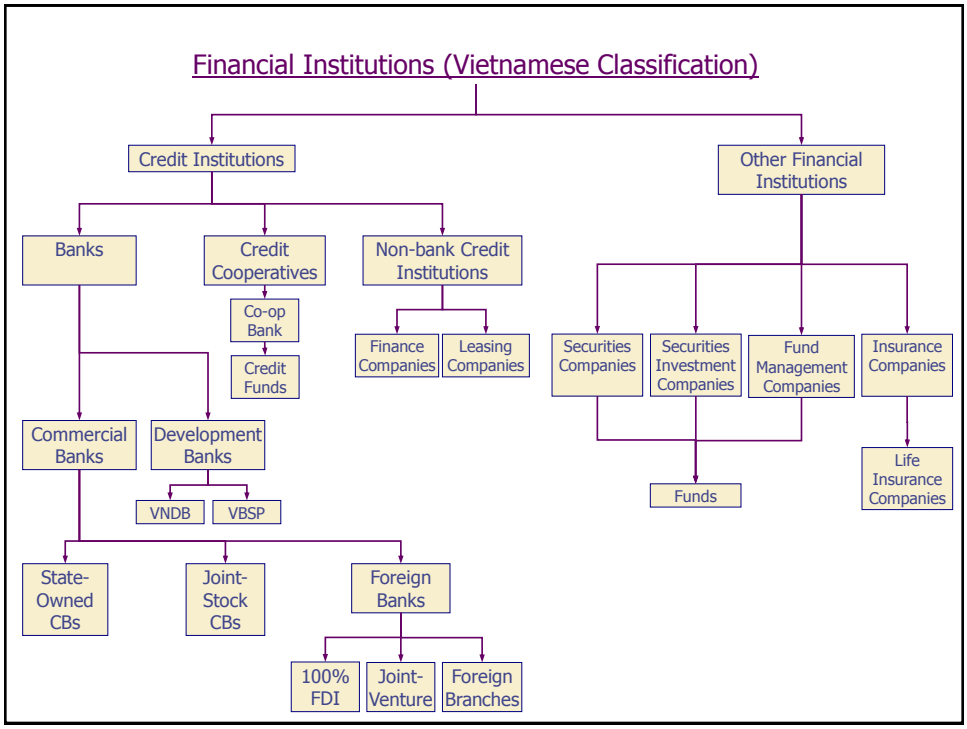
Lecture 1: Finance and Growth

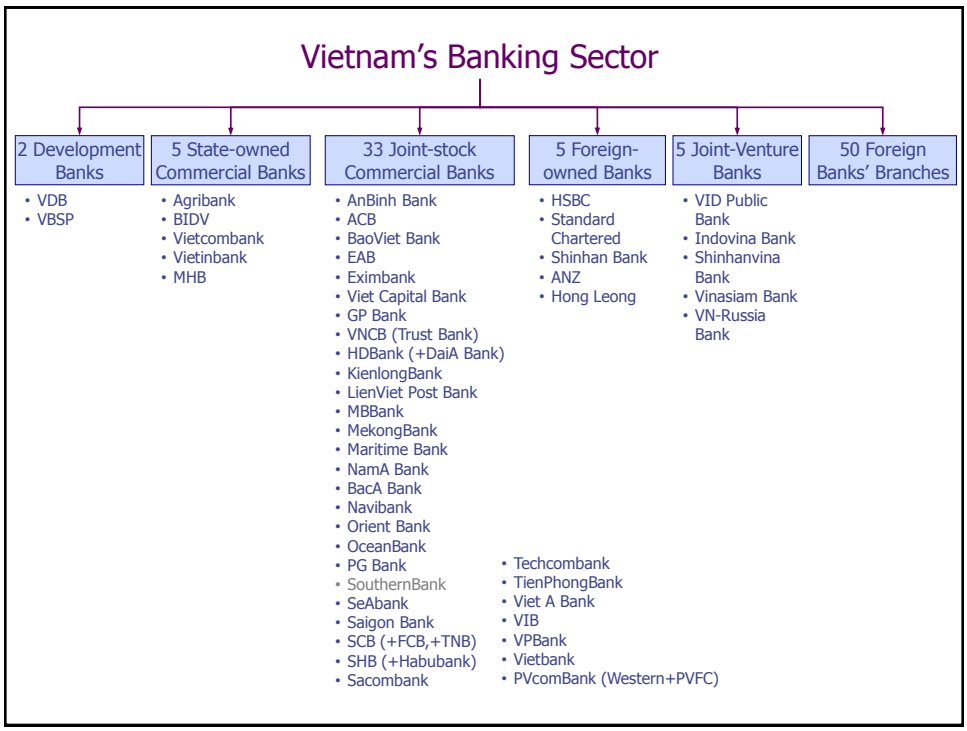
Development Finance

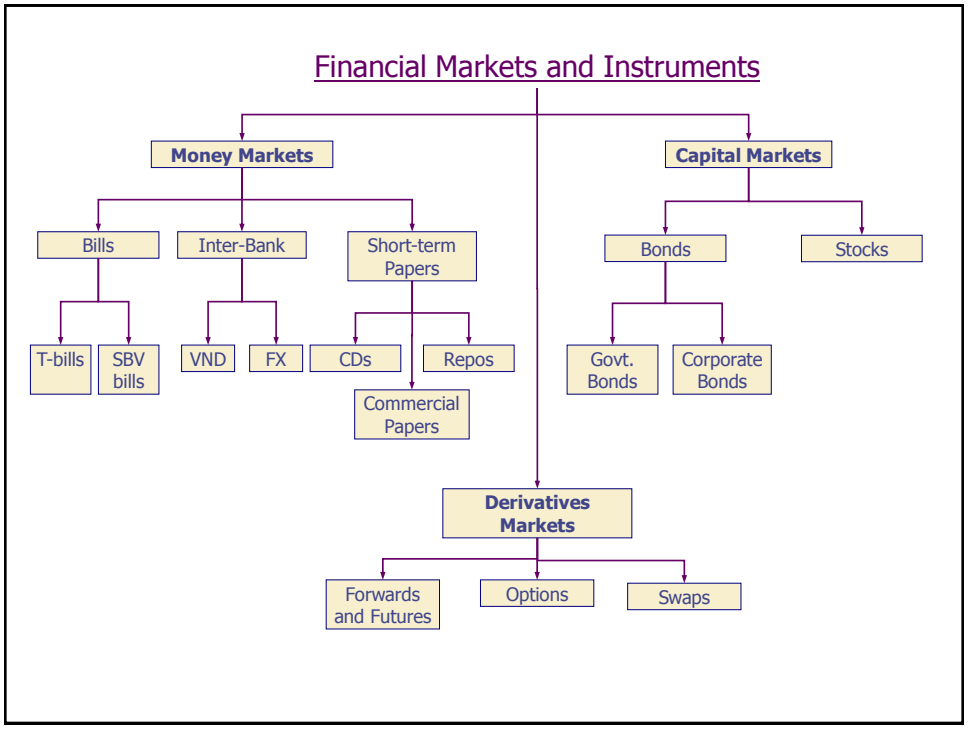
Lecturer: Nguyen Xuan Thanh

Components of a Financial System

- Financial institutions
- Financial instruments
- Financial markets
- Financial infrastructure


Financial Institutions (Vietnamese Classification)
Credit Institutions
Other Financial Institutions
Banks
Credit Cooperatives
Non-bank Credit Institutions
Co-op Bank
Credit Funds
Finance Companies
Leasing Companies
Securities Companies
Securities Investment Companies
Fund Management Companies
Insurance Companies
Commercial Banks
Development Banks
Funds
Life Insurance Companies
VNDB
VBSP
State-Owned CBs
Joint-Stock CBs
Foreign Banks
100% FDI
Joint-Venture
Foreign Branches


