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The countercyclical capital buffer – implementation issues

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Seminar on Financial Stability and Stress Testing
Basel, Switzerland, 6–8 May 2014



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The capital conservation buffer



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Objective of the capital conservation buffer

- Build-up buffers that can be drawn down in periods of stress
 - Capital conservation buffer is not a hard constraint
- Promote the conservation of capital and provide mechanism to rebuild capital during recovery
 - Banks are unwilling to cut dividends as markets interpret this as signal of weakness → mechanism addresses common action problem



Framework

- 2.5% capital buffer above the regulatory minimum capital requirement
 - Common Equity Tier 1
- Banks can use capital buffer, but if they fall short there are
 - constraints on the distribution of earnings or banks have to raise capital in the market
 - no constraints on day-to-day business decisions





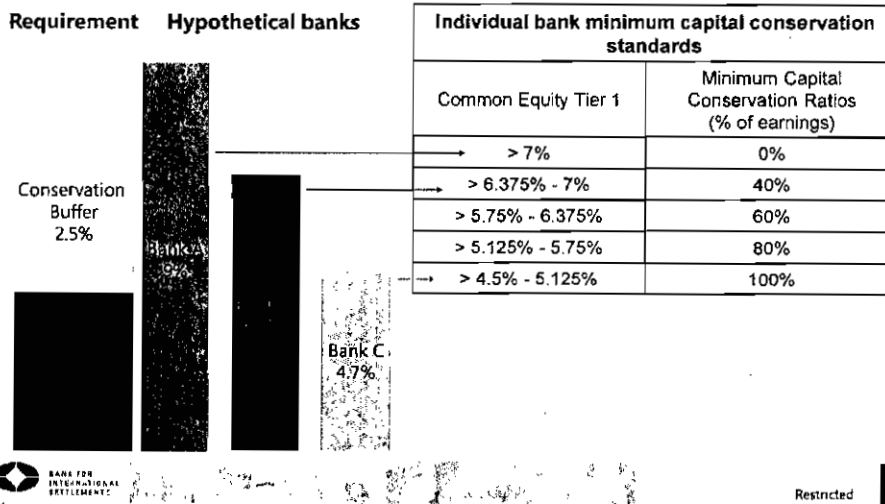
Conservation standards

Individual bank minimum capital conservation standards	
Common Equity Tier 1	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%

- Distribution restrictions: Dividends and share buybacks, discretionary payments on other Tier 1 capital instruments and discretionary bonus payments to staff.



The restrictions for the distributions of earnings to rebuild capital: Some examples





The countercyclical capital buffer (CCB)



Main readings

- Basel Committee, 2010, *Guidance for national authorities operating the countercyclical capital buffer*, December
- Drehmann, M, and K Tsatsaronis (2014): "The credit-to-GDP gap and countercyclical capital buffers: Questions and answers", *BIS Quarterly Review*, March.





The objective of the CCB

- "The primary aim of the countercyclical capital buffer regime is to use a buffer of capital to achieve the broader macroprudential goal of protecting the banking sector from periods of excess aggregate credit growth ... The aim is to ensure that the banking sector in aggregate has the capital on hand to help maintain the flow of credit in the economy without its solvency being questioned, when the broader financial system experiences stress The potential moderating effect (of the buffer) on the build-up phase of the credit cycle should be viewed as a positive side benefit, rather than the primary aim of the countercyclical capital buffer regime."

p.1, Guidance for national authorities operating the countercyclical capital buffer



The objective of the CCB (II)

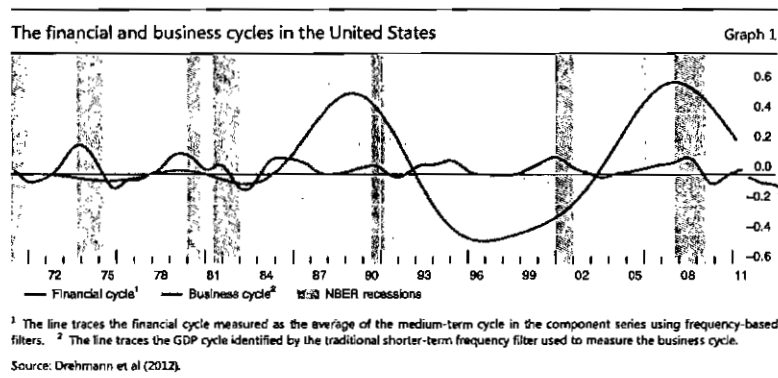
- Buffer is not about solvency → Minimum and capital conservation buffer
- Capital is built-up to protect the banking sector from effects of the financial cycle
- Moderating the build-up phase should be viewed as positive side benefit
 - Not about managing the credit cycle or asset price booms
- Macroprudential aim
 - Buffer no set on a bank-by-bank or sectoral basis

