

BANKING



Lecture I – Introduction

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Administrative

Course Outline

**Financial System, Banks,
and the Real Economy**

Online Delivery of the Course

- **All course materials are in Moodle**
 - Lecture slides, tutorial slides, key readings
 - <https://dli.cuni.cz/course/view.php?id=10103>, Banking 2020/2021
 - Log in to Moodle and enroll yourself to the course
- **Lectures and tutorials will be conducted in Zoom**
 - Link for each day (lecture+tutorial combined, always Wednesday 5 pm – 8 pm) available on Moodle
 - You can join over web browser or install a Zoom App on your computer, you can even join using your phone or tablet
- **All course requirements can be dealt with online**
 - Two online tests (midterm test, final test)
 - Team work (Credit Application, Credit Appraisal) to be submitted electronically via Moodle
 - Details follow after this Intro Lecture

Guidance for Online Sessions in Zoom

- When connecting to the Zoom session
 - Keep your camera on to make our online sessions “face to face”
 - But keep your microphone muted to prevent echo effects
- Following lectures/tutorials
 - The lecturer will “share the screen” so you will be able to follow the slides in Zoom
 - However, useful to download the slides from Moodle and have them open in parallel
- Questions
 - Use the Chat function (Chat to Everyone) to ask any questions; lecturers will monitor it regularly over the lecture and answer
 - Lecturers can invite you to unmute the mic and ask your question verbally
 - Lecturers can also invite some of you to share your screen, especially during tutorials, when discussing your particular problems and issues

Introducing the Team of Lecturers

(in order of appearance)

- Doc. PhDr. Adam Geršl, Ph.D. (adam.gersl@fsv.cuni.cz)
 - Director of Master Studies in Economics and Finance at IES
 - 2012-2020 IMF Regional Training Center in Vienna, 2001-2012 Czech National Bank
- Mgr. Magda Pečená, Ph.D. (magda.pecena@fsv.cuni.cz)
 - Senior Lecturer at IES, teaching Introductory Banking (bachelor) and Banking (master)
 - During 2000-2019, bank supervisor at Czech National Bank (2017-2019 Head of Off-Site Supervision Team for Small and Medium-Sized Banks)
- Prof. PhDr. Petr Teplý, Ph.D. (petr.teply@fsv.cuni.cz)
 - Professor of Economics and Finance at IES and VŠE, teaching Financial Economics, Banking, Insurance
 - 2014+ member of Supervisory Board of Czech Export Bank, 2001-2005 at CSOB

Introducing the Team of Teaching Assistants

- Mgr. Petr Hanzlík (96193552@fsv.cuni.cz)
 - Ph.D. candidate at IES
 - ALM specialist at CSOB

- Mgr. Jana Juhaszova (add email)
 - Ph.D. candidate at IES
 - Expert at Czech National Bank



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Course Outline

Financial System, Banks,
and the Real Economy

Course Outline

1. Introduction
2. Basic Principles of Banking
3. Principles of Risk Measurement and Risk Management
4. Credit Risk
5. Market Risk
6. Bank Regulation
7. Bank Capital
8. Liquidity Risk and Liabilities Management
9. Central Banking
10. Special Topic (tbc)
11. Recap/Guest Lecture (tbc)

Course Outline I

L1/T1: Introduction & Financial System, Banks, and the Real Economy & Review of Financial Mathematics

- Banks, markets and other financial intermediaries
- How the economy and the banking sector interact
- Review of key concepts in financial mathematics (net present value, interest calculations, bond valuation, yield curve)

L2/T2: Basic Principles of Banking

- Definition and function of banks, structure of the banking sector
- Understanding banks' balance sheets
- Measuring banks' performance and bank valuation

L3/T3: Principles of Risk Management

- Risk categorization
- Asset and liability management
- Interest rate risk

Course Outline II

L4/T4: Credit Risk

- Corporate governance and key processes in banks
- Credit risk management, credit risk quantification, provisioning
- Loan granting process and loan pricing

L5/T5: Market Risk

- Sources of market risk, market risk measurement
- Value at Risk (VaR)
- Using derivatives to hedge market risk

L6/T6: Bank Regulation

- Why and how to regulate banks, and how to make regulation effective
- Bank regulation before and after the Global Financial Crisis
- Costs and benefits of regulation

Course Outline III

L7/T7: Bank Capital

- Understanding the role of bank capital and its types (accounting, economic, regulatory)
- Risk weights and capital adequacy requirements
- Evolution of the Basel Accord for Banking Supervision (Basel I-III)

L8/T8: Liquidity Risk

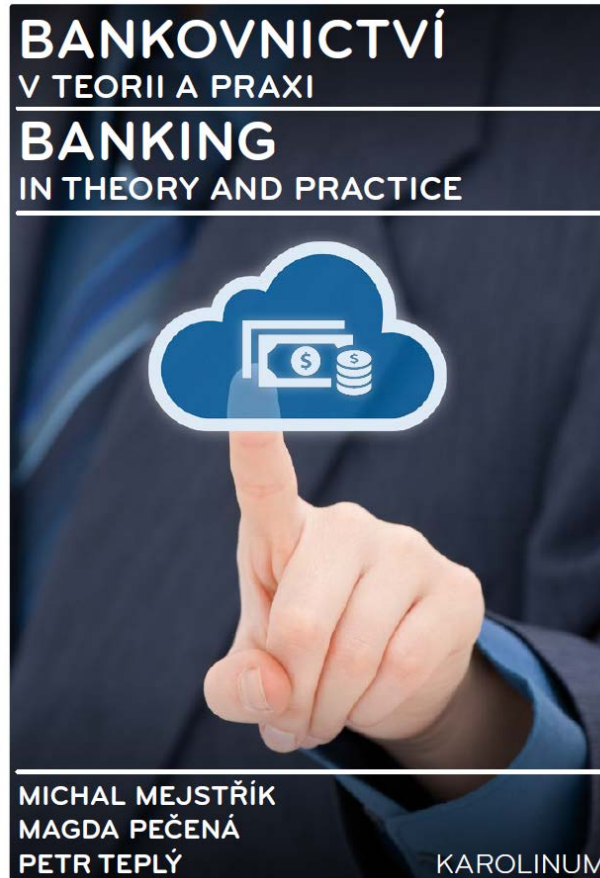
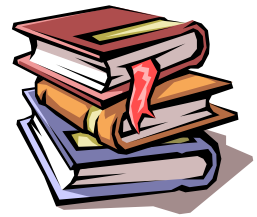
- Basic terms and key concepts in liquidity management
- Basel III liquidity requirements
- Deposits and deposit insurance