Vietnam's Banking Sector
2 Development Banks
• VDB
• VBSP
5 State-owned Commercial Banks
• Agribank
• BIDV
• Vietcombank
• Vietinbank
• MHB
33 Joint-stock Commercial Banks
• AnBinh Bank
• ACB
• BaoViet Bank
• EAB
• Eximbank
• Viet Capital Bank
• GP Bank
• VNCB (Trust Bank)
• HDBank (+DaiA Bank)
• KienlongBank
• LienViet Post Bank
• MBBank
• MekongBank
• Maritime Bank
• NamA Bank
• BacA Bank
• Navibank
• Orient Bank
• OceanBank
• PG Bank
• SouthernBank
• SeAbank
• Saigon Bank
• SCB (+FCB,+TNB)
• SHB (+Habubank)
• Sacombank
5 Foreign-owned Banks
• HSBC
• Standard Chartered
• Shinhan Bank
• ANZ
• Hong Leong
5 Joint-Venture Banks
• VID Public Bank
• Indovina Bank
• Shinhanvina Bank
• Vinasiam Bank
• VN-Russia Bank
50 Foreign Banks' Branches
• Techcombank
• TienPhongBank
• Viet A Bank
• VIB
• VPBank
• Vietbank
• PVcomBank (Western+PVFC)



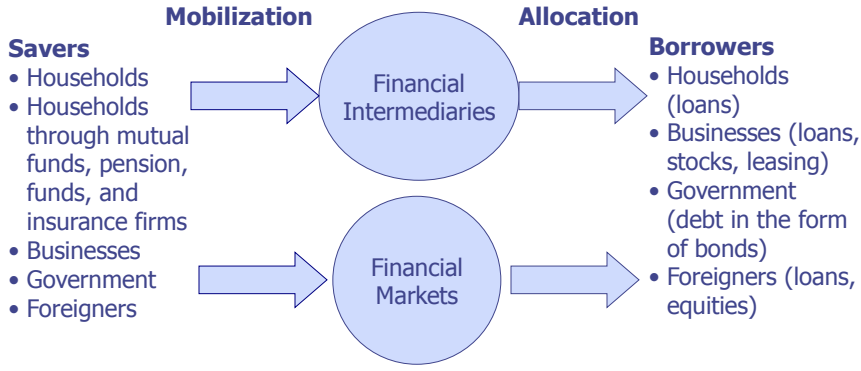
Financial Infrastructure

- Financial infrastructure is the framework of rules and systems within which firms and households plan, negotiate, and perform financial transactions.
- Financial infrastructure facilitates the effective functioning of a financial system.
- Components of Financial Infrastructure:
  - ✓ Legal and regulatory structures (including rule and contract enforcement mechanisms).
  - ✓ Supervisory resources and practices.
  - ✓ Information provision (e.g. accounting and auditing rules and practices, credit bureaus, rating agencies, public registries).
  - ✓ Liquidity facilities.
  - ✓ Payments and securities settlement systems (e.g. trading and listing services, trading rules, communication and information platforms).

Functions of a Financial System

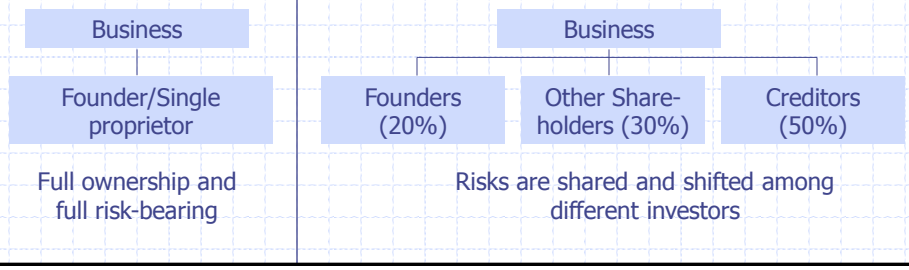
- Savings Mobilization
- Capital Allocation
- Risk Transfer and Distribution
- Management Monitor

Mobilizing Savings and Allocating Capital Funds



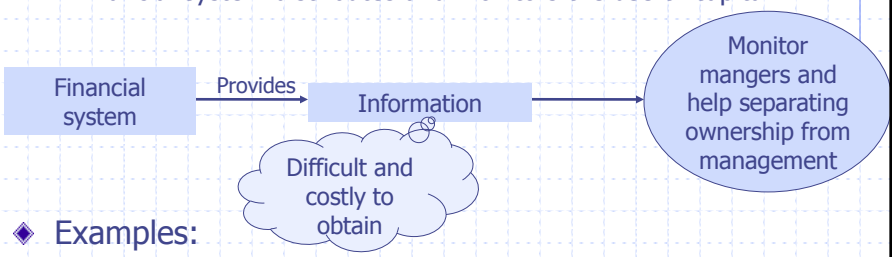
Transferring and Distributing Risks

- Risks are inherent in every financial transaction.
- A well-functioning financial system provides vehicles for diversifying or pooling risks among a large number of savers and investors.
- Risks are shared and shifted among savers and investors in various forms and through different financial instruments.



