

Club Ambrosetti

The outlook for financial markets, for their governance and
for finance

Villa d'Este, Cernobbio, 1-2 April 2011

Basel III and the real economy

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Macroeconomic impact of Basel III

Macroeconomic impact assessments

- Impact assessments carried out at the initiative of the **Financial Stability Board (FSB)** and the **Basel Committee on Banking Supervision (BCBS)**
- **Macroeconomic Assessment Group (MAG)** evaluated the **transitional** costs of introducing higher capital and liquidity requirements
- **Long-term Economic Impact group (LEI)** assessed the **long-term** benefits of **Basel III**

The estimated increase in euro area banking spreads and volumes likely to be moderate (I)

- **1 percentage point increase in the target capital ratio leads to**
 - **lending spreads to increase by 28 bps (1st approach) or**
 - **spreads to rise by 5 bps and lending to reduce by 2% relative to the baseline (2nd approach)**

The estimated increase in euro area banking spreads and volumes likely to be moderate (2)

- **A 25% increase in liquid asset holdings would increase lending spreads by around 15 bps relative to the baseline**
- **Implementation of net stable funding ratio would raise spreads by between 57 and 71 bps relative to the baseline**
- **However, fulfilment of capital requirements should have positive spill-over effects on liquidity capital ratio (LCR) and net stable funding ratio (NSFR)**

MAG results show that the GDP peak impact varies according to modelling approach and assumptions...

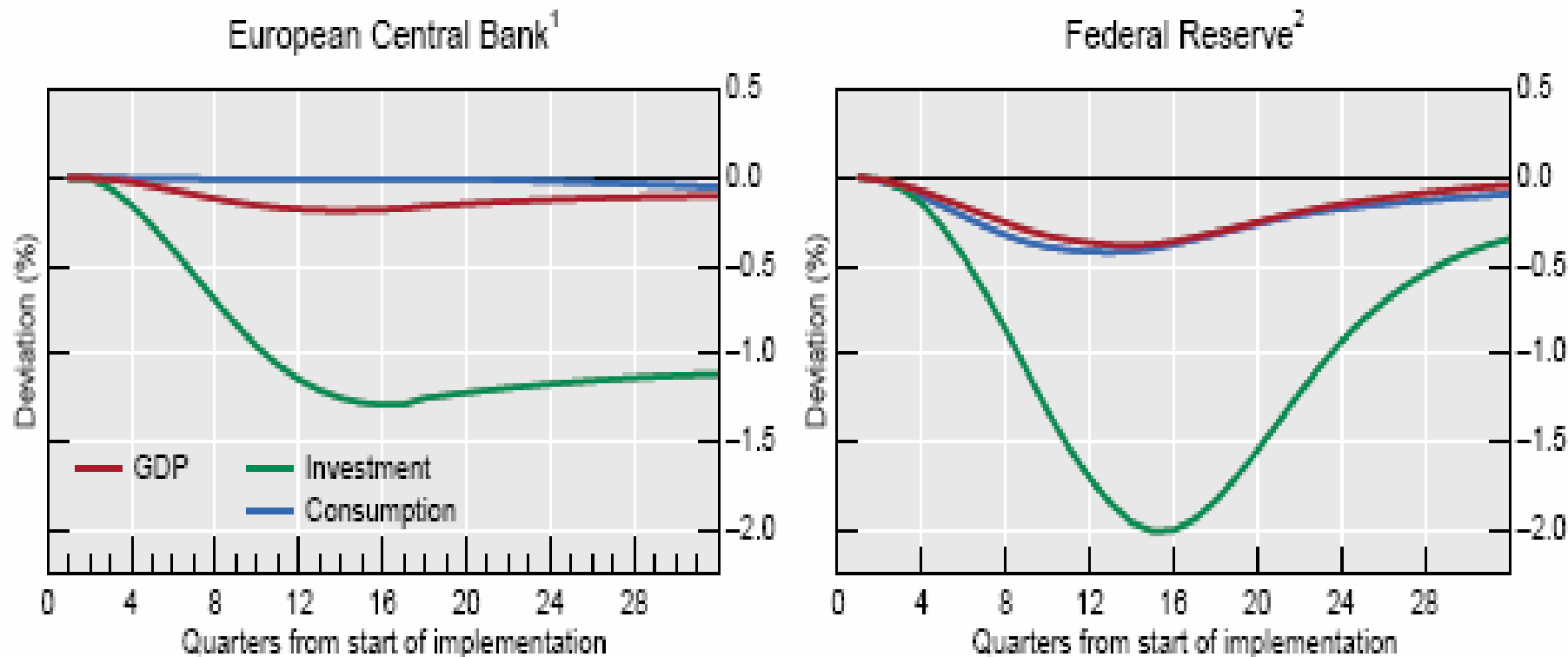
	ECB (MCM model ¹)	ECB (CMR model ²)	Federal Reserve (FRB/US model ³)
Without monetary policy			
- increase in spreads only	-0.08%	-0.29%	-0.79%
- increase in spreads with impact on lending standards	-0.19%	-	-0.89%
With monetary policy	-0.16%	-0.25%	-0.31%; -0.36%

Notes: Impact of a 1 percentage point increase in the target capital ratio implemented over four years. In the table, the GDP impact is a deviation of the baseline after 18 quarters since the beginning of the implementation.

¹ Multi-country model with endogenous monetary policy. GDP-weighted average of results for Germany, France, Italy, Spain and the Netherlands. ² A medium- to large-scale dynamic stochastic general equilibrium (DSGE) model. (See also Christiano, L, R Motto and M Rostagno (2010): “Financial factors in economic fluctuations”, ECB, Working Paper Series, no 1192.) ³ FRB/US model with endogenous monetary policy.

Source: “Assessing the macroeconomic impact of the transition to stronger capital and liquidity requirements”, interim report of Macroeconomic Assessment Group, August 2010

... but the negative GDP impact is almost non-existent at the end of the simulation period



Impact of a 1 percentage point increase in the target capital ratio implemented over four years. The GDP impact is measured in terms of percent deviation of GDP from baseline. The time unit is quarters.

¹ Multi-country model with endogenous monetary policy. GDP-weighted average of results for Germany, France, Italy, Spain and the Netherlands. ² FRB/US model with endogenous monetary policy.

Source: "Assessing the macroeconomic impact of the transition to stronger capital and liquidity requirements", interim report of Macroeconomic Assessment Group, August 2010

The results are subject to several caveats

- **Ultimately, the macroeconomic impact depends on**
 - **How banks' behaviour and business models will adjust to meet the new target capital and liquidity ratios and**
 - **how the consequent banks' response in terms of credit supply will affect the real economic activity**
 - **Other factors that may impact on actual outcome could be**
 - **Development of alternative sources of financing**
 - **The capacity of markets to absorb new equity offerings by banks**

Overall impact on euro area macro economy will be relatively modest in the medium- short-run...

