

Basel III- overview

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BIS & BCBS



BANK FOR
INTERNATIONAL
SETTLEMENTS

BIS

- Its mission is to serve central banks in their pursuit of monetary and financial stability, to foster international cooperation in those areas and to act as a bank for central banks.
- Established in 1930, the BIS is owned by 60 central banks, representing countries from around the world that together account for about 95% of world GDP. Its head office is in Basel, Switzerland and it has two representative offices: in Hong Kong SAR and in Mexico City.



The Basel Committee on Banking Supervision (BCBS) is the primary global standard setter for the prudential regulation of banks and provides a forum for regular cooperation on banking supervisory matters. Its 45 members comprise central banks and bank supervisors from 28 jurisdictions.

Basel standards- Evolution

Basel I

- Simple
- Credit risk
- Later, market risk
- No RM

Basel II

- Credit risk
- Market risk
- Operational risk
(new)
- Emphasis on RM and prudential standards

Basel III

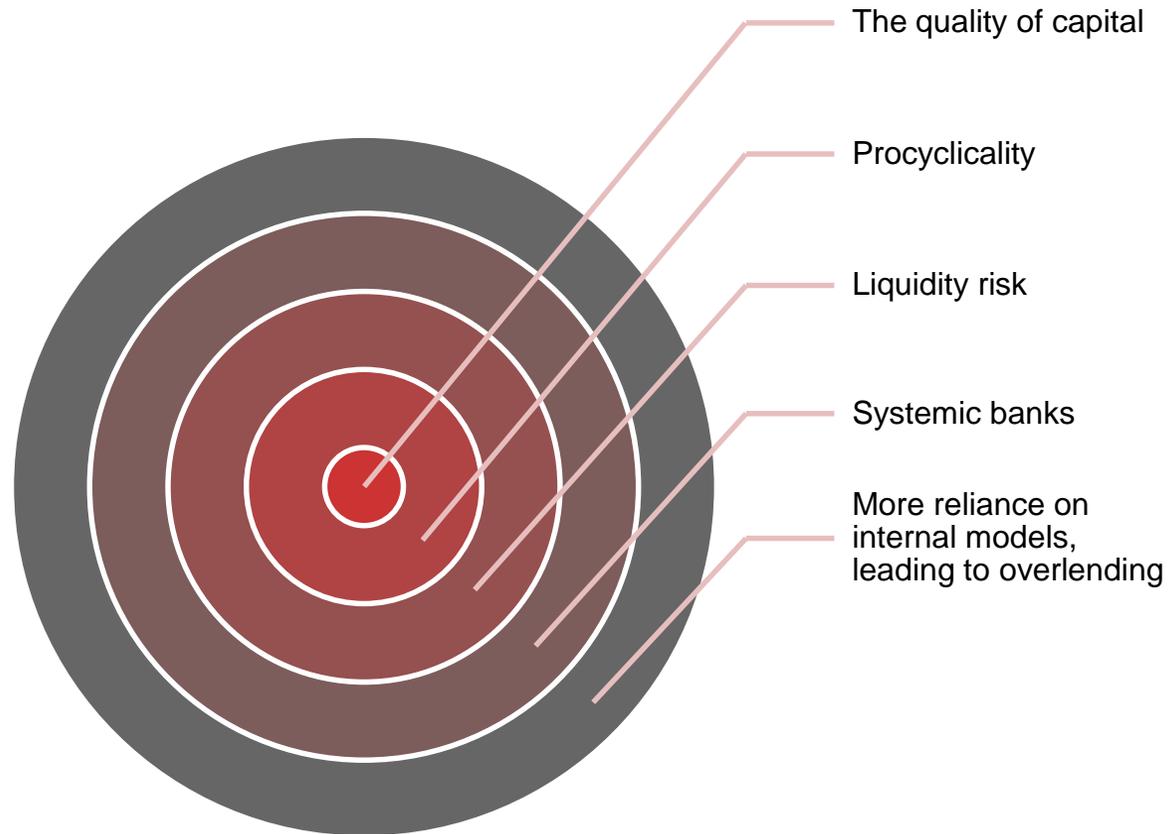
- Credit risk
- Market risk
- Operational risk
- Liquidity risk
(new)
- Enhanced RM and prudential standards

Basel standards- Evolution

Developed by the Basel Committee on Banking Supervision, Basel III is a comprehensive set of reform measures intended to strengthen the regulation, supervision and risk management of the banking sector.

