Banking

Ana Lacerda

Fall Semester 2024

Course: Banking [2206]

Grader: Joana Leite

Disclaimer: The views expressed are my own and do not necessarily represent the views of Banco de Portugal.



Instructor Details

- Deputy Head of the Financial Stability Department (from 2023 September, 1st)
- Technical consultant at Bank of Portugal (Governor's cabinet), covering banking and EU policy, including monetary affairs.
- Chief of Staff for the Secretary of State for Finance and deputy director of European Affairs at the Ministry of Finance.
 - Coordinated the work on the Banking Union and the crisis management framework at both the Eurogroup and the Council
 of the European Union.
- Experience at the Portuguese Permanent Representation of Portugal at the EU
 - Negotiation of banking and financial markets regulations, including the SSM
- Before moving to Brussels, conducted research and political analysis
 - Several publications e.g. Journal of Mathematical Finance, Journal of Banking and Finance, and Economics Letters.
- PhD in Economics/specialization in Finance from Nova SBE.



Course outline

- What is a bank?
 - The intitutional and legal framework and their impact in the wider economy
 - The role of central banks
- Banks' risks and their management
- Banks regulation
- Banks' recovery and resolution
- Banks' strategy and M&A developments
- The future of Banking



Assessment

Exam (50%)

- 12th December, 4.00pm
- Minimum grade: 9.5
- Questions will be mostly based on the lectures but...
- At least one question focusing on the guest speakers' interventions;
- At least one question focusing on selected case study.

Mid-term test (25%)

- 10th October, 5.00pm
- Questions will be based on the lectures including possible presentations by the guest speakers.



Assessment (cont'd)

Case studies (25%)

- Every three groups of 4 students will be randomly assigned one case study
 - The number of students per group may be adjusted depending on the total number of students
 - The composition of groups should be diverse in terms of nationality, gender and background. Peer review will be used as part of the assessment, to incentivise efforts and fairness within the group.
- Each group should deliver a written report that should:
- Specifically address the issues raised by the instructor via a previously posted set of questions;
- Be structured starting with an "executive summary" that identifies main issues and summarizes fundamental recommendations.
- The same case study will be presented by (most probably) two groups and challenged by another.
- Each group has 10 min to present/challenge;
- All other students not presenting/challenging are invited to be actively involved in the discussions



Assessment (cont'd)

Case studies (25%)

- When submitting the report, students will be informed of their role when presenting in class and of the relevant questions to present, if applicable
- Presenting/challenging in class is mandatory and may improve the grade assigned to the case study; its contribution may not exceed 5% of the total grade
- The three groups should support their participation in class with a powerpoint presentation.
- Some deadlines:
 - Submission of the group composition: **13th September**
 - The report has to be submitted on the day before the presentation in class
 - The powerpoint presentation has to be submitted two hours before the presentation in class
- The grader is available for help (also) in the groups setting



Bibliography

- Financial Institutions Management: A Risk Management Approach , by Anthony Saunders, Marcia Cornett and Otgo Erhemjamts, 11th Ed., McGraw-Hill (2024)
- Materials from different sources to be identified during the semester, notably from the European Banking Authority, the European Systemic Risk Board, the Basel Committee, and also the press.
- Other references:
 - The Principles of Banking, by Moorad Choudhry, 2nd Ed., John Wiley & Sons (2022)
 - An Introduction to Banking: Principles, Strategy and Risk Management, by Moorad Choudhry, 2nd Ed., Wiley (2018)
 - The Principles of Banking Regulation, by Kern Alexander, Cambridge University (2019)
 - The Oxford Handbook of Banking, by Allen N. Berger, Philip Molyneux and John O. S. Wilson, 3rd Ed, Oxford Academy (2019)
 - Contemporary Financial Intermediation, by Greenbaum, Thakor and Boot, 4th Ed., Wiley (2020)

Disclaimer: The slides to be presented in class may benefit from the ones of Gonçalo Rocha and Carla Rebelo.



To be covered today

- The institutional framework at the European Union level
- Banks as financial intermediaries and their basics
- Banks at a glance from a regulatory and supervisory perspective
 - Relevant indicators
 - Euro area banks' position
- Money creation by banks





Institutional framework at the European Union level



Institutional framework at the European Union level

Crisis 2007/2008

- **Vulnerabilities Exposed:** The crisis revealed weaknesses in the financial system and the structure of the Euro.
- Risk of Instability: There were warnings about the potential spread of financial instability.
- Massive State Aid Increase: In 2009, state aid jumped to 3.5% of EU GDP, compared to 0.5-1% in the previous decade.
- **Financial Sector Support:** The majority of state aid (about 80%) went to the financial sector in 2008 and 2009.

A new framework has been settled down...

