

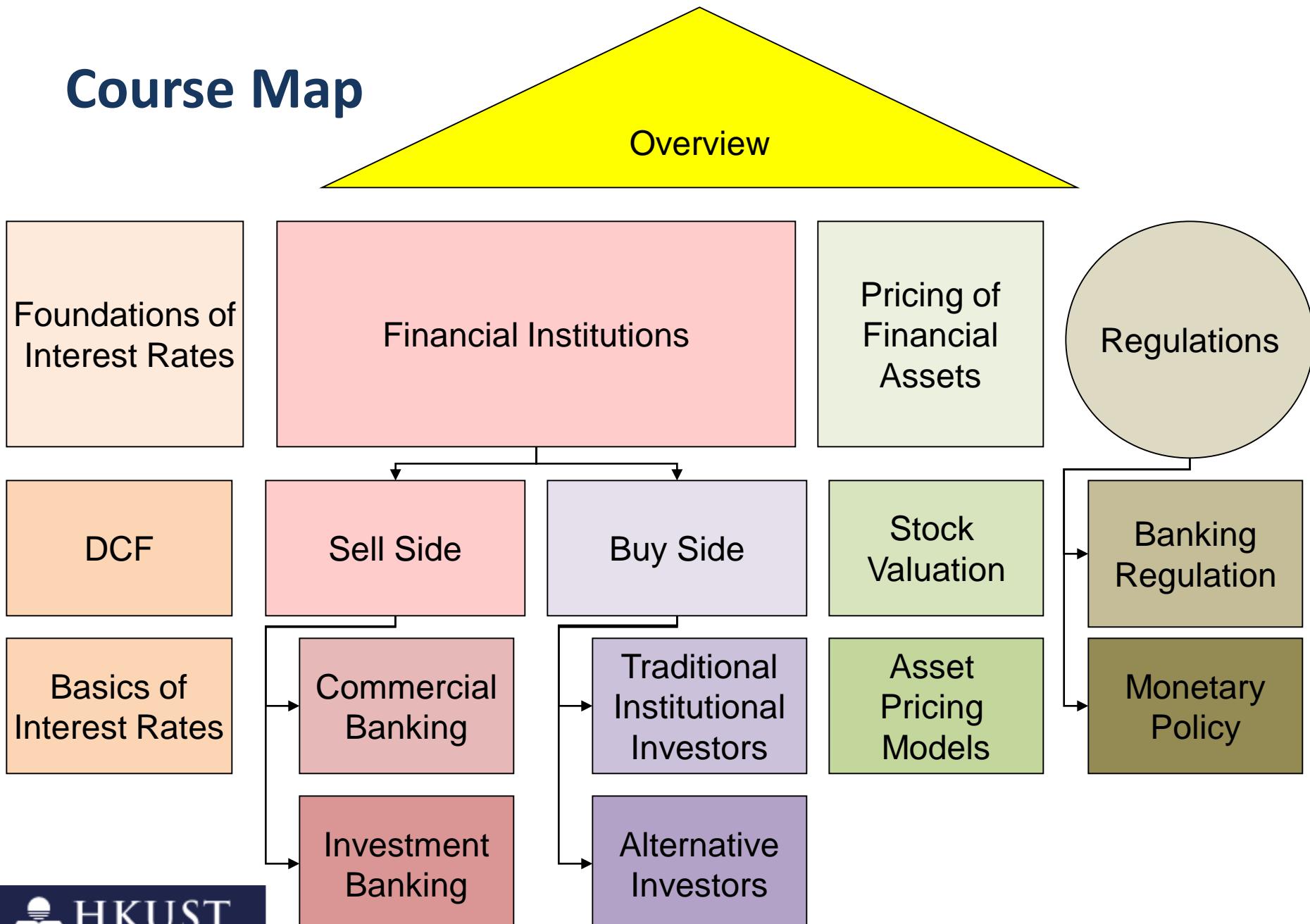
FINA 1303

THE SELL-SIDE: COMMERCIAL BANKS

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Associate Professor of Business Education - Department of Finance