The Basel III framework was developed after the financial crisis of 2008-2009

Weakness of Basel II

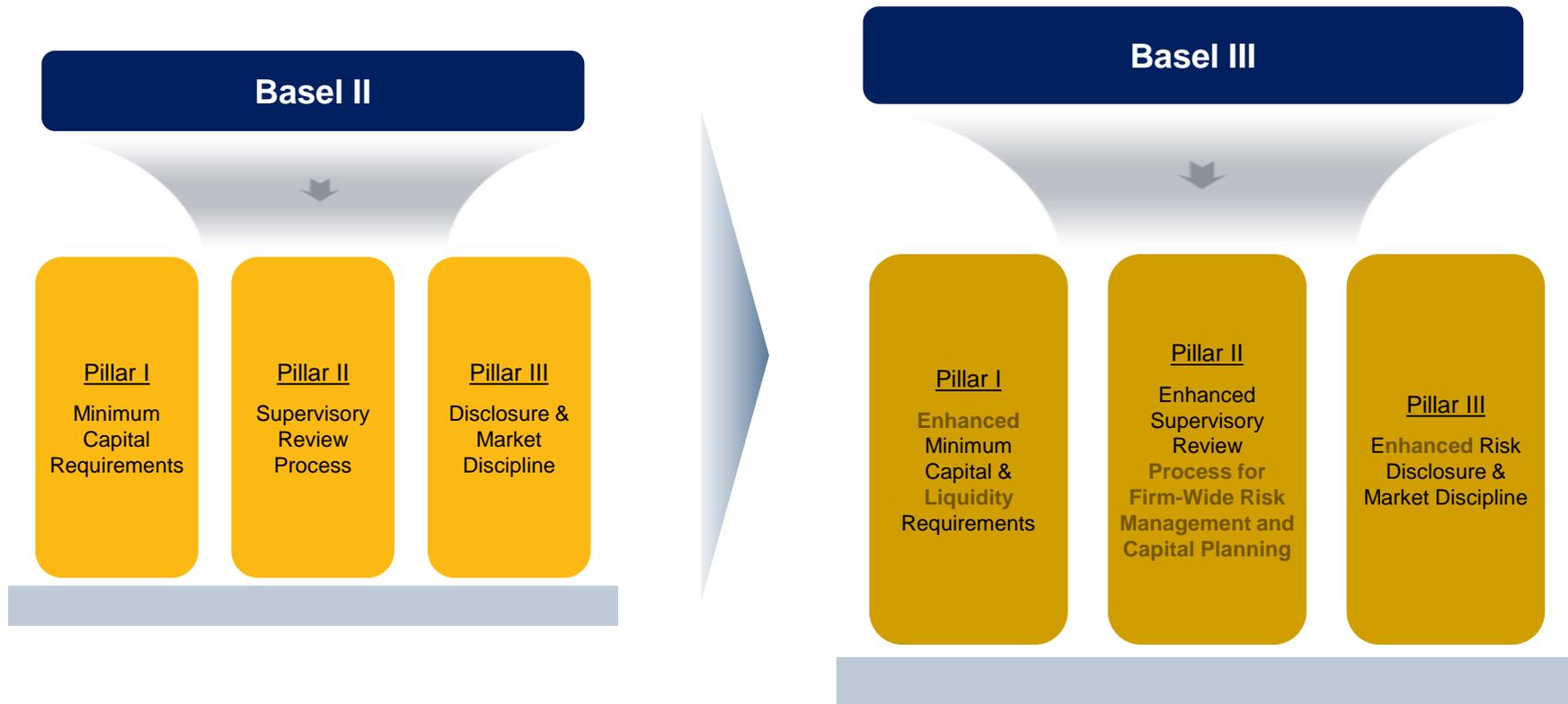


Introduction to Basel III

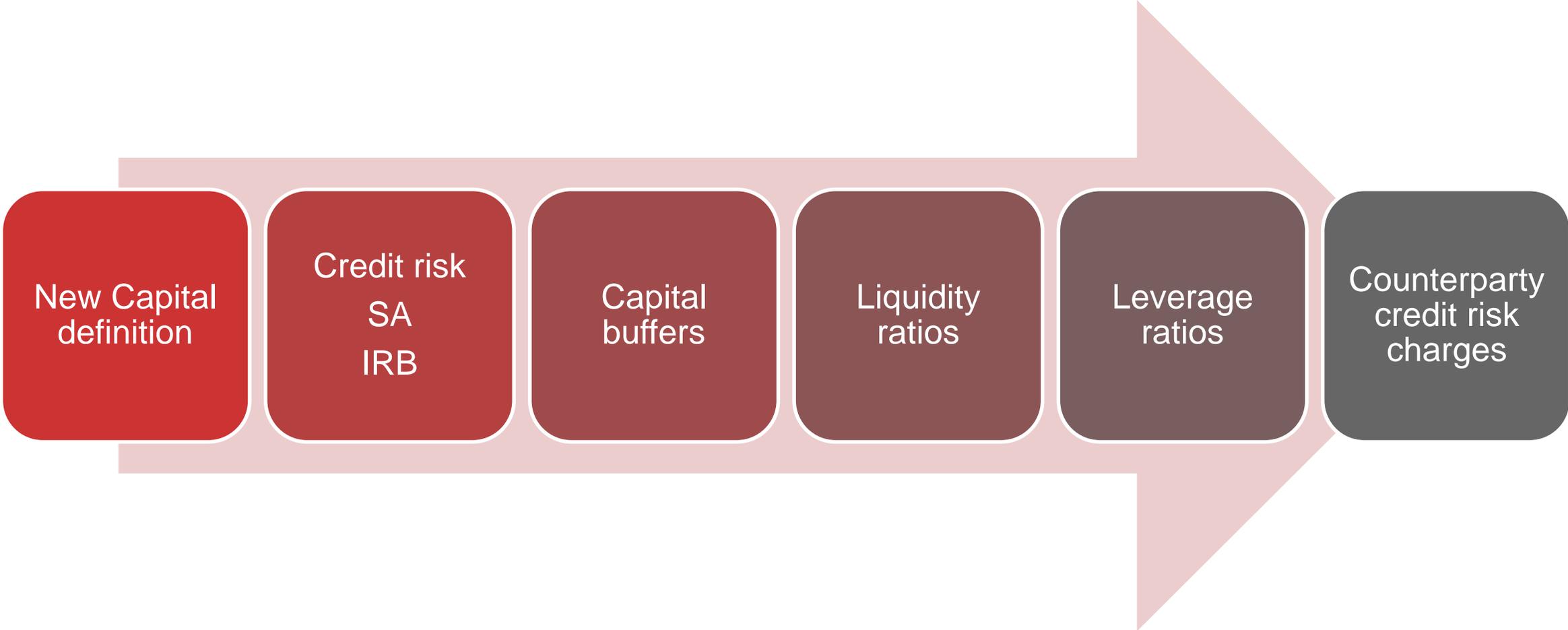
The Basel III measures primarily aim to:

