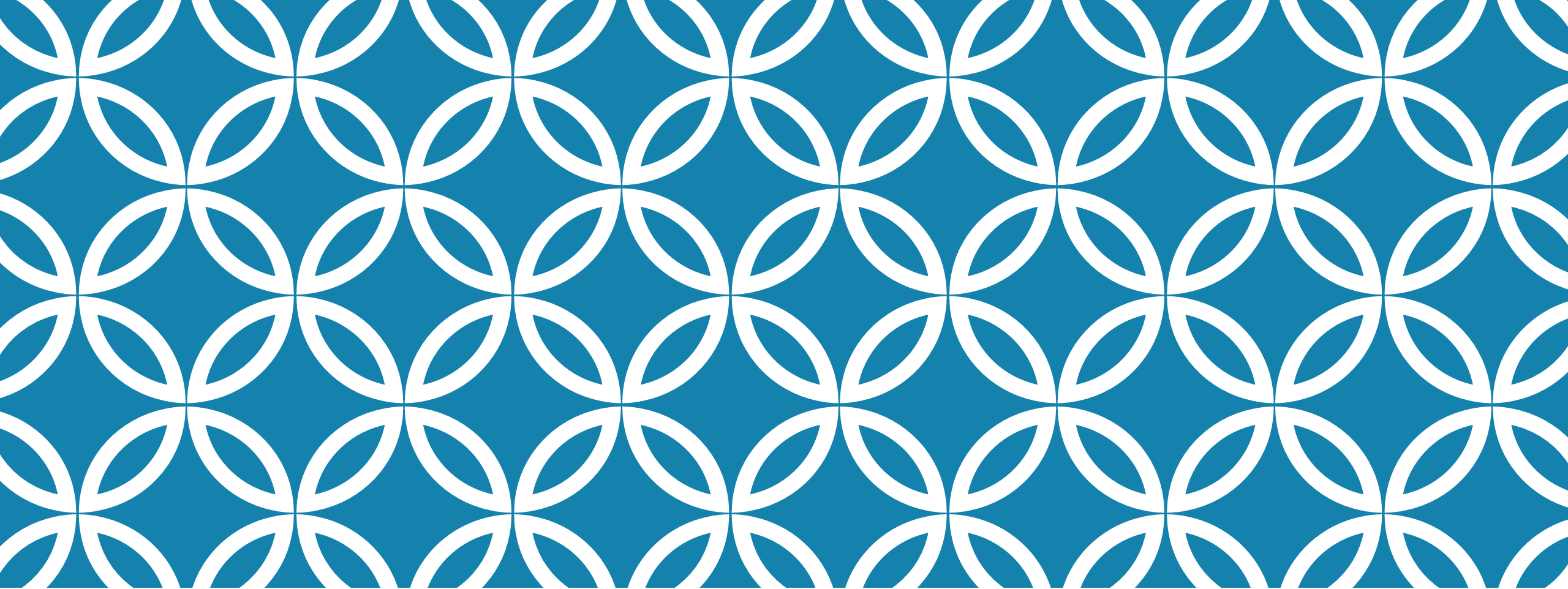




BANKING INDUSTRY: COMPETITION, STABILITY AND REGULATIONS

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MOTIVATIONS

- Financial sector, particularly financial institutions (FIs), is **highly regulated**.
 - Shouldn't the free market be a good benchmark for the role of government in financial sector?
 - What are the reasons justifying the regulation on financial system?
 - How to design the regulation?
- The topic for financial regulation is big; our focus for today's class will be limited to ***financial institutions***.

RATIONALE FOR THE REGULATION

- Theory of market regulation is built upon fundamental concepts of **market failures and inefficiency**.
 - Imperfect competition
 - Externality
 - Information asymmetry
 - Public goods
- Common reasons (rationales) used to advocate for the financial regulations are the combinations among the last three: **externality, information asymmetry and public goods**.
 - The first is usually addressed in terms of **competition policy**.

RATIONALE FOR THE REGULATION: *EXTERNALITY*

- Failure of a financial institution affects many stakeholders of the institution.
- Disruption in one particular FI can possibly lead to **systemic failure** through chains of FIs' interconnected network.
- Systemic failure among FIs leads to financial disruption; this has brought about a recession – **externality of financial collapse.**

RATIONALE FOR THE REGULATION: *INFORMATION ASYMMETRY*

- Systemic failure of FIS are associated with **information asymmetric** between fund owners and financial institutions.
- Financial institutions, e.g. banks, act as **delegated monitoring agent**, and operate by using **leverage**.
 - They have incentive to take excessive risk as well, just like other regular non-financial firms would have incentive to take excessive risk.
- Who is going to monitor the delegated monitoring?

