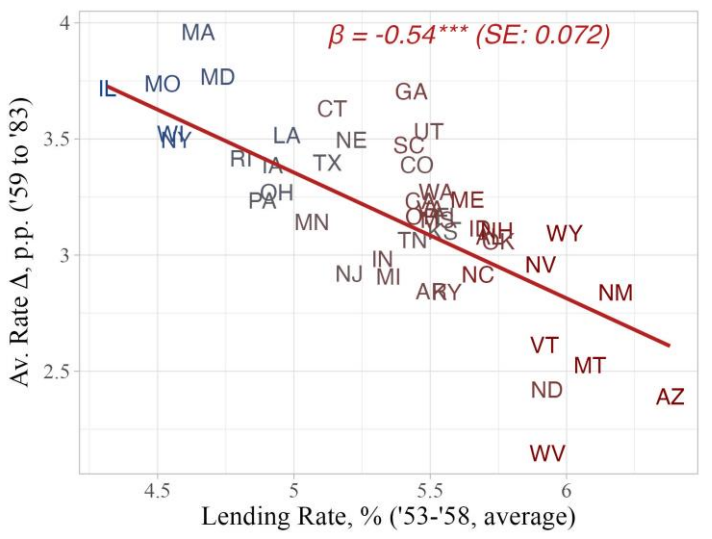
Policy counterfactual: effects of deregulation that integrates capital markets are larger in low-rate environments.

(A) Initial Differences in Local Lending Rates (1953-58)



