



CROATIAN NATIONAL BANK

---

# Efficiency of European financial sector in allocating finance

European Investment Bank, 17th November 2016  
Financing Productivity Growth in Europe

**Boris Vujčić**, Governor  
e-mail: [boris.vujcic@hnb.hr](mailto:boris.vujcic@hnb.hr)

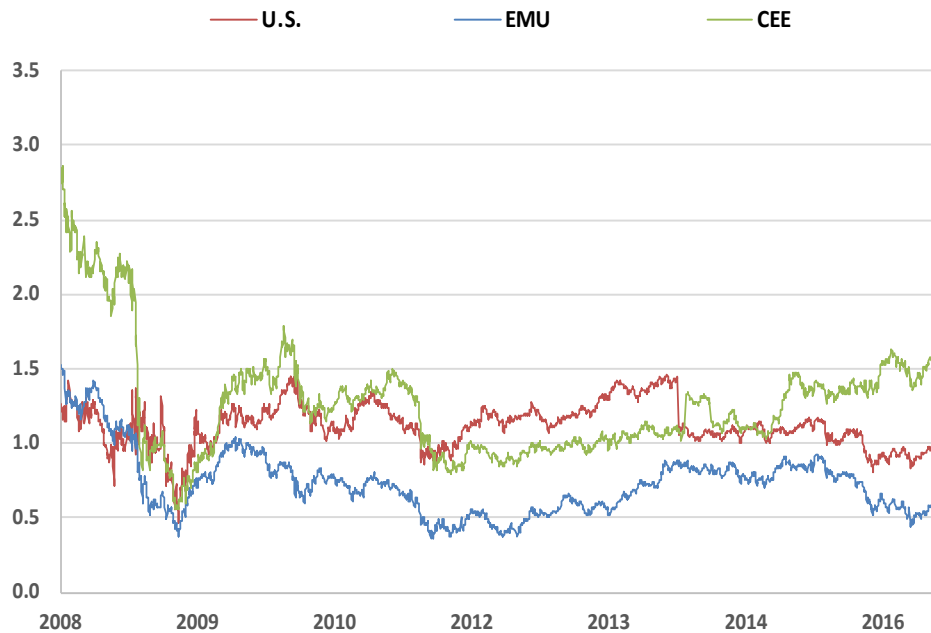
---

***Where are we today?***

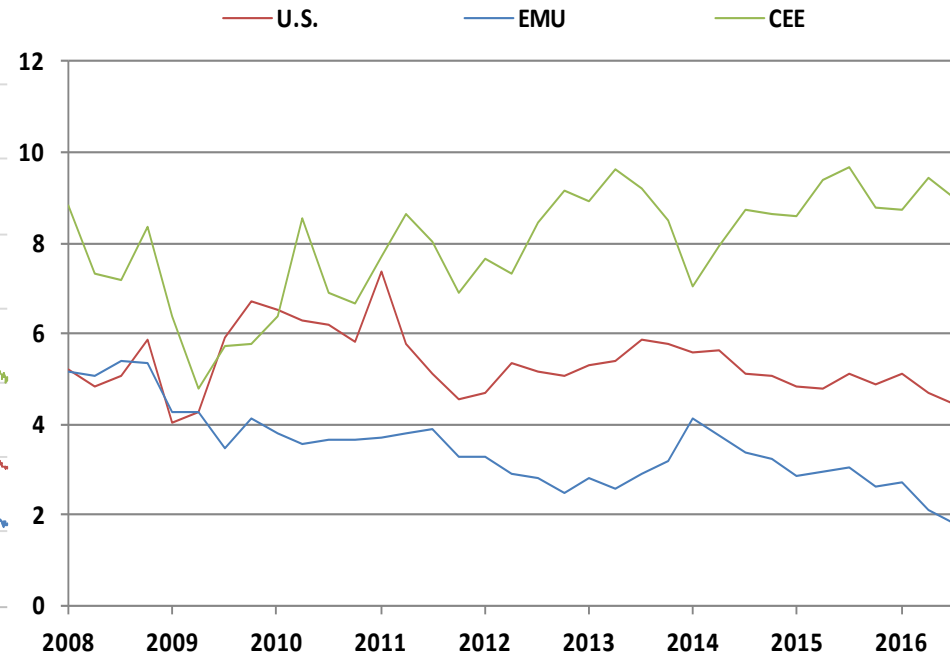
# Since the beginning of the crisis the markets doubt about the EMU vs U.S. banks business model

