FINANCIAL STABILITY INSTITUTE

BANK FOR INTERNATIONAL SETTLEMENTS

Bank Capital – Before, During and After the Financial Crisis

FSI-SEACEN Regional Seminar on Basel III and Capital Management by Banks

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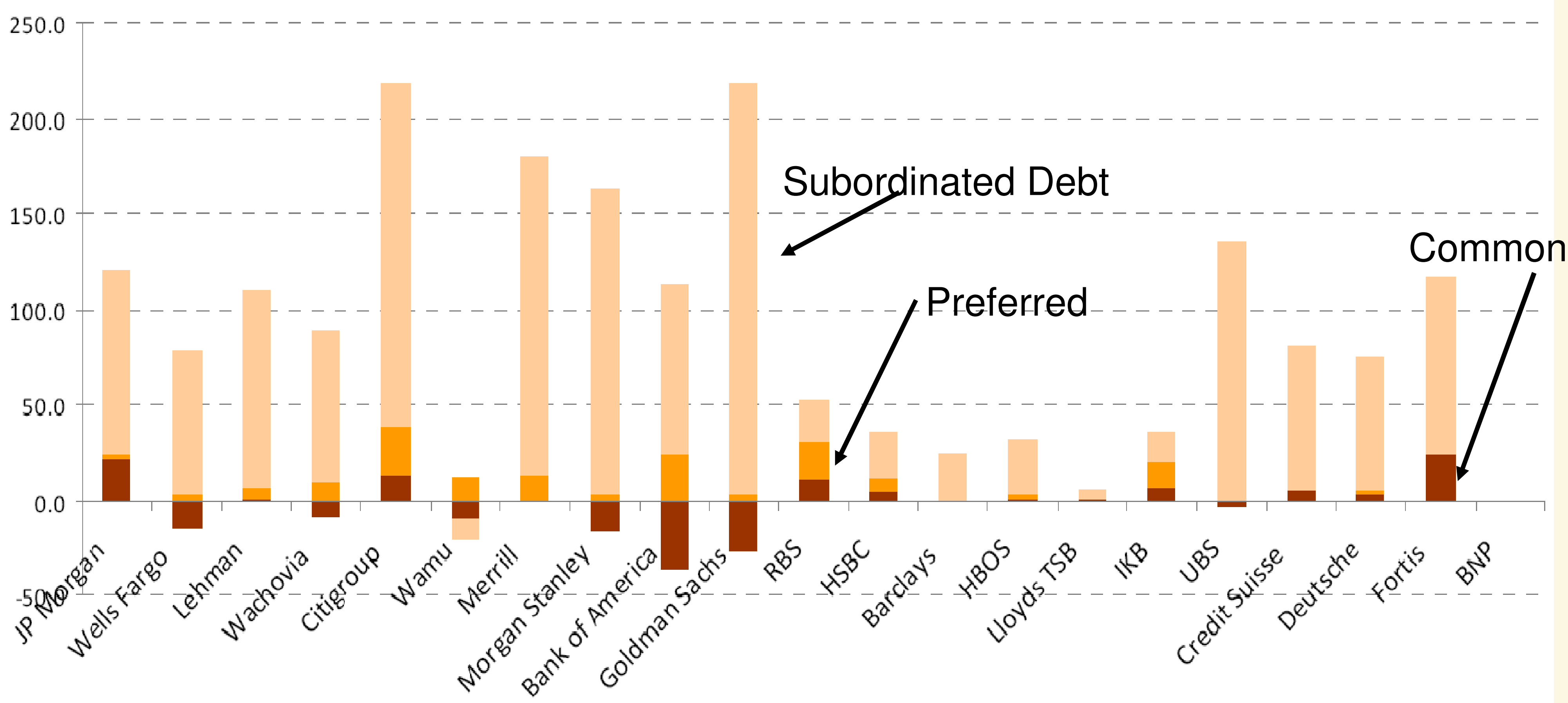
Agenda