Towards a new regulatory agenda

- Reducing risk and improving risk management;
- Improving systemic shock absorbers;
- · Weakening pro-cyclical amplifiers;
- Strengthening transparency;
- Getting the incentives in financial markets right.

Towards stronger coordinated supervision

- For all financial actors in the European Union: macro-prudential and microprudential.
- With equivalent standards for all, thereby preserving fair competition throughout the internal market.

Towards effective crisis management procedures

- Building confidence among supervisors and real trust.
- With agreed methods and criteria.
- So, all Member States can feel that their investors, their depositors, and their citizens are properly protected in the European Union.

Report from the High Level Group on Financial Supervision in the EU, 2009 (the Larosiere Report)



Institutional framework at the European Union level

Four presidentes report 2012

Building on the single rulebook, an <u>integrated financial framework</u>
 should have <u>two central elements</u>: single European banking
 supervision and a common deposit insurance and resolution
 framework.

Euro Area Summit 2012

- "it is imperative to break the vicious circle between banks and sovereigns";
- Decision to establish the Single Supervisory Mechanism as a matter of urgency by the end of 2012;
- Financial assistance to be provided by the EFSF until the ESM becomes available.

Banking Union - Euro Area +

Risk reduction





Institutional framework at the European Union level: Banking Union

- The banking union is currently equipped with two pillars:
 - Single Supervisory Mechanism (SSM)
 - Single Resolution Mechanism (SRM)
- The two pillars rest on the foundation of the **single rulebook** a set of prudential standards for individual financial institutions that applies to all EU countries.
- The banking union ensures that these rules are implemented consistently across the **euro area** and in **other participating countries** creating a level playing field.
- This set of rules provides **legal and administrative standards to regulate, supervise and govern the financial sector in all EU countries more efficiently**. It includes rules on capital requirements, recovery and resolution processes and a system of harmonized national Deposit Guarantee Schemes.

Source: ECB | Banking Supervision



Elements of the Banking Union - Single Supervisory Mechanism

Single Supervisory Mechanism (SSM)

- Since November 2014, the SSM is the system of banking supervision for Europe.
- It comprises the ECB and the national supervisory authorities of the participating countries.
- The **ECB directly supervises** the 109 <u>significant banks</u> of the participating countries, holding around 80% of banking assets in these countries.
 - The decision on whether a bank is deemed significant is based on a number of criteria.
- Banks that are not considered significant are known as "less significant" institutions.
 - They continue to be supervised by their national supervisors, in close cooperation with the ECB.
 - At any time the ECB can decide to directly supervise any one of these banks to ensure that high supervisory standards are applied consistently



Elements of the Banking Union - Single Supervisory Mechanism

Aims of the mechanism

- Ensure the safety and soundness of the European banking system;
- Increase financial integration and stability in Europe;
- Ensure consistent supervision based on knowledge sharing between the authorities and the ECB.

The ECB has the authority to

- Conduct supervisory reviews, on-site inspections and investigations
- Grant or withdraw banking licences
- Assess banks' acquisition and disposal of qualifying holdings
- Ensure compliance with EU prudential rules
- Set higher capital requirements ("buffers") in order to counter any financial risks



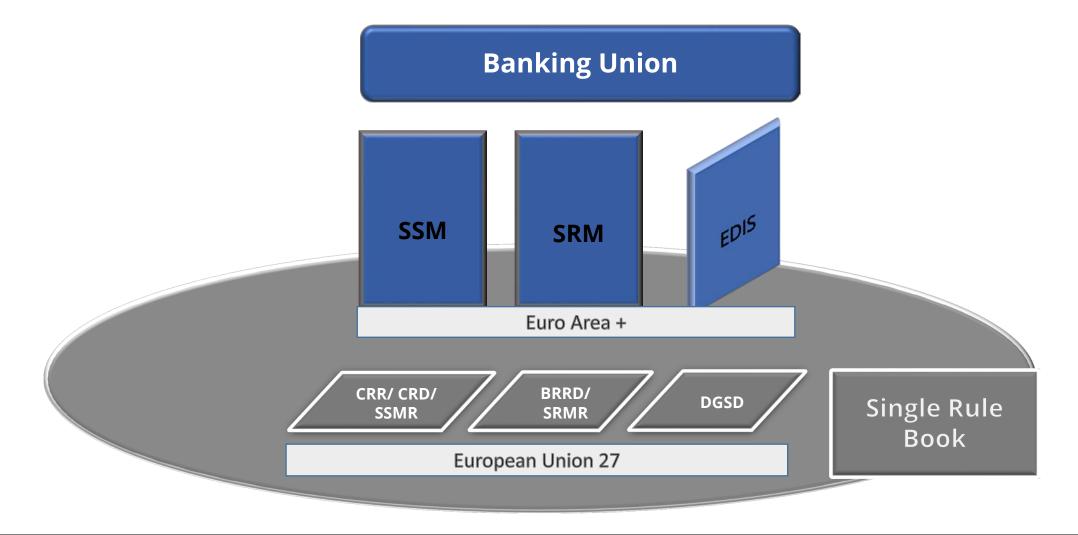
Elements of the Banking Union - Single Resolution Mechanism

