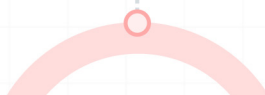
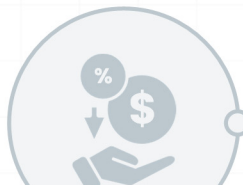




Risk & Regulation Fundamentals

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Introduction to Risk and Regulation



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When banks fail, they cannot meet their obligation to:

Depositors

OR

Creditors

Because of their **size** and **interconnectedness**,
this can cause major negative economic issues



Prudential Regulation

Making sure banks have the **necessary funding** and **risk controls**



Consumer Protection

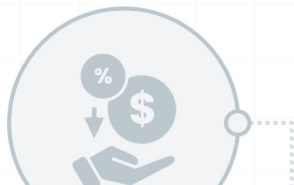
Making sure banks **treat customers fairly**



Supervision & Enforcement

Risk based supervision based on the risk they pose, and enforcement to **mitigate poor behavior**

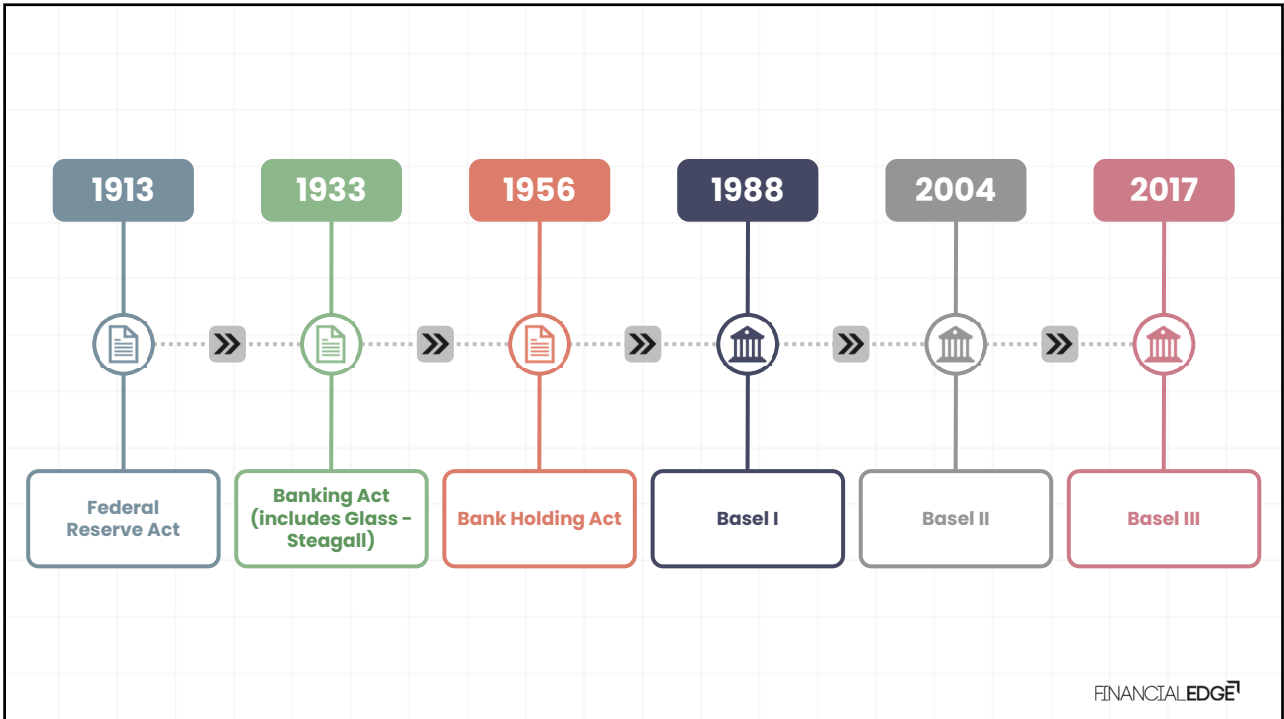
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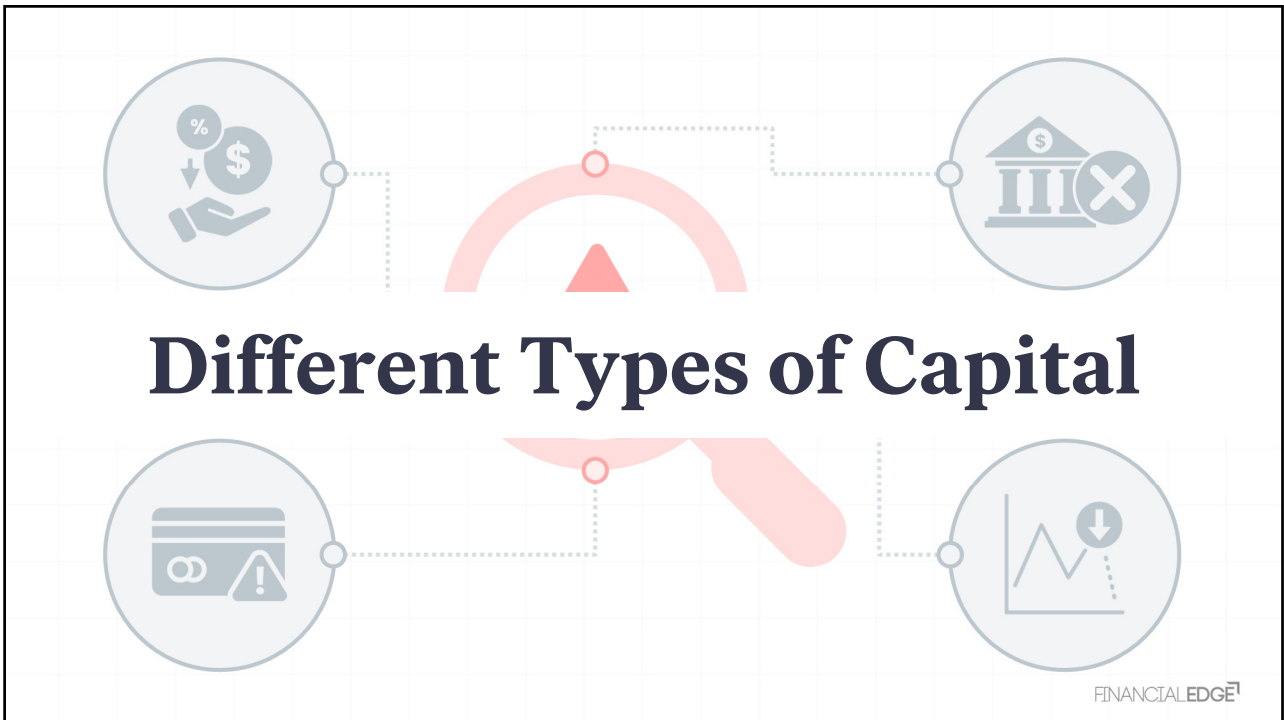
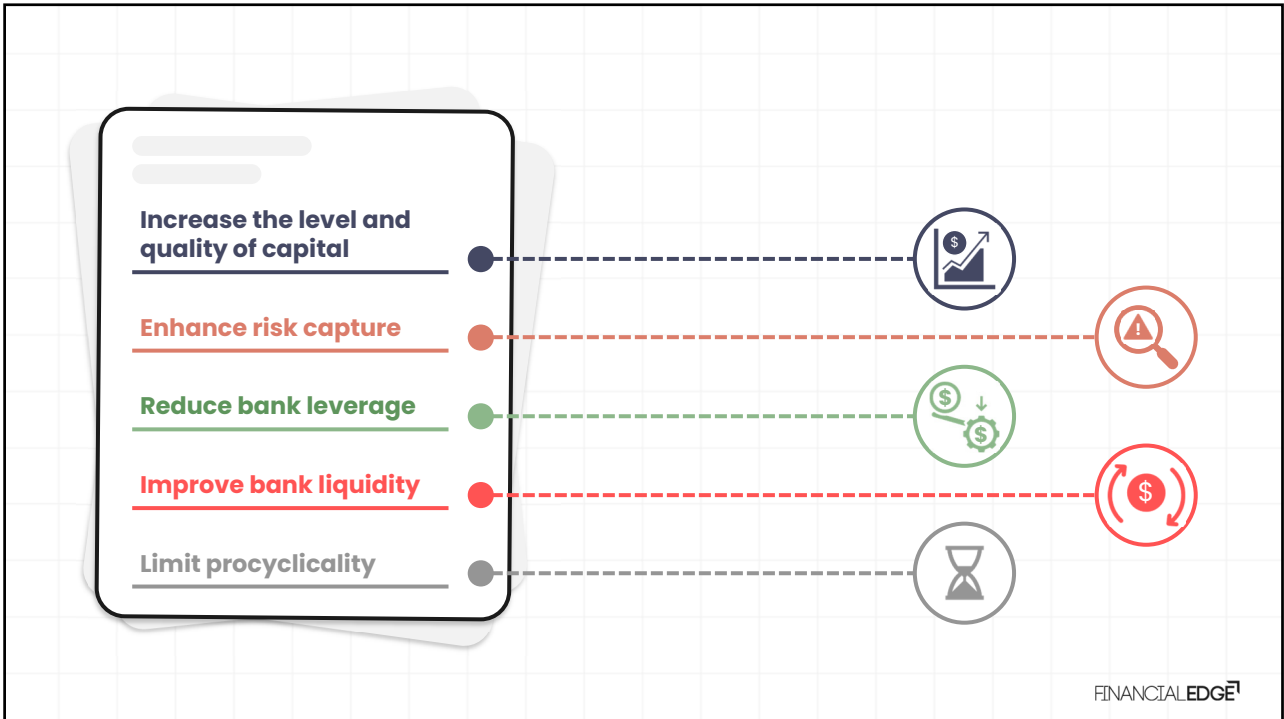