- Capital and events prior to the crisis
- Why wasn’t there enough capital? What went wrong?
- The reform of bank capital regulation

I. Capital and Events Prior to the 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 rally; green shoots; economic and financial prospects improve
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 rally; G3 real activity still weak

I. 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-back (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

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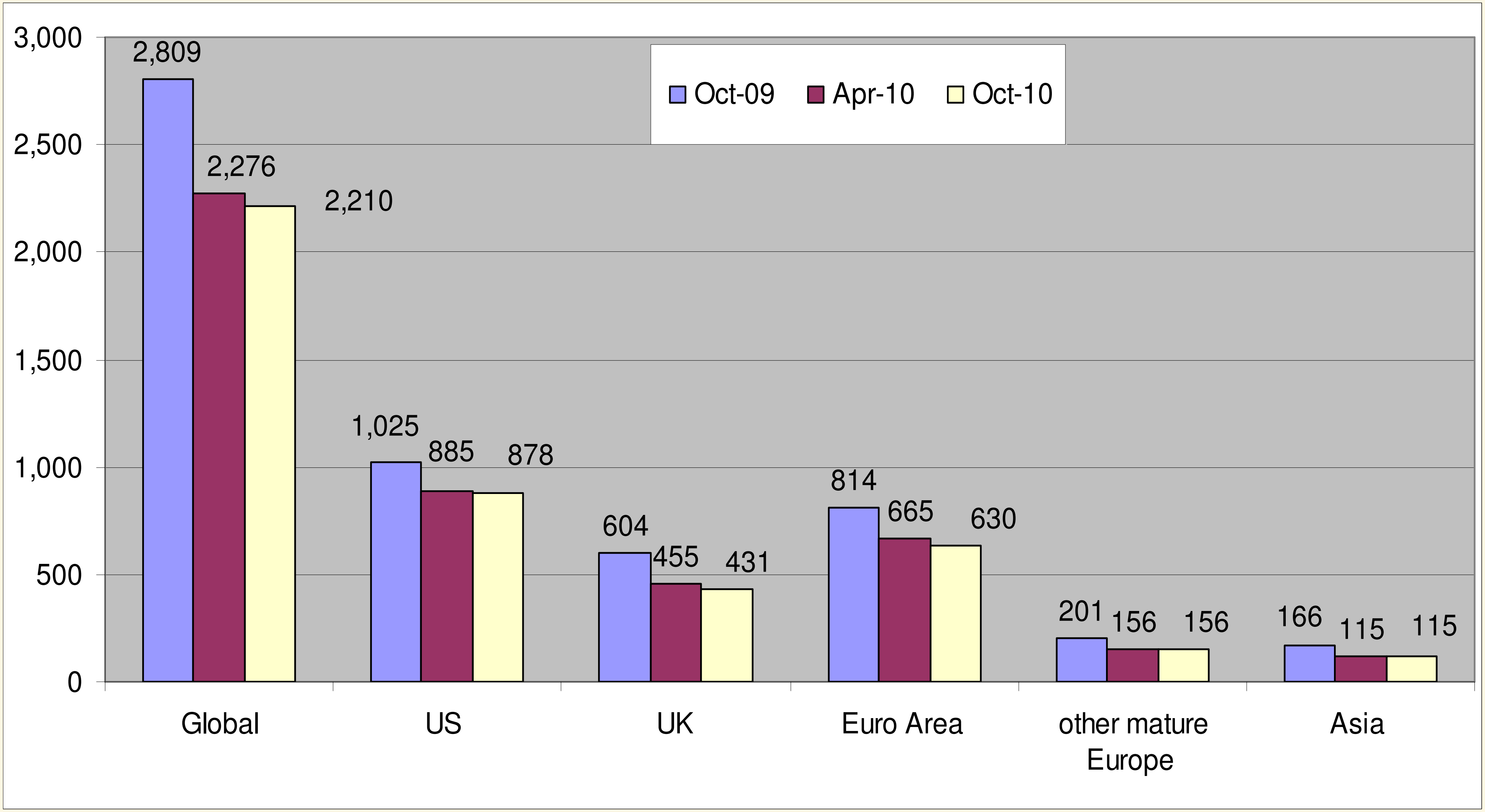
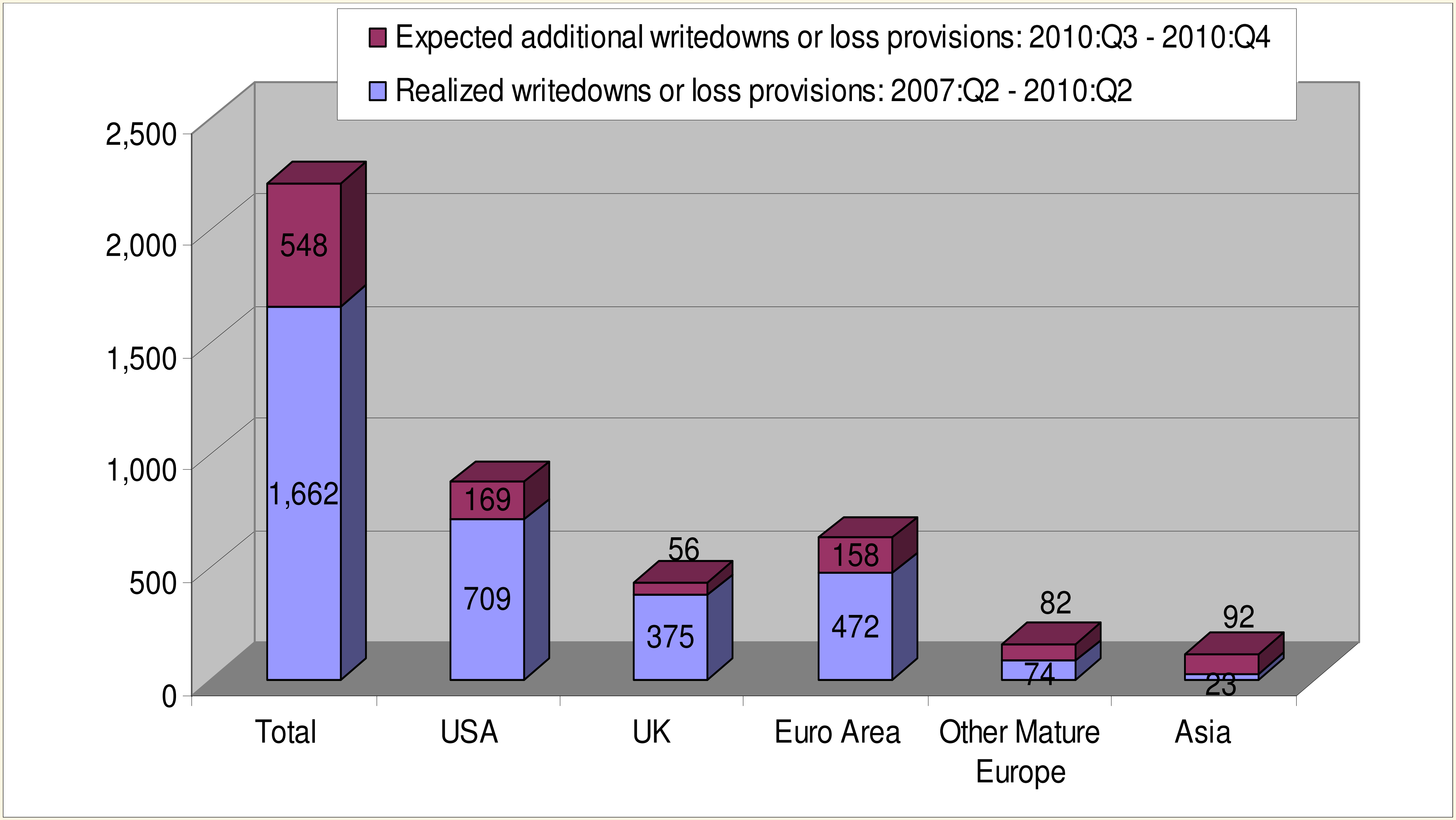
Impact of Financial Crisis: Estimates of *Projected* Bank Writedowns 2007-10 (bn USD)



