FINANCIAL STABILITY INSTITUTE

BANK FOR INTERNATIONAL SETTLEMENTS

Supervision of Risks and Basel III

FSI-SEANZA Regional Seminar on Risk Management and Risk-focused Supervision
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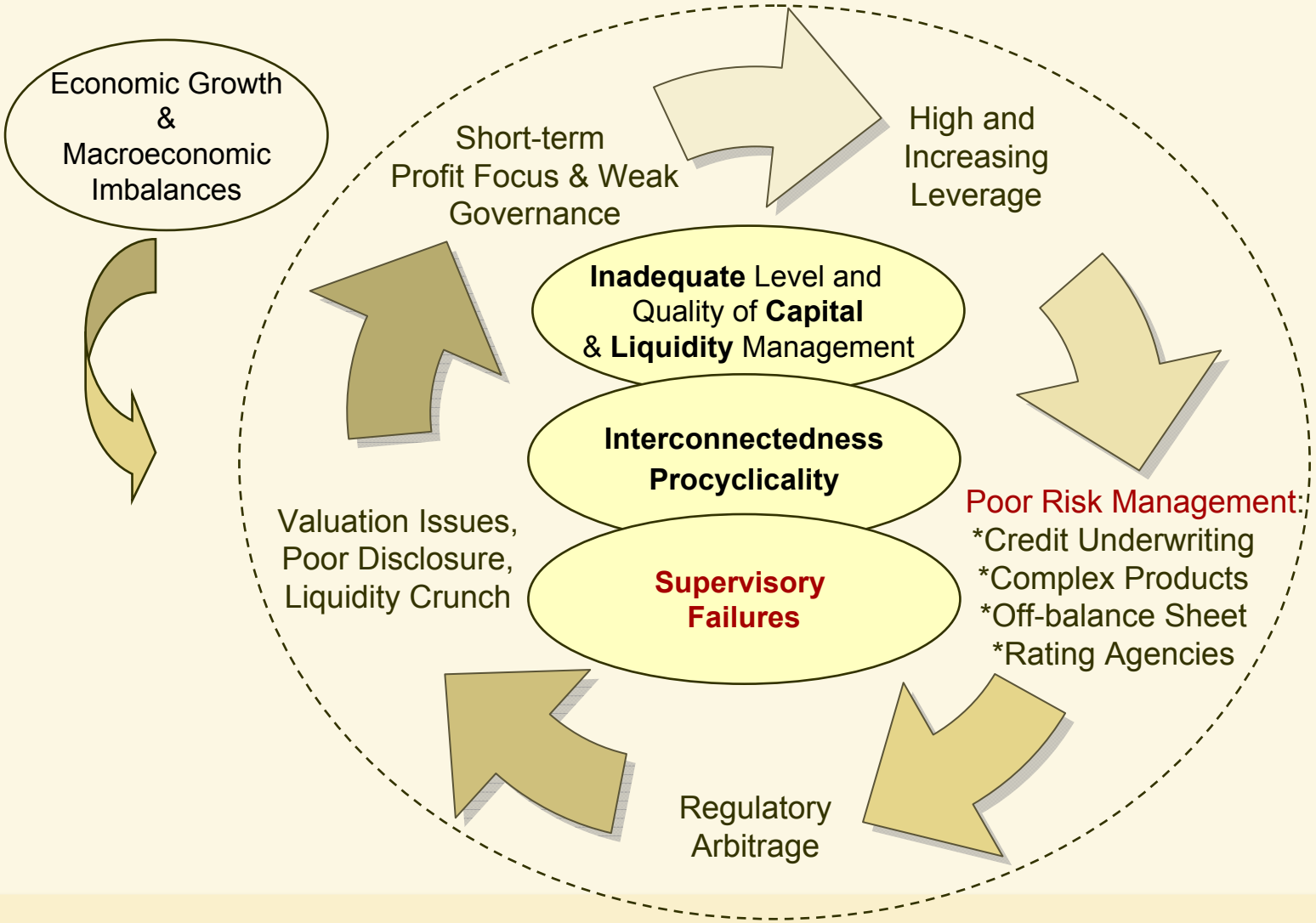
Outline

- The prelude: financial crisis
- The response: Basel III
  - Capital level and quality
  - Risk coverage
  - Leverage ratio
  - Enhancements to Pillars 2 and 3
  - Liquidity
  - Macroprudential elements

The Financial Crisis – Key Causes



The Evolution of the Financial Crisis

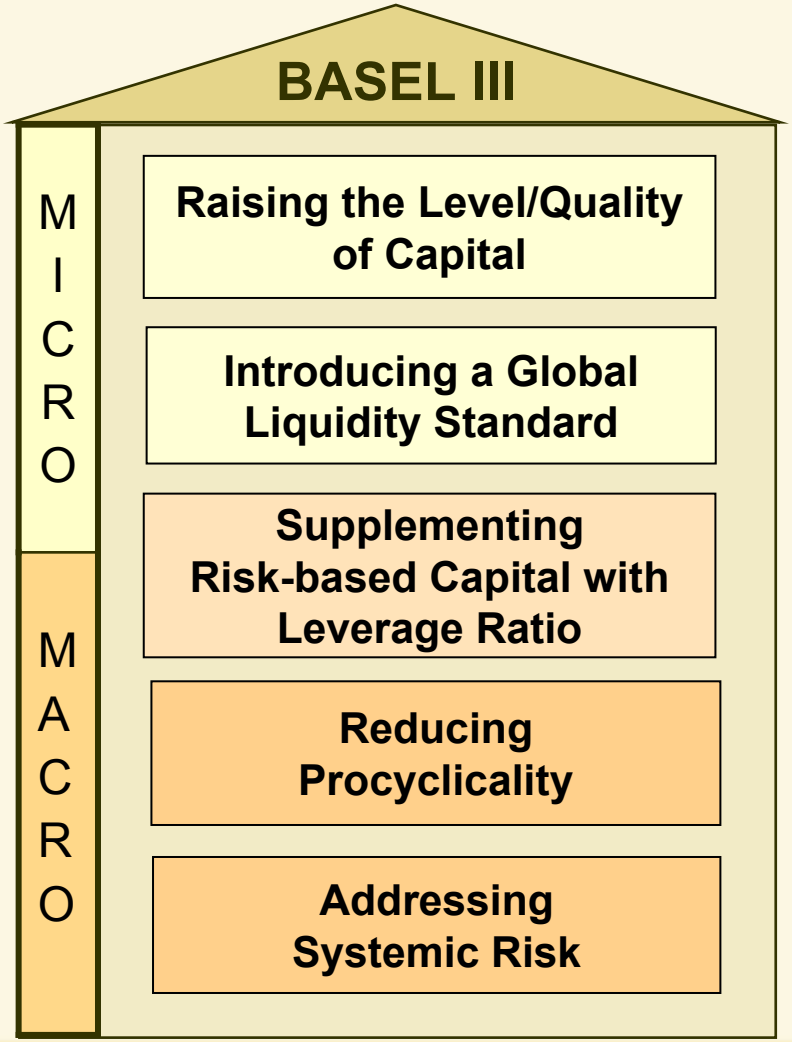
	Pre-crisis conditions (Before Q3 07)	Phase 1 (Q3 07–mid-Sep 08)	Phase 2 (mid-Sep 08–late 08)	Phase 3 (late 08–Q1 09)	Phase 4 (Q2 09–present)
Asia-Pacific	Sound macro fundamentals and banks; signs of financial exuberance	Inflation top policy concern; mild financial headwinds	Capital outflow; falling stock markets; trade collapse; much easier monetary policy	Sharp GDP contraction; large fiscal packages	Financial markets volatile; green shoots; economic and financial prospects improve but uncertain
World	Extended period of loose monetary policy, credit expansion and asset price booms	BNP funds suspended; aggressive policy easing; high commodity prices; liquidity support	Lehman Brothers bankruptcy; global finance freezes up; expanded liquidity support	Strong market interventions; synchronised G3 recession; fiscal stimulus	Steps to strengthen bank balance sheets; financial markets volatile; G3 real activity weak

