1.2. Financial Sector Structure, Indicators and Rules

Universal Banking

- In line with most EU financial systems, the Portuguese financial system is based on the principle of universal banking, which has been adopted worldwide - around half (by assets) of the 30 Global Systemically Important Banks (GSIBs) are also universal.

- In Portugal, this principle was adopted in 1992, when the Banking Act (RGICSF, DL No.298/92, 31st Dec.) adopted the recommendation of the White Book on the Portuguese Financial System.

Types of FI

- **2 major types of FIs** (according to the Banking Act):

(i) Credit Institutions - banks and specialized CIs:

  (i) grant loans

  (ii) receive redeemable funds from the public: deposits and/or bonds issued above the limit generally established to non-financial companies

(ii) Financial Companies – include Investment Companies (except Multilateral Trading Systems Management Companies)

Specialized Credit Institutions

(i) Credit Financial Firms - e.g. consumer finance + leasing (Decree-Law No 100/2015, 2 Jun.);

(ii) Mortgage Credit Institutions (Decree-Law No 357-A/2007, 31 Oct.);

Investment Companies

(i) Brokerage in Capital Markets

- Dealers – may grant loans to their customers to buy securities;
- Brokers – can only buy and sell securities for their customers;

(ii) Asset Management

- Portfolio management companies – related to wealth management, private banking;

(iii) Money and FX brokerage

- Money and currency market brokers - wholesale;