Single Resolution Mechanism (SRM)

- Resolution is the orderly restructuring of a bank by a resolution authority when the bank is failing or likely to fail.
- The single resolution mechanism (SRM) applies to banks covered by the single supervisory mechanism.
- The main purpose of the SRM is to ensure that ensures that a bank failure does not harm the broader economy or cause financial instability
- A Single Resolution Board ensures swift decision-making procedures, allowing a bank to be resolved over a weekend.
- As a supervisor, the ECB will have an important role in deciding whether a bank is failing or likely to fail.
- A Single Resolution Fund, financed by contributions from banks, is available to pay for resolution measures.
- [bail in vs bail out] Resolution is carried out without recourse to national taxpayers' money.
- Any resolution costs will have to first be borne by a bank's shareholders and creditors. Under most scenarios this should be sufficient. If, exceptionally, additional resources were needed, the Single Bank Resolution Fund would come into play.



Institutional framework at the European Union level: Banking Union







Supervision

- Micro-prudential supervision: refers to the supervision of individual institutions, such as banks, insurance companies or pension funds [banks -> SSM].
- Macro-prudential policy: involves oversight of the financial system as a whole. Its main aim is to prevent or mitigate risks to the financial system. [NCA + ECB]
 - The **European Systemic Risk Board** (ESRB) was established in 2010 to oversee the financial system of the European Union and prevent and mitigate systemic risk.
- Conduct supervision [NCA]
- Anti money laundering and terrorist financing [SSM]

Crisis management

. Resolution: Managing the orderly winding down of failing financial institutions (bankruptcy, sale, or restructuring) to minimize disruption to the financial system. [SRB +NCA]

Other Important Areas

• **Payments:** Overseeing and facilitating safe and efficient payment systems across the EU. (Shared responsibilities among NCAs and the ECB)





MICROPRUDENTIAL SUPERVISION

Promoting the stability of the financial system and the safety of the funds entrusted to credit institutions, through the application, monitoring and enforcement of rules that ensure the solvency and financial robustness of each institution.

Examples of areas of intervention:

- Capital and liquidity requirements;
- Concentration risk;
- Disclosures;
- Internal governance;
- Authorizations.



MACROPRUDENTIAL POLICY

Ensure that the financial system is resilient to risk absorption, ensuring adequate levels of financial intermediation and contributing to sustainable economic growth through the selection, calibration and implementation of macroprudential instruments.

Examples of instruments used:

- Borrower based measures;
- Capital buffers.





CONDUCT SUPERVISION

Promote the transparency of the information provided to **bank customers** and ensuring that institutions comply with their **duties of conduct** within the scope of the marketing of retail banking products and services, reinforcing **customer confidence** and contributing to the stability of the financial system.

Examples of the assessment on products and services:

- Deposits;
- Credit;
- Payment instruments.



ANTI-MONEY LAUNDERING AND COUNTER-TERRORIST FINANCING (AML/CFT)

Ensuring that financial entities identify, monitor and control their AML/CFT risks in a robust manner, complying with the applicable legal obligations, including the restrictions imposed by the European Union and the United Nations.

Examples of used instruments:

- Inspections to verify robustness of procedures;
- Measures to correct detected failures.





Dealing with the insolvency of credit institutions, or the imminence thereof, and assuring that these institutions continue to provide critical services to the economy, thus mitigating potential risks to financial stability. Ensure that institutions comply the conditions so that resolution measures could be applied towards them (fulfilment of resolvability criteria).

Examples of used instruments:

- Resolution plans;
- Resolvability assessments.



Promoting the proper functioning of payment systems.

Examples of intervention areas:

- Regulate the Interbank Clearing System (SICOI) and TARGET2-PT*);
- Superintendent the market infrastructures.

* TARGET (trans-European automatic transfer system for real-time gross settlement).



Institutional framework at the European Union level: The European System of Financial Supervision

- The European System of Financial Supervision (ESFS) is a network centered around three European Supervisory Authorities (ESAs), the European Systemic Risk Board (ESRB) and national supervisors.
- The ESAs are the:
 - European Banking Authority (EBA)
 - European Insurance and Occupational Pensions Authority (EIOPA)
 - European Securities and Markets Authority (ESMA)
- As the European banking supervisor, the ECB closely cooperates with the ESAs, especially the European Banking Authority (EBA).
- The ESFS covers both macro-prudential and micro-prudential supervision.
- The ESAs work primarily on harmonising financial supervision in the EU by developing the single rulebook. They are also mandated to assess risks and vulnerabilities in the financial sector.