L9/T9: Central Banking

- The role of central banks
- Understanding monetary policy and its implementation
- Market interest rates and their impact on banks

L10-L11: Special Topic + Guest Lecture

Key Reading for the Course





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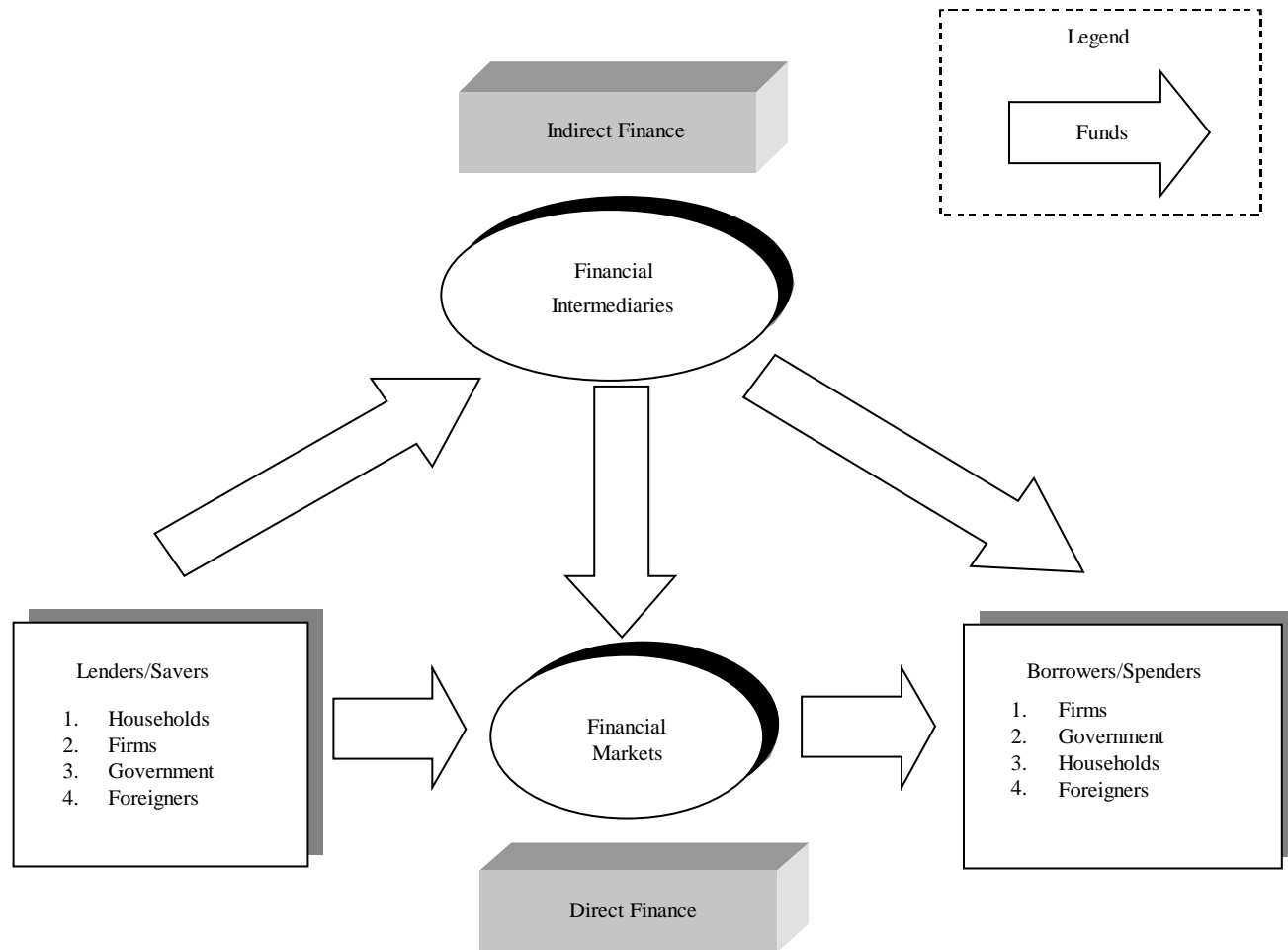
Course Outline

**Financial System, Banks,
and the Real Economy**

Why to study banks in detail?

1. They are **key financial intermediaries**, channeling savings into investments/consumption by **providing loans to the private sector**.
2. Their business model is based on **maturity transformation** (short-term deposits => long-term loans), which makes them prone to financial risks (liquidity risk, credit risk).
3. They tend to be large, leading to **concentrated banking sectors**. Failures of **large banks** due to above-mentioned risks can be **detrimental** to the real economy.
4. They operate “**pro-cyclically**”, with credit intermediation increasing in good economic times and decreasing in bad economic times, potentially **amplifying** the business cycle.