Monitoring Managers

- A financial system distributes and monitors the use of capital.



- Examples:
  - ✓ Banks evaluate borrowers' credit-worthiness and viability of investment project before lending and threaten to stop lending if investment later proves inefficient.
  - ✓ Bondholders use bond covenants to restrict borrowing companies from issuing further debt in order to control the credit risk of their bonds.
  - ✓ Hostile takeovers in the stock market put pressure on management performance.

Financial Systems and Economic Development

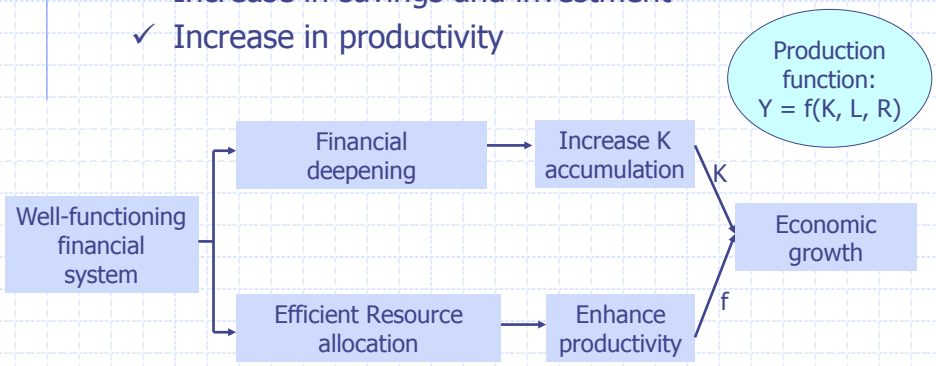
- **CORRELATION between financial development and economic growth.**
- **CAUSAL LINK between finance development and economic growth**
  - ✓ **Financial development leads economic development, or**
  - ✓ **Financial development follows economic development.**

Role of the Financial System

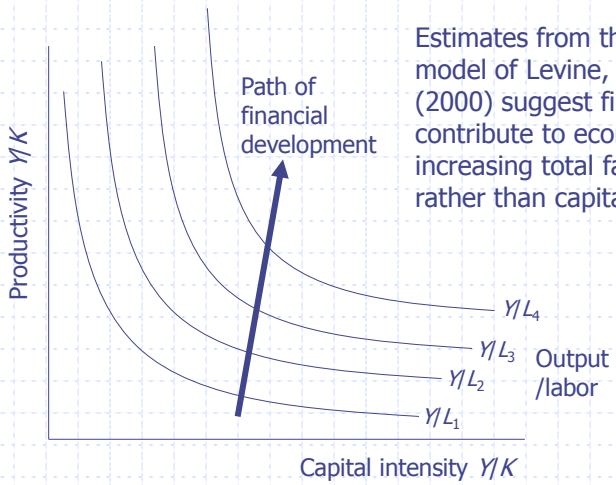
- **Development hypothesis**
  - ✓ Providing vehicles for economic development
  - ✓ Combining growth with income distribution
  - ✓ Every financial transaction involves risks
  - ✓ Financial systems are indispensable and therefore risks have to be accepted
- **Casino hypothesis**
  - ✓ Playing a minor role
  - ✓ Creating legitimate opportunities for the private sector to gamble.
  - ✓ Having detrimental effects to growth and income distribution
  - ✓ Should not be encouraged by the government, but be repressed or nationalized.

Theoretical Arguments for the Causal Link

- A well-functioning financial system results in:
  - ✓ Increase in savings and investment
  - ✓ Increase in productivity



Empirical Evidence on Financial Contribution to Productivity Growth and Capital Intensity



Estimates from the econometric model of Levine, Loayza & Beck (2000) suggest financial systems contribute to economic growth by increasing total factor productivity rather than capital intensity.

Source: WB, "Finance for Growth", 2001.