Source: IMF GFSR Reports

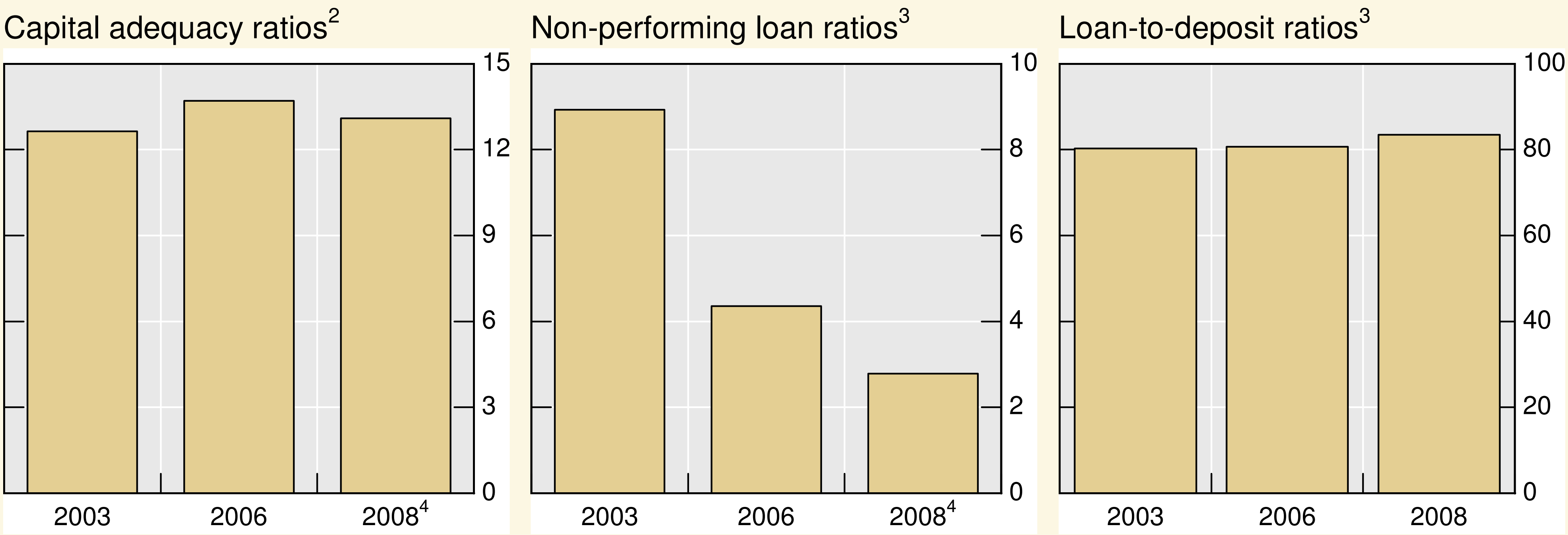
Realised Writedowns and *Expected Additional* writedowns in 2010 (bnUSD)



Source: IMF GFSR Oct 2010

Graph I.1

Soundness of banking systems in Asia-Pacific[1]

