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Development of Financial Markets and Institutions

XII. Finance and Economic Growth

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XII. FINANCE AND ECONOMIC GROWTH

1. Finance and Growth
2. Financialization
3. Monetary Policy and Modern Finance
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1. FINANCE AND GROWTH



THE FUNCTIONS OF FINANCE

Five Functions of Finance (Levine 1997)

- To mobilize savings
- To allocate resources
- To exert corporate control
- To facilitate risk management
- To ease the trading of goods, services and contracts

Additional Functions

- Financial markets help alleviate *liquidity risk*
- Liquidity: the ease with which assets can be converted into purchasing power at expected prices

THE CONSEQUENCES OF FINANCE

Two Channels of Economic Growth from Finance (Levine 1997)

- Technological innovation
- Capital accumulation

Specifics

- Financial markets and institutions (banks) channel resources to innovative entrepreneurs
- Finance increases capital accumulation by channeling savings to profitable enterprises
- This raises the rate of return, increasing the incentive to save
- Greater liquidity lowers uncertainty and increases investment returns
- Schumpeter's theory of economic development

FINANCE AND LIQUIDITY

Highly specialized production processes would be difficult without a medium of exchange. He [the entrepreneur] would find it prohibitively costly to pay his workers and suppliers using barter exchange. Financial instruments and markets that facilitate transactions will allow and promote specialization and thereby permit him to organize his truck assembly line. (Levine 1997, 702)

- Does this not confuse the role of finance and that of money?
- Remember McKinnon (1973)
- And Thomson Hankey (1873)

EVIDENCE FOR FINANCE AND GROWTH

External Finance and Growth (Rajan and Zingales 1998)

- Examine the importance of the cost of external finance to firms for growth
- Industrial sectors with a relatively greater need for external finance develop faster in countries with more well-developed financial markets
- Based on sample of countries in the 1980s

EVIDENCE FOR FINANCE AND GROWTH

Credit Access and Growth (Aghion et al.)

- They find an inverse-U relationship between credit access and economic growth
- Some amount of credit is good
 - It finances innovative entrepreneurs and new technologies (Schumpeter)
- Too much or too “easy” credit reduces productivity growth

Easy Credit as A “Loose Budget Constraint” (Kornai 1986)

- Easy credit allows incumbent firms to stay in business without innovating
- This lowers productivity growth
- Capital is bound in suboptimal employment
- The process of zombification

EVIDENCE FOR FINANCE AND GROWTH

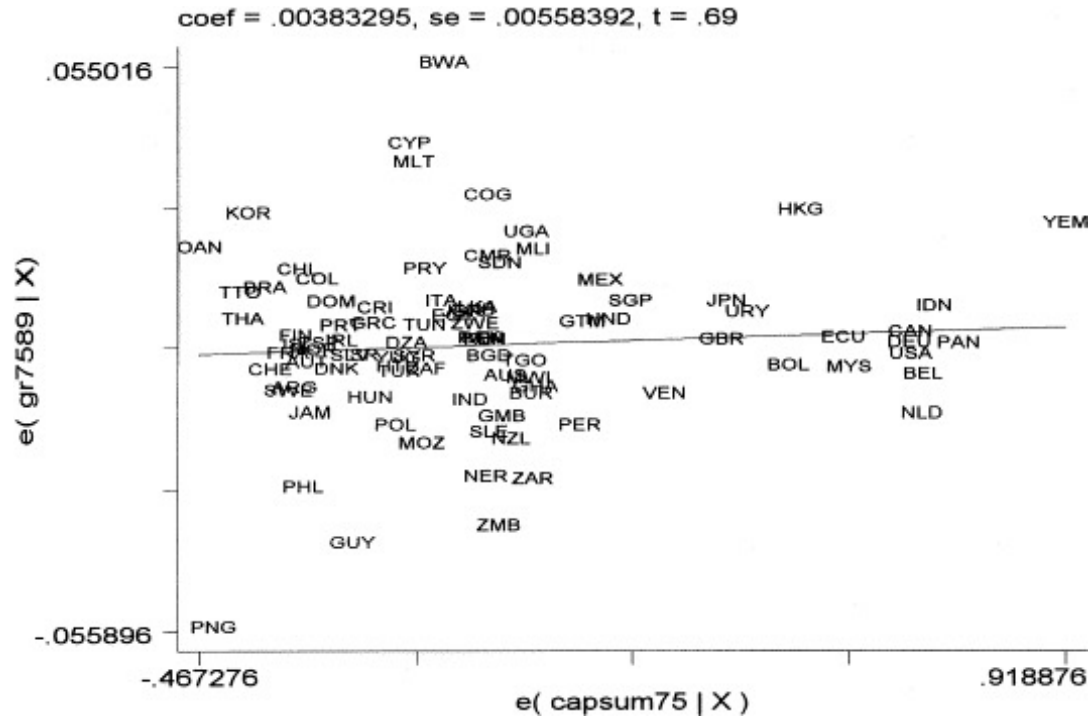
Financial Liberalization and Economic Performance (Stiglitz 2000)