Financial Deepening

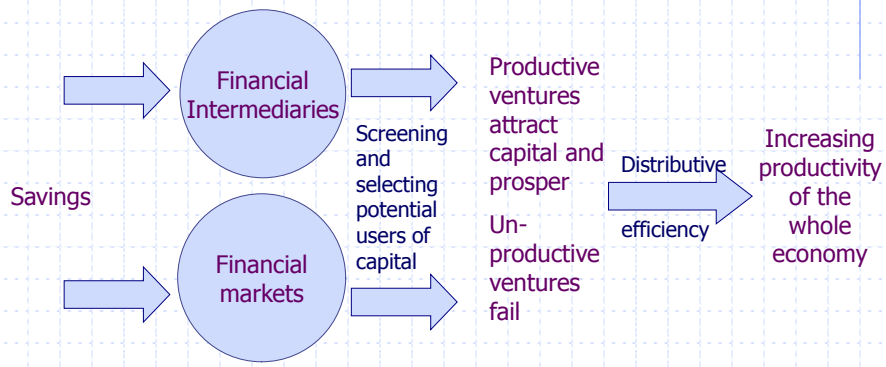
- Financial deepening means increasing the ratio of financial assets to GDP.
- Effective financial systems
  - ✓ Encourage savings; and
  - ✓ Increase investment.
- Savers can invest in the financial system and gain profits.
- Investors can access other sources of savings other than their own and therefore increase capital investment
- Measures of financial deepening
  - ✓ M2/GDP, M3/GDP
  - ✓ Credit/GDP
  - ✓ Stock K/GDP
  - ✓ Bond K/GDP

Increase

- Deposits
- Loans
- Short-term debt instruments
- Bonds
- Stocks
- Insurance
- Pension

Source: IFC, "Financial Institutions", 1998.

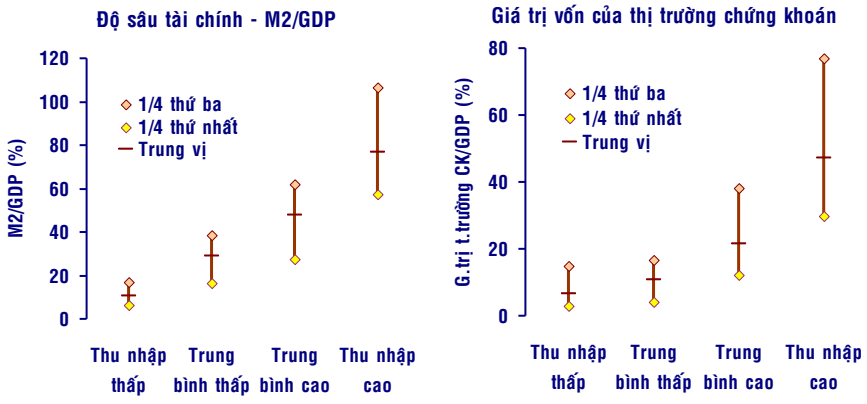
Financial Development Leads to Productivity Growth



Source: Adapted from IFC, "Financial Institutions", 1998.

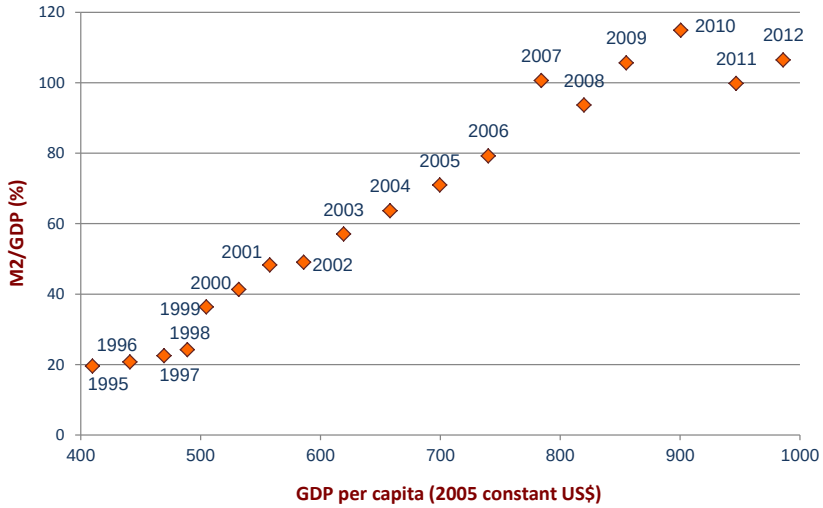
Empirical Evidence on the Correlation

- Increasing income is associated with greater financial depth.