Direct and Indirect Finance



Source: Authors based on Mishkin (2010), updated; Direct Finance also includes peer-to-peer (P2P) lending and similar

Types of Financial Intermediaries

- Financial intermediaries hold **financial assets rather than real assets**

Depository
institutions
(banks)

Other financial
intermediaries
(OFIs)

Type of Intermediary	Primary Assets (Uses of Funds)	Primary Liabilities (Sources of Funds)
Commercial banks	Corporate loans Consumer Loans Mortgages Government Bonds Municipal Bonds	Deposits Bonds (mortgage bonds)
Building society	Housing loans	Deposits
Credit unions	Consumer Loans	Deposits
Insurance companies	Corporate Loans Government Bonds Stocks	Premium from policies
Pension funds	Corporate Bonds Government Bonds Stocks	Employee and employer contributions
Finance companies Lending companies	Corporate loans Consumer Loans	Bank loans Commercial papers Stocks Bonds
Mutual Funds Investment Fund Hedge Fund, Private Equity Fund	Corporate Bonds Government Bonds Stocks	Shares
Money market mutual funds	Money market instruments	Shares

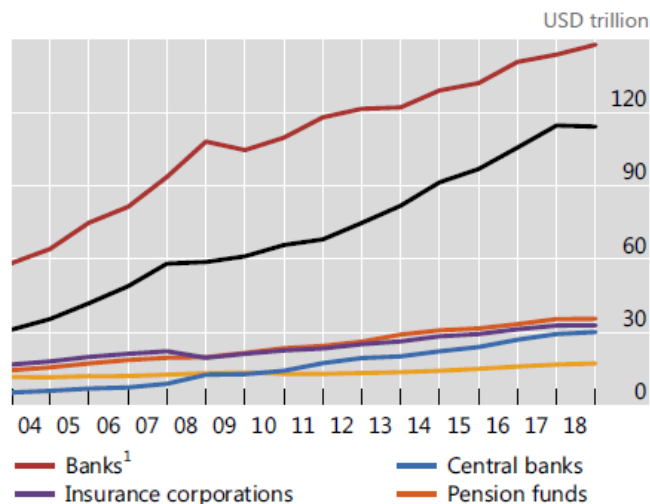
The Role of Banks in the Global Financial System

Assets of financial intermediaries

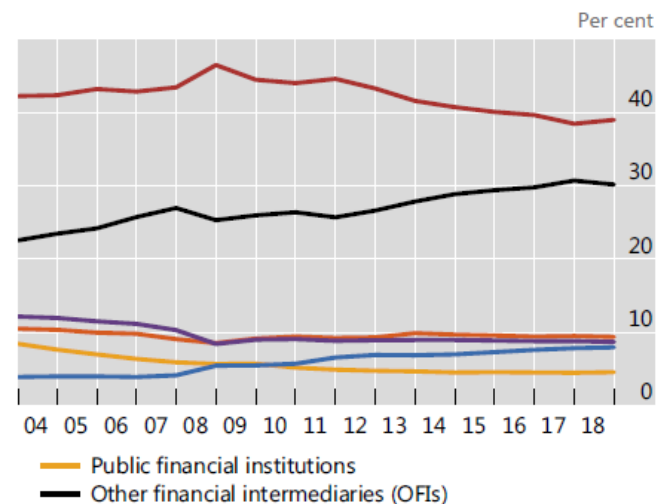
21+EA-Group

Exhibit 2-2

Total global financial assets



Share of total global financial assets²



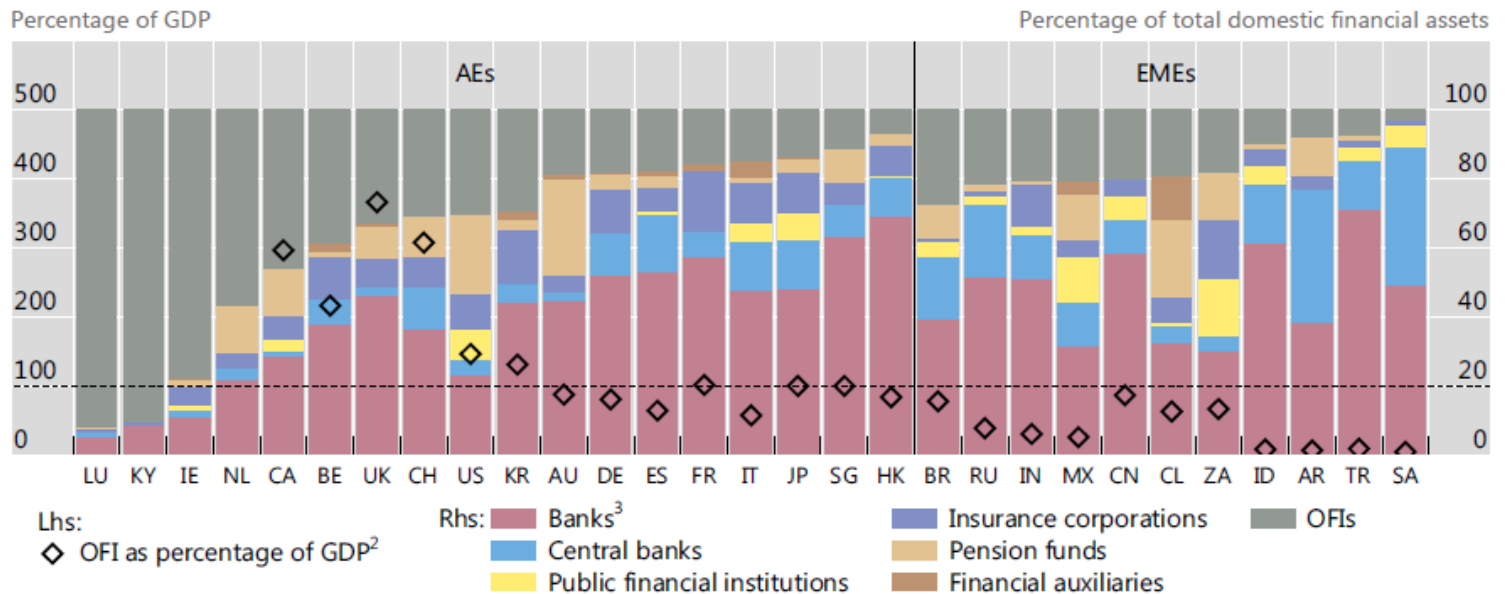
¹ All deposit-taking corporations. ² Weighted average based on total national financial assets.

