



Overview of Basel Framework

March 2024
RAF Laboratory
Tsuyoshi Oyama

Agenda

1. Basel I & II

2. Basel III

3. Basel IV(Basel III Finalization)

1. Basel I & II

1. What is Basel I ?

■ Basel I (1993--)

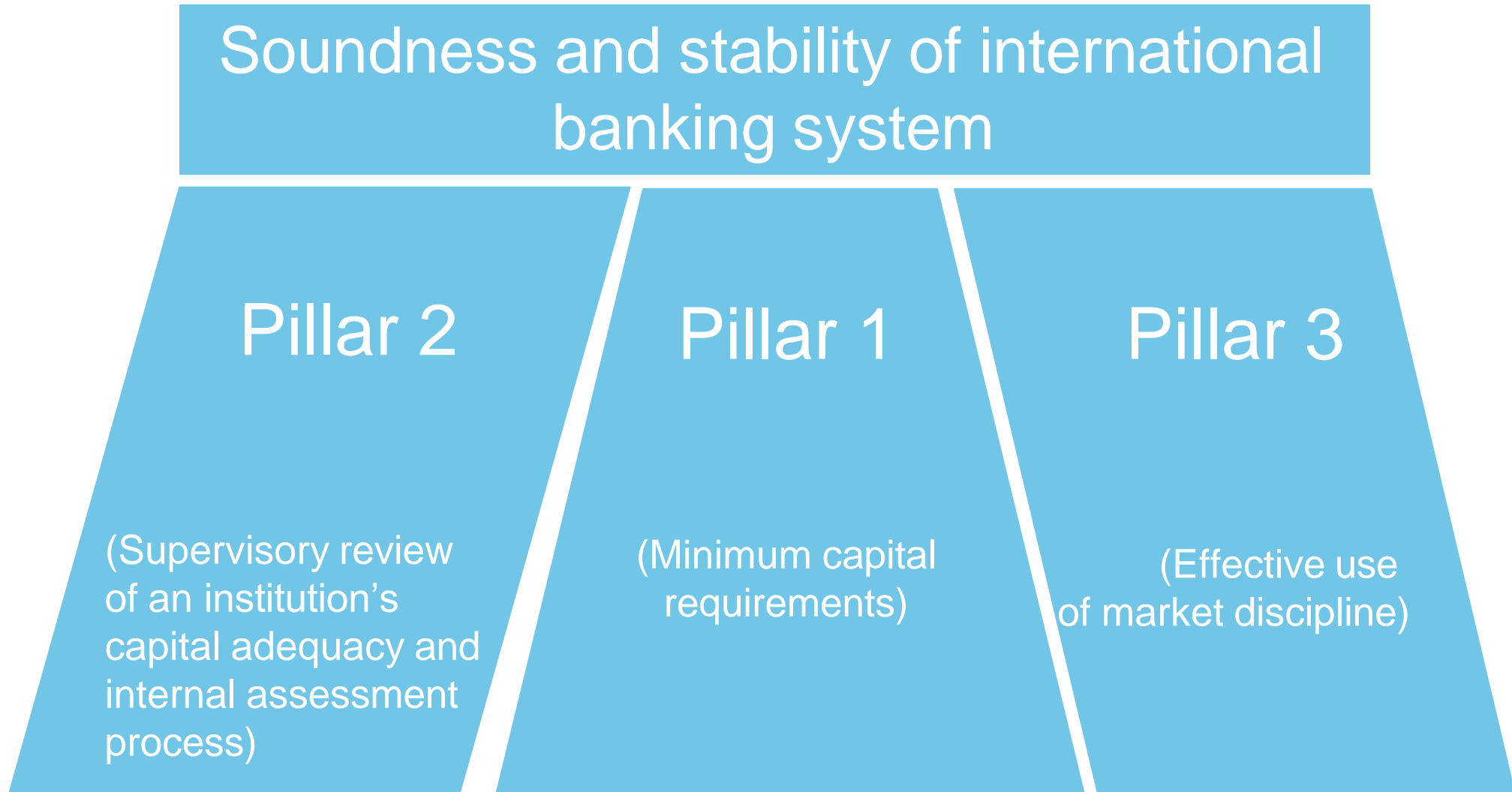
- Introduction of a uniform capital requirement for banks that operate internationally ⇒ To ensure fair competition condition while also securing the solvency of financial institutions
 - ⇒ To ensure the stability of the international financial system
 - ⇒ One-size-fits-all type and risk insensitive regulation

- Facing the rapid environmental changes, however, Basel I became increasingly outdated
 - ⇒ Rapid environmental changes (advancement of financial and risk management technology, emergence of new financial products with various risk profiles)
 - ⇒ Risk insensitive regulation biased behavior of banks
 - ⇒ Some important risks were not well captured
 - ⇒ One-size-fits-all type regulation could not properly deal with the diversity of risk management of banks and discourage some banks from advancing their own risk management

2. What is Basel II ?

- Basel II (2006--)
 - Corresponding to environmental changes since introduction of Basel I (Advancement of financial engineering/ risk management techniques, emergence of financial instruments with a variety of risk characteristics)
 - ⇒ More risk-sensitive capital requirements according to various types of risks
 - ⇒ Allow different measurement approaches, by taking into consideration of differences across banks / countries
 - ⇒ Introduce multilayer approach of “three pillars” to cope with individual bank’s diverse risk profiles / risk management methodologies, and advancement of risk management techniques in the future

Basic framework of Basel II



Three pillars of Basel II

■ Pillar 1

- Required minimum capital ratio

■ Pillar 2

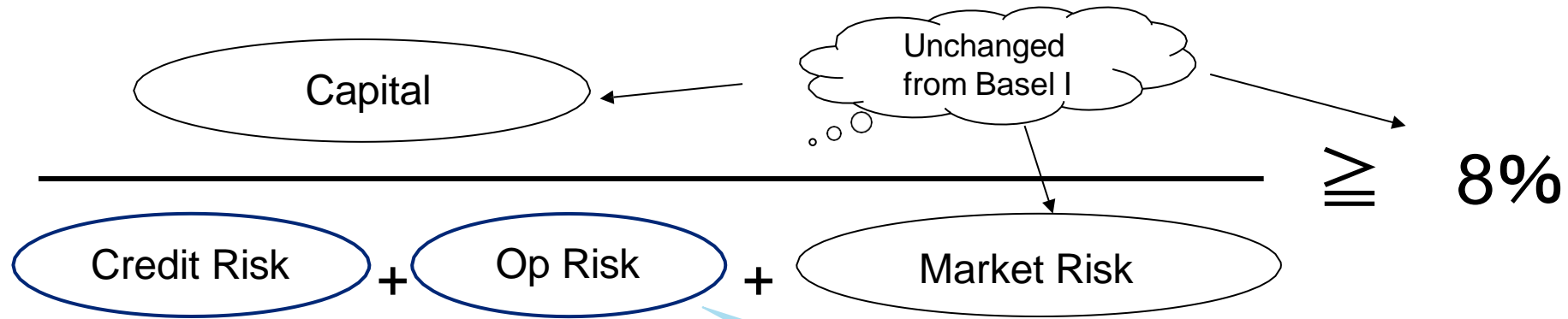
- Banks are required to assess the adequacy of their holding capital by using their own risk assessment methods (e.g. economic capital) → Then the authorities assess the adequacy of banks' risk assessment methods
- Some risk items such as credit concentration risk and interest risk of banking book are also dealt with by Pillar II due to the lack of international consensus of the risk measurement methods