- Improve the banking sector's ability to absorb shocks arising from financial and economic stress
- Improve risk management and governance
- Strengthen banks' transparency and disclosures

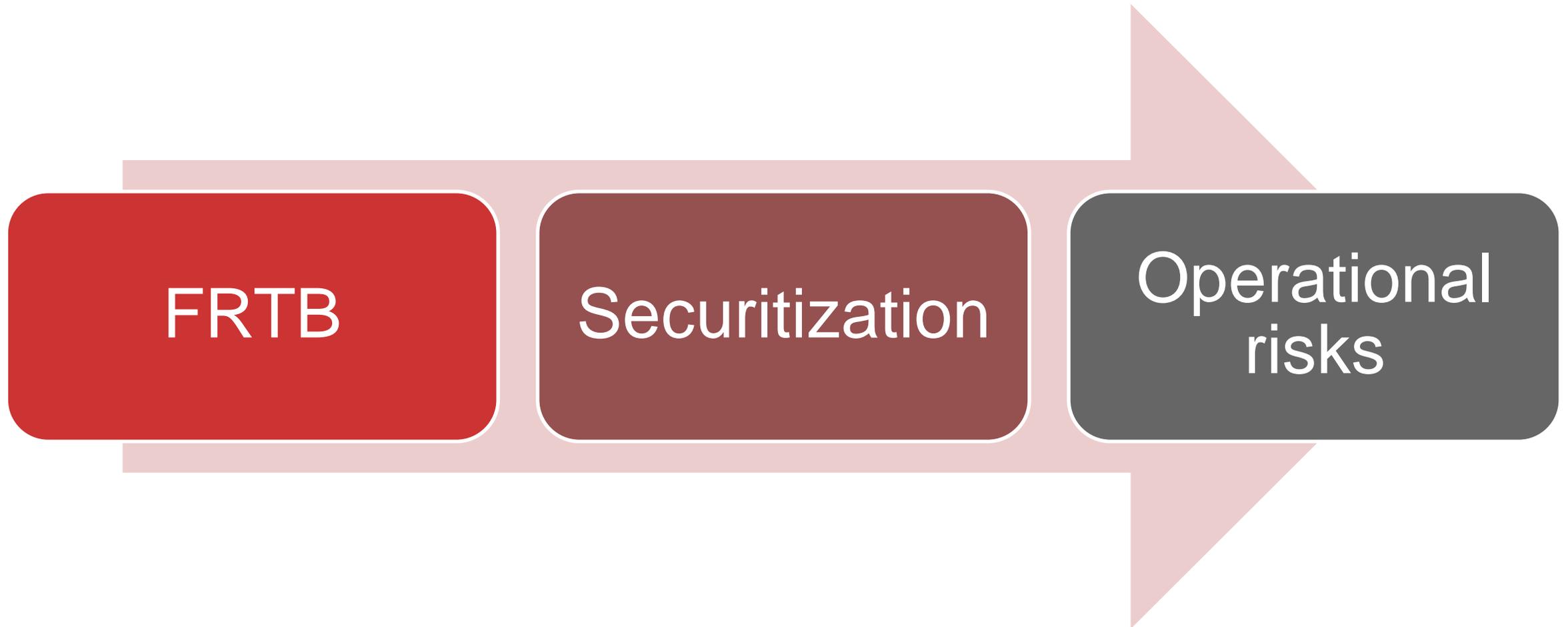
Basel II vs. Basel III



Basel III- main components

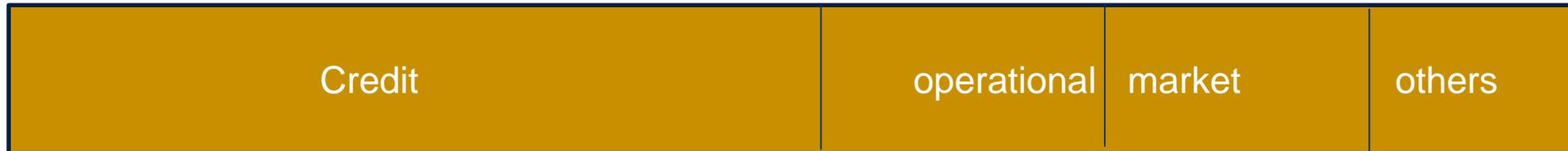


Basel III- main components



Risk-weighted assets

$$\text{Risk-based capital ratio} = \frac{\text{Regulatory capital}}{\text{Risk-weighted assets}}$$



