

# Macroprudential Institutional Arrangements: Recent Developments and Role of the Central Bank

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*Note: This presentation should not be reported as representing the views of the NBR. The views expressed in this presentation are those of the author and do not necessarily represent those of the NBR.*

**BANCA NAȚIONALĂ A ROMÂNIEI**



# Outline

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1. Key features of the macroprudential policy
  1. Concept
  2. Objectives
  3. Instruments
  
2. Institutional arrangements – the role of the Central Bank
  1. Mapping involvement in the macroprudential policy
  2. Recommendation ESRB/2011/3 on the macroprudential mandate of national authorities
  3. Case study – Determinants of institutional arrangements
  
3. Conclusions

## 1.1. Concept

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- Origin during the late 1970s – unpublished minutes of the Cooke Committee (present BCBS) and a document prepared by the Bank of England – systemic orientation of regulation and supervision linked to the macroeconomy
- BIS Report “Recent innovations in international banking” (1986) – policy aimed at supporting “the safety and soundness of the financial system as a whole, as well as payments mechanism”
- Recent financial crisis brought a strong increase in discourse and research related to macroprudential policy

## 1.2. Objectives

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- Recommendation ESRB/2013/1 on intermediate objectives and instruments of macroprudential policy
- Ultimate objective:
  - to contribute to the safeguard of the financial system as a whole, including by strengthening the resilience of the financial system and decreasing the build-up of systemic risks
- Intermediate objectives:
  - to mitigate excessive credit growth and leverage
  - to mitigate excessive maturity mismatch and market illiquidity
  - to limit direct and indirect exposure concentrations
  - to limit systemic impact of misaligned incentives – reducing moral hazard
  - to strengthen the resilience of financial infrastructures

## 1.3. Instruments

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- Mitigate and prevent excessive credit growth and leverage
  - Counter-cyclical capital buffer
  - Sectoral capital requirements (incl. intra-financial system)
  - Macroprudential leverage ratio
  - Loan-to-value requirements (LTV)
  - Loan-to-income / debt (service)-to-income requirements (LTI)
- Mitigate and prevent excessive maturity mismatch and market illiquidity
  - Macroprudential adjustment to liquidity ratio (e.g. liquidity coverage ratio)
  - Macroprudential restrictions on funding sources (e.g. net stable funding ratio)
  - Macroprudential unweighted limit to less stable funding (e.g. loan-to-deposit ratio)
  - Margin and haircut requirements
- Limit direct and indirect exposure concentration
  - Large exposure restrictions
  - CCP clearing requirement
- Limit systemic impact of misaligned incentives with a view to reducing moral hazard
  - SIFI capital surcharges
- Strengthen the resilience of financial infrastructures
  - Margin and haircut requirements on CCP clearing
  - Increased disclosure
  - Structural systemic risk buffer