## CEE still seen as better performer by the market, despite higher cost of equity

### Price-to-book ratio



### Banks' cost of equity

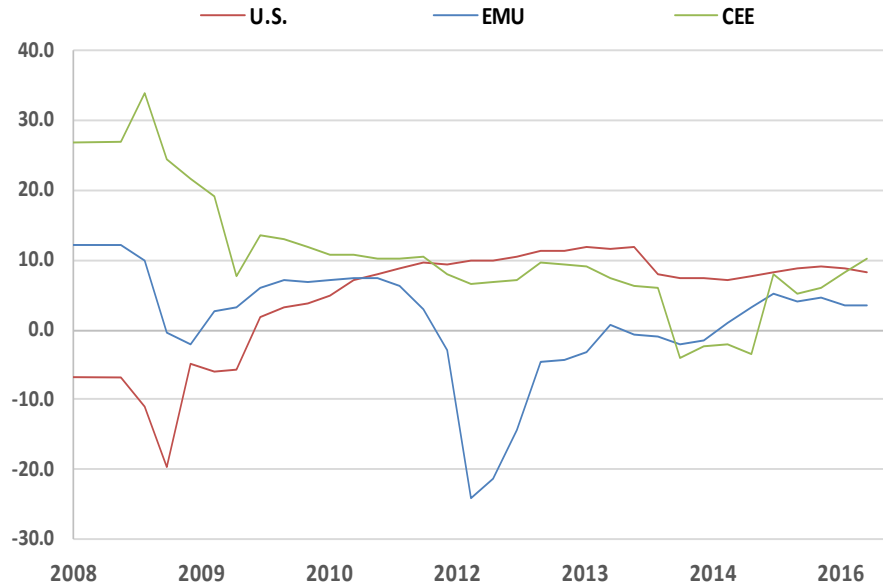


Notes: Based on the sample of 26 euro area banks included in the EURO STOXX index and 17 U.S. banks included in S5BANKX index. Cost of equity (COE) and price-to-book ratio (P/B ratio) are the weighted average (by market capitalization) of individual WACCs i.e. P/B ratios.

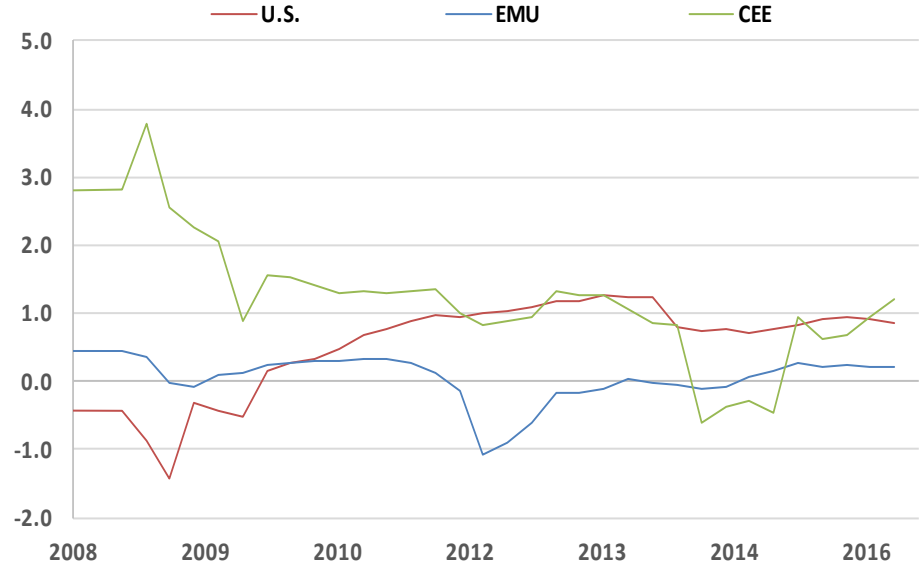
Sources: Bloomberg and CNB calculations.