- **The economy will face transitional costs through tighter credit conditions**
- **But the negative impact is mitigated by the long implementation period**
- **The negative effects should not constitute an obstacle to the economic recovery in the euro area**

...while there are substantial long-term benefits (LEI)

- **Increase the resilience of the banking system**
- **Lower probability for future crisis**
- **A less pro-cyclical banking system that is better able to support long-term economic growth**
- **Enhancing level playing field for international banking sector**

LEI study: Net benefits

Considerable room to tighten capital requirements / declining estimated marginal net benefits

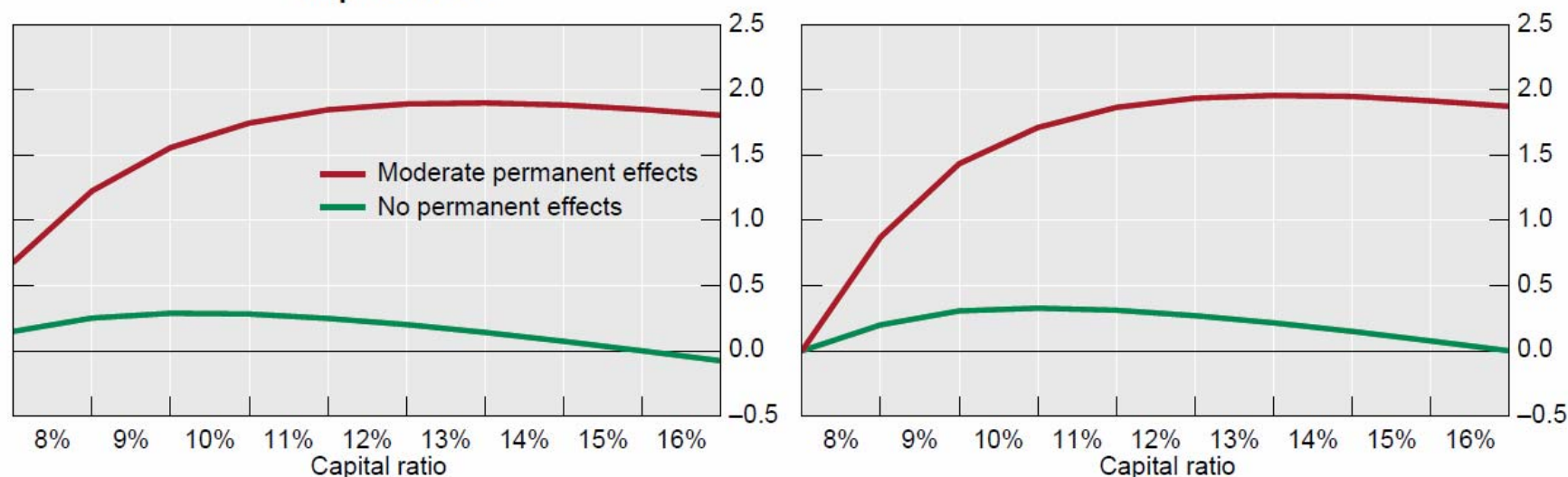
Summary graph

Long-run expected annual net economic benefits of increases in capital and liquidity

Net benefits (vertical axis) are measured by the percentage impact on the level of output

Increasing capital and meeting liquidity requirements

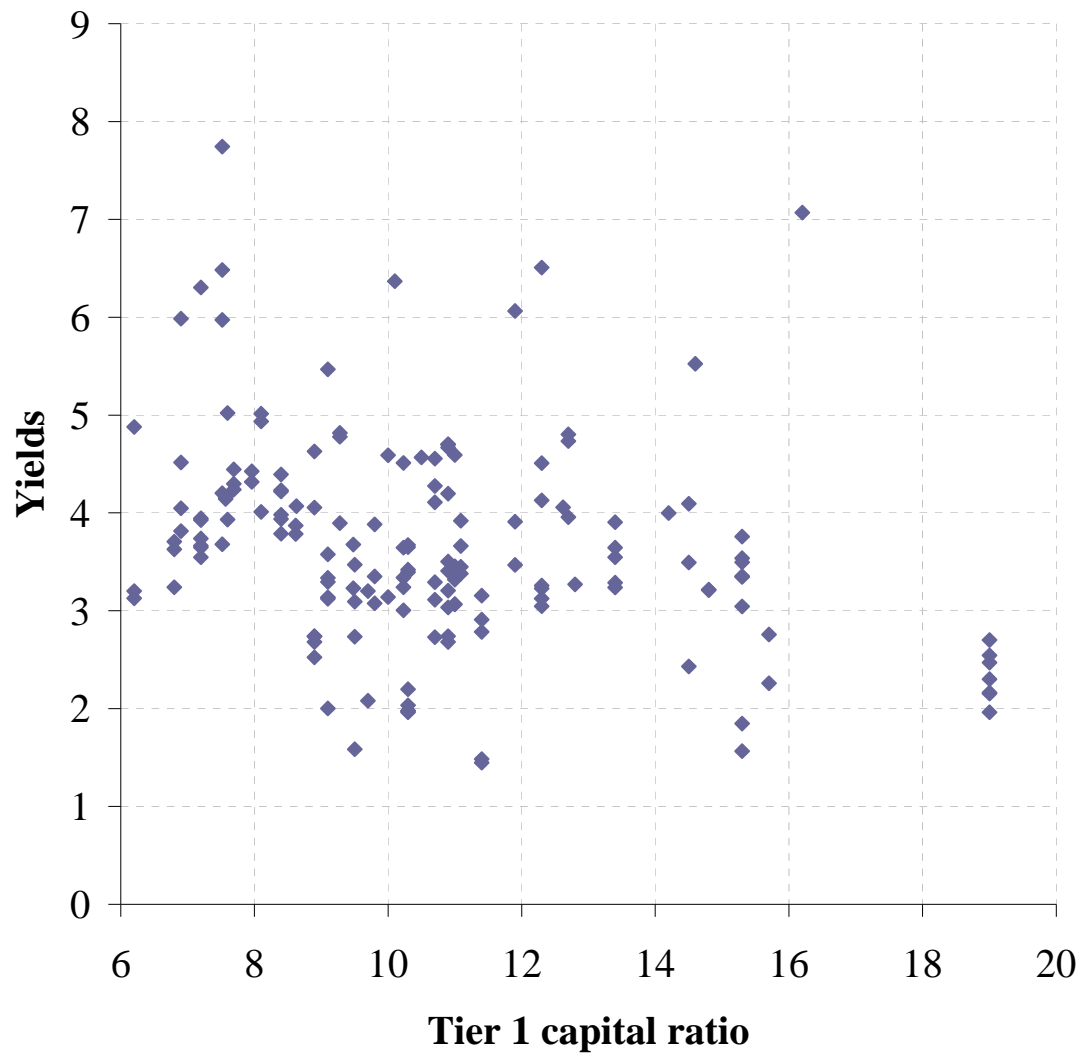
Capital only



The capital ratio is defined as TCE over RWA. The origin corresponds to the pre-reform steady state, approximated by historical averages for total capital ratios (7%) and the average probability of banking crises. Net benefits are measured by the difference between expected benefits and expected costs. Expected benefits equal the reduction in the probability of crises times the corresponding output losses. The red and green lines refer to different estimates of net benefits, assuming that the effects of crises on output are permanent but moderate (which also corresponds to the median estimate across all comparable studies) or only transitory.