?

Weaknesses Exposed by the Crisis

- Excess leverage
- Insufficient levels and quality of capital
  - Tangible common equity to RWAs as low as 1% for some global banks
- Insufficient liquidity and vulnerable structural liquidity profile
- Weak governance resulting in poor underwriting and risk management
- Lack of (no?) transparency
- Risk management / supervision overly focused at institutional level
- Systemic risks: procyclicality and interconnectedness
- Moral hazard and bad incentives

Regulatory Response to the Crisis – Basel III



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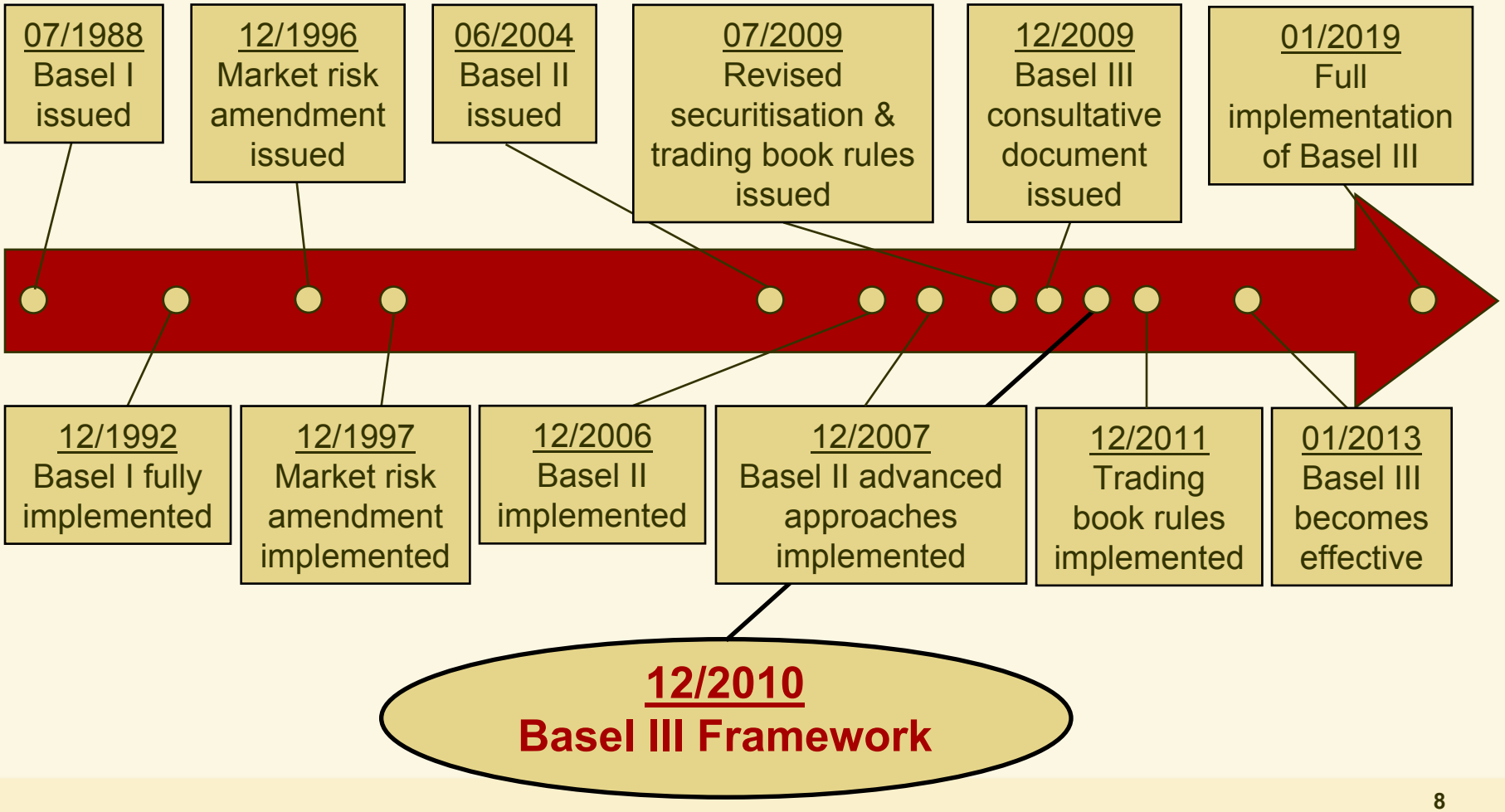
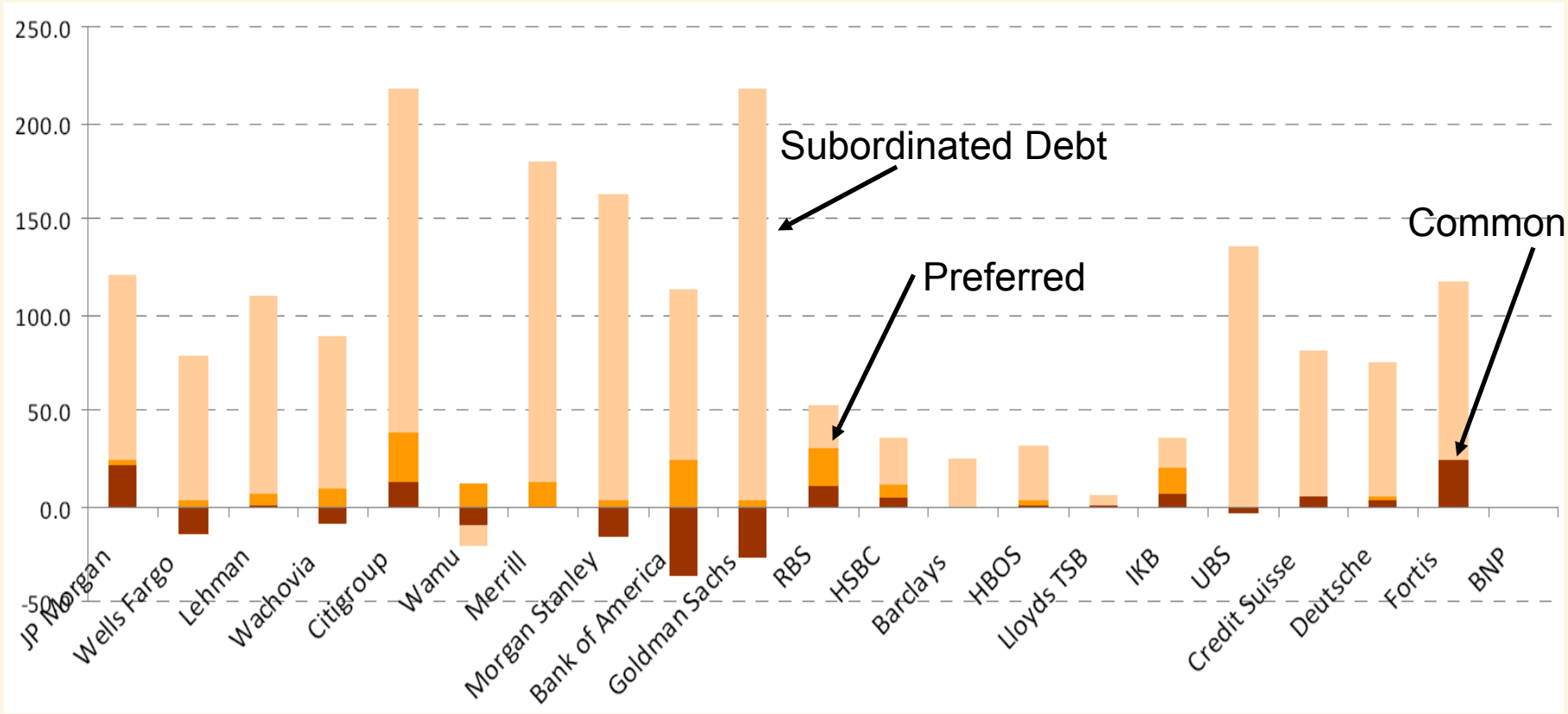
Basel III: 30 Years of Bank Capital Regulation