## 2.1. Institutional arrangements – Mapping MPP involvement

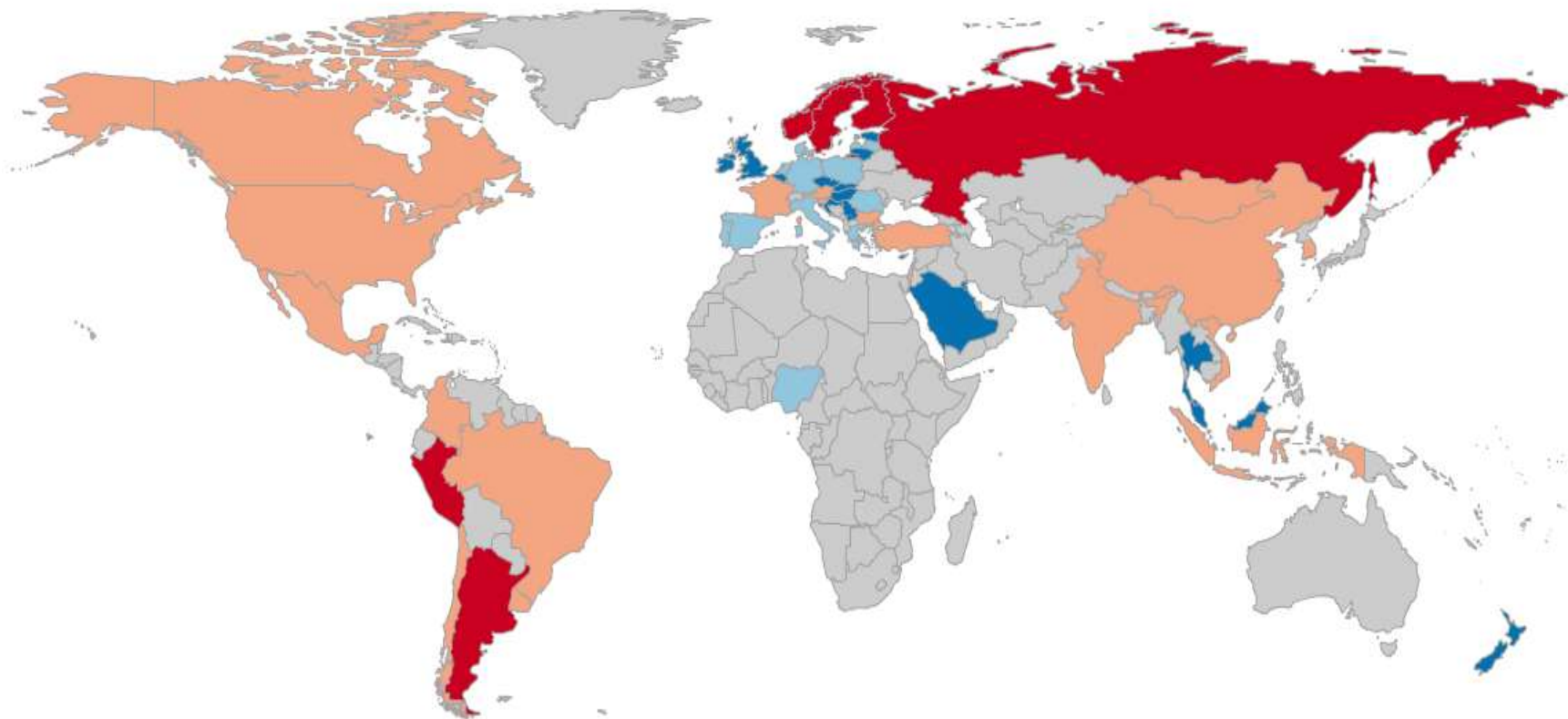
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- The Macprudential Framework: Policy Responsiveness and Institutional Arrangements, IMF Working Paper (2013) - Response time versus MaPP, MiPP, MoF indices
  - Clear relation for MaPP – leading role of central bank reduces policy response time
  - Unclear relation for MiPP and MoF, though benefits for government involvement
- The MaPP index:
  - 1 – No coordination body
  - 2 – CB is a member of a coordination body
  - 3 – CB chairs the coordination body
  - 4 – CB is the sole owner of the mandate
- The MoF index:
  - 1 – No coordination body, or Government is not a member
  - 2 – Government is member/observer of the coordination body
  - 3 – Government co-chairs the coordination body
  - 4 – Government chairs the coordination body
- The MiPP index:
  - 1 – CB has no regulatory/supervisory functions
  - 2 – CB supervises the banking sector
  - 3 – CB supervises the banking sector and other part of the financial sector
  - 4 – CB supervises the entire financial sector