- Stiglitz focuses on capital account liberalization
- He focuses on Asian countries in the 90s and the crisis of the late 90s
- Foreign direct investment (FDI) facilitates capital transfer, economic development
- But short-term capital flows are destabilizing: bankers are too easily scared, move out

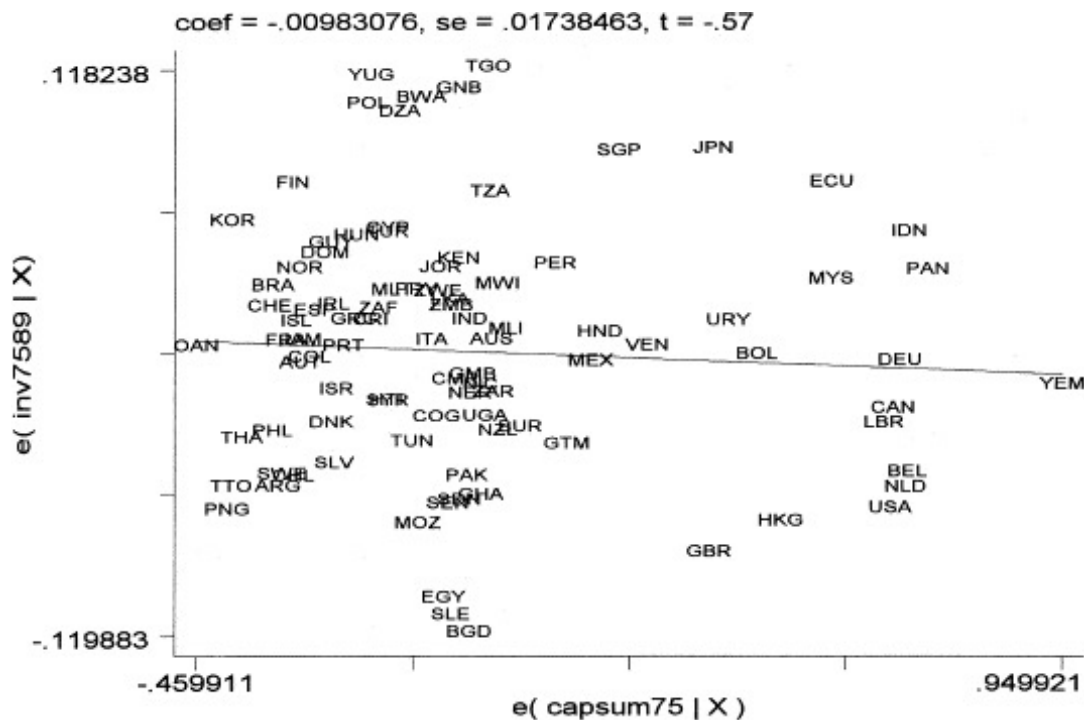
Recommendations

- Capital controls (controls on short-term movements) can alleviate this problem
- Such controls leave FDI in place
- This overlooks the connections between markets: bankers can lend to companies that then invest directly in emerging markets
 - FDI is then still financed by short-term capital

GROWTH AND OPENNESS OF CAPITAL MARKETS (STIGLITZ 2000)



INVESTMENT/GDP AND CAPITAL ACCOUNT LIBERALIZATION 1975-89 (STIGLITZ 2000)



THE LUCAS PARADOX

- Robert Lucas (1990) pointed to a puzzle in international capital markets:
- Economic models predict that capital should flow from rich to poor countries, as the marginal product of capital is higher in poorer, less productive countries
- Empirically, however, capital flows are from poor to rich countries – why?
- Lucas suggested a couple of solutions:
- Differences in human capital – but he found that this doesn't work
- Capital market imperfections – i.e, monopoly control of capital
- We can also note:
- Institutional barriers, such as weak protection for contracts, property rights
- Risk-averse investors tend to avoid risky high-return investment in emerging markets
- The role of the monetary system and dollar reserves

THE MOST RECENT TRENDS IN CAPITAL FLOWS

Changes since the Great Financial Crisis (BIS 2021)

- The overall volume has declined
- Capital flows to advanced economies declined due to bank deleveraging
- Capital flows to emerging markets stable
- Capital flows to China increased substantially

