

FINANCIAL REGULATION



Universidad
de Navarra

MASTER'S DEGREE IN BANKING AND FINANCIAL REGULATION

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2023

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Chapter 1

Why banking regulation?

- Save money
- Protect clients
- Financial stability

Why banks have special regulation?

$$\text{Two main reasons: } \begin{cases} \text{Retail clients (deposits protection)} \\ \text{Financial stability} \end{cases} \quad (1.1)$$

Taking deposits is beneficial because a bank can get cheaper financing that way. They can lend that cheap money at a higher interest rate to make money.

Trust: Even some credit institutions want to be regulated to attract more clients

Chapter 2

European Framework and the Banking Union

03/10/2023

The great financial crisis is the beginning of the current framework. It was decided that the regulation at the time was not enough and had to be changed.

The group G20 is not an institution with legal powers, it is an informal institution that suggest political and economic changes. However, these changes end up being implemented regionally.

They promoted measures with three goals:

- Higher solvency requirements (more capital and with higher quality)
- Promote financial stability
- Lower public cost, if any, in future crises

At a european level there was the necessity to promote a stable and integrated financial system in the EU. The markets perceived that the risk of the banks was highly tied with the risk of the public sector.

- Private risk sharing across borders, reducing need for public risk sharing
- Risk-sharing mitigates the impact of domestic economic shocks in its financial stability ⇒ Increase the resilience of the EMU towards adverse shock
- Full integration would imply that the risk perception of a bank does not depend on the credit quality of the sovereign where the bank is licensed. Denationalising bank's risk
- Breaking the vicious circle public debt-bank fragility. “International banks are global in life, but national in death” (Mervyn King)

The banking union is trying to break the link between the risk of the states and the risk of the banking industry.

Most important european institutions

→ EU Commision

- Executive power
- Commissioners
- Fixed presidency
- Launches the legislative procedure (submits a proposal)

→ **Parliament of the EU:** Is like the parliament of a country but it doesn't have all the legislative power, so the interest of the union and the interest of the countries are balanced

- Legislative power together with the Council
- Fixed presidency
- Members directly elected

→ **Council of EU:** Rotates each semester. Every six months a new country has the presidency. It looks for the interests of the countries. To approve laws both the Parliament and the Council have to agree.

- Legislative power together with the Parliament
- Government ministers from each EU country
- Rotating presidency

→ **European council:**

- Defines the general political direction and priorities of the EU
- Heads of State or Government and European Council and European Commission presidents
- Fixed presidency

The aims set out in the EU treaties are achieved by several types of legal acts. Some are binding, others are not. Some apply to all EU countries, others to just a few

- **Regulations.** A regulation is a binding legislative act. It must be applied in its entirety across the EU
- **Directives.** A directive is a legislative act that sets out a goal that all EU countries must achieve. However, it is up to the individual countries to devise their own laws on how to reach these goals. They are more flexible than the regulations. Countries can interpret directives differently so they don't reach the same level of harmonization of a regulation.
- **Decisions.** A decision is binding on those to whom it is addressed (e.g., an EU country or an individual company) and is directly applicable. For example, the Commission issued a decision on the EU participating in the work of various counter-terrorism organisations (the decision related to these organisations only) or the Council issued a decision on allowing Croatia to adopt the euro (the decision related to Croatia only)
- **Recommendations and Opinions:** A recommendation and an opinion are not binding, in other words without imposing any legal obligation on those to whom it is addressed. But they have power in the sense that they often create precedents and set certain standards. They may also serve as an indication to future binding legislation
- **National options and discretions granted to the supervisor.** EU Regulation 2016/445 (ECB).

Even with regulations the harmonization is not total, there is some minor flexibility

The European legislation that is binding must be enforced by the local supervisors of each country.

The banking regulation standards have been developed by the Basel Committee of Banking Supervision (BCBS). These standards or frameworks are known as BASEL I, BASEL II and BASEL III which is the current regulation framework. These standards have been implemented mostly through EU directives.

Before the great crisis there was only microprudential requirements (focused on each bank) but now the regulation also takes into account macroprudential or systemic risk (counter-cyclical provisions¹ for example). BASEL III also introduces liquidity requirements which were not taken into account before.

Each framework has been stricter than the former one, requiring more and better capital. For example, deferred tax assets now are not considered real assets because they are only used to reduce future taxable profits so in a crisis the government doesn't need to pay for these assets.

Basel 3.5

The banks need to calculate the risk weighted assets to accommodate capital for possible future losses. One difference is that this new regulation makes it so different categories of assets can have different weight depending on the specific bank, so these weights will be different among the banks. Sometimes the difference between applying standard models and internal models of a bank can be very high regarding the measurement of risk which is very dangerous. The standard models set baselines so the banks' internal models don't have too much influence on the decisions of the bank.

2.1 European Banking Authority EBA

The main task of the EBA is to contribute to the creation of the European Single Rulebook in banking whose objective is to provide a single set of harmonised prudential rules for financial institutions throughout the EU. The EBA also plays an important role in promoting convergence of supervisory practices and is mandated to assess risks and vulnerabilities in the EU banking sector.

- To perform these tasks, the EBA can produce a number of regulatory and non-regulatory documents including Binding Technical Standards, Guidelines, Recommendations, Opinions and ad-hoc or regular reports. The guidelines or recommendations have to be either adopted or the banks have to explain why they're not adopting them.
- The Binding Technical Standards (BTS) are legal acts which specify particular aspects of an EU legislative text (Directive or Regulation) and aim at ensuring consistent harmonisation in specific areas. The EBA has no legal powers so it develops a draft of the BTS which is finally endorsed and adopted by the European Commission. Contrary to other documents such as Guidelines or Recommendations, the BTS are legally binding and directly applicable in all Member States. There are two types of BTS:

→ RTS: supplement or amend non-essential elements of a legal act

→ ITS: ensure uniform application of a legal act

¹In fact, before the crisis the Bank of Spain obliged the Spanish banks to have additional counter-cyclical provisions. The banks protested because they said this did not comply with universal regulation. The crisis proved that these provisions were not only necessary, but even insufficient. Thanks to these provisions, Spanish banks did fairly well during the crisis.

2.2 European systemic risk board (ESRB)

The ESRB is responsible for the macroprudential oversight of the EU financial system and the prevention and mitigation of systemic risk. The ESRB therefore has a broad remit, covering banks, insurers, asset managers, shadow banks, financial market infrastructures and other financial institutions and markets

- In pursuit of its macroprudential mandate, the ESRB monitors and assesses systemic risks and, where appropriate, issues warnings and recommendations
- Composition: representatives of the European Commission, the ECB, the National Central Banks of the EU countries and the three ESAs
- Based in Frankfurt. The ECB provides analytical, statistical, logistical and administrative support (Secretariat), but it is not a department of the ECB.
- The warnings and recommendations from the ESRB are not compulsory. Member States must “comply or explain”

2.3 European financial integration. Four Presidents' report

In 2012 there was a real risk that the monetary union (the euro) disappeared. The president of the ECB at the time said that the ECB was going to do “whatever is necessary” to save the euro.

- Coordinated response from European leaders. Four Presidents' report (26 June 2012). Promote a stable and integrated financial system in the EU
- Commitment to the euro and to financial stability
- New crisis management tools and reform of rules
- New laws for stability of banks
- Tax-payers shouldn't pay the cost of banking crises
- European Stability Mechanism (ESM): fund to help countries in extraordinary economic difficulties
- Banking Union: EU-wide supervision of banks and a mechanism for resolution

2.4 European Stability Mechanism (ESM)

The ESM was set up to solve a problem that arose early in the sovereign debt crisis: the lack of a backstop for euro area countries no longer able to tap the markets. In 2010 Greece lost market access. The country received loans from the other euro zone countries on a bilateral basis.

Its shareholders are the euro area countries. The ESM issues debt instruments in order to finance loans and other forms of financial assistance to euro area countries.

The ESM is authorised to:

- Make loans in the context of a macroeconomic adjustment programme (Greece, Portugal, Ireland and Cyprus)
- Purchase debt in the primary and secondary debt markets

- Provide precautionary financial assistance in the form of credit lines
- Finance recapitalisations of financial institutions through loans to the governments of its member countries (Spain)
- Direct recapitalisation of institutions

Backstop for the Single Resolution Fund (SRF)

2.5 Banking Union

The need for a banking union emerged from the financial crisis of 2008 and the subsequent sovereign debt crisis. It became clear that, especially in a monetary union such as the euro area, problems caused by close links between public sector finances and the banking sector can easily spill over national borders and cause financial distress in other EU countries

Three Pillars (EU-20):

- Single Supervisory Mechanism (SSM)
 - Supervisory Board and National Competent Authorities (NCAs)
 - SSM Framework Regulation: ECB's cooperation with NCAs
- Single Resolution Mechanism (SRM)
 - Single Resolution Board and National Resolution Authorities (NRAs)
 - Single Resolution Fund (SRF). Banks make contributions to this fund the same they make contributions to the deposits guarantee fund
- European Deposit Insurance Scheme (EDIS)

Single Rulebook (EU-27):

- CRD IV,CRR (solvency)
- BRRD (When a bank has problems)
- DGSD

2.6 Single Supervisory mechanism (SSM)

SSM starts on 4 November 2014. Prudential supervision > 2,500 Banks in the euro area (20 countries) → ECB and NCAs

Possibility of extending tasks of SSM to banks established in Member States of the EU whose currency is not the euro, where close cooperation has been established between ECB and NCA (Bulgaria and Croatia, 1 October 2020).

SSM main aims are to:

- Ensure the safety and soundness of the European banking system
- Increase financial integration and stability

- Ensure consistent supervision

Some tasks are competence of the ECB for all credit institutions:

- Authorise credit institutions and withdraw authorisations of credit institutions
- Assess notifications of the acquisition and disposal of qualifying holdings in credit institutions
- Governance: Fit and proper assessment for managers, remuneration policies,...

Supervision: Significant institutions (SI) and less significant institution (LSI)

2.6.1 SSM Organisation

Governing Council: Separation from monetary policy function. All the decisions have to be taken by the governing council. They ratify the decisions of the supervisory board.

Supervisory Board: The Supervisory Board meets regularly to discuss, plan and carry out the ECB's supervisory tasks

Administrative Board of Review: The Administrative Board of Review (ABoR) carries out internal administrative reviews of the ECB's supervisory decisions, ensuring that such decisions are compliant with the rules and procedures

Mediation panel: To ensure a separation between monetary policy and supervisory tasks, the Mediation Panel resolves differences of views expressed by NCAs regarding an objection by the Governing Council to a draft decision of the Supervisory Board

2.6.2 Bank recovery and resolution before the GFC

- Not enough capital nor subordinated debt to cover losses
- Different insolvency laws: General insolvency regulation of each country is not efficient for banks. Its main goal is to guarantee equal treatment for all creditors. Banking insolvency has other significant consequences that are not covered: preservation of the critical functions, protection of depositors, financial stability
- Bail out to prevent problems of financial stability and with retail depositors
- Link sovereign and banking risk. High cost for the taxpayer. State aid rules (articles 107-109 TFEU). Banking Communication 2013. Burden sharing
- In October 2011 (updated in 2014) the FSB adopted "Key Attributes of Effective Resolution Regimes for Financial Institutions" (Key Attributes) that set out the core elements necessary for an effective resolution regime:
 - Without public funds
 - Preserving critical functions (orderly resolution)
 - Cross-border cooperation and coordination
 - Recovery and resolution planning
- In November 2015 TLAC (Total Loss-Absorbing Capacity) for G-SIBs (30 banks, FSB list).

- From January 1st, 2022, G-SIBs are required to hold a TLAC amount of 18% of RWAs and 6.75% of the leverage total exposure measure (This is not on top of the 8% capital a bank is required to have. The bank has 8% capital and it has to have at least 10% more to cover the TLAC)
- National regulators may interpret the requirements more strictly in their own jurisdictions

2.6.3 Resolution Conditions

The bank is failing or likely to fail (FOLTF). Decision taken by the supervisor or by the resolution authority after consultation with the supervisor when the bank:

- Infringes capital requirements in a way that justifies withdrawal of authorization
- Assets < Liabilities → (Insolvency)
- Unable to pay its debts or other liabilities (Liquidity)
- Extraordinary public financial support is required except when the following conditions are met:
 - Granted to solvent institutions
 - Approval under State aid framework
 - Remedy a serious disturbance in the economy and preserve financial stability
 - Temporary and proportionate
- No alternative private sector measures (including IPS) nor supervisory actions (including early intervention measures) nor the WDCI at subsidiary level. If there are measures to save the bank without spending taxpayer's money they need to be taken. In practice it is very difficult that the private sector rescues a bank after the resolution board has declared that the bank is failing or likely to fail.
- Public interest:
 - (i) necessary for the achievement of one or more of the objectives and
 - (ii) better than insolvency proceedings

Usually when there is a resolution process we think about solvency problems but in fact, almost all of the cases that end in resolution are because of liquidity problems.

2.6.4 Special management, Valuation and Resolution tools

- Appointment of a special manager to replace the management body with the powers of shareholders under the control of the resolution authority
- Valuation by independent expert (points 1.- and 2.-)
 1. Prudential valuation: determines whether the conditions for resolution or the write-down or conversion of capital instruments are met (art. 36)
 2. Economic valuation: supports the choice of resolution tool and its extension (art. 36)
- 3. Valuation of difference in treatment (NCWO) (art 74)
- Resolution tools

- Sale of the business
- Bridge bank
- Asset separation (Bad bank)
- Bail-in. Liabilities excluded from bail-in. Covered deposits

2.7 Supervisory Review and Evaluation Process (SREP)

- The Supervisory Review and Evaluation Process (SREP) is a core activity of the ECB
- SREP is a Regular (annual) assessment and measurement of the risks for each SSM significant institution to determine where a bank stands in terms of Capital and Liquidity as well as the adequacy of its Internal Arrangements and Risk Controls
- It is based on four elements (business model, governance, risks to capital and risks to liquidity and funding)
- Each of the four elements is given a combined score between 1 and 4 and then combined into an overall SREP score, also between 1 (low risk) and 4 (high risk), which reflects the overall assessment of the viability of the institution
- Final SREP decision. It feeds into the supervisory examination programme (SEP). Pillar 2. Requirement of taking, if needed, quantitative and/or qualitative measures

A team of external experts issued a report suggesting several ideas to improve the SREP. They suggested that these revisions should be done in a more continuous way rather than once a year. The other main suggestion is to focus more on the qualitative side (management, governance) because these qualitative issues can make a bank go bust and cannot be solved with more capital.

Chapter 3

Macroprudential Regulation

11/10/2023

3.1 Definition

The ultimate objective of macroprudential policy is to contribute to the safeguard of the stability of the financial system as a whole, by strengthening the resilience of the financial system and decreasing the build-up of systemic risks, thereby ensuring a sustainable contribution of the financial sector to economic growth.

Macro vs Micro

Microprudential (idiosyncratic):

- Limit the risk of failure of individual institutions, best justified in terms of depositor/investor protection
- The behaviour of individual institutions does not affect the aggregate evolution, which is taken as given

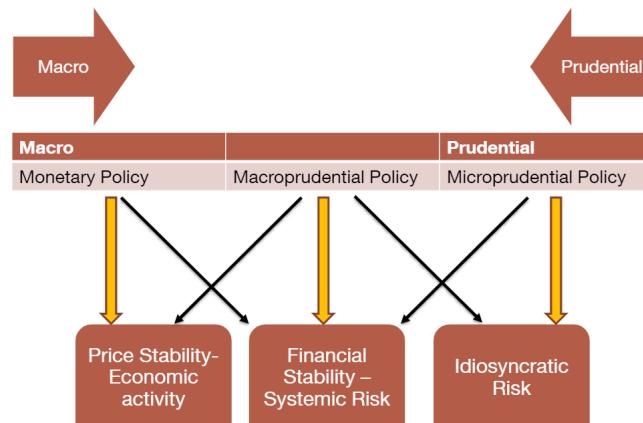
Macroprudential (systemic):

- Limit the costs of financial distress on the economy
- Aggregate risk depends on the collective behaviour of institutions (endogeneity)
- Fallacy of composition: some actions could appear individually rational but, in the aggregate, result in undesirable outcomes, owing to the externalities involved

Two main dimensions for macroprudencial regulation

- **Time dimension:** Related to economic cycles. The objective is to tackle unsustainable periods like big booms or bubbles.
- **Structural dimension:** That arising from the size, complexity and interconnectedness of banks.

One of the main difficulties of macroprudential regulation is that systemic risk is not easily measured. It cannot be directly observed in the data.



3.2 Macroprudential instruments

They can be broadly classified as follows:

Instruments available through European legislation (CRR II/CRD V)

- **Countercyclical capital Buffer (CCyB):** Additional capital buffer built up in expansions to absorb losses in recessions
- **Systemically important institutions:** Additional capital buffer for externalities caused by global systemically important institutions (G-SIIs) and domestic systemically important institutions (O-SIIs)
- **Systemic Risk Buffer (SRyB):** Capital buffer to prevent and mitigate systemic risks not covered by the CCyB and G-SII/O-SII buffers. It can be applied sectorally.
- **Article 458 CRR. Flexibility package:** Stricter requirements on capital, capital conservation buffer, liquidity, large exposures, disclosure and risk weights.
- **Article 124 CRR. Higher risk weights on real estate loans (Standardised Approach):** Only for standardised approach
- **Article 164 CRR. Higher minimum LGDs (internal models):** Only for internal models

In advance of any activation, the regulators need to notify the ECB. If the ECB thinks it is too tight they will veto it. If they think it is too lax they will tighten it.

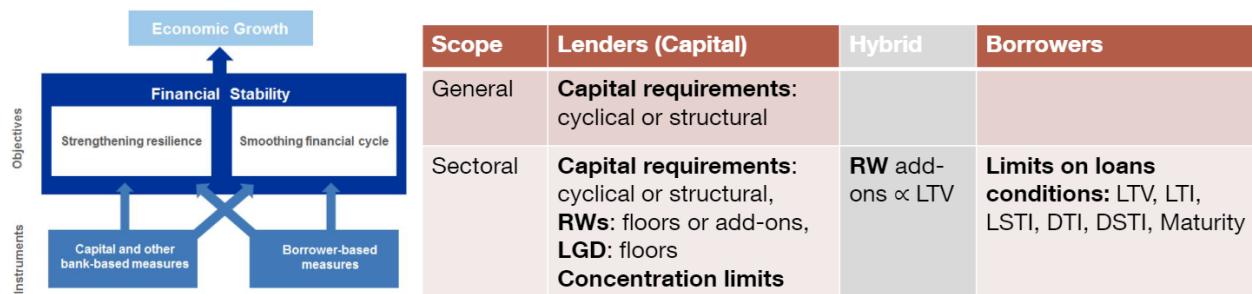
Additional instruments

- **Sectoral CCyB:** There is some overlap between this and the SRyB
- Sectoral limits to concentrations in sectors of economic activity
- Borrower-based limits, potentially including LTV (loan to value), LTI (loan to indebtedness), DSTI, Maturity...

3.2.1 Countercyclical Capital Buffer

Main goals:

- 1.- Enhance the resilience of the banking system by increasing their capital levels.



- 2.- Taming the economic cycle by making lending more expensive, disincentivizing expenditure during booms.
- 3.- Supporting the provision of credit in downturns by making lending cheaper.

The data suggests that the release of this buffer during crisis does in fact increase lending during crisis. However during booms the incentives to keep lending are much higher so it is not so effective at smoothing economic expansions.

Because it is not very costly to activate this buffer, it can be considered to lower the threshold in economic expansions, activating it earlier during the boom. It is being discussed a neutral positive capital buffer that will be activated when the economy is doing “good”, and there is no risk of cutting the credit to the economy.

Now we will see some indicators to take into account in order to activate the Countercyclical Capital Buffer

The Basel Gap

Basel Gap = $\frac{CREDIT}{GDP}$ there is some inconsistency here because Credit is a stock variable while GDP is a flow variable

To solve this we use:

Credit Intensity = $\frac{\Delta CREDIT}{GDP}$ and now the numerator is also a flow variable because it is the change of credit over time

Real State

The indicators comprising the house prices category are gap measures on:

- Observed RE prices: Statistical measure and econometric model-based measure taking into account households disposable income and mortgage interest rates
- The ratio of house prices to household disposable income
- House prices/rental prices ratio
- Error correction model measure

Output Gap

Ratio between an economy's actual growth and expected growth. When this ratio is positive this means that the economy is growing at a faster pace than it is sustainable in the long term. It is overheating

3.2.2 SIFI Buffers

A SIFI is a Systemically Important Financial Institution. Systemic buffers are intended to create a protective net and to disincentivize banks to become more systemic as they will have higher capital requirements.

$$\text{Relative score} = \frac{\text{Indicator}_i}{\sum_j \text{Indicator}_j}$$

This score measures the systemic importance of a bank relative to the systemic importance of all of the banks of the world

Many indicators are taken into account when measuring the systemic importance of a bank.

Category	G-SIIs		O-SIIs	
Cross-jurisdictional activity	Cross-jurisdictional claims	10%	Cross-jurisdictional claims	8.33%
	Cross-jurisdictional liabilities	10%	Cross-jurisdictional liabilities	8.33%
Size	Total exposure (LR measure)	20%	Total assets	25%
Interconnectedness	Intra-financial system assets	6.67%	Intra-financial system assets	8.33%
	Intra-financial system liabilities	6.67%	Intra-financial system liabilities	8.33%
	Securities outstanding	6.67%	Debt securities outstanding	8.33%
Substitutability/Financial institution infrastructure	Payments activity	6.67%	Value of domestic payment transactions	8.33%
	Assets under custody	6.67%	Private sector deposits from depositors in the EU	8.33%
	Underwritten transactions in debt and equity markets	6.67%	Private sector loans to recipients in the EU	8.33%
Complexity	Notional amount of OTC derivatives	6.67%	Value of OTC derivatives (notional)	8.33%
	Level 3 assets	6.67%		
	Trading and available-for-sale securities	6.67%		

After the bank is given a score, it will be assigned a buffer

Subcategory	Score	Buffer
1	130-229	+1,0%
2	230-329	+1,5%
3	330-429	+2,0%
4	430-529	+2,5%
5	530-629	+3,5%

The ECB can set the minimum buffer for domestic systemically important banks, but the national authorities can make this buffer higher (never lower than the ECB). The decision on the floor of minimum buffers are not rocket science, they are usually set based on expert judgements. None of the models tried have proven to be satisfactory.

3.2.3 Systemic Risk Buffer (SyRB)

Flexible tool to be applied to tackle both

- Structural risks (in principle excluding risks from systemic banks)
- and cyclical systemic risk (not addressed by the CCyB)

Four main sectors:

- 1.- All retail exposures to natural persons which are secured by residential property
- 2.- All exposures to legal persons which are secured by mortgages on commercial immovable property
- 3.- All exposures to legal persons excluding those specified in point (ii)
- 4.- All exposures to natural persons excluding those specified in point (i)

The EBA guidelines set a series of additional sub-dimensions:

- Debtor: legal or natural persons; NFC, Fin or Gov
- Economic activity (of the debtor): NACE codes
- Type of exposure: all, retail, other than retail; equity, debt, ...
- Risk profile: non-performing, RWs, LTV, LTI, ...
- Collateral: secured, unsecured; RRE, CRE,...
- Geography: member state, region, subregion, city,..

3.3 Analytical tools in macroprudential policy

The first tools used in macroprudential policy are **early warning indicators**. There are two main groups:

3.3.1 Macroeconomic indicators (Top-down)

They aggregate information about the whole system. There are many indicators:

GDP growth: It is an indicator of the level of exuberance in the economy. However, this indicator is more related to the economic cycle than to financial sector vulnerabilities. The output gap (deviations of actual GDP from potential GDP as % of potential GDP) can be a useful indicator of the degree of overheating.

Credit growth: Most financial crises are preceded by periods of strong credit growth followed by credit contractions. This indicator is useful in aggregate terms as well as decomposed by economic sectors.

Leverage and debt service ratio for the non-financial sector: Excessive credit growth can make the financial situation of households and non-financial companies more vulnerable. The credit-to-GDP ratio is a relevant measure of indebtedness and the basis for calculations of imbalances in the credit cycle.

Loan-to-value (LTV): High LTV's may show too lax credit standards, as well as vulnerable borrowers. Combined with increasing house prices, it can be an indication of an asset price bubble. Sometimes LTV ratios can be misleading. For example in the real state crisis in Spain the Loan to Value was not very high but this is because all the real state was being overvalued

Loan-to-Income (LTI): High LTI's also show too lax credit standards, which may also change for different levels of income.

Interest rate spreads: During a credit expansion period, this indicator can be helpful to determine whether it is due to demand (high spreads) or supply factors (low spreads).

Asset prices: Housing: increasing house prices tend to forewarn about accumulating vulnerabilities before quantity indicators. Useful indicators are the price-to-rent and price-to-income ratios. Stock prices are generally worse at predicting crises. Their behaviour is closer to point-in-time indicators.

3.3.2 Balance sheet indicators (Bottom-up)

Capital ratios: If the denominator is a risk-weighted measure, it is a solvency proxy. If the denominator is not risk-weighted, it is a leverage measure. This is generally a better early warning indicator than the solvency ratio.

Liquidity and funding ratios: Less sustainable funding sources can anticipate problems (e.g. too much short term exposure). From the asset point of view, measures of assets liquidity can also be helpful.

Banks' profitability: Periods of high profitability can be due to efficiency and productivity gains, but they can also come from higher leverage combined with excessive risk-taking. Low profitability can also engender risk-taking incentives.

3.3.3 CAMEL model

The name CAMEL derives from the rating system originally developed in the US to classify banks overall condition using information from the following components:

- Capital adequacy
- Assets
- Management Capability
- Earnings
- Liquidity

The model developed adapts this structure to the Spanish banking system by estimating an early warning model to identify vulnerabilities in specific banks

A logit model has been estimated in which the dependent variable captures transition to a vulnerable situation over the next two years. The estimation sample (starting in 1999 q4) exploits the global financial crisis to calibrate the model.

3.3.4 Bank of Spain: CREWS

Parameters:

- **Capital adequacy:** the capital ratio (total equity-to-total assets ratio)
- **Asset quality:** the NPL ratio, level and annual change
- **Management efficiency:** the cost-to-income ratio (total operating costs- to-total income ratio)
- **Earning ability:** ROE

- **Liquidity:** liquidity ratio (sum of cash, net deposits in credit institutions and credit to public entities without considering public debt, divided by total assets)
- **Sensitivity:** bank size, defined as the log of total assets of a bank
- **Macroeconomic variables:** GDP, interest rates

Distress events:

- Capital injections as a result of Banco de España stress test
- Distressed merger or acquisition

3.3.5 Systemic Risk Indicators (IRS)

The global financial crisis has shown the need of regularly monitoring the situation at the different markets, in order to identify and assess the level of systemic risk at each moment.

The ECB developed the CISS (Composite Indicator of Systemic Stress), a systemic risk indicator regularly used and published by the ESRB in its risk dashboard. Using the CISS as a starting point, Banco de España has developed its own IRS, which is analogous to the CISS but tries to focus on the situation and evolution of systemic risk in Spain.

The IRS aggregates information from 4 different markets, collapsing different measures of instability and stress at these markets in just one number.

The severity of the IRS is computed through a probabilistic scale.

IRS Components

- Bond Market
- Money Market
- Equity Market
- Financial Intermediaries Market

3.3.6 Growth at risk

Growth-at-risk is a quantile regression technique to estimate an extreme right tail quantile of the future GDP growth distribution (also used for real estate prices and other variables):

- A commonly employed quantile is 5%
- The future distribution of GDP is estimated on the basis of current information:
 - Current GDP growth
 - CLIFFS, a financial stress index
 - Change of the credit-to-GDP ratio
 - House Price growth
 - Current account balance

- Also possible to condition on macroprudential policy measures

This approach is very useful to characterise the intensity of the current crisis, as well as to gauge the potential benefit of several macroprudential tools.

Chapter 4

Prudential Regulation

16/10/2023

4.1 Basel II

Objectives

- A minimum capital ratio of capital to risk – weighted assets of 8%
- Continue to promote safety and soundness in the banking system
- Better align regulatory capital to underlying risk
- Expected Losses → Provisions
- Unexpected Losses → Capital

Three pillars:

- Minimum capital: Increased CET1 ratios, new leverage and liquidity ratios.
- Supervisory review
- Market discipline: the companies are required to disclose a lot of information so the market can assess the capital position of the bank

4.2 Basel III

Main implications:

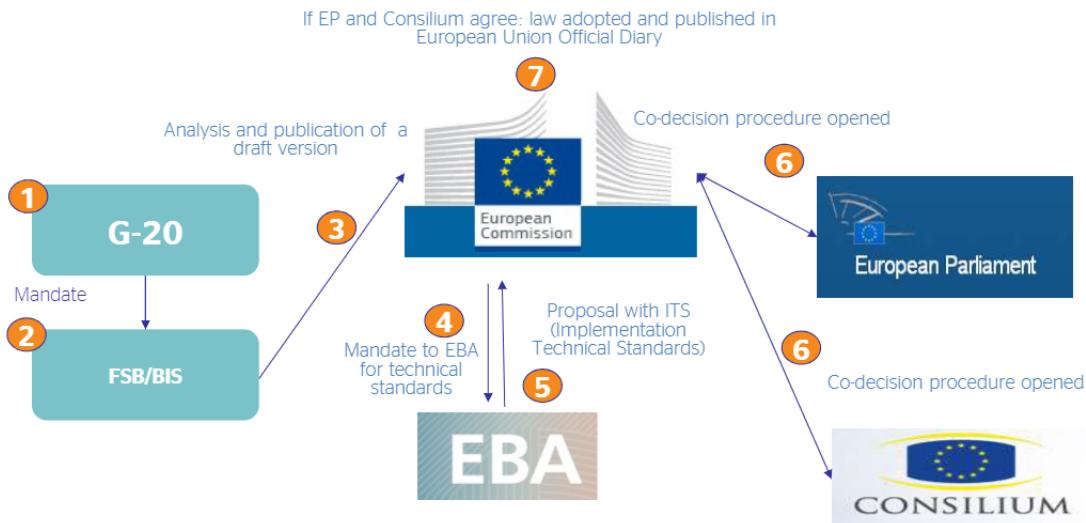
The first two pieces of Basel III focused on the numerator of the capital ratio. And the piece that is yet to come in 2025 is more focused in the denominator, on how we compute the risk weighted assets.

Basel III also introduced the leverage ratio to prevent banks from becoming too leveraged. This happened in the past because banks used internal models to artificially reduce the risk weighted assets. Now banks have to compare the results from their internal models with the results obtained with the standard approach provided by the supervisor.

Liquidity ratios were also implemented

The EBA is responsible for providing technical recommendations to the European Union to implement regulations and directives such as Basel III.

This regulations are enforced by the ECB.



4.3 Prudential consolidation

In prudential regulation, when you consolidate to set the consolidated capital requirements, you also take into account the type of entity, not only if you have control over it. This includes financial subsidiaries or even Ancillary services (they carry out important activities for the bank like, for example, all the technical services). Also real state companies could be consolidated if they are an extension of the activity of the bank.

There are 3 methods to do the consolidation:

- **Full consolidation:** You consolidate all the assets and liabilities of the subsidiary
- **Proportional consolidation:** You consolidate assets and liabilities proportionally to what percentage of the subsidiary you own.
- **Equity method:** You multiply the percentage you own by the equity of the subsidiary. Then you do the difference between that amount and your investment in the subsidiary. The “excess” is accounted as reserves OCI. In the equity method you take into account if the equity of the subsidiary is higher but **you don't take into account assets nor liabilities of the subsidiary**.

Regulatory capital is just a part of the total equity of the bank. For an element of the equity to be classified as regulatory capital it has to meet certain conditions.

From the prudential point of view the goodwill for example is not that clear that it has a value because when you elaborate financial statements from an accounting point of view you assume that the company is still running and functioning as normal. This is because the value of some assets can drastically decrease during a stress situation. These assets are not considered “healthy” from a regulatory point of view.

Also, accounting can treat differently the same asset depending on the purpose of that asset. If the bank buys loans just to trade and obtain some profit you will need to value that bond everyday and it will be reflected on your P&L. But if you plan on holding it until maturity it will get a different accounting treatment and the bank won't need to value it everyday.