	Total global financial assets	Central banks	Banks	Public financial institutions	MUNFI	Insurance corporations ¹	Pension funds	OFIs	Financial auxiliaries ²
Size at end-2018 (USD trillion)	378.9	30.1	147.9	17.3	183.7	32.9	35.6	114.3	1.0
Share of total global financial assets (%)	100.0	7.9	39.0	4.6	48.5	8.7	9.4	30.2	0.3
Growth in 2018 (year-over-year, %)	1.4	2.5	2.8	3.2	-0.1	0.2	0.4	-0.4	8.8
Growth 2012-17 (annualised growth, %)	5.9	8.5	3.4	4.7	7.8	5.5	6.3	9.0	8.8

Financial Intermediaries in Selected Countries

Composition of financial systems¹
29-Group at end-2018.

Exhibit 2-3



¹ Assets invested in foreign jurisdictions may distort these ratios. ² Jurisdictions with OFIs assets greater (lower) than their GDP will be above (below) the horizontal dashed line. The ratio of OFI assets to GDP for Luxembourg (23,631), the Cayman Islands (148,540), Ireland (1323) and the Netherlands (760) are not shown since they are particularly high compared to the rest of the jurisdictions. ³ All deposit-taking corporations.

Sources: Jurisdictions' 2019 submissions (national sector balance sheet and other data); FSB calculations.

Question 1

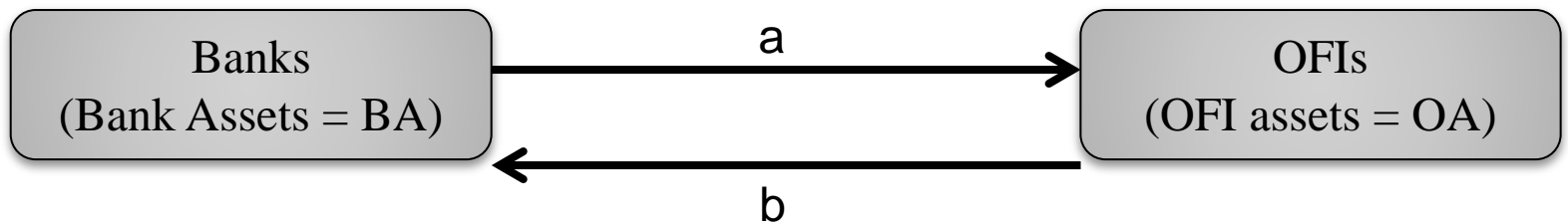
Some economists measure the size of the financial system by summing up **market securities outstanding** (bonds, stocks) and **assets of financial intermediaries**, expressing the final aggregate as a % of GDP.

What is problematic about this approach?

What issues arise when comparing countries with this measure?

Use the Chat function of Zoom to write your answer.

Banks and Other Financial Intermediaries (OFIs) are interconnected!



Interconnectedness measures:

$$\frac{a}{BA}$$

Exposure to OFIs

$$\frac{b}{BA}$$

Funding from OFIs

$$\frac{a}{OA}$$

Funding from banks

$$\frac{b}{OA}$$

Exposure to banks

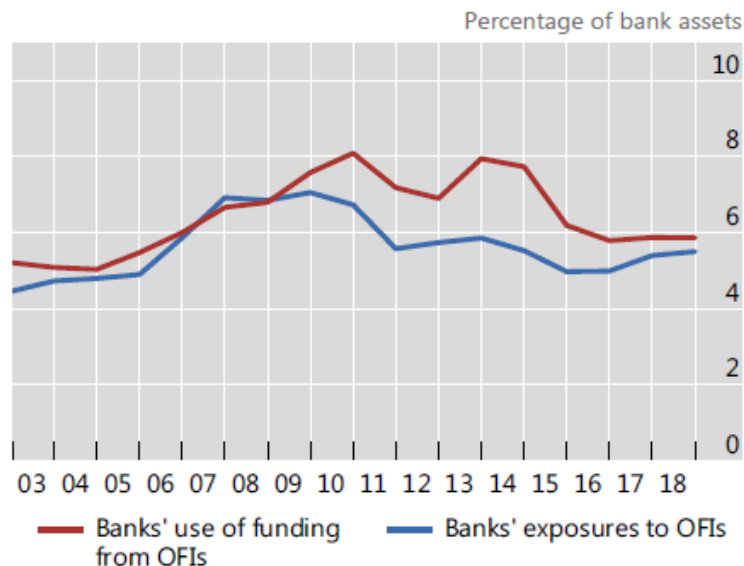
Interconnectedness between Banks and Other Financial Intermediaries (OFIs)