Capital Substitution (2000 to 2008 in $bn)

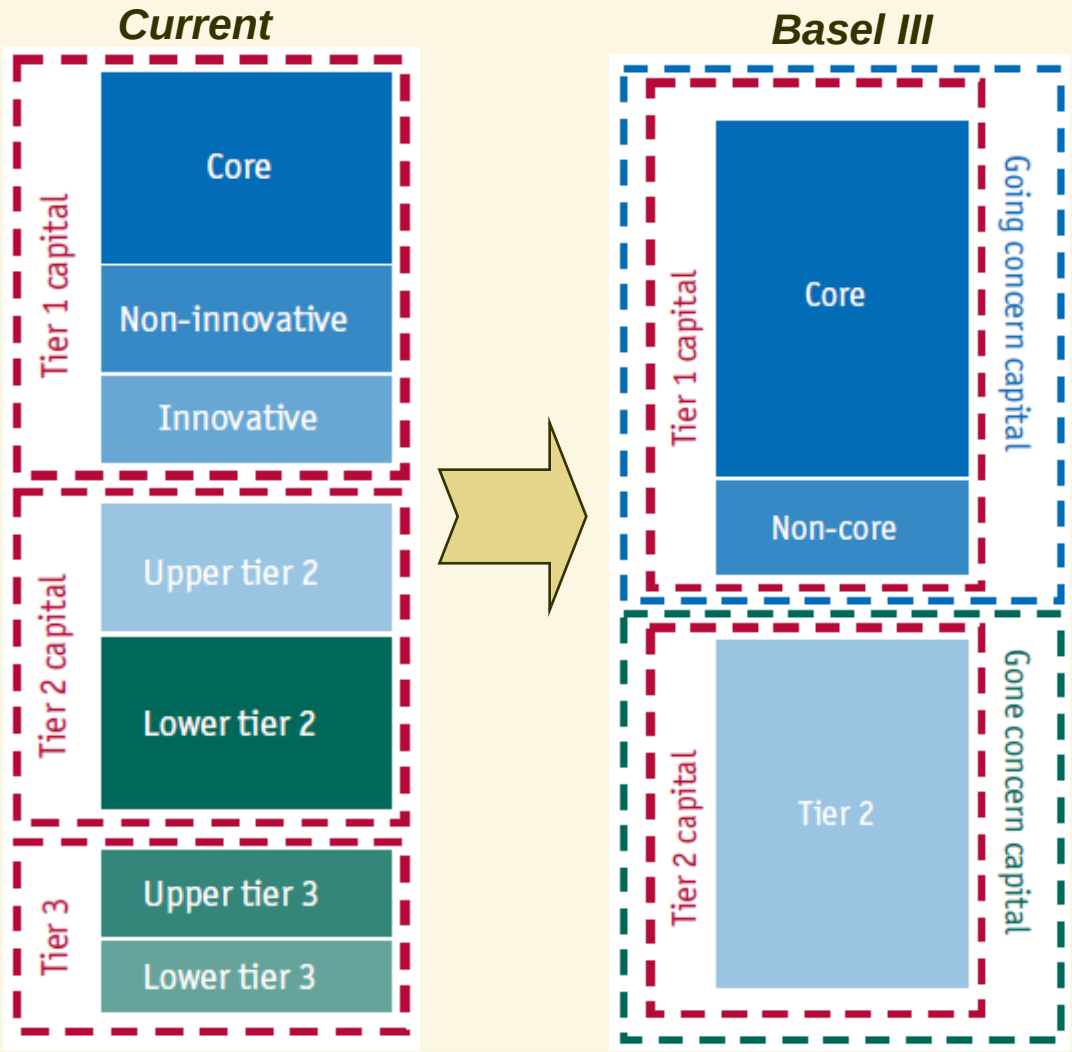


- $1.76 trillion capital raised by above banks
- $1.64 trillion (93%) of capital raised was in the form of debt
- Share buy-backs (rather than share issuance) of $24.1bn by above banks

Source-Viral V. Acharya, Irvind Gujral & Hyun Song Shin, Dividends and Bank Capital in the Financial Crisis of 2007-2009

$$\frac{\text{Capital}}{\text{RWA}} \geq \text{Minimum Ratio}$$

Raise the Quality of Regulatory Capital



Core Equity Tier 1
Common equity
Retained earnings
Portions of minority interests
Excluded
Preference shares
Silent partnerships
Portions of minority interests
Minus
Existing + Additional Deductions

Additional Tier 1 - ***Stricter criteria***
Some preference shares
Portions of minority interests
Excluded
Innovative hybrid instruments