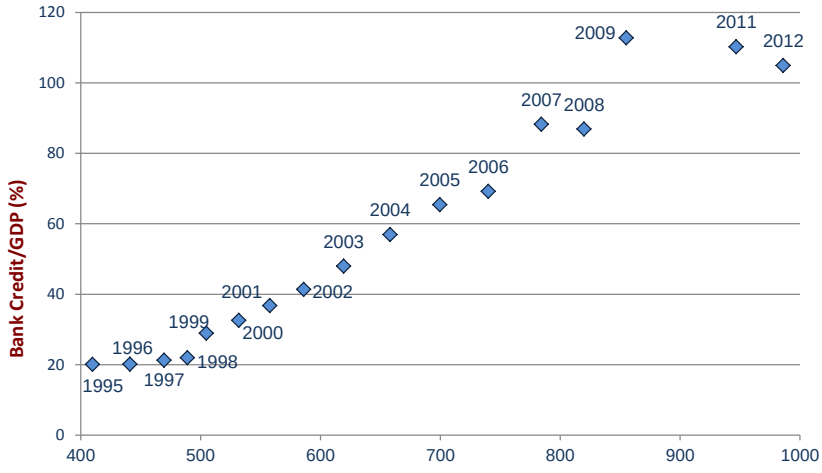
Source: WB, "Finance for Growth", 2001.

Vietnam 1995-2012: M2/GDP



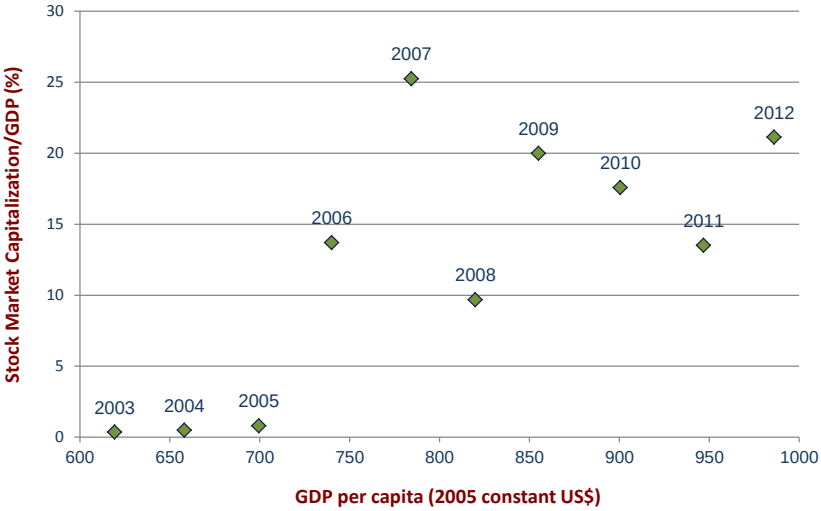
Source: World Bank, World Development Indicators Database.

Vietnam 1995-2012: Bank Credit/GDP



Source: World Bank, World Development Indicators Database.

Vietnam 1995-2012: Stock Market Capitalization/GDP



Source: World Bank, World Development Indicators Database.

Empirical Research on Finance and Growth

- Simple cross-country regressions
- Different econometric techniques to look beyond correlation and controlling for biases arising from endogeneity and omitted variables (instrumental variable approaches, difference-in-difference, micro-level and firm-level data)

Simple cross-country regressions

- Goldsmith (1969)
  - ✓ Data on 35 countries over the period 1860 to 1963 on the value of financial intermediary assets as a share of economic output
  - ✓ Financial intermediary size relative to the size of the economy rises as countries develop
- King and Levine (1993)
  - ✓ 77 countries over the period 1960-1989
  - ✓ Systematically control for other factors affecting long-run growth
  - ✓ Examine the capital accumulation and productivity growth channels
  - ✓ Construct additional measures of the level of financial development, and analyze whether the level of financial development predicts long-run economic growth, capital accumulation, and productivity growth