Basel III – New Capital requirements

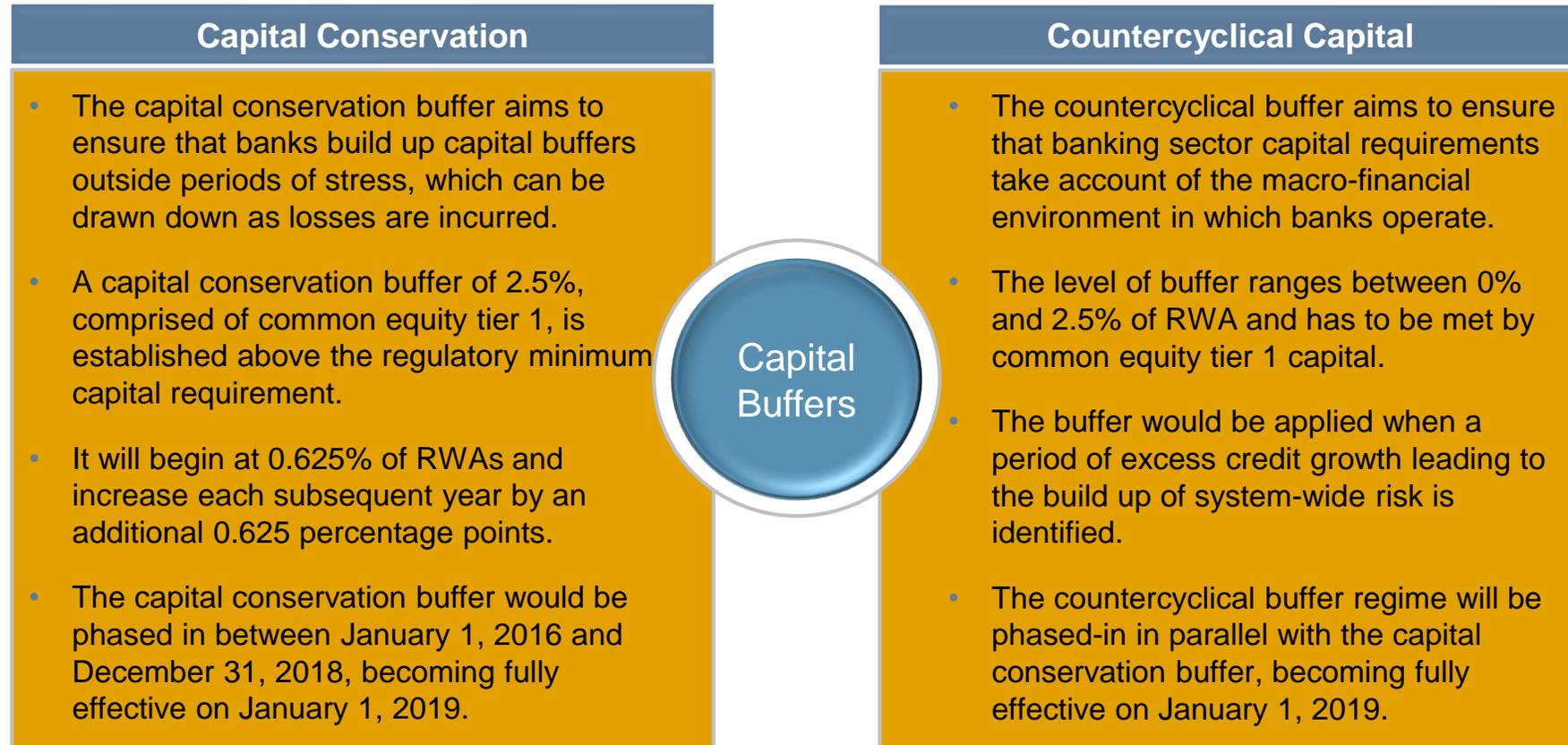
Components of regulatory capital:

- Tier 1 Capital (going-concern capital) – 6% of RWA
 - Common Equity Tier 1 – 4.5% of RWA
 - Additional Tier 1 – 1.5 % of RWA
- Tier 2 Capital (gone-concern capital) – 2% of RWA
 - Total 8% of RWA

Key elements of the revision include:

Higher Minimum Tier 1 Capital Requirement	<ul style="list-style-type: none"> • Tier 1 capital ratio: increases from 4% to 6% • The ratio will be set at 4.5% from January 1, 2013; 5.5% from January 1, 2014; and 6% from January 1, 2015 • Predominance of common equity will now reach 82.3% of tier 1 capital, inclusive of capital conservation buffer
Higher Minimum Tier 1 Common Equity Requirement	<ul style="list-style-type: none"> • Tier 1 common equity requirement: increase from 2% to 4.5% • The ratio will be set at 3.5% from January 1, 2013; 4% from January 1, 2014; and 4.5% from January 1 2015
Minimum Total Capital Ratio	<ul style="list-style-type: none"> • Remains at 8% • The addition of the capital conservation buffer increases the total amount of capital a bank must hold to 10.5% of risk-weighted assets, of which 8.5% must be tier 1 capital • Tier 2 capital instruments will be harmonized; tier 3 capital will be phased out

Basel III – Capital Buffers



Systematically Important Financial Institutions (SIFIs)

During the recent financial crisis, the failure or impairment of a number of large, global financial institutions impacted the financial system adversely. At its September 2011 meeting, the Basel Committee on Banking Supervision agreed to finalize the assessment methodology for global systemically important banks (G-SIBs).

The broad aims of the policies are to:

- Reduce the probability of failure of G-SIBs by increasing their going-concern loss absorbency
- Reduce the extent or impact of failure of G-SIBs by improving global recovery and resolution frameworks



Systematically Important Financial Institutions (SIFIs) (Cont.)

Key Policy Measures

1 Recovery Regimes

The measure adopted by the Basel Committee complements the measures adopted by the Financial Stability Board (FSB) to establish robust national resolution and recovery regimes and to improve cross-border harmonization and coordination.