	Accounting group	Banking Group
Goals	Consolidations	Solvency
Entities	Controlled subsidiaries	Financial entities and Ancillary companies
Techniques	Full consolidation	Full consolidation or Prop. consolidation

4.4 Introduction to capital or solvency ratios

Narrow Banking (fractionary banking)

The idea of this model is that banks need to invest all the money from deposits into high quality liquid assets (sovereign debt, cash), and can only grant loans with the equity part. This model would massively deleverage the banking system, slowing the economy and probably causing a huge recession. It could also shift the credit risk out of the financial sector which would not solve the problem. Also the business model of a bank is “maturity transformation” which consists in taking short term debt to grant long term loans. Then the question is: **How much capital do the banks need to hold to be able to operate safely?**

Since the banks are very leveraged one approach could be the leverage ratio which measures the capital the bank has over its total assets. The problem is that this measure doesn't take into account the riskiness of each asset so it cannot be the only measure.

That's why regulators introduced the **capital ratios**, which measure how much capital a bank has in relation to its assets weighted by a risk factor. This is the key ratio to measure how well a bank is capitalized. On top of capital ratios banks also have liquidity and leverage ratios too.

Before defining the capital ratios we need to give a definition of capital. The best and simplest capital instruments are the common shares, also known as CET1 capital. They have 3 key features to be considered capital:

1. **Loss absorption:** They can absorb losses on a “ongoing” concern, i.e the bank doesn't have to go through a process of resolution or liquidation for this instruments to absorb losses.
2. **Stability:** Common equity is perpetual, you don't have a put option that forces the bank to buy your shares back.
3. **Flexibility of the payments:** The payment of dividends is discretionary so the bank can decide whether to pay them or not without any explanation, even if they are going through “good times”.

The regulatory capital, which is the numerator of the capital ratio, can be divided in different tiers.

4.4.1 Common Equity Tier 1 (CET1)

The most common example of CET1 is common shares from the company. Other CET1 instruments are:

- Share premium accounts
- Retained earnings

- Accumulated other comprehensive income (OCI)
- Other reserves
- Minority Interest
- Fund for general banking risk

This instruments must meet some characteristics in order to be considered CET1:

- Issued directly by the institution
- Their purchase is not funded directly or indirectly by the institution
- Perpetual
- No obligation for the institution to make distributions
- The instruments absorb the first and proportionately greatest share of losses
- The instruments rank below all other claims in the event of insolvency or liquidation of the institution

Under Basel III:

$$\text{CET1 ratio} = \frac{\text{CET1 Capital}}{\text{RWA}} > 4.5\%.$$

Minority Interests

Minority interest can be considered regulatory capital as a way of “rewarding” the parent company for consolidating in full the subsidiary and thus, computing the risked weighted assets with the 100% of the assets of the subsidiary. However, this subsidiaries have to be subject to prudential regulation for this minority interest to be considered as regulatory capital.



Figure 4.1: Example of how minority interest is consolidated in an accountancy point of view

If a subsidiary has a surplus of capital and you only own 50% you cannot really declare dividends

Exercise

A banking group has the 80% of a subsidiary in Peru with a book value at a individual level of 8. At a consolidated level, this subsidiary is integrated using the full consolidation method. Calculate the amount to be included in the Group capital base taking into account the following information:

- Subsidiary's CET1 (equals to accounting equity): 10

- Subsidiary's CET1 requirements (local): 8
- Subsidiary's CET1 requirements (contribution): 7

Solution

For the calculation of the minority interest that is part of the capital you have to take into account the lowest capital requirement of the subsidiary. Here the lowest is the local one so:

- Min CET1 requirements: 7

Now we compute the minority interest (M.I) which is the total equity of the subsidiary multiplied by the percentage of the company that we do not have:

- Minority interest = $10 \times 20\% = 2$

$$\text{Regulatory Minority Interest} = \text{Minority interest}_{\text{accounting}} - \text{Excess}_{M.I \text{ part}} = 2 - (10 - 7) \times 0.2 = 2 - 0.6 = 1.4$$

This amount of 1.4 is considered as CET1 when computing the capital ratios.

4.4.2 Regulatory CET1 adjustments

You need to deduct some assets from the CET1 to take into account in the regulatory capital. Some examples are:

- Intangible assets (Goodwill & Software ¹)
- Shortfall expected losses vs. provisions (IRB method)
- Direct, indirect and synthetic holdings by an institution of its own Common Equity Tier 1 instrument
- Reciprocal holdings of financial sector entities
- Direct, indirect and synthetic holdings of the Common Equity Tier 1 instruments of financial sector entities ²
- Deferred tax assets that rely on future profitability ³
- Insufficient coverage for non-performing exposures
- The amount of items required to be deducted from AT1 items that exceeds the AT1 items of the institution

Calculation of CET1 instruments of financial entities

You first have to divide the instruments on three categories: **Direct**, **Indirect** and **Synthetic**. After that we differentiate between **Significant investment** and **Non Significant investment**

Deduction of Financial Investments

Let's assume that BBVA has the following investments in its equity portfolio:

- Bankia: 9% (1000)
- Santander: 5% (2000)

¹Some software can be considered a regulatory asset and not be deducted

²If you don't have too many they can be considered regulatory capital

³If you don't have too many they can be considered regulatory capital

- AT1 Bankia: (1000)

If BBVA's CET1 is 25.000 (without taking into account significant investment, non-significant investment and DTA deductions), please calculate (if any) the amount of capital deduction

Solution

Total exposure non-significant investments ($CET1 + AT1 + T2$) = $(1.000 + 2.000) + 1.000 = 4.000$

Threshold = 25.000 X 10% = 2.500

Total deduction = $4.000 - 2.500 = 1.500$

Of which:

$$CET1 = \frac{3000}{4000} \cdot 1500 = 0,75 \cdot 1500 = 1125$$

$$AT1 = \frac{1000}{4000} \cdot 1500 = 0,25 \cdot 1500 = 375$$

Here we don't take into account subsidiaries for the calculation.

4.4.3 Deferred Tax Assets (DTAs)

Deferred tax assets that are dependent on future profitability and arise from temporary differences shall be deducted (the amount that is more than 10%)

Rely on future profitability?	Temporal	Non temporal
YES	Partial deduction	100% deduction
NO	RWA = 100%	RWA for counterparty (1)

Table 4.1: Deduction of DTA's. (1): In this case the DTA's are Carrybacks - Overpayment

Deferred tax assets are created due to taxes paid or carried forward but not yet recognized in the income statement. For example let's imagine a bank that has 2 loans. The bank needs to make provisions:

- *Loan* → 10.000\$ → 100\$ provision
- *NPL* → 10.000\$ → 3000\$ provision

These provisions are expenses for the bank. However for the tax authority you can only deduct irreversible losses, not expected losses. So the 100 provision for the loan is not an expense in the eyes of the tax authority.

What does the bank do ? The amount that the bank is overpaying doesn't go against the P&L, it goes against an asset called DTA. However, for this asset to have any value the bank needs to make profits.

Example: Deduction of DTAs

Lets assume that the accounting profit is 200 but the fiscal profit is 220. Assuming a tax rate of 30%, indicate the accounting entry and describe the impact on the balance sheet

Solution

The deferred tax asset is the difference between the cash you are paying to the financial authority and the amount you would have to pay based on the profits recognized on your P&L. In this example:

$$DTA_s = 220 \times 30\% - 200 \times 30\% = 66 - 60 = 6 \quad (4.1)$$

Example: DTAs arising from temporary difference

Lets assume that the institution has bought a new table with an accounting value of 100. The institution uses the linear method for amortizing tangible assets

- Accounting: 5 years
- Fiscal: 10 years

The profit before taking into account the amortization cost of the table is 120. Assuming a tax rate of 30%, indicate the accounting entry in year 1 and in year 6

Solution

Year 1

Accounting profit after the amortization = 120

Fiscal profit after the amortization = $120 - (\frac{100}{10}) = 110$

$DTA = (110 - 120) \times 30\% = -3$

30 P&L	33 Cash
3 DTA	

Year 6

Accounting profit after the amortization = $120 - (\frac{100}{5}) = 100$

Fiscal profit after the amortization = $120 - (\frac{100}{10}) = 110$

$DTA = (110 - 100) \times 30\% = 3$ (asset)

33 P&L	30 Cash
	3 DTA

4.4.4 Additional Tier I instruments (AT1)

These instruments meet some of the requirements of CET1 (see section 4.4.1), but they are not considered in the same level. The main instruments in this category are the Contingent Convertible Bonds (CoCo's). They are a hybrid instrument ⁴ with some features that allows it to be considered as additional tier 1. The most important thing is that they can be temporarily or permanently written off or they can be converted into equity when the CET1 capital is below a certain established threshold (5.125%). They are also permanent instruments since they don't have a maturity date.

Characteristics:

- Instruments shall be directly issued by an institution
- Full discretion to cancel the distributions on the instruments
- Prohibition of netting or set-off agreements
- Perpetual (no incentive to redeem them)

⁴They are hybrid because they are a debt instrument that shares some features with equity

- The purchase is not funded directly or indirectly by the institution
- The instruments rank below Tier 2 instruments in the event of the insolvency of the institution
- The principal amount shall be written down on a permanent or temporary basis or be converted to CET1 instruments:
 - Ratio CET1 < 5.125%
 - Non viability
- Bail-in clause

Regulatory Additional Tier I adjustments

- Direct, indirect and synthetic holdings by an institution of own Additional Tier 1 instruments
- Direct, indirect and synthetic holdings of the Additional Tier 1 instruments of financial sector entities (reciprocal, significant, non significant)
- The amount of items required to be deducted from Tier 2 items that exceeds the Tier 2 items of the institution

Under Basel III:

$$\text{Tier 1 ratio} = \frac{\text{CET1} + \text{Additional T1}}{\text{RWA}} > 8\%.$$

4.4.5 Tier II items

The main Tier II instruments are subordinated debt. It only absorbs losses in a “gone concern” situation (resolution or liquidation). They are stable in the sense that they have a original maturity of at least 5 years. They don't have flexibility. Some Tier II capital instruments are: Capital instruments or the share premium accounts related to capital instruments. Excess accounting provisions vs expected provisions.

Characteristics:

- Instruments shall be directly issued by an institution
- The purchase is not funded directly or indirectly by the institution
- Prohibition of netting or set-off agreements
- Original maturity of at least five years
- Do not include any incentive for their principal amount to be redeemed or repaid by the institution prior to their maturity
- The instruments rank below normal claims in the event of the insolvency of the institution
- Write down or conversion when the institution is not longer viable
- Bail-in clause

Under Basel III:

$$\text{Total Capital ratio} = \frac{\text{Total Capital}}{\text{RWA}} > 8\%.$$

4.4.6 Value adjustments

When the fair value of the asset is hard to compute the supervisor may value it differently. For example in an investment bank the assets in the trading book (derivatives) are designated at fair value. There are many ways to value these assets:

- 1. Level I assets —> Market value:** If it is available
- 2. Level II assets —> Mark to model:** When there is no market price for the asset and you create a model fed with market data to price the asset
- 3. Level III assets —> Mark to mark:** When there is no market price for the asset and you create a model fed with estimations made by the bank to price the asset

For example for the regulator Level III assets are not well valued in the trading book so he will always set another price for these assets.

4.4.7 Phase-in vs Fully Loaded capital ratios

In the phase in period new deductions, new characteristics in capital instruments, new treatments are applied progressively during a transitional period.

In the fully loaded methodology the regulation that is in place is applied in full.

Grandfathering arrangements

Instruments that do not contain a bail – in clause or are subject to a netting agreement issued prior to 27 June 2019 shall qualify as AT1/T2 instruments at the latest until 28 June 2025.

Institutions shall not deduct the applicable amount of insufficient coverage for non-performing exposures where the exposure was originated prior to 26 April 2019.

In particular case of DTA that rely on future profitability (generated before 1 January 2014), the phase – in period is 10 years (10% each year) according to the following ranges:

- (i) 80% for the period from 1 January 2022 to 31 December 2022;
- (j) 90% for the period from 1 January 2023 to 31 December 2023

4.4.8 Capital ratios: Case study 2



Case study 2 - Acquisition

The Bank from the East Ltd has the following information:

- a. Information of the amount of available capital:
 - (i) CET1 - EUR 1,000M.
 - (ii) Tier 1 - EUR 1,000M.
 - (iii) Total Capital – EUR 1,400M.
- b. Information on the amount of risk-weighted assets (RWAs):
 - (i) Credit risk - EUR 8,000M.
 - (ii) Operational RWAs - EUR 1,000M.
 - (iii) Market risk - EUR 1,000M.
- c. Minimum requirements applicable to Bank from the East:
 - (i) Pillar I capital requirements:
 - a) Minimum CET 1 ratio – 4.5%.
 - b) Minimum Tier 1 ratio – 6.0%.
 - c) Minimum Total Capital ratio – 8.0%.
 - (ii) Pillar II capital requirements:
 - a) CET1 - 2%.
 - (iii) Capital buffers :
 - a) Capital conservation buffer - 2.5% (to be met with CET1).
 - b) D-SIB buffer 1% (to be met with CET1).

Considering the previous information, the Bank from the East is considering an acquisition of First Bank of Bahamas (FBB). The following information refers to First Bank of Bahamas:

First Bank of Bahamas (FBB)		
1,000	Loans	Equity
400	Bonds	Subordinated debt
100	Cash	Interbank deposits
60	Non-performing loans	Retail deposits
(30)	Provisions for NPLs	Corporate deposits
		Total liabilities
1,530	Total assets	Total liabilities and capital
		1,530

**Exercise**

The price agreed between the two parties for the 100% of the bank is EUR 400M. The purchase price allocation reveals unrecognized gains in the bond portfolio for an amount of 100M. Considering this information, the Bank from the East wants to determine which is the best way to fund the acquisition from a solvency perspective:

- a. Paying the price to FBB's shareholders in cash.
- b. Paying in newly issued shares to FBB's shareholders.

Calculate the resulting capital ratios for each of the alternatives.

Solution

Let's compute first the ratios of the Bank of the East:

- RWA = $8000 + 1000 + 1000 = 10.000$
- CET1 = $1000 \Rightarrow CET1\ ratio = \frac{1000}{10.000} = 10\%$
- T1 = $1000 \Rightarrow T1\ ratio = \frac{1000}{10.000} = 10\%$
- Total = $1400 \Rightarrow Total\ Capital\ ratio = \frac{1400}{10.000} = 14\%$

Now we compute the capital requirements. The CET1 requirement is:

$$\left. \begin{array}{l} 4,5\% \text{ (Pillar I)} \\ +2\% \text{ (Pillar II)} \\ +2,5\% \text{ (Conservation buffer)} \\ +1\% \text{ (D-SIB buffer)} \end{array} \right\} \Rightarrow 10\% \text{ CET1 capital}$$

Then the T1 and total capital ratios will be:

$$\text{Min T1 ratio} = 11,5\%; \text{ Min Total Capital ratio} = 13,5\%$$

Now let's take into account the adquisition of FBB. To compute the RWA we are giving a 100% weight to every asset except bonds, which we assume are sovereign debt bonds and thus have a 0% weight. FBB also has provisions for the not performing loans, so the total risk weighted assets are:

$$RWA = 1000 + 60 - 30 = 1030 \Rightarrow \text{Total RWA} = 10.000 + 1030 = 11.030$$

The East Bank paid 400 for FBB. The book value of FBB is 250 (its equity). Because it says that there are unrealized profits in the loan portfolio for an amount of 100, so in reality the value is 350. Because there is a difference between the price paid and the book value a goodwill is generated.

$Goodwill = 400 - 350 = 50$ Now let's compute the new ratios of the East Bank after the adquisition using the two scenarios:

Paying cash

$$CET1\ ratio = \frac{1000-50}{11.030} = 8,61\%$$

$$T1\ ratio = \frac{1000-50}{11.030} = 8,61\%$$

$$Total\ ratio = \frac{1400-50+50}{11.030} = 12,60\%$$

Paying shares

$$CET1\ ratio = \frac{1000+400-50}{11.030} = 12,24\%$$

$$T1\ ratio = \frac{1000+400-50}{11.030} = 12,24\%$$

$$Total\ ratio = \frac{1400+400-50+50}{11.030} = 16,32\%$$

Thee -50 is the deduction of the the goodwill. As we see if the East Bank pays with cash they aren't able to meet the minimum capital requirements so the advice is that the adquisition is done through the issuance of new shares and payment of those shares to the shareholders of FBB bank.

4.4.9 Capital ratios: Case study 3



Case study 3 – Renewal BankShares Group

A banking group has the following structure:

- A. The parent company (Renewal BankShares) is a holding institution that controls several banking institutions. In particular, it controls:
 - (i) Renewal Bank, a bank entity based on Germany (100%)
 - (ii) Renovation Bank, a bank entity based on Italy (51%)
 - (iii) Renewal Real Estate. A real estate company, mainly investing in real estate assets, based on Germany.
 - (iv) Renewal IT services, a non-operating company devoted to the provision of IT services to the rest of the companies that belong to the parent entity.

- B. The entities have the following balance sheets:

Renewal Bank		
20,000	Loans	Equity
3,000	Bonds	Subordinated debt
500	Cash	Interbank deposits
1,000	Non-performing loans	Retail deposits
(300)	Provisions for NPLs	Corporate deposits
24,200	Total assets	Total liabilities and capital
		24,200

Renovation Bank		
2,000	Loans	Equity
150	Bonds	Subordinated debt
200	Cash	Interbank deposits
400	Non-performing loans	Retail deposits
(300)	Provisions for NPLs	Corporate deposits
2,450	Total assets	Total liabilities and capital
		2,450

Renewal Real Estate		
100	Real estate assets	Equity
30	Cash	Long-term debt
30	Other assets	Payables
50	Receivables	Other liabilities
210	Total assets	Total liabilities and capital
		210

**IT services company**

40	Software	Equity	40
5	Cash	Payables	20
10	Other assets		
5	Receivables	Total liabilities	20
60	Total assets	Total liabilities and capital	60

Renewal BankShares (Holding company)

1,700	Participation in Renewal Bank	Equity	1,800
250	Participation in Renovation Bank	Subordinated debt	100
20	Participation in Renewal Real Estate	Other debt	300
40	Participation in IT services company	Other liabilities	60
50	Other assets		
200	Cash	Total liabilities	460
2,260	Total assets	Total liabilities and capital	2,260

**Exercise - With the information above:**

- 1) Determine the legal entities which are subject to minimum capital requirements.
- 2) Determine the existence of a banking group.
- 3) Calculate the capital ratios of the different entities (individual+ consolidated).

Solution

a) Determine the legal entities which are subject to capital requirements

The institutions that are subject to minimum capital requirements are: Renewal BankShares (the holding company), Renewal Bank and Renovation Bank because they are the only financial institutions.

b) Determine the existence of a banking group

The banking group does exist and it has the following structure:

$$\text{Renewal BankShares (Parent)} \implies \begin{cases} \text{Renewal Bank (financial institution, 100% owned)} \\ \text{Renovation Bank (financial institution, 51% owned)} \\ \text{Renewal IT services (Ancillary)} \end{cases}$$

c.1) Calculate the individual capital ratios of the different entities

Renewal Bank

$$RWA = 20.000 + 1000 - 300 = 20.700$$

$$CET1 \text{ ratio} = \frac{1500}{20.700} = 7,25\%$$

$$T1 \text{ ratio} = \frac{1500}{20.700} = 7,25\%$$

$$\text{Total ratio} = \frac{1500+1200}{20.700} = 13,04\%$$

Renovation Bank

$$RWA = 2000 + 400 - 300 = 2100$$

$$CET1 \text{ ratio} = \frac{250}{2100} = 11,90\%$$

$$T1 \text{ ratio} = \frac{250}{2100} = 11,90\%$$

$$\text{Total ratio} = \frac{250+100}{2100} = 16,67\%$$

c.2) Calculate the consolidated capital ratios

Table 4.2: Consolidated Balance sheet

Assets	Liabilities
2000 + 20.000 Loans	Equity 1800
15 + 50 Other assets	Subordinated debt 1200 + 100
5 + 500 + 200 Cash	Other liabilities 60
125 + 200 Goodwill	Other debt 300 + 20
150 + 3000 Bonds	Deposits 21.500 + 2100
100 + 700 NPL	Minority interest 125
40 Software	
20 Real state company	
27.305	27.205

Renewal BankShares

$$\text{Renewal BankShares } RWA = 2100 + 20.700 + 65 + 40 = 22.905$$

$$CET1 = \frac{1800-325-20+102}{22.905} = \frac{1557}{22905} = 6,80\%$$

$$T1 = \frac{1800-325-20+102}{22.905} = \frac{1557}{22905} = 6,80\%$$

$$\text{Total Capital} = \frac{1800-325-20+102+100+1200}{22.905} = \frac{2857}{22905} = 12,47\%$$

4.4.10 Capital ratios: Case study 4



Case study 4 – Third Bank

The Third Bank is based on the UK. It devotes mainly to provide commercial and retail banking to individuals, SMEs, corporates and public sector entities (mainly regions and councils). It was set up in 1925 and has experienced several transformations across its history. The last one, 3 years ago, involved the merger of two competing banks into the current bank.

Some additional data:

Loan portfolio:

- A. The bank calculates its loan-loss provisions according to IFRS 9. However, the bank has not reported any losses (and provisions) in the stage 1 and stage 2 loan portfolios.
- B. The prudential filters applied by the bank according to the regulations results in value adjustments of EUR 250M.
- C. The details of the retail loan portfolio and corporate loan portfolio are presented below.
- D. The bank calculates its credit risk capital requirements (and credit risk-weighted assets) according to the standardized approach. The bank does not currently have the ability to use the internal rating-based approaches for credit risks purposes.

Bond portfolio:

- A. The bank includes all its bonds in the banking book portfolio (from the accounting perspective and from the regulatory perspective).
- B. The bank calculates the capital requirements for the exposures included in the bond portfolio taking into account the credit risk rules (standardized approach). The bank does not calculate market risk capital requirements.

Operational risk:

- A. The bank calculates its capital requirements for operational risk with the Basic Indicator Approach.
- B. The information needed for their calculation is presented below (evolution of the P&L account during the last 3 years)

Capital requirements and buffers:

- A. The bank's capital requirements are:
 - 1) Pillar I
 - (i) Minimum CET1 ratio 4.5%.
 - (ii) Minimum Tier I ratio of 6%.
 - (iii) Minimum Total Capital Requirements of 8%.
 - 2) Pillar II. Additional Requirement of 2%, to be complied with CET1.



- 3) Combined buffer requirements.
- (i) Capital conservation buffer of 2.5%, to be complied exclusively with CET1.
 - (ii) Domestic SIB buffer of 1%, to be met only with CET1.

Peer group solvency data:

	<i>CET1 Ratio</i>	<i>Tier I Ratio</i>	<i>TCR</i>	<i>Leverage R</i>
Peer 1	12%	13.50%	16%	4.20%
Peer 2	11.30%	12.40%	14.40%	3.60%
Peer 3	14.70%	16.10%	17.90%	5.35%
Peer 4	15.90%	17.30%	18%	7%
Peer 5	18%	18%	21%	11%
Average	14.38%	15.46%	17.46%	6.23%
Median	14.70%	16.10%	17.90%	5.35%

a. Balance sheet data

	Assets		Liabilities
20,000	<i>Loans</i>	1,500	<i>Equity</i>
3,000	<i>Bonds</i>	1,200	<i>Sub debt</i>
500	<i>Cash</i>	1,500	<i>Interbank deposits</i>
1,000	<i>NPLs</i>	15,000	<i>Retail Deposits</i>
(300)	<i>Provisions for NPLs</i>	5,000	<i>Corporate Deposits</i>
24,200	TOTAL ASSETS	24,200	TOTAL LIABILITIES

(i) The breakdown of the retail loan portfolio is shown below:

<i>Retail Loan Portfolio</i>	
Retail Mortgage Loans (LTV<60%)	4,500
Retail Mortgage Loans (60%<LTV<80%)	3,000
Retail Mortgage Loans (LTV>80%)	800
Retail consumer loans	1,500
Credit card loans	500
Auto loans	2,000
Loans secured by pledged deposits	600
Total Retail Loans	12,900

(ii) The breakdown of the corporate loan portfolio is introduced below:

<i>Corporate Loan Portfolio</i>	
Commercial Mortgage Loans (LTV<60%)	2,000
Commercial Mortgage Loans (LTV>60%)	1,000
Syndicated Loans	2,000
Project Finance	500
Short term loans	800
Public sector loans	800
Total Corporate Loans	7,100



(iii) The details of the NPL portfolio is included:

<i>Non-performing loan portfolio</i>	<i>Exposure</i>	<i>Provisions</i>	<i>Net exposure</i>
Non-performing retail mortgage loans	400	100	300
Non-performing consumer loans	300	100	200
Non-performing corporate loans	200	100	100
Non-performing public sector loans	100	0	100
Total NPLs	1,000	300	700

(iv) Breakdown of the bond portfolio, by instrument, issuer, currency and average duration:

<i>Bond portfolio</i>	<i>Exposure</i>	<i>Currency</i>	<i>Duration</i>
Bonds issued by the Spanish Sovereign	800	EUR	8.5
Bonds issued by the Greek Government	200	EUR	2
Bonds issued by the Mexican government	900	MXN	1.5
Bonds issued by Catalonia	400	EUR	3
Covered bonds issued by Deutsche Bank	300	EUR	10
Subordinated bonds issued by Deutsche Bank	400	USD	7
Total Bonds	3,000		

(v) Evolution of the Profit and Loss account during the last 3 years.

<i>Profit and loss account</i>	<i>x-2</i>	<i>x-1</i>	<i>x</i>
Interest income	510	430	410
Interest expenses	-225	-183	-161
Net interest income	285	247	249
Fee income from securities	28	40	42
Fee income from banking services	70	75	74
Fee expenses	-10	-9	-12
Net trading income	40	25	10
Gross income	413	378	363
Administrative expenses	-80	-78	-82
Personal expenses	-115	-117	-120
Net operating income	218	183	161
Provisions for loan losses	-30	-27	-34
Legal provisions	-2	-18	-30
Profit before taxes	186	138	97
Tax on profit	-55.8	-41.4	-29.1
Net result	130.2	96.6	67.9



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Exercise - With this information:

1. Calculate the bank's current capital ratios.
2. Provide your opinion on the bank's solvency (compared with its peers).

4.4.11 Elsa Martinez Case Study: Capital deductions

Please, calculate the CET1 and total capital ratio at a consolidated level (both phase-in and fully loaded) as of December 2022 taking into account the following information. In addition, if applicable, please calculate the MDA

Balance sheet of Parent company

Table 4.3: Parent Balance sheet

Assets	Liabilities
15 Equity portfolio	Common shares 22
1 Goodwill	Perpetual debt 5
5 DTA	Subordinated debt 5
3 Software	OCI (10)
5 Investment B	Reserves 5
306 Others	Liabilities 308

Balance sheet of Subsidiary B

Table 4.4: Balance sheet of Subsidiary B

Assets	Liabilities
100 Assets	Equity 10 Liabilities 90

Additional information

- Interim profits = 10
- Taxes on profits = 20%
- The Group is using IRB models for calculating credit RWAs
- Composition of the equity portfolio:
 - 8 Apple (3%)
 - 3 SAN (11%)
 - 2 BBVA (9%)
 - 1 AT1 BBVA
 - 1 BK (12%)
- Perpetual debt
 - 2 AT1 instrument subject to a netting agreement issued in June 2018
 - 3 AT1 instrument issued by a SPV in December 2019
- Subordinated debt
 - T2 instrument that do not contain a bail – in clause issued in December 2018
- Accounting provisions = 12

- Expected losses = 10
- 50% of minority interest
- Full consolidation method is applied to subsidiary B
- Subsidiary B's capital requirements: (local)= 8, (conso) = 7
- Consolidated RWAs are 200 (100 RWA for credit risk)
- DTA's don't rely on future profitability
- Software: 3 of them are considered to be prudently valued software assets, the value of which is not negatively affected by resolution, insolvency or liquidation of the institution
- Pillar II requirements = 2.5% (assuming the full amount to be met with CET1)
- The institution has not identified as a systemic institutions and the systemic risk and countercyclical buffer are not activated at this moment.
- OCI coming from a bond issued by Telefónica
- The institution is applying the prudential filter

Solution

Firstly we need to identify what can be part of CET1. In this case we have: Common shares, minority interest, OCI and reserves. Note that OCI is negative so it will be subtracted instead of added.

Shortfall/Excess = Provisions - Expected Losses = 12 - 10 = 2 \Rightarrow We have an **Excess**

Minority interest calculation

- Minimum Subsidiary B CET1 requirements = 7
- Non holding part of Subsidiary B = $10 \cdot 50\% = 5$
- Minority interest = $5 - [(10-7) \cdot 50\%] = 5 - 3 \cdot 0.5 = 3.5$

$$\text{CET1} = 22 + 3.5 - 10 + 5 = 20.5$$

Before computing non-significant and significant investments we need to deduct the things that are clear.

$$\text{New CET1} = 20.5 - 1 = 19.5$$

In this case we only have Goodwill. Here we would also need to deduct software and shortfall in case it was necessary. DTA's are deducted after the investments deduction.

Non-significant investments

$$\left. \begin{array}{l} 2 \text{ BBVA (9\%)} \\ 1 \text{ AT1 BBVA} \end{array} \right\} \Rightarrow \text{Total exposure} = 3$$

$$\text{Threshold} = \text{New CET1} \cdot 10\% = 19.5 \cdot 10\% = 1.95$$

Deduction = $3 - 1.95 = 1.05$, of which:

$$\text{- CET1} = \frac{2}{3} \cdot 1.05 = 0.7$$

$$\text{- AT1} = \frac{1}{3} \cdot 1.05 = 0.35$$

Significant investments

New CET1 = $19.5 - 0.7 = 18.8$

$$\left. \begin{array}{l} 3 SAN (11\%) \\ 1 BK(12\%) \end{array} \right\} \implies \text{Total exposure} = 4$$

Threshold = $18.8 \cdot 10\% = 1.88$

Deduction = $4 - 1.88 = 2.12$

Joint deduction

The exposure subject to joint deduction is the amount that has not been already subject to deduction

Joint Exposure = $4 - 2.12 = 1.88$

Joint Threshold = $(19.5 - 4 - 3) \cdot 17.65\% = 2.21$

Joint deduction = 0 ($1.88 < 2.21$)

Levels of capital

Phase-In

CET1 = $19.5 - 0.7 - 2.12 = 16.68$

AT1 = $2 - 0.35 = 1.65$

2 AT1 meeting agreement Jun 2018

- 0.35 AT1 deduction

$T_2 = 5 + 0.6 = 5.6$

5 instrument, bail-in Dec 2018

+ 0.6 min[Acc. provisions, 100 Credit Risk RWA $\cdot 0.6\%$]

Total = $16.68 + 1.65 + 5.6 = 23.93$

Fully Loaded

CET1 = $19.5 - 0.7 - 2.12 = 16.68$

AT1 = $0 - 0.35 = (0.35)$

- 0.35 AT1 deduction

$T_2 = 0.6$

Total = $16.68 - 0.35 + 0.6 = 16.93$

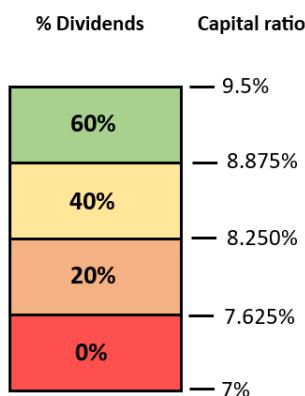
Capital ratios

Phase-In

$$\text{CET1 ratio} = \frac{16.68}{200} = 8.34\%$$

Min CET1 requirement = 9.5%

Since $8.34\% < 9.5\%$ we cannot fully distribute dividends. We need to divide the extra requirements ($9.5\% - 7\% = 2.5\%$) into 4 quartiles. Depending on the bucket where the entity is it will be able to distribute a certain amount of dividends. In this case the entity is in the third quartile, the **yellow** zone, so the MDA will be 40%.



4.5 Risk weighted assets

The risk weighted assets are measured by the exposure, which is the maximum amount lost if the counterparty defaults, multiplied by the risk weight of such exposure. There are two main approaches to calculating risk weighted assets:

4.5.1 Standardized approach

Exposure

The total exposure is measured as: $\text{Balance sheet assets} + \text{Off balance sheet assets} \times \text{CCF}$

The credit conversion factor (CCF) is an estimation of the off-balance sheet assets being transformed into on-balance sheet assets. There are four buckets of products, each with a different value of CRR.