Interconnectedness between banks and OFIs

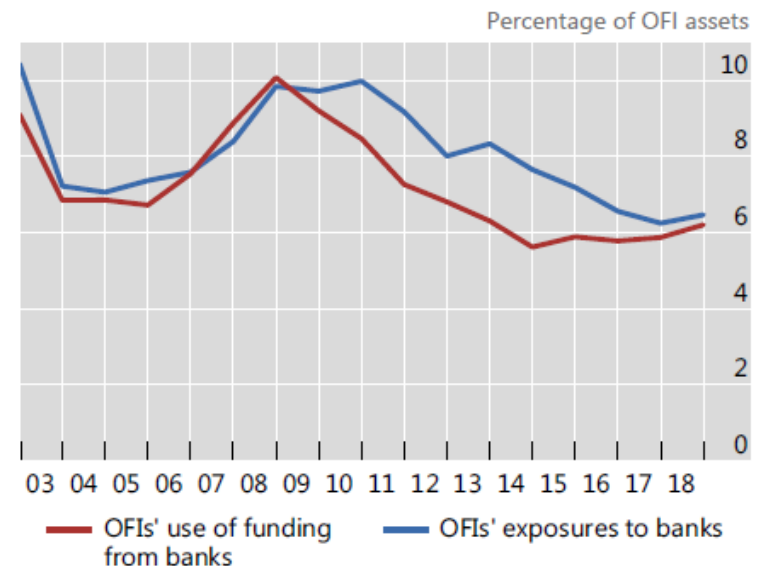
21+EA Group¹

Exhibit 3-3

Banks' interconnectedness with OFIs²



OFIs interconnectedness with banks³



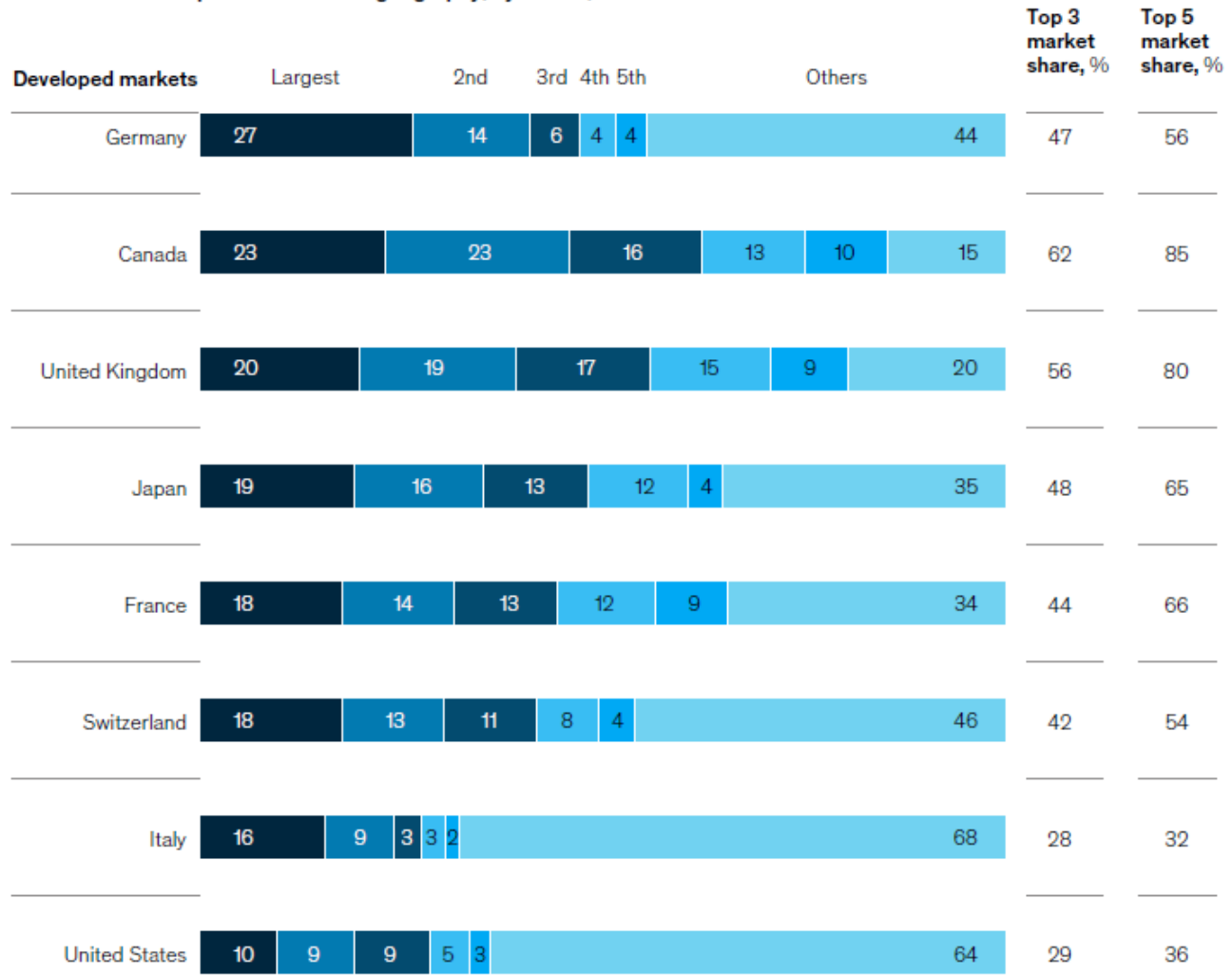
¹ Changes in interconnectedness measures may also reflect improvements in the availability of data over time at a jurisdictional level.

² Banks' use of funding from OFIs = Banks' liabilities to OFIs as a share of bank assets. Banks' exposure to OFIs = Banks' claims on OFIs as a share of bank assets. ³ OFIs use of funding from banks = OFIs' liabilities to banks as a share of OFI assets. OFIs exposures to banks = OFIs' claims on banks as a share of OFI assets.

Sources: Jurisdictions' 2019 submissions (national sector balance sheet and other data); FSB calculations.