King and Levine (1993)

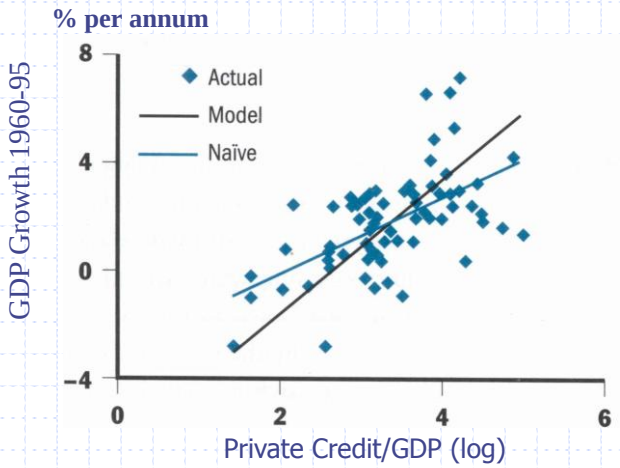
- Regressions on a cross-section of 77 countries:

  $G(j) = \alpha + \beta F(i) + \gamma X + \varepsilon$

- G(j): the value of the jth growth indicator averaged over the period 1960-1989
  - ✓ The average rate of real per capita GDP growth
  - ✓ The average rate of growth in the capital stock per person
  - ✓ Total factor productivity (TFP) growth
- F(i): the value of the ith indicator of financial development averaged over the period 1960-1989
- X: a matrix of conditioning information to control for other factors associated with economic growth (e.g., income per capita, education, political stability, indicators of exchange rate, trade, fiscal, and monetary policy)

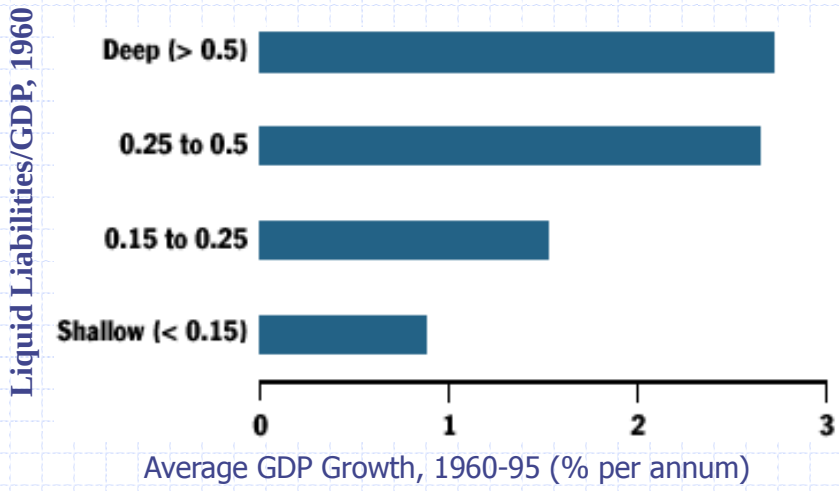
Empirical Evidence on the Causal Link

- Financial depth is a predictive measure of economic growth.



Source: WB, "Finance for Growth", 2001.

Financial Depth and Economic Growth



Source: WB, "Finance for Growth", 2001.

Adding stock markets to cross-country studies of growth - Levine and Zervos (1998)

- Construct numerous measures of stock market development to assess the relationship between stock market development and economic growth, capital accumulation, and productivity growth in a sample of 42 countries over the period 1976-93.
- Control for other potential growth determinants, including banking sector development.
- Find that the initial level of stock market liquidity is positively and significantly correlated with future rates of economic growth, capital accumulation, and productivity growth over the next 18 years even after controlling for initial income, schooling, inflation, government spending, the black market exchange rate premium, and political stability.

Using instrumental variables in cross-country studies of growth

- While King and Levine (1993) and Levine and Zervos (1998) show that financial development predicts economic growth, these results do not settle the issue of causality. It may simply be the case that financial markets develop in anticipation of future economic activity.
- To assess whether the finance-growth relationship is driven by simultaneity bias, we need instrumental variables that explain cross-country differences in financial development but are uncorrelated with economic growth beyond their link with financial development and other growth determinants.
- Levine (1998, 1999) and Levine, Loayza, and Beck (2000) use the La Porta et al (LLSV, 1998) measures of legal origin as instrumental variables.