## Institutional arrangements – Central Bank involvement in the MPP

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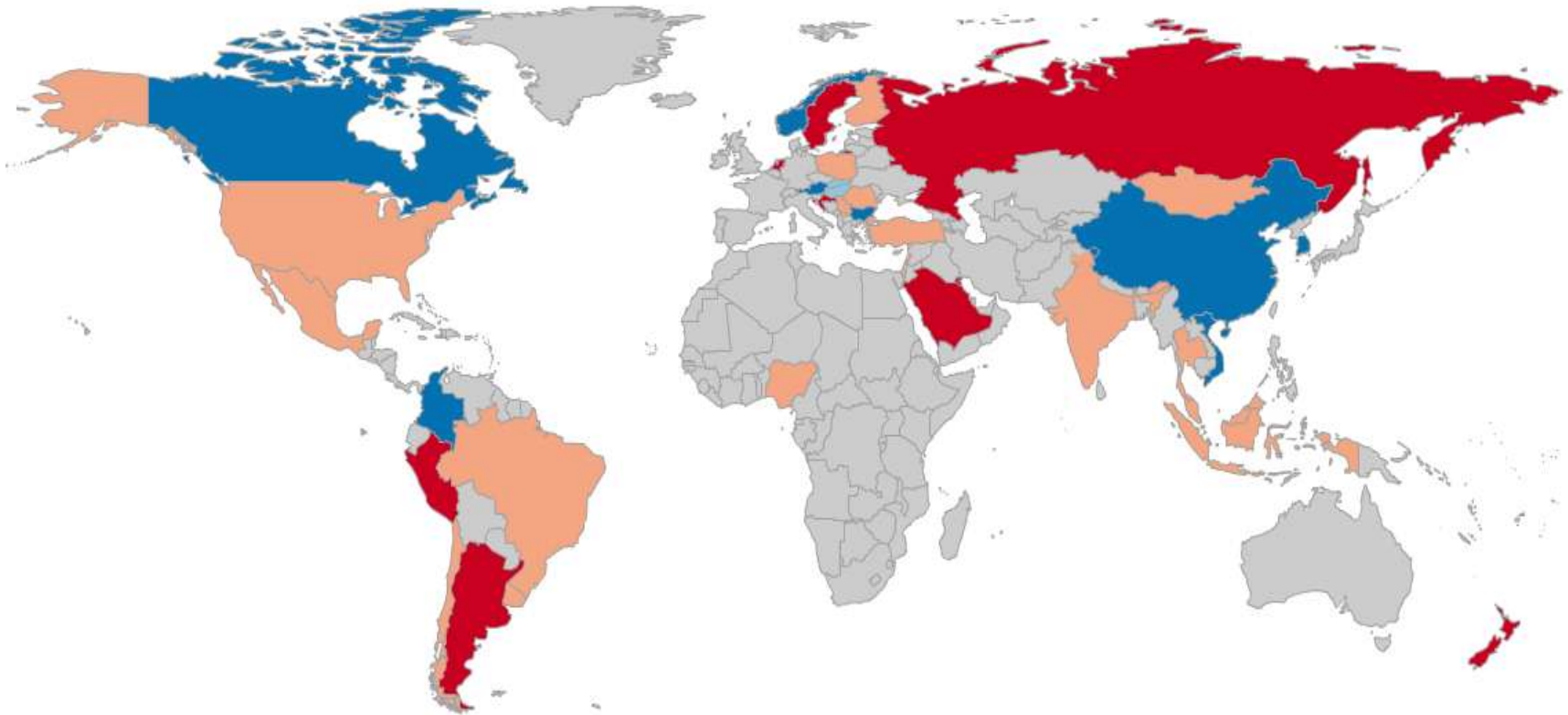


- Red – No coordination body
- Orange – CB is a member of a coordination body,
- Light blue – CB chairs the coordination body
- Blue – CB is the sole owner of the mandate

Source: IMF (2013), own calculations

## Institutional arrangements – Government involvement in the MPP

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- Red – No coordination body, or Government is not a member
- Orange – Government is member/observer of the coordination body
- Light blue – Government co-chairs the coordination body
- Blue – Government chairs the coordination body

Source: IMF (2013)



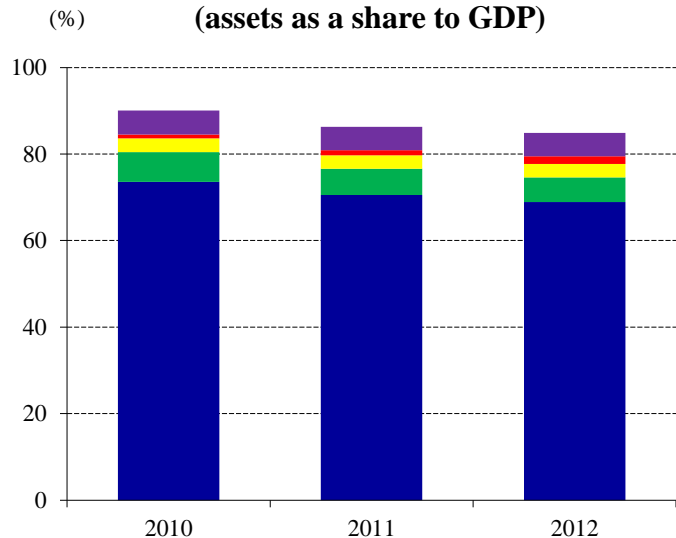
## 2.2. Recommendation ESRB/2011/3 on the macroprudential mandate of national authorities