Course Map



Course map

Overview

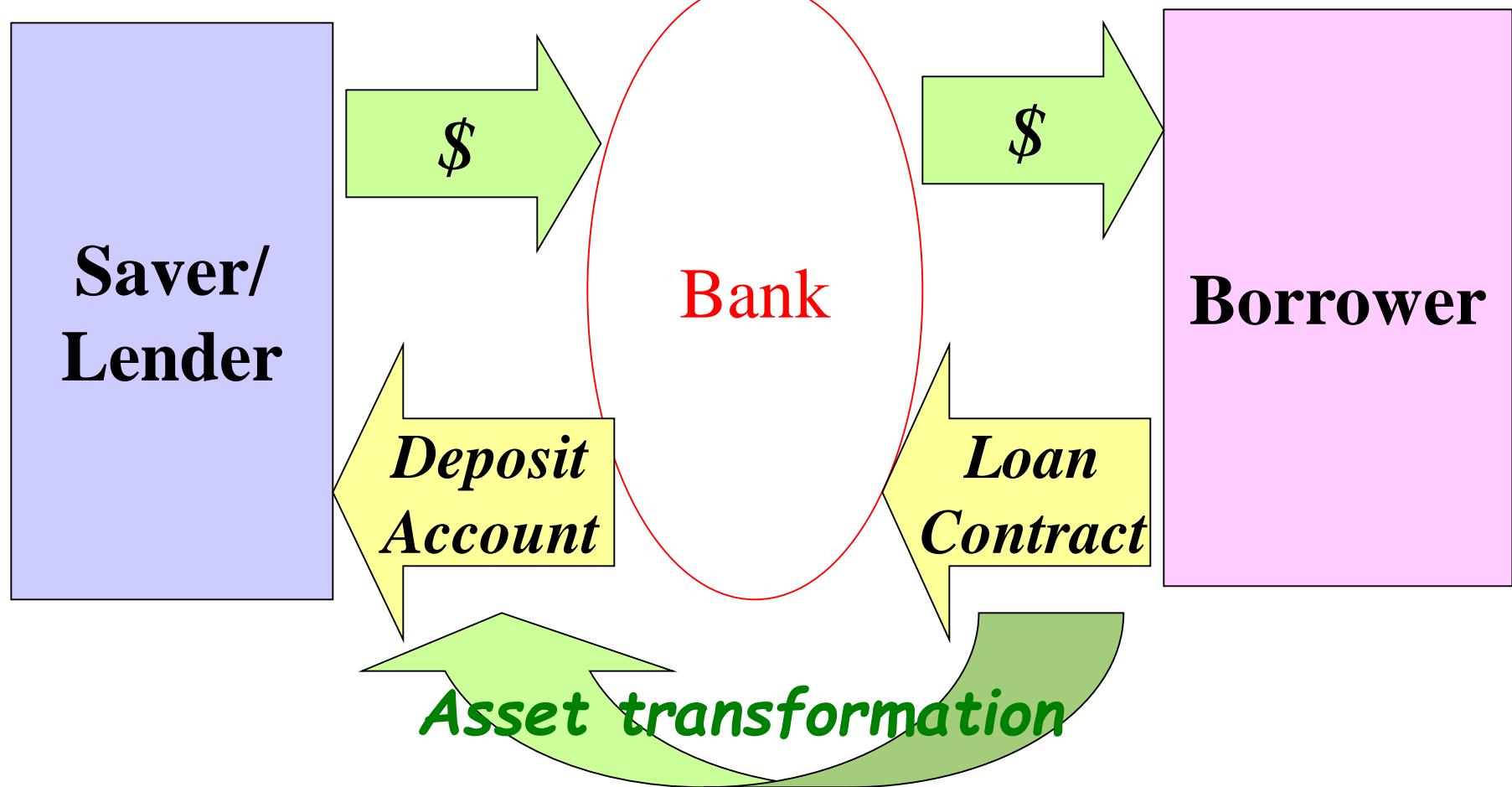
Financial Institutions

Sell Side

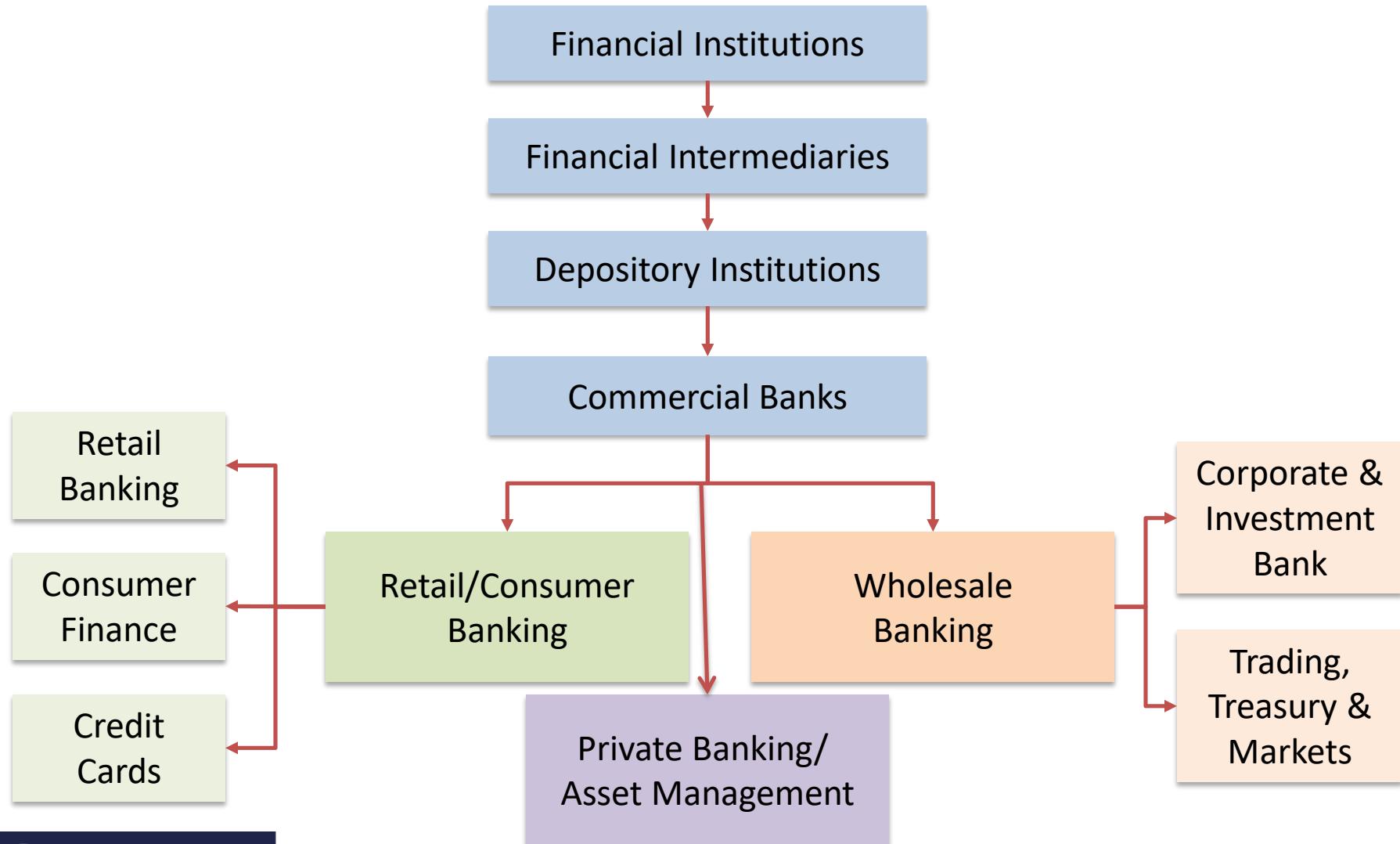
Commercial
Banking

- 1. What are Commercial Banks?**
2. Bank Management
3. Types of Risk in Banking
4. Measuring Bank Performance
5. Current Issues

Banks as financial intermediaries



Commercial Banks



What are Commercial Banks?

Class discussion

- What products and services do commercial banks offer to retail clients?
- Who are the banks competitors?
- What is the business model for retail banking v. wholesale banking?

Commercial Banking

Retail banking

- Clients = Retail (individuals)
- Provide residential and consumer loans
- Accepting small deposits

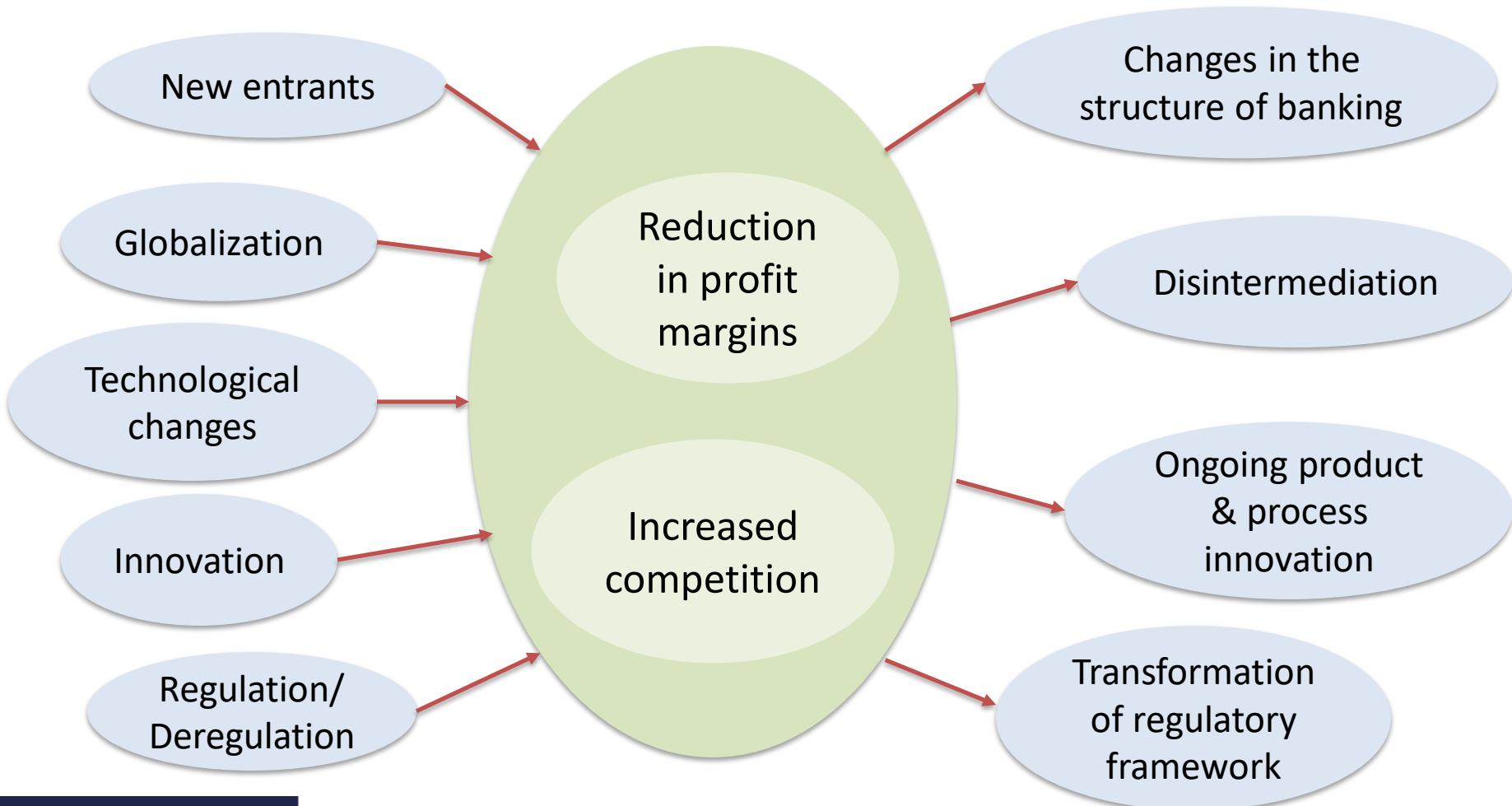
Wholesale banking

- Clients = Corporates and Institutionals (large size → wholesale)
- Provide commercial and industrial loans
- Funded with deposits and purchased funds

Mortgages in HK: what types of mortgages do banks offer? What are typical terms? Could we have a subprime crisis in HK?

- Group 1
- Video
- <https://www.youtube.com/watch?v=cP7IjoeMcZw>
- Article
- <https://www.moneyhero.com.hk/blog/en/mortgage-lesson-4-types-of-mortgages-in-hk>

Forces shaping International Banking



Commercial Banks

Traditional products and services:

- Deposit accounts
- Credit services
- Payment and collection services
- Trade services
- FX services
- Credit enhancement or payment guaranty
- Agent or fiduciary services

New products and services

- Investment banking services
- Consulting services
- Risk management services
- Broker/dealer services
- Insurance services
- Asset management



What are Commercial Banks?