■ Pillar 3

- Banks are required to expose their risk management framework and some outputs to the market through disclosure and thereby expected to be disciplined by the market

Pillar 1

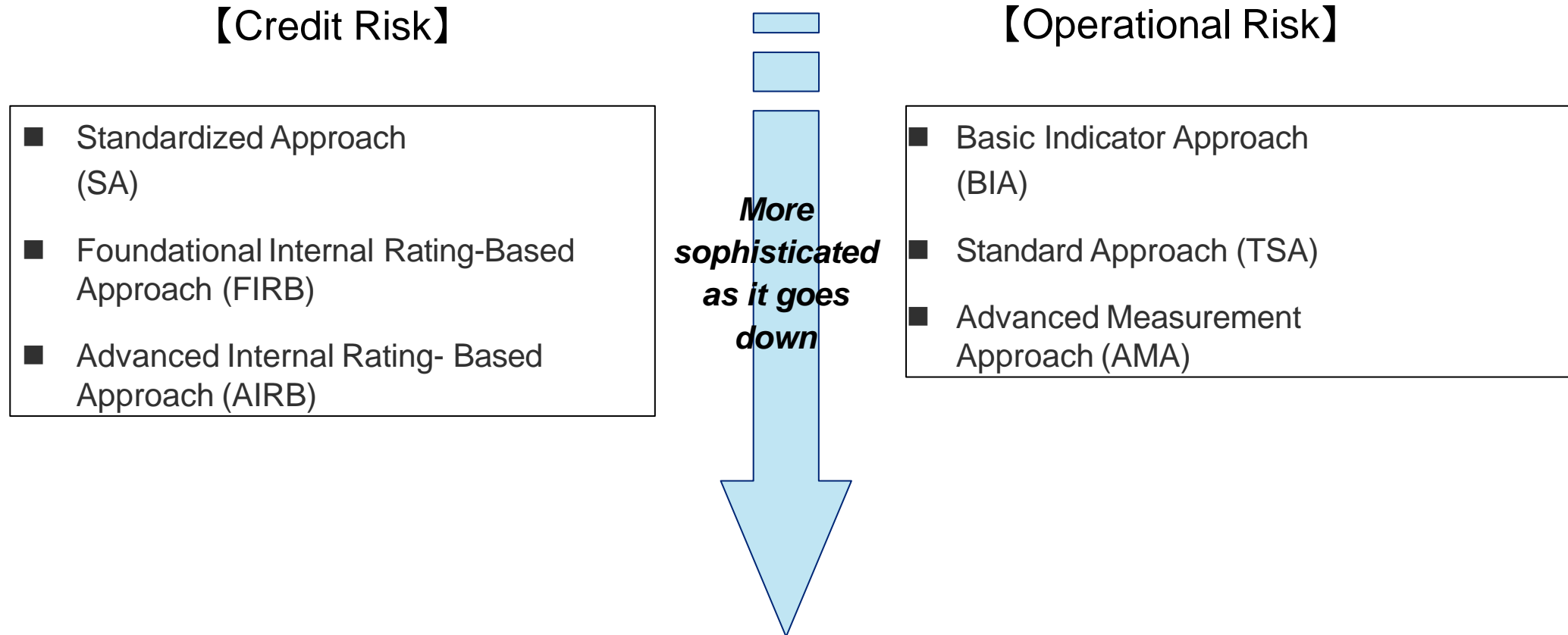
Minimum Capital Requirement



- Set different risk-weight based on the type and quality of assets
- Provide 3 measurement approaches based on varying degree of sophistication of risk management techniques

- Measure risk related to operation mistakes, system breakdown, etc.
- Provide 3 measurement approaches based on varying degree of sophistication of risk management techniques

Three measurement methodologies (Credit / Op)



Advanced approach (AIRB, AMA) takes effect since late 2007 and other approaches from late 2006.

Credit Risk

- Impose different risk weights to corporate loans according to risk level (different from Basel I that imposed uniform risk weight)
- In large, two options to determine the difference in risk
 - Entirely depends on external rating for determining risk weights (Standardized Approach)
 - Largely depends on methodologies based on internal rating which banks developed (FIRB approach / AIRB approach)
- Risk quantification to assess capital adequacy
 - Estimate risk parameters for each internal rating grade reflecting risk variance (e.g. Probability of default <PD>, Loss given default <LGD>).
 - Input estimated parameters into the formula set by Basel II (the formula is based on one-factor Merton Model) and calculate amount of risk asset, compared to equity capital
 - Financial institution can select AIRB or FIRB depending on which type categories of risk parameters to estimate.

Operational Risk

Newly introduced in Basel II

- Operational risk measurement have the following options.
 - Consider a constant proportion of gross profit as operational risk (Basic Indicator Approach and Standardized Approach)
 - Measure by using internal models developed by banks (Advanced Measurement Approach, AMA)
- AMA requires that banks should quantify risks from accidents which seldom take place but bring about tremendous amount of loss, by considering internal and external data, scenarios, and business environment and internal control factors (BEICF).

Pillar 2

Roles of bank and supervisory authority

Bank

- Develop internal capital assessment process
- Set capital target consistent with bank's risk characteristics / control environment

➔ Responsible for capital adequacy corresponding with own risk

Supervisory
Authority

- Evaluate the appropriateness of bank's assessment of capital adequacy
- ➔ Intervention measures are taken if inappropriate (e.g. insufficient capital)

Main areas under the "pillar 2"

- Risks that are not fully captured in the "pillar 1"
- Risk and risk management that cannot be adequately assessed by one-size-fits-all type approach

Pillar 3

What is Pillar 3 ?

Market discipline aimed to reinforce the framework of sustaining the financial stability of banks by asking for information disclosure

**Use internal rating / models =
expanding bank's discretion**



information disclosure is more important

* Basel II sets information items to be disclosed

Disclosure items in Pillar 3

■ Overview of disclosure items

➤ Application scope

- Consolidated base, against which Basel II was applied

➤ Composition of capital and capital adequacy information

- Disclosing the composition of capital following the Basel II definition
- Disclosing capital adequacy information from the following two viewpoints;
 1. Regulatory capital adequacy ratio (Pillar 1)
 2. Internal Capital Adequacy Assessment Process (Pillar 2)

➤ Risk management and risk exposures

- Credit risk, market risk, operational risk, interest rate risk of banking book, etc.

2. Basel III

New regulatory trends after GFC

Risk mitigation at individual banks

Green colored parts are part of the Basel III framework.