Levine, Loayza, and Beck (2000)

- Generalized method of moments (GMM) regressions on 71 countries
- G(j) is real per capita GDP growth over the 1960-95 period. The legal origin indicators, Z, are used as instrumental variables for the measures of financial development, F(i). X is treated as an included exogenous variable.
- Legal origin may affect per capita GDP growth only through the financial development indicators and the variables in the conditioning information set, X.
- The results indicate a very strong connection between the exogenous component of financial intermediary development and long-run economic growth

Panel, Time-Series, and Case-Studies of Finance and Growth

- Regression equation

$$y_{i,t} = \alpha' X^1_{i,t} + \beta' X^2_{i,t} + \mu_i + \lambda_t + \varepsilon$$

- y represents the dependent variable
- X^1 represents a set of lagged explanatory variables
- X^2 is a set of contemporaneous explanatory variables
- μ is an unobserved country-specific
- λ is a time-specific effect
- ε is the time-varying error term
- i and t represent country and (5-year) time period, respectively.

Benefits of Panel Data Analysis

- Exploit the time-series and cross-sectional variation in the data
- Avoid biases associated with cross-country regressions
- Permits the use of instrumental variables for all regressors and thereby provides more precise estimates of the finance-growth relationship

Case Studies

- Jayaratne and Strahan (1996)
  - ✓ Examination of the impact of finance on economic growth by examining individual states of the United States.
  - ✓ Since the early 1970s, 35 states relaxed impediments on intrastate branching.
  - ✓ Result: branch reform boosted bank-lending quality and accelerated real per capita growth rates.
- Guiso, Sapienza, and Zingales (2002)
  - ✓ Examination of the individual regions of Italy.
  - ✓ Result: local financial development (i) enhances the probability that an individual starts a business, (ii) increases industrial competition, and (iii) promotes the growth of firms.

Industry and Firm Level Studies

- Rajan and Zingales (1998).
  - ✓ Better-developed financial intermediaries and markets help overcome market frictions that drive a wedge between the price of external and internal finance.

$$Growth_{i,k} = \sum_j \alpha_j Country_j + \sum_l \beta_l Industry_l + \gamma Share_{i,k} + \delta(External_k * FD_i) + \varepsilon_{i,k}$$

- Demirguc-Kunt and Maksimovic (1998)
  - ✓ Whether financial development influences the degree to which firms are constrained from investing in profitable growth opportunities.

Non-linearity in the relationship between finance and growth

- The effect of financial development is strongest among middle-income countries
- Declining effects of finance and growth as countries grow richer
- Arcand, Berkes, and Panizza (2011) find that the finance and growth relationship turns negative for high-income countries, identifying a value of 110 percent private credit to GDP as approximate turning point, with the negative relationship between finance and growth turning significant at around 150 percent private credit to GDP, levels reached by some high-income countries in the 2000s.

Explanations for non-linearities

- The measures of financial depth and intermediation the literature has been using might be simply too crude to capture quality improvements at high levels of financial development.
- Financial development helps catch up to the productivity frontier, but has limited or no growth effect for countries that are close or at the frontier.
- The growth effect of financial deepening comes through enterprise rather than household credit.
- The financial system might actually grow too large relative to the real economy if it extracts excessively high informational rents and in this way attracts too much young talent towards the financial industry.
- The financial system can grow too large due to the safety net subsidy that results in too aggressive risk-taking and overextending of the financial system.

Financial Development and Financial Fragility

- The maturity and liquidity transformation from short-term savings and deposit facilities into long-term investments is at the core of the positive impact of a financial system on the real economy, but also renders the system susceptible to shocks, with the possibilities of bank and liquidity runs.
- The information asymmetries and ensuing agency problems between savers and entrepreneurs that banks help to alleviate also can turn into a source of fragility given agency conflicts between depositors/creditors and banks.
- The opacity of banks' financial statement and the large number of creditors (compared to a real sector company) undermine market discipline and encourage banks to take too much risk, ultimately resulting in fragility.