The markets' assessment

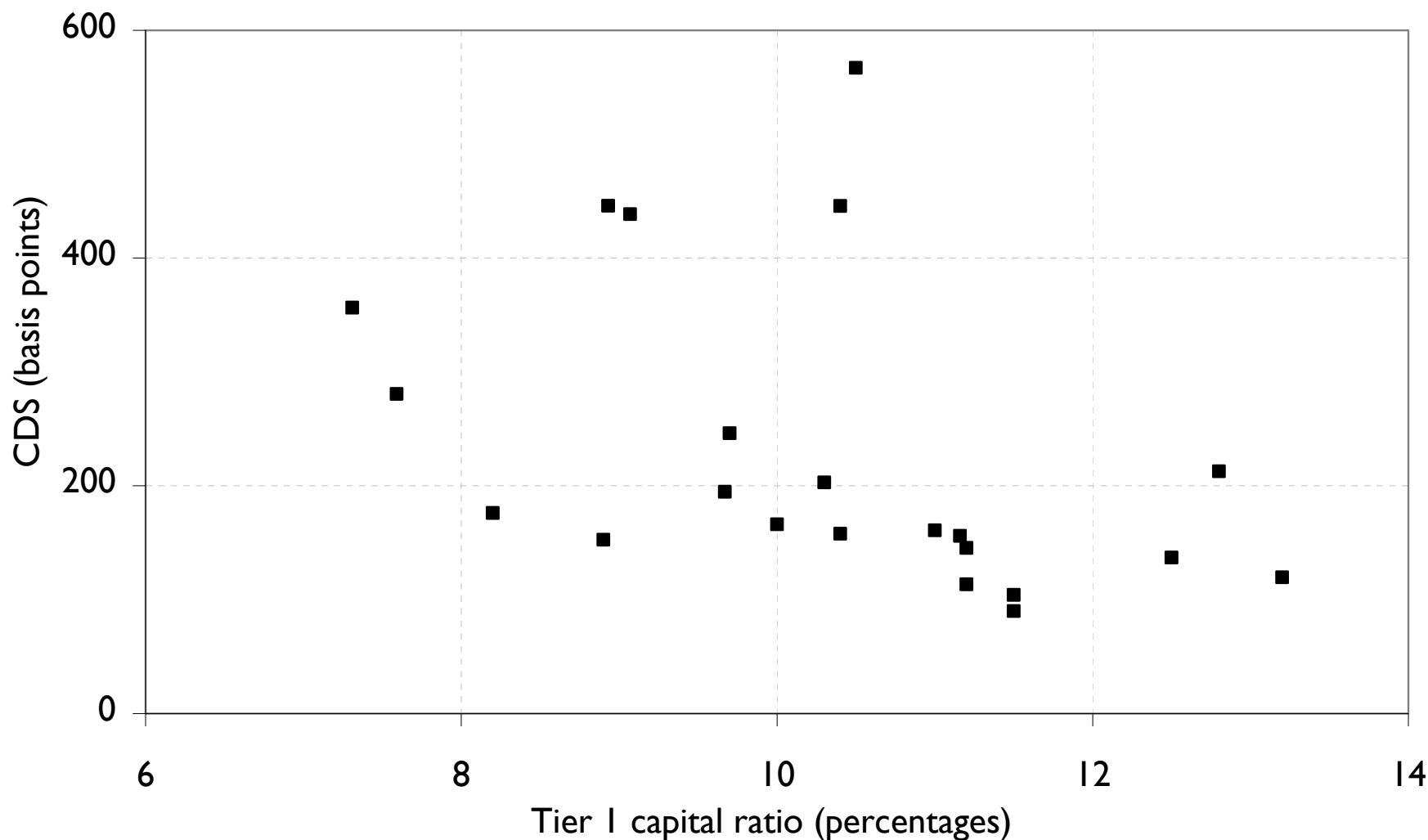
Senior unsecured bond yields and Tier 1 capital ratio



Source: Bloomberg.

Note: 1 March 2011, 3 to 5 years maturity, percentages. Selected banks in large euro area countries.

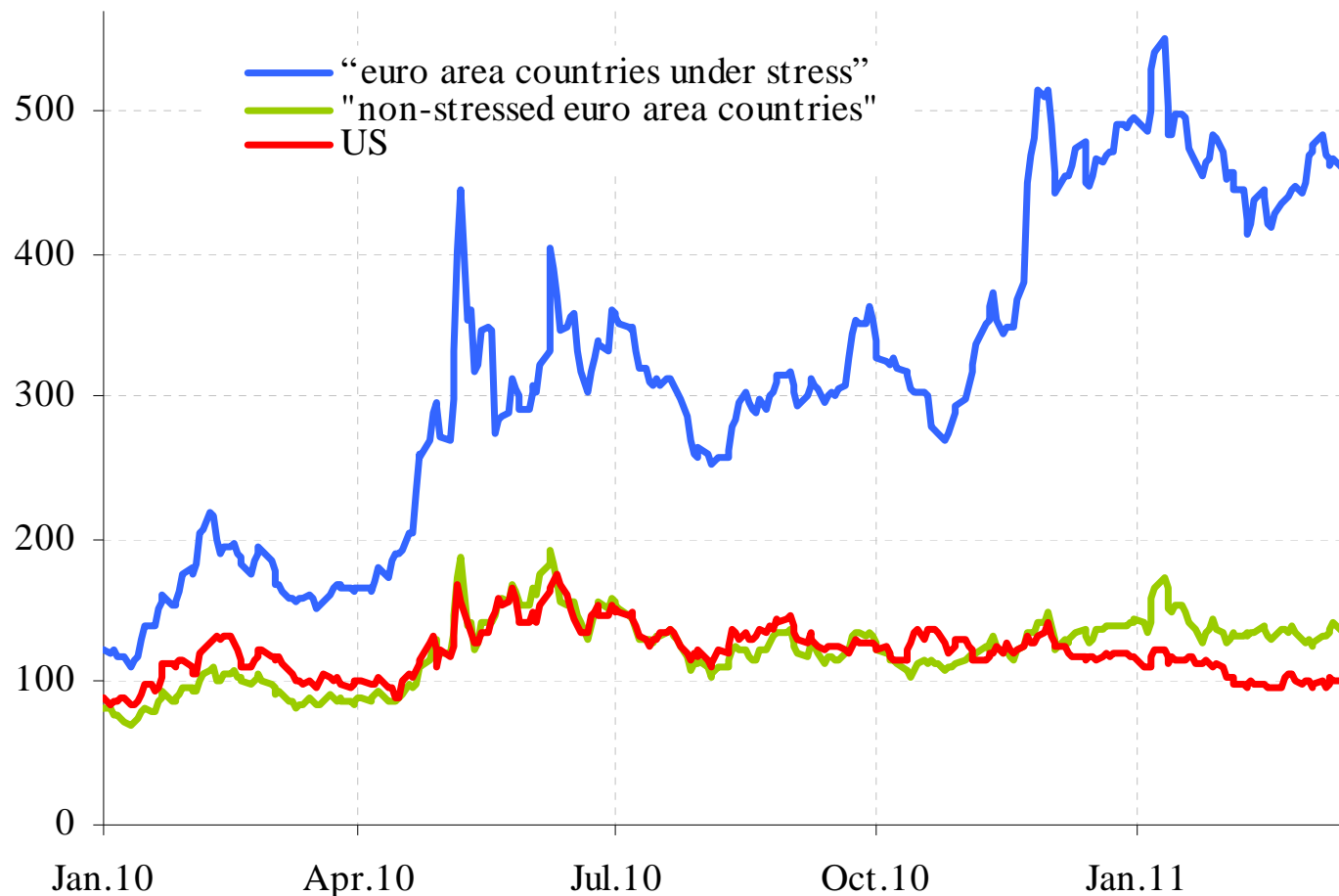
Bank CDS and Tier I capital ratios of listed banks in euro area, the UK and the US



Source: Thomson Reuters

Notes: CDS as of 11 March 2011, Tier 1 refers to Q3 2010. Greece, Irish and Portuguese banks are not included.

Bank CDS – stressed and non-stressed euro area countries (basis points)



Source: Thomson Reuters and ECB calculations.

Note: The time period covers 1 Jan 2010 to 18 March 2011 and time series refer to 5-year CDS. Euro area bank CDS and US bank CDS are the average of the senior CDS of 10 largest euro area banks and of 10 largest US banks respectively. Weighted average based on ECB's capital key. (Weighted and simple averages of bank CDS for the countries are very similar.)