Future Challenges

- Basel III Standards
- Climate change
- Digital transformation
- Money laundering and terrorist financing
- The reform of the legal and institutional framework of the European Union



Money creation by banks: The Mechanisms of Banking and Money

Supply



Money

- If you can trade with it, then is it money?
- Basic features of money:
 - Can operate as a <u>unit of account</u>.
 - Accepted as a <u>medium of exchange</u>.
 - Reliable store of value.
 - Issued by a trustworthy issuer.
 - Can safely be held in an account.



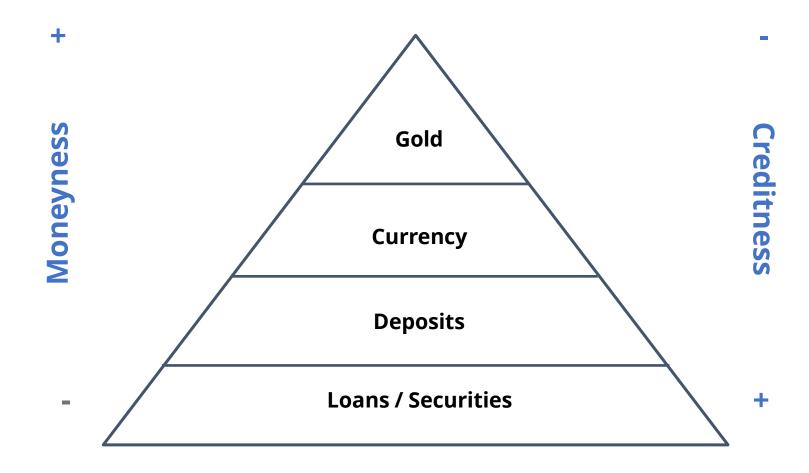


Money (cont'd)

- All monies were created equal, however not all money is alike....
- Consider a World under the Gold Standard
 - Gold is the ultimate money
 - Currency is just a promise to deliver gold
 - Deposits are just promises to deliver Currency
 - Loans are promises to deliver Deposits
- Credit as the Core Principle:
 - Each of these forms of money represents a promise; thus, they can be understood as different facets of credit.
 - This structure illustrates a hierarchy that highlights the relationships between these various forms of money.



Hierarchy of money





Money: The nature of instruments

- A deposit is an asset or a liability?
 - It depends: for me it is an asset, for the bank is a liability.
- The same can be said of currency (a liability in the Central Bank balance sheet) or loans or securities.
- Every asset is someone else's liability and vice versa. The only money here that is always an asset is gold, the ultimate money.
- Gold and currencies are sometimes referred as "**outside money**" to make clear that market players cannot increase the amount of them.
- "Inside money" can be created by players: when a bank grants a loan, in fact it increases the asset side (the loan) and the liability side (the value of the loan is credited on the debtor deposit account).



Creation of inside money out of credit

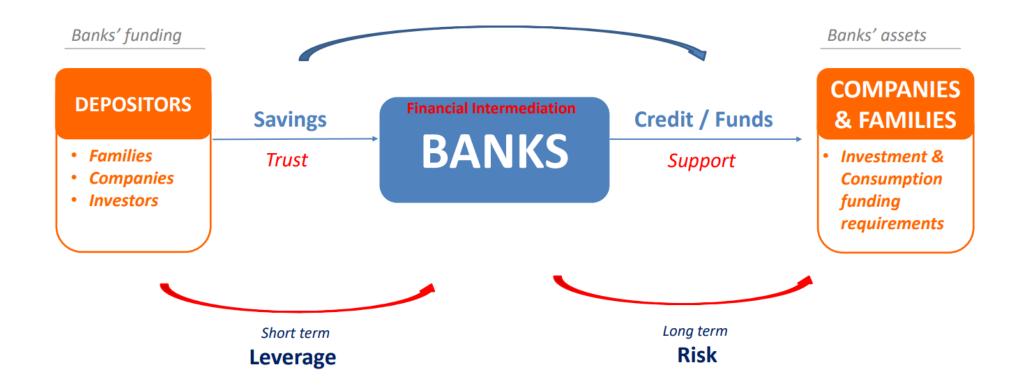
- You only trust inside money if it has the same features as outside money like:
 - Being "risk-free" (or perceived as such)
 - Available in the same denominations
 - With the same liquidity profile
 - How inside money can be created?





Money creation role

'Money creation' role





How the system works: an example

Mr. Banker opens a bank with €50 equity in cash. He called it Bank A.

Reserves: €50 Equity: Mr. Banker :€50



How the system works: A deposit

You deposit €100 cash in Bank A.