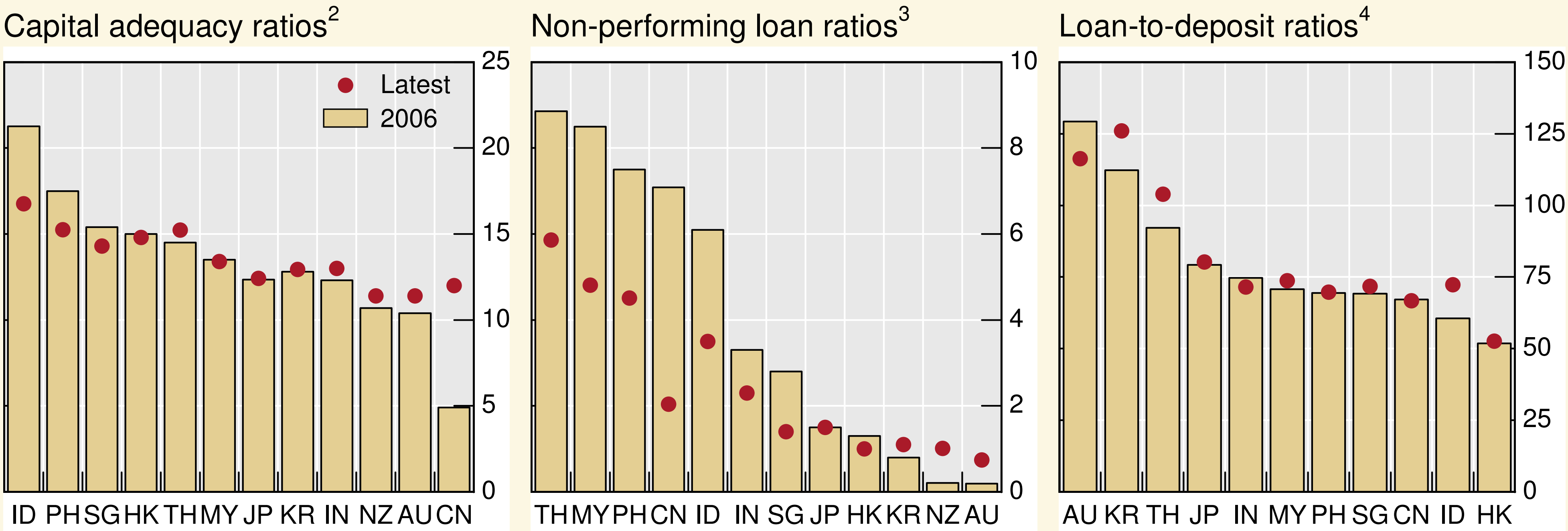


[1] In per cent. Unweighted average for Australia, China, Hong Kong SAR, India, Indonesia, Japan, Korea, Malaysia, the Philippines, Singapore and Thailand. [2] Total capital as a percentage of total risk-weighted assets. [3] Definitions may vary across economies. [4] For 2008, latest available figure in GFSR is used.

Sources: IMF Global Financial Stability Report; national data.

Graph II.3.1

Soundness of Asian banking systems[1]



For an explanation of the economy abbreviations, see Graph I.3.

[1] In per cent. [2] Total capital as a percentage of total risk-weighted assets. In Australia, Hong Kong SAR, Japan, Korea, Malaysia, New Zealand, Singapore and Thailand, the definition of risk-weighted assets changed during the period under review due to transition towards Basel II. [3] Non-performing loans as a percentage of total loans. For Australia, non-performing assets over total assets; for Japan, non-performing loans over total credit. [4] Total loans as a percentage of total deposits.

Sources: IMF; Bloomberg; CEIC; national data.

II. Why Wasn't There Enough Capital?

- Build-up of excessive on- and off-balance sheet leverage
- Erosion of the level and quality of the capital base

Resulting in a banking system that could not…

- Absorb the systemic trading and credit losses
- Cope with large reintermediation of large off-balance sheet exposures in the shadow banking sector

And that was further amplified by…

- A procyclical deleveraging process
- Interconnectedness of systemic institutions through an array of complex transactions

II. Why Wasn't There Enough Capital?

- Basel II attempted to keep the overall level of capital the same as that under Basel I
- Basel II did not sufficiently capture the risk in complex structured products
- Basel II capital requirements are procyclical; thereby amplifying business cycle fluctuations
- Basel II did not consider the impact of stress in the broader economy