High Level Evolution of US Banking Regulations



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Different Types of Capital

Accounting Capital

Recorded on the **balance sheet of the bank**

Expressed as a **dollar amount**

VS

Regulatory Capital

Amount of capital a bank **must hold as required by regulators**

Expressed as a **percentage of risk weighted assets**

The more **risky assets** a bank holds, the **more capital** it needs to **provide a buffer**

This is the **concept** behind **RWA**

Capital Adequacy Ratios

Qualifying Capital

Risk Weighted Assets (RWA)

RWA is calculated using two different approaches

Standardized Approach

Using weights from the regulator

Advanced Approach

Using the bank's own experience

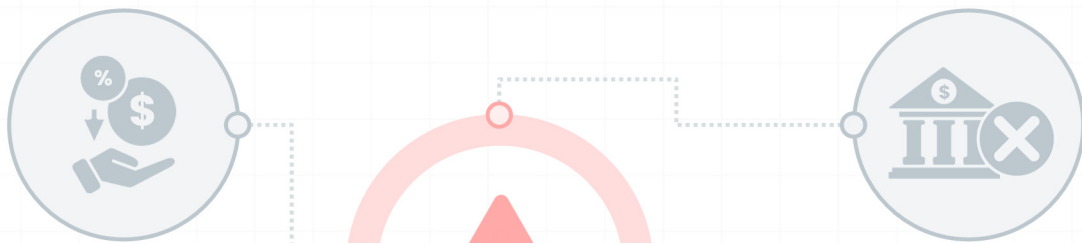
RWA – Standard Approach

Using **S&P credit ratings**, **Basel III** applies the following weights under the **standardized approach for RWA**. National regulators have scope for **discretion**

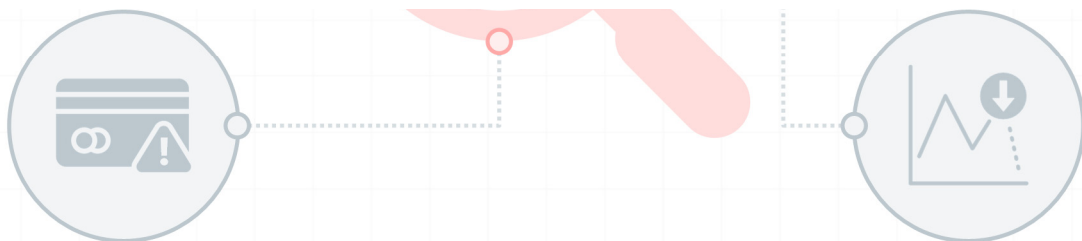
	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	Below B-	Unrated
Government Debt	0%	20%	50%	100%	150%	100%
Bank Debt	20%	50%	100%	100%	150%	100%
Corporate Debt	20%	50%	100%	100%	150%	100%

Other Risk Weightings	
Retail loans	75%
Residential mortgages	35%
Commercial mortgages	100%
Cash	0%
Other assets	100%