Low CCF=0	Medium CCF=50%
Medium Low (CCF=20%)	High (CCF=100%)

Figure 4.2: CCF buckets

Risk weight

The risk weight can be summarized using a table that gives a certain risk weight to a counterparty depending on the type of counterparty it is and its credit quality rating:

Counterparty	Rating – Credit quality step					
	1	2	3	4	5	6
Central governments/central banks	0%	20%	50%	100%	100%	150%
Regional governments/local authorities	20%	50%	100%	100%	100%	150%
Public sector entities	20%	50%	100%	100%	100%	150%
Multilateral development banks	If included in the list of the CRR, RW = 0%. If not, RW = 100%					
International organizations	If included in the list of the CRR, RW = 0%. If not, RW = 100%					
Institutions (rated; long term)	20%	50%	50%	100%	100%	150%
Institutions (rated; short term)	20%	20%	20%	50%	50%	150%
Institutions (unrated)	It shall assign the RW of exposures to the central government of the jurisdiction in which the institution is incorporated					
Corporates (rated)	20%	50%	100%	100%	150%	150%
Corporates (unrated)	It shall assign a 100% RW or the RW of exposures to the central government of the jurisdiction in which the institution is incorporated, whichever is the higher					
Retail	75%					

	S&P		Moody's		Fitch	
	Credit Assessment	Credit Quality Step	Credit Assessment	Credit Quality Step	Credit Assessment	Credit Quality Step
AAA	1	Aaa	1	AAA	1	
AA	1	Aa	1	AA	1	
A	2	A	2	A	2	
BBB	3	Baa	3	BBB	3	
BB	4	Ba	4	BB	4	
B	5	B	5	B	5	
CCC	6	Caa	6	CCC	6	
CC	6	Ca	6	CC	6	
C	6	C	6	C	6	
SD/D	6			RD/D	6	

Figure 4.3: Credit quality step and rating tables. Where a rated item has two credit assessments by ECAs, institutions shall apply the less favourable assessment. Where it has more than two credit assessments by ECAs, institutions shall apply the two most favourable assessments. Where the two most favourable credit assessments are different, institutions shall apply the less favourable of the two.

Residential mortgages

With some kind of assets the risk is computed using a particular method. With mortgages the RW is computed in relation of the loan to value

Example exercise

Lets assume a mortgage with the following characteristics:

- Initial amount: 285.000 euros

- Outstanding amount: 285.000 euros
- Appraisal value: 250.000 euros
- Counterparty: Retail
- Maturity 20 years

Solution

The value of the house is 250.000. Up to a LTV of 80% the risk weight is 35%. Because $250.000 \times 0.8 = 200.000$ that means that the first 200.000 of the loan have a risk of 35%. The next 50.000 will have a risk of 100% and the last 35.000 a risk of 75% (the counterparty is retail, see table 4.3). The RWA is: $RW_{Asset} = 250.000 \times 0.8 + 50.000 \times 1 + 35.000 \times 0.75 = 146.250$

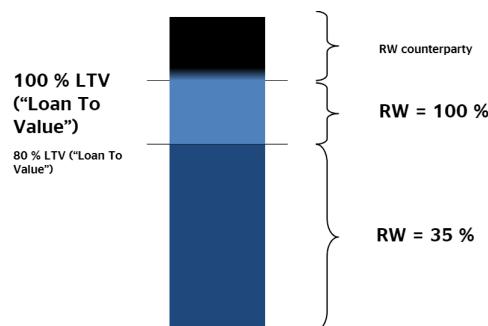


Figure 4.4: **Mortgage risk weight.** The first 80% of the value of the loan that is collateralized by the house is considered to have a weight of 35%. The remaining 20% until reaching the value of the collateral has a risk weight of 100%. After that, if the loan exceeds the value of the house, counterparty risk weight is applied using table 4.3

Exercise: Credit lines

Lets assume a credit line with the following characteristics:

- Initial amount granted: 28.500 euros
- Drawn amount: 15.000 euros
- Counterparty: Corporate Rating BB
- Accounting provisions: 300 euros
- Maturity 13 months
- The element is classified as medium/low risk

Solution

The counterparty is a corporate with a BB rating, which has a risk weight of 100% 4.3. The amount that the counterparty has already drawn is 15.000. However we have accounting provisions of 300 so we apply the rw to the amount drawn minus the provisions. The rest of the credit line that has not been drawn yet, 13.500, which is an off-sheet asset, is classified as medium-low risk so we apply a CCF of 20% 4.2 to calculate the exposure.

The risk weighted asset is then computed as follows:

$$\text{Exposure} = (15.000 - 300) \times 100\% + 13.500 \times 20\% = 17.400$$

$$RW = 100\% \text{ (Corporate BB rating)}$$

$$RW_{Asset} = \text{Exposure} \times RW = 17.400 \times 100\% = 17.400$$

Exposure to central governments, central banks and other exposures

Exposures to Member States' central governments, and central banks denominated and funded in the domestic currency of that central government and central bank shall be assigned a risk weight of 0%. This is for a political reason. Since the governments are so indebted, they want to incentivize banks to buy their debt by assigning this debt a weight of 0%, even though it is not totally risk free⁵.

Other assets

- Tangible assets: RW of 100%
- Prepayments and accrued income for which an institution is unable to determine the counterparty: RW of 100%
- Cash items in the process of collection: RW of 20%
- Cash in hand and equivalent cash items: RW of 0%
- Gold bullion held in own vaults or on an allocated basis to the extent backed by bullion liabilities: RW of 0%

Particular high risks

Institutions shall assign a 150% risk weight to exposures that are associated with particular high risks. For example:

- Investments in venture capital firms
- Investments in private equity
- Speculative immovable property financing

4.5.2 Advanced approach IRB

Roll out approach - You can start by using this model in some portfolios but you have to explain to the regulator how you are going to roll out this models to all of your portfolios

Permanent partial use - With some products like sovereign debt you can use IRB since the standarized approach gives it 0% RW.

Example exercise: Treatment of provisions

Let's assume a bank has a single loan and the following:

- Exposure value: 1.000
- Risk weight: 100%
- Specific provisions: 100

⁵Even though the risk of the government is very low it is not totally risk free. The greek government for example defaulted during the economic crisis

- Generic provisions: 50
- Expected losses: 200
- CET1 capital: 50
- Additional T1 capital: 70
- T2 capital: 30

Calculate the impact on the bank's capital position understandardized and IRB approach. What if expected losses are 100?

		Standardized Approach	IRB Approach
A	Adjustment of Specific Provisions	Specific provisions are netted from the exposure value.	X
B	Adjustment of Generic Provisions	Generic Provisions are recognised in TIER II up to 1,25% of credit risk RWAs	X
C	Comparison of Generic & Specific Provisions & Additional value adjustments with Expected Losses	X	- Defect netted in Common Equity TIER I. - Excess of Provisions are recognised in TIER II up to 0,6 % of credit risk RWAs.

Solution

→ Standardized approach (expected losses 200)

$$RWA = (1.000 - 100) \times 100\% = 900$$

$$Cap\ generic\ provisions = 900 \times 1,25\% = 11,25$$

$$Capital\ base = 50 + 70 + 30 + min(50; 11,25) = 161,25$$

$$Capital\ ratio = \frac{161,25}{900} = 17,92\%$$

→ IRB approach (expected losses 200)

$$RWA = 1.000 \times 100\% = 1.000$$

There is a shortfall of provisions over expected losses ($100 + 50 < 200$), so we subtract the total provisions (150) from the expected losses (200). This difference (-50) is going to be subtracted from the capital base.

$$Capital\ base = 50 + 70 + 30 - 50 = 100$$

$$Capital\ ratio = \frac{100}{1000} = 10\%$$

→ Standardized approach (expected losses 100)

$$RWA = (1.000 - 100) \times 100\% = 900$$

$$Cap\ generic\ provisions = 900 \times 1,25\% = 11,25$$

$$Capital\ base = 50 + 70 + 30 + min(50; 11,25) = 161,25$$

$$Capital\ ratio = \frac{161,25}{900} = 17,92\%$$

→ IRB approach (expected losses 100)

$$RWA = 1.000 \times 100\% = 1.000$$

There is a surplus of provisions over expected losses ($100 + 50 > 100$)

$$Cap\ provisions = 1.000 \times 0,6\% = 6$$

$$Capital\ base = 50 + 70 + 30 + min(50, 6) = 156$$

$$Capital\ ratio = \frac{156}{1.000} = 15,5\%$$

4.5.3 Counterparty credit risk

The risk that the counterparty of a transaction could default before the final settlement of the transaction's cash flows.

The counterparty credit risk can be mitigated with some things like a personal guarantee, a real guarantee or with credit derivatives.

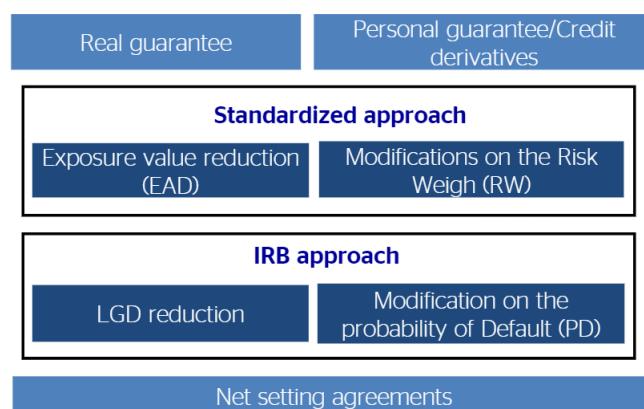


Figure 4.5: Credit risk mitigation techniques

Exercise - Collateralized consumer loan

The Bank granted a loan to a client that wants to buy a car. The loan has the following characteristics:

- Initial amount: 100.000 euros
- Outstanding amount: 75.000 euros
- Counterparty: Retail
- The client is up to date with payments
- Maturity 5 year
- Guarantee: Deposit of 20.000 euros has been pledged as collateral

Solution

$$Exposure = 75.000 - 20.000 = 55.000$$

$$RW = 75\% \text{ (retail, see table 4.3)}$$

$$RWA = 55.000 \times 0,75 = 42.250$$

Exercise - Credit accounts

Lets assume a credit line with the following characteristics:

- Initial total amount: 28.500 euros
- Drawn amount: 15.000 euros
- Counterparty: Corporate Rating BB
- Accounting provisions: 300 euros
- Maturity 13 months
- This operation has been guarantee by a corporate company with a rating A.

Solution

$$\text{Exposure} = (15.000 - 300) + 13.500 \times 20\% = 17.400$$

$$RW = 50\% \text{ (Corporate A rating, see table 4.3)}$$

$$RWA = 17.400 \times 0,5 = 8.700$$

4.5.4 Market Risk - VaR Model

The risk of losses in on and off-balance sheet positions arising from adverse movements in market prices. It affects **financial instruments in the trading book**.

VaR Model

This is the maximum loss due to the adverse market movements not exceeded with a given probability defined as the confidence level, over a given period of time.

- Time horizon: 10 days
- Confidence level 99%

Var Models + VaR Stress + Correlation + Incremental Risk Factor

4.5.5 Operational Risk

The risk of loss resulting from inadequate or failed internal processes, people and systems or from external events, and includes legal risk.

The own funds requirement for operational risk is equal to **15% of the average over three years of the relevant indicator**. The relevant indicator is the sum of the following elements:

- Interest receivable and similar income
- Interest payable and similar charges
- Income from shares and other variable/fixed-yield securities
- Commissions/fees receivable
- Commissions/fees payable

- Net profit or net loss on financial operations
- Other operating income

Standard Approach

Institutions shall calculate the own funds requirement for operational risk as the **average over three years of the sum of the annual own funds requirements across all business lines in the following table**. The annual own funds requirement of each business line is equal to the product of the corresponding beta factor referred to in that table and the part of the relevant indicator mapped to the respective business line.

Business lines	
Corporate finance (18%)	Trading and sales (18%)
Retail brokerage (12%)	Commercial banking (15%)
Retail banking (12%)	Payment and settlement (18%)
Agency services (15%)	Asset management (12%)

Chapter 5

Review of credit portfolios

5.1 Executive summary

1. Importance accounting and asset quality

- Credit portfolios (classification and provisioning)
- Foreclosed assets (classification and provisioning)

2. Use of full scope granular data

- Beware of n to m
- Group of connected clients

3. Governance matters

- Check the controls
 - 3 lines of defense:
 1. Risk owner
 2. Risk control
 3. Internal audit
 - Beware of rapid growths
 - Temptation to hide problem
 - Forbearance
 - Foreclose

5.2 Introduction to SSM

Members of the SSM:

- ECB

- National Competent Authorities (NCAs) from Euro area countries
- Non-euro countries within EU – option for Close Cooperation regime

Inspection team's supervisory and investigatory powers

- Right of access to business premises
- Right to request any information or document
 - request from the inspected legal entity any information, explanation or justification;
 - be provided with and check every document it requires: as books and records, registers, contracts, statements, official reports, accounting documents and methodological documentation;
 - take copies of or extracts from these documents
 - carry out the checks by having read-only access to all relevant IT systems, databases, IT tools, electronic files and data used by the inspected legal entity.
- Right to interview any person regardless of their seniority
- Exchange of information with the statutory auditors

Techniques:

- Observation, information verification and analysis: specially relevant the access to IT systems
- Targeted Interviews
- Walk-through: Process in place is actually applied in practice
- Sampling/case-by-case examinations
- Confirmation of data: integrity, accuracy and consistency
- Model testing: Performance of its models and their output under various hypothetical and historical market conditions

5.3 Credit portfolios

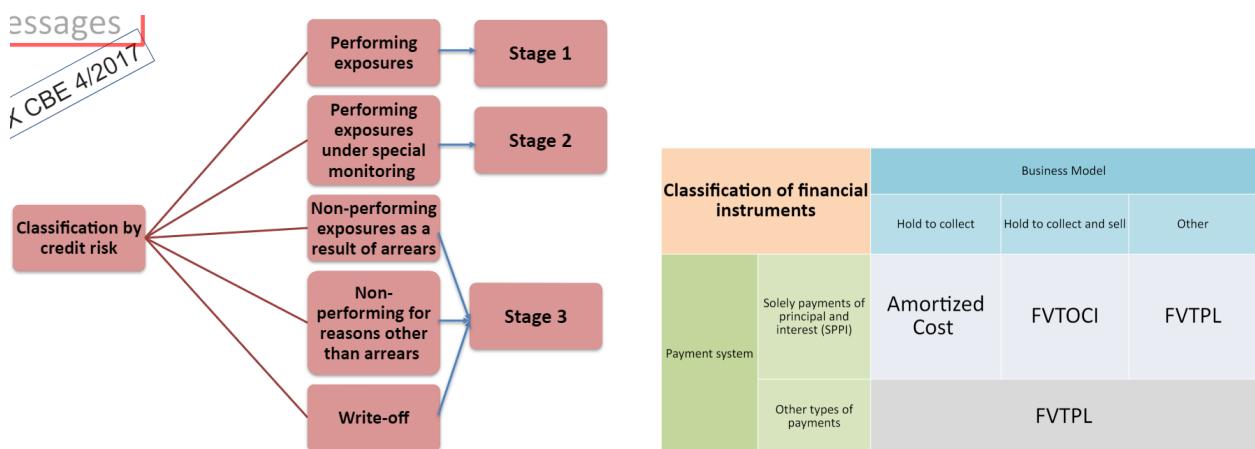


Figure 5.2: The classification review of Forbearance

MODIFICATION OF CONDITIONS	No financial difficulties		Financial difficulties
	New facility	Rollover	
Change of conditions	Renegotiated		Refinanced
			Restructured

5.3.1 Loan tape creation and data integrity validation (DIV)

The creation of “loan tapes” by banks includes basic account information required for the selection of samples for the credit file review and the collective provisioning analysis.

- Information on loans,
- Information on debtors and group of connected clients
- Information on collaterals
- Relationships n to m between them

Data integrity Validation (DIV) process involves various checks on the information obtained so as to ensure it is of sufficient quality to perform the required analyses.

The classification review

It involves assessing if the exposure is classified correctly from different perspectives:

1. 3 stages as per IFRS 9
 - Stage 2 Significant increase in credit risk
 - Stage 3 NPE classification and identification of evidence of impairment
2. Regulatory exposure class (e.g. exposures secured by mortgages on immovable property) and other segmentations (e.g. leveraged finance)
3. Other aspects such as group of connected clients or related party classification (e.g. other entities with the same parent as the significant bank).

Findings will be a crucial point for different processes

- Assess correctness of loan tape and DIV;
- Potential extrapolation of results or common patterns
- Provisioning models and other aspects such as stress test and ICAAP projection

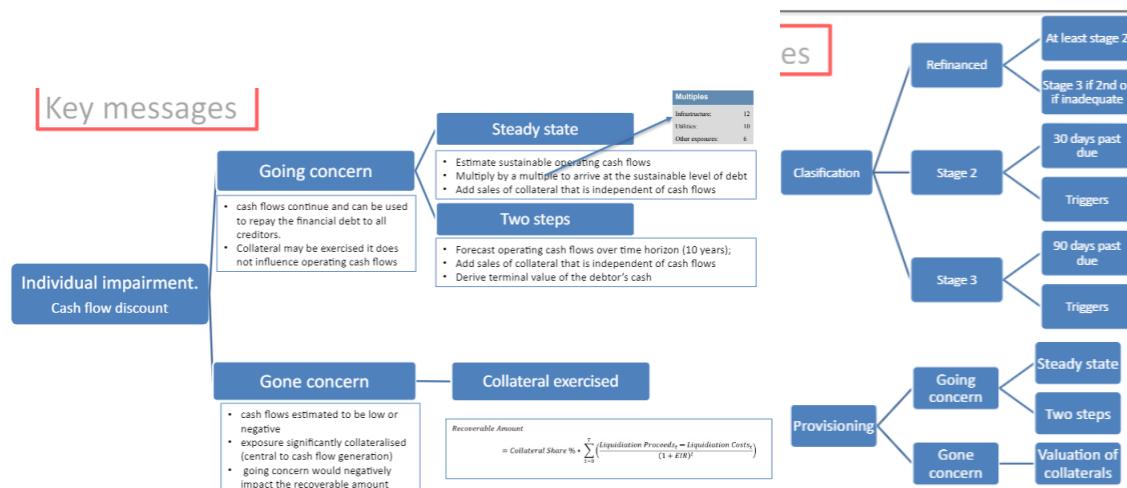
The classification review NPE

Non-performing exposures are those that satisfy either or both of the following criteria:

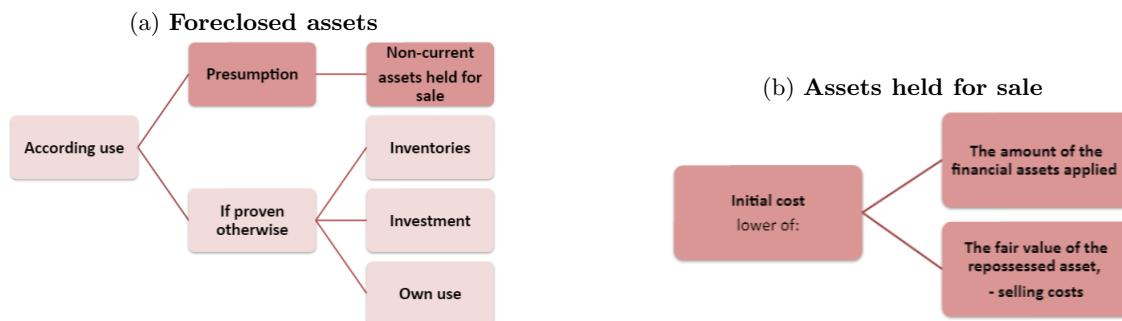
- Material exposures which are more than 90 days past-due;
- Debtor is assessed as unlikely to pay its credit obligations in full without realization of collateral, regardless of the existence of any past-due amount or of the number of days past due

The classification review NPE triggers

1. Significant financial difficulty of the issuer or the borrower;
2. A breach of contract, such as a default or past due event
3. The lender(s) of the borrower, for economic or contractual reasons relating to the borrower's financial difficulty, having granted to the borrower a concession(s) that the lender(s) would not otherwise consider
 - Forbearance or restructuring
4. It is becoming probable that the borrower will enter bankruptcy or other financial reorganisation;
5. The disappearance of an active market for that financial asset because of financial difficulties
6. The purchase or origination of a financial asset at a deep discount that reflects the incurred credit losses



5.4 Foreclosed assets



Non-current assets held for sale

Reference to an active market but is based on a valuation technique (either level 2 or level 3) \implies adjustments

- The condition or location of the assets.

- Risk and uncertainties regarding the asset should be incorporated. E.g. caveats and conditioning factors
- The volume or level of activity of the markets for these assets.
 - The previous experience in the realisations and the differences between the valuation technique and the final amount obtained in the realisation
 - Assumptions documented
 - Illiquidity discounts may be considered. E.g. more than three years

Investment

- Mainly if the foreclosed asset intended use is leasing.
 - The lessee's ability to pay is considered sufficient to meet the contractual payments
 - The lease price evidences a market value of the asset above its carrying amount
- Otherwise same rules as Non Current Assets Held for Sale
 - Haircuts from appraisals

Foreclosed asset disposal

- Derecognition implies
 - Substantial transfer of the risks and rewards of ownership of the asset
- In sales of real estate assets foreclosed with financing by the institution itself
 - Assessment of whether the financing granted will be recovered purely through repayment
 - Otherwise no recognition of profits or losses

Chapter 6

Liquidity Risk

Liquidity risk is the risk stemming from the lack of marketability of an investment that cannot be bought or sold quickly enough to prevent or minimize a loss.

In contrast, **funding liquidity risk** is the possibility that a financial intermediary is unable to repay the liability at the time of expiration of the obligation.

6.1 ILAAP

The Internal Liquidity Adequacy Assessment Process (ILAAP) summarizes the main components of the liquidity and financing risk management framework. It also establishes the entity's risk profile.

Its purpose is to evaluate the suitability and the alignment of the governing bodies' risk profile to the liquidity risk appetite and strategy of the entity. It will also allow measuring the sufficiency of the liquidity buffers of the entity.

What do supervisory expectations imply?

Key points

- The ILAAP must contain all the necessary qualitative and quantitative information to monitor the risk appetite, including a description of the systems, processes and methodologies to measure and manage the liquidity and the funding risk.
- The main data of the evolution of the material liquidity risks should be integrated in the internal reporting of the entity.
- In quantitative terms, the ILAAP must contain a report on LCR, NSFR and the Funding Plan. Furthermore, it also must include data contained in the EBA's ITS on additional liquidity monitoring metrics



6.2 Liquidity Risk Strategy - Main Risks

6.2.1 Intraday Liquidity Risk

Current or future risk that the institution may not be able to manage its intraday liquidity needs effectively and may not attend all its daily financial claims

It can be measured, for example, as the maximum amount of exposure you will have to pay that day.

6.2.2 Retail funding Risk

This includes an assessment of the likely run-off of different components of the retail book, taking into account common features such as guarantee cover, maturity, interest rate sensitivity, customer type, product type, deposit size.

6.2.3 Contingent liquidity Risk

Contingent risk is the one related to all off-balance sheet items, primarily the use of unused committed credit facilities, such as credit cards.

6.2.4 Wholesale funding Risk

This includes an assessment of the likely run-off of different components of the wholesale funding, taking into account common features such as guarantee cover, maturity, concentration, reliance on short term funding...

6.2.5 Foreign currency financing Risk

Foreign currency financing risk is defined as the risk of structural maturity mismatches between assets and liabilities in different currencies.

6.2.6 Marketable assets Risk

Firms should include a consideration of how factors affecting their ability to liquidate assets or monetize them through sale or repurchase agreements may change in stress.

6.2.7 Intra-group risk

Specific weaknesses relating to intra-group positions(e.g. high concentration of parent company exposures, dependence on intra-group financing,etc.) that adversely affect the overall viability of the entity.

For example BNP Paribas is a single point of entry bank which has a lot of intragroup risk because of its numerous branches.

The LCR will need to be disaggregated and computed independently for each branch, especially when the bank is multiple point of entry and each brand funds itself independently.

Fund transfer pricing methodology.

The price of liquidity is also taken into account when pricing a mortage to a client. For example if a client asks for mortage the price that the bank charges has to cover the risk of the client, the liquidity of that asset on the market and also the capital that the bank has to set aside. It would be something like:

$$Price = \frac{El + Liquidity}{Capital}$$

As an example, the liquidity price is going to be higher for credit cards than mortgages.

6.3 Asset encumbrance

Encumbered assets refer to assets that have a legal claim or restriction placed upon them. These claims or restrictions could be in the form of liens, mortgages, pledges, or any other encumbrances that limit the owner's ability to use or transfer the assets freely.

The **Asset Encumbrance ratio** measures the capacity of a bank to obtain additional leverage by assessing the percentage of collateralized assets (both owned and received) compared to total balance assets (including collateral received).

$$\% \text{ Asset Encumbrance} \rightarrow AE\% = \frac{\text{Total encumbered assets} + \text{Total collateral received and reused}}{\text{Total assets} + \text{Total collateral available for encumbrance}} \quad (6.1)$$

6.3.1 Asset Encumbrance Risk

Covered bonds are the safest ways of funding after deposits. These covered bonds have a collateral, usually mortgages.

Assets	Liabilities		Assets	Liabilities
30 Cash	Deposits 80	⇒	30 Cash	Deposits 80
180 Mortgages	CBI funding 120		100 Mortgages	CBI funding 40
	Senior Debt 10			Senior Debt 10

CBI funding is always collateralized and has priority over everything so banks don't want to have a lot of it because it would be difficult to attract new investors. CBI funding is like a "drug", it is really cheap but if you get too much it becomes really hard to get out of it (investors won't want to invest).

Wholesale funding is a proxy for liquidity risk. If it goes up it is telling you that the market is seeing some problems so the access to funding will be more difficult.

6.4 Liquidity Contingency Plan

The Liquidity Contingency Plan (LCP) include a detailed list of the actions that the entity may select and implement, if necessary, to obtain cash flows in a liquidity crisis. It is expected by the ECB and EBA that the assessment of the measures takes into account the results of the entity's internal stress tests.

In this sense, the valuation of the measures contained in the LCP should take into account the assumptions and the environment described in the liquidity stress scenarios.

The Contingency Funding Plan should be **integrated with the Risk Appetite Framework and aligned with the Recovery Plan**.

To achieve an adequate monitoring of the entity's liquidity as well as the potential activation of the LCP, it is recommended to use the following types of indicators:

- Core Risk Appetite Framework indicators

- Specific indicators
- Early warning indicators

According to the SREP guidelines it is considered essential to include evidence that the **LCP is reviewed and tested regularly at least in an annual basis**, unless circumstances suggest more frequency.

6.5 Funds Transfer Pricing

Funds Transfer Pricing (FTP) is a financial management process used by banks and other financial institutions to evaluate the profitability of different business units or products within the organization. It involves assigning a transfer price to funds (money) that move between various business units or departments.

The **Internal Transfer Rate** is defined as the rate that is charged to a business unit to fund its assets or what is paid for the liabilities. Financial institutions acquire funds from various sources, such as customer deposits, wholesale funding markets, or interbank borrowing. The cost associated with obtaining these funds forms the basis for FTP. The cost includes interest paid to depositors, interest on borrowed funds, and other related expenses.

Key principles:

- **Communication:** In order to achieve a proper FTP understanding and its insertion in the risk culture, the effective internal communication of all the relevant information for the interested parties is specially relevant.
- **Performance evaluation:** The correct integration of FTP allows the evaluation of the performance of the different lines of business as well as the identification of those products that are more profitable.
- **Pricing:** The cost of financing is a fundamental component when determining the entity's FTP. Based on this fact, a series of adjustments will be incorporated, negative in the case of liabilities (ie, deposits), positive in the case of assets (ie, loans), based on the additional costs such as administrative costs and the commercial margin, until reaching the final price.
- **Liquidity risk management:** The FTP Framework must be aligned with the risk tolerance determined in the RAF intended to a suitable monitoring of liquidity risk. Additionally, FTP should serve as a basis when determining strategic decisions.
- **Achievement of strategic objectives:** On the one hand, the Board of Directors is responsible for deciding the strategic goals of the entity in terms of liquidity. On the other hand, the ALCO will be in charge of taking the pertinent measures to achieve these objectives. It is considered suitable to use the system of discounts and disincentives to the funding curve, which is used to determine the FTP (i.e., incentives in the capture of deposit).

6.6 Liquidity Metrics in the Regulatory Framework

Liquidity requirements as LCR and NSFR have become more relevant for liquidity management purposes. The regulation includes the application of liquidity internal models instead of standardized rules of external character.

6.6.1 Liquidity Coverage Ratio (LCR)

The **Liquidity Coverage Ratio** measures the liquidity in the short term. This metric tests the liquidity of a financial institution, ensuring that it has a **buffer of sufficient liquid assets** that allows it to survive in a stress scenario of 30 days.

$$\text{LCR} = \frac{\text{HQLA}}{\text{Net outflows 30 days}} \geq 100\% \quad (6.2)$$

Where:

- **HQLA** are high quality liquid assets such as sovereign bonds, corporate bonds with good rating, covered bonds and liquidity facilities. They receive a **haircut** or a reduction in their value when computing the LCR.
- **Net outflows** are the difference among the expected cash outflows for the next 30 days (under a hypothesis and stress scenario) and a minimum of cash inflows and 75% of expected cash outflows. When computing the LCR, a **run-off assumption** (withdrawal of cash from banks by depositor) is taken into account.

The main objective of the LCR is to mitigate liquidity risk, allowing credit institutions to depend less on short-term financing and the central bank's liquidity provision. That is why the level of high quality liquid assets (HQLA) must be sufficient to ensure a liquidity position to face possible adverse events.

6.6.2 Net Stable Funding Ratio (NSFR)

The Net Stable Funding Ratio establishes that banks must maintain a stable financing profile in terms of their total assets and their off-balance sheet structure, considering a one year period. In that sense, it measures the liquidity in the medium/long term and complements the LCR. Efforts are made to prevent institutions from excessively financing their long-term assets with short-term liabilities.

$$\text{NSFR} = \frac{\text{Available Stable Funding}}{\text{Required Stable Funding}} \geq 100\% \quad (6.3)$$

Where:

- **Available Stable Funding (ASF):** wholesale financing and deposits with maturities lower than one year that are expected to remain in the institution for a prolonged period, even after an idiosyncratic stress event. Also **capital, preferred shares and liabilities with effective maturity of one year or more.**
- **Required Stable Funding (RSF):** The different components of the required stable financing are categorized by their level of stability and liquidity, applying a higher haircut (RSF Factor) to those instruments that are less solid

6.6.3 Wholesale funding cost

This metric calculates the potential cost of the debt that the bank should assume when going to the wholesale markets. It is the potential cost of future debt issuances. It is not the average cost of its stock of debt.

$$\text{Wholesale Funding Cost} = \text{potential cost of future debt issuances (bp)} \quad (6.4)$$

6.6.4 Loan to Deposit Ratio (LtD)

The LtD measures relationship between net credit investment and stable customer resources.

To calculate the loan-to-deposit (LtD) ratio, divide the total amount of a bank's loans by the total amount of deposits for the same period. Typically, the ideal loan-to-deposit ratio is 80% to 90%. A 100% loan-to-deposit ratio means that a bank lends one euro for every euro received in deposits.

$$\text{LtD} = \frac{\text{Total loans}}{\text{Total deposits}} \quad (6.5)$$

The LtD ratio shows a **bank's ability to cover loan losses and customer withdrawals**. Measures the **entity's liquidity to cover loans in the event of an economic downturn** that causes loan defaults. The LtD is most effective when compared to banks of the same size and composition.

Chapter 7

Stress testing

Stress tests are forward-looking exercises that aim to evaluate the impact of a severe but plausible adverse scenarios on the resilience of financial institutions.

The EBA does a solvency stress test (measure the impact of credit risk, IR risk, NII... in the capital of the banks) every two years and the year that there is no stress testing the SSM does a complementary test on a specific topic (cyber security for example)

7.1 Situation of the EU banking sector

- Capital ratios at high level
 - Macroeconomic environment is characterised by stagnant economic growth, high inflationary pressures, elevated interest rate levels and increased uncertainty not least due to geopolitical tensions.
- No clear signs of asset quality deterioration
 - Monetary tightening has an impact on loan growth. Demand for loans subdued and banks' risk appetite is limited (ECB Banking Lending Survey)
- Profitability benefiting from high rates
 - EU/EEA banks profitability have risen driven by a large rise of NII. Its increase was supported mainly by a rising NIM. Deposit betas for retail are lower.
- Banks' funding less reliant on central bank funding
 - As banks rely less on central bank financing, they have increased market-based funding volumes, albeit rising costs

7.1.1 Who does a stress test?

- Supervisors:
 - System wide stress test on the banking sector or
 - On a more individual basis Test the resilience of the sample banks under the stress test or the individual banks.