# Low profitability and low credit growth impedes resolution of NPLs

## Return on equity (ROE)



## Return on assets (ROA)

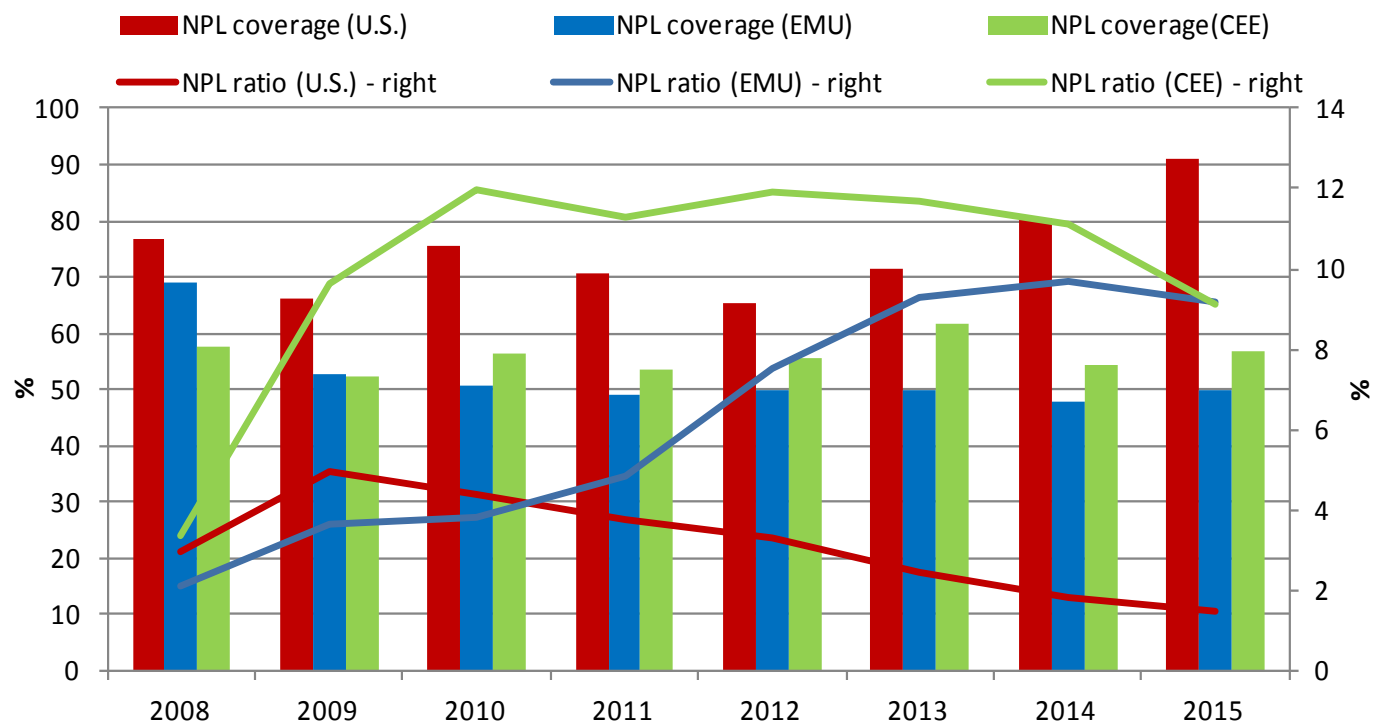


Notes: Based on the sample of 26 euro area banks included in the EURO STOXX index and 17 U.S. banks included in S5BANKX index. Return on equity (ROE) and return on assets (ROA) are the weighted average (by market capitalisation) of individual ROEs i.e. ROAs.