Systemic risk indicator – risk remains high

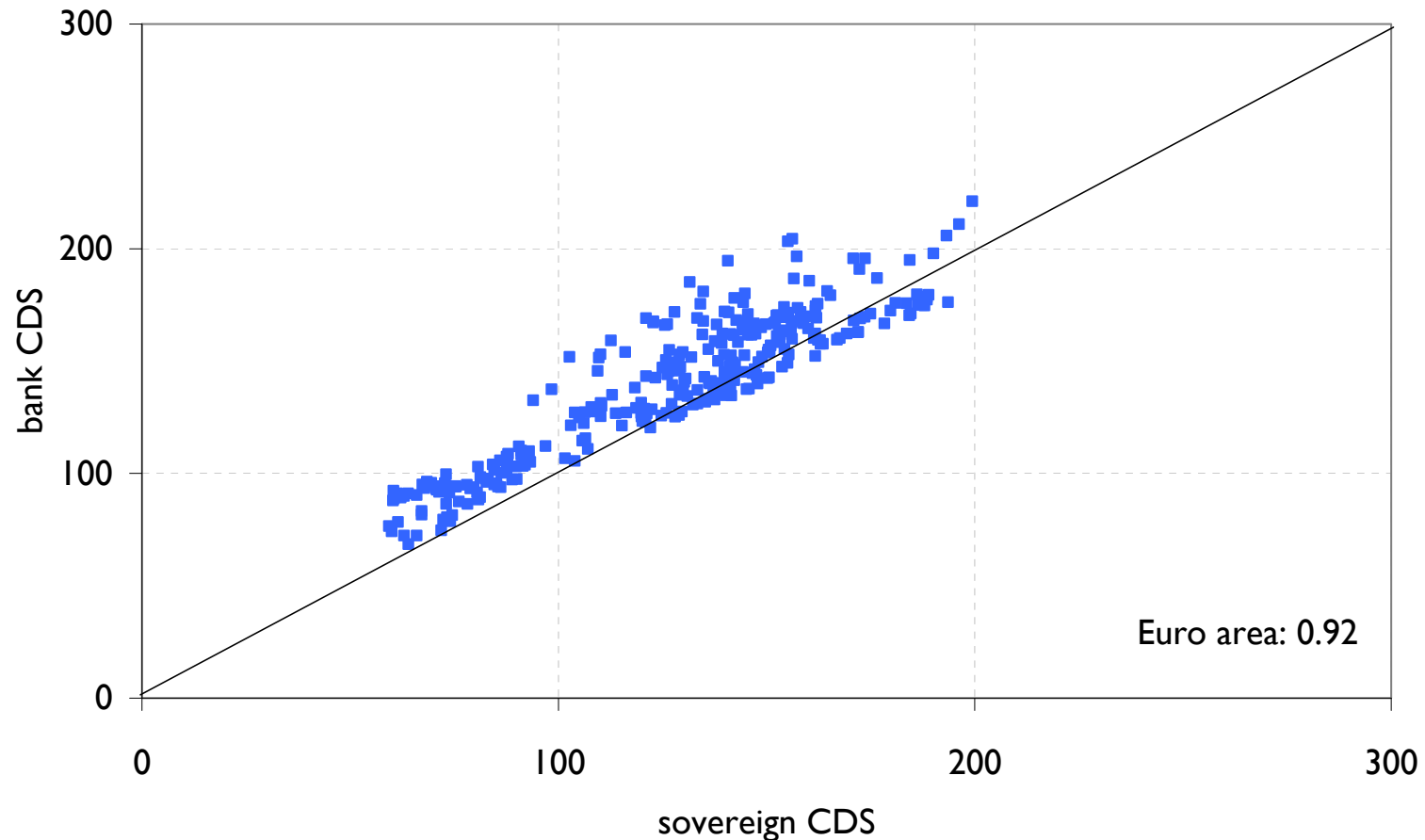


Source: Bloomberg; ECB calculations.

Note: Derived from banks stock prices and CDS spreads.

High correlation between sovereign and bank CDS

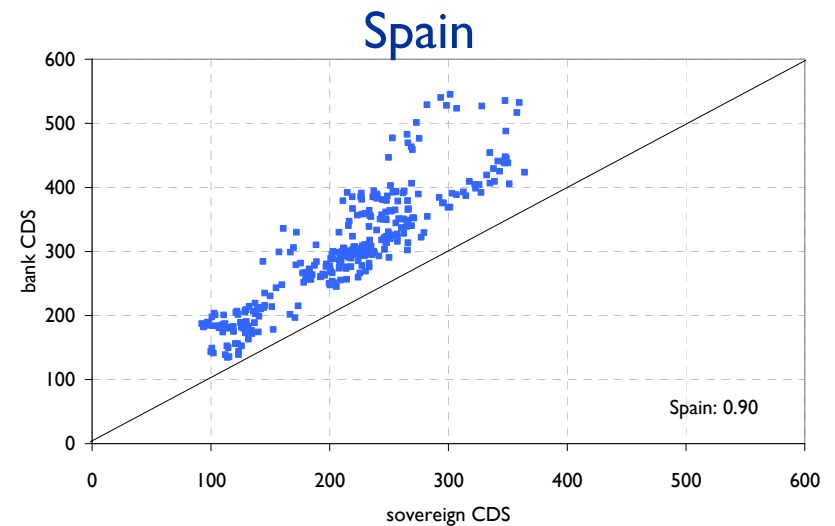
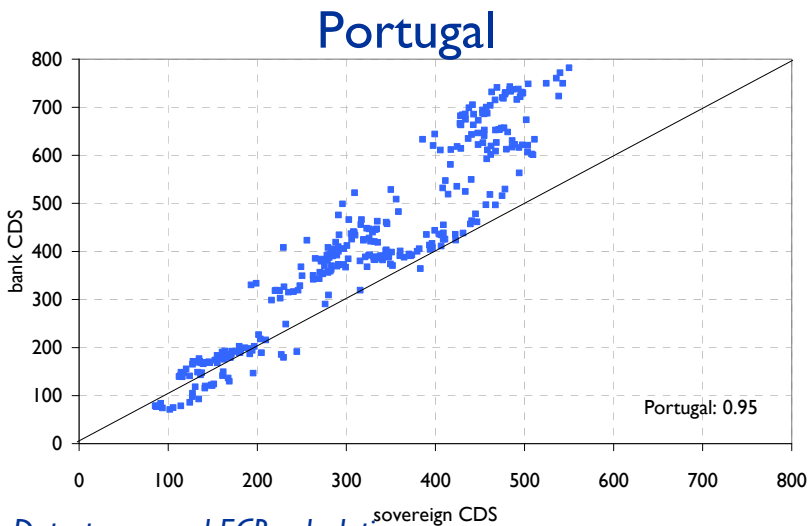
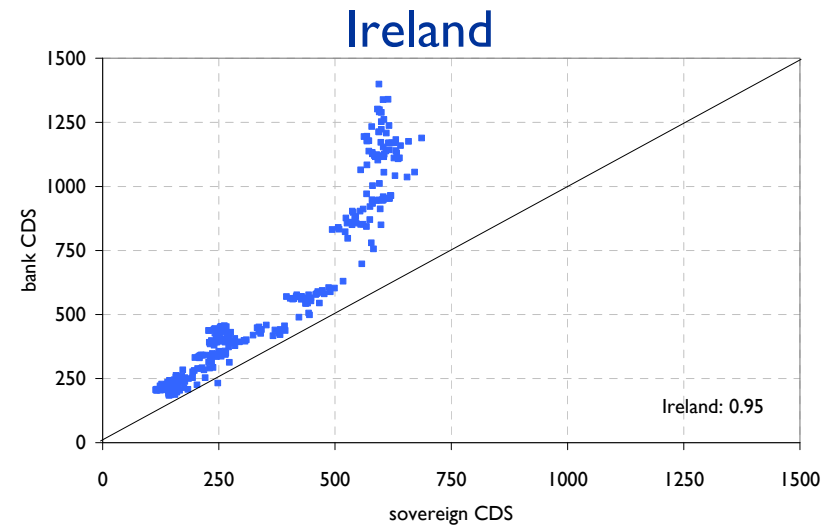
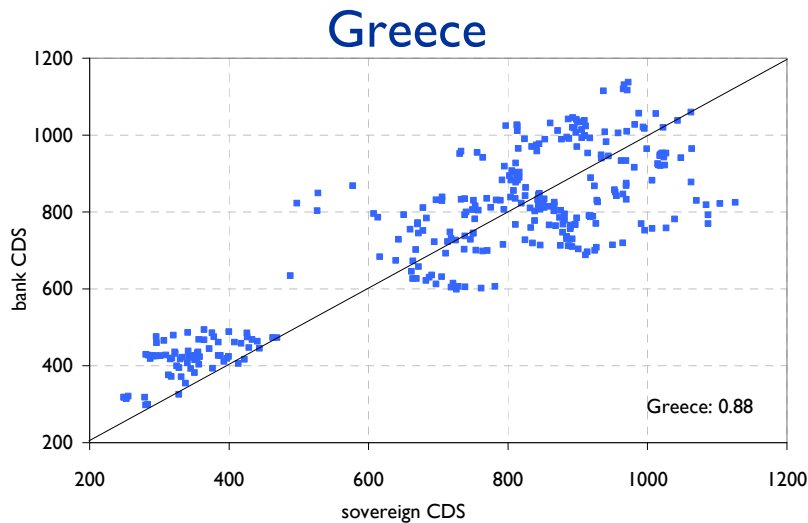
Correlation between sovereign and bank CDS – Euro area
(data in basis points)