Change in the Composition of Capital Flows

- An increasing share of flows to emerging markets is through investment fund
 - Portfolio investors are now in many countries the largest providers of foreign credit
- Local banks in emerging markets have expanded internationally
- Abundance of liquidity, low interest rates have fueled an international pursuit of yield

THE MOST RECENT TRENDS IN CAPITAL FLOWS

Importance of Bank Credit

- Despite the recent decline in bank credit, it is still the major component of international flows – 45-50 percent
- To this should be added banks' portfolio investments

Growth in Risk Aversion

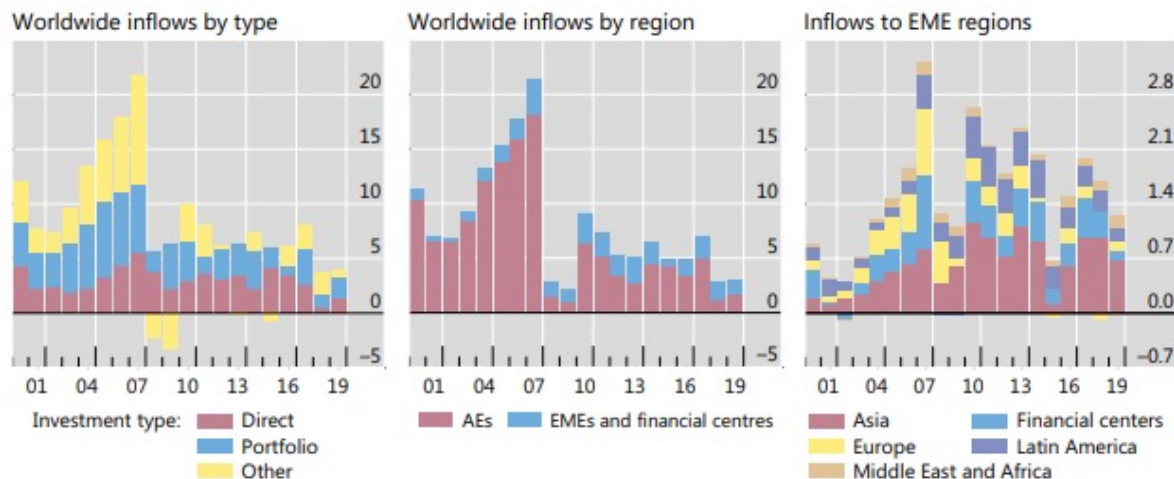
- An increase in passive investment seeking stable yields
- Increased portfolio diversification drives growth in gross flows
 - Banks in all countries seek risk-reduction by limiting exposure to their local markets
- Growth in global liquidity is the most important “push” factor
- Dollar strength (i.e., appreciation) is also important

CAPITAL FLOWS BY REGION (BIS 2021)

Capital flows by type and region

As a percentage of world GDP

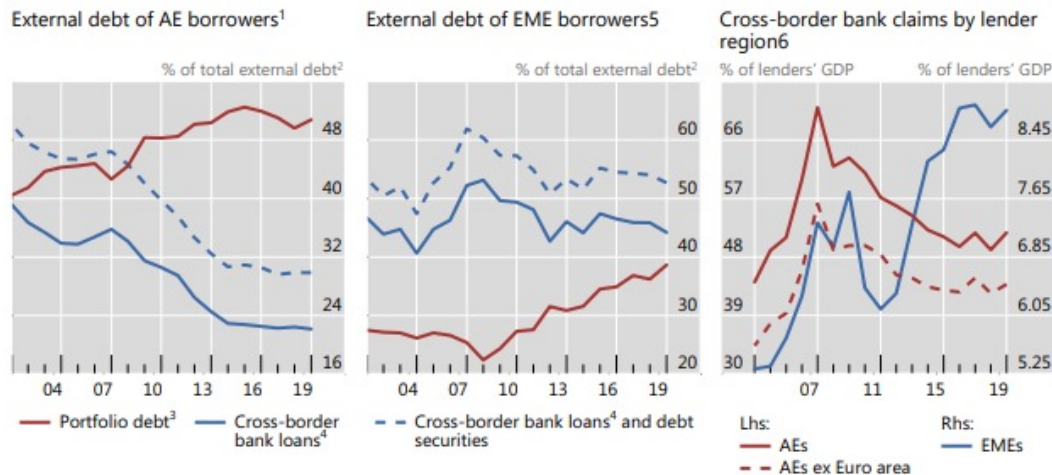
Graph 1.1



AEs = advanced economies; EMEs = emerging markets; Financial centres = Hong Kong SAR and Singapore; Emerging Asia = CN, IN, ID, MY, PK, PH, TH; Emerging Europe = CZ, HU, PL, RO, RU, TR; Latin America = AR, BR, CL, CO, MX, PE; Middle East and Africa = EG, SA, KW, QA, ZA.