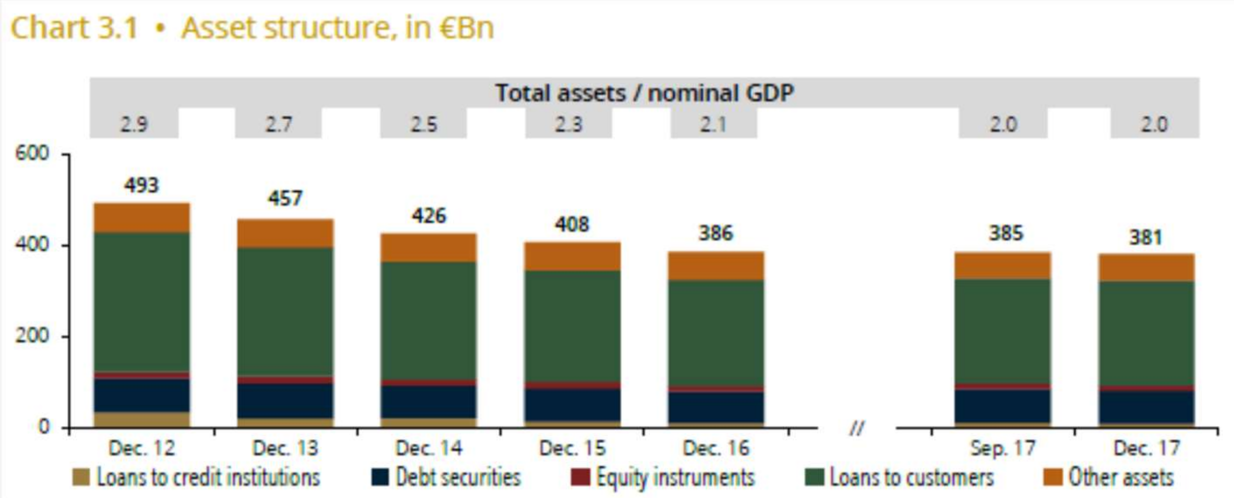
(iv) Investment Consulting Companies

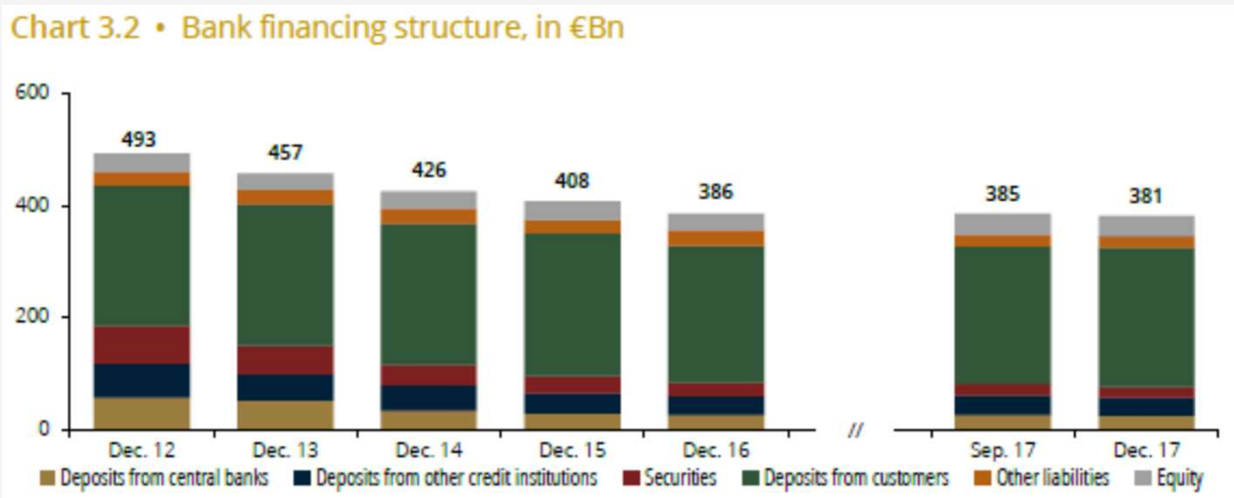
(v) Multilateral Trading Systems Management Companies

Banking System's Balance Sheet

- **Main Assets:**
  - loans to customers
  - debt securities
  - real estate assets (other assets)

- **Main funding sources:**
  - deposits from customers
  - bonds issued
  - resources from central banks
  - resources from other FI
  - capital (+)





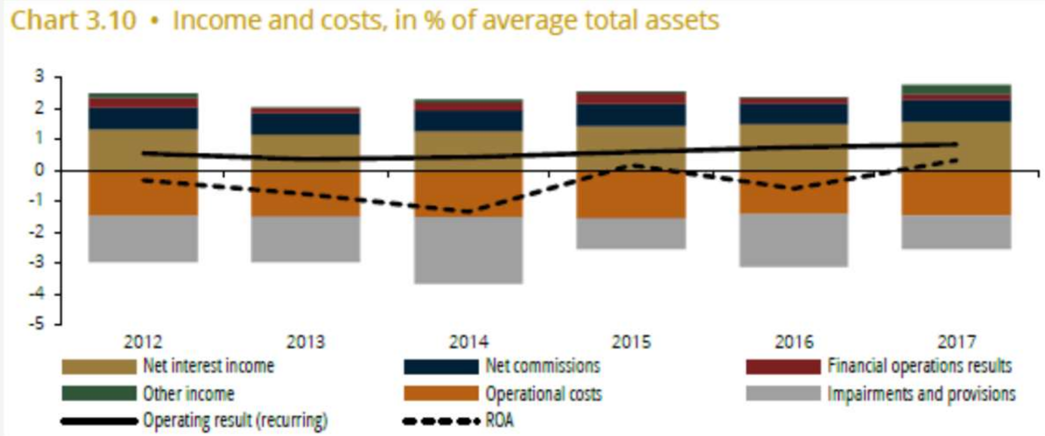
Source: Bank of Portugal (2018), "Portuguese Banking System: latest developments – Dec.2017".