Banks in the old days



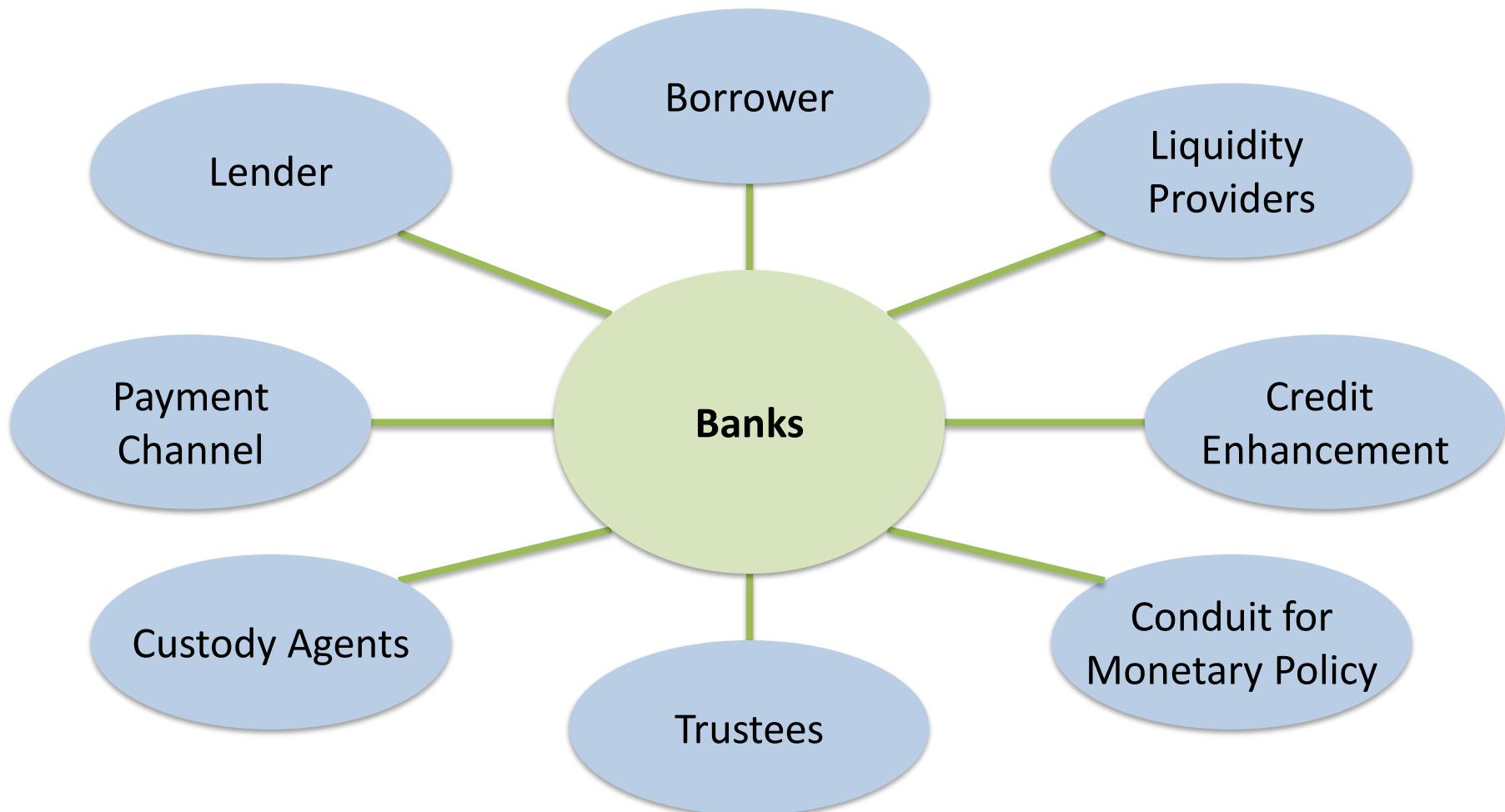
2

Foundations of Financial Institutions

Banks today



Multiple Role of Banks



The very special role of banks: money creation



Paul Tucker
Deputy Governor of the Bank of England
Member of the Monetary Policy Committee

“...banks [make loans] by simply increasing the borrowing customer’s current account...That is, banks [make loans] by creating money.”

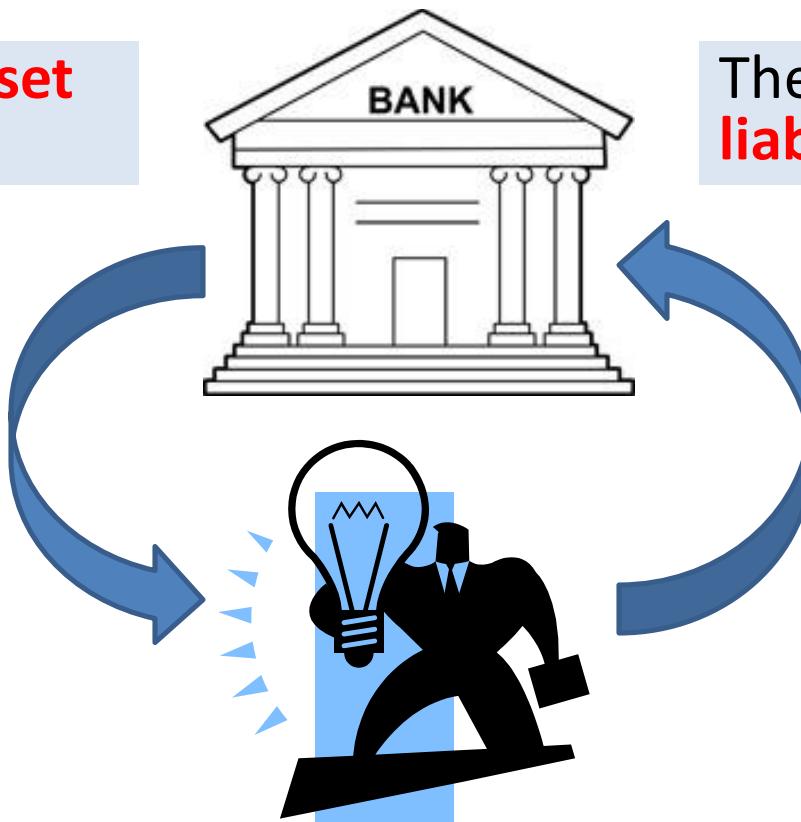
Source: Speech at Monetary Policy and the Markets Conference, 13th December 2007.

Money creation: how it works

The loan is an **asset** for the bank

The bank makes a **loan** to the business

The deposit is a **liability** for the bank



The bank deposits the money from the loan into a **deposit** account for the business

Bank deposits are part of the **money supply**

Banks in Hong Kong: digital banking developments and implications

- Group 2
- Video
- <https://www.youtube.com/watch?v=FuRuiQtA0TQ>
- Article
- <https://www.mckinsey.com/cn/our-insights/our-insights/are-hong-kongs-banks-ready-for-a-digital-transformation>

2019: HKMA granted 8 virtual banking licenses

Objectives:

1 Financial inclusion

2 Innovation

3 Customer experience

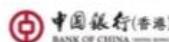
c. 30 Applicants



众安保险
Zhongan Insurance



中国平安
PING AN



中国银行(香港)
BANK OF CHINA (HONG KONG)



中信银行
CHINA CITIC BANK



CASH
FINANCIAL SERVICES GROUP



BEA 東亞銀行

SEQUOIA



AIRWALLEX



WeLab

英皇集團
EMPEROR GROUP



ANT FINANCIAL

Tencent

MoneySQ.com



京东数科



小米
xiaomi.com



CONVOY



HKT



jardines



百

8 Awardees

Institution	Shareholding %
Mox	65.1% SCBHK 25% PCCW HKT 9.9% Trip.com
Livi	44% BoCHK 36% JD Digits 20% Jardines
ZA	51% ZhongAn Online 49% Sinolink
WeLab	100% WeLab Holdings
Ant Bank	100% Ant Financial
Fusion Bank	Tencent, ICBC Asia, HKEx, Hillhouse Capital
Airstar Bank	90% Xiaomi 10% AMTD
PAO Bank	100% Ping An

Source: Mox FCCIH presentation 2 Feb 21

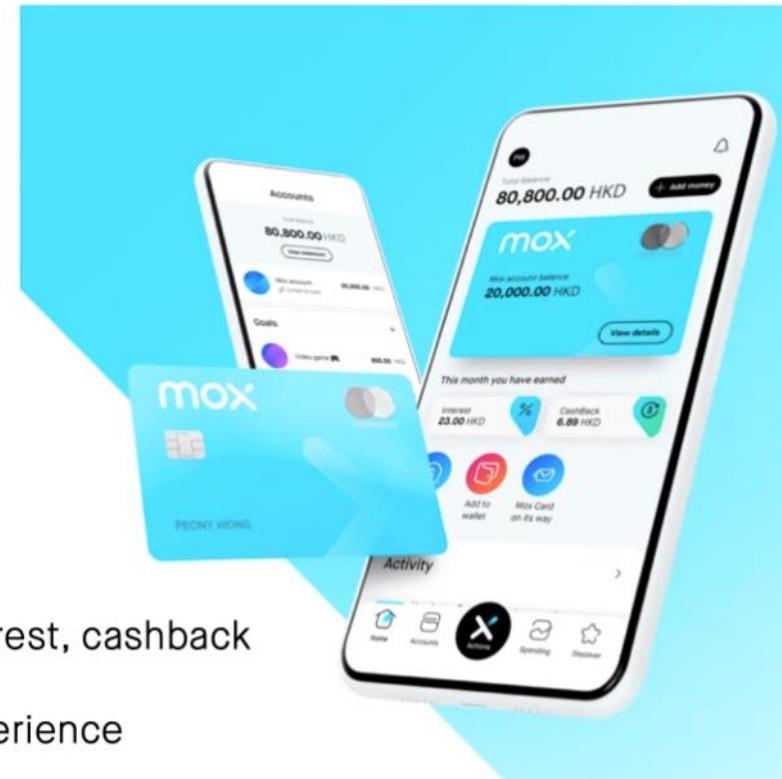
Virtual banks vs. conventional banks

Similarities

- Regulation and capital requirements
- Banking products and services
- Spending offers and discounts

Differences

- No physical branches allowed
- Partnership ecosystem
- Lower costs
- Enhanced security (e.g. device binding, MFA)
- Instant – account opening, card provision, interest, cashback
- 24/7 service
- Entirely digital customer journeys and user experience



Source: Mox FCCIHK presentation 2 Feb 21

New operating model for the Brave New Bank

-
- 1** NEW TECHNOLOGY STACK
 - 2** REDEFINE ONBOARDING
 - 3** RE-VISIT AML, FCC & FRAUD
 - 4** REAL CLOUD BASE
 - 5** NEW RISK FRAMEWORK
 - 6** MARKETING STACK
 - 7** SERVICE LED
 - 8** HIRING CULTURE
 - 9** ECOSYSTEMS
 - 10** HEART SHARE

Source: Mox FCCIHK presentation 2 Feb 21

Trends in banking industry

Six trends have upended the banking industry and yesterday's strategies for success.