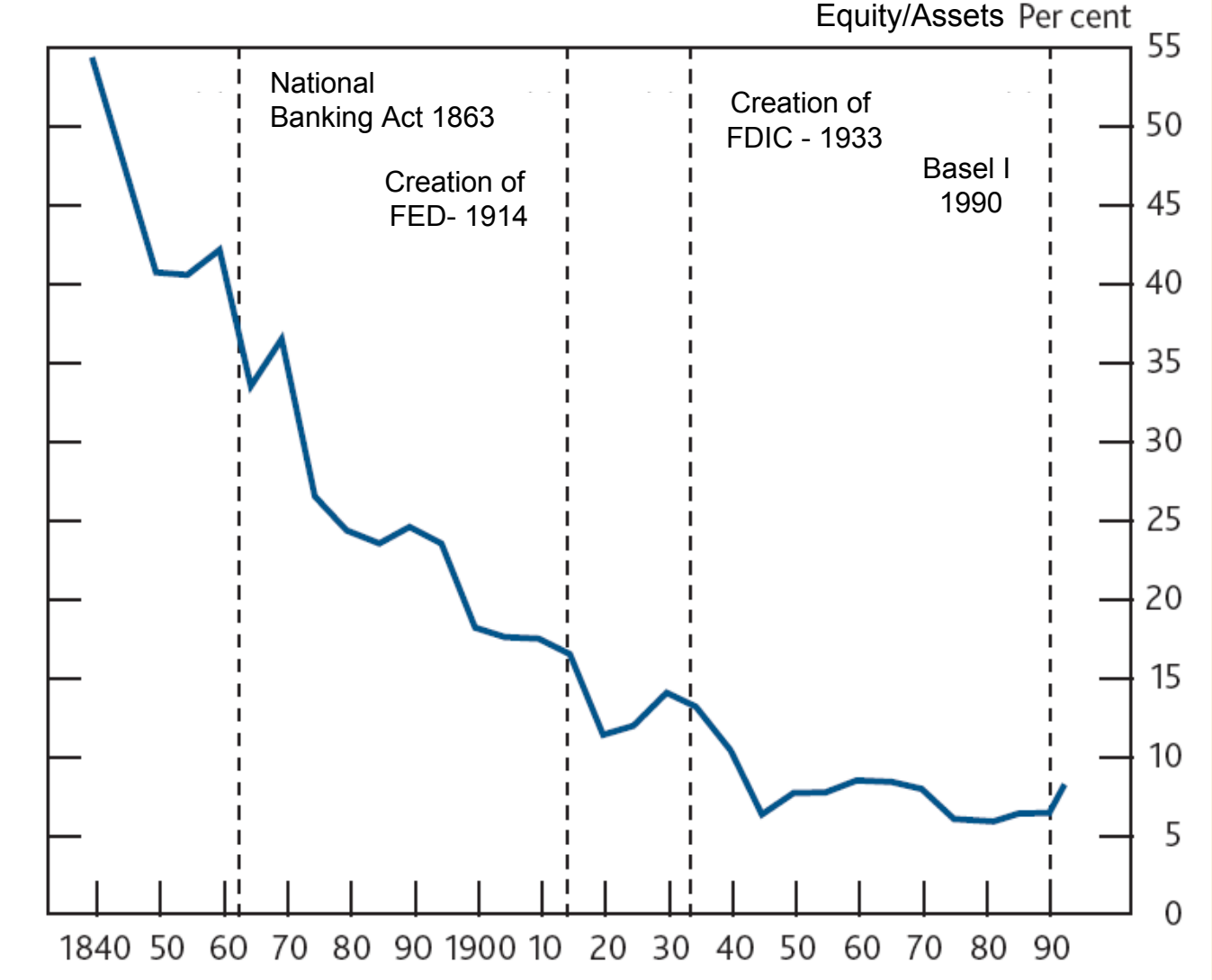
Tier 2 - ***Stricter criteria***

Tier 3 - Abolished

Disclosure + Full Reconciliation

Source: 2010 UK FSA Financial Risk Outlook

Long-run Capital Levels for US Commercial Banks (1840-1993)



Raise the Level of Regulatory Capital

$$\frac{\text{Capital}}{\text{RWA}} \geq \text{Minimum Ratio}$$

			Conservation Buffer		Countercyclical Buffer*
$\frac{\text{Common Equity Tier 1}}{\text{RWA}}$	$\geq 4.5\%$	+	2.5%	+	0% to 2.5%

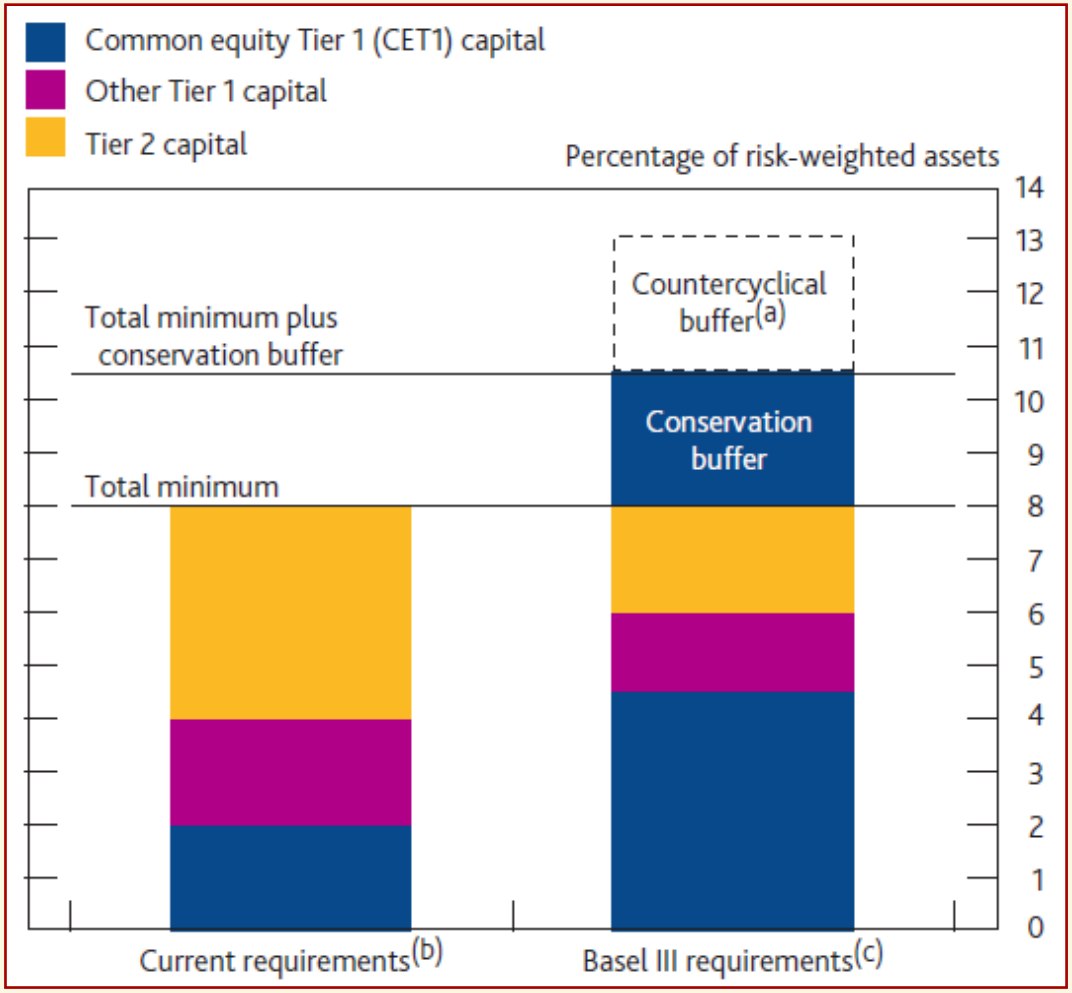
$$\frac{\text{Tier 1}}{\text{RWA}} \geq 6\%$$