	Problems highlighted by the financial crisis	Regulatory reactions	Regulation and guidance
Financial buffer enhancement	Financial fragility of Sifis	Financial buffer (capital and liquidity) enhancement	<ul style="list-style-type: none"> ■ Significant increase in minimum CAR requirement ■ LCR and NSFR ■ Leverage ratio ■ TLAC or gone concern buffer ■ Supervisory stress testing and consequent increase in required minimum capital
Enhancement of governance and risk management	Low moral and governance-related problems of Sifis	Reform of risk governance and risk culture of Sifis	<ul style="list-style-type: none"> ■ Risk appetite framework ■ Thematic review of risk culture ■ Enhancement of corporate governance ■ Risk data aggregation ■ Reform of remuneration system ■ Supervisory stress testing
Systemic risk reduction	No policy options but to bail out Sifis due to their TBTF status	Decrease in size and complexity of businesses and Increase in resolvability of Sifis	<ul style="list-style-type: none"> ■ Business structure reform including Volcker rule in the US and Ring-fence in the UK ■ RRP ■ TLAC

New regulatory trends after GFC

Risk identification at individual financial institutions

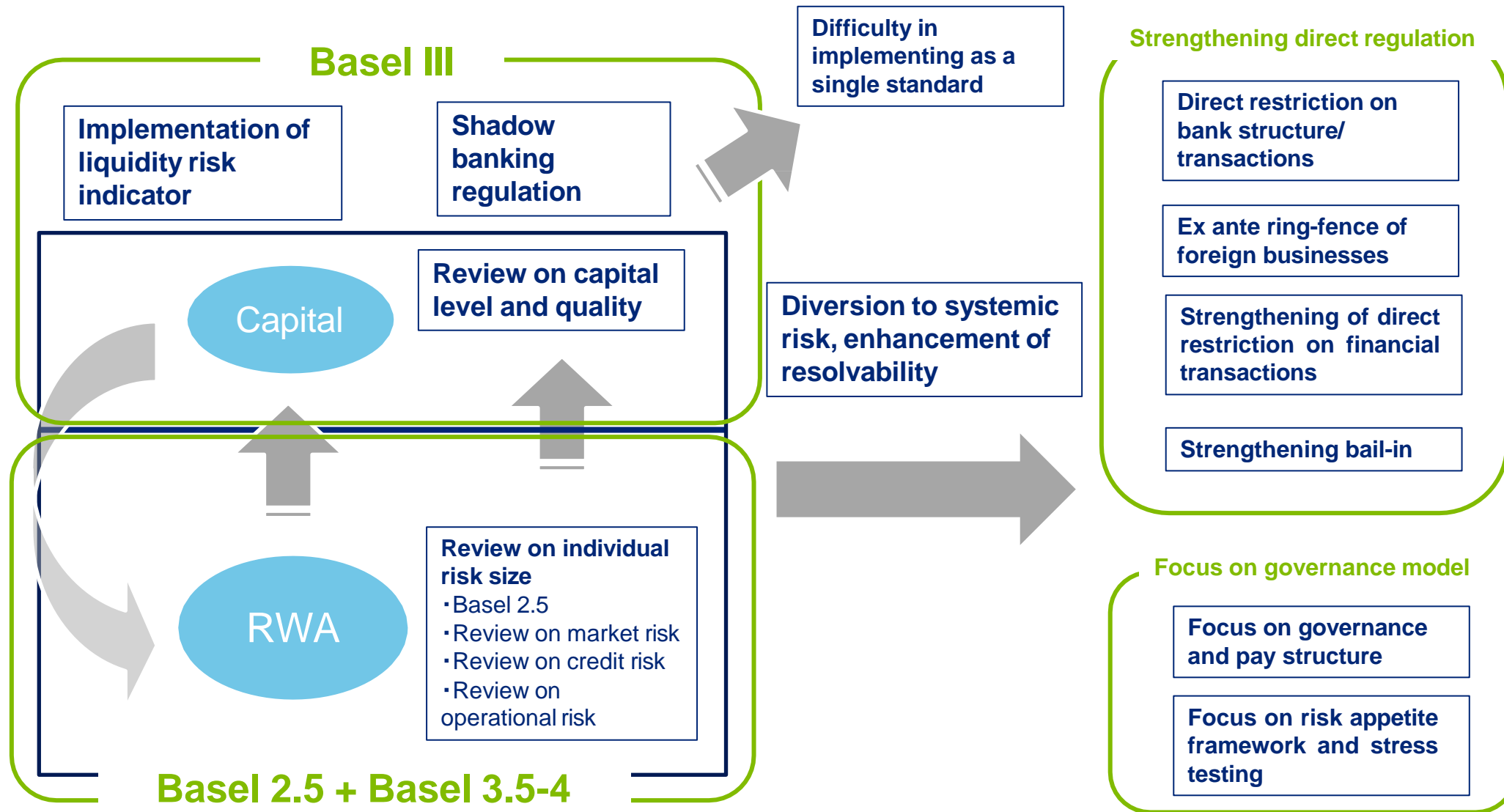
	Problems highlighted by the financial crisis	Regulatory reactions	Regulation and guidance
Re-evaluation of the risks under Basel 2	Underestimation of major risks, which could derail even Sifis management	Identification of factors behind risk underestimation and their corrections	<ul style="list-style-type: none"> ■ Risk associated with securitization and counter-party risk ■ Fundamental review of trading book ■ Review of ST, IRB of credit risk and BIA, ST, AMA of operational risks ■ Review of Interest risk of banking book
Consideration of new risks	Huge losses due to materialization of some risks, which had not been covered by conventional risk management and regulations	Explicit consideration of some risks, which had been easily dismissed, or hard to be quantified before	<ul style="list-style-type: none"> ■ Reputational risk ■ Risk concentration ■ Strategic risk ■ Conduct risk ■ Emerging risk
Disclosure enhancement	Insufficient market discipline due to a lack of disclosed comparable risk information	Increase in volume and comparability of disclosed risk information	<ul style="list-style-type: none"> ■ Review of Pillar 3 of Basel 2

New regulatory trends after GFC

Addressing the risks in the whole financial system

	Problems highlighted by the financial crisis	Regulatory reactions	Regulation and guidance
Market regulation	Expediting risk ramification due to a lack of information of the flow of derivative transactions	Visualilzation of derivative transactions by concentrating them into CCPs, and requirement of margin call for the others	<ul style="list-style-type: none"> ■ CCP concentration of derivative transactions ■ Margin call requirement of OTC derivative transactions ■ Enhancement of data collection of derivative transactions
Non-bank regulation	Enhancing bank regulation could naturally shift risks to the non-bank sector	Expanding the scope of financial regulation so as to cover a variety of systemically important non-bank businesses	<ul style="list-style-type: none"> ■ Securitization, repo transactions ■ MMF ■ Insurance ■ Asset management companies ■ Finance companies
Enhancement of prudential policy framework	Insufficient macro- prudential perspectives and poor risk assessment by regulators worsened the crisis	Enhancement of macro-prudential perspectives More focus on banks' governance and forward-looking risk assessment	<ul style="list-style-type: none"> ■ Introduction of macro-prudential perspectives into bank supervision ■ More focused assessment of financial system stability ■ Counter-cyclical buffer ■ Supervisory stress testing ■ Enhanced cross-border cooperation ■ Peer-review of bank supervisions₄

Overview of new regulations



Overview of Basel III

- More capital, higher quality capital
 - Crisis-proof level and quality
 - Core tier 1 capital
 - Increase in deduction items from capital
 - Requirement of two additional capital buffers
 - Capital surcharge for SIFIs (systemically important financial institutions)
- More buffer
 - TLAC
- More liquidity, higher quality liquidity
 - Crisis-proof level and quality
 - Introduction of LCR and NSFR
- Increase in risk coverage
 - CCR (CVA)
 - IRRBB
- Introduction of leverage ratio
 - Intentional introduction of risk “insensitive” regulation
- Mitigating procyclicality
 - Capital conservation
 - Adjustment of capital buffers according to business cycle phases