Concentration in the Banking Sector

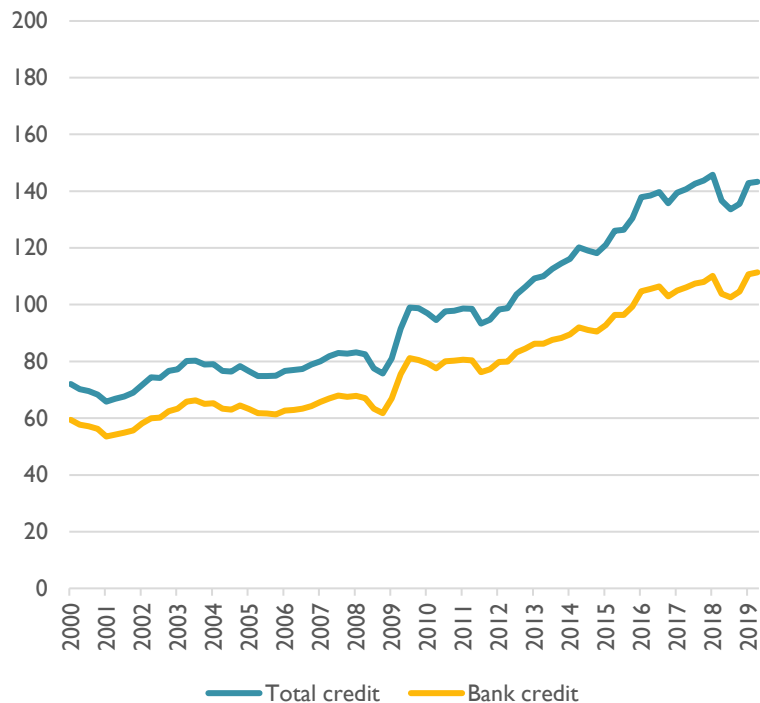
Market share of top 5 banks in each geography, by assets, %



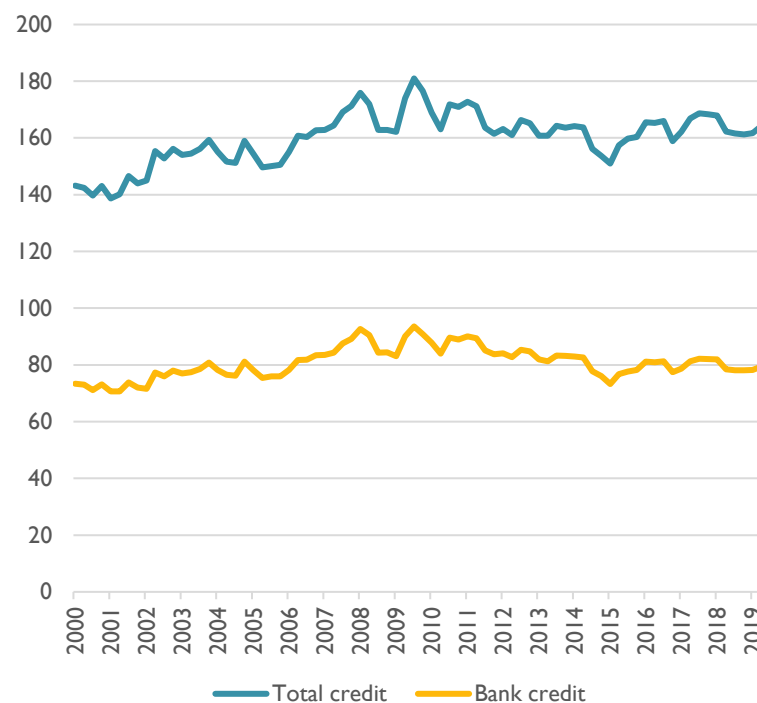
The role of banks in providing credit to the private (non-financial) sector

Total credit* = loans by domestic banks + loans by domestic non-bank financial intermediaries + debt (bonds) issued + cross-border credit + inter-company credit

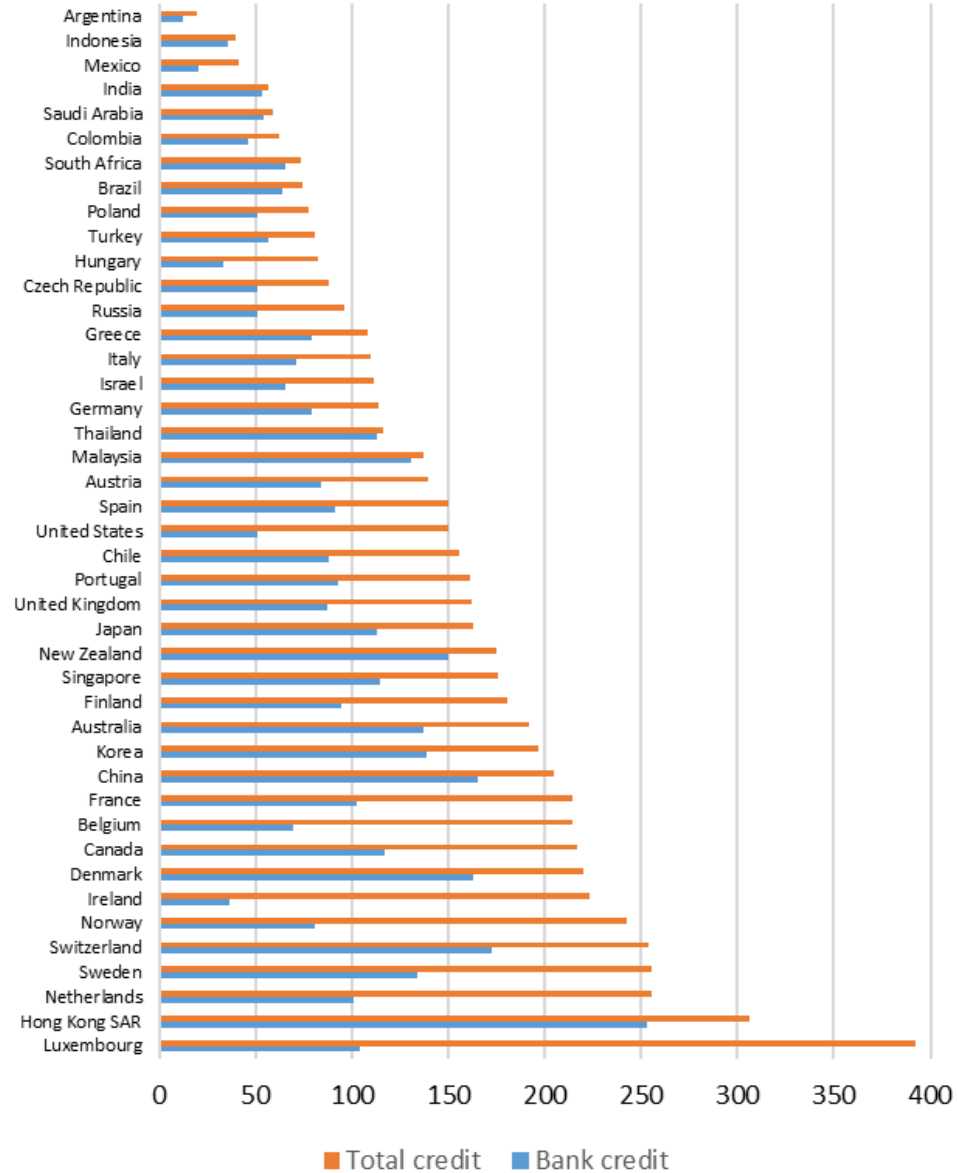
Total versus Bank Credit in Large Emerging Markets (% of GDP)