$$\frac{\text{Tier 1 + Tier 2}}{\text{RWA}} \geq 8\%$$

*Common equity or other fully loss-absorbing capital

$$\frac{\text{Capital}}{\text{RWA}} \geq \text{Minimum Ratio}$$

Raise the Level of Regulatory Capital



2010 BoE, Financial Stability Report (a) Common equity or other fully loss-absorbing capital; (b) There is no explicit requirement, it was generally understood that CET1 should form the predominant part of Tier 1; (c) Definition of Capital will be strengthened through new deductions from CET1

Strengthen Risk Coverage

$$\frac{\text{Capital}}{\text{RWA}} \geq \text{Minimum Ratio}$$

Trading Book

- New capital charges to capture credit risk associated with trading activities
- Supplement current VaR-based trading book framework with an incremental risk capital charge (default risk + migration risk)
- Introduction of a stressed VaR requirement

Securitisation Framework

- Introduction of separate (higher) risk weights for resecuritisation exposures (eg CDOs of ABS)
- More conservative treatment of liquidity facilities (LF)
- Elimination of favourable treatment afforded to general market disruption LF

Trading book and securitisation enhancements to be implemented by end-2011

Strengthen Risk Coverage

$$\frac{\text{Capital}}{\text{RWA}} \geq \text{Minimum Ratio}$$

Enhanced Capital Requirements for Counterparty Credit Risk (CCR)

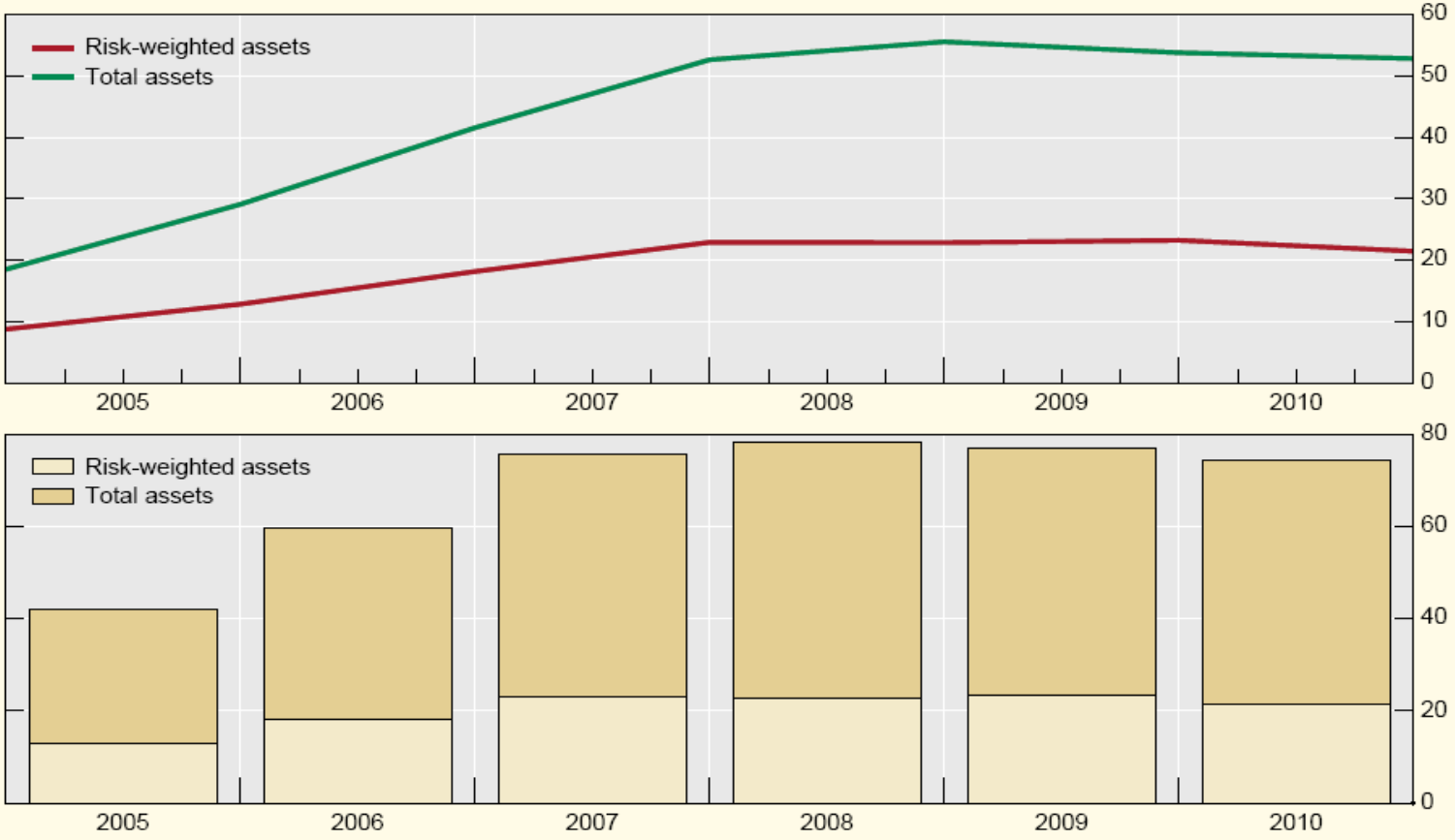
- CCR: deterioration in creditworthiness of a counterparty to derivatives, repos & securities financing transactions

- Basel II CCR Capital Charge ⇒ Default Risk
- Basel III CCR Capital Charge ⇒ Default Risk **+ Credit Valuation Adjustment (CVA) risk**
  - Incorporate a capital add-on for mark-to-market losses related to credit valuation adjustments as a proxy for CVA risk
  - Calculate EAD (for counterparties) using 3 years of data, including 1-year stressed period
  - Apply longer margining periods and strict collateral standards
- Collateral and mark-to-market (derivatives) exposures to qualifying Central Counterparties subject to 2 % risk weight

Motivation for a Leverage Ratio

Risk-weighted and total assets for top 50 banks[1]

In trillions of US dollars



[1] Top 50 banks for each year ranked by reported risk-weighted assets. Risk-weighted assets are shown in the left bar and total assets are shown in the bar on the right. Sample only includes banks which have reported Q2 data.