Banking System's Income Statement

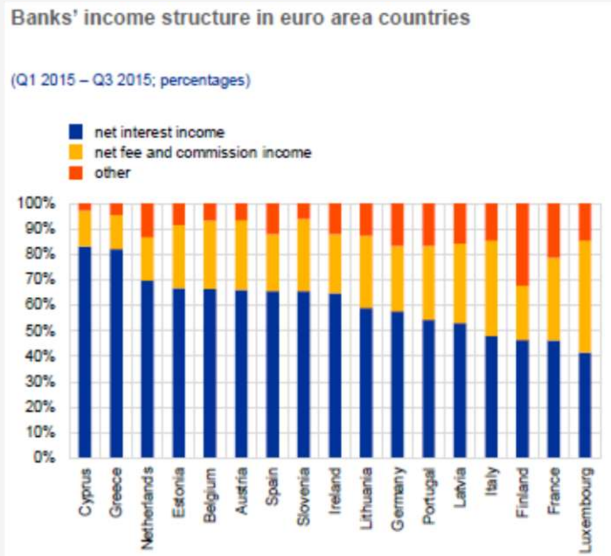
- **Gross Income (+):**
  - NII = Interest charged – paid (the most important and permanent source of revenue)
  - Fees
  - Financial Operations

- **Main costs:**
  - Provisions/Impairments
  - Operational

- **NI = Gross Income – (Main Costs + Taxes)**



Source: Bank of Portugal (2018), "Portuguese Banking System: latest developments – Dec.2017".



Source: ECB (2016), "Financial Stability Review", May.

Impairments

- **Definition:** Provisions conceptually corresponding to expected losses in loans and other assets not at fair value (valued according to market prices), e.g. real estate properties, bonds in held-to-maturity portfolios or financial participations).
- **Purpose:** Anticipate the recognition of losses as promptly as possible, smoothing the impact of negative events along time.
- **Loans:**

(i) Individual – exposures above a given threshold set by the bank, with impairments calculated by credit analysts, based on an individual assessment of expected cash-flows.

(ii) Collective – exposures below a given threshold set by the bank, with impairments calculated by using internal estimates of PDs and LGDs.

Impairments

- **Rules:** IFRS 9 (replaced IFRS39 since 1.1.2018; IFRS: International Financial Reporting Standards), introducing the Expected Credit Loss (ECL) framework.

- **Recognition of Loan Impairments – 3 stages:**

(i) **Stage 1 -** when a loan is originated or purchased => 1y ECL

(ii) **Stage 2 -** significant increase in credit risk (SICR) => Lifetime ECL

(iii) **Stage 3 -** the loan's credit risk increases to the point where it is considered credit-impaired => Lifetime ECL (with PD = 100% in the case of default)

Impairments

- **SICR:** banks have to identify relevant factors that indicate a significant increase in credit risk (impairment signs), based on 3 elements:

(i) quantitative;

(ii) qualitative;

(iii) 30 days past due.

- <u>This assessment has to be forward looking, considering different scenarios</u>.

Impairments

- **Qualitative factors:**

- PD increase (i.e. internal rating downgrade) above a given internal threshold.

- **Qualitative factors (according to IFRS9):**

- General economic and/or market conditions
- Operating performance of the borrower
- Significant change in collateral value which is expected to increase PD
- Changes to contractual terms e.g. interest waivers / forbearance
- Cash flow or liquidity issues, e.g. delay in servicing of trade creditors
- Significant increase in credit spread
- Credit rating
- Payment delays and past due information
- Previous arrears in the last 12 months

Impairments

- **Forbearance** - when the debtor is in financial difficulties and:

  (a) a modified contract is classified as NPE or would be classified as non-performing in the absence of modification/restructuring;

  (b) the modification made to a contract involves a total or partial cancellation by write-offs of the debt.