2 Bucketing Approach

The Basel Committee will group G-SIBs into different categories of systemic importance based on the score produced by the indicator-based measurement approach, which takes into account their size, interconnectedness, substitutability, cross-jurisdictional activity and complexity. An initial group of 29 banks has been identified as G-SIBs, including two banks that have been added based on supervisory judgment applied by the home supervisor.

3 Additional Loss Absorbency Requirements

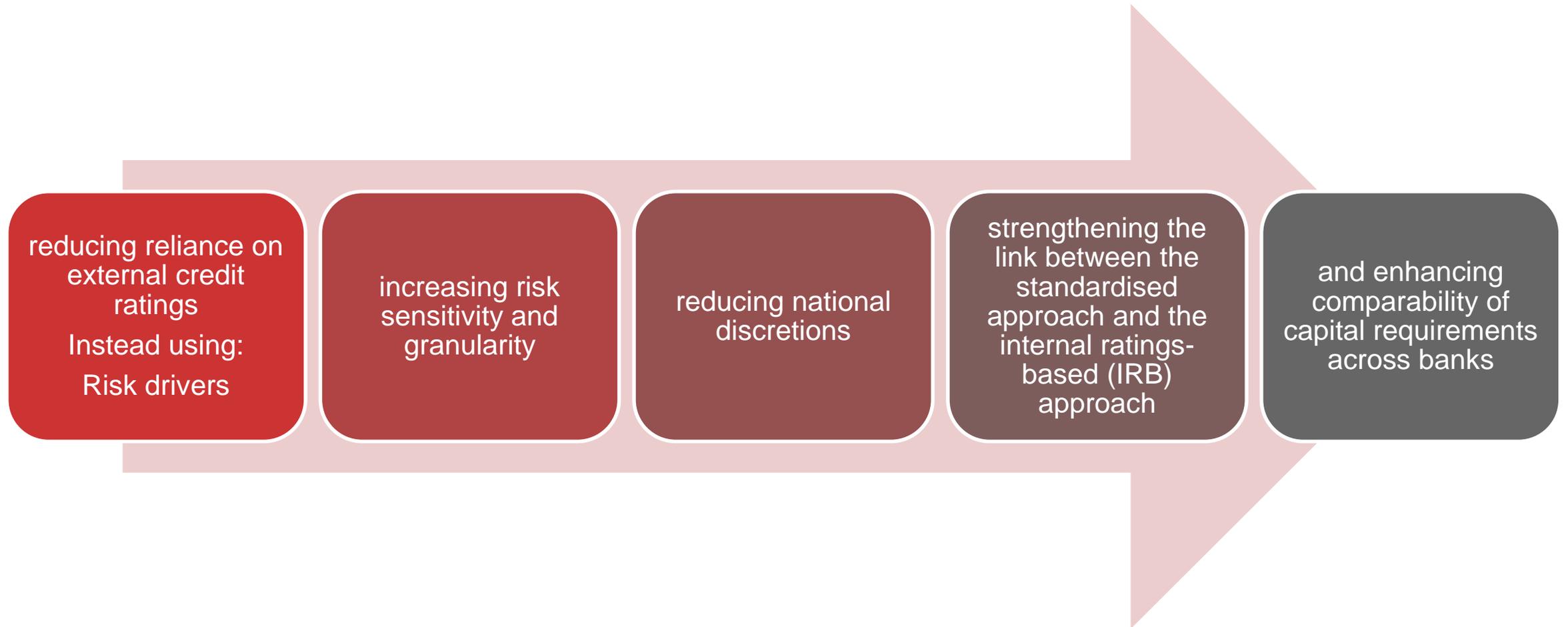
The aim of the additional loss absorbency requirement is to ensure that G-SIBs have a higher share of their balance sheets funded by instruments, which increase the resilience of the institution as a going concern. A capital surcharge of 1% of risk-weighted assets is applicable to banks in the lowest bucket (bucket 1) with the requirement rising to 1.5%, 2% and 2.5% in buckets 2, 3 and 4, respectively. A fifth bucket with a 3.5% requirement exists, but this is currently empty. The additional loss absorbency is to be met by common equity tier 1 only.

Credit Risk

One alternative is to measure risk in a standardized approach

The other alternative is based on a bank's use of its internal model (IRB) and is subject to the explicit approval of the bank's supervisor

Revised Credit Risk Standardized Approach (CRSA)



Revised Internal ratings-based (IRB) approach

Motivation

1. Address lack of robustness in modeling certain asset classes
2. Enhance comparability in banks' capital requirements

Main changes

- ❑ Removal of the option to use IRB approach for certain asset classes.
- ❑ Adoption of “input “floors for the internal estimates of PD and LGD to ensure a minimum level of conservatism of model parameters to asset classes where the advanced IRB remains available
- ❑ Provide greater specification of parameter estimation practices

Basel III – Liquidity Risk Measurement and Monitoring

The financial crisis highlighted the importance of liquidity to the proper functioning of the banking sector. Market conditions can result in liquidity evaporating quickly, and illiquidity can extend over large periods.