→ *Objective can be achieved*





The financial cycle is different from the business cycle



Framework

- Countercyclical capital requirements extend size of capital conservation buffer in times of excessive credit growth
- Buffer for exposures in jurisdiction set by national authorities
 - Guided discretion
 - Jurisdictional reciprocity
- Buffer for a particular bank is weighted average of the buffers deployed across all jurisdictions to which it has exposures
- Transparency: Authorities should explain buffer decisions



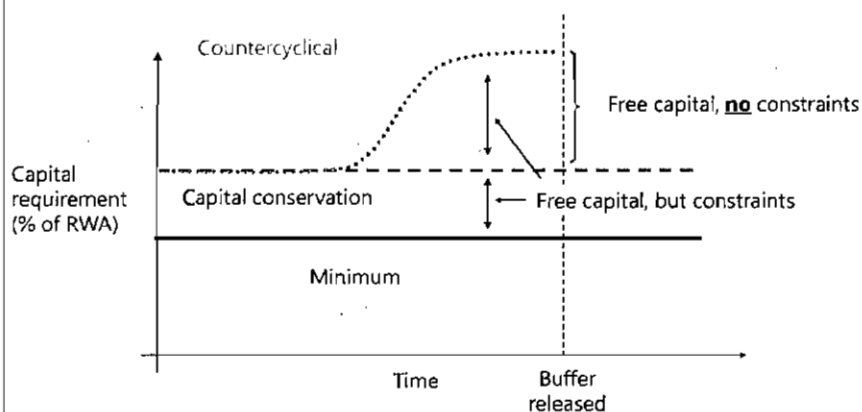


Extending the size of the capital conservation buffer

- Buffer
 - Ranges from 0%-2.5%
 - Common Equity Tier 1
- Banks can use capital buffer
 - If buffer is on: Constraints on the distribution of earnings but no constraints on business decisions (Table on slide 5 applies)
 - If buffer is off: Capital surplus is unfettered

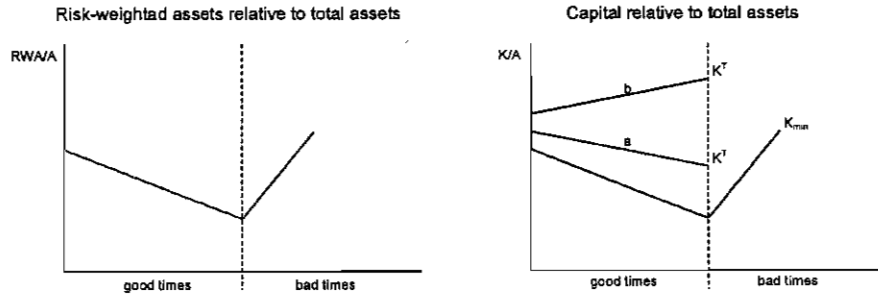


Relationship between the capital buffers





Risk-weighted versus unweighted assets



Note: A = unweighted assets; RWA = risk weighted assets; K_{min} = minimum capital requirement; K^I = minimum capital requirement + countercyclical buffer (capital conservation buffer for simplicity ignored); a and b refer to two possible paths, depending on buffer developments.