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- Objective of the MPP
  - safeguard the stability of the financial system as a whole
  - to be pursued at national level
- Institutional arrangements
  - designate a national MPA – a single institution or a board of authorities
  - central role of the CB in the MPP and CB independence
- Tasks, powers, instruments
  - minimum tasks to identify, monitor and assess risks to financial stability and to implement policies to achieve its objective
  - power to access relevant data and to cooperate with microprudential supervisors
  - control over appropriate instruments
- Transparency and accountability
  - public disclosure of policy decisions and accountability to national parliament
- Independence
  - MPA to be independent from political bodies and financial industry

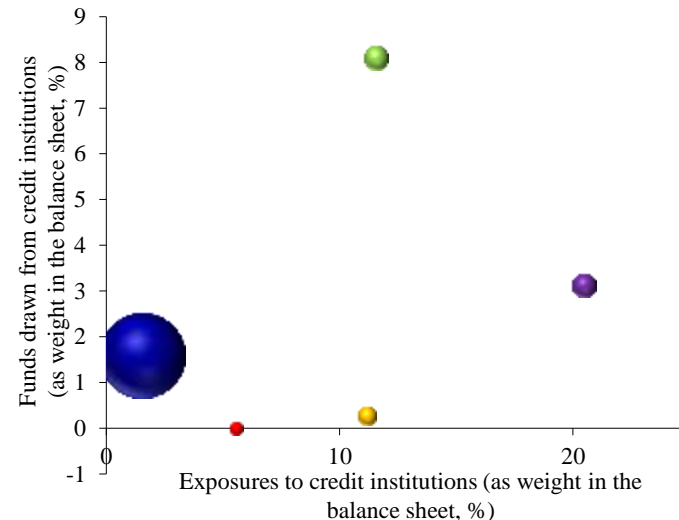
# Structure and main interlinkages of the Romanian financial sector

**Structure of the financial system  
(assets as a share to GDP)**



- Credit institutions
- Non-bank financial institutions
- Insurance companies
- Private pension funds
- Investment funds

**Main linkages between the banking sector and components of the financial system**



- Credit institutions
- Non-bank financial institutions
- Insurance companies
- Private pension funds
- Investment funds

Source: NBR's Financial Stability Review (2013)

# National Committee for Macroprudential Oversight

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Draft GEO on macroprudential oversight of the national financial system

- inter-institutional cooperation body (NBR, FSA, MoF), no legal entity, mandated to coordinate macroprudential oversight of the national financial system by defining macroprudential policy and determining the appropriate instruments for its implementation
- primary objective to contribute to the safeguarding of financial stability by strengthening the resilience of the financial system and decreasing the build-up of systemic risks, thereby ensuring a sustainable contribution of the financial sector to economic growth
- leading role of the NBR – chair and 3/8 members; MP policy does not affect the independence of the NBR
- tasks including coordination of financial crisis management, supervision of the implementation of ESRB recommendations and measures taken at national level as a follow-up to ESRB warnings and collaboration and exchange of information with the microprudential supervisory authorities, relevant authorities in the other Member States and the ESRB
- reporting to the Parliament
- independence from other public or private bodies

## 2.3. Case study – Determinants of institutional arrangements

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- Possible determinants of macroprudential institutional arrangements:
  - Macroeconomic environment
  - Financial development
  - Microprudential ratios
  - Structure of the financial sector
  - Policy options
- Case study: MP Role of the Central Bank
  - 7 Macroeconomic indicators
  - 15 Financial development indicators
  - 6 Microprudential ratios
  - 4 Financial sector weights
  - 1 MiPP Index
- Data sources:
  - IMF, World Economic Outlook (WEO)
  - World Bank, Financial Development and Structure Dataset and Global Financial Development Dataset
  - Own calculations

# Methodology

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## 1. Univariate criteria:

1. t-statistic ( $\alpha = 25\%$ )
2. Logical expected sign
3. Monotony

## 2. Multivariate criteria:

1. Correlations
2. Both forward and backward selection



## Results – Selected variables

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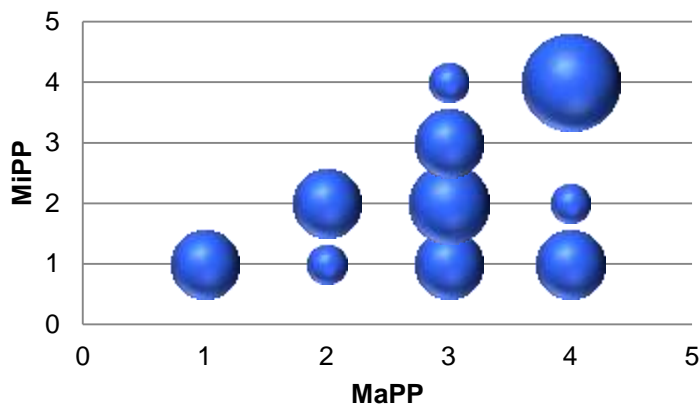
- Most of the tested variables were not statistically relevant
- Only 7 selected variables