Overview of Basel III

Capital requirements and buffers

	Common Equity	Tier I capital	Total capital
Minimum	4.5%	6.0%	8.0%
Conservation buffer	2.5%		
Minimum plus conservation buffer	7.0%	8.5%	10.5%
Countercyclical buffer range ^{*1}	0-2.5%		

Capital Quality

- Items to be deducted from tier 1 capital

- Hybrid capital
- DTAs
- Minority interests
- Unrealized losses
- Investments in other financial institutions
- Mortgage servicing rights
- Defined benefit pension fund assets
- Under provisioning
- Some non-tangible assets

- Items to be included in tier 1 capital

- Contingent capital

Counterparty Risk

- Increase in the asset correlation for the exposures to SIFIs (systemically important financial institutions)
- Capture CVA (credit valuation adjustment) losses
- Wrong-way risk to be captured through e.g. stress testing
- Enhancement of collateral management
- More use of CCP (central counterparties) encouraged

Leverage ratio

- Capital—quite restrictive
- Assets—quite comprehensive
- Minimum ratio—3 %
- Schedule
 - The supervisory monitoring period: from January 2011
 - The parallel run period: from January 2013 to January 2017
 - Bank level disclosure: from January 2015
 - Migrating to Pillar 1 treatment after some final adjustments: from January 2018

Mitigating procyclicality

- Some measures to be introduced to mitigate procyclical nature of Basel II
- Forward looking provisioning
- Capital conservation

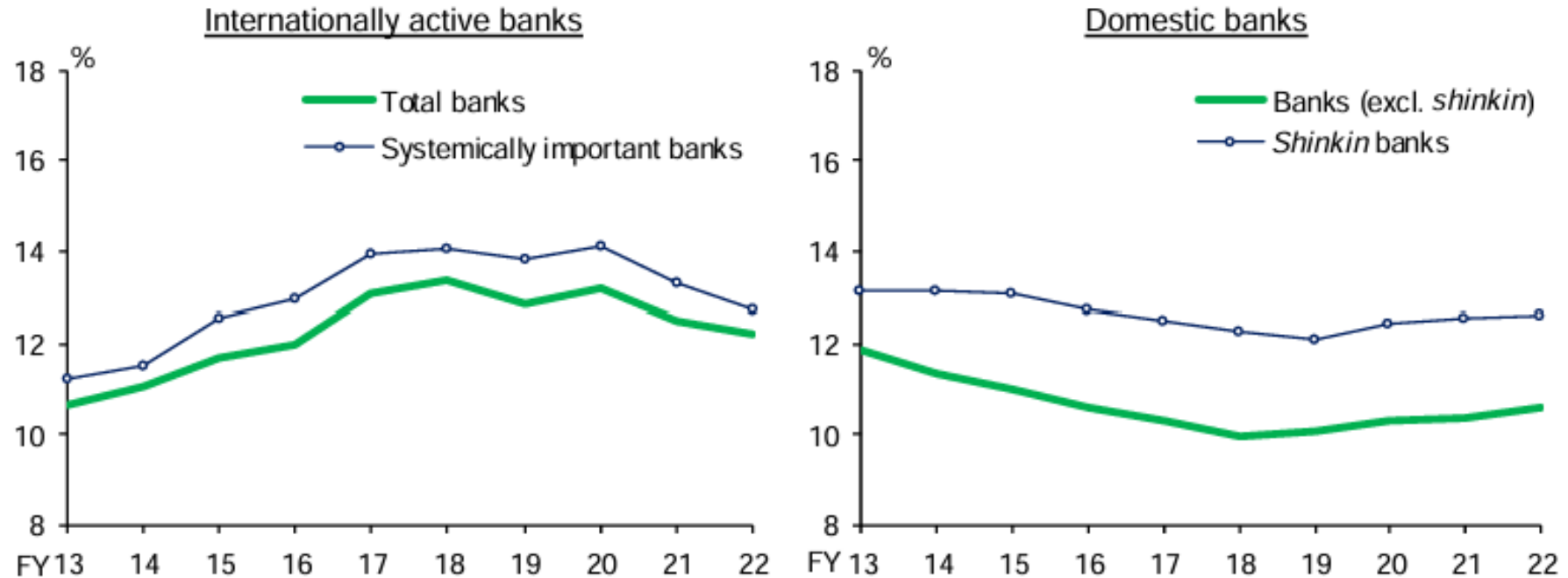
Individual bank minimum capital conservation standards (Numbers are illustrative and do not represent a proposed calibration level)	
Capital conservation range is established above the minimum requirement	
Amount by which a Bank's capital exceeds the minimum requirement in terms of a percentage of the size of the conservation range	Minimum Capital Conservation Ratios (expressed as a percentage of earnings)
[< 25%]	[100%]
[25% - 50%]	[80%]
[50% - 75%]	[60%]
[75% - 100%]	[40%]
[> 100%]	[0%]

BCBS “Strengthening the resilience of the banking Sector” (2009)

- Countercyclical capital buffer
 - Additional buffers depending over the phase of 10-20 year credit cycle
 - Indicator– a deviation from the trend of credit/GDP ratio (2—10%)
 - The host regulators take a leading role
 - Exposures located in multi-countries– Weighted average buffers

Capital adequacy ratio of Japanese banks

Chart V-1-1: Capital adequacy ratios



Note: The left-hand chart shows the CET1 capital ratio of internationally active banks; the right-hand chart shows the core capital ratio of domestic banks. In principle, on a bank group basis. The transitional arrangements are taken into consideration.
 Source: Published accounts of each company; BOJ.

Source: Bank of Japan, "Financial Stability Report", October 2023

Liquidity ratios

■ Liquidity coverage ratio

- This ratio requires banks to hold enough liquid assets to offset the net cash outflows under an acute short-term (30 days) stress scenarios
- $LCR = \text{Stock of high quality liquid assets} / \text{Net cash outflows over a 30 day time period} \geq 100\%$
- Highly restrictive definition of high quality liquid asset
- Very severe scenarios of cash outflows

■ Net Stable Funding Ratio

- This ratio requires banks to hold long-term (1 year) stable sources of funding against the liquidity profiles of assets funded and the off-balance sheet items
- $NSFR = \text{Available amount of stable funding} / \text{Required amount of stable funding} \geq 100\%$
- Having invited a harsh criticism from the industry
- Observation phase to address any unintended consequences across business models or funding structures before starting the revised NSFR by January 2018

Liquidity buffer of Japanese banks

Japanese major banks' liquidity coverage ratio

LCR	YTD June 2023	
	Average LCR(%)	YOY change(pps)
Norinchukin	207.5	-46
Chiba	168	-19
MUFG	159.3	-4
SMTB	138	-8
Mizuho	136.9	5
SMFG	131.3	-4
Concordia	128.1	-30
Shizuoka	120.5	-41

Source: S&P Global Market Intelligence

IRRBB

- Interest Rate Risk in the Banking Book (IRRBB) under Basel III concerns the potential impact of interest rate changes on a bank's financial stability, focusing on non-trading activities like loans and deposits. Effective management of IRRBB is crucial for maintaining a bank's profitability and capital adequacy in the face of fluctuating interest rates.
- Key Measures:
 - Net Interest Income (NII): Indicates the short to medium-term impact on earnings by showing the difference between interest income from assets and expenses on liabilities.
 - Economic Value of Equity (EVE): Measures the long-term effect on a bank's capital by assessing the present value of assets minus liabilities, highlighting the bank's financial health under interest rate changes.
 - Managing IRRBB involves forecasting NII and evaluating EVE under various interest rate scenarios, which involve varying the interest rates according to different economic conditions—such as rising rates to simulate an inflationary environment or lowering rates to reflect a recessionary period—to evaluate how these changes would affect the net interest income (NII), the economic value of equity (EVE), and other financial metrics.
- Regulatory Framework:
 - Unlike Pillar I of Basel III, which mandates minimum capital requirements for credit, market, and operational risks, IRRBB falls under Pillar II. This emphasizes the need for banks to develop internal risk management practices and assess overall capital adequacy in relation to their risk profile. Pillar II encourages a tailored approach, focusing on risks not fully captured by Pillar I, including IRRBB.