Reserves: €150 Equity: €50 Deposits: Mr. you: €100



How the system works: Intrabank cheque

You write a €20 cheque to the plumber. He deposits the cheque in his Bank A account.

Balance Sheet of Bank A

Reserves: €150

Equity: €50

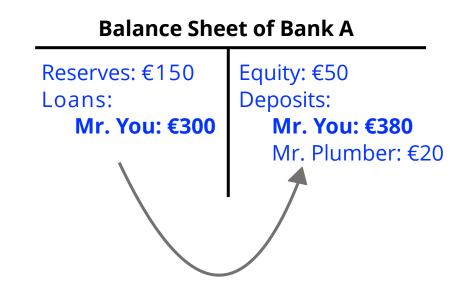
Deposits:

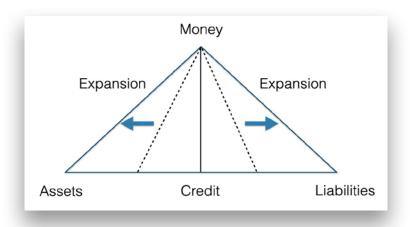
Mr. you: €80 Mr. Plumber: €20



How the system works: A loan

You need money to pay your bills, and so you ask for a €300 loan, granted from Bank A.

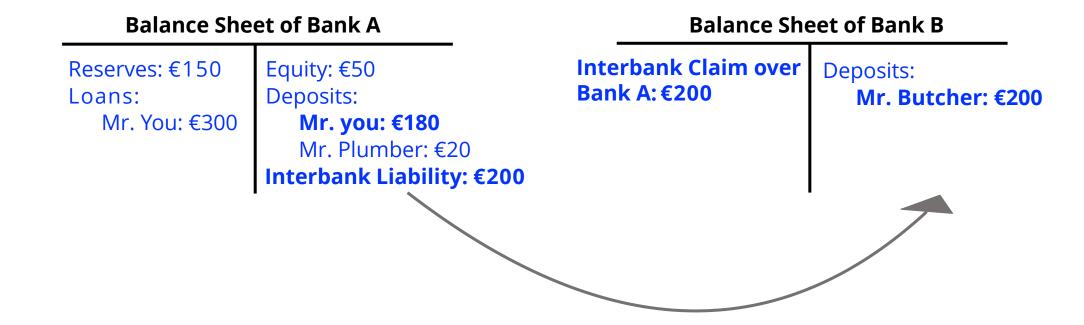




Money (M1) is created out of thin air !!!

How the system works: Intrabank cheque

You write a €200 cheque to the butcher. He deposits the cheque in his Bank B account.





How the system works: Clearing the cheque

- Bank A is informed first thing in the morning that Bank B has a cheque on your account.
- Two options are available for Bank A:
 - **Reject the cheque** (if you don't have funds, or your account is blocked, or the signature is wrong, ...)
 - Accept the cheque for payment and so Bank A has to pay overnight €200 to Bank B



How the system works: Bank fragility

Bank A is solvent but does not have €200 in cash to pay Bank B.

Balance Sheet of Bank A

Reserves: €150

Loans:

Mr. You: €300

Equity: €50

Deposits:

Mr. you: €180

Mr. Plumber: €20

Interbank Liability: €200

This is the fragility of fractional banking.



How the system works: Options available to BankA to cover the cheque:

- Bank A can transfer reserves to Bank B
 - This is usually done by transferring balances among deposit accounts of the banks at the Central Bank
- If no Central Bank reserves are available, Bank A can ask for a Money Market loan (O/N, T/N and week are the usual maturities)
- Bank A expects to have some positive interbank balances in the following night. If negative balances keep mounting, Bank A must consider other options:
 - Issue long maturity securities (equity or bonds);
 - Sell some assets to generate cash (or repo them);
 - Try to get more client deposits (marketing, higher interests).



How the system works: The discount window

- When all other options fail (or are not ready overnight), Bank A can ask for a "discount" from the Central Bank.
- The old rule of Central Banking (*Bagehot's Dictum*) was:
 - Central Banks should discount whatever amount at a high price against good collateral.
- For Central Banks, money is unlimited?...
- The high price is an incentive to find a solution in the market.
- The good collateral is there to avoid supporting insolvent banks.