- Macroprudential authorities
 - System wide effects: financial stability, economy policy implications, macroprudential buffers
- Banks:
 - Banks' own stress test – for risk management purposes, to establish the risk appetite Stress test is not only for banks, for example, stress test of insurance companies or of central counterparty clearing house (CCP)

7.2 How is it run?

Two ways for getting a system-wide picture:

Bottom-up: The public authority defines the framework (assumptions, scenario) and banks project the impact. Banks may assess differently some risks depending on the business model or the location of the bank for example. Public authority aggregates the bank-level results.

- ↑ more tailor-made and granular (each bank will reflect the shock on its own portfolio)
- ↑ datasets used in the simulations generally richer
- ↓ but, cross-section comparability may be impaired

Top-down: The public authority carries out the stress test based on its own framework (data, assumptions, scenario) and also projects the impact and analyse the effect on the banking system. Banks may need to provide data to the public authority

- ↑ enhances the comparability of results
- ↓ but often less accurate, especially when carried out on aggregated system-wide data (however, authorities may work on institution-level data and increasingly do so)

Combination: Example – Banks estimate the credit risk losses based on the scenario provided by the public authority. The public authority provides banks with the projections on fees and commissions income.

You can have a **static balance sheet** or a **dynamic balance sheet**

7.3 Static or Dynamic balance sheet?

Two ways for getting a system-wide picture:

Static balance sheet: “unchanged or stable business model” throughout the projection period. The balance sheet remains the same during the stress test (no reduction of lending)

- ↑ More comparability
- ↓ Less realism

Dynamic balance sheet: evolving business model throughout the stress test: reflects the responsive actions taken by the management. This may mean a reduction of lending over the stress test horizon or other type of management actions (selling assets, reduction of costs...)

- ↑ More realism

↓ Less comparability

7.4 Scenario and sensitivity analysis

A **sensitivity analysis** is a change of a single risk factor while a **scenario analysis** is a consistent change of a set of risk factors.

Figure 7.1: Sensitivity vs Scenario analysis

	Sensitivity analysis	Scenario analysis
Credit risk	<ul style="list-style-type: none"> ? What if all ratings worsen by one grade? ? What if default rates double in portfolios X,Y,Z? ? What if our collateral recovery rates are systematically 25% lower for real estate collateral? 	<ul style="list-style-type: none"> ? What if there is a crisis like the Global Financial Crisis? ? What if the Covid-19 gets worse? ? What if interest rates stay high for a longer period of time and there is a sudden drop-in economic activity?
Market risk	<ul style="list-style-type: none"> ? What if the EUR/USD rate changes by X%? ? Parallel shift of yield curve by X basis points? ? Increased in implied volatility of European stocks of Y% 	<ul style="list-style-type: none"> ? What if exchanges rates or interest rates behave as they did historically during period X?

7.4.1 Severity of scenarios

The scenarios can be:

Historical

- 1929 Stock Market Crash
- 1973-74 Oil Crisis
- 2008 Global Financial Crisis
- 2020 Covid-19 pandemic

Hypothetical

- U.S. government defaults on its debt
- New variants of Covid-19
- Brexit (before the UK referendum!)
- Asteroid hits Earth

Hybrid

The scenarios have to be **extreme but plausible**. Normally there are 2 or 3 scenarios: Baseline and 1 or 2 Adverse. There can also be Exploratory Scenarios, Reverse Stress test. The time horizon is between 2 and 3 years.

7.5 How the results are used?

Pass/fail exercise are seemingly easier to interpret, but may give a sense of false security

Lack of capital thresholds (and possible shortfall) makes the results less intuitive (and less media-friendly), but allows to focus on impacts, vulnerabilities and areas for improvement:

Bloomberg (2015): “EU Cooks Up a Stress Test for 2016 That No Bank Will Fail”

Reuters (2016): “Europe to stress-test its banks again, but none can fail”

Different approaches, however all used to set capital:

- EU – Stress test results are input to the Pillar 2 requirement and Pillar 2 Guidance.
- US – Stress test results used to set the stress test capital buffer (SCB) requirement.
- UK – Stress test results informs the setting of regulatory capital buffers (also qualitative input)

Transparency of the results add to market discipline but there is debate on possible consequences in terms of “Beauty contest” or “Self-fulfilling prophecies”.

7.6 Objective of supervisory stress tests and the BCBS Principles

- Stress testing frameworks should:
 - have clearly articulated and formally adopted objectives
 - include an effective governance structure
 - be used as a risk management tool and to inform business decisions
 - capture material and relevant risks and apply stresses that are sufficiently severe
- Resources and organizational structures should be adequate to meet the objectives of the stress testing framework – skill sets
- Stress tests should be supported by accurate and sufficiently granular data and by robust IT systems
- Models and methodologies to assess the impacts of scenarios and sensitivities should be fit for purpose
- Stress testing models, results and frameworks should be subject to challenge and regular review
- Stress testing practices and findings should be communicated within and across jurisdictions

Figure 7.2: Examples of stress tests

	EU ST 2023	FED ST 2023	UK ST 2023
Number of banks	70	23	8
Duration	3 years (end 2022 – end 2025)	9 quarters (end 2022 – Q1 2025)	5 years
Approach	Bottom-up (constrained)	Top-down (+company run)	Bottom-up
Balance sheet	Static	Static	Static and with management actions

7.7 EU regulatory background

- Supervised Institutions – Internal
 - CRR
- Supervisors (Competent Authorities) – Microprudential
 - Annual supervisory stress tests on institutions
- European Supervisory Agencies: EBA – Region-wide microprudential
 - EBA EU-wide ST
- Macroprudential Authorities – top-down system-wide macroprudential
 - EBA Macro-prudential Stress Test

7.7.1 SREP guidelines

Several objectives

- Guiding CAs in assessing banks' own stress tests
- Setting common practices on supervisory stress testing
- Linking stress test outcomes to P2 guidance

Types:

- Qualitative assessment of stress testing program
 - Extent to which stress testing is embedded in an institution's risk management framework
 - Involvement of senior management and of the management body in the stress testing program
 - Integration of stress testing and its outcomes into decision-making throughout the institutions
 - Institution's ability and the infrastructure available
 - Adequacy of the frequency of the stress test (proportionality)
- Quantitative assessment of stress testing
 - CAs should challenge the choice and use of scenarios, assumptions and methodologies, and should assess: the severity of the scenarios, whether they are severe but plausible, internally consistent and forward looking,
 - When challenging outcomes institutions' stress test, use outcomes, scenarios, assumptions supervisory stress tests (e.g., EBA, IMF)

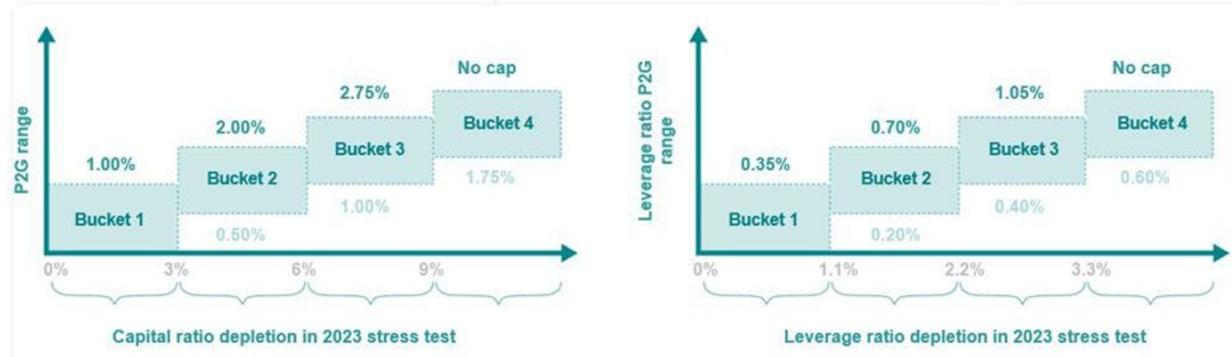
7.7.2 SSM approach to P2G and P2G-LR

Competent authorities (CAs) should determine and set P2G and P2G-LR based on the outcomes of the adverse scenario of the relevant supervisory stress tests

In the first step, supervisors place banks in one of four buckets according to the depletion of their capital ratios in the stress test. Each bucket has a corresponding range of P2G that overlaps with neighbouring buckets to avoid cliff effects.

In the second step, supervisors set the final P2G for each bank within the range of the bucket, or in exceptional cases outside it, taking into account banks' individual circumstances, such as its risk profile and the year in which their capital ratio reached its lowest point during the stress test.

This ensures that the process remains **bank-specific** and also delivers reasonable P2G for banks with very high capital ratio depletion.

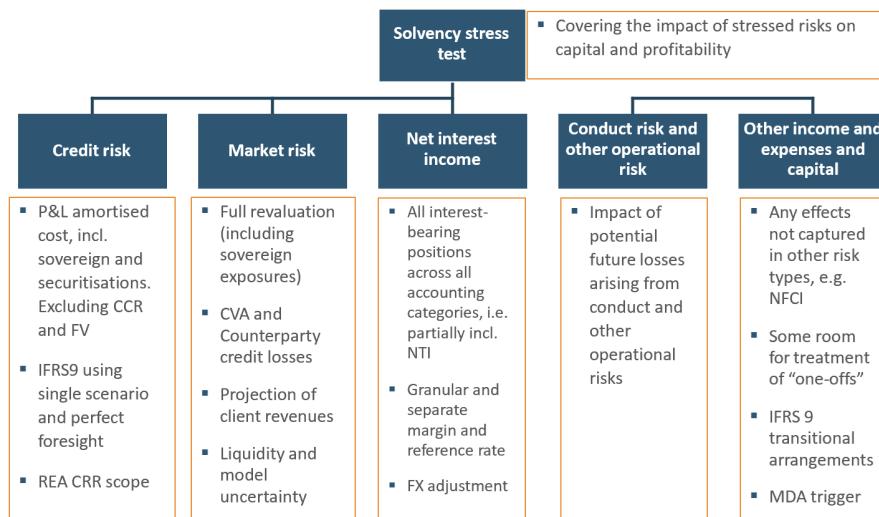


7.8 The EU-wide stress test

- Bottom-up static balance-sheet approach
- Not a pass-fail exercise but an input for SREP
- Common baseline and adverse scenarios over three years

Key features

Bottom-up static balance-sheet approach	Not a pass-fail exercise but an input for SREP	Common baseline and adverse scenarios over three years
<ul style="list-style-type: none"> ▪ Conducted by banks following a bottom-up and static balance sheet approach. ▪ Banks' projections are subject to conservative constraints that are included in the EBA methodology. ▪ Banks under restructuring are subject to the same assumptions including the static balance sheet. 	<ul style="list-style-type: none"> ▪ The exercise is not a pass-fail exercise, i.e. no capital threshold was defined. ▪ Input for the supervisory review and evaluation process (SREP) under the responsibility of competent authorities. ▪ For this purpose all main regulatory capital ratios are assessed, including fully loaded ratios and the leverage ratio. 	<ul style="list-style-type: none"> ▪ The stress test is based on a common baseline and adverse scenario. ▪ Time horizon of the exercise: 3 years.



7.9 Long-term strategy for the EU-wide stress test

- Why changing?
 - After 4+1 exercises a thorough reflection is needed.
 - Different times require different approach (crisis vs steady state).
- The main objective of the exercise:
 - Micro-prudential stress test for supervisory purposes.
 - Identification of risks:
 - Supervisors – concrete support to SREP; assessment of capital planning;
 - Banks – complement and challenge to ICAAP; improve risk management framework.
 - An important by-product: Providing information to market participants on banks' resilience and ability to generate and distribute profits in an adverse scenario.
- Criteria for assessing suitability of changes:
 - Relevance – outcome as close as possible to the actual impact on capital should the adverse scenario materialize
 - Comparability – ensures a level playing field across banks.
 - Transparency – disclosure to market participants, as well as clearer link of results to supervisory actions.
 - Cost-efficiency – optimizes supervisory and bank costs.

7.9.1 Hybrid Approach

Development towards hybrid approach where some selected elements would follow a centralised (top-down) approach while the rest of the methodology would remain inherently bottom-up, with some constraints to be relaxed to increase the realism of the exercise.

7.10 Other types of stress test

- Solvency stress test (Run by EBA, SSM, FED, Banks of England and other authorities)
- Liquidity stress test (2019 ECB Banking Supervision) - Tested banks' resilience to idiosyncratic liquidity shocks, which were calibrated based on recent crisis episodes.
- Interest rate risk stress test – 2017 ECB IRRBB sensitivity analysis
- Climate stress test
- Cyber stress test
- Other types of analysis – Covid 19
- Stress tests for macroprudential purposes (focusing on financial stability and system-wide effects rather than individual banks)

7.11 Moving to climate stress test

A banking system that is sound and resilient to climate related risks, would be key for driving the economy through a smooth transition to a low-carbon economy

Banks will have to learn how to deal with these risks: the process of integrating climate risks into standard financial stability monitoring and supervision has already kicked off.

Through CRST (Climate Risk Stress Testing) (especially Bottom-up), supervisors can also monitor how banks are progressing to incorporate environmental aspects into their strategy and risk management systems.

Chapter 8

Supervisory Review and Evaluation Process (SREP)

The Directive 2013/36/EU, as amended, (“CRD”) establishes in its Article 97 the Supervisory Review and Evaluation Process (“SREP”) by which competent authorities shall review the arrangements, strategies, processes and mechanisms implemented by institutions to comply with CRD and Regulation.

It combines data and expert judgement following a principle of “constrained judgement”, with a view to ensuring that the SREP decision fits best with an institution’s risk profile (and is not a “mechanical” process) while also ensuring consistency and accountability across the SSM.

Competent authorities are required to evaluate, considering the nature, scale, and complexity of an institution’s activities:

- Risks institutions are or might be exposed to
- Risks that an institution poses to the financial system
- Risks revealed by stress-testing

The ECB as the competent authority is required to carry out a SREP and to take decisions for significant institutions.

8.1 Methodology

Is an harmonized methodology developed along the lines of the EBA Guidelines on SREP.

It is applied in a proportionate manner to institutions depending on the nature, scale, and complexity of theiractivities, and, when relevant, on their situation within a group.

Relies extensively on quantitative and qualitative analysis.

The SREP has four main dimensions:

- 1) **Business model:** Sustainability of the business models, continuous operational losses, geopolitical uncertainties, impact of interest rates in NII, climate risk.

2) Governance and risk management: Board of Directors (lack of formalization of minutes, lack of effective challenging, insufficient diversity in the Supervisory Board), Training programs, Most of Internal Control Functions not well developed, Fit & Proper assessment.

3) Risks to capital: NPL Strategic & Operational Plans, Divestment in NPLs, Collateral management & data quality, Implementation of IFRS9 not integrated into the bank's risk management framework, Risks to outsourcing not well developed, Model risk management still far from being developed. This dimension is divided into 4 categories that are analyzed individually as if they were separate dimensions:

- Credit Risk (60%)
- Market Risk (10%)
- IRRBB (15%)
- Operational Risk (15%)

at the end the supervisor takes a weighted average of the 4 scores to give a final score for risk to capital.

4) Risks to liquidity and funding: Intraday liquidity management not developed, Fund Transfer Pricing not including liquidity costs and benefits, Liquidity Stress Testing not sufficiently developed.



Figure 8.1: Main topics assed in the SREP

Each category has two different assessments: **Risk Level** and **Risk Control**. Because of the nature of the risk, business model and internal governance only have one assessment (see figure 8.3). The supervisor follows a methodology with three phases for each of the two assessments. Depending on the dimension of the risk the phases will have subtle differences but in essence they will be the same. Now we will see how the risk level and the risk control assessment is done for the dimension: Risk to capital

8.1.1 Risk level assessment

Three phases:

- 1.- Data gathering
- 2.- Automated anchoring
- 3.- Main assessment

Phase 1 - Data Gathering

In phase 1 all the necessary data is collected. This includes both quantitative and qualitative data points. Comparison among peers and trends/evolution in the indicators are also considered.

Depending on the dimension that is being analyzed the supervisor will collect different data points. The information gathered can come from internal data of the bank (ICAAP, ILAAP), from public sources or from the market among others. The supervisor carries out a more **qualitative assessment** of the bank at the end, taking into account things such as:

- Board meetings
- On-site inspections
- Personal interviews to the executives

Phase 2 - Automated Anchoring

From the previous indicators gathered in phase 1, the supervisor selects a **narrower list of indicators**. The individual scores are compared to pre-defined thresholds that represent the supervisor's risk appetite.

Each indicator shall be assigned a score between 1 and 4 and thresholds should be calibrated and reviewed periodically, based on their empirical distributions. Phase 2 rating is produced starting from the level of the indicator which is seen as the most important one (NPL ratio for example), with successive adjustment depending on the levels of other significant indicators (Inflow non-performing loans / Total performing loans (dynamic)).

In the context of business model analysis such thresholds cannot be pre-defined based on regulatory requirements, but are rather defined based on expert judgement and historical data analysis.

Here we have an example of some of the indicators the supervisor might select from a much larger list:

Business model:

- Return on Assets after TAX (ROA)
- Cost to Income Ratio (CIR)
- NII after Impairments to Total Assets (NIA)

Credit Risk:

- Non-performing loans / Total loans (static)
 - **Adjustment metric:** Inflow non-performing loans / Total performing loans (dynamic)
- Sectorial concentration

Market Risk:

- Trading portfolio (assets and liabilities) / Total assets
- Level 3 assets and liabilities / Total own funds
- Volatility in revenues from market activities

IRRBB:

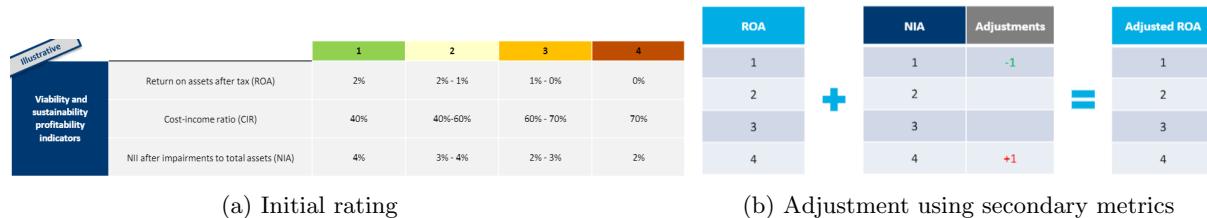
- Change of EV BB under +200bp parallel shift / Total capital
- Change of EV BB under -200bp parallel shift / Total capital
- Change of NII under +200bp parallel shift / Total capital
- Change of NII under -200bp parallel shift / Total capital

Operational Risk

- Total loss amount / Operational risk capital requirements
- Total loss amount / Relevant indicator ¹
- Operational risk capital requirements / Total own funds

Risks to Liquidity and Funding:

- Liquidity coverage ratio (LCR)
 - **Adjusting factor:** Short-term wholesale funding ratio. Funding concentration ratio
- Net Stable Funding Ratio (NSFR). Loans to stable funding ratio
 - **Adjusting factor:** Loan to deposit ratio



Phase 3 - Main Assessment

The objective of Phase 3 is to reach a detailed and deep understanding of the exposure of the institution to each risk. In Phase 3 the JST should assess the risk more comprehensively for the final determination of the score. The JST can adjust the preliminary quantitative risk score determined in Phase 2:

- Upgrading it by one notch
- Downgrading it by up to two notches

8.1.2 Risk Control Assessment

It is a **qualitative assessment** that analyses how the bank is managing the risk. It also has 3 phases:

- 1.- Focus list
- 2.- Regulatory References
- 3.- Additional Adjustments

¹Examples of relevant indicators: Total gross income, total balance sheet assets, Sum of 5 largest operational risk losses (by business line)...

Phase 1 - Focus List

A set of documents should be collected in order to perform the analysis. The bank is requested to provide information on the following topics (non-exhaustive):

- Governance structures for credit/market/liquidity/IRRBB/operational risk management
- Strategic planning and budgeting in relation to credit/market/liquidity/IRRBB/operational risk
- Description of credit/market/liquidity/IRRBB/operational risk appetite
- Description of credit/market/liquidity/IRRBB/operational risk policies
 - NPL measurement and impairment
 - collateral valuation
 - ...
- Description of credit/market/liquidity/IRRBB/operational risk assessment processes and tools
- Description of outsourced credit/market/liquidity/IRRBB/operational risk activities

Phase 2 - Regulatory References

Compliance questionnaire is the main segment. It encompasses a limited list of objective questions rooted in “regulatory” references.

Four segments required:

- Governance
- Risk appetite
- Risk management and internal control
- Internal audit

Phase 3 - Additional Adjustments

The supervisor uses a list of questions as additional guidance to form its overall risk control assessment. Similarly to Phase 2, it is also based on a compliance questionnaire, which includes the same four segments with two subcategories for each segment: **Guidance on preliminary assessment** and **Guidance on relevant aspects**

8.2 Pillar II capital requirements

Binding capital requirements vs soft capital requirements

Table 8.1: P2R vs P2G

	P2R	Soft P2RC (P2G)
Nature	Requirement	Guidance
Quality of capital	CET1 (56%) Tier 1 (75%)	CET1 (100%)
Transparency	Disclosed to the market	Not disclosed to the market
Severity	Breach of the regulations	Nothing. Potentially a capital plan may be required

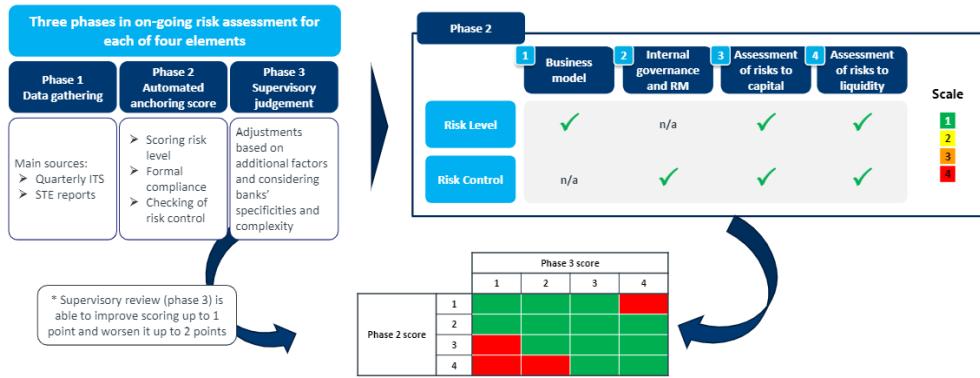


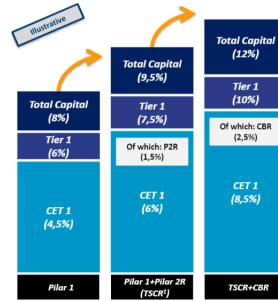
Figure 8.3: Supervisory assessment process diagram

To adjust P2G the supervisor looks at the maximum shortfall in CET1 during stress scenarios. This amount is then adjusted and the CCB and CCyB buffers are subtracted. The amount that is left is more or less the P2G.

General supervisory tips from Alvaro Cervigón

Never base your assessment on static pictures, always use forward looking view. What is better to have a bank with a 20% CET1 that has been struggling to make profits or a bank that is very close to the minimum CET1 but makes a lot of profits and doesn't have a risky business. If we look at the static picture the first bank is better but this is not the reality.

The P2R requirement is not fulfilled a 100% with CET1. The regulation says that $\frac{3}{4}$ should be covered with T1 and $\frac{3}{4}$ of that T1 with CET1 so in total $\frac{3}{4} \cdot \frac{3}{4} = \frac{9}{16} = 56\%$ CET1



8.3 Proportionality

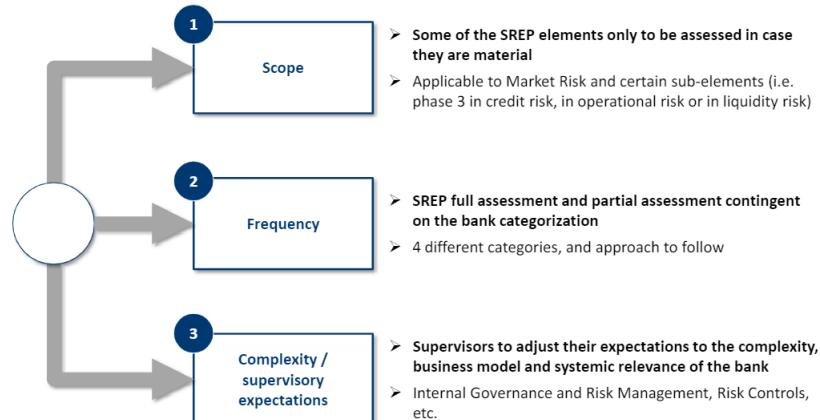


Figure 8.4: A proportionality principle is applied to be “fair” with the banks. This is mainly because some factors such as size, business model or systemic importance matter a lot in the supervisory assessment

Chapter 9

International Financial Architecture: Framework and Banking Regulation

9.1 Introduction: Why the banking system should be regulated and supervised?

9.1.1 Banking system and financial stability

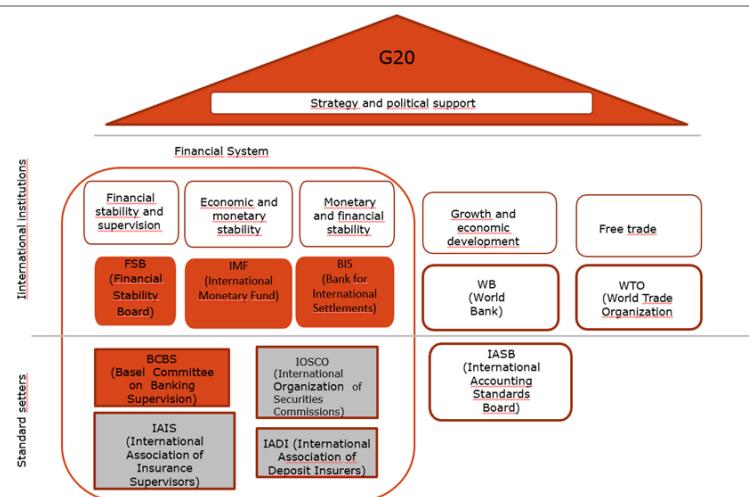
- The objective of the banking business is to provide for the needs of the market economy: channel financial flows and manage risk.
- The markets are not perfect.
- Theoretical models vs Real behaviour of the economic agents: anticompetitive practices, unstable financial markets
- Asymmetrical information of the external agents vs bank managers
- Financial stability: systemic banks
- External impacts:
 - Severe macroeconomic impact
 - Disruption of the payments system
 - Higher cost of funds for companies
 - Contagion risk to other banks and failure of the financial system

9.2 International Framework

- Informal political group: G20
- International institutions: IMF, BIS, WB, WTO
- FSB

- Standard setters:
 - Basel Committee on Banking Supervision (BCBS)
 - International Association of Insurance Supervisors (IAIS)
 - International Organization of Securities Commissions (IOSCO)
 - International Association of Deposit Insurers (IADI)
 - International Accounting Standards Board (IASB)
- National authorities
- Regional authorities

9.2.1 G20



9.2.2 IMF

- Bretton Woods 1944: International Monetary Fund (IMF) and World Bank (WB)
- IMF focuses on macroeconomic and financial stability while the WB concentrates on long-term economic development and poverty reduction.
- The IMF is an organization of 190 countries, working to foster global monetary cooperation, facilitate international trade, promote high employment and sustainable economic growth, secure financial stability and reduce poverty around the world.

9.2.3 BIS

- Act as a bank for central banks
- Serve central banks and financial authorities in their pursuit of monetary and financial stability
- Foster international cooperation in those areas

9.2.4 FSB

- After the Asian crisis (1997-199) : Financial Stability Forum in 1999
- In 2009 after the GFC: Financial Stability Forum → Financial Stability Board
- Enhancing cooperation on financial stability by putting together ministries of finance, central banks, different standard setters (Basel based and non-Basel based) supported by international organizations
- Helps to bridge the political side represented by the G20 and national authorities and the standard setters, with the support of international organizations.
- Contrary to other committees (like BCBS) FSB reports directly to the G20

9.2.5 Standard setters

BCBS (Basel Committee on Banking Supervision): is the primary global standard setter for the prudential regulation of banks and provides a forum for regular cooperation on banking supervisory matters.

- Standards for the prudential regulation and supervision of banks. They constitute minimum requirements and BCBS members may decide to go beyond them. The Committee expects standards to be incorporated into local legal frameworks through each jurisdiction's rule-making process within the pre-defined timeframe established by the Committee
- Guidelines elaborate the standards in areas where they are considered desirable for the prudential regulation and supervision of banks, in particular international active banks. They generally supplement BCBS standards by providing additional guidance for the purpose of their implementation

9.3 Supervision

- They reflect key advances in regulatory thinking. Include among others:
 - Proportionality. Devoting supervisory attention in line with the risk profile and systemic importance of banks
 - Applying a broad financial system perspective that considers both the macroprudential and micro prudential elements of effective supervision
 - Adopting effective crisis preparation and management strategies, together with orderly resolution frameworks and other measures to mitigate the impact of bank failures
 - Fostering robust market discipline through sound supervisory practices in the areas of corporate governance, disclosure and transparency

9.4 Solvency

9.4.1 Basel I

Merits

- It generated substantial increases in capital ratios of international banks
- It enhanced the competitive equality among international banks

- Convergence in the concept and measurement of capital adequacy

Weaknesses

- It did not assess capital adequacy in relation to a bank's true risk profile
- It covered only credit and market risks
- Weak definition of capital

9.4.2 Basel II

Three pillars:

- Minimum capital requirements, which sought to develop and expand the standardized rules set put in Basel I. Includes internal models to calculate RWA. Capital requirements to cover credit risk, market risk and operational risk.
- Supervisory review
- Market discipline and transparency

Weaknesses

- It did not address two important issues:
 - The overall amount of capital: 8%
 - nor its definition and quality
- No consideration for macroprudential
- No consideration for liquidity

9.4.3 Basel III

After the GFC the notion of macropredential/systemic risk becomes widely accepted. Basel III combines the firm-specific and system-wide approaches.

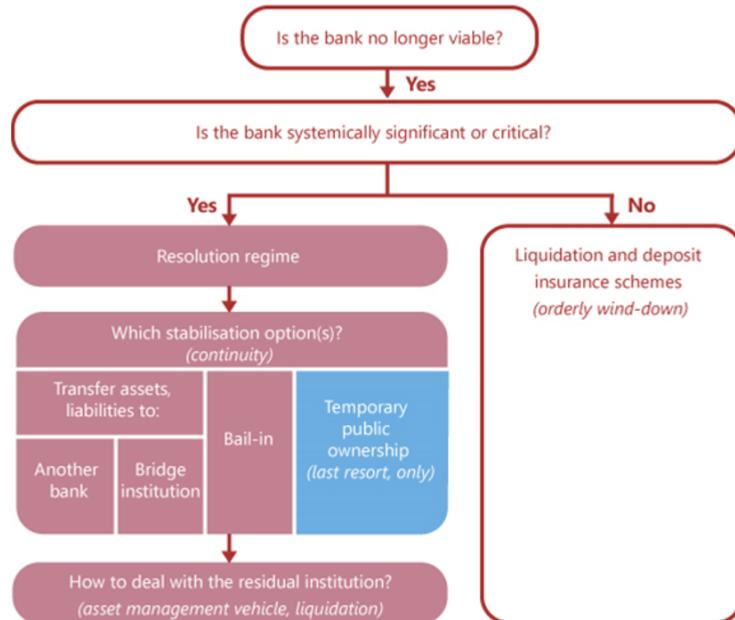
- Micropredential:
 - Strict definition of capital (the numerator). Both higher and better
 - Calibration of a new minimum (the capital ratio)
 - Leverage ratio
 - LCR, NSFR.
- Macropredential:
 - Countercyclical capital buffer
 - TLAC
 - Systemic risk buffer

9.5 Resolution

Total Loss Absorbing Capacity (TLAC)

The TLAC standard defines the minimum amount of qualifying financial instruments that must be available for bail-in within resolution at G-SIBs.

TLAC requirements can be met by instruments that are eligible for the minimum regulatory capital requirement, plus debt liabilities that meet certain criteria. One of those criteria is that TLAC-eligible liabilities should be subordinated to TLAC-excluded liabilities, such as deposits and structured products. Subordination can be achieved in three ways: contractual, statutory and structural.



SECOND SEMESTER



Universidad
de Navarra

FINANCIAL REGULATION

Autor:

Ramón González García-Valcárcel

2023

Mr. Miguel Ángel Otero Complementing the prudential framework: leverage ratio, NSFR, Pillar 2 requirements, large exposures, proportionality, the output floor.