In 2008, the Basel Committee published *Principles for Sound Liquidity Risk Management and Supervision*. To complement these principles, **two minimum standards** for funding liquidity have been established, which further strengthen the liquidity framework. Both the standards and the objectives they are intended to achieve include:

1

Liquidity Coverage Ratio (LCR)

Promotes short-term resilience of a bank's liquidity risk profile by ensuring that it has sufficient high-quality liquid assets to survive a significant stress scenario lasting for one month.

$$\text{LCR} = \frac{\text{Stock of high quality liquid assets}}{\text{Total net liquidity outflows over the next 30 days}} \geq 100\%$$

- The framework also defines "high quality" liquid assets and their characteristics
- Total net liquidity outflows = Outflows – min (inflows, 75% of outflows)

2

Net Stable Funding Ratio (NSFR)

Promotes resilience over a longer time horizon by requiring institutions to fund their activities with more stable sources of funding on an ongoing basis.

$$\text{NSFR} = \frac{\text{Available amount of stable funding}}{\text{Required amount of stable funding}} > 100\%$$

- Stable funding is the portion of those types and amounts of equity and liability financing expected to be reliable sources of funds over a one-year time horizon under conditions of extended stress.

Basel III – Liquidity Risk Measurement and Monitoring (Cont.)

The framework outlines the following metrics to be used as consistent monitoring tools, which provide information to assist supervisors in assessing the liquidity risk of a bank.

Contractual Maturity Mismatch	Contractual cash and security inflows and outflows from all on- and off-balance sheet items, mapped to defined time bands based on their respective maturities
Concentration of Funding	Different ratios/figures to help identify sources of wholesale funding that are of such significance that their withdrawal could trigger liquidity problems
Available Unencumbered Assets	Available unencumbered assets that are marketable as collateral in secondary markets and/or eligible for central banks' standing facilities
LCR by Significant Currency	Foreign Currency LCR = Stock of high-quality liquid assets in each significant currency/Total net cash outflows over a 30-day time period in each significant currency
Market-related Monitoring Tools	Early warning indicators based on high-frequency market data with little or no time lag (e.g., market-wide information, information on the financial sector, bank-specific information).

Basel III – Leverage Ratio

The framework includes a simple, transparent, non-risk based leverage ratio to act as a supplementary measure to the risk based capital requirements. The leverage ratio is intended to prevent an excessive build up of leverage in the banking sector.

$$\text{Leverage Ratio} = \frac{\text{Tier 1 Capital}}{\text{Total Exposure}} \geq 3\%$$

A bank's total exposure measure is the sum of the following exposures: (a) on-balance sheet exposures; (b) derivative exposures; (c) securities financing transaction (SFT) exposures; and (d) offbalance sheet (OBS) items.

The committee will test the 3% requirement during the parallel run period from January 1, 2013 to January 1, 2017.

Any final adjustments to the definition and calibration of the leverage ratio would be carried out in the first half of 2017.

Basel III – Risk Coverage

The Basel framework includes measures to strengthen the risk coverage of the capital framework. It was recognized that the failure to capture major on- and off-balance sheet risks, as well as derivative related exposures contributed to the destabilization in the crisis.

1 Effective Expected Positive Exposure

For banks with permission to use the internal models method (IMM) to calculate counterparty credit risk (CCR) regulatory capital:

To determine the default risk capital charge for counterparty credit risk, banks must use the greater of the portfolio-level capital charge (not including the CVA charge) based on **effective EPE** using current market data and the portfolio-level capital charge based on effective EPE, using a stress calibration. The greater of effective EPE using current market data and the stress calibration should not be applied on a counterparty by counterparty basis, but on a **total portfolio level**.

2 Credit Valuation Adjustment

In addition to the default risk capital requirements for counterparty credit risk determined based on the standardized or internal ratings-based (IRB) approaches for credit risk, a bank must add a capital charge to cover the risk of mark-to-market losses on the expected counterparty risk (such losses being known as credit value adjustments, CVA, etc.) to OTC derivatives.

Basel III – Risk Coverage (Continued)

3 Asset Value Correlation

Under Basel III, the risk weights on exposures to financial institutions has been increased, relative to the non-financial corporate sector, in the IRB approach. A multiplier of 1.25 is introduced for all exposures to large regulated financial entities and to all unregulated financial entities.

4 Wrong-Way Risk

Basel III requires implementation of an explicit capital charge where specific wrong-way risk has been identified, in addition to the consideration of general wrong-way risk. Stress testing and scenario analyses must be designed to identify risk factors that are positively correlated with counterparty credit worthiness.

5 Enhanced CCR Management Requirements

The Basel III framework requires institutions to establish policies, processes and systems to ensure the identification, measurement, management, approval, and internal reporting of CCR, as well as have procedures to ensure that these are adhered to.

FRTB

Market Risk Capital Charge

Standard Approach
(SA)

Internal Model Approach
(IMA)