How the system works: Using the discount window

Suppose in this case that Central Bank gives cash to Bank A. Money (M0) created. **Balance Sheet of Bank A Balance Sheet of Bank B** Equity: €50 **Credit over Bank A: Reserves: €350 Currency: €200** €200 Loans: Deposits: Mr. you: €180 Mr. You: €300 Mr. Plumber: €20 Interbank Liability: €200 **Owe to Central Bank: €200**



Banks at a glance from a regulatory and supervisory perspective



- Relevant indicators





Financial Stability Review

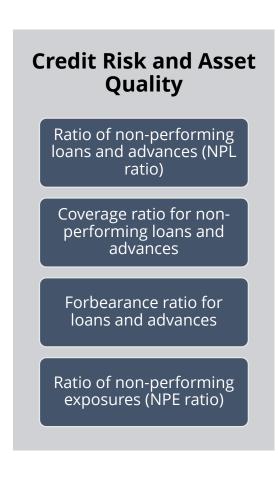


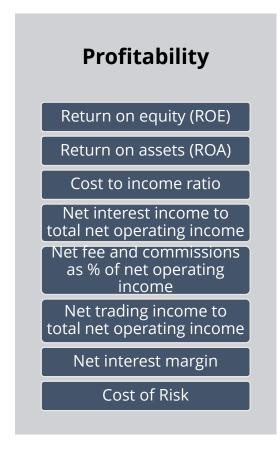


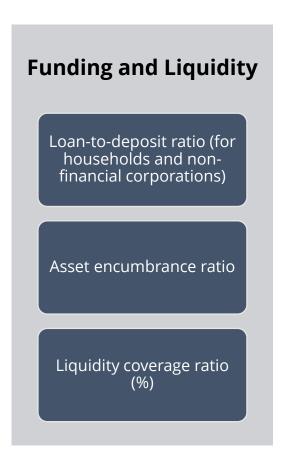
Banks at a glance: relevant indicators

Solvency Tier 1 capital ratio Total capital ratio CET1 ratio CET1 ratio (fully loaded) Leverage ratio Leverage ratio (fully phased-in definition of

Tier 1)







Banks at a glance: relevant indicators

Solvency

- Refers to the ability of the bank to meet long-term obligations as and when they arise.
- Capital is a measure of the banks' resources to absorb losses. Capital is the difference between all of a firm's assets and
 its liabilities. Acts as a financial cushion to absorb losses. The value of a firm's assets must exceed its liabilities for it to
 remain solvent.

Credit Risk and Asset Quality

Credit risk is the risk that promised cash flows from loans and securities held by banks may not be paid in full.

Profitability [flow]

Amount generated in a given time period

Funding and Liquidity

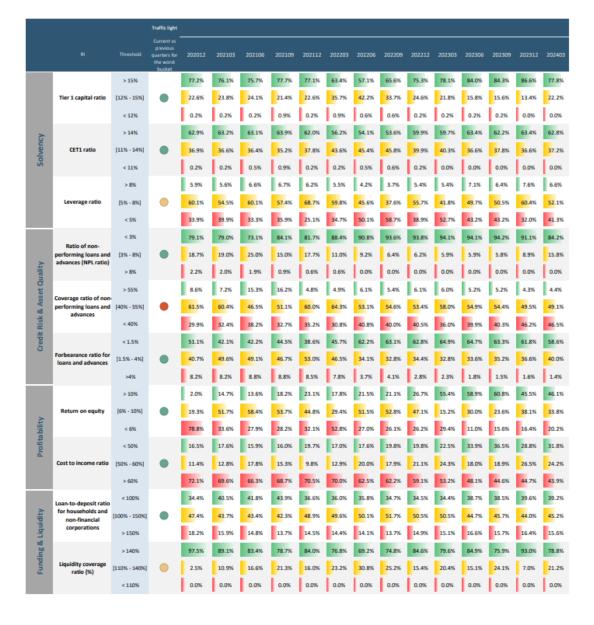
Liquidity is a measure of the cash and other assets banks have available to quickly pay bills and meet short-term business
and financial obligations. Liquid assets are cash and assets that can be converted to cash quickly if needed to meet
financial obligations.



Banks at a glance:
Euro area banks' position
European Banking Authority (EBA)

Heat map: risk indicators trend over time

Data as of Q1 2024





Financial Stability Review, May 2024 « Publications Foreword



Search in this publication

Q

Foreword



Financial stability conditions have improved since the last edition of the Financial Stability Review was published. The near-term risk of a deep recession accompanied by rising unemployment – a major source of concern six months ago – is much lower from today's perspective, and disinflation has proceeded in parallel.

At the same time, geopolitical tensions are a significant source of risk for not only euro area financial stability but also global financial stability. Policy uncertainty remains high around the world in a year featuring so many major

elections. In such an environment, the scope for adverse economic and financial surprises is elevated, and the risk outlook for euro area financial stability remains fragile accordingly.