<b>Explanatory variable</b>	<b>Category</b>	<b>Sign</b>	<b>R-squared</b>
Microprudential Policy Index	Policy options	+	0.2509
Bank Z-score	Microprudential	-	0.1881
GDP per capita (current US\$)	Macroeconomic	-	0.1561
Insurance assets to financial sector assets (%)	Financial sector structure	-	0.0917
Stock market total value traded to GDP (%)	Financial development	-	0.0849
Bank non-performing loans to gross loans (%)	Microprudential	+	0.0782
Net interest margin (%)	Microprudential	+	0.0700

# Results – Microprudential Policy Index

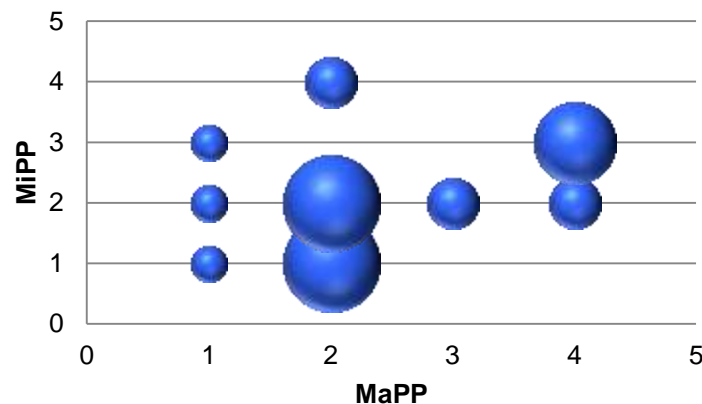
- Macroprudential institutional arrangements depend on the national framework for microprudential supervision

## Europe



	Coefficients	Standard Error	t Stat	P-value
Intercept	2.0828	0.3513	5.9296	0.0000
MiPP	0.4076	0.1382	2.9507	0.0066
R-squared				0.2509

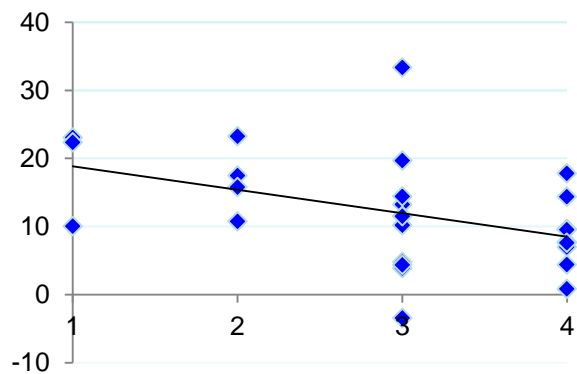
## World sample



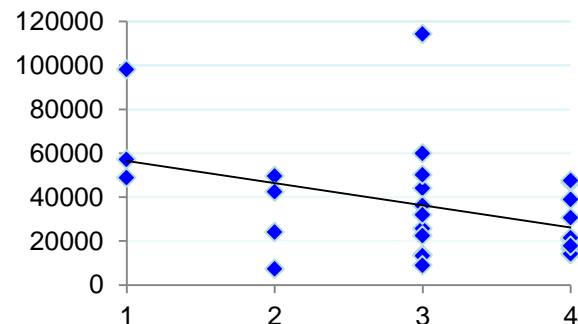
	Coefficients	Standard Error	t Stat	P-value
Intercept	1.6046	0.4550	3.5265	0.0016
MiPP	0.4150	0.2020	2.0541	0.0501
R-squared				0.1396