Sources: Bloomberg and CNB calculations.

- ❑ EMU banks operate in an environment of low interest rates, low growth, and increased competition from non-banks. EU banks profitability is low in historical standards and in comparison with other banking systems.
- ❑ Unlike EMU banks, US banks recovered their profitability swiftly after the crisis

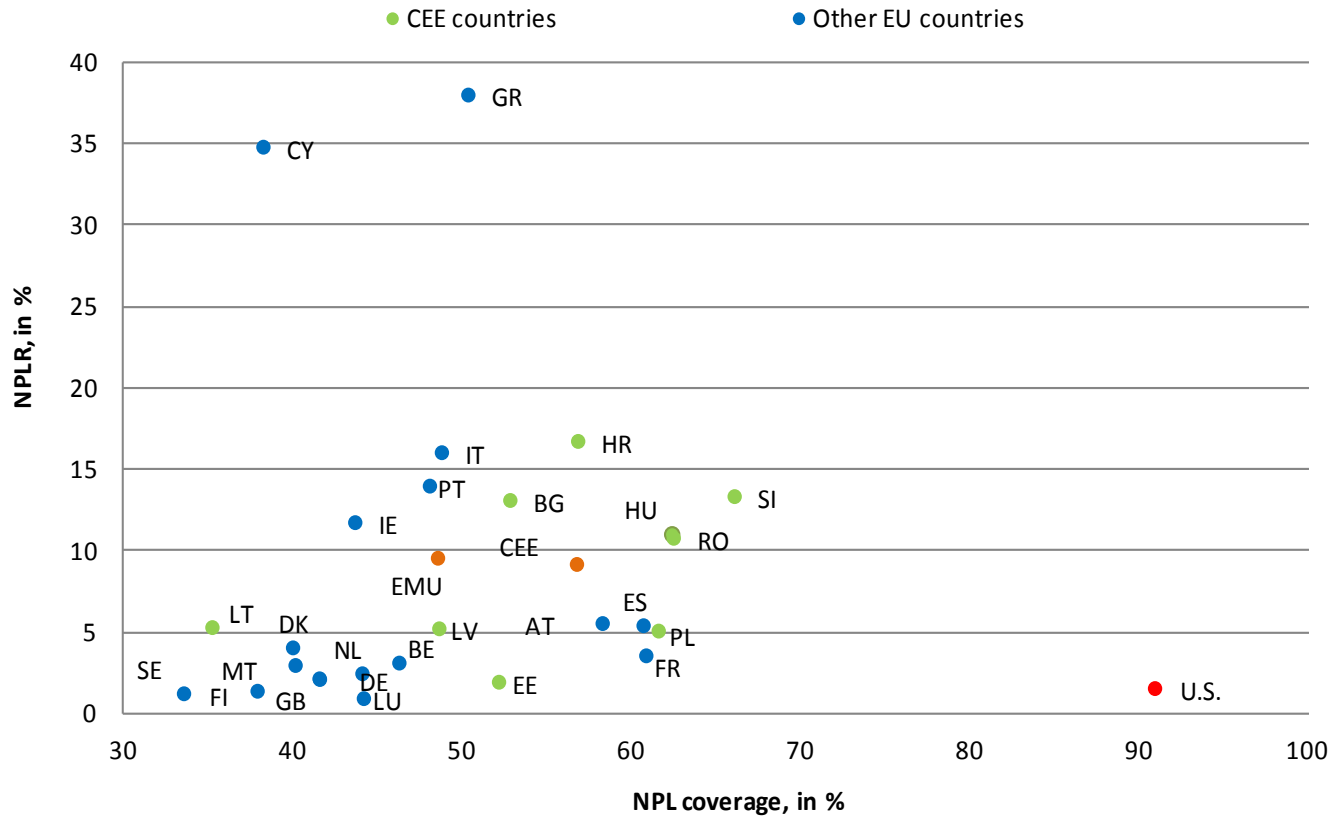
# Despite the initial higher increase of NPL ratio in the CEE, NPL ratio of EMU banks declined slower after crisis



Notes: No data for Czech Republic and Slovakia. EMU and CEE data represent the simple average NPLRs and NPL coverages of corresponding countries.