Overview

- 1 Macro-financial and credit environment
 - **1.1** While risks of a deep recession have declined, geopolitical risks are on the rise
 - **1.2** Lax fiscal policies may reinforce public debt sustainability concerns
 - **1.3** Euro area firms are coping with rising debt service costs

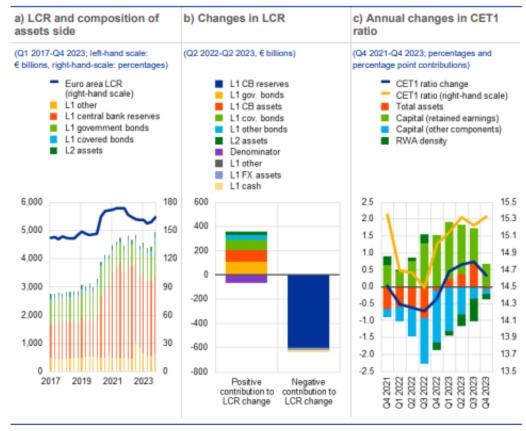
Box 1 Corporate debt service and rollover risks in an environment of higher interest rates

- **1.4** Strong labour markets support household resilience
- **1.5** Correction under way in property markets, notably the commercial segment



Solvency

Chart 3.12
Liquidity and capital positions remain robust despite large TLTRO repayments and record shareholder payouts



Sources: ECB (supervisory data) and ECB calculations.

Notes: Based on a balanced sample of 80 euro area significant institutions. Panels a and b: L1 and L2 stand for level 1 and level 2 respectively. L1 assets are of the highest quality and liquidity. L2 assets are of lower quality and less liquid than L1 assets, and they are subject to limits on the extent to which a bank can hold them to meet the LCR requirement. Panel b: C8 stands for central bank. Change between Q2 2022 and Q2 2023.

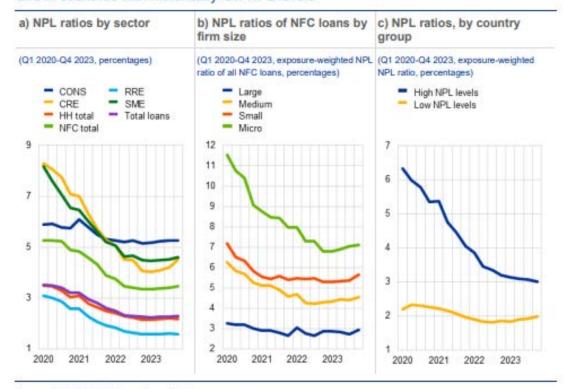


Credit Risk and Asset Quality NPL (Non-Performing Loans):

Loans which have defaulted and have not yet been totally written off <u>or</u> loans that are on the hedge of defaulting

Chart 3.8

NPL ratios started to increase slightly for loans backed by CRE, loans to micro firms and in countries with historically low NPL levels



Source: ECB (AnaCredit, supervisory data).

Notes: Panel a: based on the full sample of significant institutions. Excludes loans held for sale, cash and cash balances at central banks and other demand deposits. CONS stands for consumer loans; CRE stands for commercial real estate; RRE stands for residential real estate. Panel b: AnaCredit follows the EU Commission standard classification for micro, small, medium and large firms. Panel c: based on the full sample of significant institutions. Excludes loans held for sale, cash and cash balances at central banks and other demand deposits. For country groupings, see footnote 26. Slovakia has only branches or subsidiaries with a parent in the euro area, which are not considered here.



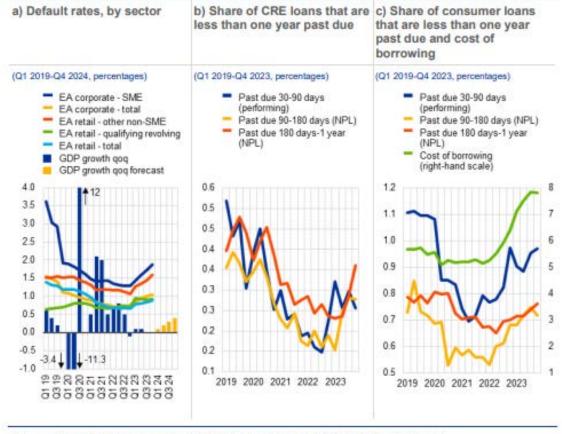
Credit Risk and Asset Quality

NPL (*Non-Performing Loans*):

Loans which have defaulted and have not yet been totally written off <u>or</u> loans that are on the hedge of defaulting

Chart 3.9

Bank asset quality is gradually weakening, which is visible in rising default rates and arrears on consumer and CRE loans



Sources: ECB (ECB staff macroeconomic projections for the euro area, March 2024, MIR, supervisory data).