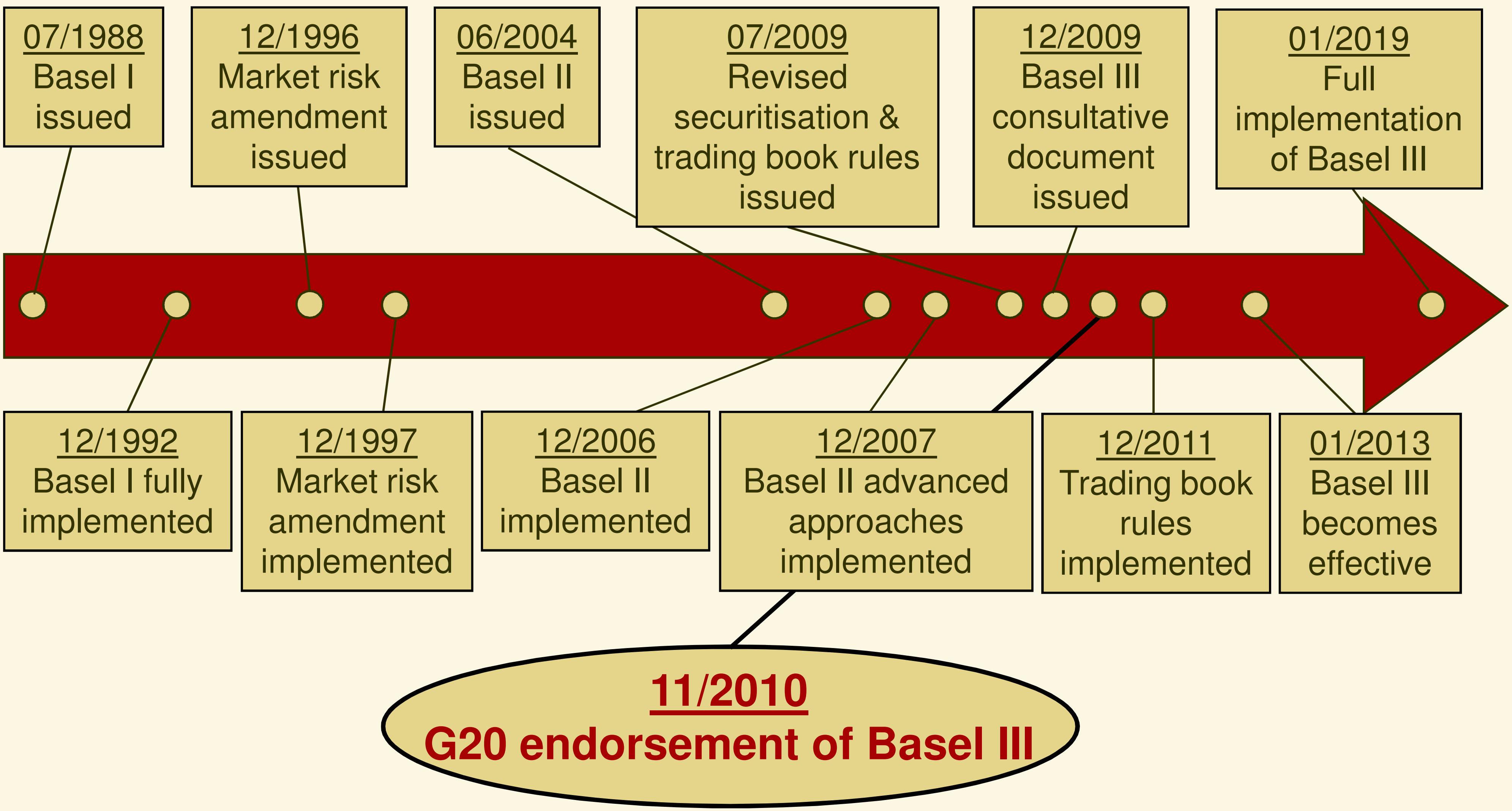
II. Why Wasn't There Enough Capital?
What went wrong?