Sources: CNB (for Croatia), Consolidated Banking Data 2 (ECB) and FED (for U.S.)

# However, NPL ratios and coverage levels vary significantly across the countries

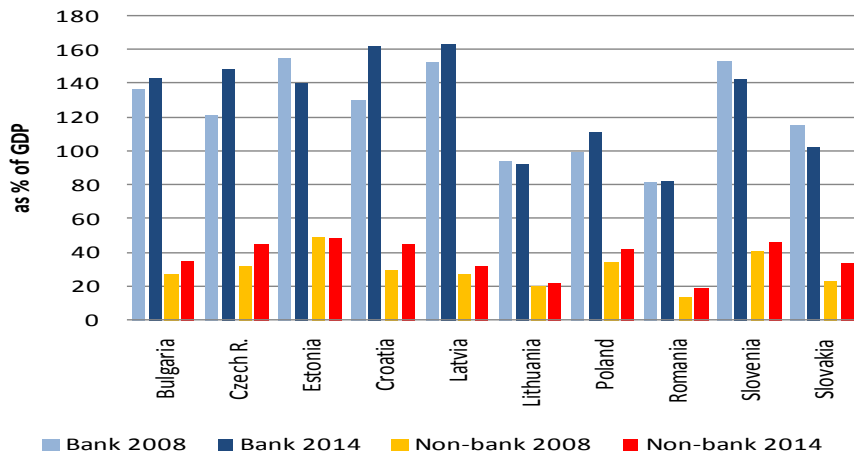


Notes: Data refer to Q4-2015. No data for Czech Republic and Slovakia. EMU and CEE data represent the average NPLR and NPL coverage of corresponding countries. CEE countries are shaded in green and other EU countries in blue.

Sources: CNB (for Croatia), Consolidated Banking Data 2 (ECB) and FED (for U.S.)

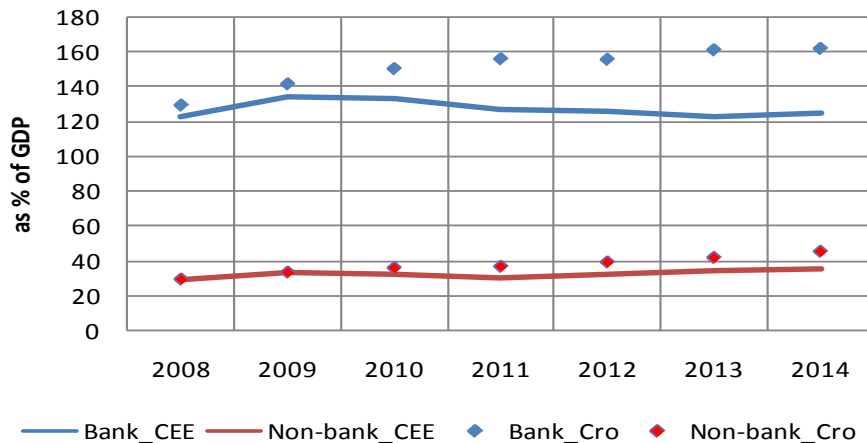
# Financial structure in CEE countries: share of bank and non-bank financial intermediaries

## Financial intermediaries' assets



Financial systems in all CEE countries are still dominantly bank-centric, so bank intermediation channel is very important.