Determining the buffer: Guided discretion

- Authorities are expected to apply judgment using the best information available to gauge the build-up of system-wide risk
- Authorities are expected to calculate the buffer guide, which serves as a common reference point for discussions





The buffer guide

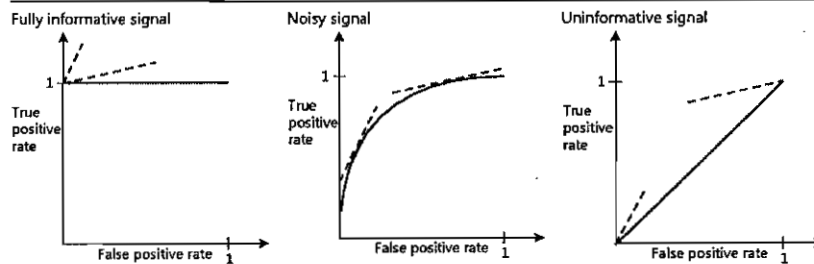
- Deviations of the credit to GDP ratio from a long term trend
 - Measure of excessive credit growth in line with objective
- Mechanics:
 - (Broad) credit to GDP ratio minus rolling HP trend (one-sided filter)
 - Explained in Guidance document
- Most reliable signal ahead of systemic crises



The ROC curve as measure of signaling quality

Signal quality and policymakers' preferences

Graph A



The red line denotes the ROC curve. The dotted lines denote preferences of a policy maker who weights the expected costs and expected benefits of macroprudential interventions linearly. The blue (green) line indicates high (low) costs relative to benefits.

Source: Based on Drehmann and Juselius (2013).

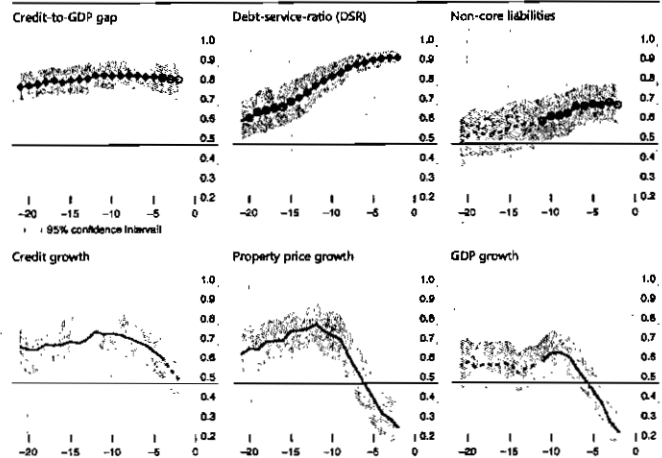




The signalling quality of different EWTs

AUCs for different forecast horizons

Graph 2



The horizontal-axis denotes the forecast horizons in quarters before crises. The vertical-axis denotes AUC. The horizontal line at 0.5 highlights the value of an uninformative indicator. A solid blue line indicates that the specific variable for the given horizon is statistically different from an uninformative indicator, while a dashed blue line indicates the opposite. A yellow blue circle shows that the signal is stable in the sense that it does not reverse direction within the forecast horizon until the crisis. Red diamonds highlight that the specific variable is statistically the best indicator for this particular horizon. Other indicators that are not statistically different from best-performing indicator are marked by solid blue circles.

Source: Drehmann and Juselius (2013).



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Is the credit-to-GDP gap a good indicator for EMEs?

- Critique 1:

- The use of the credit-to-GDP gap hinders financial deepening

If financial deepening occurs at a steady pace, gradual and persistent growth of credit will be embedded in the trend of the credit-to-GDP ratio.

- Critique 2:

- Analysis has been undertaken using mainly advanced economy data.

This is correct, but the credit-to-GDP gap is a good indicator for EMEs.

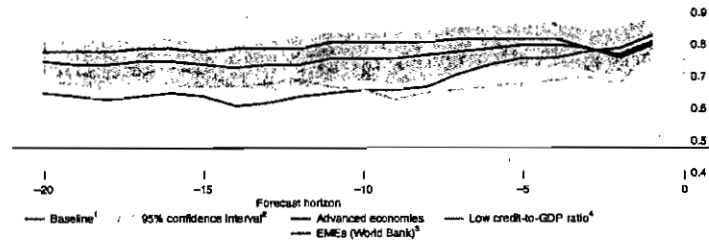


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The forecast performance of the credit-to-GDP gap for different samples
AUCs for different forecast horizons



The horizontal axis denotes the forecast horizons in quarters before crises. The vertical axis denotes the AUC. The horizontal line at 0.5 highlights the value of an uninformative indicator.