Basel 2.5

Standard Charge

VaR + SVaR

IRC + CRM

RNIV

FRTB

SBA

DRC-SA

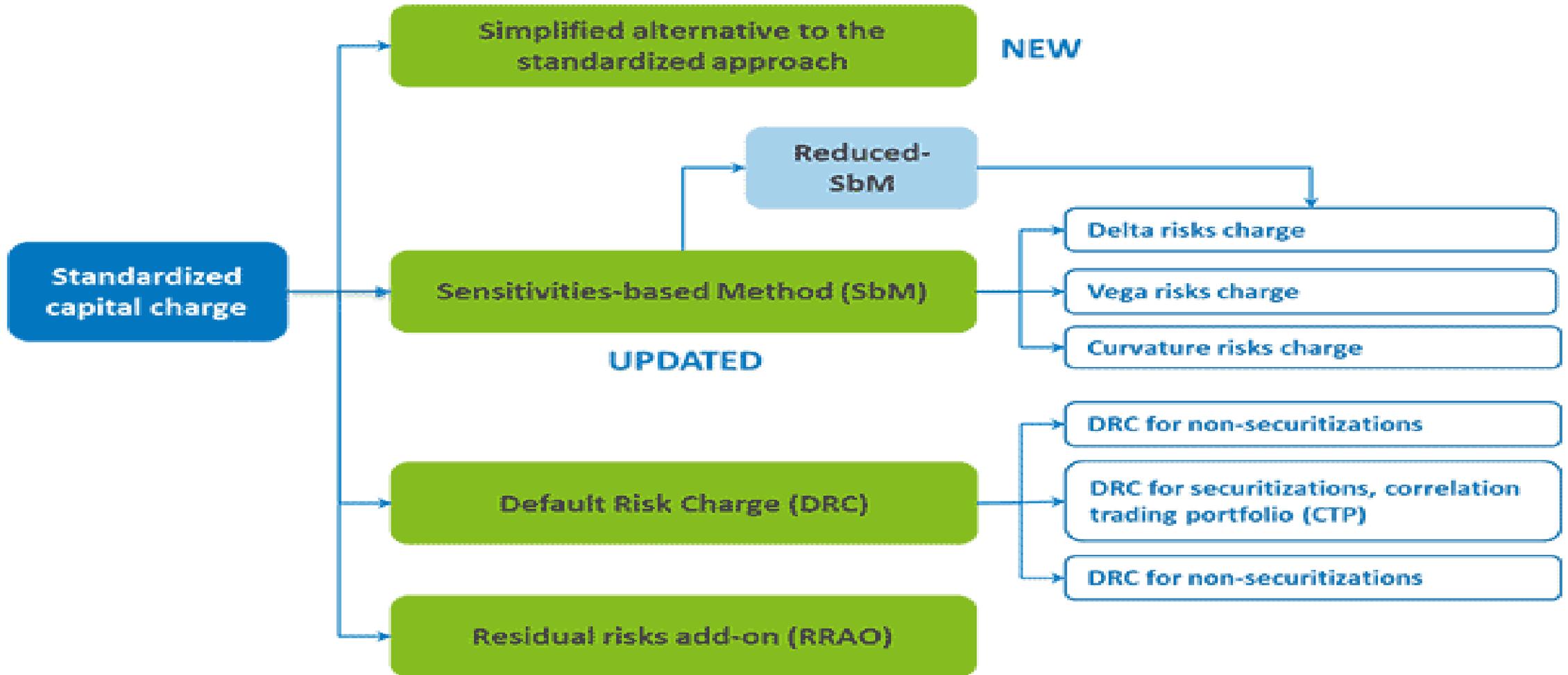
Residual
Risk

ES

DRC-IMA

NMRF

FRTB



FRTB

Regulatory boundary between trading and banking books

- New defined list of instruments to be included in each book
- Strict limit on the movement between books.
- Intent, lists, supervisory discretion

From VAR to ES

- The new risk measure according to FRTB is Expected Shortfall (ES)
- To capture tail risk

Revised SA

- Introduction of sensitivity-base methodology.
- Acting as a floor for the IM.

FRTB

Inclusion of market illiquidity

- Varying liquidity horizons.
- Replace the 10 days horizon of VAR

Revised approach to approvals for internal models

- The supervisors will review the use of internal models at desk level.
- More rigorous model approval process

FRTB

Risk class	<p>Definition of seven risk classes for the Sensitivities-based Method:</p> <table border="1" data-bbox="377 358 2425 501"><tr><td data-bbox="389 365 886 429">GIRR</td><td data-bbox="899 365 1396 429">Equity</td><td data-bbox="1409 365 1905 429">Commodity</td><td data-bbox="1918 365 2415 429">FX</td></tr><tr><td data-bbox="389 436 886 501">CSR (non-SEC)</td><td data-bbox="899 436 1396 501">CSR (SEC)</td><td data-bbox="1409 436 1905 501">CSR (CTP)</td><td data-bbox="1918 436 2415 501"></td></tr></table>	GIRR	Equity	Commodity	FX	CSR (non-SEC)	CSR (SEC)	CSR (CTP)	
GIRR	Equity	Commodity	FX						
CSR (non-SEC)	CSR (SEC)	CSR (CTP)							
Risk factor	<ul style="list-style-type: none">• Variables (e.g. a given vertex of a given interest rate curve or an equity price) within a pricing function decomposed from trading book instruments• Risk factors are mapped to a risk class								
Risk position	<ul style="list-style-type: none">• Main input that enters the risk charge computation• Delta and vega risks: sensitivity to a risk factor• Curvature risk: worst loss of two stress scenarios								
Bucket	<p>Set of risk positions which are grouped together by common characteristics</p>								
Risk charge	<ul style="list-style-type: none">• Amount of capital that a bank should hold as a consequence of the risks it takes• Computed as an aggregation of risk positions first at the bucket level, and then across buckets within a risk class defined for the Sensitivities-based Method								