## Average financial assets in CEE countries and Croatia



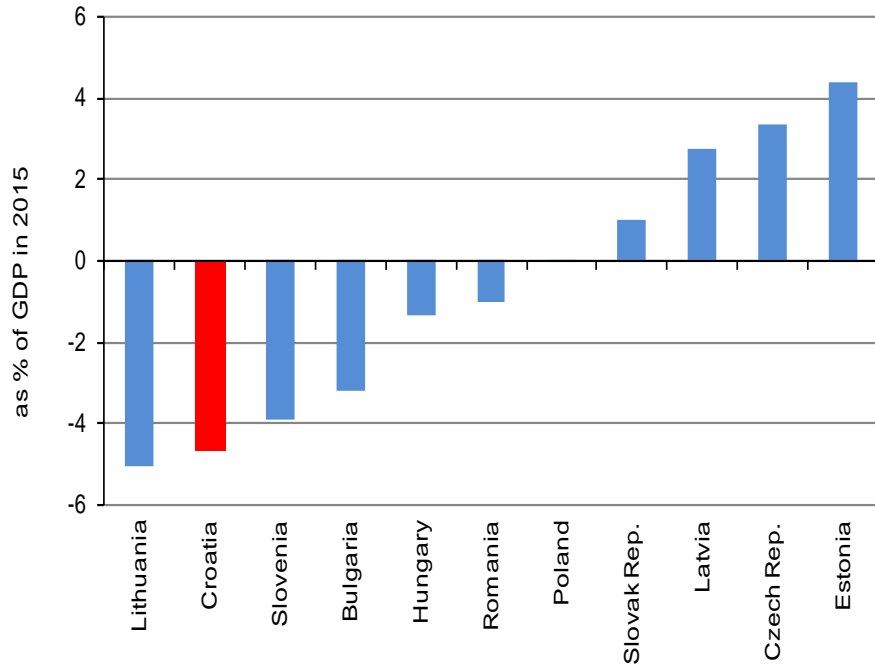
Growth in financial assets of non-bank intermediaries in Croatia mostly due to increasing share of mandatory pension and investment funds.

Note: Datas for Hungary are not adequate.

Source: Eurostat

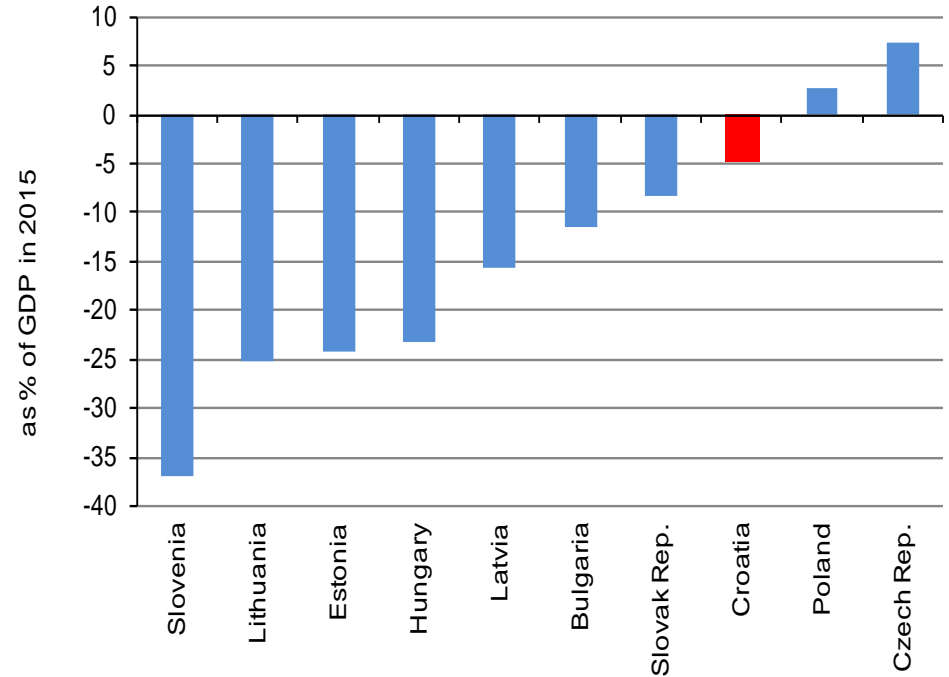
# Deleveraging of banks in CEE

Between q4 2014 and q4 2015



Sources: CNB and national central banks.