TLAC

- The Total Loss-Absorbing Capacity (TLAC) is designed to ensure that Global Systemically Important Banks (G-SIBs) have sufficient loss-absorbing and recapitalization capacity to maintain critical operations without requiring public funds in the event of a failure. Introduced by the Financial Stability Board (FSB) in response to the 2008 financial crisis, TLAC aims to minimize risks to financial stability and prevent the adverse economic impacts of a systemically important bank's failure.
- TLAC requirements mandate that G-SIBs hold a minimum amount of qualifying instruments that can be readily written down or converted into equity in times of financial distress. This includes a mix of equity, debt, and other securities that meet specific criteria for absorbency, subordination, and maturity. The objective is to shift the burden of bank losses from taxpayers to banks' shareholders and also creditors, thus creating a safer and more resilient banking system.
- By ensuring that banks have a buffer of loss-absorbing capital, TLAC aims to facilitate the orderly resolution of failing banks, thereby protecting the global financial system and economy at large from systemic risks.

3. Basel IV (Basel III Finalization)

What is Basel IV (or Basel III Finalization)

- Basel III finalization, often referred to as "Basel IV" in the banking industry, represents a set of reforms that build upon the Basel III framework, aiming to further strengthen the regulation, supervision, and risk management within the banking sector.
- These reforms were finalized by the Basel Committee on Banking Supervision (BCBS) to address the shortcomings identified in the Basel III framework. Main features of Basel III Finalization is as follows;
 1. **More Risk-sensitive Capital Requirements:** It refines the way banks calculate their risk-weighted assets (RWAs), making the process more sensitive to the actual risks banks face. This includes changes to the credit risk, operational risk, and market risk frameworks.
 2. **Output Floor:** One of the most significant changes is the introduction of an "output floor." This limits the extent to which banks can reduce their RWAs through the use of their internal models. The floor is set at 72.5% of the RWAs calculated using the standardized approaches, ensuring that the capital requirements based on internal models cannot fall below 72.5% of those calculated under standardized approaches.
 3. **Enhanced Operational Risk Framework:** Basel III finalization introduces a revised operational risk framework that simplifies the existing approaches and bases capital requirements more directly on a bank's income and historical losses.






to be continued...

What is Basel IV (or Basel III Finalization)

- 4. Credit Valuation Adjustment (CVA) Risk:** The reforms include a new framework for CVA risk, which arises from changes in the creditworthiness of counterparties in derivative transactions.
- 5. Leverage Ratio Enhancements:** The finalization strengthens the leverage ratio framework by introducing a leverage ratio buffer for global systemically important banks (G-SIBs), making it more costly for these banks to increase their leverage.

Basel III vs. Basel IV

- While the first phase of Basel III focused largely on the capital side of the capital ratio calculation (the numerator), the 2017 reforms concentrate on the calculation of RWAs (the denominator).

Basel III: main features					
2010	 <p>Increase the level and quality of capital</p> <p>Banks required to maintain more capital of higher quality to cover unexpected losses. Minimum Tier 1 capital rises from 4% to 6%, of which at least three quarters must be the highest quality (common shares and retained earnings). Global systemically important banks (G-SIBs) are subject to additional capital requirements.</p>	 <p>Enhance risk capture</p> <p>Capital requirements for market risk rise significantly. Requirements are calculated based on 12 months of market stress. Credit Valuation Adjustment risk is now included in the framework.</p>	 <p>Constrain bank leverage</p> <p>A leverage ratio constrains the build-up of debt to fund banks' investment and activities (bank leverage), reducing the risk of a deleveraging spiral during downturns.</p>	 <p>Improve bank liquidity</p> <p>The Liquidity Coverage Ratio requires banks to hold sufficient liquid assets to sustain them for 30 days during times of stress. The Net Stable Funding Ratio encourages banks to better match the duration of their assets and liabilities.</p>	 <p>Limit procyclicality</p> <p>Banks retain earnings to build up capital buffers during periods of high economic growth so that they can draw them down during periods of economic stress.</p>
2017		<p>Revisions to the standardised approaches for calculating credit risk, market risk, Credit Valuation Adjustment and operational risk mean greater risk sensitivity and comparability. Constraints on using internal models aim to reduce unwarranted variability in banks' calculations of RWAs.</p> <p>An output floor limits the benefits banks can derive from using internal models to calculate minimum capital requirements.</p>	<p>Global systemically important banks (G-SIBs) are subject to higher leverage ratio requirements.</p>		

Basel III finalization completely revised the risk-weighted asset calculation methods

- In December 2017, the BCBS published Basel III: Finalizing post-crisis reforms, which consists of the following:
 - ✓ Review of the SA for credit risk
 - ✓ Review of the IRB for credit risk
 - ✓ Review of the CVA risk framework
 - ✓ Review of the operational risk framework
 - ✓ Revised leverage ratio measurement methodology
 - ✓ Introduction of the output floor
- In January 2019, the BCBS published the "Minimum capital requirements for market risk" (final version), which consists of the following:
 - ✓ Review of the SA for market risk
 - ✓ Review of the IMA for market risk
 - ✓ Review of the boundary
- In March 2020, in response to the Covid-19 disruption, the BCBS announced that it would "postpone the implementation period by one year" (from January 2022 to January 2023).

Risk Category	Standardized	Internal model
Credit risk	Revised SA	AIRB Revised FIRB
	CEM	IMM
Counterparty credit risk	SA-CCR	
	CVA	BA-CVA
SA-CVA		Revised IMA
Market risk	Revised SA	
Operational risk	BIA	Removed IMA
	TSA	

Major changes required by Basel IV

Risk category		Major revision
Credit risk	SA	<ul style="list-style-type: none"> ✓ Significant increase in risk weighting of equity ✓ Introduction of the framework for real estate collateralized loans (RW is determined by LTV using collateral valuation at the time of execution) ✓ Change in handling of external ratings for financial institutions (use of financial institutions' own external ratings, introduction of covered bond framework)
	IRB	<ul style="list-style-type: none"> ✓ Revision of scope of application (mandatory application of SA for equity, mandatory application of FIRB for large companies and financial institutions) ✓ Introduction and review of parameter floors ✓ Partial revision of minimum requirements (e.g., prohibition of Cohort method in EAD)
	Counterparty credit risk	<ul style="list-style-type: none"> ✓ Abolish advanced risk measurement method in CVA risk, introduce SA-CVA ✓ Mandatory application of SA-CCR (e.g., uniform international standards)
Market risk	Overall	<ul style="list-style-type: none"> ✓ In principle, assets subject to mark-to-market valuation (listed equity, etc.) should be captured under the market risk framework, and prior notification should be submitted to the authorities when the banking account framework is applied. ✓ Review the "market risk exclusion" framework and strengthen the capture of foreign exchange risk.
	SA	<ul style="list-style-type: none"> ✓ Revised framework to measure market volatility risk + default risk + residual risk ✓ Sensitivities are measured using a framework specified by the regulator.
	IMA	<ul style="list-style-type: none"> ✓ Changed from VaR to ES-based framework ✓ Significantly strengthened model requirements
Operational risk		<ul style="list-style-type: none"> ✓ Elimination of internal models (advanced measurement methods) ✓ Change the framework from "Gross Profit" to "BI" (Business Scale) ✓ For large financial institutions, the framework using internal loss (ILC) is applied.
Overall—Output floor		<ul style="list-style-type: none"> ✓ When using the internal model, floor calculations using the "standard method" are required for all risk categories (Currently, it is possible to calculate floors using methods other than the "standard method").