HOW DOES THE FINANCIAL INSTITUTION PLAY BY THE RULE?

- The case for regulation is clear.
- But, how do we regulate FIs system?
 - The topic is too board again; we will focus on Banking system.
- Key issue raised: how to balance the two dilemma: *competition* and *stability (resilience)*?
- Regulation in financial system is greatly shaped by *theory of regulation* and *international practical experiences*.

INTERNATIONAL REGULATORY STANDARD: THE BASEL ACCORDS

- Banking regulation is unique; mostly **internationalized** standard.
 - Banks compete internationally; regulation ought to be standardized.
- The idea of having **international standard** of banking regulation was initiated during 1980s, known under the Basel accord.
 - Basel accord is a proposal made by the Bank of international settlement (BIS).
 - BIS is located in Basel.
- The accords have been improved and evolved over years. Current generation of the accord is called **Basel accord 3**.

BASEL 1: RISK-BASED CAPITAL ADEQUACY

- Basel 1: The accord was first released and adopted among industrialized G10 country by 1988.
- What is the idea of Basel 1?
 - Banks' **insolvency** should be avoided and prevented.
 - The insolvency can be cushioned/avoided if Bank has sufficient amount of capital to cover the financial loss.
 - Bank should be monitored and regulated to maintain a certain level of minimum capital level; i.e. **capital adequacy level**.

BASEL 1: CAPITAL ADEQUACY AND INCENTIVE COMPATIBLE REGULATION

- Capital adequacy is calculated from the level of **bank's risk exposure**.
 - Capital should be sufficiently high to cover the **worst case scenario loss**.
 - The worse case scenario loss can be calculated from the concept of VaR, i.e. Value-at-Risk.
- Excessive risk-taking: High-risk, high-return, but high penalty.
 - If any bank wishes to take risky investment, it's fine. But, that bank must be charged for high level of the capital
- **The regulation is designed to be a self-evolving (self-incentivizing) regime that promotes both stability and competition.**

BASEL 1: PRACTICAL IMPLEMENTATION

- Following Basel 1, each commercial bank is required to meet the so called “*capital adequacy ratio*”

$$\text{Capital-to-Risk-adjusted-asset} > 8\%$$

- Risk-adjusted asset is the value of asset converted into its *risk-adjusted value* with *risk weights*.

BASEL 1: RISK TOPOLOGY AND RISK WEIGHT

Risk-asset ratio – an illustrative calculation

Asset	£ million	Weight fraction	Weighted (£m)
Cash	25	—	—
Treasury bills	5	0.1	0.5
Other eligible bills	70	0.1	7.00
Secured loans to discount market	100	0.1	10.00
UK government stocks	50	0.2	10.00
Other instruments – government	25	0.2	5.00
– company	25	1.0	25.00
Commercial loans	400	1.0	400.00
Personal loans	200	1.0	200.00
Mortgage loans	100	0.5	50.00
<i>Total assets</i>	<i>1000</i>		<i>707.50</i>
Off-balance-sheet risks			
Guarantees of commercial loans	20	1.0	20.00
Standby letters of credit	50	0.5	25.00
<i>Total risk-weighted assets</i>			<i>752.50</i>
<i>Capital ratio 8%</i>			<i>60.2</i>

Source: Bank of England 'Banking Supervision' Fact Sheet, August 1990.

- Loss in financial operation can arise because of two types of risk.
 - Credit risk (default)
 - Market risk
- Each bank should (must) set aside the amount of capital that can be used to cover the loss attributed to the two risks.
- Standardized approach suggests that bank look into the **risk weight table**, and calculate the capital surcharged accordingly.