Between September 2008 and December 2015



Sources: CNB and national central banks.



---

***Major changes of regulatory framework and its implications***

# Basel III has strengthened macroprudential regulatory framework as respond to the crisis

---

The latest global financial crisis shown that there is a need for macroprudential policy in addition to maintaining price stability and microprudential policy (safeguarding financial institutions).

- ❑ “Macroprudential policy aims at “limiting systemic risk”, i.e. the risk of widespread disruptions to the provision of financial services that have serious consequences for the real economy” (CGFS, 2014).
- ❑ “Basel 2.5” package (BCBS, 2009) included measures to strengthen the trading book capital requirements under Basel II and Basel III introduced (inter alia) a new definition of capital, comprehensive quantitative framework for regulating the banks’ liquidity (LCR, NFSR), capital buffers (capital conservation buffer, counter-cyclical buffer).
- ❑ **However, we still do not know enough about effects and efficiency of various instruments**

# Some effects of macroprudential measures on credit growth

---

In terms of connection bank and non bank credit growth with quantity-based (Loan-to-Value, Debt-to-Income etc.) and price-based measures (Counter-cyclical Requirements, Dynamic Provisioning etc.) for AEs and EMEs (Cizel et al., IMF, 2016) MaP measures tend to:

- a) slow the growth rate of bank credit and increase the growth rate of nonbank credit
- b) reduce the net sectoral credit flow (i.e. stimulate cross-sector substitution to nonbank credit)
- c) reduce the growth rate of total credit (i.e. substitution effect do not fully compensate the impact on bank credit)
- d) substitution effects are stronger in AEs than in EMEs
- e) the effects are stronger when the measures directly constrain credit

# Empirical and theoretical effects of higher bank capital requirements

---

- a) helpful in reducing systemic risk-taking and thus decrease the cost and frequency of systemic crises (Martinez-Miera and Suarez, 2014)
- b) increases the franchise value of core banking activities and new funds can be used for investment in risky market-based activities (Martynova et al., 2014)
- c) makes the provision of credit more stable and robust even in economic downturns and have a positive long-run effect on GDP growth (Martynova, 2015)
- d) increase in Tier 1 capital to RWA by 1.p.p. will increase the weighted average cost of capital by 6-9 b.p. per year (Baker and Wurgler, 2013)
- e) forcing a banking group to increase its Core Tier 1 ratio by 1 p.p. was associated with a reduction in this group's credit growth by 1.2 p.p (Messonnier and Monks, 2014)