Trends



Accelerating deglobalization and geopolitical concerns

Deglobalization was already occurring before COVID-19 but is now accelerating, with gaps in global supply and distribution systems.

Radical changes in the macro environment

COVID-19 is a real-economy crisis, with manifold effects. For banks, these include a prolongation of low interest rates, which will accelerate margin compression, and the extent and duration of central-bank support.

Upheaval in the ways we work

The crisis has upended traditional ways of working, some of which were already beginning to evolve: working from home, dependence on digital tools, distributed teams, changes in workflow and behavior.

Growing challenges from tech players and embedded finance

Digital natives' ability to embed financial services in their platforms has accelerated the drift of customers from their banks. When banks no longer know their customer better than others, they can lose volumes and their feel for customer needs.

Transformed customer expectations

Customers expect a better, more predictive, and seamless experience than ever before—and better advice—across every channel.

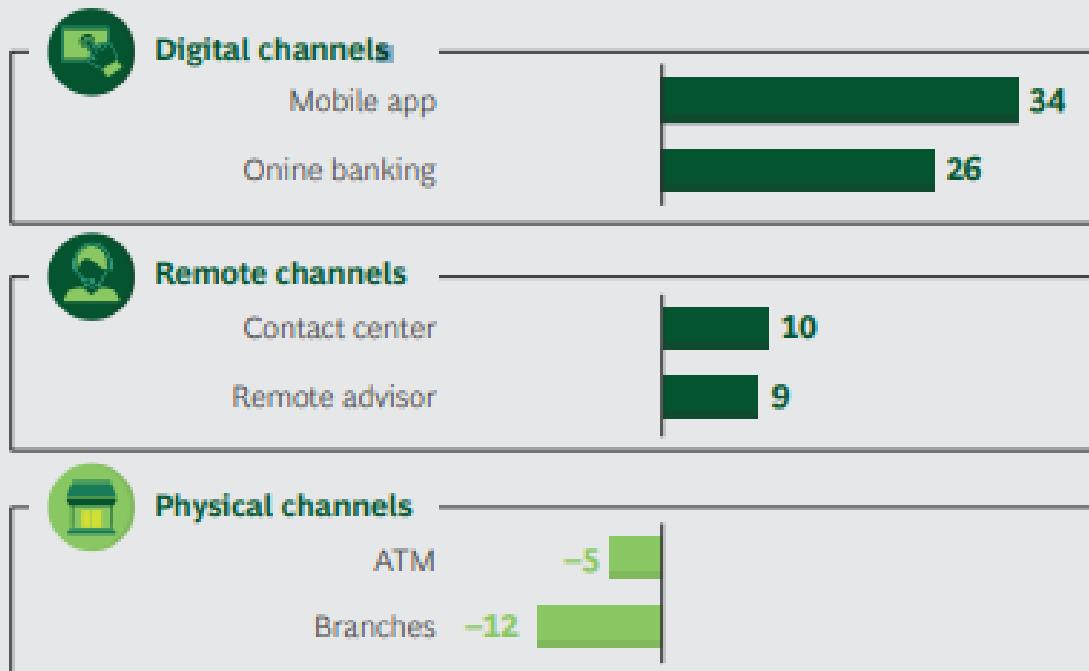
Increasing urgency of social and environmental sustainability

Interdependence of nations is now more apparent. Climate and sustainability, responsible capitalism, and economic inequality are playing a larger role in conversations among nations and companies.

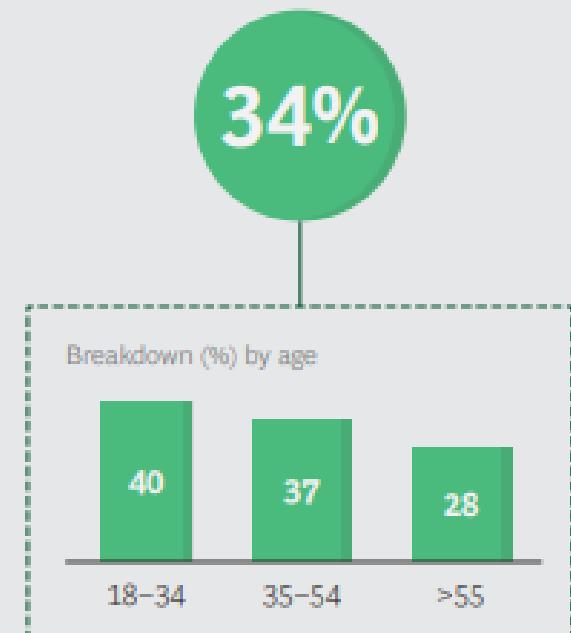
Source: McKinsey Global Banking report 2020

Customers are increasingly turning to digital banking

Net change (%) in channel usage during COVID



Customers who feel comfortable depositing money in a digital bank



Sources: REBEX Pulse 2020; study conducted from May 18, 2020 to June 19, 2020; BCG.

Note: N = 17,600 across 30 countries.

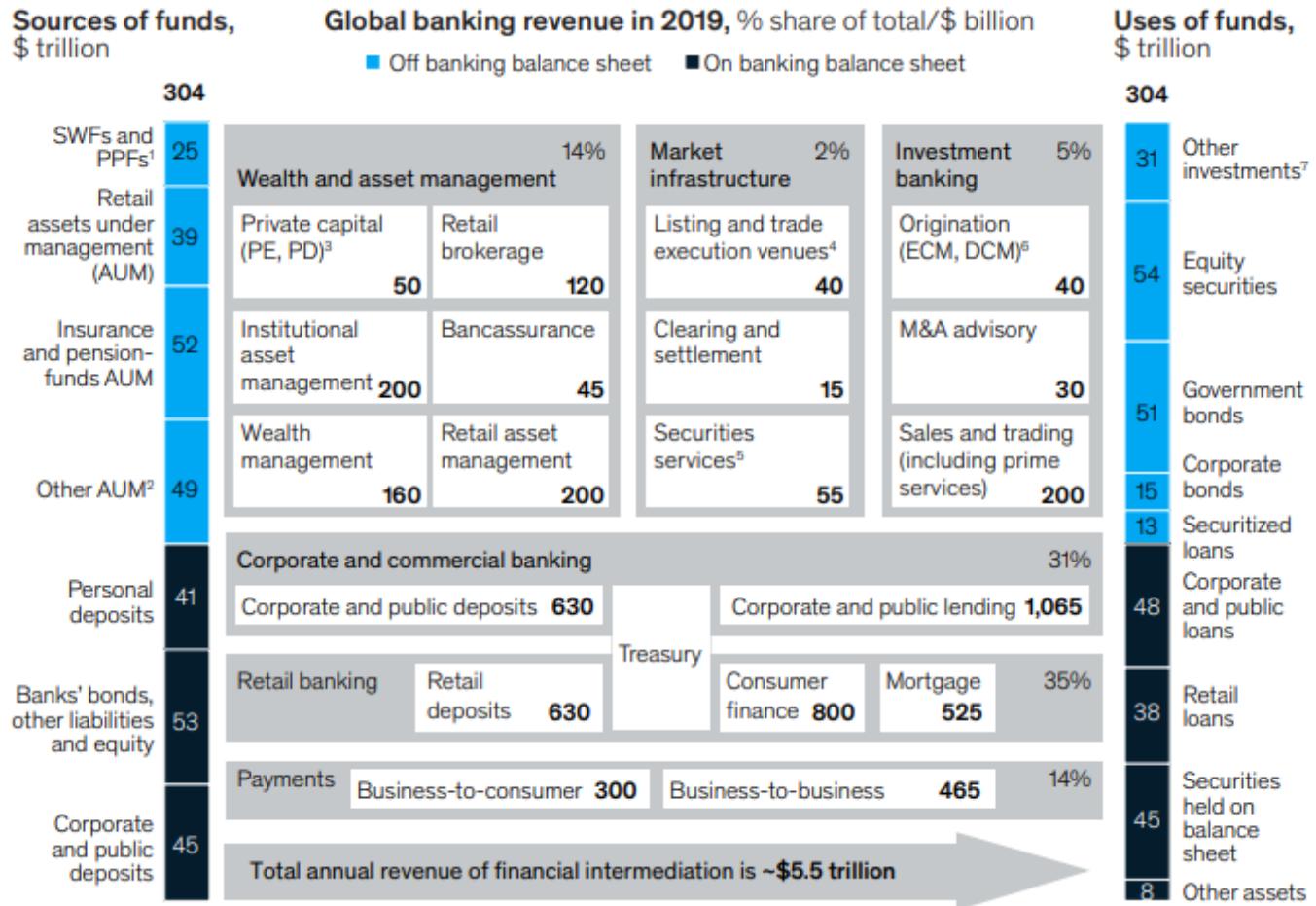
Source: BCG Dec 2020

Banks in China: will digital banking replace traditional banking?

- Group 3
- Video
- <https://www.youtube.com/watch?v=Y6YLQXM5izM>
- Article
- <https://www.chinabusinessreview.com/internet-finance-in-china-will-it-disrupt-traditional-banking/>

Global Financial Intermediation

Global financial intermediation is a complex system that generated about \$5.5 trillion in annual revenue in 2019.



¹Sovereign-wealth funds and public-pension funds. ²Endowments and foundations, corporate investments. ³Private equity, private debt. ⁴Includes exchanges, inter-dealer brokers, and alternative venues but excludes dark pools. ⁵Custody, fund administration, corporate trust, security lending, net interest income, collateral management, and ancillary services provided by custodians. ⁶Equity capital markets, debt capital markets. ⁷Real estate, commodities, private capital investments, derivatives.