Credit Risk

The main changes to the SA for credit risk will:

- Enhance risk sensitivity while keeping the SA for credit risk sufficiently simple.
 - ✓ Provide for a more detailed risk weighting approach instead of a flat risk weight, particularly for residential and commercial real estate.
- Reduce reliance on external credit ratings.
 - ✓ Require banks to conduct sufficient due diligence when using external ratings.
 - ✓ Have a sufficiently detailed non-ratings-based approach for jurisdictions that cannot or do not wish to rely on external credit ratings.

The main changes to the IRB approach for credit risk will:

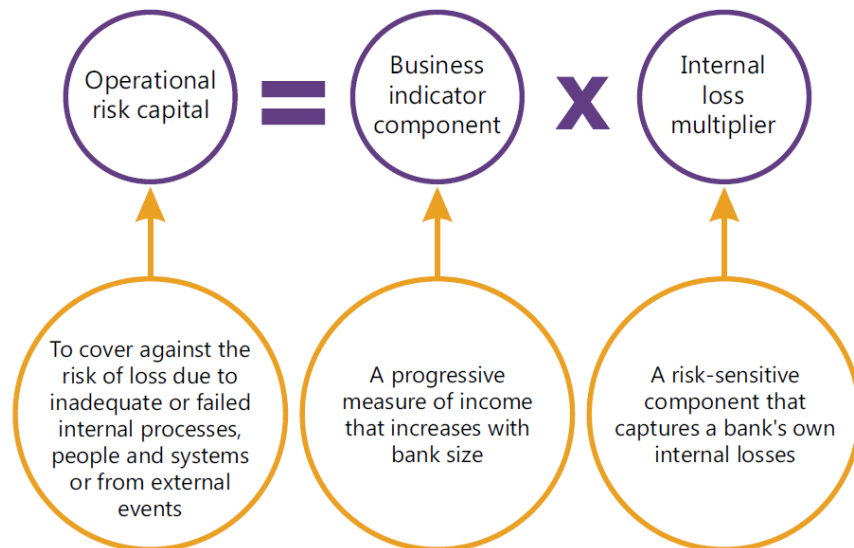
- Remove the option to use the A-IRB approach for exposures to financial institutions and large corporates. No IRB approach can be used for equity exposures.
- Where the IRB approach is retained, minimum levels are applied on the probability of default and for other inputs

Exposure class	Methods available under the new credit risk standards	Change in available methods relative to current credit risk standard
Banks and other financial institutions	SA or F-IRB	A-IRB removed
Corporates belonging to groups with total consolidated revenues exceeding EUR 500m	SA or F-IRB	A-IRB removed
Other corporates	SA, F-IRB or A-IRB	No change
Specialised lending	SA, supervisory slotting, F-IRB or A-IRB	No change
Retail	SA or A-IRB	No change
Equity	SA	All IRB approaches removed

(Source) BCBS “Finalising Basel III in brief” December 2017

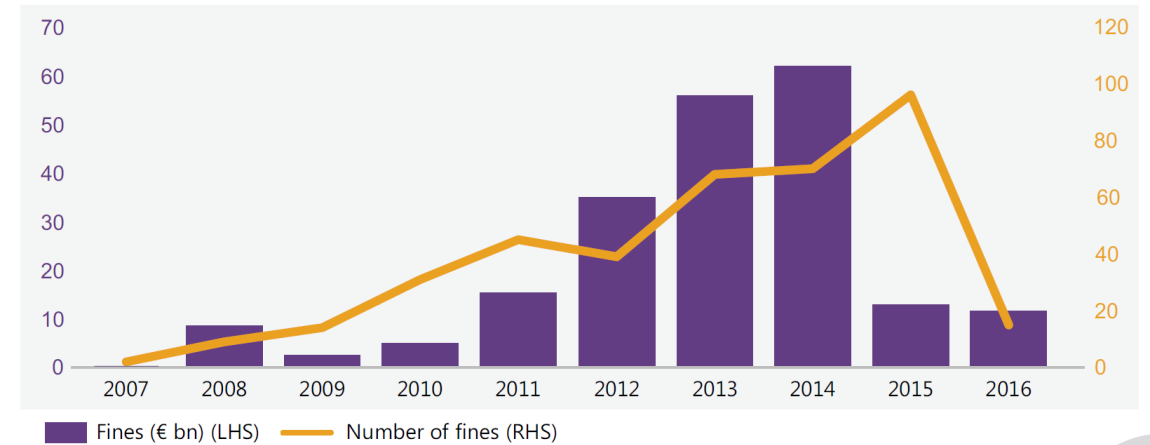
Operational Risk

- Simplify the framework by replacing the four current approaches with a single standardised approach.
- Make the framework more risk-sensitive by combining a refined measure of gross income with a bank's own internal loss history over 10 years.
- Make it easier to compare RWAs from bank to bank by removing the option to use multiple approaches and the option to use internal models.



Significant operational risk losses during crisis

Conduct-related fines



Sources: Le Monde; Basel Committee Secretariat calculations.

Conduct-related fines for a sample of 111 banks. Fines converted to euros based on relevant exchange rate as at 20 May 2016.

(Source) BCBS "Finalising Basel III in brief" December 2017

Leverage ratio surcharge for G-SIBs

- Basel III had already prescribed a risk-based capital buffer for G-SIBs. Therefore, the leverage ratio buffer is necessary to make sure that the leverage ratio continues to act as an appropriate backstop to the risk-based requirements for G-SIBs.

$$\text{Leverage ratio} = \frac{\text{Tier 1 capital}}{\text{On- and off-balance sheet exposures (including derivatives, repos and other securities financing transactions)}} \geq 3\%$$