- **Credit-impaired indicators:**

- Long term forbearance
- Borrower insolvency
- Likely borrower bankruptcy
- >90 days past due

Key Indicators

1) Profitability

2) Efficiency

3) Credit Risk

Key Indicators

1) Profitability

- Return on Equity: ROE= Net Income/Total Capital
- Return on Assets: ROA = Net Income/Total Assets
- Net Interest Margin = Net Interest Income/Total Assets

also provides a perspective on assets profitability, but only considering net interest

Key Indicators

- ROE may also be seen as the product between ROA and leverage:

$$ROE = ROA \cdot Assets / Capital$$

- ROE can be decomposed even further:

$$RoE = \frac{Total\ assets}{Tier\ 1\ capital} \times \frac{Tier\ 1\ capital}{Common\ equity} \times \frac{Net\ income}{RWAs} \times \frac{RWAs}{Total\ assets}$$

$$RoE = Financial\ leverage \times Common\ equity\ margin \times RoRWAs \times Unit\text{-}risk$$

- Profitability may be determined by the profitability of assets, or just by the increase in leverage.

Key Indicators

- As impairments are expected to reflect expected losses, ROE and ROA may already be considered as forward-looking measures of profitability.
- However, if a bank adopts a riskier strategy than in the past, this past behavior of the bank will not be adequate to estimate its expected losses => impairments will be higher than anticipated.
- **A bank may opt for having different EL estimates for different purposes:**

- IFRS 9 – point-in-time (PIT)
- Pricing and risk-adjusted returns – PIT for short term loans and through-the-cycle (TTC) for longer maturities
- Capital requirements (IRB approach) – TTC

Key Indicators

- Risk-adjusted profitability of loans is usually measured by the RAROC:

$$RAROC = \frac{s - Ca - Cf - EL}{K}$$

s = minimum spread (e.g. over the Euribor)

Ca = administrative costs (% total credit)

ROE = return on equity (long-term goal)

K = capital requirement for the loan

Cf = funding cost (spread over the Euribor)

EL = Expected Loss (PD x LGD x EAD)

- RAROC is associated to the minimum spread to be charged in a loan:

$$s = Ca + ROE \cdot K + Cf + EL$$

Key Indicators

- Conceptually, all loans can be accepted, as long as the spread charged to the performing customers is high enough to compensate for the losses with the remaining customers.
- However, if these minimum spreads become too high, given market conditions, they may lead to adverse selection, i.e. to grant loans charging very high spreads to customers who are willing to accept those loans because they know that they will not redeem those loans.

↓

- A maximum EL (risk classification) must be defined as a cut-off level, in order to mitigate adverse selection risk, avoid the adoption of a less conservative credit policy than in the past, leading to a disruption of the PD estimates.

Key Indicators

2) Efficiency

- Cost-to-Income = Operating Expenses (e.g. personnel and other administrative expenses) / (Gross Income)

  Gross Income → NII + Fees + Results from Financial Operations

3) Credit Risk

- 2 different dimensions:

(i) level of problem loans – asset quality indicators

(ii) level of coverage of problem loans by provisions

Key Indicators

(i) **level of problem loans**

- Definition of credit risk indicators has faced harmonization and transparency problems in EU and worldwide => 3 major issues:

(a) Installments past-due vs EAD

(b) Default definition – past-due time to be considered? 30 days? 60? 90?

(c) Restructured loans

- Following EBA decisions, for capital requirements, exposures are either performing or non-performing (NPE).

- Restructured loans demand higher provisions/impairments and may impact on capital requirements and NPL ratios, if they are considered as NPE.

Key Indicators

- In the past, simpler measures only considered installments past-due, excluding the remaining EAD and the restructured loans:

- 30/60/90 days past due (DPD) capital and interest (as % of total credit) =>

  ⇒ 30 days past-due was the credit risk ratio usually focused and used in Portugal.

  ⇒ Some countries opted for less strict ratios – 60 or 90 DPD.

Key Indicators

- 1st measure in Portugal including restructured loans: Credit at Risk (Instruction No.16/2004, 16 Oct., changed by Instruction No.23/2012, 16 Aug. and by Instruction 6/2018, 12 Mar.) => Banks had to **disclose this indicator in public information on credit risk**, that included:
  - Past due loans over 90 DPD;
  - Restructured credit, when restructuring occurred after 90 DPD and didn't involve neither the payment of any past due capital or interest, nor additional guarantees.
- Instruction No. 22/2011, 17 Out. (revoked by Instruction No. 4/2018, 12 Mar.) – prudential report on credit at risk, detailing the several components of the ratio.