¹ As baseline, credit-to-GDP gaps are calculated by the standard methodology and the full sample of all countries is used. ² 95% confidence interval for the AUC using the baseline model. ³ EMEs according to World Bank classification. ⁴ Countries with a credit-to-GDP ratio below 100%.



Measurement problems and the credit-to-GDP gap

- Does the trend change when new data becomes available?
 - By design not
 - Using a 2-sided filter not possible for policy makers and gives worse EWI results
- There is a "start point" problem
 - An analysis shows that at least 10 years of data for the credit-to-GDP ratio are needed, before trend calculations become stable
- The gap can also be influenced by structural breaks



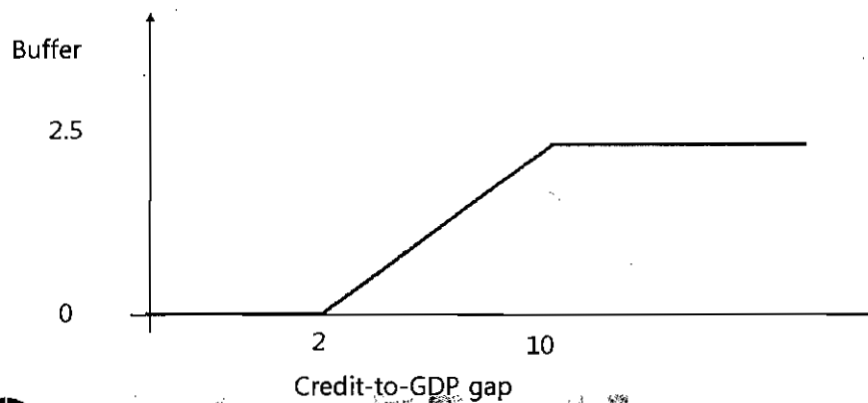


The role of judgement

- There are no models that can deliver effective rule-based counter cyclical instruments
 - Wrong signals can be issued
 - Data problems may hamper the analysis
 - Authorities need to take account of a broad set of information
 - State of business cycle, e.g. GDP growth
 - Market based indicators, e.g. credit spreads
 - State of the banking sector, e.g. profitability
 - ...
- Macroprudential monitoring capacity needs to be enhanced

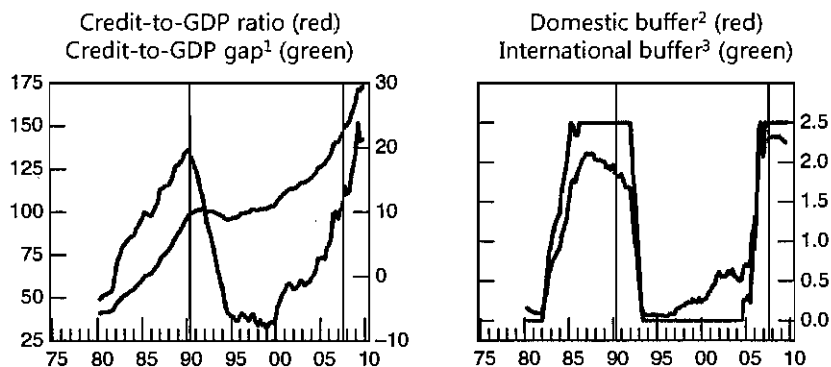


Translating the credit to GDP gap into the buffer guide





The historical performance of the guide for the UK



Note: ⁽¹⁾ Deviations of the credit-to-GDP ratio from its long term trend, calculated by a one-sided HP filter using a smoothing factor $\lambda=400,000$, in percentage points. ⁽²⁾ Buffer guide add-on for banks with purely domestic exposures, in percent of risk weighted assets. ⁽³⁾ Buffer guide add-on for a hypothetical bank whose share of domestic and cross boarder lending is based on aggregate exposures for the particular country, in percent of risk weighted assets. Sources: National data; BIS calculation.