Mr. Antonio Carrascosa and Mr. Mario Delgado Introduction to the banking resolution: EU resolution framework.

Mr. Fernando de la Mora Bad banks, bridge banks, resolution and restructuring. Some real cases. X2

FINANCIAL REGULATION Mr. Álvaro Benzo Non-financial risks

FINANCIAL REGULATION Mrs. Pamela Lintner Cross border resolution, early intervention, depositor protection. Real cases.

Mr. Antonio Carrascosa and Mr. Mario Delgado Case study

FINANCIAL REGULATION Mrs. María José Gómez Capital market regulation overview. X2

FINANCIAL REGULATION Mr. Miguel Cuenca New market infrastructure landscape (EMIR).

Mrs. África Pinillos AML

Mr. Antonio Carrascosa and Mario Delgado SRB in Banking Resolution: Single Resolution Fund, Cross border Resolution, etc

Mr. Charles Morel Climate change risk management, Green Finance Stress Test, green products

Mr. Udaibir Das Issues in Global Financial Architecture and International Banking, Preserving Financial Stability in Emerging and Developing Markets (EDMs).

Mr. Arturo Fraile ESG Financial Regulation

Mr. Francisco Javier del Río Cryptoassets - risks, future regulation and potential impact on the FS

Chapter 10

The Prudential Framework

10.1 Large exposures

An individual client or to a group of connected clients (GCC) to be a "large exposure" when it represents more than 10% of its **eligible capital**.

The large exposures regime consists of a concentration limit, so that **large exposures cannot exceed 25%** of the banks' eligible capital. The objective of the large exposures regime is to protect banks against concentration risk to individual client. Some clients form a group of connected clients when they are economically connected (when one is economically dependent from the other). As of June 2021, the large exposures regime is enhanced in two main aspects:

1. The capital base is Tier 1 Capital, instead of total capital.
2. There is a new concentration limit for exposures of G-SIBs towards other G-SIBs, established at 15%.

With these two amendments, the large exposures regime is more prudent by:

- i. improving the quality of the capital base; and
- ii. taking into account the systemic interconnectedness between banks that are considered "too big to fail"

10.2 Capital buffers

1. Capital Conservation Buffer (CCB)

The purpose of this buffer is to provide a buffer in stressed times before losses end up eroding the bank's capital. Therefore, if a bank does not comply with this buffer, it will have to stop payments of dividends and bonuses. The CCB is 2.5% of RWAs.

2. Counter Cyclical Buffer (CCyB)

It requires a bank to have an additional amount of CET 1 capital in good times, so that it is available when the economic cycle turns and economic activity slows down or even contract. If a bank breaches this requirement, the same rules as in the case of the capital conservation buffer apply.

It is set by the macro-prudential authorities in each Member State, which normally are the National Central Banks. In the EU, it is currently activated in 15 Member States. The level at which the CCyB is established currently ranges from 0.5% to 2.5%.

3- Systemic Risk Buffer (SyRB)

The aim of this buffer is to prevent and mitigate long-term non-cyclical systemic or macro-prudential risks. It can be activated for general exposures or for sectoral exposures.

Member states can require banks to hold a systemic risk buffer of common equity tier 1 (CET 1) capital up to 3% for “all exposures” and up to 5% for “domestic exposures” without authorization from the European Commission. Beyond these limits, a Member State should seek approval from the European Commission.

A very good example is a bubble in the real estate industry, which banks usually are very exposed to. The level at which the systemic risk buffer is established currently ranges from 0.25% (general exposures in AT) to 9% (certain sectoral exposures in Belgium).

4- Buffers for Systemic institutions (G-SIBS and O-SIBS)

- 4.1 G-SIB capital buffer

It is a capital buffer that is mandatory for banks that are identified as ‘global systemically important banks’ (G-SIBs). The systemic importance of a bank is determined according to the criteria agreed by the G-20 which includes the size, cross-border activities and interconnectedness. The list of G-SIBs as well as the capital buffer that each G-SIB has to maintain are published annually by the FSB (in November each year). This list determines the level of the required buffers, classifying the G-SIBs in buckets. In Spain there is only one G-SIB, which is in the bucket required to hold a capital buffer equivalent to 1% of its RWAs. The most recent G-SIB list was published on 27 November 2023 and now there are 29 G-SIBs (one less than last year).

- 4.2 G-SIB leverage ratio buffer

In addition to the leverage ratio (non-risk capital measure), it was decided that a new G-SIB leverage ratio buffer should be introduced for consistency purposes.

- It entered into force in January 2023.
- It is calculated as 50% of the capital buffer for G-SIBs. (i.e. if the capital buffer is 1% of RWAs, the corresponding G-SIB leverage ratio buffer will be 0.5% of the leverage exposure)

- 4.3 O-SIB capital buffers

It is a capital buffer that was established to ensure that banks that are systemic in domestic markets are subject to a buffer similar to that of G-SIBs.

The capital buffer for O-SIIs cannot be higher than 2% of RWAs.

As of January 2024, the O-SII buffer will range from 0.25% to 1.25% following the new methodology approved by the ECB. Such new ECB methodology increases the number of buckets for O-SIIs from 4 to 6 buckets, ranging from 0.25% (first bucket) to 1.50% (sixth bucket). In Spain, there will be one O-SII in the first bucket (0.25%), one in the second bucket (0.50%), one in the fourth bucket (1.00%), and another one, labelled as both G-SIB and O-SII, in the fifth bucket (1.25%).

10.3 The output floor

The objective of this policy measure is to avoid that the calculation of capital requirements by banks according to their own internal models leads to an unjustified reduction of their capital requirements.

To this end, a floor is established so that capital requirements calculated with authorized internal models by banks (the output) can never be lower than 72.5% of the capital requirements calculated under the standardised approaches (the floor). This will, in turn, help reduce excessive variability of RWAs with internal models and favour their comparability among banks.

The CRR3 envisages a transitional period to introduce the output floor, so that it will gradually increase from 50% in 2025 to 72.5% that will apply from 2030 onwards. The output floor in the EU applies both for the banking group (consolidated level) and for each individual institution (solo level)

Chapter 11

Resolution

Overview

1) New institutions (Extraordinary Powers)

- a. SRB
- b. FROB

2) Bail-in

3) Orderly

- a. Objectives:
 - i. Preserve Critical Functions
 - ii. Preserve Financial Stability
 - iii. Not with Public Money

4) Prevention

- a. Recovery Plan
- b. Resolution Plan → Plan

5) Cross borders

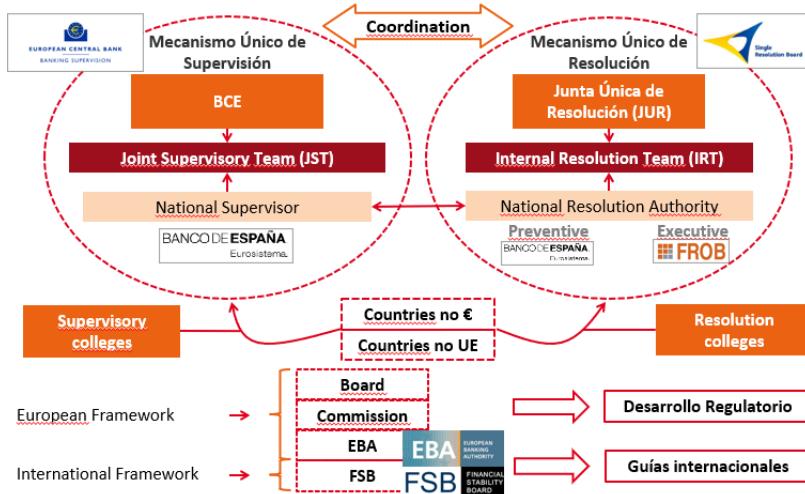
- a. Multiple Point of Entry
- b. Single Point of Entry

6) Single Resolution Fund

11.1 Resolution tools

Sale of the business to a private party

- Part or all of the shares or other instruments of ownership or assets, right and liabilities can be sold to a private purchaser



- Quick and private solution.
- It may be facilitated with an “APS”. Role of the SRF?
- Credibility: market structure, separability, and information (VDR)
- Contingencies favor an “asset deal”. Indemnities from the SRF?

Bridge bank

- Part or all of the shares or other instruments of ownership or assets, right and liabilities can be transferred to a temporary entity
- It can complement the sale of business tool

Asset separation pool

- Assets, rights and liabilities can be transferred to an asset management vehicle, totally or partially publicly owned, if liquidation of the assets could cause market disruption
- Asset Management Company (\approx Bad Bank).

11.1.1 New hierarchy of liabilities

New hierarchy of liabilities	“Bail-in sequence”
Capital Subordinated debt Senior non preferred Senior debt + Large companies deposits SMEs and individual client deposits Covered Deposits	8% bail-in over total liabilities If more bail-in is necessary... <ul style="list-style-type: none"> • Generally \rightarrow more bail-in • Possible flexibility \rightarrow resolution fund If more bail-in is necessary... <ul style="list-style-type: none"> • Generally \rightarrow more bail-in • Possible public sector resources for deposits

Table 11.1: Problem of buckets with different liability classes, especially when the probability of exclusion is high: new senior non-preferred and the super-preference of deposits

SRB and EBA are working together.

- **Valuation 1:** Problems of solvency and liquidity. This valuation is done to confirm if the bank is failing or likely to fail.
- **Valuation 2:** Different goal in sale of business and in other resolution tools. When other resolution tools are used this is an economic valuation and it is very important because it will determine the amount of creditors being bailed in and everything. During a sale of business this valuation will give an orientation in the market. Since it is hard to determine an exact price, a range it is usually given.
- **Valuation 3:** Check of the “No creditor worse-off principle”. Use of the SRF if any creditor is worse off.

The Single Resolution Fund:

- A single, fully-mutualised fund
- Funded until 2024 to at least 1% of covered deposits. Target around €70 billion financed by ex-ante contributions which are adjusted by risk profile
- Shortfalls may be financed by ex post contributions or borrowing
- Always, fiscal neutrality, at least in the medium/long run (protection of taxpayer)
- The SRF can be used to ensure the effective application of the resolution tools. It can be used for liquidity support or for capital measures
- To be used for capital measures, at least 8% of the losses of the bank must have been absorbed by shareholders & creditors of the bank first

11.1.2 Resolution planning cycle

The first step is the preparation phase, where the SRB drafts the preparation but it is not disclosed to the bank. The bank is only given a summary.

Then the bank starts drafting the resolution plan. After the plan is drafted there is a review phase and then an approval phase. The final phase is the communication phase. Inside this phase the regulator also issues a book of expectations for the banks that they will have to slowly incorporate.

The single supervisory mechanism is comprised of 20 eurozone countries plus Bulgaria.

Resolution Process: Preparation Phase → Drafting Phase → Review Phase (with SRB) → Approval phase → Communication Phase

Template to fill:

- LCR, Liability Data Report
- ALR, Additional Liability Dara report
- CFR, Critcal ntion Report
- CIR Reporting pursuant to Comission Implementing Regulation
- Financial Market infrastructure Report

The SRB defines 5 types of critical functions:

- Deposits
- Lending

- Payment, cash, settlement, clearing and custody (PCSCC) services
- Capital markets
- Wholesale funding

Inside of each of these categories there are subcategories. Materiality thresholds are also considered for each of the categories.

7 Dimensions of resolvability:

- Governance
- Bail in execution
- Liquidity and funding in resolution
- Operational continuity & FMI access
- Information systems & data requirements
- Communication
- Separability and reorganization

11.2 MREL

Table 11.2: Balance sheet of Bank A

Assets	Liabilities
100 Assets	Equity 14 Liabilities 86

Table 11.3: Balance sheet of Bank A

Assets	Liabilities
86 Assets	Equity 3 Liabilities 83

11.3 Resolution Framework

Key attributes of effective resolution

- 1 Scope
- 2 Resolution Authority
- 3 Resolution Powers
- 4 Set off, netting, collateralisation
- 5 Safeguards
- 6 Funding of firms in resolution
- 7 Legal framework conditions

- 8 Crisis management Groups
- 9 Cross border cooperation agreements
- 10 Resolvability assessment
- 11 Recovery and resolution planning
- 12 Access to info and info sharin

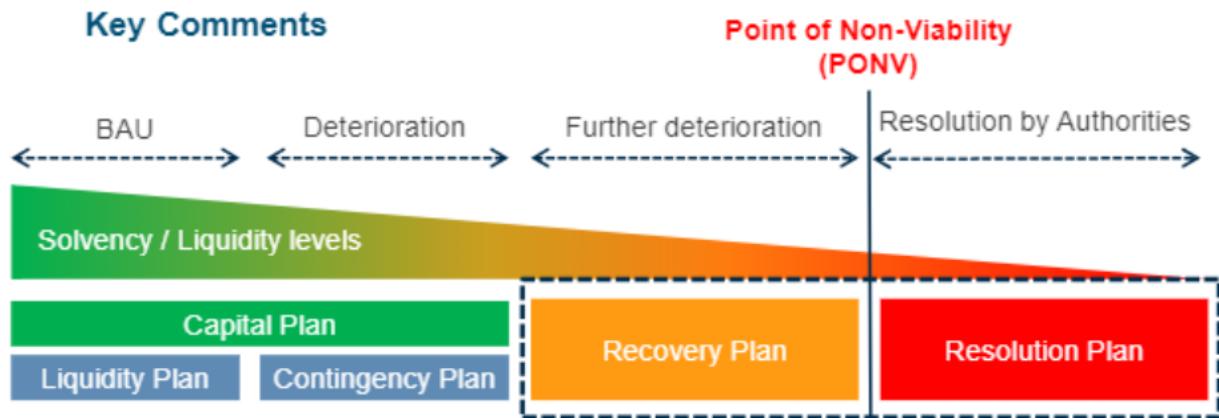


Figure 11.1: **Phases of the failure of a bank.** Once the recovery plan is reached, the regulators and the public need to be informed. There is no need for disclosure if the contingency plan is started.

11.4 Preparation and prevention: Recovery plans

General topics

- Very complex process involving manydepartments. Reviewed by Internal Audit
- Strategic plan must be considered.
- Has to be consistent and clear. An executivesummary and annual dry run are desirable
- Data quality is often an issue

Scenarios

- Must cover fast/slow events as well as systemic/idiosyncratic and combined impacts
- Proportionality in the number anddetail of scenarios (4 for G-SIBs)
- Impact and feasibility of recoveryoptions per scenario
- Reverse stress test is important
- Not severe enough, potentialimpediments not assessed fairly

Measures

- Many types: Disposal, liquidity management,capital raising, cost saving, asset sales, accessto CB facilities, access to Wholesale funding, de-risking, commercial measures

- RP's essence is the quality of recovery options
- Over optimistic sometimes, valuation is unclear, difficult peer comparison, liquidity is key

11.5 Resolution plans

When the recovery plan fails the plan enters into resolution. The resolution plan prepares the bank for the supervisors to take it over.

Critical Economic Functions: The bank needs to analyse and identify the critical economic functions which will be kept so the system doesn't collapse. The rest of the functions can be reduced or even eliminated.

MREL: Amount of liabilities that the bank has to have to absorb potential losses. Mrel is approximately double the amount of CET1 capital:

$$MREL = 2 \cdot CET1 + Buffer \approx 25 - 30\% RWA \quad (11.1)$$

Everything is bail-inable except from deposits that are protected by the deposit insurance scheme.

11.5.1 Resolution Powers Tools

- **Bail-in:** Using the MREL to recapitalize the bank
- **Asset separation:** Power to transfer assets, rights or liabilities to 1 or + asset management vehicles. Definition: total/ partial public ownership entity, controlled by the Resolution Authority. Aims to maximize value through orderly liquidation. Ex. SAREB. Resolution Authorities determine transfer price. Can only be used with other tools
- **Bridge institution:** It takes the bad assets for a period of 1 or 2 years. This is usually used if you cannot sell the bad assets in the market either because the market is in distress or because the selling price would be too low.
- **Sale of business:** Selling the bank completely to another institution.
- **Moratorium:** Suspend any payment or delivery obligations under any contract to which an institution under resolution is a party. Can last no more than two business days. May be used when FOLTF with no private alternative or to assess if there is Public interest to resolve or determine actions or application of tools.

11.6 SRM: SRB, Single Resolution Fund and Resolution Tools

The decision-making process under the SRM will be taken by a Single Resolution Board (SRB). A bank resolution decision will be taken in less than a weekend. The EC and the ECB have permanent observer status in all Executive and Plenary SRB Sessions.

11.6.1 Activities and powers of the SRB

Its mission is to ensure an orderly resolution of failing banks with minimum impact on the real economy and public finances of the participating Member States and beyond.

- The SRB will prepare resolution plans and will carry out the resolution of banks in trouble (proactive role), whenever it fails or is likely to fail
- The Board will also be in charge of the Single Resolution Fund, a pool of money financed by the banking sector which will be set up to ensure that medium-term funding support is available while a credit institution is being restructured.
- Assessment of Resolvability and MREL requirements: It works in close cooperation with the national resolution authorities.
- The ECB shall provide all relevant information to the SRB to help inform its assessment process.
- The SRB remains responsible to determine whether no alternative solution is available and whether a resolution is necessary in public interest

11.6.2 Funding of the SRB

- **DGF:** Deposit Guarantee Fund is still responsible for the covered deposits funding
- **Resolution fund:** Financed by ex- ante contributions from the banking sector to each National Competent Authority Resolution Funds
- **Bail-in:** The Bank Recovery and Resolution Directive has enshrined in hard law minimum thresholds for “bail in” that must be applied where resolution funding is required

The sequence for bearing resolution costs will be as follows:

Step 1: The national compartments of the affected host and Member States would be used after the bail-in.

Step 2: If Step 1 is not enough, then a portion of all compartments (including those of the concerned Member State) would be used.

Step 3: If previous steps still insufficient, any remaining funds of the concerned compartments would be used

The SRF may be used only to the extent necessary to ensure the effective application of the resolution tools, as a last resort. The SRF shall not be used directly to absorb losses or to recapitalise an institution, only exceptionally under important preconditions:

1. Contribution to loss absorption and recapitalisation of not less than 8% of total liabilities including own funds has already been made by shareholders, the holders of relevant capital instruments and other eligible liabilities through write-down, conversion or otherwise.
2. the SRF contribution does not exceed 5% of the total liabilities including own funds of the institution under resolution

11.6.3 Composition of MREL by bail-in hierarchy

1. Ordinary shares - Traded
2. Additional Tier 1
3. Subordinated debt / Tier 2

4. Subordinated debt not Tier 2
5. Other MREL eligible
6. Senior non-preferred debt
7. Senior unsecured debt
8. Uncollateralized secured liabilities
9. Uninsured non-preferential deposits
10. Structured products
11. Derivative liabilities (Traded, OTC and Bilateral)
12. Uninsured preferential deposits

11.7 Popular Case Study

11.7.1 Executive summary

The first intervention by Resolutions Authorities (SRB, BdE, and FROB) was perceived as rapid and effective in minimizing impacts on financial stability, though communication could be improved. Popular Bank has a capital structure with a CET1 ratio of 10% and total capital of 12%, but valuation suggests potential negative value. Only actual capital consists of subordinated shares converted and sold to SAN. The integration of Popular into SAN could negatively affect SAN's capital due to goodwill and potential litigations.

Liquidity issues, including deposit outflows and depletion of liquidity buffers, led to concerns, but the Santander acquisition is expected to halt outflows.

Banco Popular has a high NPA ratio and plans to increase coverage to 65% to facilitate quick sale. Significant REOs are concentrated in land. Joint ventures with Varde, like Aliseda and Wizink, may undergo review for synergies. The Allianz contract might be terminated or upgraded, and Totalbank could be retained or sold within the consolidated entity as needed.

11.7.2 Lessons learnt

The end of "Too Big To Fail" may prompt banks to be more transparent about accounting provisions to avoid confidence crises affecting liquidity. It could also encourage them to bolster liquidity contingency planning. Integration into SAN is expected to create value due to the acquisition at a discount, capital amortization, and synergies.

The resolution of Popular Bank was triggered by liquidity issues, though Deloitte valuation suggests insolvency. Saracho's role is seen as a failure in both selling and managing the bank. Further market concentration is anticipated, raising concerns about complex entities. Excessive manager salaries and bonuses contribute to banking reputation risks. Sellers may lower prices due to resolution risks in future transactions. Litigations offer potential upside for affected investors, particularly those from the last capital increase. Investors may hesitate to invest in troubled banks' capital or bail-inable instruments. Contagion risks to Liberbank or as an idiosyncratic event are debated.

The resolution was remarkably swift and without public funds, garnering positive market and public perception. However, doubts persist about intervention timing and bank solvency. Communication regarding

resolution preparatory work by SRB was deemed unfortunate. ECB's liquidity management is criticized as slow or insufficient, raising future bank-run risks. Stress test credibility and the role of authorities, particularly Guindos and CNMV, are also scrutinized.

Chapter 12

Bank restructuring

Private solutions

- **Distressed M&A:** When a healthy bank steps in to buy the bank that is in trouble: Sometimes the transaction is not even worth it for the healthy bank
- **Restructuring:** Selling assets, firing people, rescheduling the debt...

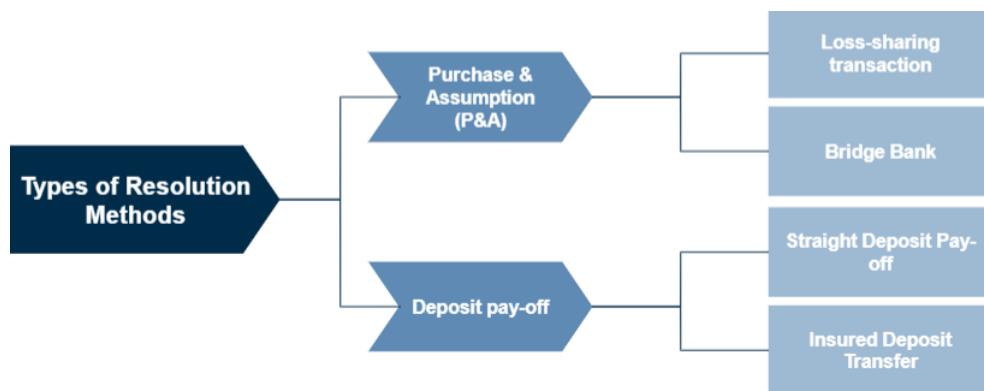
Public solutions

- **APS:** Asset Protection Scheme in which the government grants protection for some of the bad assets of the bank
- **Asset Management company:** Also known as a “Bad Bank”
- **Resolution**
- **Bridge Bank**
- **Liquidation**
- **Nationalisation**

12.1 The US resolution framework

The traditional resolution process in the US is done by the FDIC by taking immediate action to resolve it, following a resolution process with two different stages:

- **The Resolution Stage:** Process of resolving failed banks. The FDIC takes charge of valuing the assets of the failed bank, solicits bids for the sale of the bank and evaluates the bids to determine which one is the least costly for the insurance fund
- **The liquidation stage:** The process of liquidating the assets of a failed bank. The FDIC is in charge of liquidating any remaining assets of the failed bank and distributes the proceeds, first to unsecured depositors, then to the general creditors and finally to the shareholders



12.2 European bank restructuring

12.2.1 Bad banks

The creation of an AMC (Asset Management Company) will cleanse the balance sheets of the banks allowing additional credit to flow into the system while also creating a structure for the efficient deleverage of NPL.

Numerous countries have used AMC structures and asset protection schemes to support and mend troubled banking systems where NPLs are a feature. There are essentially 3 different approaches which are as follows:

- **Asset Management Company (AMC):** NPLs are transferred to an independently managed, funded and capitalized entity, leaving the banks to focus on the good assets and a new specialist management to work-out resolve the NPLs (e.g. Securum, NAMA, SAREB, BAML). Typically used for real estate asset classes primarily (CRE, RRE, land & development).
- **Corporate Restructuring Vehicles (CRVs):** A vehicle set up by a bank, with potentially 3rd party equity, where NPLs (corporate or SME debt) are transferred and worked out using specialist staff. Several banks can participate where there are common borrowers (e.g. KKR UCG ISP A&M structure).
- **Asset Protection Scheme (APS):** This is an insurance scheme on a pool of assets, where the bank takes the first loss on any reduction in value with the Government insuring above a certain hurdle. Can be used for all classes (e.g UK)

12.2.2 Internal Bank Restructuring

A restructuring plan is both a financial and an operational plan. It can be originated by the shareholders or the management team of the company.

Developing a restructuring plan is comprised of four main steps:

- Plan
- Identify
- Analyze
- Report

12.2.3 Restructuring plan deliverable

It should contain a clear and credible set of restructuring strategies and actions that help the Bank restore its capital and liquidity position. It is divided into 3 main stages:

- **Current state:** Financial Plan & Forecast. Done by LOB and Legal Entity and is a 3-year view
 - Income statement
 - Balance sheet
 - Capital position and plan
 - Liquidity
 - Core vs non-core business
- **Pro-forma State:** Scenario & Stress Test. Done by LOB and Legal Entity and is a 3-year view
 - Base case
 - Stress scenario projections
 - Key risk exposures
 - Loss projections for loans, investments, trading book, off balance sheet
- **Restructuring strategies & actions** Done by LOB and Legal Entity and is a 3-year financial impacts projection.
 - Capital issuance and management
 - Liquidity strategies
 - De-risking
 - Cost improvement

12.3 Non performing assets

Non Performing Assets (NPA) are those assets that do not generate (or at high risk of not generating) income for the bank.

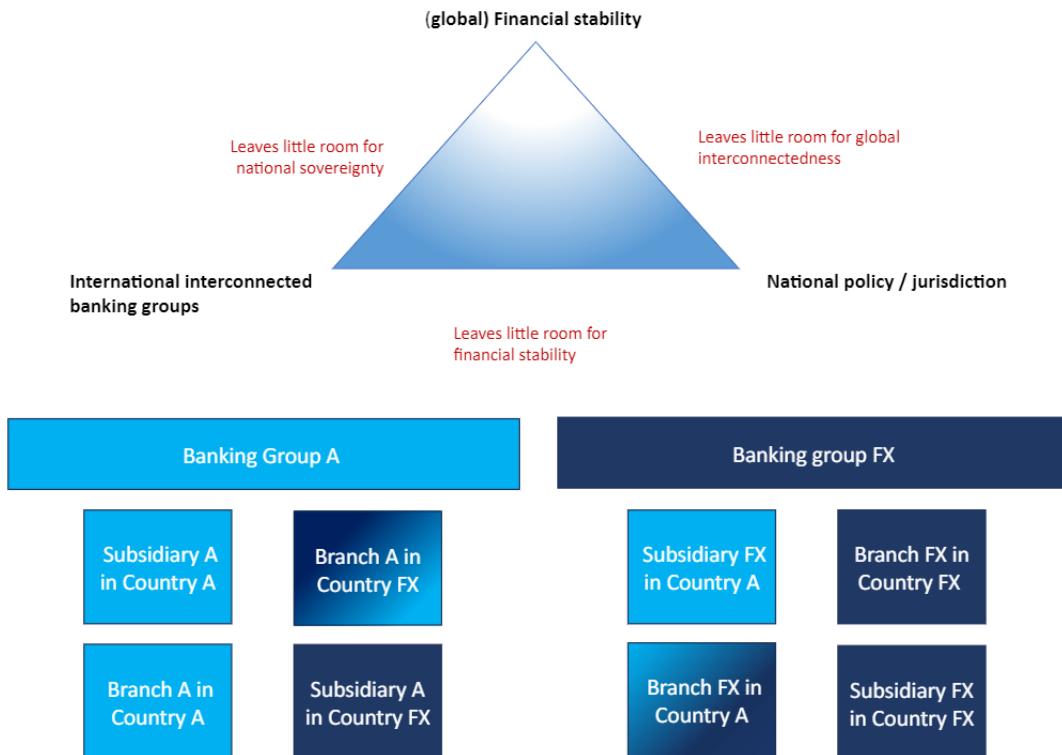
Chapter 13

Cross Border Bank Resolution

13.1 Introduction

Cross Border Bank Resolution the process of resolving financial institutions with operations spanning multiple jurisdictions.

Resolution should aim to protect financial stability, global interconnectedness and also national interests. However this is a **financial trilemma**.



Resolution Authority in Country A has resolution power over:

- ✓ Subsidiaries and Branches of Bank A in A as well as Subsidiary of FX in A

- ✓ Branch A in country FX: branch in principle follows parent liquidation/resolution; no separate legal entity
- ✓ Partly over branch FX in Country A: may take stabilization action (or request conversion into subsidiary) if FX RA does not take action (depending on country A legislation)

13.1.1 Landsbanki - Icesave

In October 2008, Iceland experienced the collapse of its three largest banks: Kaupthing, Glitnir, and Landsbanki, which collectively constituted 80% of the nation's financial system. These collapses were fueled by excessive balance sheet growth, with the banks expanding aggressively into foreign markets and relying heavily on funding from abroad, particularly through attracting foreign deposits with relatively high interest rates, notably from EU Member States.

The Icelandic government faced the risk of sovereign default and had no option but to bail out the banks to prevent a collapse. Emergency legislation was enacted to create new bridge banks by separating domestic activities from the failing banks, aiming to maintain basic banking services for the domestic economy with public support and bail-ins.

Cross-border issues complicated the situation further. The banks held large foreign currency balance sheets with maturity mismatches, and the Central Bank lacked the capacity to act as a lender of last resort in foreign currency due to insufficient foreign exchange reserves and credit lines. Additionally, many of the banks operated through branches in EU Member States, with deposit guarantee schemes in those countries covering only a fraction of deposits and often unable to address the mismatch between contributions in Icelandic Krona and deposits in foreign currencies.

In response to the crisis, different countries implemented varying measures to protect depositors. In Ireland, domestic deposits were fully guaranteed by the government, while preference was given to depositors from EU branches. However, there was a disparity in treatment regarding the time value of money, with foreign depositors left with limited access to their deposits and minimal insurance coverage. The UK and Netherlands fully guaranteed Icebank (a retail arm of Landsbanki) deposits in their local branches to maintain financial stability, while Germany imposed a moratorium to secure branch assets.

13.1.2 Main takeaways from the pre - GFC

- Lack of cross border cooperation
- In all cases authorities followed territorial approach
 - (part) business continuity and stabilization of the financial system with public bail-out splitting the bank along national borders
 - Banks were operating in EU countries based on the “European passport” and a harmonized regulatory framework (CRD; DGSD,...) but the safety net and crisis management remained largely national:
 - home DGS for branch did not work in practice; DGS even if legally covered by home, questionable if sufficient safeguard for host financial stability
 - Tough countermeasures in host authorities via asset freezing, moratoria ,..
 - Lender of last resort is national

13.2 Regulatory and legal changes of cross border bank resolution post 2008

13.2.1 Basel recommendations

Recommendation 1: Effective national resolution powers

Recommendation 2: Frameworks for a coordinated resolution of financial groups: Each jurisdiction should establish a national framework to coordinate the resolution of the legal entities of financial groups and financial conglomerates within its jurisdiction.

Recommendation 3: Convergence of national resolution measures: National authorities should seek convergence of national resolution tools and measures toward those identified in Rec. 1 and 2 in order to facilitate the coordinated resolution of financial institutions active in multiple jurisdictions.

Recommendation 4: Cross-border effects of national resolution measures: To promote better coordination among national authorities in cross-border resolutions, national authorities should consider the development of procedures to facilitate the mutual recognition of crisis management and resolution proceedings and/or measures.

Recommendation 5: Reduction of complexity and interconnectedness of group structures and operations

Recommendation 6: Cross-border cooperation and information sharing

Recommendation 7: Strengthening risk mitigation mechanisms: resiliency of critical financial or market functions during a crisis or resolution of financial institutions; Eg enforceable netting agreements, collateralization, and segregation of client position; standardization of derivative contracts; greater transparency in reporting for OTC contracts through trade repositories

Recommendation 8: Transfer of contractual relationships: National resolution authorities should have the legal authority to temporarily delay immediate operation of contractual early termination clauses in order to exercise resolution

Recommendation 9: Exit strategies and market discipline after public interventions

Recommendation 10: Planning in advance for orderly resolution

13.2.2 Crisis management groups (CMGs) for GSIBS

CMG members cooperate via institution specific cross border cooperation agreements (CoAgs) and cooperate closely with authorities of other countries in which firms have a systemic presence

- CMGs enhance coordination and cooperation between home and host authorities of G-SIFIs
- carry out recovery and resolution tasks, e.g. enhance resolvability and progress and manage recovery and resolution plans (but do not “adopt” plans)
- enhance communication and prepare for the effective management and/or resolution of an institution

Making the resolution of a bank administrative based instead of jurisdictionally based is really important. This is because you can prepare beforehand with the administrative authority in case there is a resolution. This could not happen with a judge because the judge does not know beforehand what case they are getting.