Sources: Bankscope; BIS calculations.

Introduce a Leverage Ratio

$$\frac{\text{Tier 1 Capital}}{\text{Total Assets + OBS}} \geq 3\%$$

- Objectives:
  - Supplement Basel II with a simple, non-risk-based "back-stop" measure based on gross exposure
  - Constrain build up of leverage during boom periods and help to avoid destabilising deleveraging processes
  - Introduce safeguards against model risk, measurement error
- Minimum ratio: 3 % (to be assessed during parallel run period)
- Capital measure: Tier 1 (Committee to assess use of Common Equity Tier 1 and Total Capital)
- Items deducted from capital also to be deducted from the exposure measure

Introduce a Leverage Ratio

$$\frac{\text{Tier 1 Capital}}{\text{Total Assets + OBS}} \geq 3\%$$

- Exposure measure
  - Follow accounting balance sheet as much as possible
  - On-balance sheet assets
    - Non-derivative exposures = net of specific provisions and valuation adjustments
    - Physical and financial collateral not allowed to reduce exposure
    - No netting of loans and deposits
  - Off-balance sheet items
    - Uniform 100% credit conversion factor (CCF)
    - However, commitments unconditionally cancellable by the bank without prior notice – 10% CCF
  - Derivatives, repos and securities finance
    - Accounting measure of exposure (derivatives – add-on for potential future exposure using Current Exposure Method)
    - Regulatory netting rules per Basel II

Enhanced Supervision and Disclosure

PILLAR 2

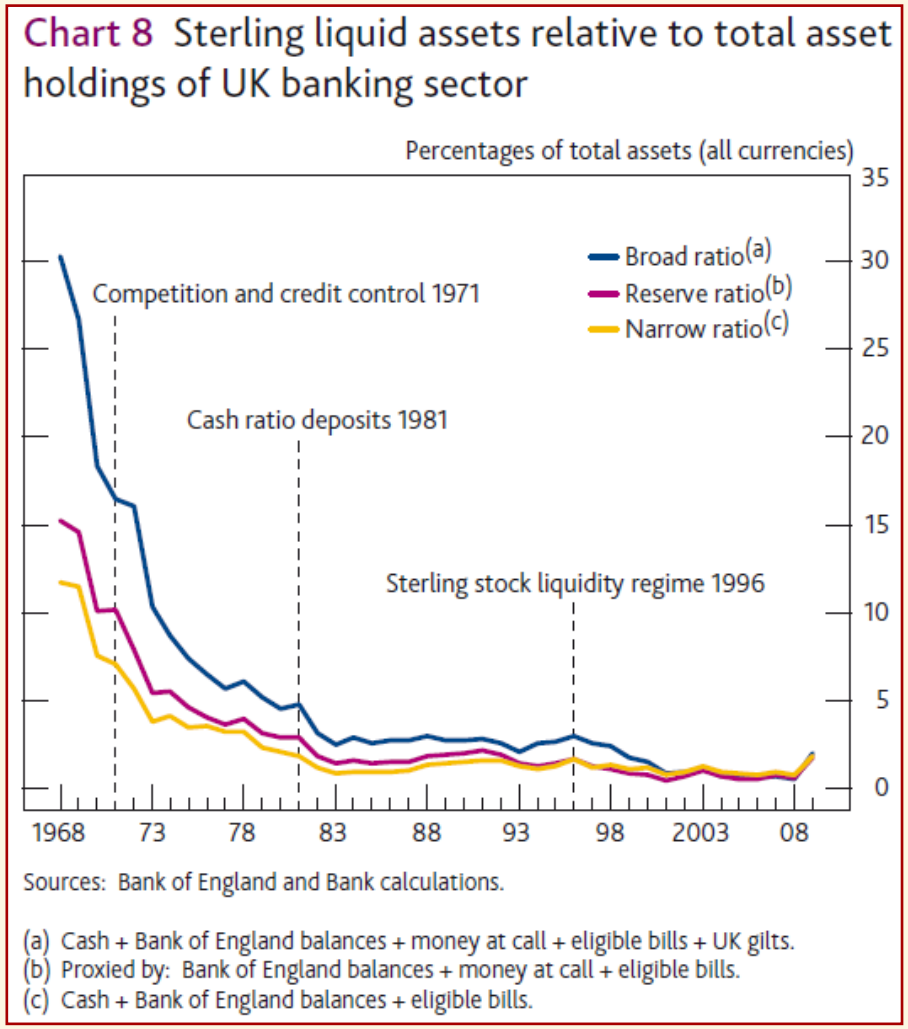
Effective when introduced – July 2009

- Strengthen firm-wide governance and risk management
- Improve capture of off-balance sheet exposures, particularly securitisations
- Identify sources of reputational risk and include in stress testing
- More effective management of risk concentrations
- Better consideration of the relationship between liquidity and capital
- Additional guidance re sound valuation practices, stress testing, liquidity risk management, corporate governance and compensation

PILLAR 3

- Introduce concept of banks' responsibility towards market participants that goes beyond Pillar 3 disclosure requirements
- Specific revisions to expand disclosures related to securitisations (particularly resecuritisations) and off-balance sheet vehicles
- To be implemented by end-2011

Enhance Liquidity Risk Management & Measurement



Bank of England, Financial Stability Report, Jun 2009

Liquidity Framework – Key Components

- Liquidity Coverage Ratio (LCR)
  - Short-term (30-day) liquidity requirement

$$\frac{\text{Stock of high quality liquid assets}}{\text{Net cash outflows over a 30-day time period}} \geq 100\%$$

- Net Stable Funding Ratio (NSFR)
  - Structural liquidity requirement

$$\frac{\text{Available amount of stable funding (ie, sources)}}{\text{Required amount of stable funding (ie, uses)}} > 100\%$$

Macroprudential Approach to Regulation and Supervision

	Microprudential	Macroprudential
Focus	Individual institutions' resilience	Financial system-wide resilience
Key objective	Depositor protection	Avoid output (GDP) costs linked to financial instability
Characterisation of risk	Dependent on exposures of individual financial institutions	Dependent on collective behaviour of financial firms ⇒ feedback effects taken into account
Calibration of prudential tools	In terms of individual institutions' risks	In terms of system-wide risk
Application	At the level of individual firms	At the level of individual firms

*As defined, the two perspectives are intentionally stylised in order to highlight two orientations that coexist in current prudential frameworks
**Adapted from Borio, C (2003): "Towards a macroprudential framework for financial supervision and regulation?", CESifo Economic Studies, vol 49, no 2/2003, pp 181–216. Also available as BIS Working Paper, no 128, Basel, February.