Source: Datastream and ECB calculations.

Note: The chart presents average sovereign CDS (weighted with the capital key at the ECB) and bank CDS (simple average for 10 largest euro area banks) for daily observations in the period 1.1.2010 – 18.03.2011 and the correlation coefficient. Diagonal line at 45°.

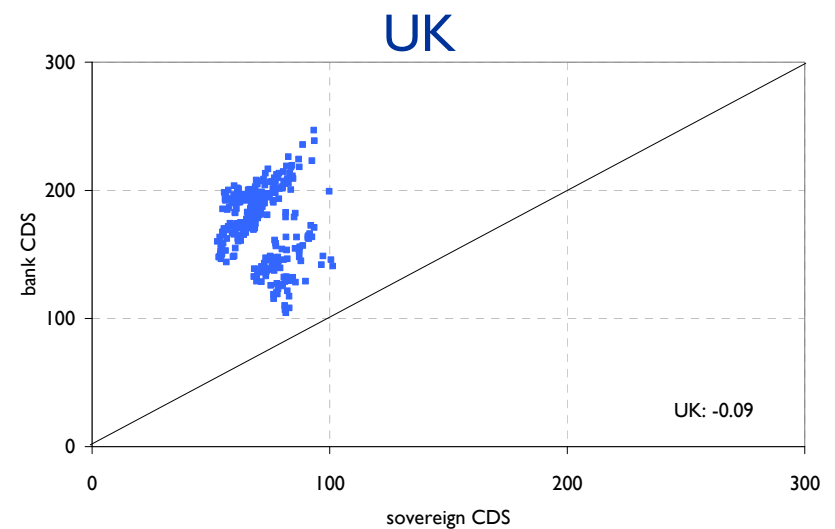
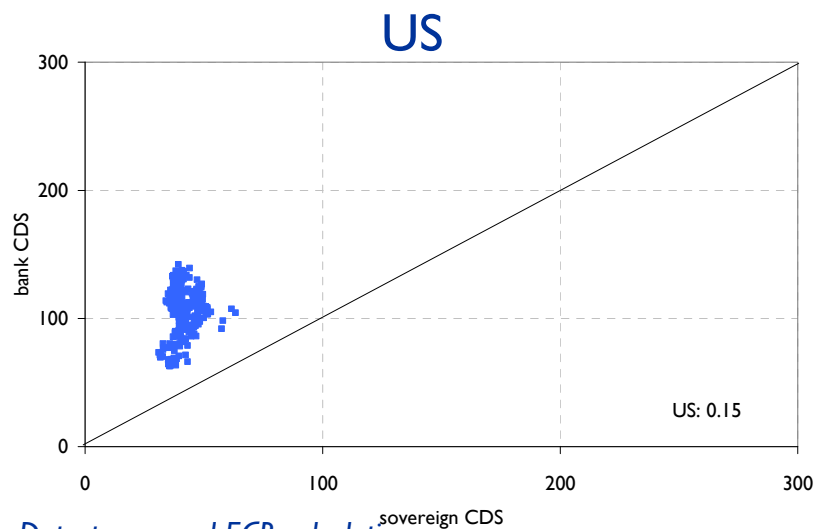
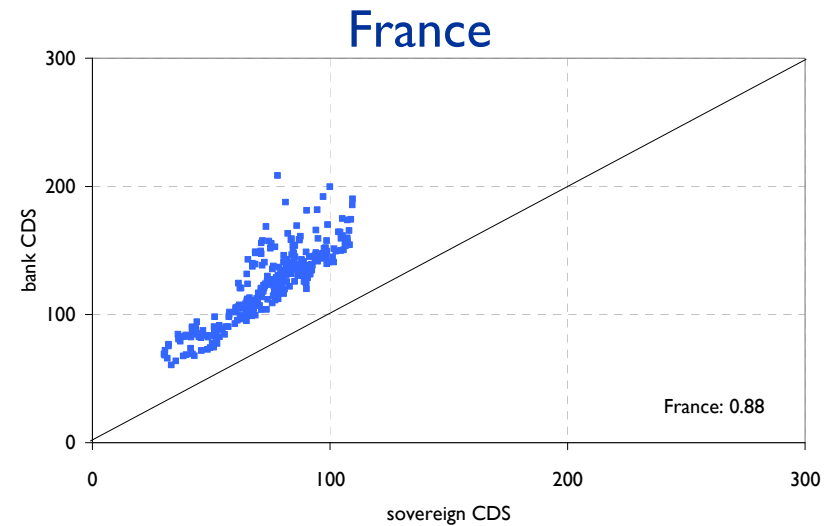
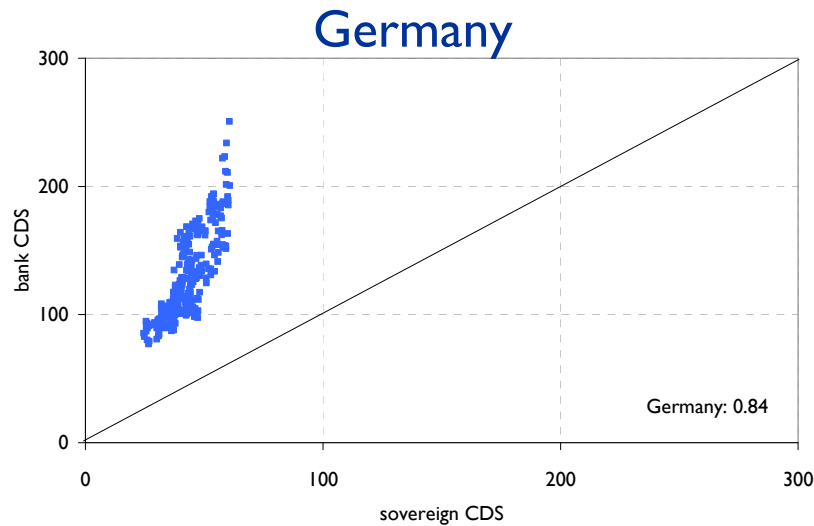
High correlation in all EA countries – although with different patterns



Source: Datastream and ECB calculations.