The SRB and the National Authorities are in charge of drafting the Resolution Plan with some inputs from the banks. The authority in charge of the Resolution Plan is the one where the holding company is. Other relevant countries where the bank has important subsidiaries are invited to share ideas.

What would happen if a subsidiary of a bank is huge in the country (for example in Zambia) but it is insignificant inside the group?

- Then the host authority would have to really argue why the subsidiary is important in the country and request an invitation to the resolution college in the jurisdiction of the parent company

All the banks also need to have a bail-in playbook. Bail-in playbooks regulate that the local authority can write down the liabilities for the bail in even if those bonds were issued under a foreign country's law.

13.2.3 Resolution over branches

The resolution authority should have power over local branches of foreign firms, enabling it to either assist in a resolution initiated by the foreign home authority or, in rare cases, take independent action. If the host authority deems a branch to pose a risk of failure and the home authority is unlikely to act adequately, the host authority may be empowered to resolve the branch independently. This could involve transferring assets to an acquirer or establishing a bridge bank or asset management vehicle.

However, certain resolution methods like share transfer and bail-in conversion are not feasible for branches. In some jurisdictions like the UK, the Prudential Regulation Authority (PRA) may apply UK law to value assets in exceptional circumstances. The determination of whether to resolve a branch under host law instead of home law is based on a cost assessment. While general resolvability requirements do not typically apply to foreign branches, if the host authority lacks confidence in the home resolution arrangements, it may withdraw authorization and require the branch to convert into a subsidiary.

13.3 Single point of entry vs Multiple point of entry

The main difference is that in a single point of entry entity the MREL and TLAC instruments are issued by the parent and the capital is downstreamed to the subsidiaries. If a subsidiary fails, then losses are upstreamed towards the parent and the parent will have to put capital. Even in this case of a single point of entry, the one that decides that the bank is failing and triggers the conversion of the TLAC and the MREL is the local authority of the subsidiary.

It is not prohibited that in a multiple point of entry bank, the parent authority buys TLAC and MREL instruments issued by the subsidiaries.

In a MPE there is also a group resolution plan that establishes things as group support.

Summary

1. Capital & internal MREL is prepositioned by the parent to the Subsidiary (guarantee possible)
2. The only resolution entity is the parent - in principle
3. The Subsidiary may not put into resolution but declare FOLTF/ Non-viable under WDCC to trigger internal MREL
 - Assets transferred to parent: by writing off capital and at the same time recapitalization via MREL conversion

- The only creditors affected are capital and MREL = parent

Who decides on internal MREL?

- Coordination and cooperation in CMGs and EU Colleges, BUT not binding
- Legal jurisdiction of the subsidiary and type of MREL is with the host authority (also within the non Banking Union EU)
- Parent RAs / Bank may set conditions on internal MREL eg limitation on subsidiaries autonomy (governance, risk management, franchise system, liquidity, treasury, IT - third party services etc.)

Is the host country bound by an SPE group resolution plan? Is it aware about the group resolution plan?

- A small host country (non material entity but the subsidiary may well be systemic in the host) may not have access to CMGs ,Colleges and not be formally aware have access to the group plan.

What if Loss goes beyond internal MREL?

- The host authority takes regular resolution action and the group may break up (SoB, Bail-in conversion etc)

Can the parent company also provide internal MREL under an MPE strategy?

- Yes, See HSBC , also in EU cases. In many small host countries lack of capital market to issue external MREL

13.4 Cross border recognition

Statutory recognition of resolution decisions: foreign country to recognize resolution action of another resolution authority domestically empowering local authorities to enforce action or supporting measures and grounds for refusal

- **Within the EU (Art 66)** Resolution actions within the European Union are automatically recognized.
- **With Third Countries** Recognition with third countries is discretionary and subject to certain grounds:
 - Adverse effects on financial stability in the member state or another member state.
 - Independent resolution action necessary for achieving resolution objectives concerning EU branches.
 - Disparity in treatment between creditors or depositors in member states compared to those in third countries.
 - Material fiscal implications for a Member State.
 - Contravention of national law by the effects of recognition or enforcement.
- **Empowerment for Negotiation** The European Commission (EC) and Council are empowered to negotiate framework agreements that include the recognition of resolution actions of third countries.

- **Limitations of Resolution Stay Powers** Resolution stay powers may only apply to contracts governed by local law. Contracts governed by foreign exchange (FX) law might not be covered, necessitating the request for contractual recognition in local law.

It seems like banking groups are **international in life** but **national in death**. There are some examples that illustrate this concept:

13.4.1 Novo Banco

In the first case study, Oak Finance Lux entered a facility agreement with BES under English law, with the English courts having exclusive jurisdiction. After BES's split into NOVO Banco and a winding-down entity, Oak's liability was transferred to NOVO Banco. However, a Portuguese banking law provision prohibited transferring liabilities to bridge institutions if owed to entities holding more than 2% of the original institution's share capital. The Central Bank of Portugal decided Oak's liability hadn't transferred, leading Oak to sue in English courts. Initially, a lower court held NOVO Banco bound by the jurisdiction clause. But the UK Supreme Court ruled jurisdiction determined by EU law, not contractual clauses, favoring Portugal's jurisdiction.

13.4.2 PrivatBank

In the second case, PrivatBank's insolvency led to a bail-in affecting loans made by UK SPV Credit Finance plc, converted into shares as part of nationalization. Litigation ensued, and Ukrainian authorities sought recognition of the resolution action from the Bank of England (BoE), eventually approved by the UK Treasury in 2021. The London Court of International Arbitration's ruling affirmed that PrivatBank must repay Eurobonds only if BoE doesn't recognize the bail-in, and this recognition didn't affect legal actions under Ukrainian law, highlighting the extensive power to override contractual jurisdiction clauses.

13.4.3 FOLTF of Sberbank Europe

On February 27th, the Single Resolution Board (SRB) determined that Sberbank Europe AG and its subsidiaries in Austria, Croatia, and Slovenia faced a significant deterioration in liquidity, prompted by sanctions against its Russian parent. A moratorium was imposed on these banks, suspending payments, enforcement, and termination rights.

On March 1st, the SRB decided that no resolution was necessary for the Austrian parent due to the absence of public interest, suggesting national insolvency procedures instead. The Croatian and Slovenian subsidiaries were resolved through the sale of business, transferring all shares to Hrvatska Poštanska Banka and Nova Ljubljanska banka, respectively, for a payment of 5.11 million euros. The Hungarian subsidiary underwent solvent liquidation, leading to deposit guarantee scheme (DGS) payouts, while the Czech subsidiary faced administrative proceedings and eventual license revocation and liquidation.

BARS Banja Luka and Serbia's subsidiaries underwent resolution via share transfer to Nova Banka and AIK Banka, respectively. Additionally, the Bosnian-Herzegovinian subsidiaries saw external administration and resolution through the sale of business to ASA Banka.

- Resolution plan stipulated for SPE. Banking groups still appear to be "international in life but national in death"
- Protection of taxpayers and insured depositors

- Avoidance of spillovers – maintenance of financial stability
- Continuation of critical economic services for those subsidiaries that were put into resolution – via Sale of business
- Application of Public interest test appears discretionary – i.e. if buyer available resolution if not, not...
- Well coordinated actions – importance of resolution moratorium (2 days) to “buy” time, but approach taken reflects “(territorial) pragmatism” and break up along national lines - Also due to special circumstance of the case and previous private M&A discussions in CEE countries

13.4.4 Cross border effects of Silicon Valley Bank (SVB): UK and Germany

Silicon Valley Bank (SVB) was ranked as the 16th biggest bank in the U.S. with approximately \$209 billion in total assets and \$175.4 billion in total deposits at the end of 2022. SVB operated as a California state-chartered member bank with 17 branches in California and Massachusetts.

SVB also had a presence in the UK through a subsidiary, as well as in Germany with a lending-only branch (no deposits). Furthermore, SVB had operations in China, Denmark, India, Israel, and Sweden.

SVB Financial Group (SVB Financial) served as the top-level parent financial holding company, with SVB as its principal subsidiary. Five material entities were identified in SVB’s Resolution Plan, including those in the UK, Germany, and Global Services India, which provided IT, HR, and financial services.

As of December 31, 2022, the Common Equity Tier 1 (CET1) ratio of SVB Financial was 12.05% (required 7%), while for the bank itself, it was 15.26%. SVB was not subject to the Federal Reserve’s Liquidity Coverage Ratio (LCR) or Net Stable Funding Ratio (NSFR) requirements.

Effects on UK and Germany

SVB UK, a subsidiary of a US parent company, faced scrutiny from UK regulators due to concerns about its liquidity despite having a healthy balance sheet. There were worries that the parent company might attempt to repatriate funds from SVB UK, reminiscent of past financial crises like the Icelandic banking collapse.

By March 10, a significant portion of SVB UK’s deposits had been withdrawn, triggering fears of a liquidity crisis and potential insolvency. The Bank of England stepped in, applying to place SVB UK into insolvency to protect depositors up to the insured limit of £85,000.

Efforts were made to find a buyer quickly to prevent further damage to the financial system and potential negative impacts on the tech industry, as SVB UK was a major lender to startups. Eventually, HSBC UK Bank Plc acquired SVB UK for a nominal sum of £1, ensuring continuity of services for customers.

Meanwhile, SVB’s German branch underwent restructuring, with BaFin imposing a moratorium initially but later granting permission for the branch to continue operations under a new name and license. The parent company’s US operations were sold off, and the German branch remained under FDIC control until it was eventually sold in parts to various bidders, including Bootstrap Europe.

13.4.5 Importance of cross border recognition

The need for cross-border recognition of FDIC resolution actions arose because FDIC had jurisdiction over German assets without a separate legal entity, as they were under the ownership of the FDIC Bridge Bank.

This recognition was necessary to ensure that the acquired assets would be acknowledged under German law, providing legal certainty for the acquiring entity. Similarly, if the branch had been a subsidiary, there would still be a need for recognition to prevent complications such as the non-transfer of a foreign subsidiary's assets under a parent bank's resolution actions, potentially leading to the subsidiary being wound down under the host country's laws. Without recognition, there could be a risk that the host country's liquidator or court might utilize the assets of the parent bank for recovery, posing a risk for the new acquirer, bridge bank, or asset management vehicle. Recognition of the parent resolution authority's decision by the host country helps mitigate this risk.

13.5 Credit Suisse Case Study

Credit Suisse, as one of the largest banks globally and a key player in Switzerland's banking sector, operates through various business lines across different regions. These include global wealth management, investment banking, commercial and retail banking in Switzerland, and global asset management.

In response to regulatory requirements, particularly from FINMA, Credit Suisse and other major Swiss banks have been undergoing structural changes aimed at ensuring their stability in times of crisis. FINMA's resolution strategy, known as "single point of entry" (SPoE), focuses on resolving these banks at the level of their group holding companies. This approach is designed to streamline the resolution process and prevent jurisdictional disputes by having a unified resolution authority.

Under the SPoE framework, if a bank faces insolvency, bail-in bonds issued by the group holding company can be converted into equity to recapitalize the bank. This conversion helps absorb losses and rebuild the bank's capital base. Systemically important banks like Credit Suisse are required to maintain sufficient "gone concern" capital instruments, such as bail-in bonds, to ensure they can withstand financial shocks.

In March 2023, Credit Suisse had a resolution plan prepared for potential implementation. This plan included several key steps:

1. Shareholders and certain bondholders, particularly holders of Additional Tier 1 (AT1) capital instruments, would have their investments wiped out.
2. Bail-in bonds, totaling over CHF 50 billion of Total Loss-Absorbing Capacity (TLAC), would be converted into new shares, thereby increasing the bank's capitalization.
3. New management would be appointed to oversee the restructured bank.
4. Credit Suisse would benefit from a CHF 100 billion liquidity facility provided by the Swiss National Bank, with backing from the Swiss Confederation. This facility, established through emergency legislation and draft amendments to the Swiss Banking Act, would provide essential liquidity support.
5. The bank would reopen with a consolidated Common Equity Tier 1 (CET1) ratio of approximately 44% of Risk-Weighted Assets (RWA), significantly bolstering its financial position. This resolution plan demonstrates Credit Suisse's proactive approach to regulatory compliance and risk management, ensuring its resilience in the face of potential financial challenges.

Why was SPE Resolution not taken?

- Possible knock-on effects from imposing losses on shareholders and bailing in bondholders
- Uncertainty about the market and customer acceptance of a stand-alone recapitalized entity

- Certain execution risks, including the mechanics of bail-in due to US SEC requirements:

13.5.1 Decisions taken by the Swiss authorities

Based on contractual agreements and emergency ordinances, FINMA declared that Credit Suisse's Additional Tier 1 (AT1) instruments would be completely written down in a "viability event." Such an event would occur if Credit Suisse received extraordinary government support beyond customary measures, necessary to improve its capital adequacy and prevent insolvency or inability to meet debts.

In a viability event, holders of AT1 instruments would irrevocably waive their rights to repayment and agree to the write-down of their investments. This measure was implemented to bolster Credit Suisse's capital adequacy and ensure its financial stability.

Despite these measures, financial stability was maintained, with minimal disruption in financial markets and continued business from customers. The resolution process adopted a global approach, encompassing the entire Credit Suisse entity.

International responses regarding burden sharing and AT1 write-down were also observed. The SRB, EBA, and ECB emphasized the precedence of common equity instruments in absorbing losses before AT1 instruments. This principle guided actions in crisis interventions.

Similarly, the Bank of England's statement highlighted the statutory order in which shareholders and creditors bear losses, with AT1 instruments ranking ahead of Common Equity Tier 1 (CET1) and behind Tier 2 (T2) instruments in the hierarchy.

In the United States, UBS's compliance with US securities laws was crucial for the resolution process, including the publication of registration statements and prospectuses filed with the SEC for the issuance of new shares to Credit Suisse shareholders, a process that took approximately three months

13.6 Cross Border Bank Resolution: Main takeaways

- No practical example of a Cross border SPE bail-in case
- Well working fora for Cooperation (CMGs and EU resolution colleges), but non-binding and small host countries often left outside
- Well working examples of cross border recognition (UKR / BES, but option to opt out from recognition due to national concerns; still many uncertainties and potential impediments e.g. on details regarding cross border bail-in technicalities e.g. US SEC law in case of Credit Suisse)
- SPE/MPE lines are in practice blurred: NOTE also under SPE the host authority may take resolution action and an MPE bank may receive MREL from the parent bank
- Contagion effects still along national lines, ELA national; national public backup (apart from ESM), national DGS/ No European Deposit insurance scheme (yet), national insolvency, administration, tax, law, etc.

Chapter 14

Capital Markets Regulation

14.1 Capital Markets Union (CMU)

Its aim is to get money -investments and savings- flowing across the EU so it can benefit consumers, investors and companies.

While progress has been made since the initiative was created in 2015, european capital markets are still fragmented.

Key objectives and actions

1. Support a green, digital, inclusive and resilient economic recovery by making financing more accessible for european companies
2. Make the EU an even safer place for individuals to save and invest long-term
3. Integrate national markets into a genuine single market

14.2 Entities participating in the securities markets

Investment firms:

There are 3 main types:

- Brokers: They just do market making, providing liquidity to the market
- Dealers: They operate in the market with their own money, holding the shares that they buy and sell.

Chapter 15

AML/CFT system in Spain

15.1 Introduction

What is money laundering?

Money laundering is the act of introducing illicit funds into the legal economy:

- **MEANS:** acquiring, possessing, using, converting, transferring, concealing or disguising the nature, source or beneficial ownership of property or rights to property
- **INTENTION:** knowing that these assets are derived from criminal activity. Funds are always derived from criminal activities
- **AIM:** disguise the illicit origin of the funds and put them into circulation under the appearance of legality

The FATF recommendations aim to establish international standards and the implementation of legal, regulatory and operational measures to combat money laundering, the financing of terrorism, the proliferation of weapons of mass destruction and other threats to the integrity of the international financial system. These recommendations are then implemented in EU and transposed to national legislations.

In Europe the EBA also has a legal mandate to foster the consistent, efficient and effective application of EU AML/CFT law:

- **LEGAL INSTRUMENTS**
 - Draft Technical Standards
 - Guidelines, Recommendations and Opinions
- **POWERS**
 - Breach of Union law investigations
 - Non-binding mediation
 - Peer reviews
- **OTHER TOOLS**

- Training
- Supervisory convergence assessments
- Discussions at relevant internal committees
- Bilateral liaison with individual competent authorities

15.2 AML package

Over the past 30 years, EU rules have not been effective in the fight against financial crime and its rapid evolution. AMLD4 and AMLD5 had many divergences in their national implementations.

A series of ML/TF scandals leads to a new EU AML package in July 2021 and the implementation of AMLD6 which included:

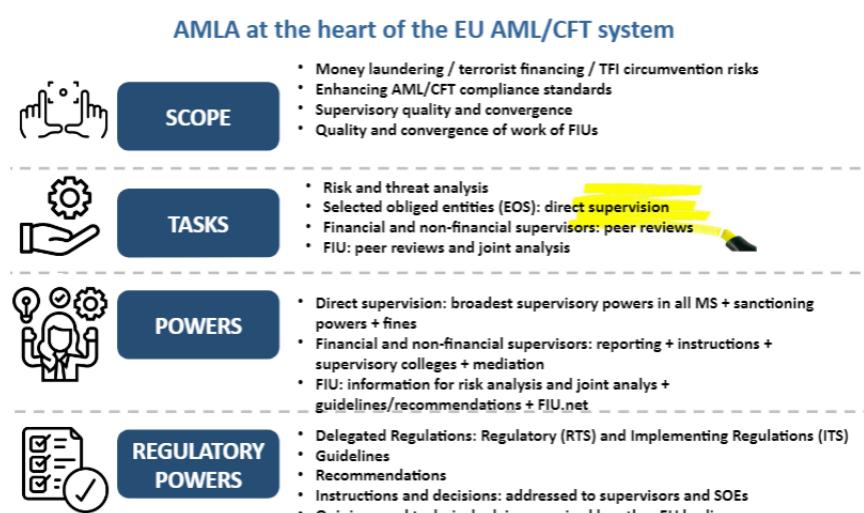
- (AMLAR): AMLA regulation
- (ANLR): AML regulation
- (FTR): Funds Transfer regulation

These three regulations are directly applicable in member estates. The AML package comes with many areas to prioritize:

- Single Rule Book: part of the AMLD into a Regulation
- EU AML Supervisor: direct supervision (tasks/powers) and supervised entities
- Coordination mechanism for FIUs
- Others: enhancement of EU Criminal Law and the EU presence in AML international fora

15.3 AMLA at the heart of the EU AML/CFT system

The new Anti Money Laundering Authority, which will be based in Frankfurt and will start its mandate in 2028 is the pillar of the new AML framework in Europe.



Beguinning 1 January 2026, inherent and residual risk will be classified by AMLA and financial supervisors will establish a common methodology and will be classified as

- Low
- Medium
- Substantial
- High

with a groups of factors:

- channels
- customers
- products and services
- operations and geographies

Assesed Obliged Entities (assesed OE) with medium risk and selected OE with high risk will have to pay an annual supervisory fee.

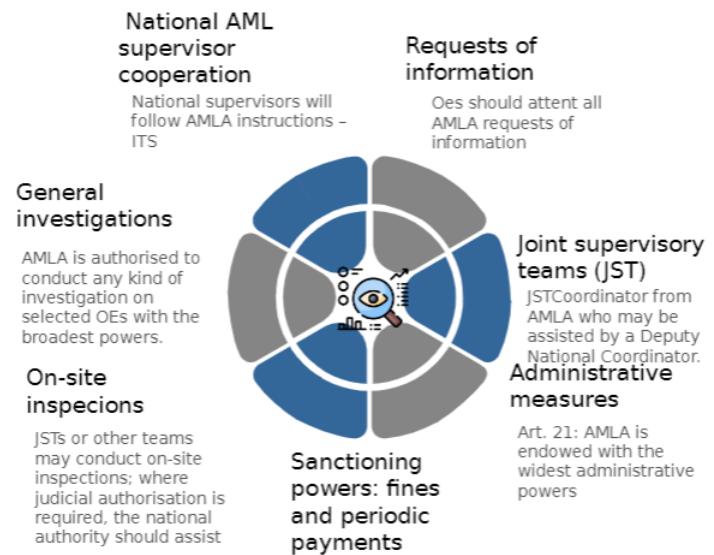
15.4 AML in Spain - SEP-BLAC

The sepblac has two branches:

- **Finance intelligence unit:**
 - OPERATIONAL & STRATEGIC - analysis
 - DISSEMINATION – Intelligence reports
 - NATIONAL COLLABORATION – LEAs requests
 - INTERNATIONAL COLLABORATION - exchange
- **AML/CFT Supervisory Authority:**
 - RBS - AML/CFT RISKS – sectorial assessments
 - Inspections / supervisory actions (plans) – nosanctions
 - DOMESTIC AND INTERNATIONAL COOPERATION – prudential supervisors at domestic and international level – ECB, EBA, etc

The functions of the SEPBLAC are:

- **Analysis**
 - Analysis of suspicious activity reports



- Analysis and exploitation of systematic reporting
- Analysis of authorities' reports

- **Supervision**

- Recommendations to obliged entities
- Proposals to the Standing Committee to address requirements to the obliged entities
- Assessment of the procedures for the creation of financial institutions
- Assessment of acquisitions and increases in shareholdings in the financial sector

- **Others**

- Reporting to competent authorities
- Reporting to the CPBCIM and its Standing Committee
- Financial Ownership File

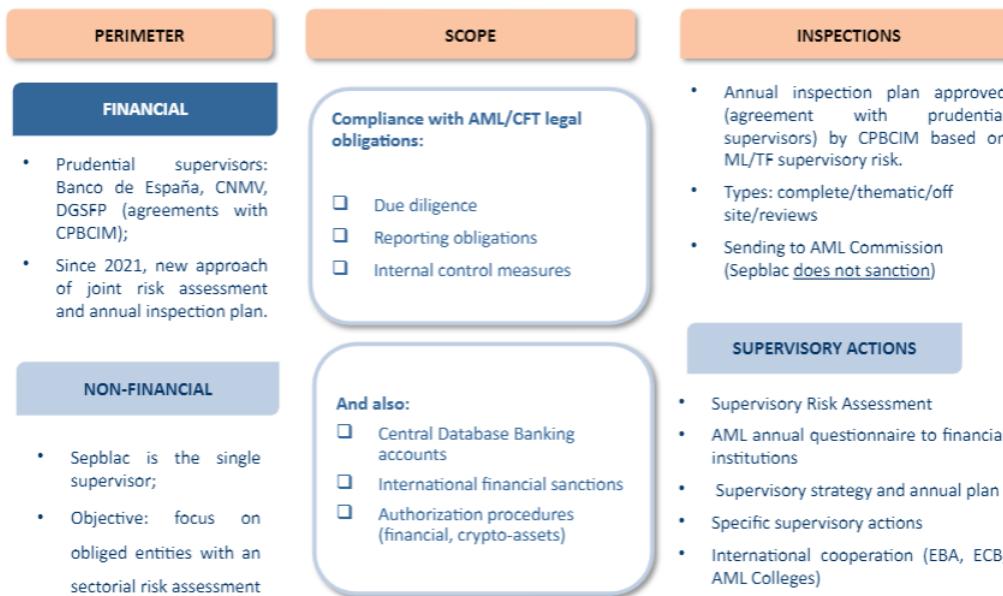
15.4.1 Financial Intelligence Unit (FIU)

The FIU is the organism in charge of investigating suspicious activities in the financial sector. The analysis process can include many aspects:

- Unusual increase of the assets
- Lack of justification in an economic activity
- Relationship with serious criminal activities
- Unnecessary complexity of the operation
- Unusual transactions
- Lack of apparent economic or lawful purpose
- Inconsistencies with the volume, nature of activity or operating background of the persons
- Split of an operation into several ones without justification
- Use of frontmen and instrumental companies
- Excessive complexity of the banking and commercial operations
- Use of tax havens
- Unusual use of cash and equivalent means of payment without justification in the activity

They can request to the institutions different records: Suspicious activity transactions (STRs), Systematic reporting operations (DMO) and Means of payment movements and seizures. These documents are confidential and any authority or official who accesses its content must keep reservation. It will not have evidence value and it is not allowed to be incorporated into judicial or administrative proceedings.

The SEPBLAC carries out a risk based analysis of all sectors and joint risk matrix for credit institutions. It coordinates with prudential supervisors and other stakeholders.



They carry out on-site and off-site inspections and also follow-up inspections and recommendations both for banks and the rest of OE.

15.4.2 Financial Titles File (FTF)

- **Database of an administrative nature** created for the purpose of preventing and impeding money laundering and the financing of terrorism.
- **Body responsible:** The State Secretariat for Economic Affairs and Enterprise Support will be responsible for the Financial Titles File.
- **Body responsible for processing:** Sepblac on behalf of the Secretariat.
- **Obligations:** credit institutions must declare to Sepblac for inclusion in the FTF information on current accounts, savings accounts, time deposits, payment accounts and safe deposit box rental contracts.
- **Access:**
 - Judges
 - Public Prosecutor's Office
 - LEAS and CNI
 - Sepblac for the exercise of its powers
 - Tax Agency in the terms provided for in Law 58/2003, of 17 December, General TaxationLaw.

15.5 Virtual Asset Service Providers (VASPs)

Definition: Providers of services of exchange of virtual currency for fiat currency and custody of electronic wallets.

Banco de España is responsible for the VASP Register. Registration is only allowed for those providers which complies with:

- (i) adequate AML/CFT procedures and bodies;
- (ii) compliance with the requirements of commercial and professional integrity.

Activity

In 2022 Spain ranked 5th in the EU in 2021 in terms of volume of transactions: 60 billion euros (4.8% of GDP, 2.7% of total financial assets)

Certain proportion of transactions with these currencies that are used for illicit activities, and only an estimate of the lower limit of the weight they represent in the total is available. In Spain, the percentage of these transactions would represent 1% (although this figure can be a lower bound). Fraud (57.6% of the total) and theft of funds (31.8%) account for most of the illicit operations identified.

Between 10 and 12% of Spaniards surveyed claim to use or own crypto

Indicators of increased ML/TF risks:

- Exchange of services through ATMs with use of cash
- No identification of the customer in transactions below 1,000 euro.
- Reception and delivery of any type of cryptocurrencies (including privacy and anonymity related currencies) to and from external wallets.

Risk mitigation:

- Purchase specific type of cryptocurrencies (Bitcoin, Bitcoin Cash, Ethereum and Litecoin) not related to privacy and anonymity.
- Customers can only transfer funds from their own account opened with a credit institution in Spain, EU or equivalent third parties.
- Limitations/prohibition to receive and send cryptocurrencies to and from external wallets.
- For the disposal of the cryptocurrencies by the client: is only possible by selling them through the exchange service provider and the amount obtained will be deposited, by transfer, in his bank account in Spain, EU or equivalent third parties.

15.5.1 AML obligations

Due diligence measures:

- Formal identification (art. 3)
- BO identification (art. 4)
- Purpose of the business relationship (art. 5)
- Follow-up of the business relationship (art. 6)

3 types: simplified, normal and enhanced Risk-based approach.

Reporting obligations

- Internal analysis: special examination (art. 17)
- Reporting to the UIF (Sepblac): STR (art. 18)
- Systematic reporting (art. 20)
- Cooperation with CPBCIM and its supporting bodies (art. 21)

Special examination

Detailed examination, any fact, regardless of the amount that may be related to ML/TF

- Unusual/complex transactions
- No apparent economic purpose
- Indications of simulation or fraud

On top of that, the entity must have: Automated alerts + record in AML/CFT manual of how obligation is met, development and dissemination of suspicious transactions within the obliged entity, complete analysis and representative at Sepblac: decision to report to Sepblac

Internal control body decision: record of the minutes

STR

After special examination, if there are indications it should be reported when:

- There is a lack of consistency between the nature of the transaction or the volume and profile of the customer.
- There is no economic, professional or business justification.

Internal control

Obligated entities must have an updated AML Manual with all internal control measures

Sanctioning system

Type of breaches

- Very serious:** Lack of communication to Sepblac if proven suspicious activities
 Failure to cooperate with Sepblac, resistance or obstruction
 Breach of the prohibition of disclosure
 Not adopting remedial actions after infringements
 Same serious breach in 5 years

Serious: Law requirements: Identification, DD, alerts, special examination, STR (27 points)

Minor: Any other not contemplated on the above.

Table 15.1: 3 blocks of AML compliance

Due Diligence Measures(KYC)	Reporting obligations	Internal controls
Identification (KYC)	Analysis of ML/TF suspicion	Policies, procedures and controls
Follow-up	STR	AML Compliance Officer
Abstention	Systematic reporting CA cooperation	External audit report Training

Chapter 16

Resolution framework - Lesson learnt from the crisis

The build-up of the bubble

- From 1995 to 2007, the credit to firms multiplied by more than six and to households by more than five. Considering both, the ratio private debt/GDP went from 66% to 172%.
- Interest rates decreased a lot from 1995. For example, the average mortgage rate went from 10% in 1995 to 4% in 2007.
- The average price of houses multiplied by more than two from 1995 to 2007.
- The share of the construction sector in the GDP rose from almost 5% in 1995 to more than 9% in 2007. The number of housing starts multiplied by almost three from 1995 to 2006.

The bubble burst

- After the peak of the share of the construction sector in the GDP, in three years fell down up to 4%. Similar trend with the housing starts, from the peak in 2006, with around 650.000 starts, to 50.000 four years later.
- The volume of NPLs multiplied by more than ten from the beginning of 2007 to the end of 2011. Largest real estate exposure in the saving banks (they grew extraordinarily based on their lending activity to the real estate sector).
- At the end of 2007, the yearly growth of credit to non-financial sectors was almost 12%. That growth at the end of 2011 was 1%.

It is important that before recapitalizing a bank its balance sheet is cleaned by recognizing the losses and putting the assets at fair value.

2008: Liquidity Measures

- Introduction of a Public Liquidity Facility for credit entities.
- Public guarantees for banks' debt issuances (up to 5 years).

- Increased protection for retail depositors from €20,000 to €100,000.

2009-2010: Consolidation, New Regulation of Savings Banks, and More Transparency

- Establishment of the Fund for Orderly Bank Restructuring (FROB):
 - Resources: €9 billion with a €90 billion leverage capacity.
 - Facilitated savings banks mergers through acquisition of hybrid instruments, with conditional restructuring plans.
- Overhaul of savings banks regulation:
 - Savings banks transferred assets and operated as banks, enhancing capital-raising capacity.
 - Corporate governance improvements.

2011: Recapitalization

- Royal Decree-law raised solvency requirements for credit institutions:
 - Minimum core capital ratio of 10% for entities with over 20% funding dependent on wholesale markets and less than 20% equity from external shareholders.
 - Institutions below the ratio had to raise capital from private investors or FROB. Savings banks had to convert to banks to access FROB resources.

2012: Restructuring and Real Estate Asset Clean-Up

- By early 2012:
 - 99% of savings banks had transferred financial activities to banks.
 - Staff reduced by 16.9% and branches by 17.2% through mergers.
 - 10% GDP balance sheet clean-up and 1.3% increase in capitalization from 2008 to mid-2011.
 - High exposure to real estate development (€307 billion, ~30% of GDP).
- Goals of the first package (February 2012):
 - Significant increase in bank asset write-downs (€54 billion) by end of 2012, without public funds.
 - Further consolidation incentives.
 - Specific provision (€34 billion), capital buffer (€10 billion), and generic provision (€10 billion) for real estate assets.
 - FROB's equity base increased from €9 billion to €15 billion, enhancing borrowing capacity.

July 2012: European Financial Assistance

- European assistance was necessary due to lingering doubts about the Spanish financial system.
- Financial program included:
 - Independent third-party valuation of the entire financial sector asset portfolio.
 - €100 billion financial backstop from the European Stability Mechanism (ESM).
 - Public money injection (€39.078 million) in banks via shares and contingent convertible bonds (cocos).
 - Strict restructuring plans for state-aided banks, including reduction in staff, branches, businesses, and subsidiaries.
 - Burden sharing among shareholders and sub-debt holders in publicly recapitalized banks.
 - Strengthened FROB as resolution authority, incorporating provisions from the Bank Recovery and Resolution Directive (BRRD).
 - Establishment of an Asset Management Company (AMC) to handle real estate exposures of state-aided banks.