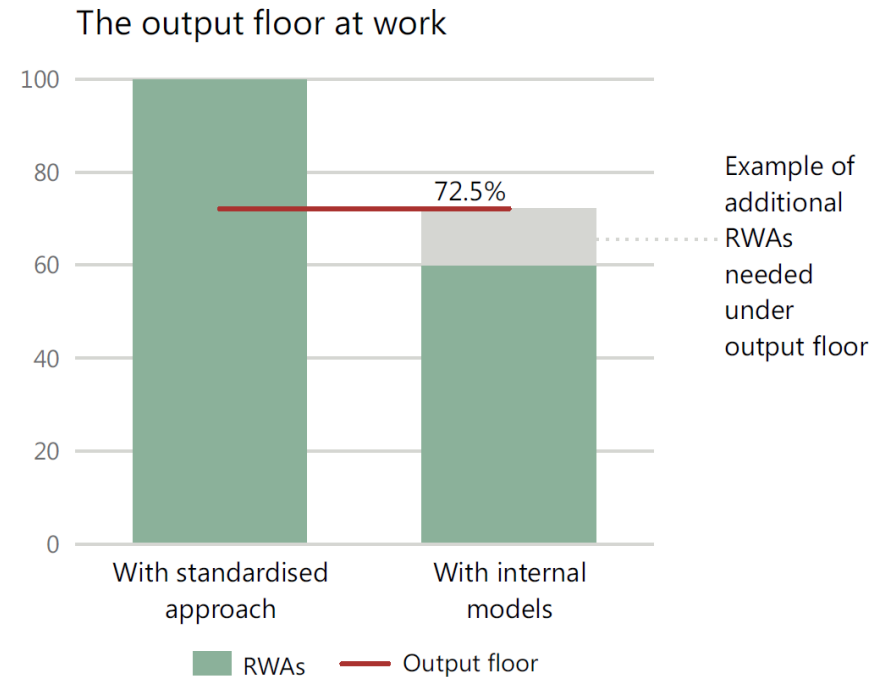
Capital conservation ratios for a G-SIB subject to a 1% risk-weighted buffer and 0.5% leverage ratio buffer		Table 4
CET1 risk-weighted ratio	Tier 1 leverage ratio	Minimum capital conservation ratios (expressed as a percentage of earnings)
4.5–5.375%	3–3.125%	100%
> 5.375–6.25%	> 3.125–3.25%	80%
> 6.25–7.125%	> 3.25–3.375%	60%
> 7.125–8%	> 3.375–3.50%	40%
> 8.0%	> 3.50%	0%

The leverage ratio buffer for each G-SIB will be set at 50% of its risk-based capital buffer. For example, a bank with a 2% risk-based buffer will have a 1% leverage ratio buffer and so will be expected to maintain a leverage ratio of at least 4%.

(Source) BCBS “Finalising Basel III in brief” December 2017

Output floor

- The revised output floor limits the amount of capital benefit a bank can obtain from its use of internal models, relative to using the standardised approaches.
- Banks' calculations of RWAs generated by internal models cannot, in aggregate, fall below 72.5% of the risk-weighted assets computed by the standardised approaches. This limits the benefit a bank can gain from using internal models to 27.5%.



(Source) BCBS "Finalising Basel III in brief" December 2017

Output floor

- The RWA calculated by the "Floor Calculation Methodology" below multiplied by the "Floor Multiplier" will be the lower limit of the RWA calculated using the internal model.

	Internal model	Methods to calculate the output floor	
		After Basel IV	Before
Credit risk	AIRB	SA for credit risk	FIRB /SA/Basel1
	FIRB	SA for credit risk	SA/Basel1
Counterparty credit risk	IMM	SA-CCR	–
Securitization framework	SEC-IRBA	SEC-ERBA/SEC-SA	–
CVA risk	–	SA-CVA/BA-CVA	–
Market risk	IMA	SA for market risk	–
Operational risk	–	SA for operational risk	TSA/BIA/Basel1
Floor multiplier	–	72.5%*	First year 90% After second year 80%

※Raised from 50% in several steps

Transitional arrangements

- A transitional period of six years from the start of application has been established for Basel IV that are expected to have a significant impact.

Implementation dates of Basel III post-crisis reforms and transitional arrangement for phasing in the aggregate output floor	
Revision	Implementation date
Revised standardised approach for credit risk	<ul style="list-style-type: none"> • 1 January 2023
Revised IRB framework	<ul style="list-style-type: none"> • 1 January 2023
Revised CVA framework	<ul style="list-style-type: none"> • 1 January 2023
Revised operational risk framework	<ul style="list-style-type: none"> • 1 January 2023
Revised market risk framework	<ul style="list-style-type: none"> • 1 January 2023
Leverage ratio	<ul style="list-style-type: none"> • Existing exposure definition:⁷ 1 January 2018 • Revised exposure definition: 1 January 2023 • G-SIB buffer: 1 January 2023
Output floor	<ul style="list-style-type: none"> • 1 January 2023: 50% • 1 January 2024: 55% • 1 January 2025: 60% • 1 January 2026: 65% • 1 January 2027: 70% • 1 January 2028: 72.5%


CVA risk framework

The Committee has agreed to revise the CVA framework to:

- enhance its risk sensitivity: the current CVA framework does not cover an important driver of CVA risk, namely the exposure component of CVA. The revised CVA framework takes into account the exposure component of CVA risk along with its associated hedges.
- strengthen its robustness: CVA is a complex risk, and is often more complex than the majority of the positions in banks' trading books. Accordingly, the Committee is of the view that such a risk cannot be modelled by banks in a robust and prudent manner. The revised framework removes the use of an internally modelled approach, and consists of: (i) a standardised approach; and (ii) a basic approach. In addition, a bank with an aggregate notional amount of non-centrally cleared derivatives less than or equal to €100 billion may calculate their CVA capital charge as a simple multiplier of its counterparty credit risk charge.
- improve its consistency: CVA risk is a form of market risk as it is realised through a change in the mark-to-market value of a bank's exposures to its derivative counterparties. As such, the standardised and basic approaches of the revised CVA framework have been designed and calibrated to be consistent with the approaches used in the revised market risk framework. In particular, the standardised CVA approach, like the market risk approaches, is based on fair value sensitivities to market risk factors and the basic approach is benchmarked to the standardised approach

(Source) BCBS "High-level summary of Basel III reforms" December 2017

Basel III (IV) implementation 1/2

Basel III standards adoption as of 2023/09/30 

Click on a cell to see time series information and to get hyperlinks to National Supervisors. Please contact National Supervisors regarding the content of the URLs.
Click on row header to get a hyperlink to the Basel Standard definition.