Note: The chart presents sovereign CDS and median bank CDS for daily observations in the period 1.1.2010 – 18.03.2011, and the correlation coefficient. Diagonal line at 45°. Data in basis points.

Correlation between sovereign and bank credit risk for UK and US is virtually zero

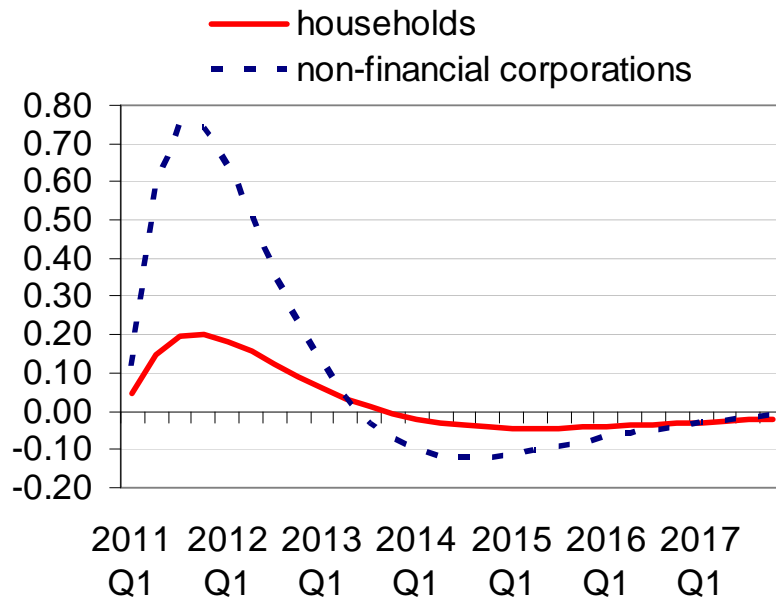


Source: Datastream and ECB calculations.

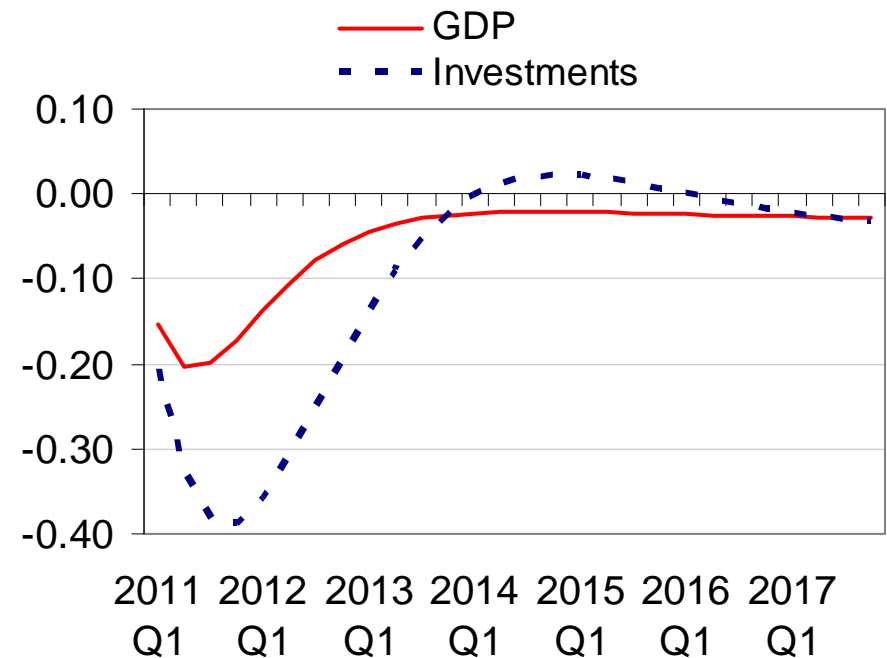
Note: The chart presents sovereign CDS and median bank CDS for daily observations in the period 1.1.2010 – 18.03.2011, and the correlation coefficient. Diagonal line at 45°. Data in basis points.

Lack of credible implementation would increase banks' funding costs

Impact on lending rates



Impact on GDP and investments



Note: Impacts expressed as % deviation from the baseline.

Source: The scenario is estimated by using the benchmark model of “Macroeconomic propagation under different regulatory regimes – evidence from an estimated DSGE model for the Euro area”, Matthieu Darracq Pariès, Christoffer Kok Sorensen and Diego Rodriguez Palenzuela, ECB Working Paper no 1251, October 2010

A comment on the report by The European House-Ambrosetti

The extreme scenario

- **The extreme scenario outlined in the report assumes that, to be compliant to Basel III, Italian banks will reduce credit to households and (non-financial) firms by up to 24% vis-à-vis 2009**
- **BUT, banks can be compliant also by increasing capital**
 - **Fresh capital can be attracted by making the Italian banking system more efficient, improving its ROE *without* necessarily increasing leverage and risks**

Let's think “European” !

- **How to attract capital in the banking system ?**
- **One way not much explored is to make the EU financial (and in particular banking) system more integrated**
 - **Competition can enhance efficiency and open up new markets**
 - **In this context compliance to the new rules would be key to ensure a resilient and less crisis-prone banking system**

Stress tests

Communication strategy is key

- **A new round of stress tests is being carried out between March and June**
- **The success of the stress test exercise crucially depends on the communication strategy**
 - **Market participants need to fully understand the exercise**
- **Communication has to be clear**
 - **National authorities cannot engage in a “beauty contest” -type exercise**
- **Supervisors should coordinate their communication strategy closely within the EBA**

Tougher conditions increase the **rigour and credibility** of the exercise, which help restore confidence

- **Vis-à-vis the previous round of stress tests (July 2010), this time:**
 - **The exercise is performed assuming more adverse scenarios**
 - **National supervisors and banks will have less discretion**
- **Differently from what some commentators seem to suggest, this time stress tests will be credible and more rigorous**

This time the GDP decline is assumed to be larger

- **Current exercise:**
 - **- 4%** (cumulative in 2011 & 2012 on EU)
with 1% probability for 2011
- **Past exercise:**
 - **- 3%** (cumulative in 2010 & 2011 on EU)
with 7% probability for 2010
- **GDP measure encompasses parameters changes due to interest rates, haircuts, PD, ...**

This time national supervisors and banks will have less discretion

- **This time EBA will give direct guidance regarding the definition and projection of pre-provision operating profits, including the increased cost of funding**
- **The thresholds will be set at levels substantially higher than the current minimum solvency requirements**

In case a bank is insufficiently capitalised ...