- **No disclosed reconciliation between elements used to determine capital ratios and items included in the audited financial statements**
- **No separate presentation of prudential adjustments and deductions**
- **No description of limits and thresholds applied to various capital components**
- **No detailed description with regards to:**
  - The main characteristics of issued instruments
  - The contents of numerators and denominators and the calculation of the various ratios
- **Content of ratios changed over the years without specific mention of the size of the various components in the financial statements.**

III. The reform of bank capital regulation

- **In September 2009 the Group of Central Bank Governors and Heads of Supervision reached agreement to…**
  - Raise the quality, consistency and transparency of the capital base
  - Introduce a leverage ratio
  - Introduce a framework for countercyclical capital buffers
  - Issue recommendations to reduce systemic risk
- **In July 2009 the BCBS issued measures to strengthen the…**
  - Rules governing trading book capital
  - The treatment of certain securitisations in Pillar 1

Thirty years of bank capital regulation



III. The reform of bank capital regulation
Definition of capital

- Objective:
  - Raise quality, consistency, transparency of capital
  - Absorb losses on going concern basis
- **Basel III: focus on predominant form of Tier 1**
  - Common shares and retained earnings
  - Currently, common equity min requirement only 2%
  - Net of regulatory adjustments (ie deductions)
  - Some assets can be included in core capital
  - Full disclosure of all capital components

III. The reform of bank capital regulation
Better risk coverage

- Objective:
  - All material risks should be adequately captured
- **Failure to capture key risks amplified stress**
- **Significantly higher trading book capital**
  - Higher capital charges for securitisations
  - Introduction of stressed Value-at-Risk
- **Counterparty credit risk**

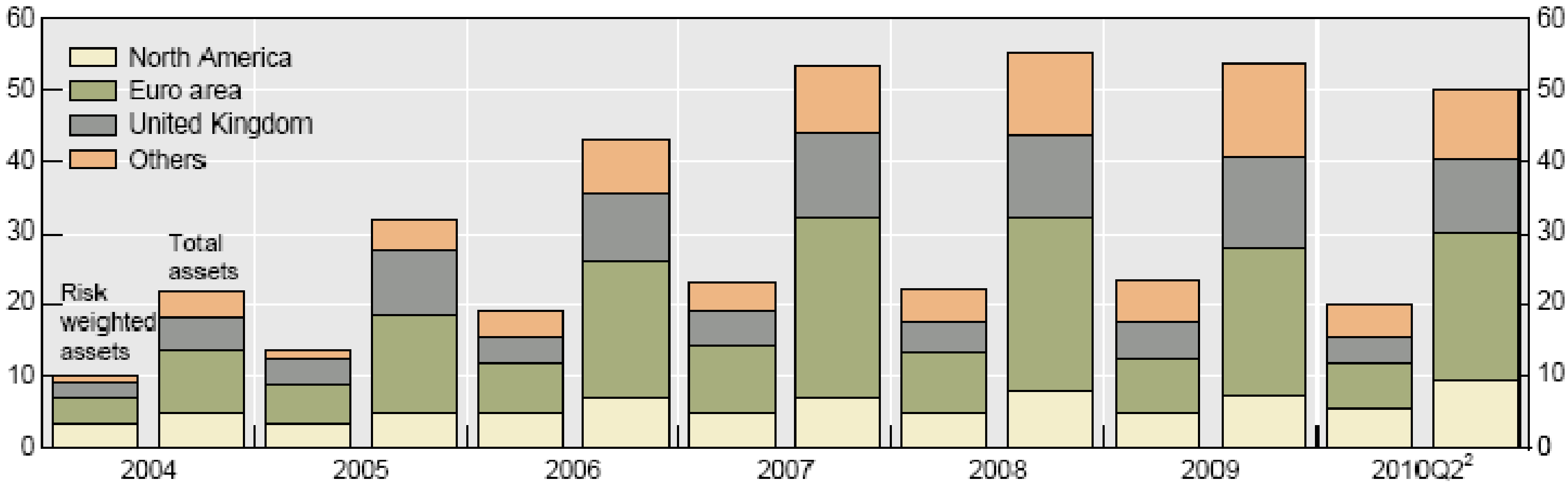
III. The reform of bank capital regulation
Leverage ratio