# Results – Other determinants

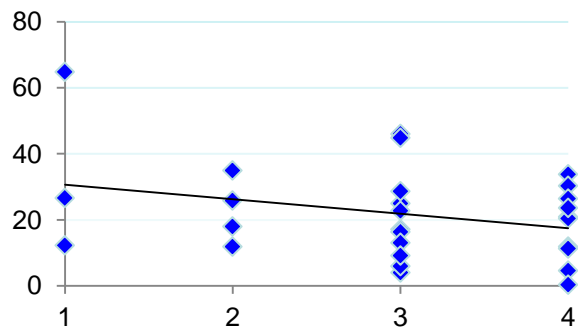
### Bank Z-score



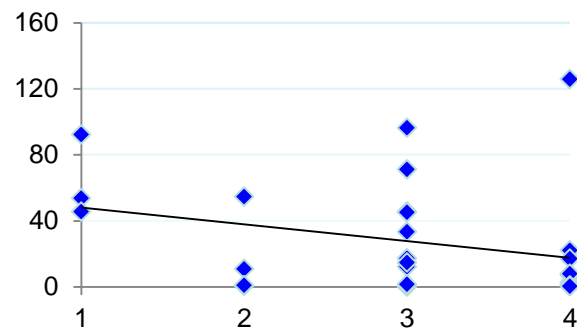
### GDP per capita (current USD)



### Insurance assets to financial sector assets (%)

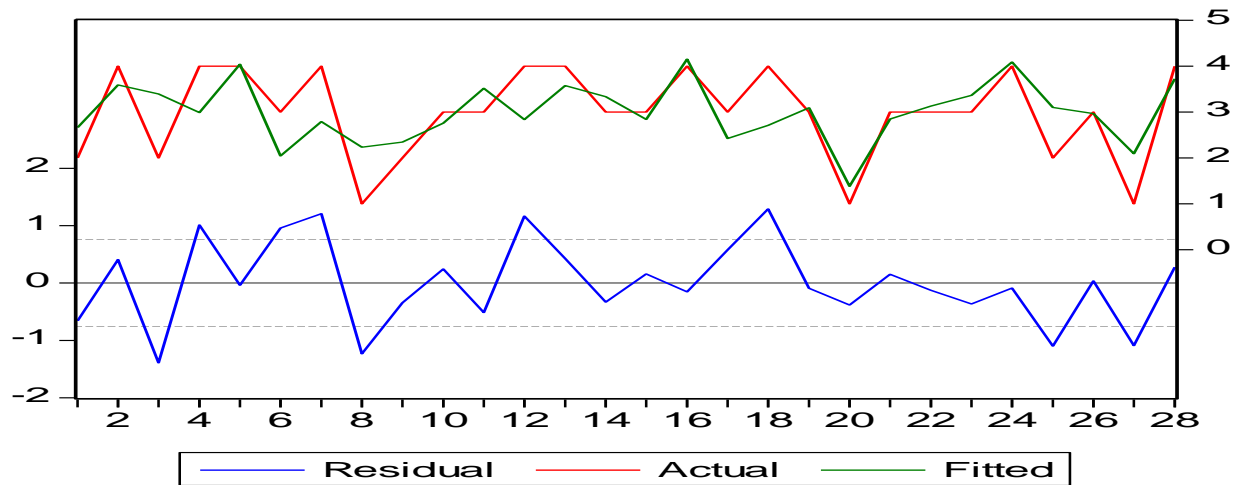


### Stock market total value traded to GDP (%)



# Results – Multivariate Model

Explanatory variable	Coefficient	Std. Error	t-Statistic	Prob.
Intercept	2.638466	0.3609	7.3118	0
GDP per capita (current US\$)	-0.0000173	0.0000	-2.9611	0.0066
Microprudential Policy Index	0.439451	0.1217	3.6109	0.0013
R-squared	0.4454	Mean dependent var	3.0000	
Adjusted R-squared	0.4010	S.D. dependent var	0.9813	



## Conclusions (1)

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- Worldwide diversity in macroprudential institutional arrangements
- Recommendation ESRB/2011/3 on the macroprudential mandate of national authorities
- EU convergence on general Central Bank involvement – leading role, although with different degrees of involvement
- Difficulty to explain institutional arrangements by quantitative data:
  - Macroeconomic environment
  - Financial development
  - Microprudential ratios
  - Structure of the financial sector



## Conclusions (2)

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- Most important explanatory variable is Central Bank involvement in microprudential supervision (MiPP). The relation is stronger in the EU.
- The Central Bank role in the macroprudential policy generally increased in the cases of:
  - higher CB involvement in microprudential supervision
  - lower bank resilience (Z-scores)
  - lower economic development (GDP per capita)
  - lower relative importance of non - bank financial sectors (insurance)
  - lower financial development (stock exchange transactions)
- Member States with less developed economies, having more supervisory tasks concentrated within the CB, were more likely to entrust MPP to the CB

## References

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Thank you!

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