Sources: IMF, *Balance of Payment Statistics*; CGFS Working Group calculations.

TYPES OF CAPITAL FLOWS (BIS 2021)



¹ Outstanding amounts for AT, AU, BE, CA, CY, CH, DE, DK, EE, ES, FI, FR, GB GR, IE, IT, JP, LV, LT, LU, MT, NL, NZ, NO, PT, SE, SK, SI, VA, and US. ² Defined as the stock of debt securities portfolio investment liabilities plus the stock of other debt instrument liabilities across all sectors for both components. ³ Stock of portfolio investment liabilities for all sectors. ⁴ Cross-border loans include interbank deposits and deposits with own affiliates. ⁵ Outstanding amounts for AL, BR, CL, CN, CO, CZ, EG, HR, HU, ID, IL, IN, KE, KR, KZ, MA, MY, MZ, MX, PE, PH, PK, PL, RO, RU, SA, TH, TN, TR, UA, and ZA. ⁶ The GDP of LBS-reporting countries (lenders' GDP) enters the denominator as a scaling factor in the year when the country started to report to the LBS.

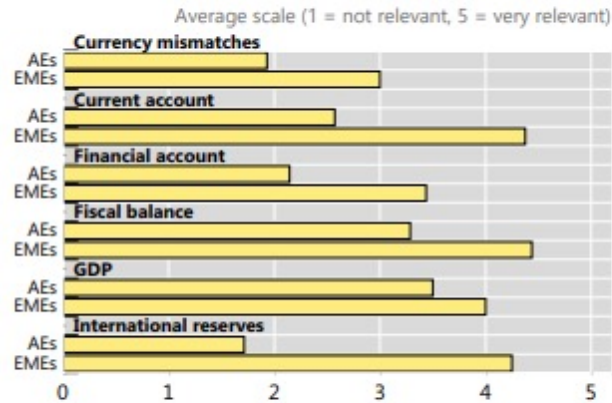
Sources: IMF *International Investment Position Statistics*; IMF, *World Economic Outlook*; BIS locational banking statistics (LBS); CGFS Working Group calculations.

DRIVERS OF CAPITAL FLOWS (BIS 2021)

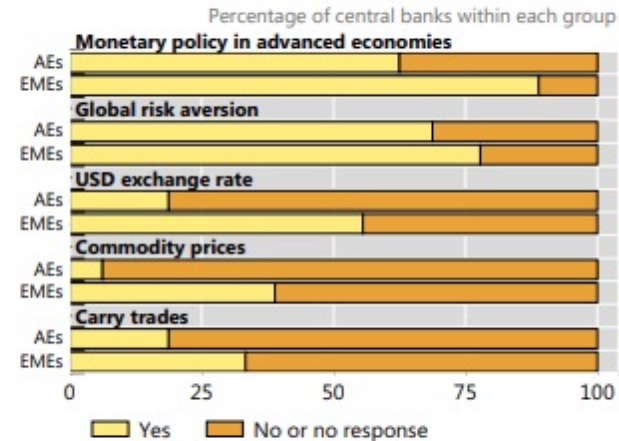
Core drivers of capital flows as indicated in the survey^{1,2}

Graph 2.1

Pull factors



Push factors



¹ AEs: AU, BE, CA, CH, DE, EA, ES, FR, GB, IT, JP, LU, NL, NZ, SE, and US. ² EMEs: AR, BR, CN, CL, CO, HK, IN, KR, MX, MY, PE, PH, RU, SA, SG, TH, TR, and ZA.

Source: CGFS Working Group, Survey on changing patterns of capital flows, August 2020, questions 6a and 7.

2. FINANCIALIZATION



DEFINITIONS AND IMPACTS

Complementary Definitions

- “... a pattern of accumulation in which profits accrue primarily through financial channels rather than through trade and commodity production.” (Krippner 2005)
- “Financialization refers to the increasing importance of finance, financial markets, and financial institutions to the workings of the economy.” (Davis and Kim 2015)

Suggested Consequences

- The growth in derivatives markets distort the real economy (Breger Bush 2012)
- Financial markets fuel global land speculation (Fairbairn 2014, 2020)
- Financialization increases inequality (Krippner 2012)

SUGGESTED CAUSES

Technological Cause

- Modern communications systems greatly reduce costs of information
- This enables real time financial and derivatives markets

Ideological Cause

- The rise of “neoliberalism” in the 1980s
- Liberalization led to great expansion of financial markets

DERIVATIVES AND COMMODITIES

Coffee and Derivatives in the “Global South” (Breger Bush 2012)

- Huge growth in derivatives markets since early 2000s
- For one kg of coffee sold on the world market, 8,000 kg of “future coffee” derivatives
- Speculative flows in derivatives markets cause volatility for farmers in spot markets

Agricultural Futures and Spot Markets

- Correlation between liquidity in futures and rapid price rises in spot markets (Ghosh et al. 2012)
- Irwin and Sanders (2011; 2012) however found no evidence for this relationship
- Note of caution: size of derivatives markets unproblematic – most contracts synthetic, i.e., settlement is in cash

THE PERNICIOUS INFLUENCE OF DERIVATIVES?