Source: SWF Institute; McKinsey Capital Markets and Investment Banking Pools; McKinsey Global Institute McKinsey Panorama Global Banking Pools; McKinsey Performance Lens Global Growth Cube

Source: McKinsey Global Banking report 2020

SUMMARY (KLOs)

- What are commercial banks
- What they do (basic business models)
- Competitors
- Money creation

Course map

Overview

Financial Institutions

Sell Side

Commercial Banking

1. What are Commercial Banks?
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Bank Management

Class discussion

- Imagine that you are the CEO of a large bank
 - (pick one and name it)
- What keeps you awake at night and why?



Bank Management

4 primary concerns of bank managers: Aspects of bank management:

- | | |
|--|--|
| <ul style="list-style-type: none">• Make sure bank has enough cash to pay deposit outflows | <ul style="list-style-type: none">• Liquidity management |
| <ul style="list-style-type: none">• Pursue an acceptably low level of risk by acquiring assets with low default rate and diversifying asset holdings | <ul style="list-style-type: none">• Asset management |
| <ul style="list-style-type: none">• Acquire funds at low cost | <ul style="list-style-type: none">• Liability management |
| <ul style="list-style-type: none">• Decide the amount of capital the bank should maintain and acquire this capital | <ul style="list-style-type: none">• Capital management |

ALM

Liquidity Management

Scenario 1

Bank A (Reserve Requirement = 10% of Deposits)

Assets		Liabilities	
Reserves	\$20 mil	Deposits	\$100 mil
Loans	\$80 mil	Capital	\$10 mil
Securities	\$10 mil		

Reserve req.
= \$10 mil

Excess reserves
= \$10 mil

Deposit outflow of \$10 mil

Bank A (Reserve Requirement = 10% of Deposits)

Assets		Liabilities	
Reserves	\$10 mil	Deposits	\$90 mil
Loans	\$80 mil	Capital	\$10 mil
Securities	\$10 mil		

Reserve req.
= \$9 mil

Excess reserves
= \$1 mil

Liquidity Management

Scenario 2

Bank B (Reserve Requirement = 10% of Deposits)

Assets		Liabilities	
Reserves	\$10 mil	Deposits	\$100 mil
Loans	\$90 mil	Capital	\$10 mil
Securities	\$10 mil		

Reserve req.
= \$10 mil

Excess reserves
= none

Deposit outflow of \$10 mil

Bank B (Reserve Requirement = 10% of Deposits)

Assets		Liabilities	
Reserves	\$0 mil	Deposits	\$90 mil
Loans	\$90 mil	Capital	\$10 mil
Securities	\$10 mil		

Reserve req.
= \$9 mil

Shortfall of res.
= \$9 mil

Liquidity Management

4 Possible actions for Bank B

1. Borrow from other banks or corporations

Assets		Liabilities	
Reserves	\$9 mil	Deposits	\$90 mil
Loans	\$90 mil	Capital	\$10 mil
Securities	\$10 mil	Borrowings	\$9 mil

2. Sell securities

Assets		Liabilities	
Reserves	\$9 mil	Deposits	\$90 mil
Loans	\$90 mil	Capital	\$10 mil
Securities	\$1 mil		

Source: Mishkin/Eakins

Liquidity Management

4 Possible actions for Bank B (Cont)

3. Borrow from the FED

Assets		Liabilities	
Reserves	\$9 mil	Deposits	\$90 mil
Loans	\$90 mil	Capital	\$10 mil
Securities	\$10 mil	Discount loans	\$9 mil

4. Call in or sell off loans

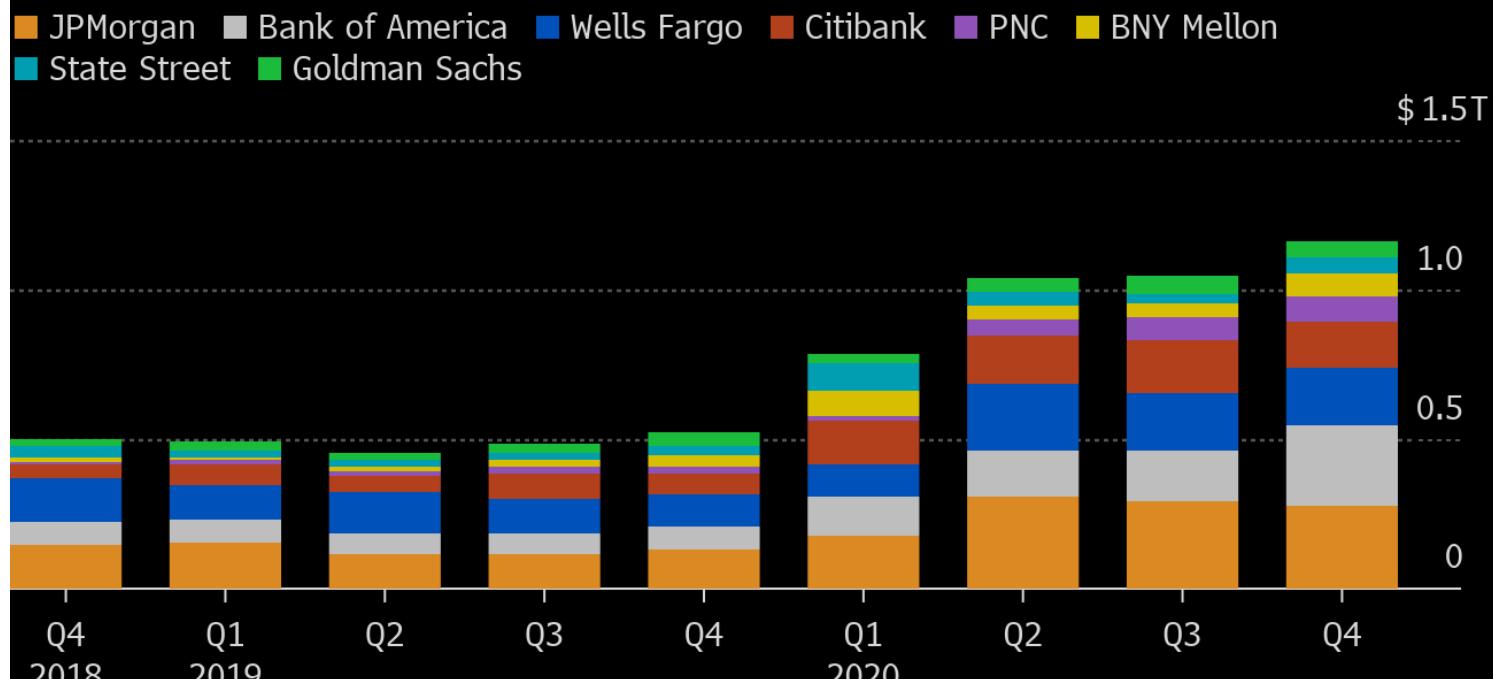
Assets		Liabilities	
Reserves	\$9 mil	Deposits	\$90 mil
Loans	\$81 mil	Capital	\$10 mil
Securities	\$10 mil		

Source: Mishkin/Eakins

Reserves

On Reserve

The largest U.S. banks' balances at the Fed have doubled since 2018

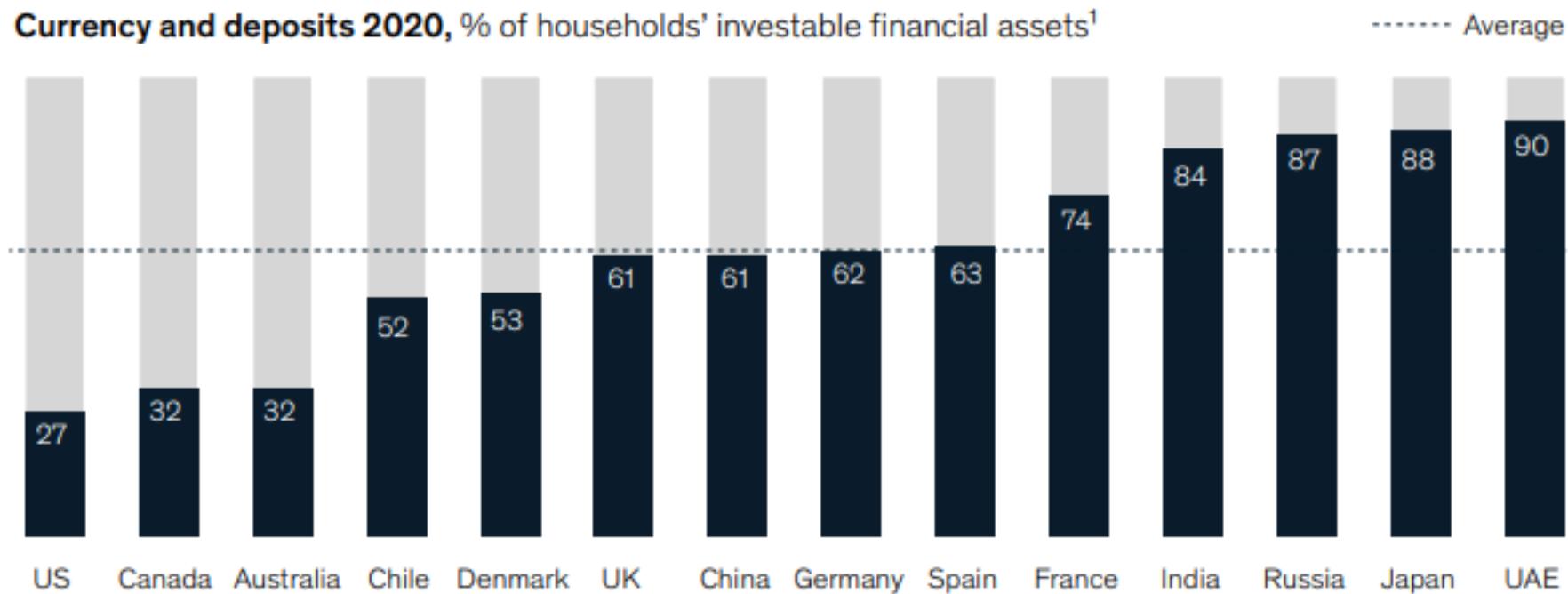


Source:
Bloomberg 15
March 21

Sources: Wrightson ICAP, Federal Reserve

Bloomberg

Currency & Deposits 2020 by Country



ALM: Asset and Liability Management

■ Asset Management

- Get borrowers with low default risk, paying high interest rates
- Buy securities with high return, low risk
- Diversify portfolio
- Manage liquidity by holding liquid assets and managing reserves