Chapter 17

Conduct Risk

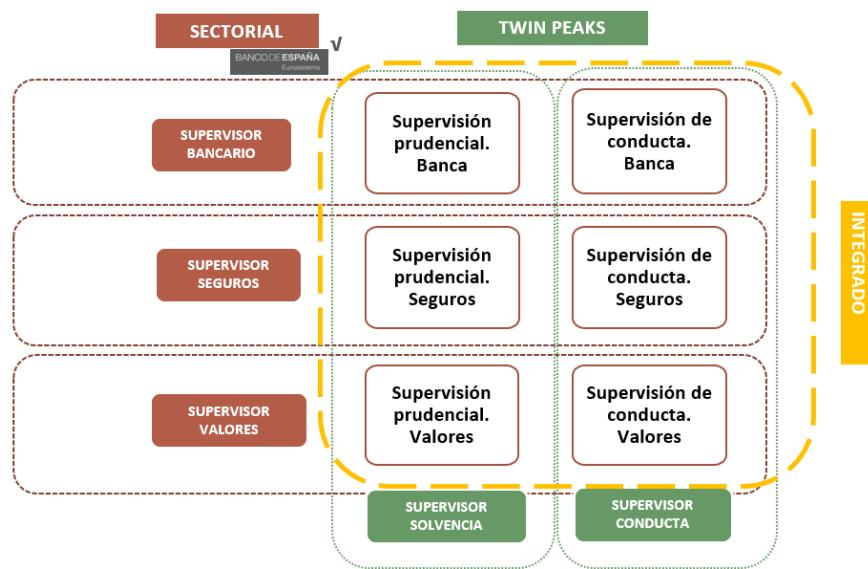
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The concept of conduct risk will be defined by Conduct Authority. The conduct area is completely domestic in Europe, every country designs its own conduct framework.

In general terms, might be defined as the **market conditions where a pattern of behaviour by actors leads to customer detriment or has an adverse effect on market stability**.

17.1 Conduct frameworks

Figure 17.1: Twin Peaks vs Sectorial supervision models



In Spain, financial supervision operates under a sectoral model, with three distinct supervisors overseeing each of the main financial sectors. The Banco de España holds supervisory authority over the solvency and conduct of credit institutions and other financial intermediaries. It exercises this authority independently or as part of the Single Supervisory Mechanism (SSM) in the euro area. Additionally, it collaborates with other national supervisors within their respective competences.

Securities Markets are under the supervision of the CNMV and Insurance companies are under the supervision of the Ministry of Economy.

Figure 17.2: Institutional setup in Spain

		Regulation	Supervision	Dispute resolution
General set up for consumer protection		Parliament Central government Regional governments	Regional governments	Courts Consumer arbitration
Financial activity SECTORIAL APPROACH	Banking and payments	Parliament Central government BdE (delegated acts)	Conduct Supervision: Banco de España Prudential Supervision: BCE/Banco de España	Banco de España Courts
	Stock markets, investment firms and mutual funds	Parliament Central government CNMV (delegated acts)	CNMV	CNMV Courts
	Insurance and pension funds	Parliament Central government DG Insurance&PF	DG Insurance&PF	DG Insurance&FP Courts
	AML&KYC	Parliament Central government	SEPBLAC (FIU) Banco de España	Courts

17.2 Conduct regulation

Previous to the 2008 financial crisis there were only some regulations about transparency and disclosure of the products to the client but there were no other regulations in place.

In Europe the conduct regulation is partially harmonised and standardised per product EBA Soft Law. National legislation:

- Consumer credit
- Residential Mortgages
- Payment Systems
- Advertisement regulation

In 2019 a specific reporting on conduct was created. Financial institutions must create this report with the conduct profile of the institution for Banco de España to assess it.

Objective responsibility: Even if you are not directly guilty you have to assume the losses. For example if a bank sets up a system and a customer gives up his private information without noticing, the bank could be made responsible.

During the supervision there will be 3 main phases: **detection & planning, investigation and enforcement.**

The supervisor will ask the details of the systems and procedures that the bank has in place. The supervisor can also ask for a sample of the contracts that the bank has actually subscribed with its clients.

If the disciplinary measures that BdE considers don't imply any sanctions they don't have to escalate it to the supervisory board.

There can be recommendations (not binding), requirements and sanctions.

Identification of conduct profile per institution. This conduct profile has two components:

- **Conduct category:** Classifies the supervised institutions based on the relative importance of the businesses and activities they carry on.
- **Conduct risk:** Includes an estimate of the risk of institutions in the field of market conduct.

Depending on the conduct profile, the cycle of verification procedures and the type of monitoring of the institution are established.

17.2.1 On-site and off-site inspections

Gathering documents and information from many institution about an specific topic. Usually these inspections don't end up in a sanction as the evidence is not enough. If there is some evidence about bad practices, an on-site inspection will usually be carried out.

17.2.2 External communications

Communication of expected good practices is very important for the supervisor as it means increased efficiency. They do this by:

- Issuing guidelines
- Press releases
- Through the BdE website
- Q&A with teh financial institutions
- Interactive factsheets

17.3 Exam topics

Definition of conduct risk

General institutional framework

1 question about regulation

Chapter 18

Risk Appetite Framework

18.1 Risk Appetite Framework

One of the main challenges of implementing the RAF is effectively disaggregating the plan by geographies, business lines and even subsidiaries. For example if the objective of the group is to have a 150% LCR not all business lines are going to have 150%. Maybe one will have 150%, another one 120% and another one 200% depending on the characteristics. The aggregation must be 150% for the whole group.

The risk appetite of a bank belongs to the risk control function in the second line of defense but it is constructed with the opinion of all the lines of business too (even though the CRO has the last say).

To set a risk capacity for NPL's for example you need to calibrate a model with a graph that shows how your capital decreases when delinquency increases. The limit will be the rate of delinquency that makes the capital go below 8%.

Risk limits are often calibrated using the steepness of the curve, i.e how fast you eat the capital. The faster a bank eats the capital, the higher margin they will have to have between the risk capacity and risk limit.

The only way to anticipate problems in a bank and have a forward looking in a bank is by assessing their governance and risk management.

If a risk is material there should be a RAF for that risk, capital allocated to that risk, and a recovery process for that risk.

18.2 Introduction: the three lines of defense

Three lines of defense

The first line of defense is the one that originates de risk. One common mistake is thinking that once you start managing risk you automatically are in the second line of defense. However it is easy to notice that the front office, the business guys are effectively taking risks when deciding if they grant a loan or if they enter into a trade.

The three lines of defense framework allows entities to effectively manage the risks to which they are exposed, as well as their control by the supervisory authority. In terms of Internal Governance, the main guide that

applies to the supervisor are the EBA's Internal Governance Guidelines, updated in July 2021.

- 1LoD
 - Maintains efficient internal controls and executes control procedures and risk management as part of its daily activity.
 - Works closely with 2LoD in defining risk appetite, identifying risks and defining risk policies, as well as detecting points for improvement in the control execution and management model.
- 2LoD
 - Establishes a strong and uniform control framework within the Entity.
 - Issues conclusions on risk control and independently reports them to the business units while working together in management.
 - Has a holistic and forward-looking vision of the entity's risks.
 - Guides and leads the risk control processes and ensures the application of policies.
- 3LoD
 - Is independent from the other lines of defense.
 - Evaluates the control measures assigned to risks, and the degree of compliance with policies, procedures, and controls.
 - Provides assurance about 1LoD and 2LoD to the governing and management bodies.
 - Assesses the effectiveness and efficiency of the internal control framework.

The entity must present robust governance and adequate escalation and reporting processes for the entity's casuistry and its risks, and possess both internal expertise (know-how) and external (advisory) in risk management and internal audit functions.

18.3 Introduction: the Risk Control Function

- **Organizational Structure**

- Hierarchical and functional dependency
- Direct access to governing bodies: They must report to the governing bodies, with direct access to the Board and cannot be dismissed without its approval.
- Empowerment: The person responsible for the Risk Management Function should provide input on decisions that have a significant impact on the entity's risk profile. They may have a veto right over certain decisions if they do not have a favorable opinion.

- **Management Tools**

- Have sufficient resources and timely periodic training. In addition, they must have access to all the necessary internal and external information for the exercise of their functions. Some of the tools to highlight are:
 - * Risk Appetite Framework
 - * Dashboard for monitoring and prioritization.
 - * Process of opinion on decisions with relevant impact on the risk profile.
 - * Map of processes, risks, and control.

- **Functions**

- Risk Strategy: Implement risk policies and control risk management framework.
- Monitoring, recommendation of corrective measures, and risk control.
- Identification and quantitative and qualitative risk assessment.
- Analysis of trends and identification of new or emerging risks arising from changes in circumstances and conditions.
- Evaluation of the robustness and sustainability of the strategy and risk appetite, and ensuring that this appetite is adequately translated into specific risk limits.

18.3.1 What is the Risk Appetite Framework?

The appetite for risk is "the level and types of risk that an entity is willing to take to achieve its business objectives." The Risk Appetite Framework is the management tool that allows the Board of Directors to:

- i. Define the risk strategy and the risk appetite declaration of the Group.
- ii. Formalize the mechanism for the supervision and monitoring of risks, so as to ensure compliance with the risk appetite.
- iii. Strengthen the risk culture of the Entity.

Main components:

- **General framework and risk culture**

- General Framework: General approach (policies, processes, controls, and systems).
- Risk Culture: Principles and values that must be observed to have an adequate culture of risks:
 - * Tone from the Top
 - * Accountability
 - * Effective challenge
 - * Incentives

- **Statement, indicators and calibration**

- Identification of the level of risk to which the entity is exposed.
- Must cover all relevant risks and be clear and quantifiable.
- The calibration must be based on objective criteria.
- It is necessary that they are established for the group as a whole and that they are developed for each entity and individual business line.

- **Governance**

- Main roles and responsibilities:
 - * Board of Directors

- * CEO
 - * CRO
 - * Risk Control Function
 - * CFO
 - * Internal audit
- Need for clear monitoring and escalation processes.

What is RAF?

- **RAF: supervisory expectation**

- The RAF is not a regulatory requirement. However, the SSM considers it a best practice and a key pillar in the management and control of risks. For this reason, it has been the object of intense scrutiny.

- **RAF: backbone of the risk strategy**

- The RAF is not an exclusive element of the Board. It acquires its meaning when it is further developed downwards and is integrated into the risk policies of the bank. The objectives and limits of risks and the principles for the management and control of risks that it contains must be incorporated into the day-to-day of the entity and in the incentives scheme.
- The RAF is not an isolated element. It has numerous intersections with other significant processes (strategy and business plan, capital and liquidity planning, contingency plans, crisis management framework, etc.) with which it must be perfectly aligned.

- **Pending challenge: Implementation to the RAF**

- Although during the first years of the SSM, the attention focused on the definition of a solid and effective RAF, now the challenge is still the disaggregation of the RAF in the organization and its integration in the day-to-day management of banks.

RAF as a mechanism for the articulation of the risk strategy

One of the most important points in the SREP is assessing the way in which banks design, perform, and review their risk oversight function. Supervisors expect financial entities to develop a strong risk culture that is embedded across the whole organization and is defined in the Risk Appetite Framework, which becomes a key regulatory process that is integrated with other relevant processes within the entity such as Recovery and Resolution Plan, ICAAP / ILAAP, Business Model Analysis, etc. RAF is both a Risk Control and a Governance Tool for management purposes.

Identification and anticipation of risk deterioration

- **Objectives/Appetite**

- These reflect the strategy and the objective risk profile of the bank.
- Must be included within the RAS, in the Business Plan, the ICAAP, and the ILAAP.

- The quantified risk objective under the different metrics (capital, liquidity, income, etc.) is the first stage of control, and the level that the entity hopes to maintain.

- **Early warning indicators**

- These seek to avoid a potential deterioration of the entity by establishing triggers for the adoption of measures.
- EWIs were initially defined as part of the crisis management framework of banks and then subsequently included in the RAF.
- The activation of an EWI should trigger the activation of a contingency or action plan.

- **Limits/Tolerance**

- These are identified as maximum risk tolerance levels.
- They must be specific and sensitive to the size of the portfolios, measurable, reportable, and based on assumptions.
- Reaching a limit or tolerance level implies the need to activate a more aggressive action plan and possibly also activating the 'governance' of the banks' Crisis Management Framework.

- **Recovery Indicators**

- These should identify possible weaknesses in the entity and cover the impact channels through which they could materialize.
- Overcoming the threshold may involve the activation of the Recovery Plan and the governance system based on the Internal Crisis Management Framework.
- They must be aligned with the global risk management framework as well as with the contingency and liquidity plans.

All these are with the same metrics, but at different stages.

18.4 Risk Indicators

18.4.1 Quantitative Indicators

- The indicators of a RAF are not strictly prescribed but several regulatory references provide guidance to select the right indicators.
- The list of quantitative risk indicators must cover all material risks of the bank.
- Indicators must be progressive, following a traffic light approach.
- EBA provides a minimum list of indicators through its guidelines on Recovery Plan indicators (EBA/GL/2015/02) which should be part of the RAF. These indicators should be calibrated and integrated with other processes following a traffic light approach:

- **Mandatory**

- * **Capital**

- CET1, total Capital, Leverage

- * **Liquidity**
 - LCR, NSFR, Wholesale funding cost
- * **Profitability**
 - ROA, ROE, significant operational losses
- * **Asset quality**
 - NPL, Coverage Ratio
- **Additional**
 - * **Market Indicators**
 - Rating deterioration, CDS Spread, Stock price variations
 - * **Macro indicators**
 - GDP variation, Sovereign CDS

18.4.2 EBA Quantitative Preliminary Assessment

EBA guidelines indicate the quantitative metrics that will be used by competent authorities in their assessment of banks' risk profile. Hence, these guidelines also provide references for the banks to select their RAF indicators.

18.5 RAF Governance

18.5.1 Role of Senior Management Regarding the RAF

- **Management Body:** Setting, approving, and overseeing the implementation of responsibilities including the overall risk strategy, risk appetite, and risk management framework.
 - Responsibilities:
 - * Overall risk strategy including its risk appetite and its risk management framework.
 - * A risk culture addressing the institution's risk awareness and risk-taking behavior.
 - Supervisory functions:
 - * Suitable members who do not perform any executive function and can oversee the risk strategy and appetite.
 - * Oversee and monitor that strategic objectives, organisational structure, risk strategy, and policies such as remuneration and disclosure are implemented consistently.
- **Risk Committee:** Where established, should advise and support the management body in its supervisory function.
 - Responsibilities:
 - * Monitor the institution's overall actual and future risk appetite and strategy.

- * Assist the management body in overseeing the implementation of the institution's risk strategy and corresponding limits.

18.6 Need for Integration of the RAF with Other Key Processes

18.6.1 Introduction

The Risk Appetite Framework is the entity's cornerstone for determining both the risk strategy and risk governance. It ensures the application of the "tone-at-the-top" principle and sets the standard for the rest of the organisation. Consistency between processes is emphasized by the supervisor mainly through SREP, ECB's ICAAP/ILAAP, and ECB's recommendations.

18.6.2 Impact of the RAF in Other Key Processes

The RAF defines a bank's risk strategy and must influence key processes within the bank.

- Indicators: The Recovery Plan indicators must be followed up regularly with RAF traffic light approach.
- Scenarios: The budget process must be consistent with ICAAP and ILAAP.
- Plans-Methodology
- Governance
- Measure

18.6.3 Integration between the RAF and the Strategic Plan

When developing the strategic plan, senior management must consider the risk appetite that has already been set. Breach of thresholds due to the implementation of the strategic plan is not possible. Integration is further strengthened in the Business Model Analysis through sensitivity analysis to demonstrate the viability and sustainability of the business model and adherence to the defined risk appetite.

- **Strategic Plan:**

- Business Growth
- Geographic Expansion
- Structural Changes

- **Risk Appetite:**

- Capital indicators
- Profitability indicators
- Risk Indicators

18.6.4 Integration between the RAF and the ICAAP & ILAAP

- **Risk Taxonomy:** The RAF determines the risk taxonomy to which the institution is materially exposed. ICAAP and ILAAP should consider this.

- **Calibration of Indicators:** The indicators within the risk appetite should be based on the results of stress tests performed for the ICAAP and ILAAP process. Thresholds are categorized as “Business as usual”, “Deterioration”, and “Deteriorated”.

18.6.5 Integration between the RAF and the Crisis Management Framework

The RAF is the cornerstone of the crisis management framework described within the Contingency and Recovery Plans. The RAF should enable:

- Adequate monitoring
- Detection of impairments
- Anticipation of issues

To perform these tasks:

- All Recovery Indicators must be contained within the RAF.
- The entity must develop and apply corrective measures according to the situation.
- Design an adequate Governance structure.

18.7 Integration between the RAF and other regulatory processes -Summary

18.7.1 Key Relevance of RAF for the SSM

SSM Thematic Review on Corporate Governance

- Shortly after taking over direct supervision of all significant banks in the Euro Area, the SSM announced a thematic review on corporate governance with a special focus on risk appetite framework.
- The review provided the SSM with direct input for its so-called Supervisory Review and Evaluation Process (SREP) and the SSM’s capital decisions.
- A negative outcome of the assessment of the risk appetite framework review could potentially lead to additional capital requirements since it is a key element of the governance block of the SREP assessment.
- The RIGA review focused on the proactive involvement and true ownership of the Board of the banks.

18.7.2 SSM Thematic Review: 4 key areas

- Board Assessment
 - Analysis of Board member profiles, composition, expertise and adequacy.
- Board Information
 - Quality of the information.
 - Analysis of Board Meeting Minutes.
- Quality of the debate

- Board agendas.
- Board proactivity.
- Effective challenge.
- Risk approach in decision making processes.
- RAF
 - RAF documentation review.
 - RAF in the decision making process.
 - Risk culture.

18.7.3 Key conclusions from the Thematic Review on banks' RAF

Main observation:

- Heterogeneity in the design, comprehensiveness and implementation of the RAF.
- Having a formalised and integrated RAF was still a pending topic for many credit institutions.

Main areas of improvement:

- RAF design:
 - RAF comprehensiveness, especially on: non-financial risks,
 - Number of metrics,
 - Inclusion of stressed metrics,
 - Alignment of the metrics to the institutions' business model.
- RAF limits:
 - Limits' risk constraining capacity,
 - Lack of escalation process.
- RAF integration in:
 - Use of the RAF to promote debate within the institution the decision-making,
 - RAF deployment within entities and business lines processes.

18.8 New trends and requirements

Areas for improvement

- i. RAF's disaggregation,
- ii. Inclusion of new risks,
- iii. Focus on inclusion of the RAF in the decision-making process,
- iv. RAF & ICAAP,

- v. Mitigating actions and contingency plans linked to RAF,
- vi. Material risk identification.

RAF disaggregation

“An appropriate RAF should enable risk capacity, risk appetite, risk limits, and risk profile to be considered for business lines and legal entities as relevant, and within the group.”

Currently, some banks have not yet carried out the RAF’s disaggregation but this is a necessary process to ensure the continuous adherence to the risk appetite. By breaking down each indicator into operating limits, the credit institution is better capable of monitoring the observance of risk appetite levels in the day-to-day management and better identify the sources of a breach in order to take appropriate action when needed.

Inclusion of new risks Existing RAFs include a wide range of indicators and risk metrics to cater for more traditional prudential risks (credit risk, market risk, interest rate risk, liquidity and funding risk, etc) while less traditional or more difficult to measure risks such as non-financial risks are generally addressed through qualitative statements. However, given the growing importance and materiality of such risks, there is an increasing pressure on banks to move to more sophisticated risk appetite metrics to include such risks when these are material. New risks:

- Climate Risk,
- Sovereign Risk,
- Business Risk,
- Non-Financial Risks:
 - Reputational Risk,
 - ICT Risk,
 - Compliance Risk,
 - Legal Risk,
 - Conduct Risk.

Decision-making and methodological coherence

Contingency plans and risk limits

The Contingency Plans should be integrated into the RAF, in such a way that it reflects to a greater extent the risk profile and business model. Indicators included in the RAF should be well defined in order to anticipate situations of deterioration which could lead to the possible activation of the corresponding Contingency Plan. In this situation, the RAF limit threshold should be the trigger for the activation of the Contingency Plan.

The Material Risk Identification process Through the MRI process, entities determine the risks to which they are significantly exposed and for which risk indicators must be established. Such indicators should be taken into consideration, in a consistent manner, by all relevant regulatory processes.

Chapter 19

Banking Resolution: A Paradigm Shift

Antonio Carrascosa and Mario Delgado

19.1 Introduction: A Shift of Paradigm

Resolution as the Concluding Element of Financial Regulation

Resolution addresses fundamental questions:

- Can a bank fail?
- How should a banking crisis be managed?
- Why do banks fail?

Failures often stem from asset problems, liquidity runs, corporate governance issues, or systemic/idiosyncratic crises.

19.1.1 Basics of the Resolution Regime

A new institutional framework grants authorities extraordinary powers to manage bank failures, emphasizing "bail-in" over "bail-out" to avoid public money use. The regime prioritizes prevention through recovery and resolution planning, requiring banks to meet loss absorption capacity (MREL). Cross-border resolution strategies include Multiple Point of Entry (MPE) and Single Point of Entry (SPE), supported by the Single Resolution Fund (SRF).

19.2 The Resolution Regime

19.2.1 Resolution Trigger

A bank is deemed "failing or likely to fail" if it:

- Fails to meet banking license requirements.

- Has insufficient assets to cover liabilities.
- Cannot meet financial obligations.
- Requires public support to operate.
- Lacks private or supervisory solutions.

The decision to initiate resolution lies with the supervisor or the resolution authority.

19.2.2 Resolution Tools

Several tools are available:

- Sale of Business: Quick sale of shares/assets to a private purchaser, potentially supported by the SRF for contingencies.
- Bridge Bank: Temporary transfer of ownership or assets to a bridge entity.
- Asset Separation Tool: Transfer of assets to a public asset management vehicle to prevent market disruption.

19.2.3 Financing (“Bail-in”)

Bail-in involves writing down and converting equity and debt, placing the burden on shareholders and creditors instead of taxpayers. It aims to stabilize the bank while preserving financial stability.

19.2.4 Hierarchy of Liabilities

The BRRD establishes a hierarchy for loss allocation:

- Capital
- Subordinated Debt
- Senior Non-Preferred Debt
- Senior Debt and Large Company Deposits
- SMEs and Individual Client Deposits
- Covered Deposits (DGS)

The bail-in sequence requires at least 8% of total liabilities to be absorbed before using resolution funds or public resources.

19.2.5 Valuation

Valuations are crucial for different resolution stages:

- Valuation 1: Assesses solvency and liquidity issues.
- Valuation 2: Determines value for sale of business or other tools.
- Valuation 3: Evaluates SRF use.

19.2.6 Funding in the Resolution Directive

The SRF is a fully mutualized fund, targeting €70 billion by 2024, financed by risk-adjusted ex-ante contributions. Shortfalls may be covered by ex-post contributions or borrowing, ensuring fiscal neutrality. The SRF supports resolution tools, especially after a bank absorbs at least 8% of losses through bail-in.

19.2.7 Approval of a Resolution Scheme

The SRB can trigger resolution if public interest is served, focusing on maintaining critical functions and financial stability. Liquidation is considered if it serves as a viable counterfactual, and state aid rules may create distortions in practical cases.

19.2.8 State Aid and Resolution

Pre-BRRD, bank bail-outs involved partial burden sharing, APS, and liquidity support. Post-BRRD, precautionary recapitalization is used for capital, liquidity, and guarantee support for solvent banks, mainly driven by stress test adverse scenarios.

19.2.9 Cross-Border Resolution

Banks' cross-border operations complicate resolution, requiring coordinated transnational efforts and cost distribution. Crisis Management Groups and Resolution Colleges are established for prevention and coordination, led by home authorities.

19.2.10 Cross-Border Resolution Strategy

Two main strategies are employed:

- Single Point of Entry (SPE): Resolution at the parent company level.
- Multiple Point of Entry (MPE): Resolution where the crisis originates.

The choice depends on the financial, legal, and operational structure of the bank group.

19.2.11 Summary of the EU Framework

The Global Financial Crisis (GFC) saw extensive use of public funds, creating a sovereign-bank loop. The new framework shifts to internal recapitalization (bail-in) ensuring market discipline and continuity of critical functions. This framework demands robust resolution plans and appropriate liability structures (MREL). It addresses challenges to financial stability and retail customer protection, emphasizing the need for a specialized crisis management approach by institutions like the BoS, FROB, and SRB.

19.3 Challenges and Key Ongoing Reforms

Key reforms include:

- Finalizing the Banking Union with the European Deposit Insurance Scheme (EDIS).
- Reviewing the Crisis Management and Deposit Insurance (CMDI) framework.
- Enhancing liquidity in resolution.

- Harmonizing insolvency regimes across Europe.

These reforms aim to solidify the banking resolution framework, ensuring stability and protection without relying on public funds.

Chapter 20

Resolution Planning

20.1 The Spanish Banking Crisis 2012: an example of systemic crisis

20.1.1 The context of the crisis

- The build-up of the bubble
 - From 1995 to 2007, the credit to firms multiplied by more than six and to households by more than five. Considering both, the ratio private debt/GDP went from 66% to 172%.
 - Interest rates decreased a lot from 1995. For example, the average mortgage rate went from 10% in 1995 to 4% in 2007.
 - The average price of houses multiplied by more than two from 1995 to 2007.
 - The share of the construction sector in the GDP rose from almost 5% in 1995 to more than 9% in 2007. The number of housing starts multiplied by almost three from 1995 to 2006.
- The bubble burst
 - After the peak of the share of the construction sector in the GDP, in three years fell down up to 4%. Similar trend with the housing starts, from the peak in 2006, with around 650,000 starts, to 50,000 four years later.
 - The volume of NPLs multiplied by more than ten from the beginning of 2007 to the end of 2011. Largest real estate exposure in the saving banks (they grew extraordinarily based on their lending activity to the real estate sector).
 - At the end of 2007, the yearly growth of credit to non-financial sectors was almost 12%. That growth at the end of 2011 was 1%.

20.1.2 Stages in the policies to tackle the financial crisis

- i. 2008: liquidity measures
 - Public Liquidity Facility for credit entities.

- Public guarantee for banks' debt issuances (up to 5 years).
 - Increased retail depositors' level of protection from €20,000 to €100,000.
- ii. 2009-2010: consolidation, new regulation of saving banks and more transparency
- Set up of the FROB:
 - FROB own resources: €9 bn + €90 bn leverage capacity.
 - Facilitated merging processes of saving banks (by acquiring hybrid instruments), subject to conditionality (restructuring plans).
 - Savings banks regulation overhauling:
 - Savings banks transferred their assets and operated as banks: enhanced capacity to raise capital.
 - Improvements in corporate governance.
- iii. 2011: recapitalization
- A Royal Decree-law raised solvency requirements for all credit institutions:
 - A minimum core capital ratio of 10% for those entities less opened-up to private investors (with more than 20% funding dependent on wholesale markets and whose external shareholders have less than 20% equity).
 - Credit institutions below their respective ratio obliged to raise capital from private investors or to recourse to FROB. Savings banks had to transform into banks to access FROB resources.
 - The 2012 restructuring: tough cleaning-up of the real estate assets
 - Situation at the beginnings of 2012:
 - * 99% of savings banks transferred their financial activity to banks.
 - * Reduction of staff (16.9%) and branches (17.2%) thanks to merged entities.
 - * 10% GDP of balance sheet clean up (end 2008-mid 2011).
 - * 1.3% of higher capitalization (end 2008 – mid 2011).
 - * But... real estate development exposure: €307 billion (around 30% of the GDP).
 - Main goals of the first package (Feb 2012):
 - * Significant increase in bank asset write-downs: €54 bn, before end 2012. Financial effort to be done by financial institutions, without public funds.
 - * Further incentives to consolidate the system.
 - Different instruments to increase coverage of real estate assets:
 - * Specific provision: €34 bn (coverage ratios increased especially for land and unfinished developments).
 - * Capital buffer: €10 bn (calculated based on exposures to land and unfinished properties).

- * Generic provision: €10 bn.
- * How much is this (€54 bn)? 5% of the GDP. From 2008 to June 2011, the Spanish banking sector had set aside specific provisions of around €66 bn.
- The FROB's equity base was increased from €9 billion to €15 billion, resulting in an improved borrowing capacity.

20.2 The Resolution of Banco Popular

Sixth biggest lender in Spain, with a large attractive SME loan portfolio at end of FY2015. Around €140 Bn of assets.

- Significant asset quality challenges: Gross NPAs of EUR 38 billion (28 percent of total loan book), coverage ratio of 45 percent.
 - May 2016: Capital injection of EUR 2.5 billion to be completed in June 2016.
 - July 2016: Stress test revealed a 7 percent CET1 ratio under adverse scenario.
 - Feb 2017: BPE reports EUR 3.5 billion loss due to real estate portfolio impairments.
 - May 2017: The management of the bank opened a sale process.
 - June 2017: AT1 bonds began trading at distressed levels, BPE requests emergency liquidity assistance (ELA).
- Deteriorating creditworthiness in Q1 2017: Moody's downgraded ratings.
- Top management reshuffles: three leadership changes since 2015.
- Repeated attempts to sell off assets to boost depleted capital (credit card business, US arm).
- Share price drop by > 50 percent in May-June 2017 left the bank unable to raise fresh capital.

20.2.1 The sale of the bank

- Banco Popular was bought by Santander.
 - Shares and Additional Tier 1 (AT1) fully written down.
 - Tier 2 instruments converted into stocks and sold to Banco Santander for EUR 1.
 - Traditional senior debtholders protected.
- Little sign of contagion in either equity or debt markets.
- Legal action from the bondholders burnt when BPE's junior liabilities were written down completely.

Liquidity crisis: difficult to manage

Financial stability concerns applying the preferred strategy in the resolution plan (bail-in) in the middle of a serious liquidity crisis. Bail-in of deposits and liquidity crisis (corporate deposits). The government did not guarantee the issuance of financial instruments to get liquidity.

20.2.2 The Failure of Sberbank in the EU

On 1st March 2022, the Single Resolution Board (SRB) took several decisions on the Sberbank group, following its declaration, two days earlier, of the unviability of the Austrian parent company and subsidiaries in Slovenia and Croatia. Basically, the Austrian holding company was liquidated because there was no public interest in the resolution and, on the other hand, the two aforementioned subsidiaries were resolved and sold after it was decided that there was such public interest. Let's remember that a resolution means the restructuring of a bank by an administrative authority, following the declaration of its unviability (provided that there is no private solution or supervisory action that restores the viability of the institution within a reasonable time, and that resolution is necessary in the public interest) using resolution tools (bail-in, sale of business, segregation of assets and bridge bank) to ensure the continuity of its critical functions and ensure the financial stability of that country.

20.2.3 The Failure of SVB

SVB's business model has typically been focused on funding tech start-ups and the healthcare sector in Silicon Valley. However, in the last year and a half it received a very strong increase in

Chapter 21

Cryptoassets. Risks, Future Regulation And Potential Impact On Financial System

21.1 Types of Crypto Assets

21.1.1 Cryptocurrencies: Stable Coin And Unbacked Crypto

- Digital representation of currencies using on cryptography and DLT.
- Main features of crypto:
 - i. Unchangeable: when a block is mined, nobody can change it.
 - ii. Unattachable: cannot be judicially attached or claimed (is anonymous).
 - iii. Global nature: not connected with a country, so not subject to political decisions.
 - iv. Public: number of transactions and open source.

21.1.2 Utility Token

- Crypto-asset which is intended to provide digital access to a good or service, available on DLT (i.e. in the real world, like reward points).
- It can contain a smart contract in a block to be executed on the Ethereum blockchain (i.e. share payments of a transaction).
- Utility tokens are often used in initial offerings: Investors get preferential access to products or services in exchange for helping to fund blockchain-based projects.
- Utility tokens can be traded for Bitcoin or ETH.

21.1.3 Security Tokens, Asset Backed Token

- It is a tokenization of securities, debts, or assets (REAL STATE).
- The tokenization of assets makes them tradable. Instead of trading the asset itself, you trade the token.
- Main concern: how to make sure and secure what you are investing in?

21.2 Types of Cryptocurrency

- ◊ Government Cryptocurrencies (CBDC)
 - Digital coin with the same rights as fiat currencies.
 - Backed by central bank.
 - No risk of reimbursement.
- ◊ Stable Coins
 - Cryptoassets with a stabilization mechanism.
 - Risk of fluctuation value underlying asset.
 - Tether (USDT), Binance (BUSD), and Coinbase (USDC): covered by a fiat currency such as the dollar.
 - DAI: covered by other cryptocurrencies (USD Coin, Ether).
- ◊ Unbacked Cryptoassets
 - Cryptoassets do not comply with the stabilization mechanism.
 - Cryptoassets reference other cryptocurrencies as the underlying asset.
 - Bitcoin, Ether, Litecoin.