- **If a bank is found to have insufficient capital under stress, supervisors should require that it raises extra capital**
 - **Private sources (e.g. rights issues)**
 - **Profits – by restricting dividends**
 - **National government should offer backstop facilities**

However “over-capitalisation” is not panacea

- **Raising the quality and quantity of capital is crucial: it will help ensuring the solvency of the banking system**
- **Liquidity issues, however, should be addressed with different tools**
 - **Basel III rules have opted for specific quantitative provisions – outright liquidity ratios – and rightly so**
 - **This should improve the management of liquidity risk, which is a cash-flow risk, and cannot be fully addressed via capital requirements only**

Background slides

Basel III: main design

Main design elements of the Basel reform package (I)

- **Revised capital requirements (risk based)**
 - **New definition of capital**
 - **Strengthened risk coverage**
 - **Increased minimum capital requirements**
 - **Introduction of capital buffers on top of the minimum requirements**
 - **capital conservation buffer**
 - **counter-cyclical capital buffer**

Main design elements of the Basel reform package (2)

- **Leverage ratio (non-risk based) – supplementary measure**
- **Liquidity framework**

Capital requirements (I)

- **Crisis experiences:**
 - **Insufficient capital base to absorb losses**
 - **need for recapitalisation, involving taxpayers' money**
 - **Inadequate transparency of banks' capital position**

Capital requirements (2)

- **Regulatory response**

- **Enhancing the quality (i.e. loss absorbency) of the capital base**
 - **Focus on core elements of capital (common equity)**
 - **Further regulatory adjustments (items not having sufficient loss absorbing capacity will be deducted from capital)**
- **Increasing the quantity of capital (minimum + buffers)**
- **Ensuring harmonisation and consistent application of requirements**
- **Improving banks' disclosure about their regulatory capital**

Leverage ratio (I)

- **Crisis experiences:**
 - Many banks built up excessive leverage before the crisis while still showing strong risk-based capital ratios
 - Highly leveraged institutions proved to be more prone to failure

Leverage ratio (2)

- **Regulatory response**
 - Introduction of a leverage ratio as a supplementary, non-risk based measure
- **Design/formula:**

$$\text{Leverage ratio} = \frac{\text{Capital measure (Tier 1 capital according to the new definition)}}{\text{Exposure measure (on-balance sheet and off-balance sheet items)}}$$

Liquidity risk standards (I)

- **Crisis experiences:**
 - **Over-reliance on short-term market funding to finance longer-term assets**
 - **Faulty assumptions and plain disregard of market liquidity**
 - **Neglect of certain sources of cash flow drains (e.g. margin requirements)**
- => Inadequacy of liquidity risk management at many firms**

Liquidity risk standards (2)

- **Regulatory response**
 - **Raising international liquidity risk standards**
 - **Introduction of “Principles for Sound Liquidity Risk Management and Supervision” in 2008**
 - **Regulatory liquidity risk framework as part of Basel III, issued in 2010**

Two liquidity risk standards (I)

I. Liquidity Coverage Ratio (LCR):

$$\text{LCR} = \frac{\text{Stock of highly liquid assets}}{\text{Expected net cash outflow in 30 days}} \geq 1$$

- **Purpose:**
 - Establish a minimum level of high-quality liquid assets to withstand an acute stress scenario lasting one month

Two liquidity risk standards (2)

2. Net stable funding ratio (NSFR):

$$\text{NSFR} = \frac{\text{Available amount of stable funding}}{\text{Required amount of stable funding}} \stackrel{!}{\geq} 1$$

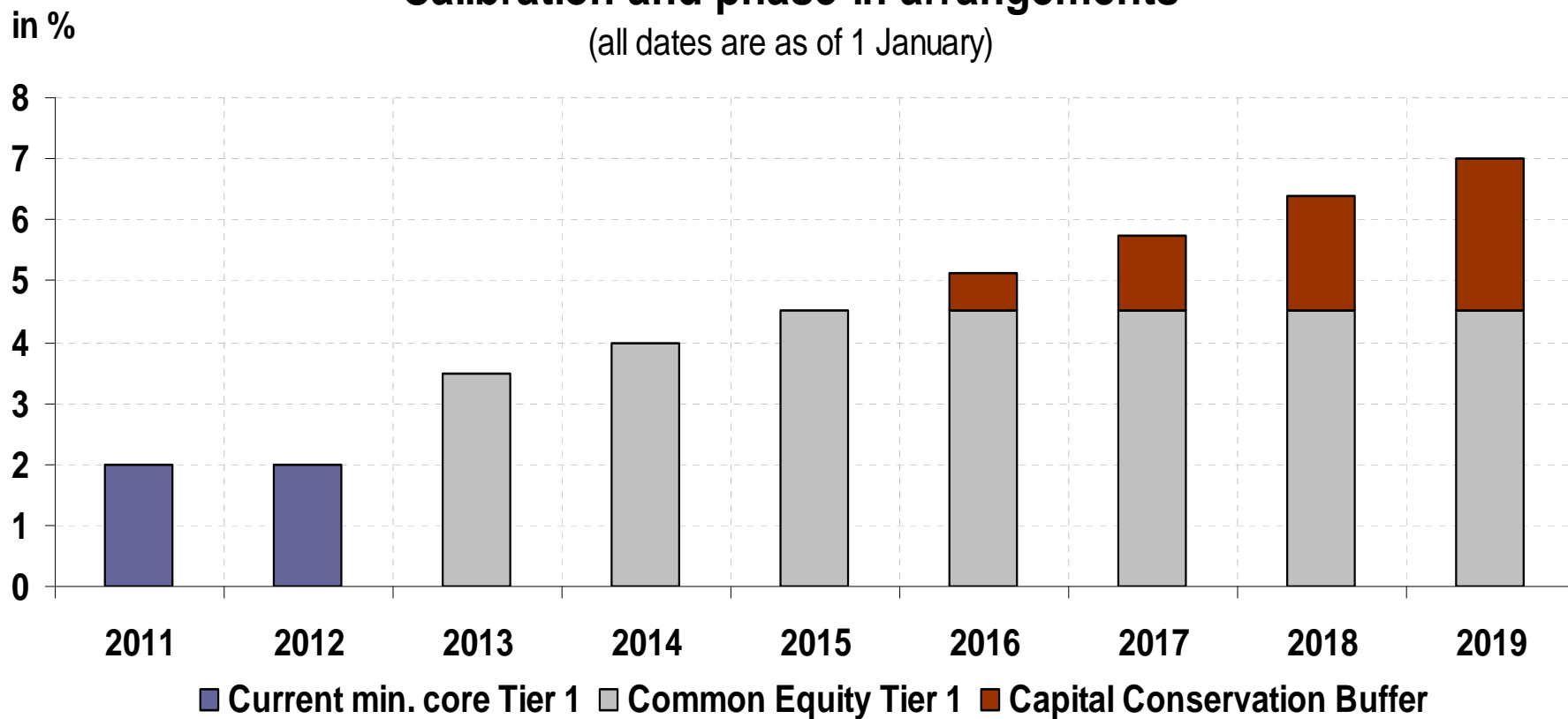
- **Purpose:**

- To ensure a closer alignment of the funding of longer-term assets or activities by more stable medium or longer-term liability and equity financing