Key Indicators

- Instruction No. 18/2012, 15 May (replaced by Instruction No. 32/2013, 15.01.2014 and revoked by Instruction No. 4/2018) - rules on identification of restructured loans.

- EBA released a common definition for NPLs in EU, distinguishing between restructured/forborne loans that must be considered performing or NPE:

↓

Final Draft Implementing Technical Standards on Supervisory Reporting on Forbearance and Non-Performing Exposures under Article 99(4) of Regulation (EU) No 575/2013, 24 Jul.2014.

Key Indicators

- **NPE** (Art. 178 of CRR, Reg. 575/2013 and EBA/GL/2016/07, 28/09/2016):

(i) > 90 DPD (national authorities may replace for 180 days when exposures are guaranteed by residential mortgages and, in loans to SMEs, by commercial mortgages, as well as Public sector entities).

(ii) the debtor is considered as unlikely to be able to redeem the loan, with no recourse to additional bank decisions, e.g.:

(a) suspension of interest payments;

(b) loan restructuring, including the forgiveness or the postponement of capital redemption or the payment of interest or fees;

(c) request the debtor insolvency.

Key Indicators

- “Unlikely to pay” (UTP) definition gives some leeway for interpretation => banks are required to have clearly defined internal criteria to identify UTP indicators/events, implemented homogeneously in all parts of the group.
- **Cross-default**

- for reporting purposes: NPLs > 20% of the exposure to the customer, except for retail loans.
- For UTP assessment: banks are expected to set a threshold

- **Economic Groups** – when a debtor belongs to a given group, the need to consider exposures to other group entities also as non-performing must be assessed.
- **Cure Period** – at least 3 months

Key Indicators

- NPE include the defaulted and impaired exposures, as well forborne exposures where the customer is considered UTP.
- A distressed restructuring is an indication of UTP when it is likely to result in a diminished financial obligation caused by the material forgiveness, or postponement, of principal, interest or, where relevant, fees.
- Diminished financial obligation – assessment based on a comparison between the NPV of expected cash flows before and after the changes in the terms of the contract (both discounted using the original effective interest rate).

$\Downarrow$

- If this difference > a given threshold (set by EBA as 1%) => exposure must be classified as defaulted.
- The threshold should be set by banks.

Key Indicators

- Banks still have to assess exposures for possible other indications of UTP => if there are reasonable doubts regarding the likeliness of repayment of the obligation according to the new arrangement in full in a timely manner, the obligor should be considered defaulted.

- Indicators to be used:

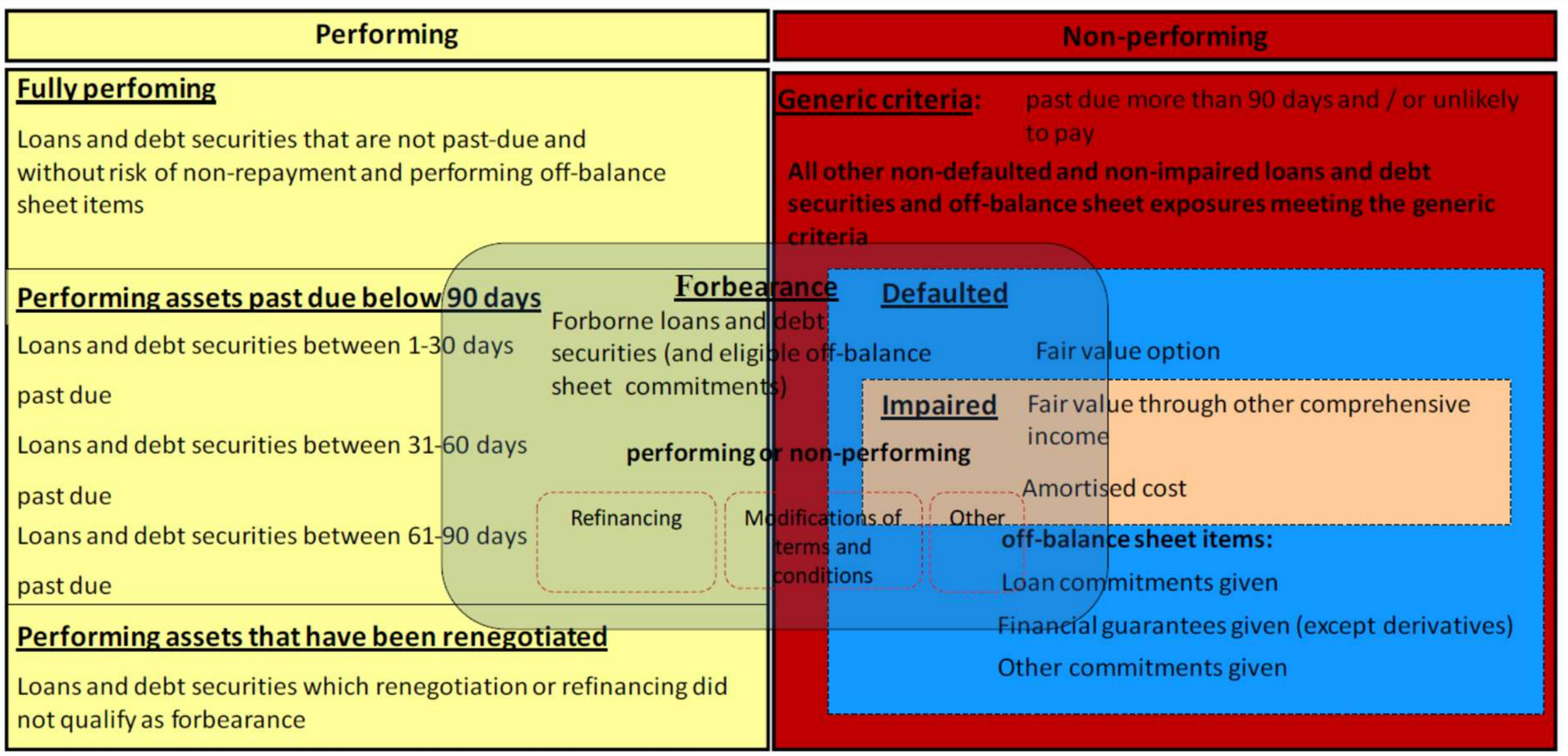
(i) large balloon payments

(ii) a significant grace period

(ii) the exposure has been restructured multiple times

Key Indicators

- Forborne exposures can be either in performing or non-performing portfolios.



Source: EBA (2014), "Final draft Implementing Technical Standards on Supervisory reporting on forbearance and non-performing exposures under Article 99(4) of Regulation (EU) No 575/2013", 24 July.

Key Indicators

- **Cure period -** The forbearance classification shall be discontinued when all the following conditions are met (to be assessed at least on a quarterly basis):

(a) the contract is considered as performing;

(b) a minimum 2 year probation period has passed from the date the forborne exposure was considered as performing;

(c) regular payments of more than an insignificant aggregate amount of principal or interest have been made during at least half of the probation period;

(d) none of the exposures to the debtor is more than 30 days past-due at the end of the probation period.

Key Indicators

(ii) **level of coverage of problem loans by provisions**

- Coverage ratio of Past Due Loans = Provisions (Impairments)/Past Due Loans

- Texas ratio = NPLs/(tangible equity + loan loss reserves): compares problem loans with the financial resources a bank has to absorb further losses from its troubled assets.

$$\downarrow$$

Lower Texas ratio ⇔ more robust position

Regulation

- 6 types of regulation to ensure the stability of FIs and consumer protection:

(1) safety and soundness regulation;

(2) monetary policy regulation;

(3) credit allocation regulation;

(4) consumer protection regulation;

(5) investor protection regulation; and

(6) entry and chartering regulation.