- Objective:
  - Supplement risk-based framework with simple measure
  - Contain build-up of leverage in the banking system
  - Simple, transparent and internationally applicable
- **Floor beneath risk-based measure**
- **Long transition and observation phase**
  - Supervisory monitoring: starts 2011
  - Parallel run period: 2013 until 2017
  - Public disclosure at bank level: 2015
  - Migration to Pillar 1 in 2018
- **Calibration: minimum tier 1 leverage ratio of 3%**

III. The reform of bank capital regulation

Risk weighted and total asset for the 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. [2] Sample only includes banks which have reported Q2 data.

Sources: Bankscope; BIS calculations.

III. The reform of bank capital regulation
Capital conservation buffer

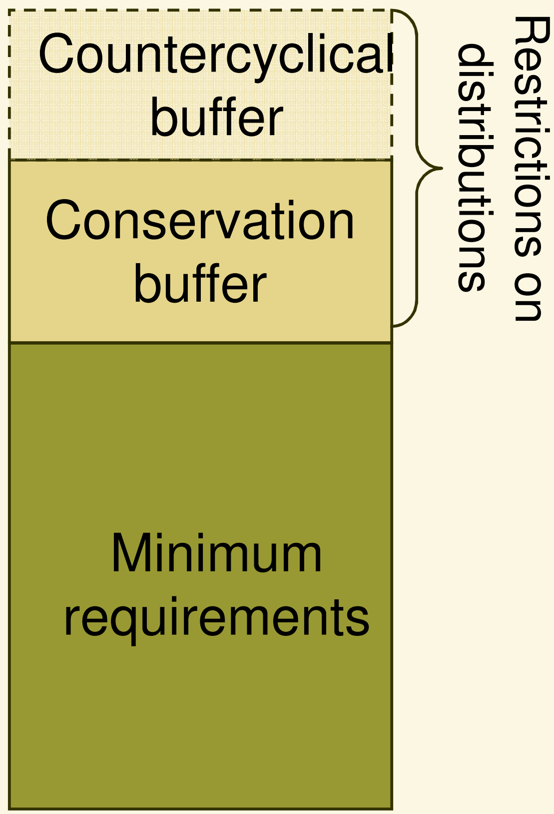
- Objective:
  - Establish buffer above the minimum
- **Banks continued to distribute earnings during crisis**
- **Build capital buffers in good times**
- **Draw down buffers during stress**
- **Buffer range between 0 – 2.5% above the minimum**
  - If capital falls within this range, bank can only distribute specified portion of earnings (eg dividends, share buybacks)

III. The reform of bank capital regulation
Countercyclical capital buffer

- Objective:
  - Protect banking sector from periods of excess aggregate credit growth often associated with system-wide risk
- **Jurisdictions calculate countercyclical capital buffer**
  - Methodology based on credit-to-GDP guide
- **Buffer calibration: 0 – 2.5% above conservation buffer**
  - If capital falls within extended buffer range, bank has one year to get its capital above top of range before restrictions
- **Home-host issue important, still under consideration**
  - Depends on the location of credit exposures

III. The reform of bank capital regulation
Functioning of the capital buffers

- **Capital conservation buffer**
  – establishes fixed range above the Tier 1 minimum capital requirement.
  – When Tier 1 ratio falls into this range, bank becomes subject to restrictions on distributions
- **Countercyclical capital buffer**
  – extends size of capital conservation buffer during periods of excess credit growth



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