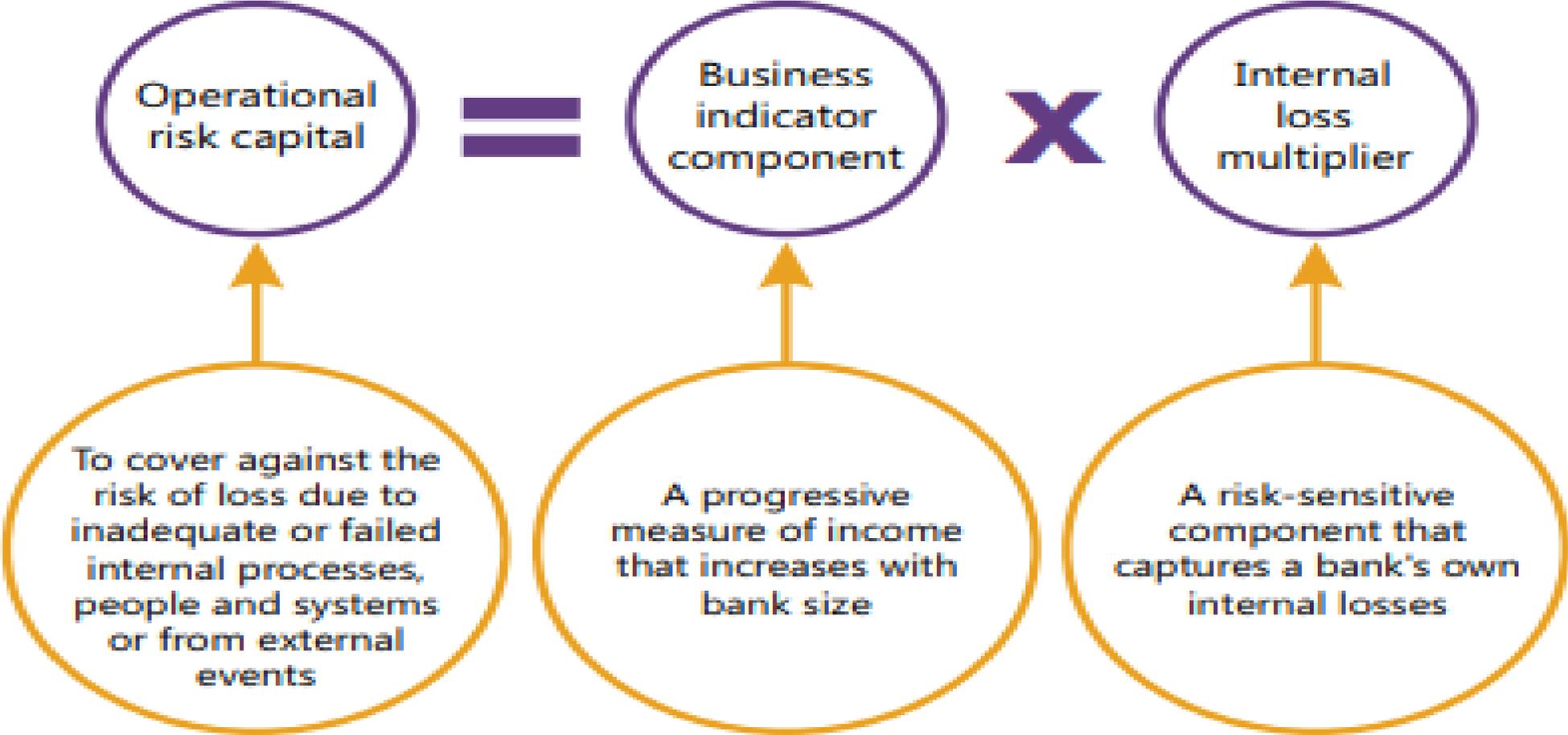
Operational Risk

single scandalized
approach

the framework is
more sensitive as
it combines a
refined measure
of gross income
with bank own
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.

Operational Risk



Market Discipline – Disclosure Requirements

The Basel framework sets out disclosure requirements to help improve the transparency of regulatory capital and improve market discipline. Key disclosure requirements include:

- 1 Full reconciliation of all regulatory elements back to the balance sheet in the audited financial statements
- 2 Description of the main features of capital instruments issued
- 3 Comprehensive explanation of how ratios involving components of regulatory capital are calculated
- 4 Full terms and conditions of all instruments included in regulatory capital
- 5 During transition phase, disclose the specific components of capital that are benefiting from the transitional provisions



Implications of Basel III

Key Change	Implication
Increased Quality and Quantity of Capital	<ul style="list-style-type: none"> Banks will have to pay more attention to their <u>balance sheet items</u>. Banks will be faced with <u>additional capital requirement</u>, and are likely to <u>raise significant capital</u> as common equity along with <u>retention of profits and reduced dividends</u>. There are expected to be <u>further add-ons</u> for pillar 2 risks, SIFIs and the counter-cyclical capital buffer so banks may target a total capital ratio of 13-15 percent.
Leverage Ratio	<ul style="list-style-type: none"> The introduction of the leverage ratio could lead to <u>reduced lending</u> and is expected to further motivate banks to <u>strengthen their capital position</u>. Banks may be required by the market and rating agencies to maintain a higher leverage ratio than required by the regulator.
Liquidity Coverage Ratio (LCR)	<ul style="list-style-type: none"> The LCR would contribute to reducing the risk of a bank run, resulting in higher stability of the financial sector. The introduction of the LCR will require banks <u>to hold significantly more liquid, low-yielding assets, which may negatively impact profitability</u>.
Net Stable Funding Ratio (NSFR)	<ul style="list-style-type: none"> NSFR motivates banks to increase the stability of their funding mix and <u>reduce reliance on short-term wholesale funding</u>. Since it may be difficult to increase the proportion of wholesale deposits with maturities greater than one year, it may result in <u>higher funding costs</u>. <u>Stronger banks</u> with a higher NSFR will be able to <u>influence marketing pricing of assets</u>.

Q&As





Thank You

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