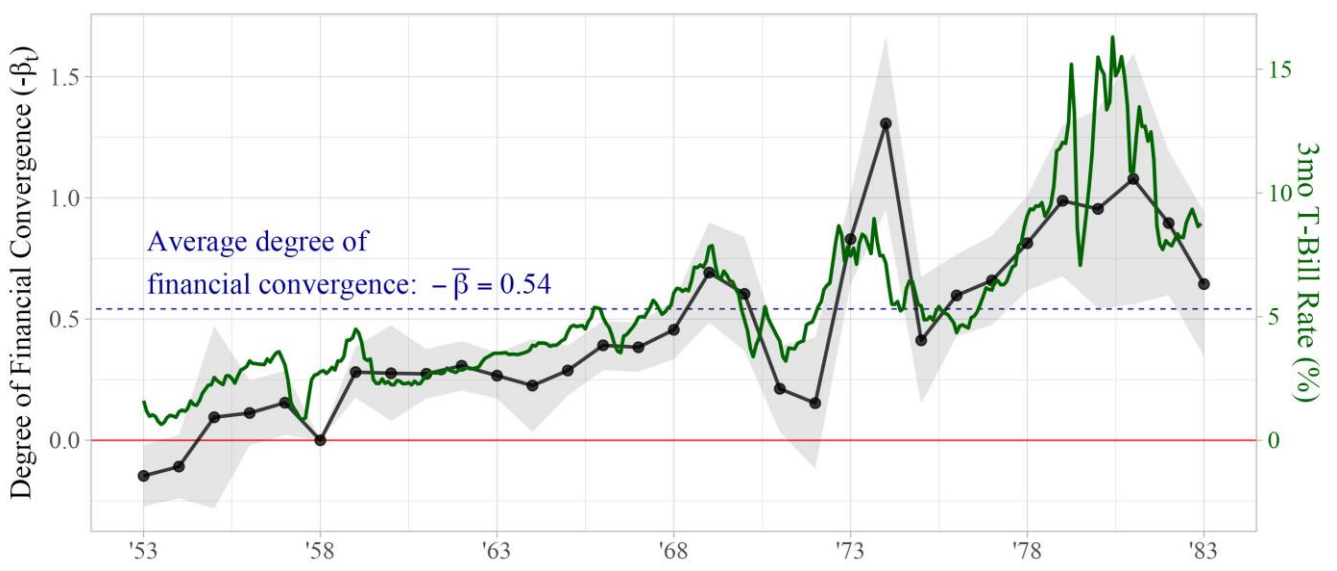
(B) Convergence in 1959-83

$$r^L_{j,59-83} - r^L_{j,53-58} = \alpha + \beta r^L_{j,53-58} + \varepsilon_j$$

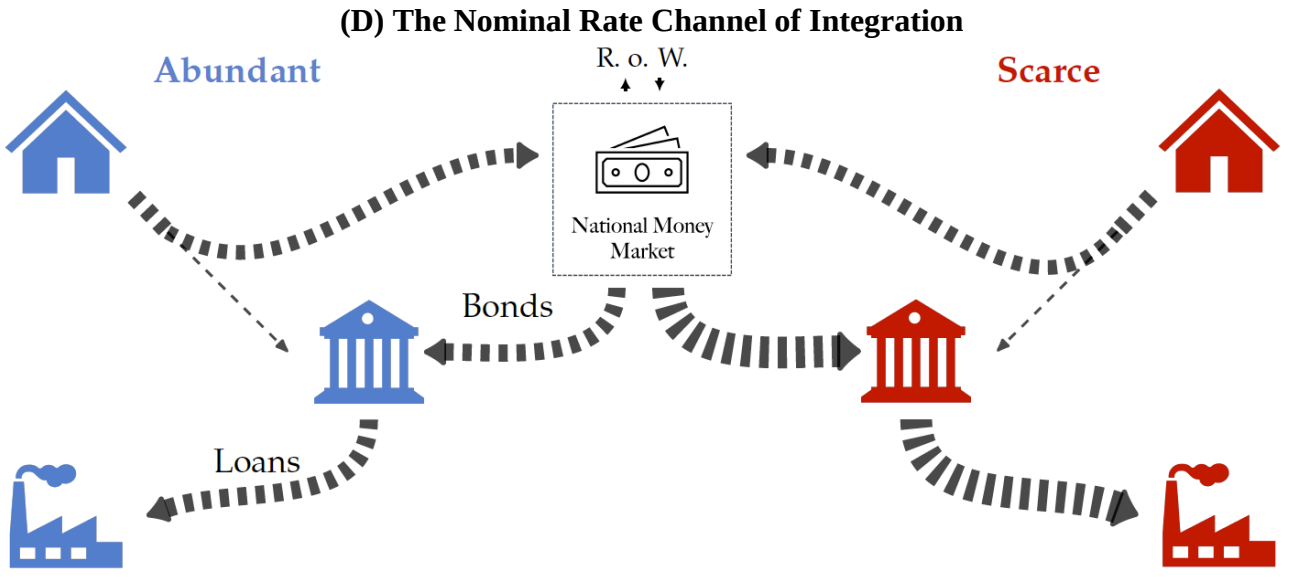


(C) Financial Convergence is Faster In High Nominal Rate Years

$$r^L_{j,t} - r^L_{j,53-58} = \alpha_t + \beta_t r^L_{j,53-58} + \varepsilon_{jt}$$



(D) The Nominal Rate Channel of Integration



(A): Large differences across states in local bank loan rates in 1953-58

(B): These differences halve by 1983

(C): This narrowing of differentials is strongly correlated with the level of nominal rates.

- Other channels hard to square with data: risk differentials narrowing, competition, real convergence

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(D): Theory that rationalizes why high nominal rates can foster integration.

- Frictional access to national markets (expensive wholesale financing).
- Banks in states where deposits from households are abundant relative to loan demand face lower funding costs → lower loan rates charged.
- However, when nominal rates *rise*, deposits move to money markets.
- Levels the playing field, all banks now need to rely more on national markets instead of local retail deposits.

(E): Integration has real consequences. States with initially higher interest rates benefit and grow more.

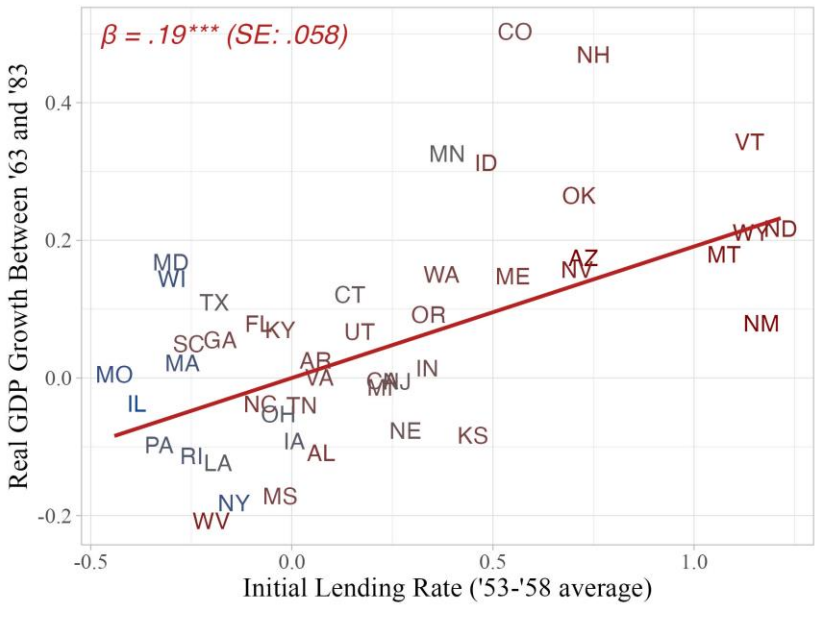
- Growth driven mostly by attracting workers from other states.

(F): Quantification of real effects. Transitional dynamics after integration of financial markets.

- Firms in initially capital-scarce places expand production, bids up wages and rental rates of physical capital.
- ↑ investment and attracts workers
- Financial integration can explain up to **20%** of relative differences in growth of South and West and of Northern Financial Centers, compared to the average US state.

(E) Growth and Financial Integration

$$\log(Y_{1983}) - \log(Y_{1962}) = \alpha + \beta r^L_{j,53-58} + Controls_j + \varepsilon_j$$



(F) Transitional Dynamics After Financial Integration