■ Liability Management

- No longer primarily depend on deposits
- When see loan opportunities, borrow or issue CDs to acquire funds

Off-Balance-Sheet Activities

- Fee income from:
 - Foreign exchange trades for customers
 - Servicing mortgage-backed securities
 - **Guarantees of debt**
 - Backup lines of credit
- Trading in and of:
 - Financial futures and options
 - Foreign exchange
 - Interest rate swaps
- Loan sales

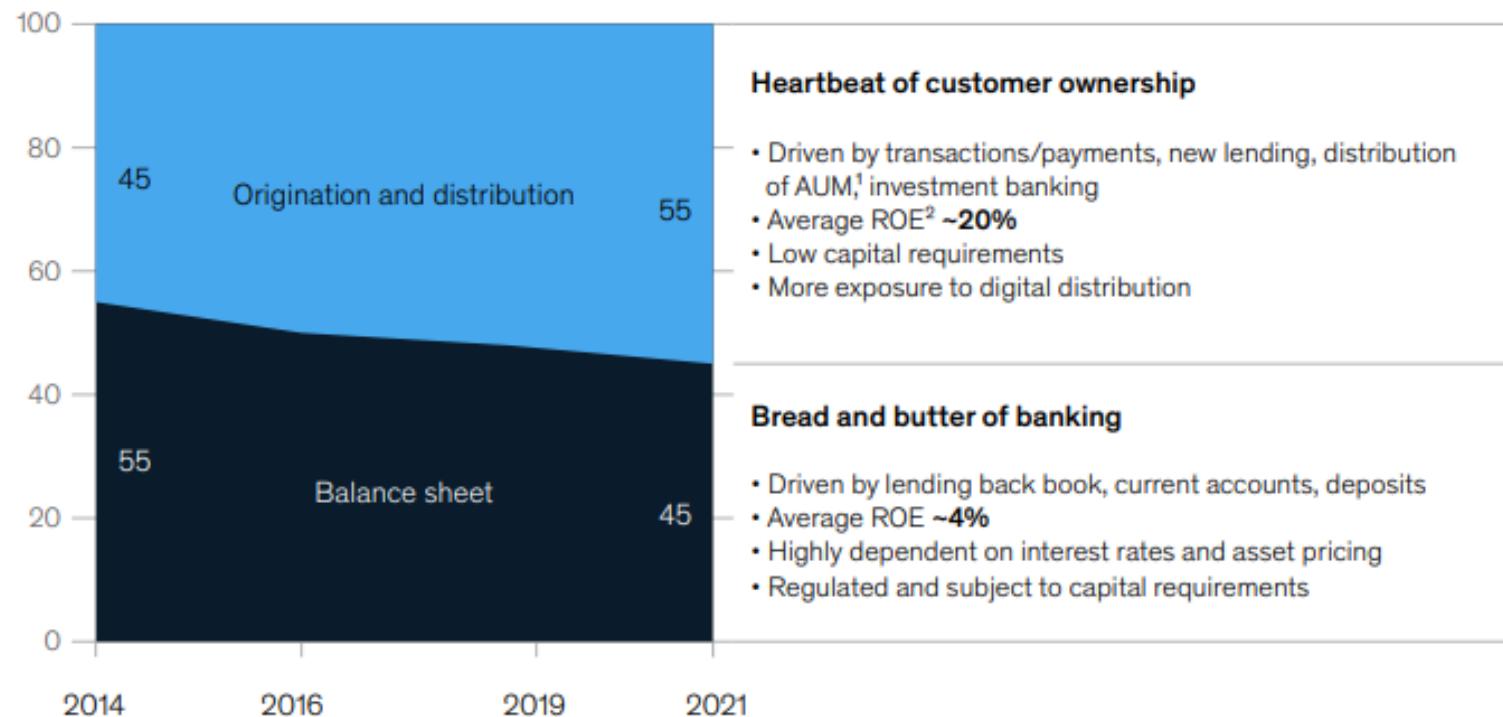
Contingent liabilities

Off-balance sheet activities involve **trading** financial instruments and generating income from **fees** and loan sales, activities that affect bank profits but **do not appear on bank balance sheets**
(source: Mishkin)

All these activities involve RISK

Global Banking Revenues 2014-2021

Global banking revenues by activity, 2014–21, %



¹Assets under management.

²Return on equity.

Source: S&P Global; Panorama by McKinsey

Capital Adequacy Management

- Tradeoff between safety (high capital) and return (ROE)
- Banks also hold capital to meet capital requirements
- Strategies for Managing Capital
 - Sell or retire stock
 - Change dividends to change retained earnings
 - Change asset growth (increase or shrink balance sheet by acquiring or selling off assets)

Source: Mishkin/Eakins

Test Your Understanding

- What is the theoretical background for capital adequacy requirements
 - More capital increases cushion for losses
 - More capital provides incentive for shareholders to monitor management
 - All of the above
 - None of the above



SUMMARY (KLOs)

- Understand the key aspects of bank management
- Liquidity risk and how to manage it
- Role of off-balance sheet activities

Course map

Overview

Financial Institutions

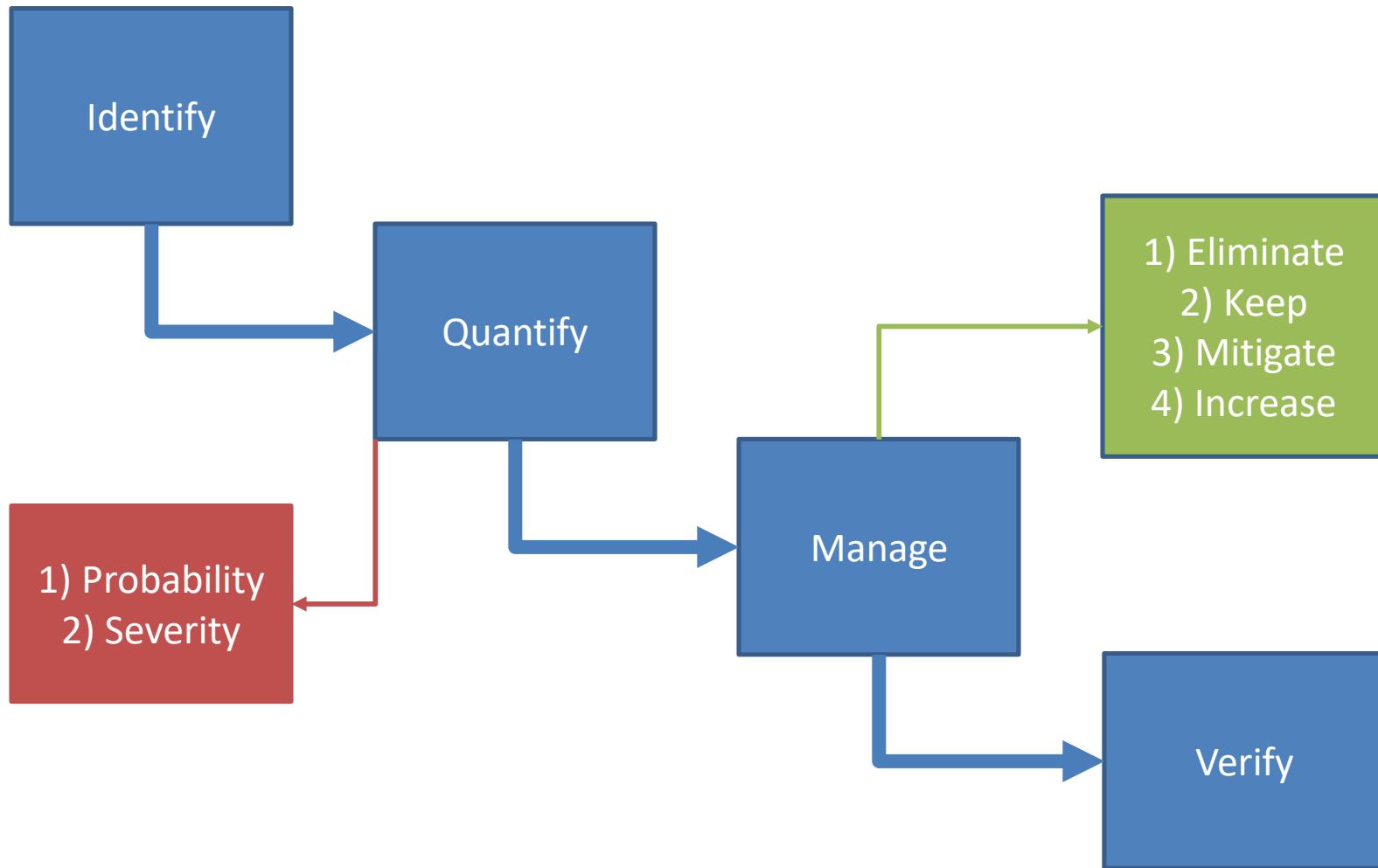
Sell Side

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Types of Risk in Banking

Risk Management Basics



Types of Risk in Banking

- Credit
- Liquidity
- Market
- Operational
- Legal & Reputational



Credit risk

- The **ability** and **willingness** of a borrower to **pay when due**
- Components: **default** risk and **recovery** risk
 - Within a given level of default risk, recovery risk can vary widely
 - Recovery highly dependent on position in capital structure e.g. higher recovery for secured debt and on type of issue e.g. recovery higher for loans than bonds
- Remedy: liquidate or work-out?