Safety and Soundness Regulation

- 2 main purposes:

(i) to mitigate the risk of failure – **prudential regulation**:

- protect depositors and borrowers against the risk of FI failure due, for example, to a lack of diversification in asset portfolios => regulation on large risks and credit to shareholders;
- minimum level of capital or equity that the shareholders of a FI need to contribute to the funding of its operations, to mitigate the risk of failure and provide protection against insolvency;

(ii) to improve protection against failure:

- provision of guaranty funds such as Deposit Guarantee Funds for depository institutions and Security Investors Protection Funds for securities firms.

Prudential Regulation

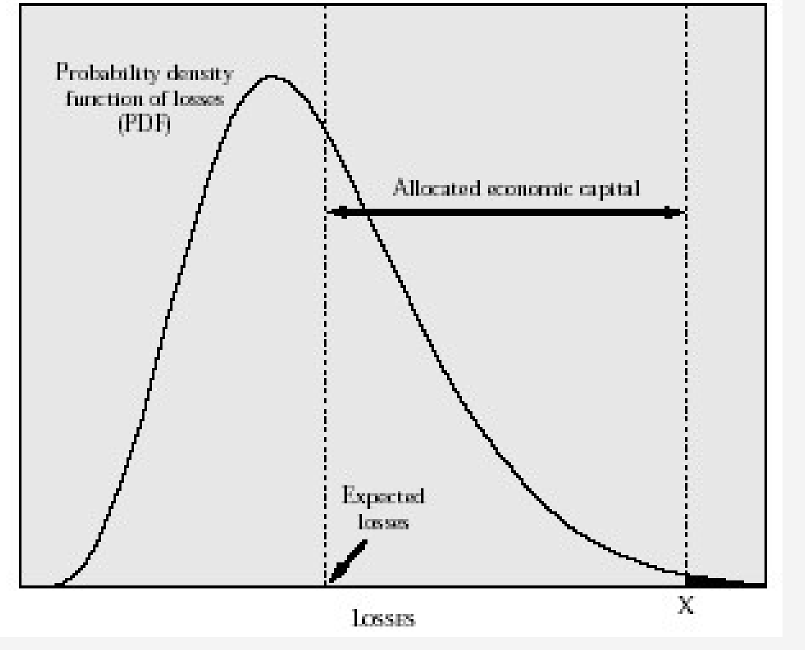
- Rationale:

(i) Loan portfolios must avoid significant concentrations and minimize exposures to main shareholders.

(ii) Banks have to be focused on banking business, minimizing financial participations and exposure to real estate assets;

(iii) Banks have to keep enough capital to:

- face unexpected losses
- protect depositors, bondholders and other creditors in case of insolvency or resolution.
- protect public resources and taxpayers
- finance banks' investments.



Source: Jones and Mingo (1998).

Prudential Regulation

(1) Large exposures

(2) Credit to shareholders

(3) Financial Participations

(4) Tangible and Intangible Assets

(5) Capital

Prudential Regulation

(1) Large exposures:

- Definition: risks to a group of interconnected entities corresponding to >=10% of the FI's own funds
- Report of large exposures to the supervisor
- Risks to a given group of customers <= 25% of FI's own funds (Notice 9/2014)
- Sum of large exposures <= 8 x FI's Own Funds

(2) Credit to shareholders (art.109, Banking Act):

- Loans to a given qualified shareholder <= 10% of the FI's own funds
- Sum of loans to all qualified shareholders <= 30% of the FI's own funds

Main Prudential Restrictions

(3) Financial Participations:

- Individual qualified stakes < 15% of the own funds of the participant

- Total qualified stakes < 60% of the own funds of the participant

  direct/indirect financial participation >10% of capital/voting rights of the participated or allowing a significant influence in the participated management.