Macroprudential Approach to Regulation and Supervision

- **Time dimension**
  - How risk in the financial system as a whole *evolves over time* and can be amplified by interactions with the real economy
  - *Objective*: Mitigate or dampen procyclicality
  - *Focus*: Various forms of buffer that act countercyclically, thereby also possible restraining the buildup of system-wide risk
- **Cross-sectional dimension**
  - How risk is distributed in financial system as a whole *at a point in time*
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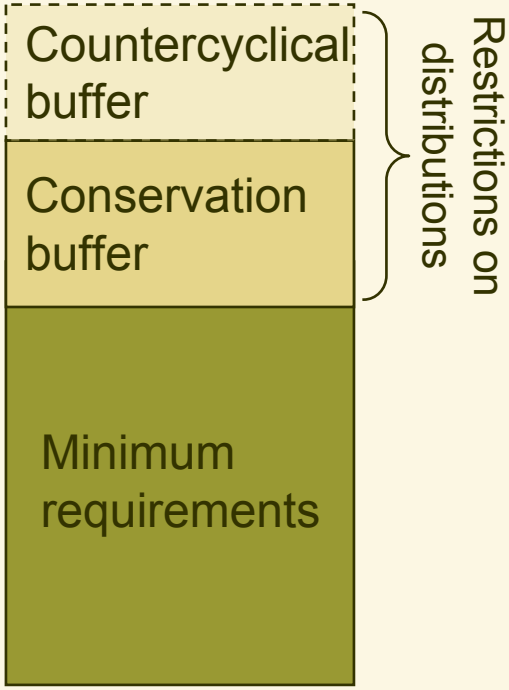
Macroprudential Approach: Capital Conservation and Countercyclical Buffers

- Goal = build buffers in good times that can be used in stress
- Capital conservation buffer
  - Constraints on distributions to conserve capital in bad times and rebuild it in good times
  - Addresses collective action and signaling problems
- Countercyclical buffer
  - Protects banking sector against periods of excess credit growth
  - Buffer can be released in a downturn

The Functioning of the Capital Buffers

The Functioning of the Capital Buffers

Individual bank minimum capital conservation standards	
Common Equity Tier 1 (including other fully loss absorbing capital)	Minimum Capital Conservation Ratios (expressed as a percentage of earnings)
Within first quartile of buffer	100%
Within second quartile of buffer	80%
Within Third quartile of buffer	60%
Within Fourth quartile of buffer	40%
Above top of buffer	0%



The Functioning of the Capital Buffers

- Establishes a fixed range above CET 1
- When a bank's CET 1 falls into this range, the bank is subject to restrictions on discretionary distributions of earnings (eg dividends)

Capital Conservation Buffer

7%

4.5%

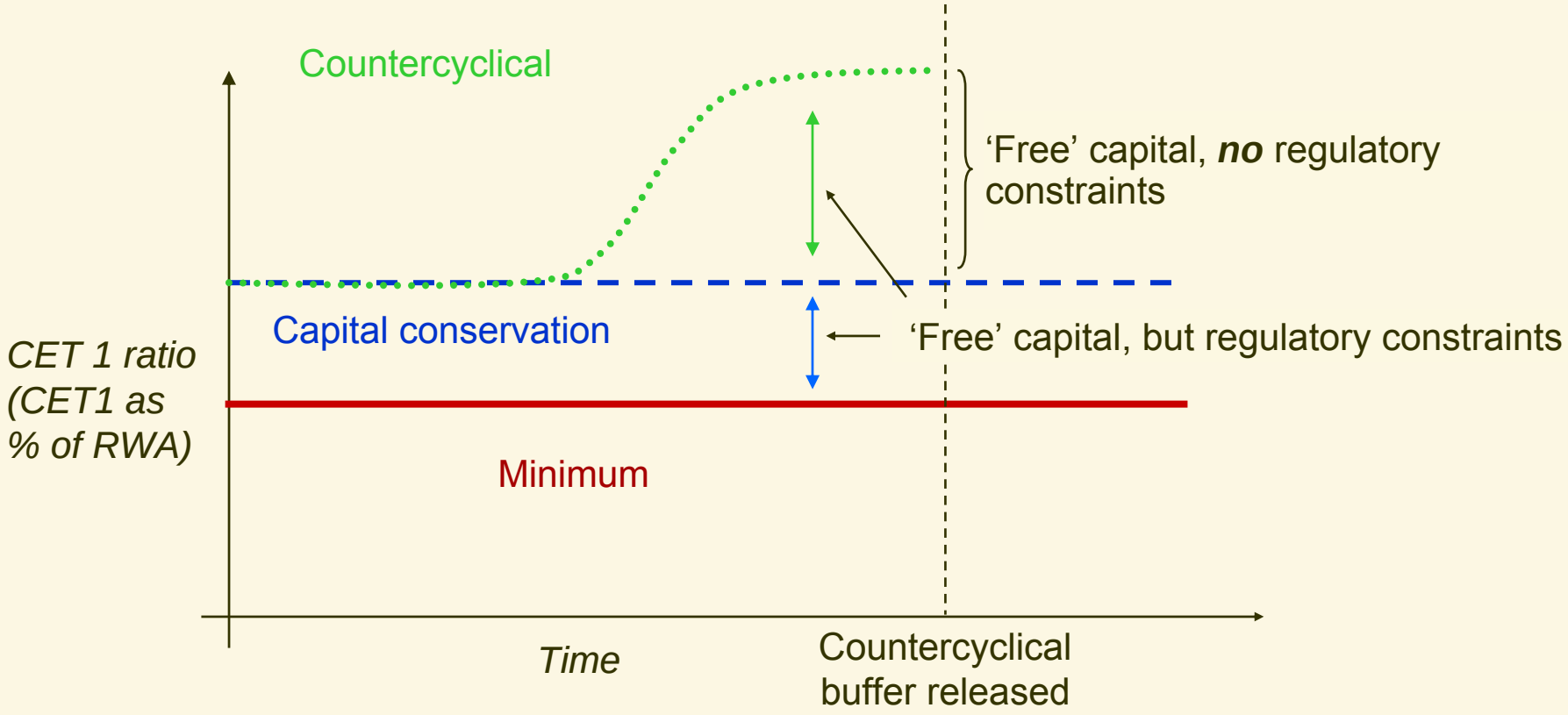
$$\frac{\text{Common Equity Tier 1} + 2.5\ \%}{\text{RWA}} \geq 7\%$$

Common Equity Tier 1 Ratio	Minimum Capital Conservation Ratios (expressed as a percentage of earnings)
4.5% - 5.125%	100%
>5.125% - 5.75%	80%
>5.75% - 6.375%	60%
>6.375% - 7.0%	40%
> 7.0%	0%

CET 1 ratio

Time

Relationship Between the Capital Buffers



The countercyclical capital buffer works by extending size of capital conservation buffer during periods of excess credit growth