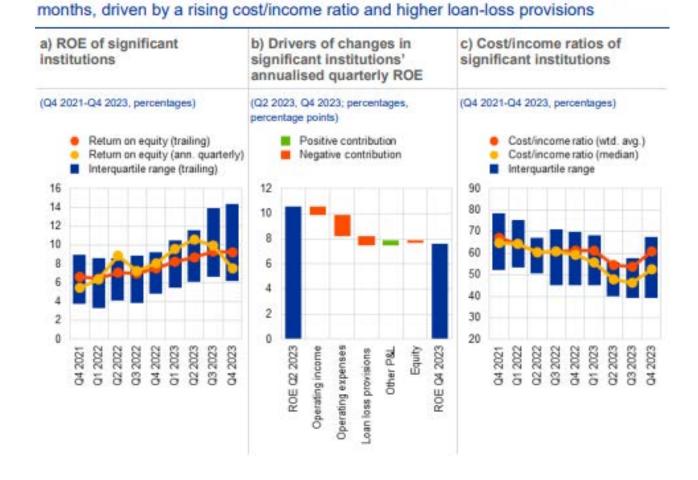
Notes: Panel a: based on IRB-reporting significant institutions. Four-quarter trailing figures. Euro area exposures only. Panel b: based on the full sample of significant institutions. The cost of borrowing is measured as the lending rate on new consumer loans to households.



Profitability

Chart 3.1

Bank profitability has declined somewhat from multi-year highs over the last six

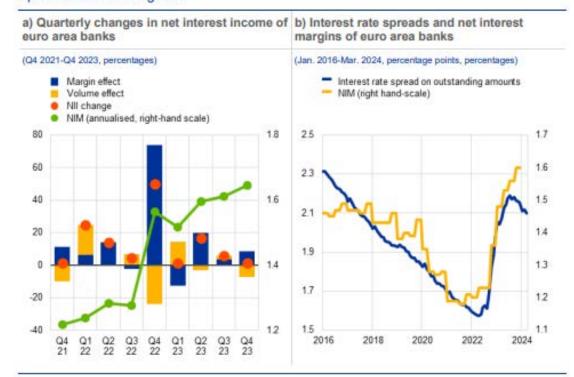




Profitability

Chart 3.2

Net interest income growth stagnated as loan volumes declined while interest rate spreads started to tighten



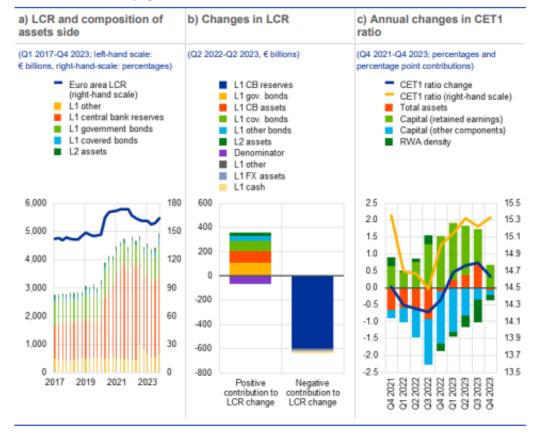
Sources: ECB (supervisory data, MIR) and ECB calculations.

Notes: Panel a: NII stands for net interest income; NIM stands for net interest margin, calculated as net interest income divided by total assets. The chart shows quarter-on-quarter changes in NII. Based on a balanced sample of 80 euro area significant institutions. Panel b: based on all euro area banks.



Funding and Liquidity

Chart 3.12
Liquidity and capital positions remain robust despite large TLTRO repayments and record shareholder payouts



Sources: ECB (supervisory data) and ECB calculations.

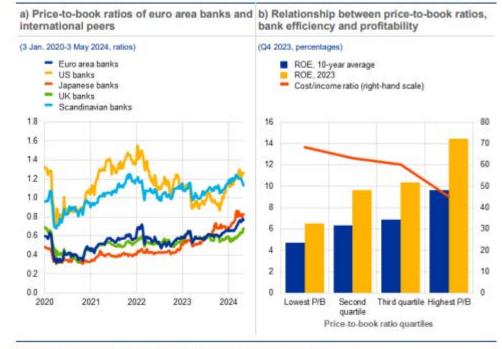
Notes: Based on a balanced sample of 80 euro area significant institutions. Panels a and b: L1 and L2 stand for level 1 and level 2 respectively. L1 assets are of the highest quality and liquidity. L2 assets are of lower quality and less liquid than L1 assets, and they are subject to limits on the extent to which a bank can hold them to meet the LCR requirement. Panel b: C8 stands for central bank. Change between Q2 2022 and Q2 2023.



Other prespectives!

Chart 3.14

Euro area bank price-to-book ratios continue to lag international peers but the relationship with bank profitability suggests a path to improving valuations



Sources: LSEG, Bloomberg Finance L.P., ECB (supervisory data) and ECB calculations.

Notes: Panel a: price-to-book ratios for Datastream banking sector indices. Panel b: calculations based on sample of 29 listed euro area banks. The cost/income and price-to-book ratios are as of Q4 2023.



Banking

Ana Lacerda

Class 1

Disclaimer: The views expressed are my own and do not necessarily represent the views of Banco de Portugal.