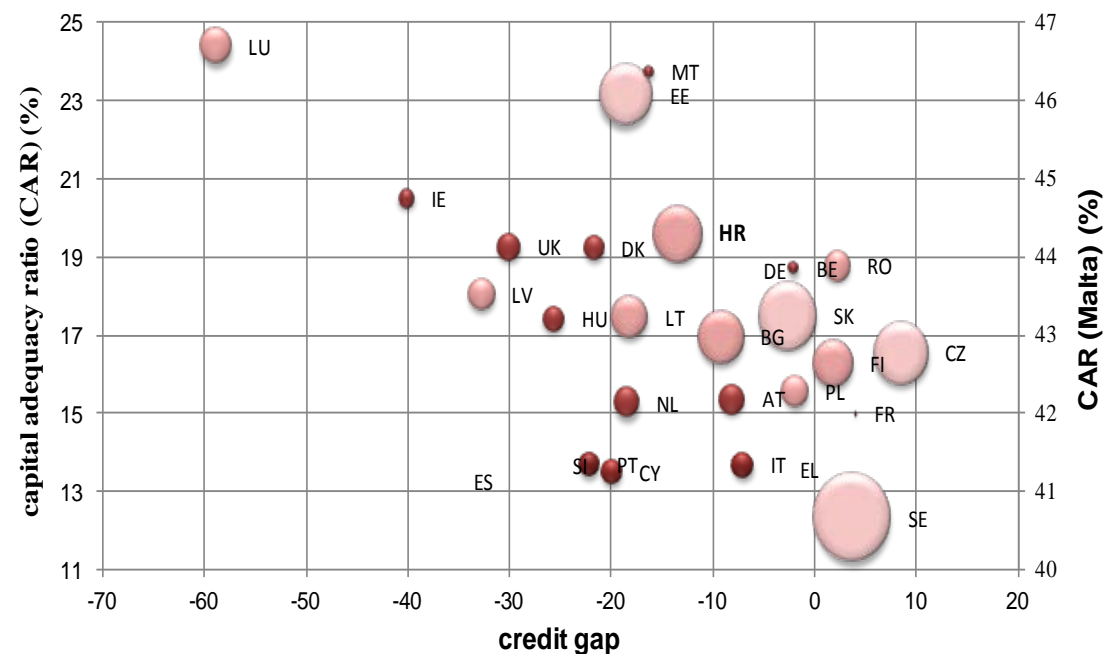
## ...but from CEE (Croatia's) point of view

---

- ❑ Traditionally higher capital positions found in most EM (for instance in Croatia) in comparison to those in advanced economies caused **somewhat smaller** capitalization pressures and heightening of other regulatory standards.
- ❑ Direct impact to increase in RWA for trading exposures was **not significant** due to the limited volumes of Croatian banks trading books.
- ❑ LCR maintaining requirement was not currency differentiated, but **foreign currency risk** is still being closely monitored and limited through different control measures (for instance Minimum Required Amount of Foreign Currency Claim).

# Introducing measures of macroprudential interest took into account the financial cycle and the level of capitalisation of the banking system

## Intensity of measures of macroprudential interest relative to the initial capitalisation of the banking system and credit gap



□ The macroprudential measures implemented by the states that are closer to the upward phase of the financial cycle (measured by the credit gap) are on average slightly more intensive.

□ The intensity of measures within similar levels of the credit gap is more uneven among the states that are closer to the upward phase of the financial cycle.

□ This intensity for Croatia corresponds with a higher level of capitalisation of the banking system.

Notes: Credit gap is defined as the difference between the credit-to-GDP ratio and its long-term trend. Intensity of measures taken by a specific state is represented by the size of “bubbles” and expressed in a relative relation to the largest observed intensity in the states under consideration.

Source: ECB and CNB calculations.

---

**Thank you for your attention!**

---

- **The process of creating a banking union**

Intensive cross-border financial activities in the EU and strong inter-linkages in financial stability conditions among countries and between banks and countries makes BU necessary and reasonable step in further financial integration process.

- In general, **positive effects** are enhancing financial stability (weakening links between sovereigns and banks, level playing field, more effective supervision), maintaining the integrity of the single market (common supervisory practice, harmonized regulation, reduced compliance costs for cross border banks), ensuring that positive long-run benefits and negative short-run costs of macro-prudential policy are internalized not only nationally but also Union-wide.
- Majority of **negative effects** arise from transition to the envisaged structure of the BU. Implementation process is still ongoing and there are still some uncertainties.





## ...but from Croatia's point of view

---

- ❑ As paradox, joining BU immediately could in fact increase financial stability risks.
- ❑ Since some banks would fall under SSM, and other not, the question of dealing with market fragmentation arises as banks outside of SSM could be perceived riskier. This could lead to deposit prices and competition differences in two artificially created banking systems.
- ❑ The possibility of shifting bank capital across borders without fully internalizing financial stability considerations.
- ❑ As an EU member outside of the Eurozone, Croatia faces no pressure to join immediately. However, Croatian can join BU anytime it decides (before entering the Eurozone) and this position leaves some tactical buffer in form of exercising a “wait and see” strategy.