		AR	AU	BR	CA	CN	HK	IN	ID	JP	KR	MX	RU	SA	SG	ZA	CH	TR	GB	US	EU	
Capital	CCyB	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	MAR NCCD	1	4	4	4	1	4	2	2	4	2	3	2	4	4	4	4	4	1	4	4	4
	CCP	4	4	4	4	1	4	3	2	4	4	4	2	4	4	4	4	4	4	4	4	4
	EIF	4	4	4	4	1	4	na	na	4	4	2	4	4	4	4	4	4	4	4	2	4
	SA-CCR	4	4	4	4	4	4	3	4	4	4	1	4	4	4	4	4	4	4	4	4	4
	SEC	4	4	4	4	2	4	4	4	4	4	4	4	4	4	4	4	4	1	4	2	4
	TLAC	na	4	4	4	4	4	1	na	4	1	4	4	4	4	4	4	4	1	4	4	4
	CR SA 2023	1	4	4	4	2	2	1	4	3	4	4	2	4	3	2	2	2	1	2	2	2
	CR IRB 2023	na	4	4	4	2	2	na	na	3	4	1	4	4	3	2	2	2	1	2	na	2
	CVA 2023	1	1	1	3	2	2	1	3	3	4	1	1	4	3	2	2	2	1	2	2	2
	MR 2023	1	1	2	3	2	2	2	3	3	4	na	1	4	3	2	2	2	1	2	2	2
	OR 2023	1	4	2	4	2	2	3	4	3	4	4	4	4	3	2	2	2	1	2	2	2
OF 2023	na	4	1	4	2	2	na	na	3	4	1	4	4	3	2	2	2	1	2	2	2	
RBC 2013	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
Leverage	LR EXP 2014	4	1	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
	LR EXP 2017	4	4	1	4	2	2	1	4	3	4	1	1	4	3	2	2	2	4	4	4	4
SIB	G-SIB	na	na	4	4	4	4	na	na	4	4	na	na	na	4	na	4	na	4	4	4	
	D-SIB	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	na	4
	LR-Buffer	na	na	na	4	4	na	na	na	4	na	na	1	na	na	na	4	na	4	4	4	4
IRRBB	IRRBB	4	2	4	4	4	3	4	4	4	2	2	4	4	4	4	4	1	4	4	2	
Liquidity	IDL	4	4	4	4	1	4	4	4	1	1	2	4	4	4	4	4	4	4	4	4	4
	NSFR	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	4	4
	LCR	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Large exposur..	LEX	4	4	4	4	4	4	4	4	4	2	3	2	4	4	4	4	2	4	4	4	
Crypto	Crypto	na	1	1	2	1	na	na	na	1	1	na	na	na	1	1	1	1	1	1	1	1
Disclosure	DISC Pillar III	4	3	4	4	2	4	1	4	4	4	2	4	4	4	4	4	4	4	4	na	4
	DISC DEC 20..	4	3	4	3	2	4	1	4	4	4	2	4	4	4	4	4	4	2	4	4	4
	DISC JAN 2018	4	2	4	3	2	4	2	4	4	4	4	2	4	4	3	4	3	4	4	4	4
	DISC DEC 20..	4	3	4	3	2	4	1	4	1	4	1	4	4	4	4	4	4	1	4	4	4
	DISC TLAC	na	na	1	4	2	4	na	na	4	3	4	na	4	na	na	4	na	4	4	4	4
	DISC MR 2023	na	1	na	2	2	2	na	3	3	4	1	na	4	3	2	2	na	2	na	2	2
DISC Jan 2023	1	3	na	3	2	2	2	3	3	4	2	na	4	3	2	2	na	2	1	na	2	

1 draft regulation not published
 2 draft regulation published
 3 final rule published (not yet implemented by banks)
 4 final rule in force (published and implemented by banks)
 na not applicable

Select period: 2023/09/...
 Select standard: (すべて)

Adoption Status:
 ■ adoption completed ■ adoption not started ■ standard not yet due
 ■ adoption in progress ■ not applicable

(Source) BCBS "RCAP on timeliness: Basel III implementation dashboard" September 2023

Basel III (IV) implementation 2/2

Table 1: Member jurisdictions that have issued final rules

Standard		Number of member jurisdictions as of end-September 2022	Number of member jurisdictions as of end-September 2023	Increase in adoption
Capital	Margin requirements for non-centrally cleared derivatives	19	20	1
	Securitisation framework	23	24	1
	Revised standardised approach for credit risk	8	9	1
	Revised IRB approach for credit risk	6	8	2
	Revised CVA framework	3	6	3
	Revised minimum requirements for market risk	3	6	3
	Revised operational risk framework	8	10	2
	Output floor	6	7	1
Leverage	Revised (2017) exposure definition	15	18	3
SIB	Leverage ratio buffer	14	14	0

Table 1: Member jurisdictions that have issued final rules

Standard		Number of member jurisdictions as of end-September 2022	Number of member jurisdictions as of end-September 2023	Increase in adoption
IRRBB	Interest rate risk in the banking book	13	16	3
	Net Stable Funding Ratio	26	27	1
LEX	Supervisory framework for measuring and controlling large exposures	23	24	1
Disclosure	Revised Pillar III requirements, published December 2016 [DISC Pillar III]	22	23	1
	CCyB, Liquidity, Remuneration, Leverage ratio (revised) [DISC DEC 2017]	22	23	1
	Key metrics, IRRBB, NSFR [DISC JAN 2018]	21	23	2
	Composition of capital, RWA overview, Prudential valuation adjustments, G-SIB indicators [DISC DEC 2018]	21	22	1
	Market risk disclosure [DISC MR 2023]	3	5	2
	Key metrics, RWA Overview, Leverage ratio, Credit risk, Operational risk, modelled and standardised RWA comparison – Jan 2023	4	7	3

Note that shaded rows show the outstanding Basel III standards due 1 January 2023.

(Source) BCBS “RCAP on timeliness: Basel III implementation dashboard ” September 2023

Basel III (IV) implementation in Japan

- It has been internationally agreed that the new regulations should be implemented "as soon as possible," with implementation basically starting in January 2023. Based on this, in Japan, the framework allows for early application on a voluntary basis, with a deadline of the fiscal year ending March 2024 for internationally active banks and domestic banks that adopt an internal model.
- Originally, until April 2022, the FSA announced its policy to "implement from the fiscal year ending March 31, 2023," but in light of developments by overseas authorities, it decided to postpone the deadline for implementation for one year. However, since many banks had been preparing their systems for implementation in the fiscal year ending March 31, 2023, the Agency decided to allow implementation as originally planned in consideration of such circumstances. In fact, 39 financial institutions in 20 financial groups have submitted notification for early adoption beginning in the fiscal year ending March 31, 2023.
- Overseas, Australia, Canada, and Hong Kong plan to implement some or all of the regulations by mid-2023, Switzerland, Singapore, and South Africa by mid-2024, and the EU and the UK by January 2025. The U.S. finished the comment period for its proposed regulations and is expected to publish the final one soon in the amid of strong opposition from the industry group (see the next page).

Basel III (IV) implementation in the US

- Recent news indicates that major U.S. banks and financial industry groups are actively pushing back against regulatory initiatives related to the Basel III endgame proposals, raising concerns about the implementation and potential impact on the banking sector and the broader economy.
- Banks are particularly concerned about the proposal that would apply higher capital charges on non-interest revenue, such as fees from credit cards or investment banking services. Industry representatives argue that these charges overstate the risk for banks with a high proportion of non-interest income. There's a push for regulators to cap the proportion of assets on which such charges would apply. This concern is heightened by the backdrop of recent banking crises, prompting a review of capital rules aimed at ensuring stronger bank capital. However, industry executives argue that the bank failures were due to mismanagement and liquidity issues rather than a lack of capital.
- Additionally, there's been an unusual coalition forming against the Basel III finalization, including consumer groups, non-banking sectors, and bipartisan legislators, who argue that the proposal could reduce credit availability, thereby undermining economic growth. Consumer advocacy groups, typically at odds with banks, have joined the chorus, expressing concerns that increased risk weightings for mortgages could adversely affect borrowers typically at the lower end of the wealth spectrum. The banking industry has criticized the Federal Reserve's plan to boost reserve requirements, labeling it as misguided and potentially harmful to lending. The argument is that forcing banks to hold more capital than needed for safety and soundness comes at a cost to the economy, suggesting that there are other regulatory tools available to manage risks.
- In a significant pushback, several leading banking and financial industry groups have sent a joint letter to key regulatory agencies, requesting a new proposal for the Basel III endgame package to close data-disclosure gaps. They accuse the agencies of drawing from nonpublic data for their proposals, thus potentially violating the Administrative Procedure Act. This joint letter, part of a broader campaign including media efforts to draw public attention to their concerns, suggests a readiness to legally challenge the proposal if enacted without adjustments.