BASEL 1: PROBLEM TO THE FIRST PROPOSAL

- So, why later generation of Basel accord then?
 - Commercial loan and personal loan are treated the same.
 - Good-credit commercial loan and low-quality commercial loan are treated the same.
 - One-size fit all problem: *efficient (good) banks might be over-penalized.*
- Likely to create the so called “*capital regulatory arbitrage*”

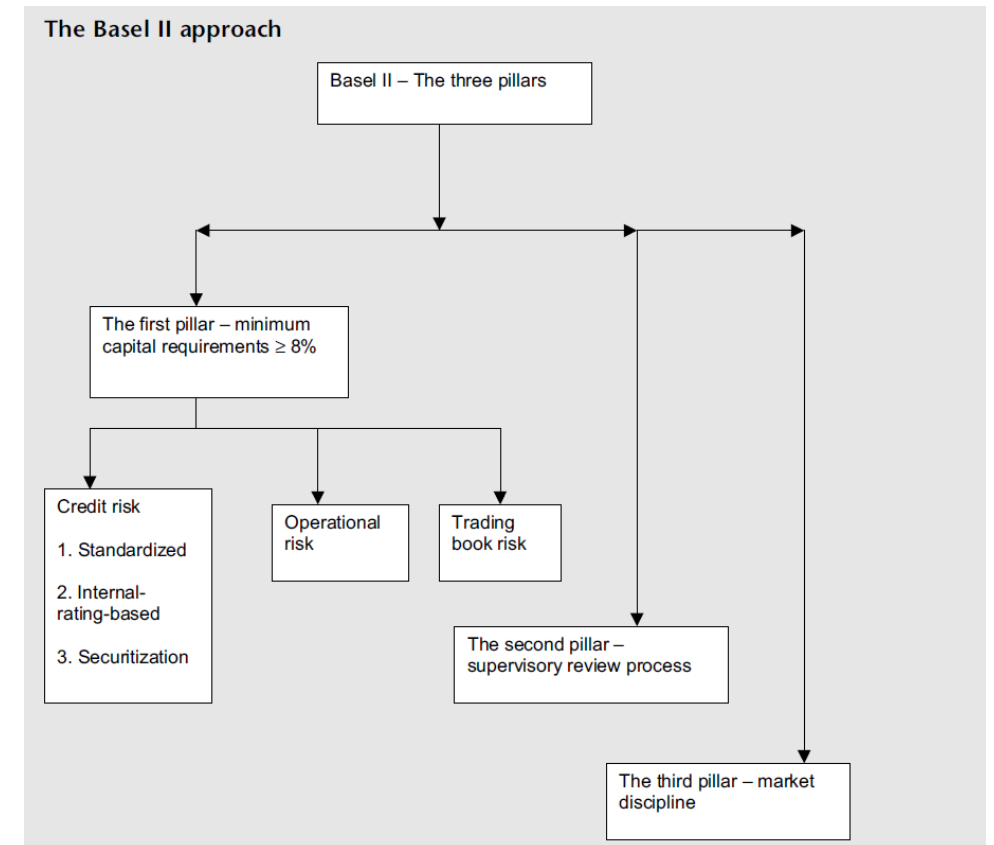
BASEL 2: AN AUGMENTED BASEL 1.

➤ Basel 2: “New” **Risk-based capital adequacy**

- Improved upon the older version of Basel 1.
- Introduce finer concepts of *implementation* and *risk topology*.
- Other elements included: *supervisory* and *market discipline*.

BASEL 2: FINER RISKS TOPOLOGY

- Finer risk-weight coefficients
- Allow an efficient bank (with advanced management) to use an internal rating score for picking the risk weight, and hence capital surcharged.
- More types of risk addressed.



BASEL 3

➤ Basel 3: “Newer” *Risk-based capital adequacy*

- Even before Lehman Brothers collapsed in September 2008, the need for a fundamental strengthening of the Basel II framework had become apparent. The banking sector entered the financial crisis with **too much leverage and inadequate liquidity buffers**. These weaknesses were accompanied by poor governance and risk management, as well as inappropriate incentive structures. The dangerous combination of these factors was demonstrated by the mispricing of credit and **liquidity risks**, and **excess credit growth**.
- Micro-prudence v.s. *Macro-prudence regulation*.

FOUR MAJOR PROPOSALS UNDER BASEL 3

- a **Countercyclical capital buffer**, which places restrictions on participation by banks in system-wide credit booms with the aim of reducing their losses in credit busts.
- a **Leverage ratio** - a minimum amount of loss-absorbing capital relative to all of a bank's assets and off-balance sheet exposures regardless of risk weighting.
- **Liquidity requirements** - a minimum liquidity ratio, the Liquidity Coverage Ratio (LCR), intended to provide enough cash to cover funding needs over a 30-day period of stress; and a longer-term ratio, the Net Stable Funding Ratio (NSFR), intended to address maturity mismatches over the entire balance sheet.
- **Additional proposals for systemically important financials (SIFIs)**, including requirements for supplementary capital, augmented contingent capital and strengthened arrangements for cross-border supervision and resolution.