Positive Role of Derivatives

- Derivatives markets normally a help to price discovery
- Primary producers can use forward prices to plan production, reduce uncertainty

Distorted Derivative Markets?

- Derivatives markets grew due to increased liquidity in the financial system
- Perhaps speculative in- and outflows lead to periods of price volatility, negating the benefits?
- Such flows are likely to be exacerbated: in a credit crunch, the financial system is drained of liquidity

FINANCE AND LAND SPECULATION

Land as a Financial Asset (Fairbairn 2014)

- Land is increasingly a “reserve of value” that passively appreciates
- “[Land] is a productive asset that moonlights as a financial asset.”

Land as Inflation Hedge

- Land prices are highly correlated to inflation with a low correlation to other asset prices
- In a falling-interest rate environment, land is bound to appreciate, attracting speculators
- Land appreciation drives out individual buyers, makes external finance more necessary
- Appreciation also from agricultural subsidies – especially in the EU

CHANGING FARMING STRUCTURE

Changing Ownership

- Corporate land ownership is increasing – but still a minority
- Majority of land is directly held by individuals in most countries (80-90 percent)
- Farming perhaps not suitable for corporate control, greater uncertainty means that individual ownership is more efficient (Allen and Lueck 2002)
- Larger farms and ownership concentration is a global phenomenon

Increased Indebtedness

- Mortgage-backed securities often considered a very safe asset (Basel, ECB)
- Note that many of these trends occurred already from the 1950s

FINANCIALIZATION AND INEQUALITY

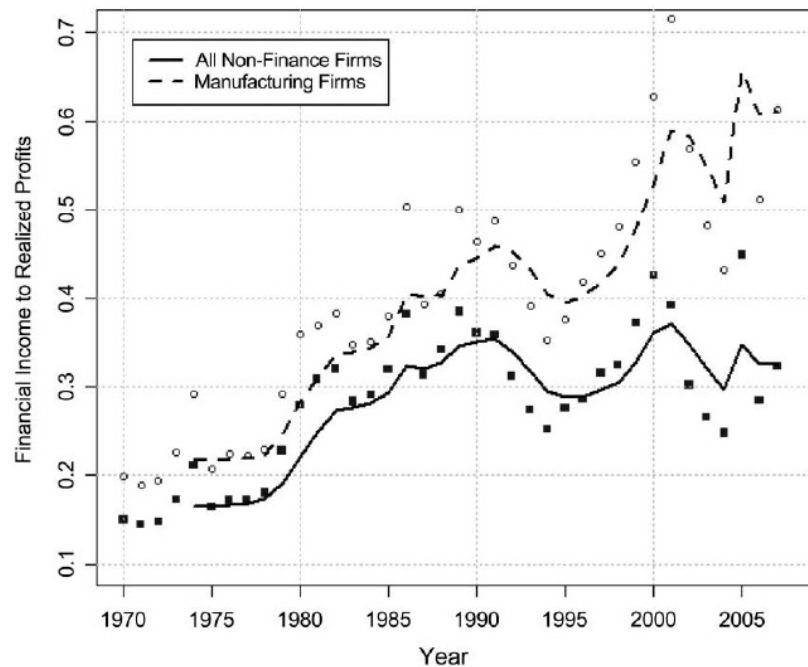
Expanding Role of Financial Profits in America 1950-2001 (Krippner 2012)

- Grew from 10-15 percent of total profits in 1950s to peak of 40 percent 2001
- Nonfinancial firms increasingly dependent on financial activities for income
- Compensation to employees in the financial sector also grew

Finance Driving Inequality? (Van Arnum and Naples 2013)

- Lin and Tomaskovic-Devey (2013) explains financialization as a result of the weakening bargaining position of workers
- Weak explanation – strong empirical case
- Financial income as proportion of profits grew from 15 to 30 percent for all nonfinancials 1970s-2008

US FINANCIAL INCOME TO PROFITS 1970-2008 (LIN AND TOMASKOVIC-DEVEY 2013)