Determining the buffer: the release phase

- Crises may require prompt release of buffer
 - ⌘ No single variable can be used as reliable indicator
 - ⌘ Buffer guide not useful for release phase as it tends to remain elevated for some time after crises
 - ⌘ see Drehmann et al (2011)
- Buffer can be released gradually when credit growth returns to normal conditions



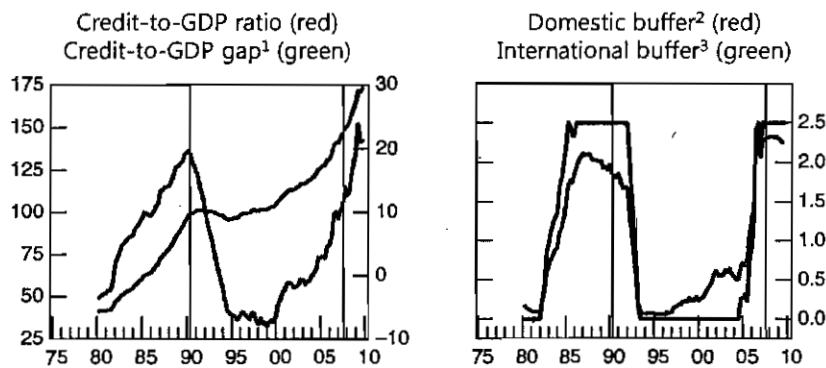


Jurisdictional reciprocity

- National authorities determine buffer requirements for credit exposures in their jurisdiction
 - Home supervisors for internationally active banks will require appropriate capital adjustments
- Ensures level playing field between domestic and foreign banks



The historical performance of the guide for the UK



Note: ⁽¹⁾ Deviations of the credit-to-GDP ratio from its long term trend, calculated by a one-sided HP filter using a smoothing factor $\lambda=400,000$, in percentage points. ⁽²⁾ Buffer guide add-on for banks with purely domestic exposures, in percent of risk weighted assets. ⁽³⁾ Buffer guide add-on for a hypothetical bank whose share of domestic and cross border lending is based on aggregate exposures for the particular country, in percent of risk weighted assets. Sources: National data; BIS calculation.

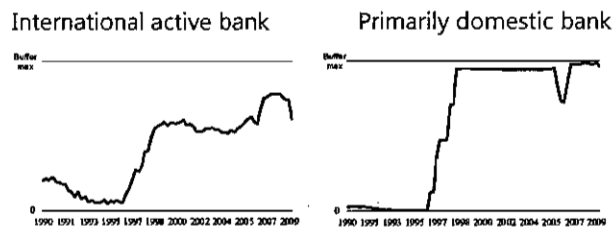




Bank specific buffers

- Build-up: banks have 12 months to comply with buffer increases
- Release: Immediately
- The buffer will reflect the geographic composition of the bank's portfolio of credit exposures.

Hypothetical bank buffers



See: Consultative document

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Transparency

- Authorities should communicate
 - Buffer decisions
 - Regular assessment of the macro financial situation
- Communication ensures
 - Accountability
 - Credibility of the buffer
 - Prepare banks for buffer decisions



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Summary

- Capital conservation buffer
 - Introduces capital buffers into regulatory framework
 - Enforces capital conservation in bad times
- Countercyclical capital buffer
 - Introduces macroprudential objectives into regulatory framework
 - Guided discretion
 - Jurisdictional reciprocity
 - Transparency



Thanks

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Literature

- Basel Committee, 2010, *Basel III: A global regulatory framework for more resilient banks and banking systems*, December
- Basel Committee, 2010, *Guidance for national authorities operating the countercyclical capital buffer*, December
- Basel Committee, 2010, *Countercyclical capital buffer proposal - consultative document*, July
- Drehmann, M., C. Borio and K. Tsatsaronis, 2012, "Characterising the financial cycle: don't lose sight of the medium term!", *BIS Working Paper*, no 380.
- Drehmann, M., C. Borio and K. Tsatsaronis, 2011, "Anchoring countercyclical capital buffers: The role of credit aggregates", *International Journal of Central Banking* No 7.
- Drehmann, M, and M Juselius (2013): "Evaluating early warning indicators of banking crises: Satisfying policy requirements", *BIS Working Papers*, no 421.
- Drehmann, M, and K Tsatsaronis (2014): "The credit-to-GDP gap and countercyclical capital buffers: Questions and answers", *BIS Quarterly Review*, March.