Calibration and phase-in arrangements

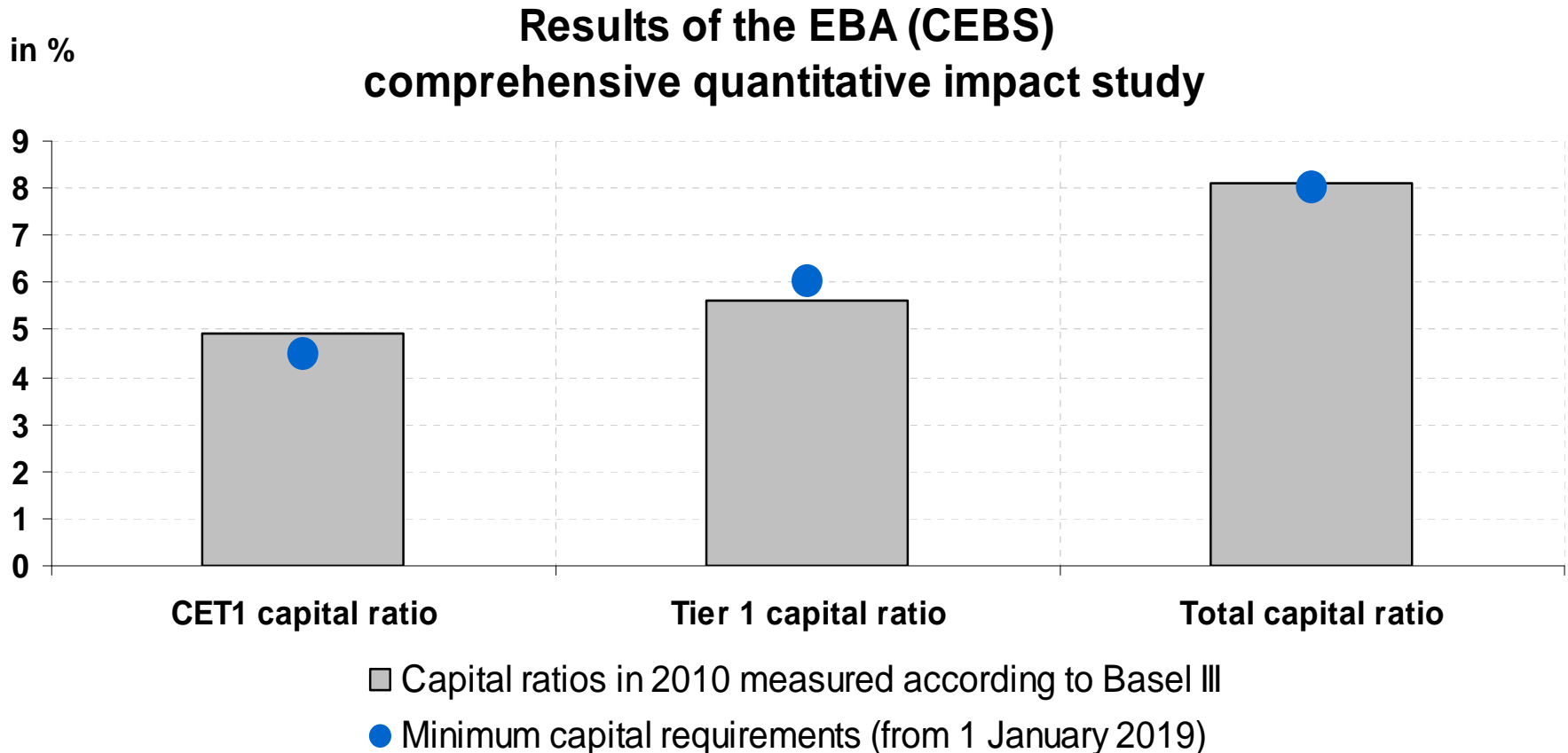
Calibration and phase-in arrangements

(all dates are as of 1 January)



Source: BCBS.

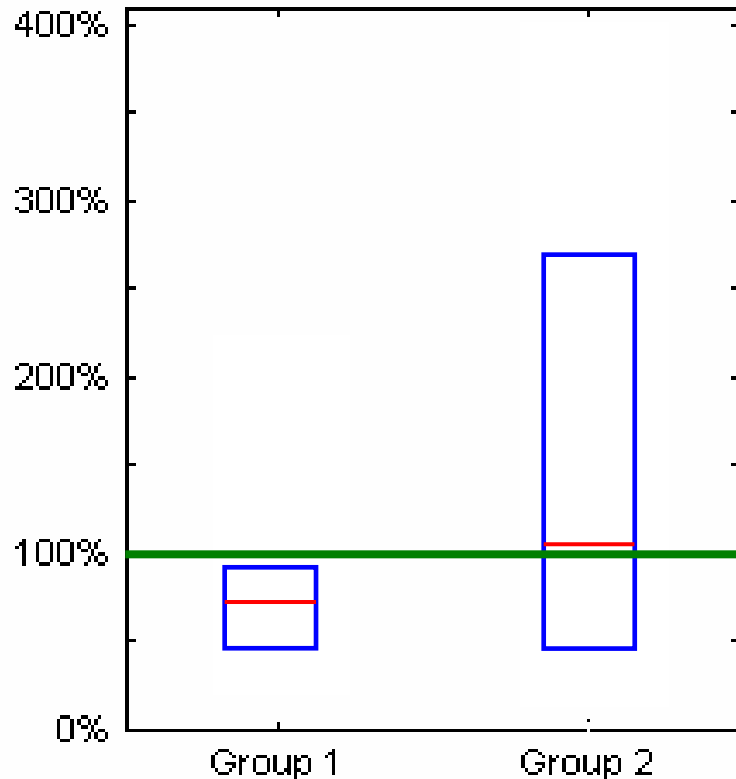
The new capital rules will decrease the capital ratios of large banks in the EU



Source: CEBS QIS, 10/12/2010.

Impact of the Liquidity Coverage Ratio on EU banks

LCR impact for Group 1
and Group 2 banks



Median of large internationally active institutions below 100% level

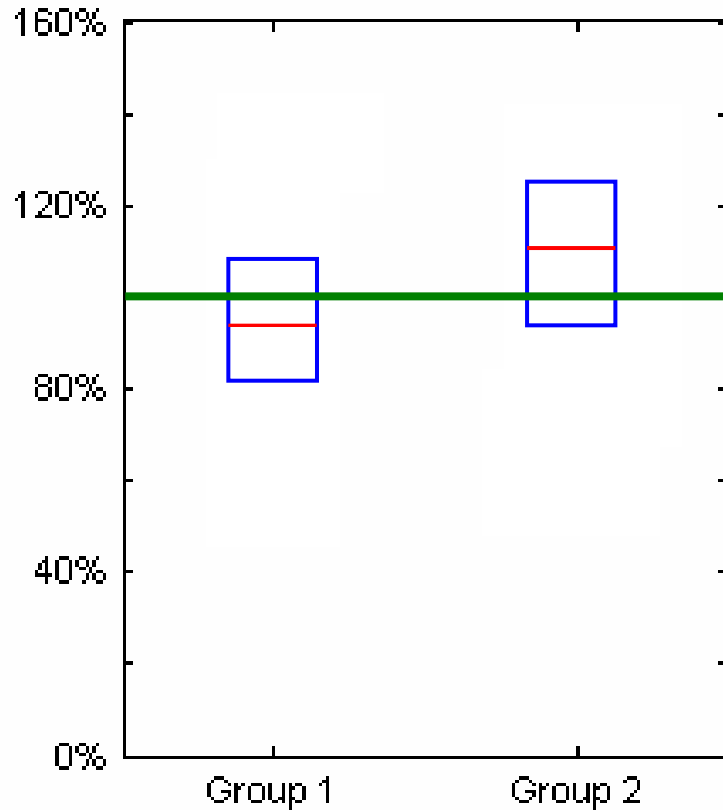
Large dispersion of impact of LCR on banks in both groups

The bar chart shows the dispersion in the impact of the regulation, with the red line representing the median impact for the two respective groups. Group 1 banks are large, internationally active financial institutions. Group 2 banks are smaller, locally oriented institutions.

Source: CEBS, Results of the Comprehensive Quantitative Impact Study, 16 December 2010

Impact of the Liquidity Coverage Ratio on EU banks (2)

NSFR impact for Group 1
and Group 2 banks



**Median of large
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**Dispersion of impact of
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Source: CEBS, Results of the Comprehensive Quantitative Impact Study, 16 December 2010

Thank you for your attention!