3. MONETARY POLICY AND MODERN FINANCE

THE HIDDEN ROLE OF MONETARY POLICY

A Hidden Cause of Financialization

- Monetary policy drives international capital flows
- Monetary policy is a key cause of the growth of the financial sector
- Not this or that policy – the monetary system as such

Fiat Money and Financialization

- Monetary saving (cash hoarding) is discouraged, savings directed into financial markets
- Money creation leads to Cantillon effects in favour of the financial system
- Central banks stand ready to bail out banks and financial institutions (“Too Big To Fail”), leading to moral hazard, overexpansion
- Bailouts perpetuates the greater role of finance caused in the boom

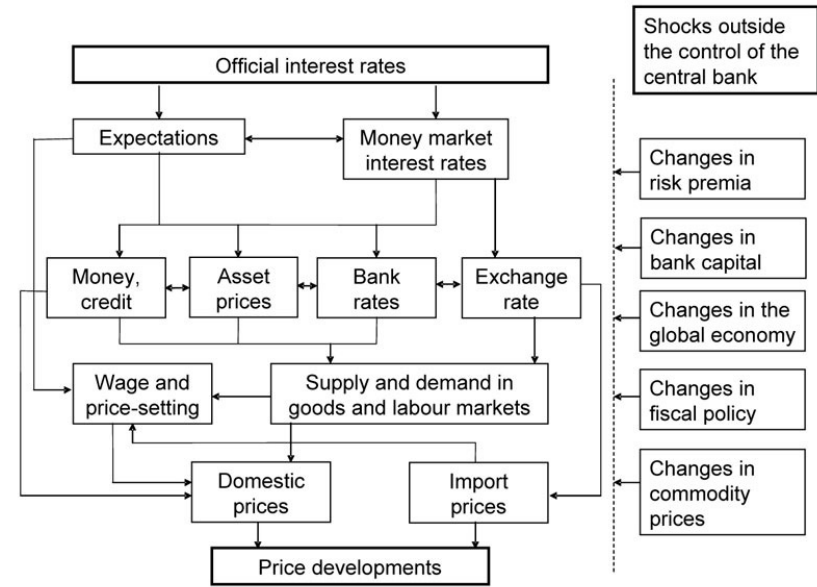
THE TRADITIONAL TRANSMISSION MECHANISM

- Flow of new money most important tool of policy (Mishkin 2019; Rothbard 2008)
- The central bank lowers interest rates by creating new money
 - It lends to banks at target rates
 - Or buys financial assets at targeted prices
- Consequence: bank lending increases, as the supply of reserves expand
- The market rate of interest falls
- Asset prices increase
- Prices increase overall

ECB'S TRANSMISSION MECHANISM

- Source:

<https://www.ecb.europa.eu/mopo/intro/transmission/html/index.en.html>



FIAT MONEY AND FINANCIAL MARKETS (HÜLSMANN 2014)

Central Banking Boosts Financial Markets

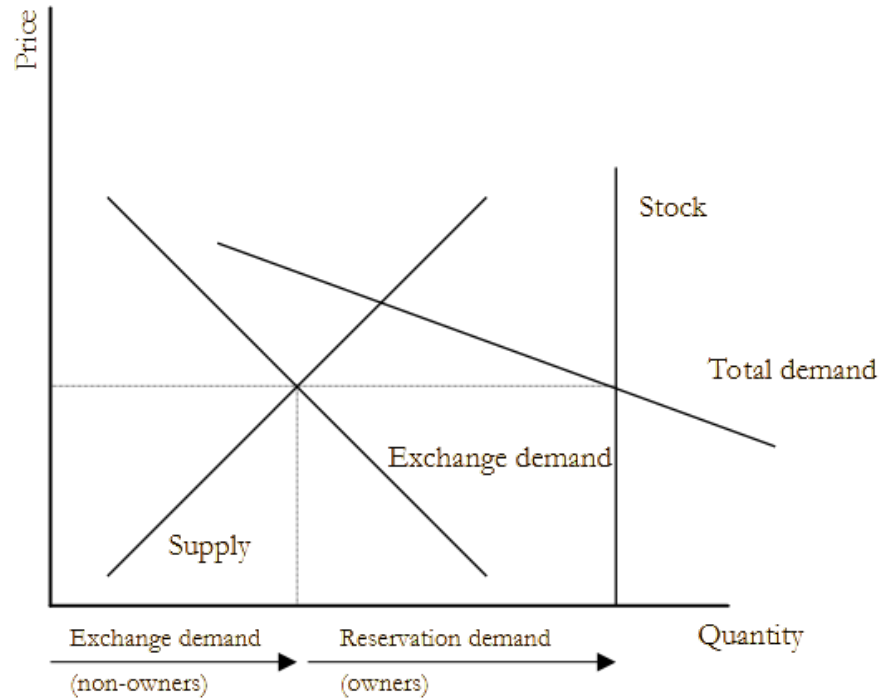
- Central banks purchase financial assets with new money (monetization channel)
- Central banks lend new money to market actors against collateral
 - Financial assets, increasing demand for these assets
- Increasing fiat money supply leads to permanent price inflation (price inflation channel)
 - Hoarding becomes uneconomic and lead to losses even at low inflation rates
- Central banks aim at stable inflation, PPM (moral hazard channel)
 - Banks create most of the money, this goal effectively means stabilizing the banking system
 - The implicit bailout guarantee leads banks to increase their activities, become riskier
- Notice that this all holds also at comparatively low rates of money creation