Capital Conservation Under the Countercyclical Buffer

Individual bank minimum capital conservation standards, when a bank is subject to a 2.5% countercyclical requirement	
Common Equity Tier 1 Ratio (including other fully loss absorbing capital)	Minimum Capital Conservation Ratios (expressed as a percentage of earnings)
4.5% - 5.75%	100%
>5.75% - 7.0%	80%
>7.0% - 8.25%	60%
>8.25% - 9.5%	40%
> 9.5%	0%

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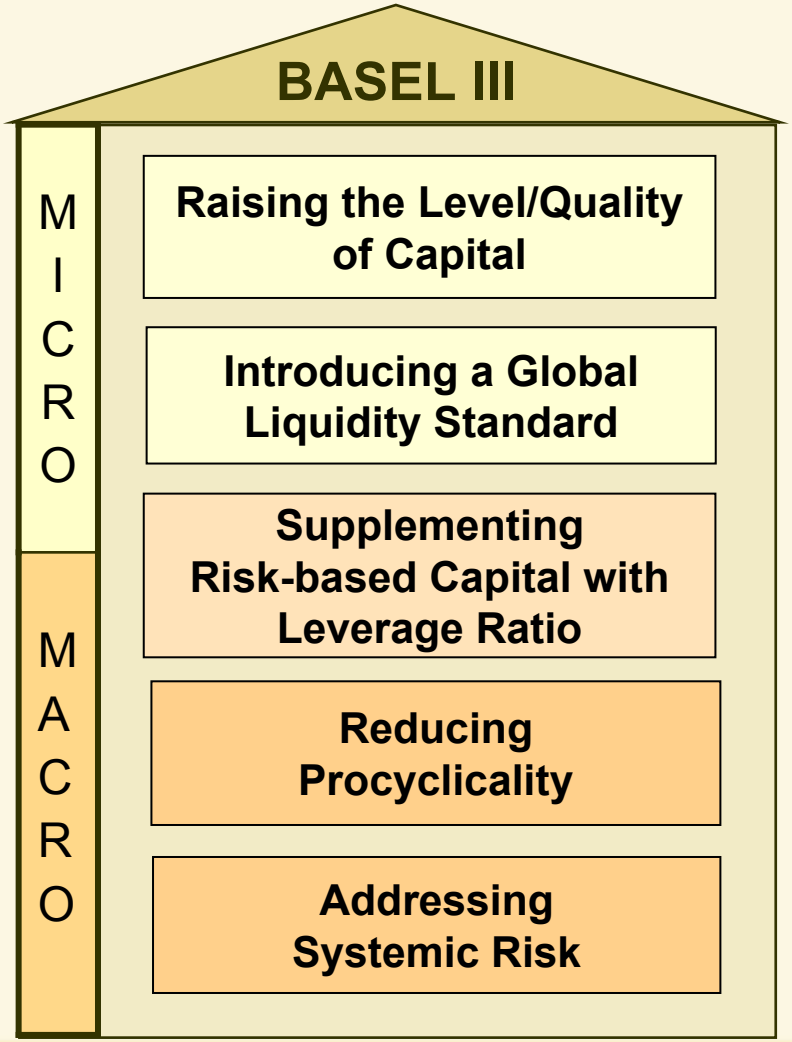
Macroprudential Approach: Systemic Risk and Interconnectedness – G-SIBs

- Framework released Nov 2011 by the BCBS (in coordination with FSB) to address global systemically important banks (G-SIBs)
  - Banks whose distress or disorderly failure would cause significant dislocations in the global financial system and adverse economic consequences across a range of countries
- Indicator-based approach to identify G-SIBs with five broad categories (size, interconnectedness, lack of substitutability, global (cross-jurisdictional) activity and complexity)
- Additional loss absorbing requirements: capital surcharge from 1% to 2.5% of CET1 (plus additional empty bucket at 3.5%)
- Transition period from 2016 to 2018 (like Basel III)

Measures to Reduce the Systemic Contribution of SIBs

Objectives	Measures
• Reduce the *probability* of SIB failure • Reduce the *impact* of SIB failure • Reduce *public sector costs* • Increase *level playing field* / reduce too-big-to-fail advantage	• Capital surcharges • More intense supervision • SIB resolution framework • Cross-border resolution framework • Living wills • Contingent capital & bail-in • Enhanced concentration limits --- • Liquidity surcharges • Subsidiarisation • Limits or restrictions on size/scope of activities

Regulatory Response to the Crisis – Basel III



Basel III Implementation – Timeline

	2013	2014	2015	2016	2017	2018	2019
CET1 requirement	Gradual implementation 3.5%	Gradual implementation 4%	Final implementation 4,5%				
Tier 1 capital	Gradual implementation 4.5%	Gradual implementation 5.5%	Final implementation 6,0%				
Total capital requirement	Final implementation 8,0%						
Capital conservation buffer				Gradual implementation 0.625 %	Gradual implementation 1.25%	Gradual implementation 1.875%	Final implementation 2.5%
Phasing in of new deductions from capital base		Gradual implementation 20%	Gradual implementation 40%	Gradual implementation 60%	Gradual mplementation 80%	Final implementation 100%	
Leverage ratio	Observation	Observation	Publication			Final implementation	
Liquidity coverage ratio	Observation	Observation	Final implementation				
Net stable funding ratio	Observation	Observation	Observation	Observation	Observation	Final implementation	

Basel III Going Forward

- Timely and consistent implementation of Basel III
  - BCBS member countries to translate Basel III rules into national legislation and regulations by beginning of 2013
  - Basel III requirements will take effect from beginning of 2013 and will be progressively phased in until 2018
  - Beginning of 2019 – Basel III framework should be in place
- During the phase in process, BCBS to monitor implementation to detect and correct possible unintended consequences
- BCBS and FSB to actively oversee effective, consistent implementation of the regulatory reform
  - BCBS: Standards Implementation Group (SIG) reviews
  - FSB: peer national and thematic reviews

BCBS – Other Ongoing and Future Work

- Fundamental review of the trading book
- Use and impact of external ratings in the securitisation capital framework
- Strengthening cross-border bank resolution
- Review and update of *Core Principles for Effective Banking Supervision* to reflect lessons of the crisis
- Review of integrity of risk weighting approaches
- Perimeter of regulation (shadow banking)
  - Much of the pre-crisis shadow banking sector was created by the banks (eg SIVs, CDOs, liquidity lines to OBS activities) – reduced incentives under Basel III
  - Strong consolidated banking regulation and supervision to directly or indirectly reduce risks of shadow banking
  - Need appropriate oversight of bank-like functions in shadow banking sector

Concluding Remarks

- The philosophy of Basel III is that we must make banks more resilient to mitigate the types of economic shocks we have just seen
- Basel III introduces both micro- and macroprudential reforms
  - Enhanced risk management and supervision
  - Better shock absorbers – because supervisors and banks are both incapable of predicting the next crisis with sufficient degree of confidence
- Implementation of the standards must be globally consistent and rigorous