21.2.1 Stable Coins

- Stablecoin issues a blockchain asset that is pegged to the dollar at a 1:1 ratio. This allows users to transmit and trade in the DeFi ecosystem with digital representations of the dollar without being exposed to the volatility of other cryptocurrencies.
- But, in the end, the issuer of a stablecoin is like a bank: raising funds and investing in assets, obtaining profitability. Needs to be under regulation.
- Three types of stablecoins:
 - Fiat-collateralized (Tether).
 - Crypto-collateralized (DAI).
 - Algorithmic (Terra).
- Tether bill for not holding sufficient fiat reserves in its accounts.

21.2.2 Centralized Exchanges (CEX)

- Privately-owned platforms that facilitate the trading of cryptocurrencies, matching buyers and sellers based on the best executable price.
- Advantages:
 - User-friendly.
 - No need to use own crypto wallet.
 - Apparently reliable.
 - Leverage.
- Main disadvantages/risks:
 - Hacking risks custodian cryptos.
 - Transaction fees.
 - Bad practices and risk of fraud (CEX can use customer funds for own investments).
- Tax control.

21.2.3 Decentralized Finance (DEX)

Protocols operating under blockchain. Contracts executed under special conditions. Peer to peer.

- Advantages:
 - Custody. No risk of hacking private keys.
 - Preventing market manipulation. Allowing for peer-to-peer exchange.
 - Less censorship. No KYC forms, offering privacy and anonymity to users.
- Disadvantages:
 - Complexity. Users must remember the key and passwords of crypto wallets. Not user-friendly.
 - Lack of fiat payments. Switch from one digital asset to another.
 - Liquidity struggles. 99% trading is via CEX. Difficult to find buyers and sellers.

21.3 Crypto Assets Activity

Crypto assets were originally developed to democratize payments and disintermediate financial services. Crypto activity has evolved to meet varying needs: speculative investment, store of value, money laundering, and payments. In the particular case of Bitcoin, 60% is held as permanent investment, 20% for trading, and 20% are lost. So mostly, cryptos are used for speculation and centralized entities, such as exchanges and wallet providers, concentrate the activities (99% of trading with cryptos). These exchanges are not regulated. MiCA will do it in EU. In emerging markets, the advent of crypto assets has been fueled by the high percentage of the population unbanked. Smartphone and crypto allow them to make quick and cheap transactions. But cryptoization circumvents exchange and capital control restrictions.

21.3.1 Case Studies: FTX, Terra, and Silvergate Bank

Main Lessons

- Over-reliance on crypto asset deposits without proper risk controls on this new activity.
- Deposits to liabilities ratio represent around 93%, mostly not covered by Deposit Guarantee Scheme.
- Large portfolio of debt securities (51% total assets) funded with short-term deposits, with valuation losses on their unhedged holdings of long-term fixed-rate debt securities.
- Collapse of FTX, a fraudulent crypto asset exchange and investment fund platform, which was Silvergate Bank's largest client. In November 2022, FTX filed for bankruptcy and withdrew nearly \$1 billion in deposits from Silvergate Bank. This triggered a stampede of other customers who also wanted to pull their money out of the bank.
- In the last quarter of 2022, Silvergate Bank lost 68 percent, or \$12 billion, in deposits.
- Financially weakened by withdrawal of deposits, Silvergate Bank announced in March 2023 its plans to liquidate voluntarily.

21.4 Regulatory Framework for Crypto Assets

21.4.1 Future and Current Regulation on Crypto Assets

- EU-International
 - UE = Consumer Protection and Market Integrity
 - BIS = Prudential
- Spain
 - BdE = AML
 - CNMV = Market Regulator

21.4.2 Market Regulation (MiCA)

MiCA entered into force on June 29, 2023, and will become applicable after 18 months:

- From June 30, 2024, provisions regarding asset-referenced tokens and e-money tokens.
- From December 30, 2024, other parts: custody, trading, etc.
- Most EU countries have reduced the transitional period until the end of December 2025 instead of July 1, 2026. It is allowed to crypto-asset service providers (now VASP and under MiCA CASPs) that are providing services prior to December 30, 2024, to continue during the transitional period (end of December 2025).

Scope of MiCA

- In-scope
 - All crypto-assets not covered elsewhere in financial services legislation and e-money tokens.

- Issuers and crypto-asset service providers in the Union.
 - Not in-scope
 - DeFi, NFT (non-fungible token), or unbacked cryptocurrencies.
 - MiFID II financial instruments, deposits, securities.
 - E-money unless it qualifies as e-money token.
 - ECB, EIB, EFSF, ESM, public international organizations.

Who Will Supervise MiCA?

Dual supervision:

- National competent authorities in each country. It is not the responsibility of the prudential supervisor (ECB).
- In Spain, it has been assigned to (art. 251 Ley 6/2023 del Mercado de valores):
 - Banco de España: issuers of ART and EMT.
 - CNMV: all other MiCA servicers.
- EBA for significant ART issuance and significant EMT issues by Electronic Money Institution.

Regulation

- Electronic Money Tokens (EMT)
 - Issuers can only be credit institutions or electronic money institutions.
- Asset-Reference Tokens (ART)
 - Issuers should be authorized (except credit institution).
- Utility Token
 - Only accepted by the issuer of that token.
- Other Cryptoassets Issued Centralized
 - Issuer: Legal entity not subject to authorization.

21.4.3 Prudential Treatment of Crypto Assets (BIS)

Prudential treatment of crypto asset exposures held by credit institutions:

- Tokenized Traditional Asset: Same treatment as traditional assets (bonds, equities, cash, etc.).
- ART that complies with MiCA: RWA 250%.
- Other Cryptoassets: RWA 1,250%.

Register of providers exchange virtual currency and custody (AML)

- Disclaimer web Banco de España: Those providers not subject to regulation and are not supervised by Banco España; Enrollment in this registry does not imply approval or verification of any activity carried out by suppliers.
- This Register should be removed at the end of the transitional period of MiCA (at the end of 2025) or when CNMV registers new CASP for MiCA activities.
- EU's agreement to strengthen anti-money laundering rules for crypto-assets:
 - Cryptoasset service providers must make checks on customers who carry out transactions worth €1,000 or more and report suspicious activity. Cross-border crypto asset firms must make additional checks.
- This Register should be removed at the end of the transitional period of MiCA (at the end of 2025) or when CNMV registers new CASP for MiCA activities.

Spanish market regulator rules (CNMV)

- Warning CNMV List of companies not authorized to provide investment services:
 - Powers are granted to the CNMV in order to subject to administrative control the advertising of crypto assets that are offered as an investment proposal.
 - Crypto assets are not regulated in the LMV.
 - Cryptocurrency investment funds cannot be traded in Spain without authorization.

BdE supervisory approach to cryptoassets

- BdE has included a clear disclaimer and warning in the Register web page: crypto activities are not under regulation nor supervision.
- There is no initiative to anticipate MiCA in our national legislation.
 - Meanwhile:
 - * ECB draft guidelines for the licensing assessment of institutions being involved in crypto-assets:
 - * It will also help us in ongoing supervision strategies to deal with entities willing to engage in crypto activities.
- BdE has set up a work stream with all departments involved: identify risks and propose a policy stance to deal with regulated entities proposals in the banking and payment sector.

Public statement of CNMV

- Are not considered a means of payment.
- Are not backed by a central bank or other public authorities.
- Are not covered by customer protection mechanisms such as the Deposit Guarantee Scheme or the Investor Compensation Scheme.

- Price setting: many cryptocurrency prices are set without effective mechanisms to prevent their manipulation, such as those in regulated securities markets.
- Complex instruments that may not be appropriate for small-scale savers.
- Problems arising from their cross-border nature: issuance, custody, and marketing of crypto-assets are often not based in Spain: resolution of any dispute may be costly and outside Spanish authorities.
- Theft, scams or loss: the distributed ledger technology used to issue cryptocurrencies poses specific risks.
- Cryptocurrency custody is neither regulated nor supervised. The loss or theft of a private key can lead to the loss of the cryptocurrency, without the possibility of recovery.

21.4.4 Potential threats to the financial system and risks of crypto assets activity

- So far, loss of confidence in crypto-assets has had limited spillover to broader markets.
- Exposures in crypto-assets in the banking system are not material. Mainly invested by hedge funds.
- The use of crypto-asset for payments and settlement is still limited.
- Nevertheless, this channel will be accelerated since some global payment companies are integrating stablecoin in their infrastructure.
- Also we have some concentration risk in centralized exchanges and stablecoins: Binance handles half of the trading volumes and Tether issued more than half of the stablecoins.
- Centralized exchanges with poor operational, cyber risk management and governance (i.e. recent FTX crisis).

Crypto ecosystem

- Operational, cyber, and governance risk.
- Integrity.
- Data availability/reliability.
- Challenges from cross-border activities.

Stablecoins

- How stable are stablecoins?
- Domestic and global regulatory and supervisory approach.

Macro-Financial

- Cryptoalization, capital flows, and restrictions.
- Monetary policy transmission.
- Bank disintermediation.

Challenges

- Global Stablecoin (Wallet), alternative to domestic bank deposit.
- Decentralized Finance, reduction in loan activity.
- Loss of customer relationship.

Risk related to crypto assets

- To exposure of crypto assets:
 - Risk of failure in valuation due to market prices volatility.
 - Failure in valuation due to mistake in crypto assets classification.
 - Loss of value due to the exit from decentralized register.
- To Issuance of cryptosystem:
 - Failure in the register of cryptos in the DLT.
 - Risk of duplication of issuance of crypto due to fork.
- To the custody of the crypto assets:
 - Risk of loss of crypto keys.
 - Risk of loss of crypto assets due to problems in the register DLT.
- For crypto holders.
- By crypto asset function.

21.4.5 Conclusions

1. Crypto assets imply complex activities and new risks in a non-regulated environment (pending implementation):
 - Operational and financial integrity risks from crypto asset exchanges and DeFi: not regulated yet.
 - Investor protection risks for crypto assets: inadequate reserves and transparency of exchanges.
2. MiCA is going to partially regulate crypto activities (emissions ART/EMT and exchanges) that at least will protect users (custody, transparency..) but it will not avoid the embedded high risk of the unbacked crypto assets (no fundamentals behind market value).
3. Rapid growth market of cryptoassets and high volatility. Cryptoassets have been used for speculation, fraud, money laundering activities, etc. Until now there had not been financial stability risks. Nevertheless, greater involvement of financial institutions could fuel growth of crypto-assets and could increase financial stability risks.
4. There is a need for a quick implementation of new regulations like MiCA in order to protect consumers and market integrity.

5. Supervisory methodology needs to be adapted to this new crypto activities and technological regulatory requirements (both credit institutions and other crypto providers).
6. Finally, strong coordination is needed at the country level and cross-border among supervisors (prudential, payment and market) in order to approach the supervision of cryptoassets.
7. Public authorities should encourage sound innovation within the traditional financial system, in particular accelerate the introduction of CBDC in order to improve and reduce costs of payments; and enhancing financial inclusion.

Chapter 22

EU New Markets Infrastructure Landscape

22.1 European Regulation Post Financial Crisis

22.1.1 General Overview

The European Market Infrastructure Regulation (“EMIR”) aims to increase the stability of the derivative markets in the EU. Objectives:

- Clearing Obligation: Introducing clearing obligations for OTC (eligible) derivatives through recognized CCPs. IRS and CDS to be the first.
- Reporting: Requiring reporting of relevant information of derivatives contracts to Trade Repositories.
- RMT (Risk Mitigation Techniques): Putting in place procedures to monitor and mitigate risks for non-cleared OTC derivatives including Margin Requirements.
- CCPs & TRs: Regulating the approval process, governance, and structure of authorized Clearing House (CCPs) and Trade Repositories (TRs).

The EU developed the European Market Infrastructure Regulation (EMIR) equivalent to DFA in the USA, FMIA in Switzerland, Reglas Tripartitas MX, etc. The main ideas are: transparency, investor protection, IT, and trading venues.

22.2 EMIR

22.2.1 EMIR Close-up View

Scope of legislation: The European Market Infrastructure Regulation (“EMIR”) aims to increase the stability of the derivative markets in the EU by:

- Introducing clearing obligations for OTC (eligible) derivatives.
- Putting in place procedures to monitor and mitigate risks for non-cleared OTC derivatives including Margin Requirements.

- Requiring reporting of relevant information of derivatives contracts to Trade Repositories.
- Regulating the approval process, governance, and structure of authorized Clearing House (CCPs) and Trade Repositories (TRs).

Affected entities: EMIR divides the entities subject to the regulation into FC (Financial Counterparties) and NFC (Non-Financial Counterparties) with a further division based on the volume of derivatives activity: NFC+ and SFC (Small Financial Counterparties). It also has extraterritorial scope, affecting non-European entities subject to certain EMIR requirements (e.g., risk mitigation techniques), with additional clarity from ESMA expected.

22.2.2 Risk Mitigation Techniques

- **Timely Confirmation:** Obligation to confirm trades within proposed deadlines. “Negative affirmations” are compliant if both counterparties have agreed in advance. Financial Counterparties must report monthly the number of unconfirmed OTC derivatives transactions outstanding for 5 or more business days.
- **Portfolio Reconciliation**
- **Dispute Resolution:** Procedures for identifying and monitoring disputes related to contract value and collateral, managing unresolved disputes within 5 business days. Entities must report disputes over Euro 15 million or outstanding for more than 15 days to the competent authority.

22.2.3 Clearing Obligation

MiFID II – MiFIR: Derivatives may be subject to “mandatory trading” requirements through recognized Trading Venues, considering:

- Importance of liquidity of the instrument.
- Change of business model of market players.
- Connectivity to TV (IT issues).
- Compliance with Best Ex policies.

CRR – CRDV IV: A Qualified Central Counterparty (QCCP) is a CCP authorized to operate in the EU. Third-country CCPs must be recognized to provide services to EU entities per Article 25 of EMIR. Capital charges for direct exposures are set at 2% for QCCPs, while non-QCCPs have corporate exposure charges. Additionally, the Credit Valuation Adjustment (CVA) is not applicable to QCCPs but is applicable for non-QCCPs.

22.2.4 Margin Requirements for Non-Cleared Derivatives

Scope: FC and NFC+ for all derivative transactions not cleared by CCPs and Intragroup Exemptions. Margins:

- **Variation Margin:** Covers current exposure (mark-to-market).
- **Initial Margin:** Covers potential future exposure.

Impacts:

- Liquidity profile of counterparties.
- Demand for high-quality liquid assets (HQLA).
- New role: collateral management.
- Higher cost of derivative instruments.
- Competitive position in the derivative markets.

Collateral: Assets collected as collateral for initial and variation margin should be highly liquid and, after accounting for an appropriate haircut, able to hold their value during financial stress.

22.2.5 Mandatory Reporting

- **Who:** Counterparties and Central Counterparties (CCPs) must report details of any derivatives contract they enter into, including modifications or terminations, to a registered Trade Repository. Both parties must report but can delegate this duty. Reporting can also be delegated to a CCP if the contract is cleared.
- **What:** All derivatives, including Exchange Trade Derivatives (ETD), from Feb 2014. Valuation and collateral must be reported from Aug 2014.
- **When:** Trades must be reported no later than T+1.

22.2.6 Refit, New Rules

- **Why:** Reducing regulatory and administrative burdens while preserving financial stability and reducing systemic risks. Efficient and resilient post-trading systems and collateral markets are essential elements. Objectives: Clearing, Risk Mitigation Techniques, and Reporting.

22.3 MiFID II - MiFIR

22.3.1 Close-up View

- **Scope:**
 - Extend the definition of Investor Protection Rules.
 - Create safer and more efficient markets through stronger market infrastructure.
 - Improving the transparency of European financial markets by expanding and creating rules for pre- and post-trade transparency for all asset classes.
- **Estimated Impact:** Changes proposed in the current MiFID Directive will substantially impact Financial Markets activity mainly due to the margins of the associated activity (pre-trade transparency). The increased transparency may generate potential issues with the current hedging structure/model.

22.3.2 Pre and Post Transparency Analysis

New Transparency Regime will split the Non-Equity Markets into two worlds:

- **Liquid Instruments ToTV:** Market Structure will change from a bilateral (OTC) to a multilateral way on electronic platforms.
- **Non-Liquid But ToTV:** Non-Liquid assets will remain OTC but with less liquidity.

22.3.3 Investor Protection

- **Product Governance:**

- Strengthening management and compliance functions in investment firms.
- Implementing new product governance rules for firms that create or distribute financial instruments.
- Ensuring products are designed to meet the specific needs of identified target markets.
- Requiring firms that recommend or offer third-party products to have systems for understanding product approvals and gathering necessary information.

- **The Legitimacy of Inducements to be Paid:**

- Independent investment advisors and portfolio managers must not accept third-party fees or commissions.
- Research is deemed a non-monetary benefit.
- Clients can choose and pay for their desired research.
- Portfolio managers must create an annual budget.
- Commission Share Agreements (CSA) may be used to facilitate these practices.

Chapter 23

Capital Market Regulation Overview

23.1 IOSCO Objectives and Principles of Securities Regulation

Global standard for securities regulation, providing a framework for promoting investor confidence, market integrity, and financial stability across global securities markets.

1. Objectives: IOSCO emphasizes investor protection, market fairness, efficiency, transparency, and systemic risk reduction as the primary goals of securities regulation.
2. Core Principles: The document outlines 38 core principles covering regulatory authority, enforcement, market integrity, investor protection, and cooperation among regulators.
3. Regulatory Authority: Regulators should have clear objectives, powers, resources, and independence to effectively oversee securities markets.
4. Market Integrity: Regulations should ensure fair, efficient, and transparent markets by preventing market abuse, manipulation, and ensuring adequate disclosure standards.
5. Investor Protection: Measures should be in place to safeguard investors from fraud, misrepresentation, and abuse, including disclosure requirements, suitability standards, and client asset protection.
6. Cooperation: Regulators should cooperate internationally, share information, and coordinate.

23.2 Capital Markets Union

Key objectives and actions:

- Support a green, digital, inclusive and resilient economic recovery by making financing more accessible to European companies.
- Make the EU an even safer place for individuals to save and invest long-term.
- Integrate national capital markets into a genuine single market.

23.3 Institutional architecture of capital market regulation and supervision

- Investment services regulation: MiFID II/MiFIR.
- Collective investment Schemes: UCITS, KIID & AIFMD.
- Market abuse regime: MAD/MAR.
- Market transparency, prospectus requirements.
- Clearing and settlement (EMIR, CSDR). Resilience and crisis management (CCP R&R).
- Sustainable finance (SFDR, BMR, CSRD, EU Taxonomy, ESG Ratings, Due Diligence).
- Financial innovation and digital finance (MiCA/DORA).

23.4 Rules of Conduct

Client Categorization: Proficient in categorizing clients into retail, professional, or eligible counterparties, aligning with their knowledge, experience, and financial circumstances, ensuring appropriate levels of protection and disclosure.

Suitability and Appropriateness: Skilled in evaluating the suitability of investment products and services for clients based on their investment goals, risk tolerance, and financial status, guaranteeing that all recommendations are precisely tailored.

Conflict of Interest Management: Demonstrated ability in identifying and managing potential conflicts of interest between firm, employees, and clients, developing robust policies to safeguard client interests.

Best Execution Practices: Expertise in implementing strategies to achieve the best possible execution of client orders, taking into account multiple factors such as price, cost, and speed; committed to transparency and continual improvement of execution standards.

Inducements and Research Compliance: In-depth understanding of MiFID II regulations regarding inducements and the transparent provision of investment research, ensuring non-conflict of interest and alignment with client best interests.

Client Reporting and Disclosure: Strong capability in delivering comprehensive pre-trade and post-trade transparency to clients, including detailed disclosures on costs, charges, and investment product information.

Recording and Reporting Obligations: Proficient in maintaining meticulous records of all client interactions and transactions, ensuring compliance with regulatory requirements for data retention and reporting to authorities.

Product Governance: Expertise in overseeing the development and distribution of financial instruments, ensuring robust product governance processes that prioritize client interests.

23.5 Issuers and listed companies

Prospectus Regulation: Specialized in guiding companies through the requirements for the preparation, approval, and disclosure of prospectuses. Ensures comprehensive, clear, and truthful information is available.

able to investors, covering essential details like financial statements, company descriptions, and associated investment risks.

Transparency Directive: Experienced in enforcing continuous disclosure obligations for companies listed on regulated markets. Oversees the periodic reporting of both financial and non-financial information critical to investor decisions and company valuation, including the disclosure of significant shareholdings to clarify shareholding structures and management influences. There are (NFRD) and (CSRD).

23.6 Regulated markets and other trading venues

MiFID II and MiFIR: Expert in enhancing investor protection and market transparency under MiFID II and MiFIR, setting comprehensive rules for investment firms, trading venues, and related entities across the EU. Ensures rigorous compliance with transparency and data reporting requirements.

Market Abuse Regulation (MAR): Proficient in the implementation of MAR to prevent insider trading and market manipulation. Enforces disclosure requirements and supports regulatory bodies in monitoring and investigating market abuse.

European Market Infrastructure Regulation (EMIR): Specialized in increasing transparency and reducing counterparty risks in derivatives markets. Manages mandates for central clearing of OTC derivatives and enforces strict reporting and risk mitigation protocols.

Central Securities Depositories Regulation (CSDR): Skilled in regulating securities settlements within the EU to promote uniform settlement standards and enhance the operation and conduct of Central Securities Depositories.

23.7 Post-trading facilities

23.7.1 Clearing and Settlement

Proficient in managing the processes and infrastructures required for finalizing transactions, including ownership transfer of securities and payment handling between buyers and sellers.

23.7.2 Central Securities Depositories (CSDs)

Experienced in working with CSDs like Iberclear in Spain, ensuring safekeeping, accurate recording of securities ownership, and facilitating efficient securities transfers.

23.7.3 Clearing Houses

Skilled in coordinating with major European clearing houses such as Euroclear and Clearstream to manage financial settlements, calculate net positions, handle collateral, and mitigate counterparty risks.

23.7.4 Settlement Systems

Knowledgeable in operating within the TARGET2-Securities (T2S) system, a pan-European platform for cross-border settlement, combining securities and cash accounts to streamline transactions and reduce risks.

23.7.5 Trade Repositories

Expert in utilizing trade repositories to enhance transparency and risk management for over-the-counter (OTC) derivatives trades.

23.8 Market integrity

23.8.1 Regulatory Compliance

Expert in enforcing MAR to boost market integrity and investor confidence by preventing insider dealing, unlawful disclosure of inside information, and market manipulation across the EU.

23.8.2 Scope and Application

Proficient in applying MAR requirements to financial instruments on regulated markets, multilateral trading facilities (MTFs), and organized trading facilities (OTFs), covering all related transactions and conduct.

23.8.3 Key Prohibitions

Deep understanding of MAR's prohibition against insider dealing, unauthorized disclosure, and market manipulation. Enforces compliance to protect market integrity.

23.8.4 Obligations

- **Transparency and Disclosure:** Skilled in managing issuer obligations for the timely public disclosure of inside information, ensuring transparency in financial dealings.
- **Monitoring and Reporting:** Advanced capability in overseeing the monitoring and reporting of suspicious activities to detect and mitigate potential market abuses.

23.8.5 Regulatory Oversight and Penalties

Knowledgeable in guiding regulatory oversight activities, collaborating with national authorities to enforce regulations, and manage significant penalties including fines and criminal prosecution for violations.

23.9 Financial innovation and digital finance

23.9.1 DORA

Regulatory Framework - DORA Compliance

In-depth knowledge of the Digital Operational Resilience Act (DORA) aimed at enhancing the security and resilience of digital systems and information and communication technology (ICT) within the financial sector.

Risk Management

Expertise in implementing robust risk management processes to identify, assess, and mitigate ICT-related risks in compliance with DORA requirements.

Incident Reporting

Skilled in establishing and maintaining effective incident reporting mechanisms as mandated by DORA, ensuring rapid response and recovery from ICT disruptions.

Testing and Auditing

Proficient in conducting regular resilience tests and audits to ensure continuous compliance and operational readiness in line with DORA guidelines.

Stakeholder Collaboration

Experienced in collaborating with national and EU regulatory bodies, ensuring adherence to DORA regulations and facilitating smooth compliance across organizational units.

23.9.2 MiCA

Regulatory Framework Understanding

Profound knowledge of the Markets in Crypto-Assets (MiCA) Regulation, aimed at creating a comprehensive regulatory framework for managing crypto-assets, crypto-asset service providers, and related activities within the EU.

Compliance and Implementation

Skilled in interpreting and applying MiCA provisions to ensure compliance among issuers and service providers of crypto-assets. Leads implementation strategies to align business operations with new regulatory requirements.

Risk Management

Expert in identifying and mitigating risks associated with crypto-assets, including market manipulation and consumer protection risks, in line with MiCA directives.

Stakeholder Engagement

Experienced in engaging with industry stakeholders, including fintech companies and regulatory bodies, to facilitate understanding and compliance with MiCA regulations.

Policy Development

Adept at contributing to policy development discussions and advising on potential impacts of MiCA on the digital asset landscape.

23.9.3 Sandbox

Framework Application

Proficient in leveraging regulatory sandbox environments to test new business models and technological innovations in financial services under the oversight of key Spanish regulatory bodies such as CNMV, Banco de España, and Dirección General de Seguros.

Controlled Testing and Supervision

Skilled in orchestrating controlled and limited testing phases, ensuring compliance with regulatory standards while exploring the practicality and impact of novel financial services solutions.

Innovation and Feasibility Analysis

Experienced in analyzing the feasibility of innovative approaches within the financial sector, facilitating the smooth transition from concept to market-ready solutions while adhering to regulatory frameworks.

Stakeholder Collaboration

Expert in collaborating with regulators and industry stakeholders to align experimental testing with broader financial regulations and consumer protection standards.

Chapter 24

Redefining Boundaries. Repair, Reform, Reinvent Resilience.

24.1 Macro Financial Setting for Banking Services Today

Global Economic Outlook Analysis: Expertise in analyzing the steady but slow global economic outlook, identifying resilience and divergence across regions. Proven ability to assess near-term financial stability improvements and escalating medium-term vulnerabilities.

Fiscal and Financial Risk Evaluation: Skilled in evaluating the fiscal and financial risks in a high-debt, slow-growth environment, including the impact of higher long-term real interest rates on fiscal trends and financial stability.

Policy and Structural Change Advocacy: Advocates for significant structural changes and a rethinking of economic and financial policies in response to enduring issues like money and consumption dynamics, health and education as societal ends, and growing wealth and earnings inequalities.

Strategic Insight on Economic Inequities: Deep understanding of the urgent need for policy reforms to address structural economic challenges and the implications of these inequities on global stability.

24.2 Debt and a “Haircut”

Debt Financing Insight: Proficient in analyzing the dynamics of debt financing among governments, corporates, and financial institutions. Expert in assessing creditor protection mechanisms through collateral.

Collateral Valuation and Risk Management: Skilled in managing risks associated with collateralized debt, including implementing strategies to safeguard investments when collateral values decline. Demonstrates strong capability in applying appropriate “haircuts” to reflect the risk level associated with the securities and the borrower’s creditworthiness.

Risk Assessment and Mitigation: Experienced in evaluating the “Lemon Problem,” where collateral falls in value concurrently with borrower default, increasing credit risk. Expert in formulating strategies to minimize financial exposure and protect creditor interests.

24.3 What are Global Policymakers Doing?

Central Bank Strategy Insight: Deep understanding of the impacts of banking turmoil on economic activities, including how it influences central banks' lending behaviors and monetary tightening strategies.

Monetary Policy Execution: Proficient in analyzing the strategic focus of central banks on inflation control, including the implications of lowering yields and supporting economic activities that may complicate the responsibilities of monetary authorities.

Risk Assessment in Policy Adjustment: Expert in evaluating the potential negative spillovers associated with premature central bank exits from inflation-focused policies, emphasizing the importance of sustained and strategic monetary interventions.

24.3.1 What About Emerging and Developing Markets?

Global Financial Safety Net Access: Expert in leveraging international financial safety mechanisms, including the IMF's precautionary arrangements, the US Federal Reserve's repo facility for Foreign and International Monetary Authorities, and central bank swap lines to ensure financial stability.

Debt Vulnerability and Restructuring: Proficient in strategizing preemptive restructuring initiatives with bilateral and private sector creditors to manage high debt vulnerabilities effectively and mitigate the risks of debt distress.

Exchange Rate and Policy Stability: Skilled in managing exchange rates to optimize economic outcomes while maintaining financial and price stability; adept at implementing Integrated Policy Frameworks to ensure coordinated and effective policy responses.

24.3.2 Questions

What is the projected global growth for 2024 and 2025? 3.1% in 2024 and 3.2% in 2025

What is one of the salient risks along the last mile of global disinflation? Build-up of medium-term vulnerabilities

What is a rapidly growing asset class that now rivals other major credit markets in size? Corporate, private credit

What is the current state of global financial stability? Near-term global financial stability risks have receded

24.4 All This Matters in the Banking Sector

Growth Projections: Utilizes growth forecasts to guide banks in strategic planning and risk management, identifying potential expansion opportunities in regions with higher growth rates.

Inflation Expectations: Analyzes expected inflation rates to predict their impact on interest rates, crucial for making informed lending and investment decisions.

Financial Stability Risks: Identifies and assesses financial stability risks, such as rising corporate debt levels, to anticipate and mitigate potential threats to bank operations, including higher loan default risks.

Asset Class Trends Analysis: Proficient in evaluating growth and risk trends across various asset classes to refine and optimize bank asset allocation strategies, identifying new investment opportunities.

Economic and Regulatory Shifts: Skilled in anticipating and preparing for potential regulatory changes driven by shifts in monetary, fiscal, and other economic policies, ensuring strategic compliance and adaptability.

24.5 International Monetary and Financial System

Institutional Exchange Rate Management: Proficient in overseeing the governance of cross-border payments, exchange rates, and capital mobility under the International Monetary System (IMS).

Exchange Rate System Analysis: Expert in managing a mostly floating exchange rate system where the value of currencies such as the U.S. dollar, EU euro, and Japanese yen is determined by the foreign exchange market, allowing them to fluctuate freely based on market forces.

24.5.1 Why Did the Fixed Exchange Rate System Collapse?

When the U.S. began to print money, run high trade deficits, and experience high inflation, the global system was strained to the breaking point. The U.S. dollar came under speculative attack.

24.5.2 What was the Jamaica Agreement?

A new exchange rate system established in 1976 that rules that were agreed on then are still in place today. Under the Jamaican agreement:

Floating rates were declared acceptable,

Gold was abandoned as a reserve asset,

Total annual IMF quotas—the amount member countries contribute to the IMF—were increased to \$41 billion. Today, they are about \$300 billion.

24.5.3 What Happens When Countries Go Broke, and Businesses and Markets Buckle Under?

IMF lending to countries in three broad types of crisis: Currency or Exchange Rate crisis, a Banking or Financial crisis, a Sovereign Debt crisis.

24.5.4 What Kind of Financial Assistance Does the IMF Offer?

Post-financing assessment (PFA), IMF conditionality, protecting the Fund resources-safeguards assessments of central banks.

24.5.5 Main Questions

The primary purpose of the International Monetary System is?

- To enhance jobs and growth
- To promote the interests of the major foreign currencies like the U.S. Dollar

- To govern exchange rates and the value of currencies

Are the devaluation and depreciation of a currency the same? No

- **Devaluation:** A deliberate reduction in the value of a currency by the government or central bank in a fixed exchange rate system, typically to address economic imbalances.
- **Depreciation:** A decrease in the value of a currency due to market forces in a floating exchange rate system, without direct government intervention.

The Fixed Exchange Rate Regime Collapsed Because

- Economists wanted a floating exchange rate regime.
- Run on the value of Gold:
- The macroeconomic inability of the USA and lack of confidence in the U.S. Dollar

A Balance of Payments Crisis Occurs When

- A country cannot pay the World Bank and the Asian Development Bank.
- A country is unable to manage its foreign exchange reserves.
- A country is unable to attract foreign direct investment.
- A country cannot pay for essential imports or service its external debt.

The Global Safety Net Consists of

- The IMF
- The IMF and the country's international reserves
- Bilateral swap arrangements
- Regional financial arrangements
- All the above

A Crisis Occurs When Asymmetric Information Increases from a Disruption in the Financial System and:

- Allows for more efficient use of funds and increases economic activity.
- Reduces uncertainty in the economy and increases market efficiency.
- Causes severe adverse selection and moral hazard problems that make financial markets incapable of channeling funds efficiently.