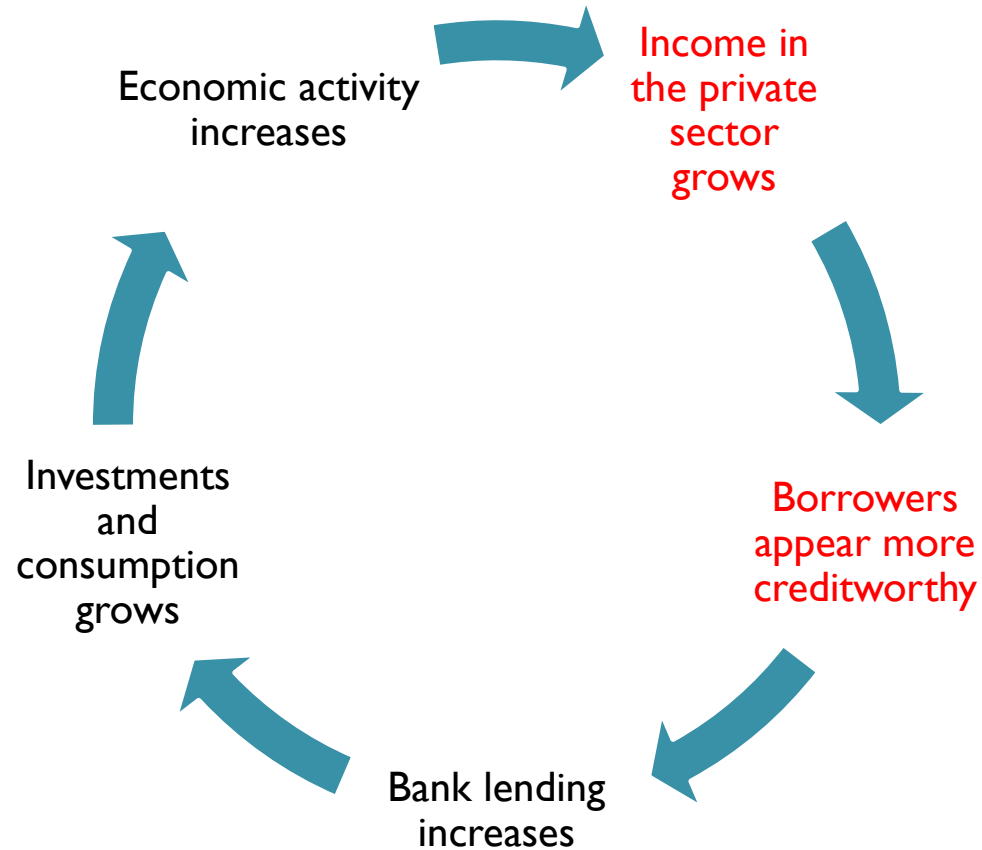
Total versus Bank Credit in Advanced Economies (% of GDP)



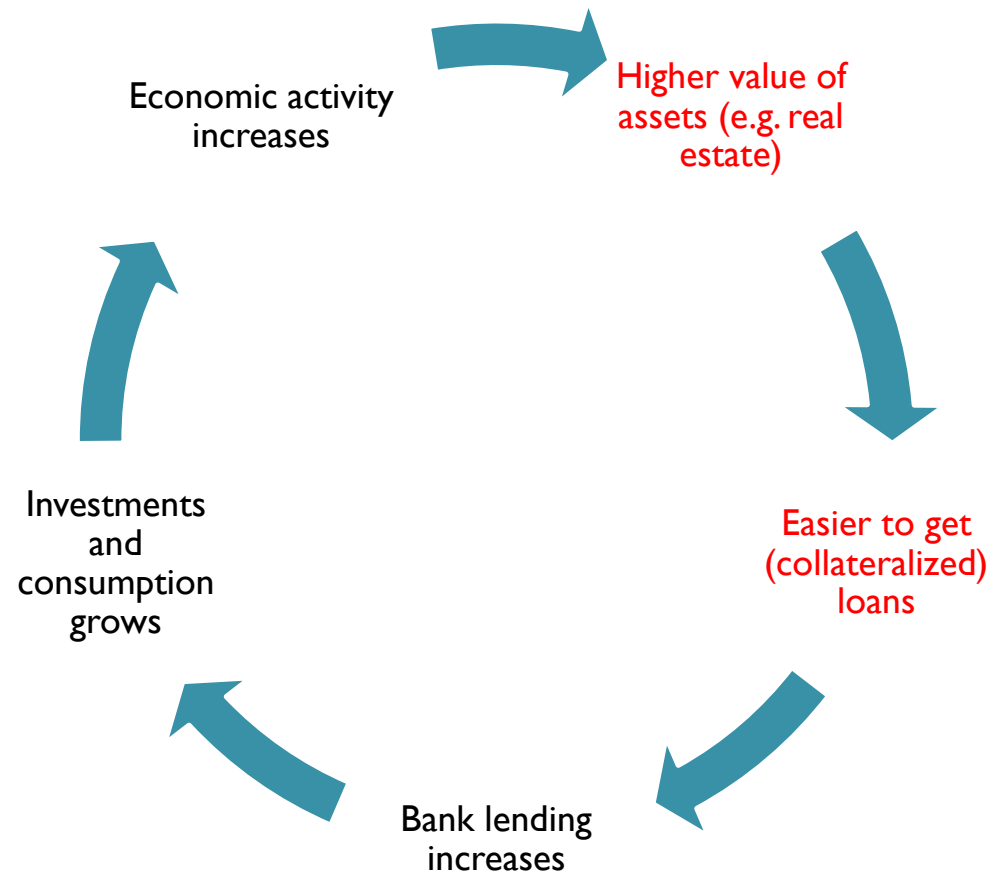
Credit in Advanced Economies and Large Emerging Markets (% of GDP, 2019)