MONETARY POLICY AND FINANCIAL MARKETS

Indirect Influence of Monetary Policy (Žukauskas and Hülsmann 2018)

- Monetary policy also indirectly leads to higher demand for and prices of financial assets
- Demand for money and financial assets understood in terms of reservation demand and exchange demand
 - Exchange demand: demand for a good in exchange by non-owners
 - Reservation demand: demand by owners unwilling to sell at current prices
- Reservation demand is especially important for price formation in the case of durable assets (real estate, financial assets, money)

THE TOTAL DEMAND FOR FINANCIAL ASSETS



MONETARY POLICY AND FINANCIAL MARKETS

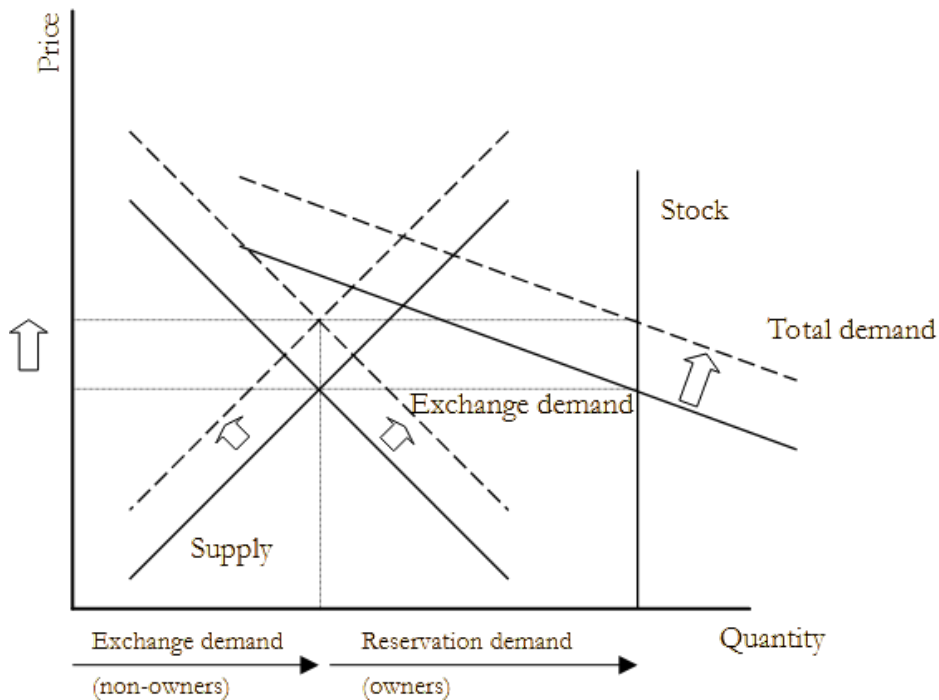
Importance of Reservation Demand for Money

- Both money and financial assets have large and pretty fixed stocks
- A sizable proportion of the stock is not exchanged during any given period
- Central bank money creation induce a fall in the reservation demand for money
- On the margin, people substitute other assets for depreciating cash

Monetary Policy and Demand for Financial Assets

- Financial assets preferred, since they are very liquid – a partial substitute for money
- Monetary policy leads to an increased demand for financial assets and higher prices
- Increase in reservation demand – holders expect the value of their assets to increase
- Increase in exchange demand – more people want to hold financial assets

A CHANGE IN DEMAND FOR FINANCIAL ASSETS



MONETARY POLICY AND CANTILLON EFFECTS

Cantillon Effects in the Modern Monetary System

- Money enters the financial sector first, financial asset prices rise first
- Financial actors have an increase in income or cash flow first
- People will increasingly save in the form of financial assets to benefit from this process
- Reservation demand for money falls, reservation demand for financial assets increases

Cantillon Effects and Business

- Businesses too will seek closer financial connections to benefit
- Debt becomes comparatively cheaper than equity
- The opportunity cost of direct investment/ownership increases