Credit Risk

Types

- Borrower
- Counterparty
- Country
- Industry
- Consumer
- Settlement risk

Mitigation

- Credit policy
- Credit limits
- Concentration limits
- Credit scoring
- Netting
- Credit bureau
- Ratings

Credit risk in Asia: what is the level of NPLs (non performing loans) for banks in Asia? How has it evolved over time? Implications?

- Group 4
- Video(first 2 min)
- <https://www.bloomberg.com/news/videos/2021-09-23/china-banks-try-to-reassure-investors-over-evergrande-exposure>
- Article
- <https://www.cnbc.com/2020/07/17/chinas-banks-brace-for-more-bad-loans-as-coronavirus-hit-economy-slows.html?&qsearchterm=non%20performing%20loans%20for%20banks%20in%20Asia>

Market risk

Types

- Interest Rate risk
- FX risk
- Equity risk
- Commodity risk

Mitigation

- ALM policy
- Hedging
- Risk management policy and limits

Liquidity Risk

Types

- Funding liquidity risk
- Market liquidity risk

Mitigation

- ALM policy
- Conservative funding policy
- Conservative ratios

“Liquidity is an illusion. It’s always here when you don’t need it, and rarely there when you do”

Michael Milken

Operational Risk

Types

- Inadequate information systems
- Operational breakdown
- Breaches in internal control
- IT security breakdown
- Unforeseen catastrophes
- Fraud

Mitigation

- Risk management policy
- Back up and recovery plans
- Segregation of duties
- Outsourcing
- Audits

“West LB’s equity trading loss soars; trading investigation launched”

FT 31 August 07

“Jail for ex-NAB rogue forex dealers”

FT 5 July 06

Operational risks in banks in Asia: find recent incidents, what happened, consequences

- Group 6
- Video link
- <https://www.youtube.com/watch?v=PkqXXXkxIFY>
- Article
- <https://www.thejakartapost.com/news/2020/11/07/maybank-branch-manager-detained-for-allegedly-stealing-rp-22-billion-from-accounts.html>

Legal & Reputational Risks

Types

- Regulatory risk
- Money Laundering
- Conflicts of Interest
- Non-enforceability of contracts
- Non-compliance with corporate governance laws
- SEE issues

Mitigation

- Implement SOX and related corporate governance policies
- KYC Policies
- Legal & Compliance Dpts reporting to CEO
- Audits
- SEE audits (environmental and corporate governance)

Reputational Risk for Financial Institutions: do we care? Examples in Asia

- Group 7
- Video
- <https://www.youtube.com/watch?v=ehLVQz8LsHM>
- Article
- <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/hsbc-s-support-for-china-bill-risks-tarnishing-reputation-among-some-clients-59001826>

Test Your Understanding

- What is recovery risk?
 - The risk of the borrower not paying
 - The risk of how much the lender can recover in a case of default
- How do banks help prevent money laundering (which type of policy?)
 - ALM policy
 - KYC policy
 - Credit policy



SUMMARY (KLOs)

- Basics of Risk Management
- Credit risk dimensions and mitigation
- Understanding market risk
- Market risk mitigation strategies
- Understanding operational risk
- Operational risk mitigation strategies
- Understanding legal & reputational risk and mitigation strategies

Course map

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Measuring Bank Performance

Measuring Bank Performance

Income statement

- Operating Income: the income that comes from a bank's ongoing operations =
 - Interest income = interest on the bank's assets
 - Non-interest income = service charges and fees, plus revenues from off-balance sheet activities
- Operating Expenses : expenses incurred in conducting the bank's ongoing operations =
 - Interest expense = interest on bank's liabilities
 - Non-Interest expense = operational costs e.g. wages
 - Provision for loan losses
- Net Operating Income (NOI)

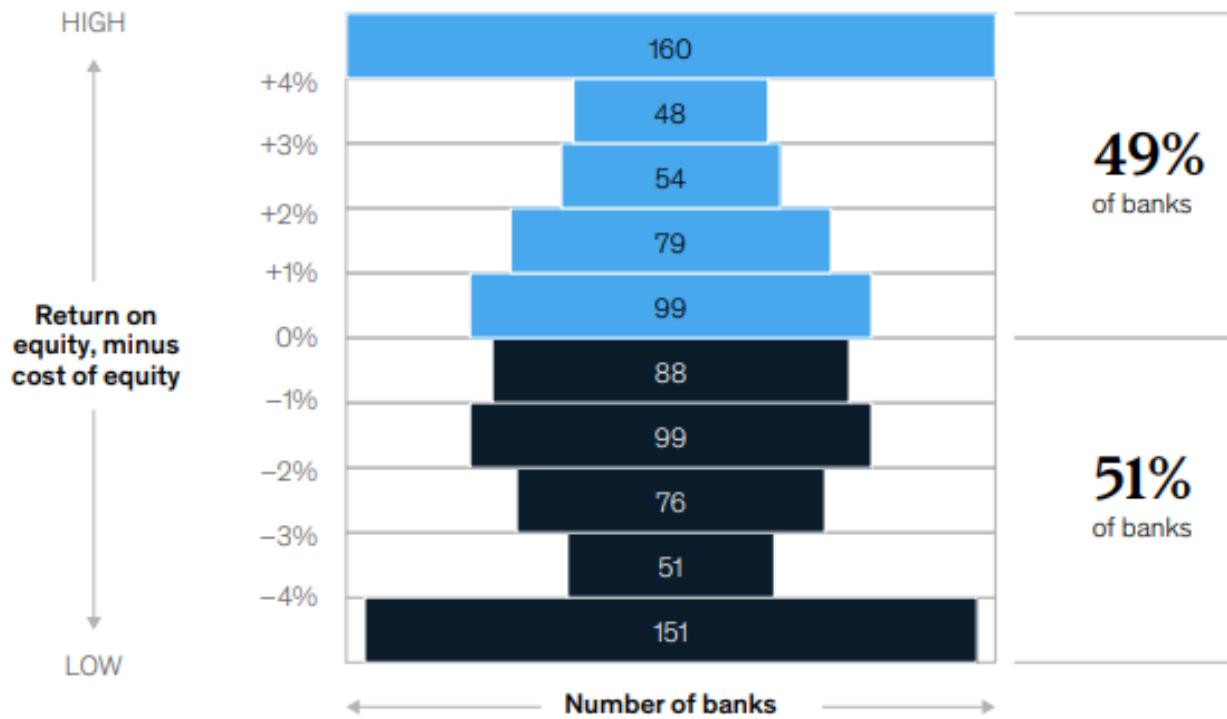
Source: Mishkin/Eakins

Key Indicators

Profitability	Size & Market Share	Other Financial	Other
Operating income	Total Assets	VAR	Awards
Net income	Market Cap	Share Price	Customer satisfaction
EPS	Funds under management	Ratings	Employee turnover
ROA	League Tables		Lawsuits
ROE	Volume estimations		
ROEC			
RAROC			
Customer profitability			

Half of banks generate returns on equity below the cost of equity

Average return on equity—cost of equity spread 2011–20, number of banks (n = 905¹)



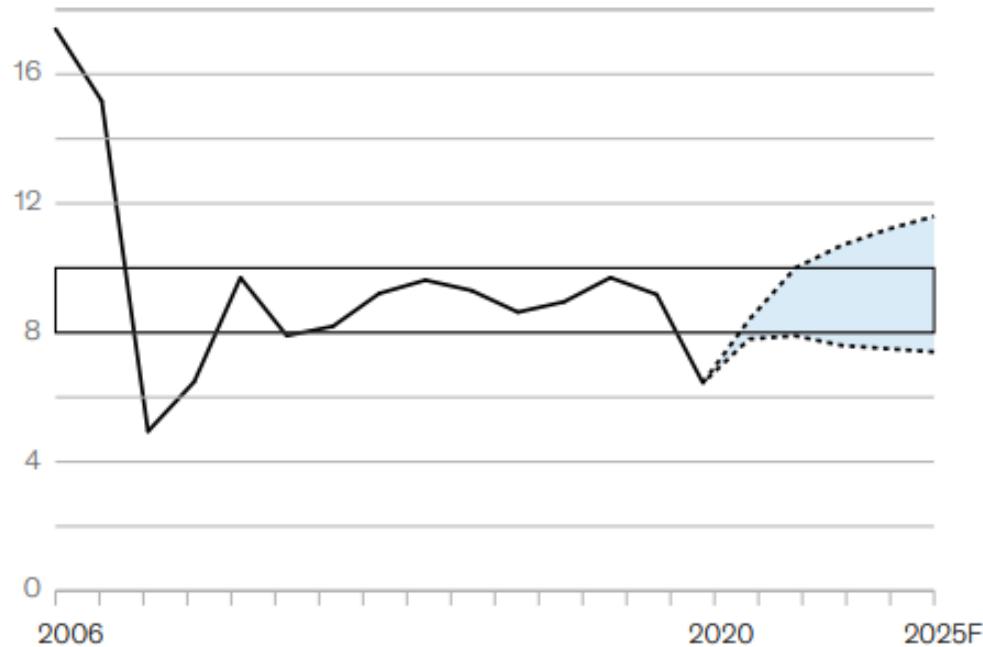
¹All deposit-taking institutions with available data for 2011–20 (n = 905).