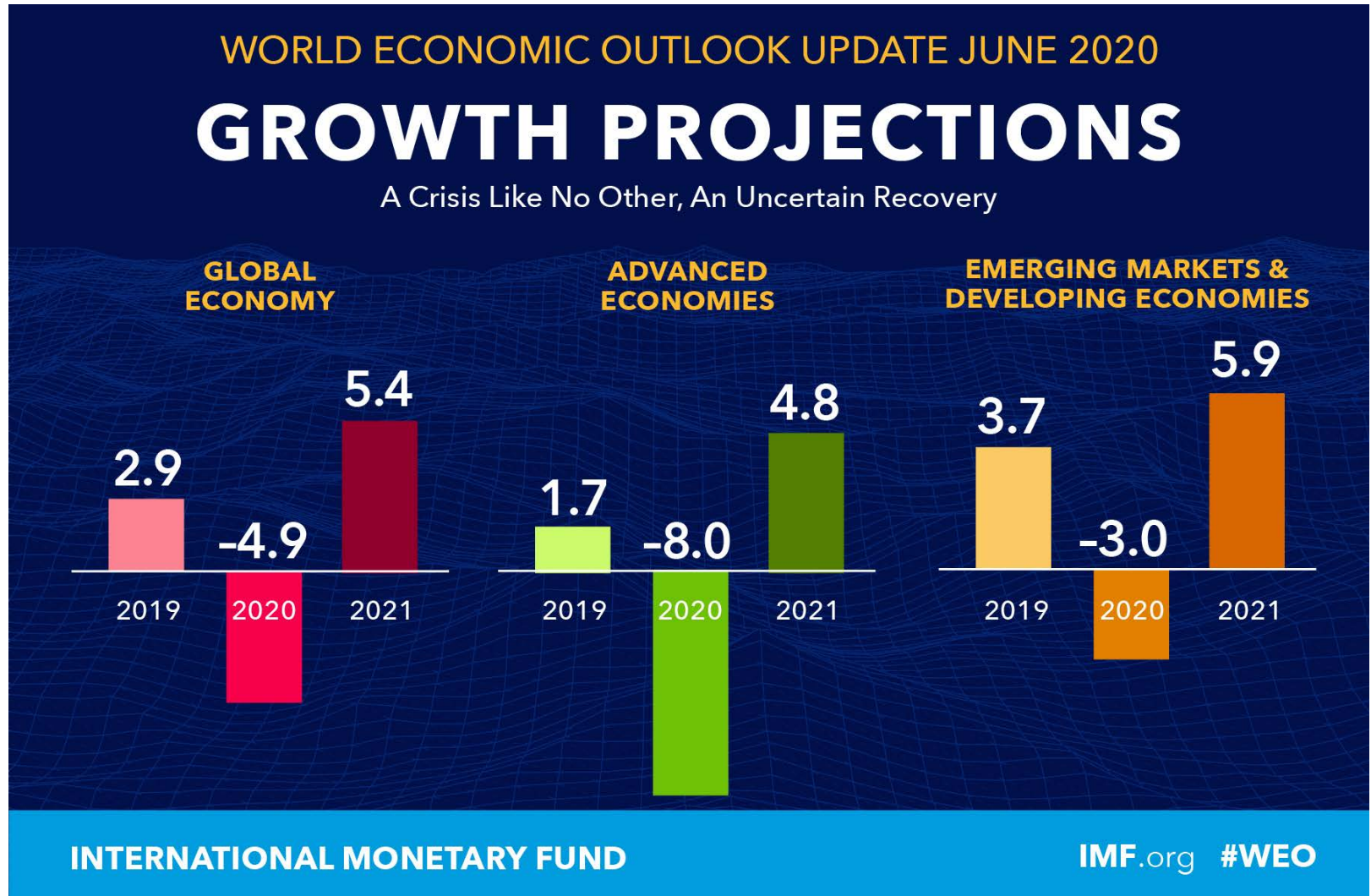
Interaction between banks and the real economy I



Interaction between banks and the real economy II



Current global economic outlook in COVID-19 times



Question 2 for final discussion

What **challenges** does the current economic situation bring to banks?

Use the Chat function of Zoom to write your answer.

Obligatory Reading I

McKinsey&Company, July 28, 2020: [Banking system resilience in the time of COVID-19.](#)

- 12 pages, available in Moodle, too.
- Discusses to what extent are banks in Europe, in the UK and the US resilient to the adverse economic development caused by the Covid-19 pandemic
- Three likely scenarios are tested, assessing the impact on banks' capital
- Actions by regulators, banks and governments are reviewed in relation to the impact