- Stakes > 25% of the voting rights of the non-financial participated company cannot be held for more than 3 years (consecutive or not)

Main Prudential Restrictions

(4) Tangible and Intangible Assets (Notice 5/2003):

- Exposure <= FI's own funds (excess must be deducted to own funds).
- Total financial participations <= 40% of FI's own funds.
- Limits can be exceeded due to foreclosures, for 2 years (or higher, if authorized by the BoP or if considered as negative elements of own funds).
- CIs can't buy real estate properties, except their premises or authorized by the BoP or in case of foreclosure (for 2y, +1y, by FIs request until 2 months before the end of the 2 initial years) - art.112 of the Banking Law.
- Real estate property amortized proportionally (i.e. 16,6%/year), impacting on the total own funds (but not on the CET1), after the 4^{th} year in the balance sheet.

Main Prudential Restrictions

(5) Capital:

- Own Funds include 2 tiers, with CT1/Common Equity being more subordinated.
- Common Equity core tier 1 > 8%
- Common Equity tier 1 > 9,5%
- Solvency Ratio > 11,5% (for planning purposes)
- Additionally, supervisors have the power to impose pillar 2 capital requirements, following their assessment of banks' risks.

Own Funds – Main Items
Tier I
Common Equity Tier 1
Capital Minority Interests
Reserves **Negative elements of Common Equity Tier I** Losses for the current financial year Intangible assets (e.g. goodwill) Deferred tax assets relying on future profitability
Tier II
Subordinated Debt with an original maturity not below 5y and no put-options (to be amortized proportionally in the final 5 years of maturity)

Rules on Appraisals of Real Estate Properties

- Market risk in real estate assets is usually very relevant for banks, as a significant volume of loans have real estate properties as collaterals => the level of collateralization depends on the real estate price.
- Moreover, banks also own real estate prices, as their own premises, or as a consequence of foreclosures.
- Finally, banks can also be exposed to market risk in real estate assets through investment funds.

⇓

- As the real estate market is not sufficiently liquid to provide transparent and robust prices, it is relevant to set rules about how to evaluate real estate prices.

Rules on Appraisals of Real Estate Properties

(1) As collateral

- Appraisals by an independent expert or internal independent unit (Notices 5/2007 and 5/2006):
  - every 3 years - residential properties
  - yearly - commercial properties and loans > 5% of own funds or properties > 500 k and 1M€ (residential and commercial, respectively)
  - NPLs - 3 months after the 1st default if the initial appraisal is more than 1 year old and LTV>75%;
- Impacts:
  - Downward revisions => increase in LTVs => higher capital charges (risk weight of 35% for residential loan amounts up to LTV of 75% and 50% for commercial real estate loan amounts up to LTV of 50%; 75% and 100% for amounts above, respectively).

Rules on Appraisals of Real Estate Properties

(2) Foreclosures

- Appraisals:
  - At the time of foreclosure and every 3y afterwards (or more frequently, if requested by the supervisor or a significant price fall is anticipated)
- Impacts:
  - Downward revisions => impairments => impact on P&L
  - Upward revisions => the balance sheet value is kept, as potential gains are not recognized.

Rules on Appraisals of Real Estate Properties

(3) Real Estate Investment Funds (CMVM Regulation 2/2015)

- Banks usually own participation units of these funds, due to the liquidity support provided to funds managed by their own fund management companies and when their units were sold by the bank.
  - Support provided to avoid a fire sale of the properties invested, including loans granted to the funds.
- Financial adjustment program in Portugal => banks became the owners of more than 50% of REIF units => consolidation of the total amount of the funds for accounting and prudential purposes.
- Impacts: Price devaluations => impact on P&L, through real estate prices (if funds are consolidated) or through the participation units.