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Capital Requirements Ratio



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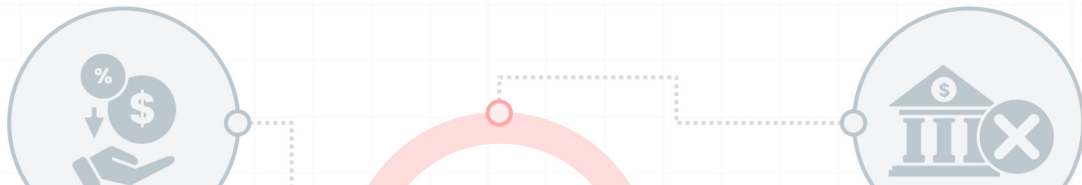
Regulations Around the Globe



Basel III	Basel III is the international regulatory framework that aims to strengthen the regulation, supervision and risk management of the banking sector
Capital adequacy	The minimum requirement for common equity (tier one) is 4.5% of RWA
Leverage ratio	A non-risk-based leverage ratio serves as a backstop to the risk-based capital requirement
Know your customer	Verification procedures are required for onboarding individuals and companies
Credit risk	The counterparty credit risk framework for measuring exposure
Market risk	The capital requirements for trading and derivatives activities use a stressed value-at-risk framework
Liquidity	The liquidity coverage ratio (LCR) requires banks to have sufficient high-quality liquid assets to withstand a 30-day stressed funding scenario



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Calculating Risk Weighted Assets



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In this example the bank has a number of **different types of assets**, including:

Residential and commercial mortgages

US treasuries

Apple and Tesla corporate bonds

Cash on deposit

Assets	Value (\$m)	Rating	Risk Weight	RWA
Residential mortgages	250		35%	87.5
Commercial mortgages	300		100%	300
US Treasuries	100	AAA	0%	0
Apple corporate bonds	50	AA	20%	10
Tesla corporate bonds	25	BB-	100%	25
Cash	75		0%	0
Total Assets	800			422.5

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Qualifying Capital

Common Equity Tier 1 (CET1)

Highest quality as **absorbs losses immediately**. Consists (mainly) of:

Common stock

Retained earnings

Other comprehensive income

Additional Tier 1 (AT1)

Includes **paid-up capital instruments** not included in CET1 such as:

Preferred stocks

Certain debt instruments (e.g. contingent convertible bonds)

Tier 2

Harder to liquidate supplementary capital. For example:

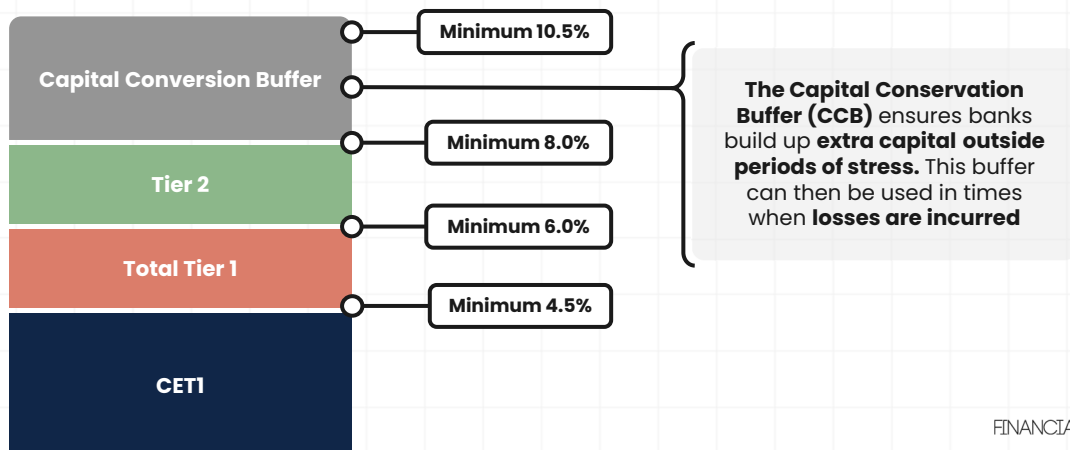
Undisclosed reserves

Qualifying subordinated debt

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Minimum Capital Ratios

Banks must maintain a minimum amount of capital, measured as **a percentage of RWAs**



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