Source: S&P Global; Panorama by McKinsey; McKinsey corporate performance analytics

RoE v. Cost of Equity for Banks 2006 - 2020

Banking return on equity (ROE), %

— Reported ROE Projected range of ROE □ Cost of equity



Source: S&P Global; Panorama by McKinsey

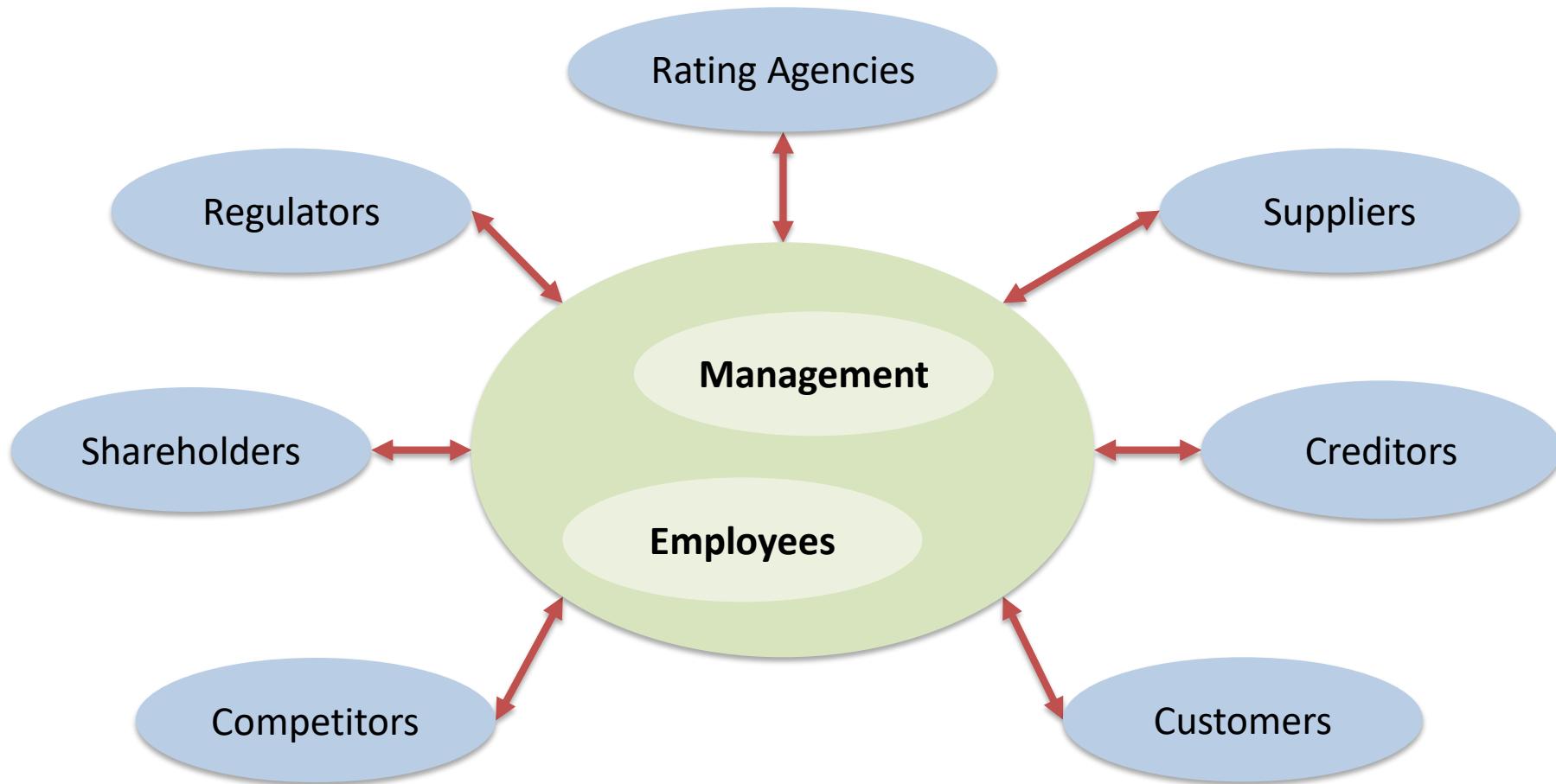
~1 to 1.5%

ROE growth per
100-basis-point
rise in interest rates

~0.2%

ROE boost for each
percentage point rise
in loan-to-deposit
ratios

Key Constituencies



Bank Organization

- Matrix management
- Lines of business/lines of products
- CRM and implications
- Shifting strategies
- Impact of bank mergers
- Impact of bank regulation/deregulation

Matrix Management

Markets

	US	EMEA	ASPAC	LATAM
FX				
MM				
DCM				
ECM				
Derivatives				
M&A				

LOB

Derivatives in Asia: what is the level of development of derivatives market (on exchange and OTC) across Asia? What about China? What are the issues? Implications?

- Group 5
- Video
- <https://www.youtube.com/watch?v=-hPxqQXCAO4>
- Article
- <https://www.cnbc.com/2017/05/21/heres-how-commodity-exchanges-are-eyeing-chinas-wild-futures-trade.html>

SUMMARY (KLOs)

- Understanding the various types of performance indicators
- Understanding matrix management

Course map

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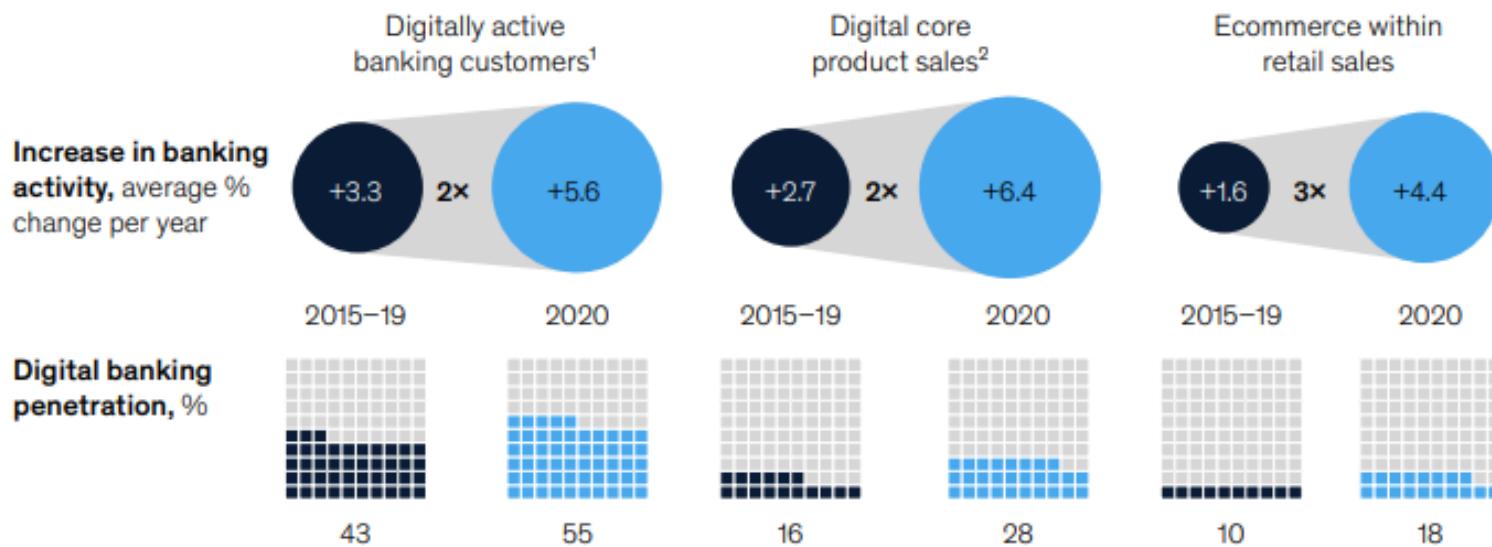
Current Issues

Current issues in banking

- Regulatory pressure
- New entrants
- Technology/FinTech
- Shadow banking

Digital Penetration

Comparison of digital banking metrics from 2015–19 and 2020



¹Day active digital (online plus mobile) users over total active customers.

²Digital product sales over total product sales. Sales data reflect product units.

Source: Finalta; Statista

Source: McKinsey - Global Banking Report 2021

Open Banking

The Open Banking Evolution: From Beginning To Beyond

SPIRE  WhiteSight
FOR OPEN BANKING