INTERNATIONAL FLOWS AND MONETARY POLICY

- Cantillon effects and the increased desirability of financial assets also explain part of the growth in cross-border flows
- Recall: diversification and risk management are becoming more important than productive – but risky – investment
- Financial assets are increasingly substitutes for cash, the “safest” asset. Passive investment in the safest financial assets therefore dominates
- Financial flows into “safe” countries (US, Germany) from riskier jurisdiction is part of this trend
- Financial assets in general appreciate
- Financial assets in the safest jurisdiction appreciate even more

4. LITERATURE



LITERATURE

Aghion, P., A. Bergeaud, G. Clette, R. Lecat and H. Maghin. 2019. Coase Lecture – The Inverted-U Relationship Between Credit Access and Productivity Growth. *Economica* 86, no. 341: 1-31.

Allen, D. W. and D. Lueck. 2002. *The Nature of the Farm: Contracts, Risk, and Organization in Agriculture*. Cambridge, Mass.: MIT Press.

Bank for International Settlements. 2021. Changing Patterns of Capital Flows. *CGFS Papers* no. 66. [Online here](#).

Breger Bush, S. 2012. *Derivatives and Development: A Political Economy of Global Finance, Farming, and Poverty*. New York: Palgrave Macmillan.

LITERATURE

Davis, G. F. and S. Kim. 2015. Financialization of the Economy. *Annual Review of Sociology* 41, no. 1: 203-21.

Fairbairn, M. 2014. ‘Like Gold with Yield’: Evolving Intersections Between Farmland and Finance. *The Journal of Peasant Studies* 41, no. 5: 777-95.

Fairbairn, M. 2020. *Fields of Gold: Financing the Global Land Rush*. Ithaca: Cornell University Press.

Ghosh, J., J. Heintz and R. Pollin. 2012. Speculation on Commodities Futures Markets and Destabilization of Global Food Prices: Exploring the Connections. *International Journal of Health Services* 42, no. 3: 465-83.

Hankey, T. 1873. *The Principles of Banking, Its Utility and Economy; with Remarks on the Workings of the Bank of England*. 2nd edition. London: Effingham Wilson, Royal Exchange.

LITERATURE

Hülsmann, J. G. 2014. Financial Markets and the Production of Law, *Document de travail de GRANEM*, University of Angers. [Online here](#).

Irwin, S. H. and D. R. Sanders. 2011. Index Funds, Financialization, and Commodity Futures Markets. *Applied Economic Perspectives and Policy* 33, no. 1: 1-31.

Irwin, S. H. and D. R. Sanders. 2012. Financialization and Structural Change in Commodity Futures Markets. *Journal of Agricultural and Applied Economics* 44, no. 3: 371-96.

Kornai, J. 1986. The Soft Budget Constraint. *Kyklos* 39: 3-30.

Krippner, G. R. 2005. The Financialization of the American Economy. *Socio-Economic Review* 3: 173-208.

Krippner, G. R. 2012. *Capitalizing on Crisis: The Political Origins of the Rise of Finance*. Cambridge, Mass.: Harvard University Press.

LITERATURE

Levine, R. 1997. Financial Development and Economic Growth: Views and Agenda. *Journal of Economic Literature* 35, no. 2: 688-726.

Lin, K.-H. and D. Tomaskovic-Devey. 2013. Financialization and U.S. Income Inequality, 1970-2008. *American Journal of Sociology* 118, no. 5: 1284-1329.

Lucas, R. E. 1990. Why Doesn't Capital Flow from Rich to Poor Countries? *The American Economic Review* 80, no. 2: 92-6.

McKinnon, R. I. 1973. *Money and Capital in Economic Development*. Washington, D.C.: Brookings Institution.

Mishkin, F. 2019. *The Economics of Money, Banking and Financial Markets*. Harlow: Pearson, 12th edition, global edition.

LITERATURE

Rajan, R. G. and L. Zingales. 1998. Financial Dependence and Growth. *The American Economic Review* 88, no. 3: 559-86.

Rothbard, M. N. 2008. *The Mystery of Banking*. Auburn, Ala.: Ludwig von Mises Institute. 2nd edition.

Stiglitz, J. E. 2000. Capital Market Liberalization, Economic Growth, and Instability. *World Development* 28, no. 6: 1075-86.

Van Arnum, B. M. and M. I. Naples. 2013. Financialization and Income Inequality in the United States, 1967-2010. *American Journal of Economics and Sociology* 72, no. 5: 1158-82.

Žukauskas, V. and J. G. Hülsmann. 2018. Financial Asset Valuations: The Total Demand Approach. *The Quarterly Review of Economics and Finance* 72: 123-31.