EUROPEAN CENTRAL BANK

EUROSYSTEM

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Real convergence in central, eastern and south-eastern Europe

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*The views expressed are those of the presenter and do not necessarily reflect those of the ECB.

The designation of Kosovo is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.

Overview

1	Real convergence in CESEE: stylised facts
2	Real convergence in CESEE: drivers and impediments
3	EU and euro area membership: some lessons

With acknowledgements to the authors of:

Żuk, P. and Savelin, L. (2018), "*Real convergence in central, eastern and south-eastern Europe*", Occasional Paper Series, No 212, ECB, July

Diaz del Hoyo, J.L., Dorrucci, E., Heinz, F.F. and Muzikarova, S. (2017), "*Real convergence in the euro area: a long-term perspective*", Occasional Paper Series, No 198, ECB, December
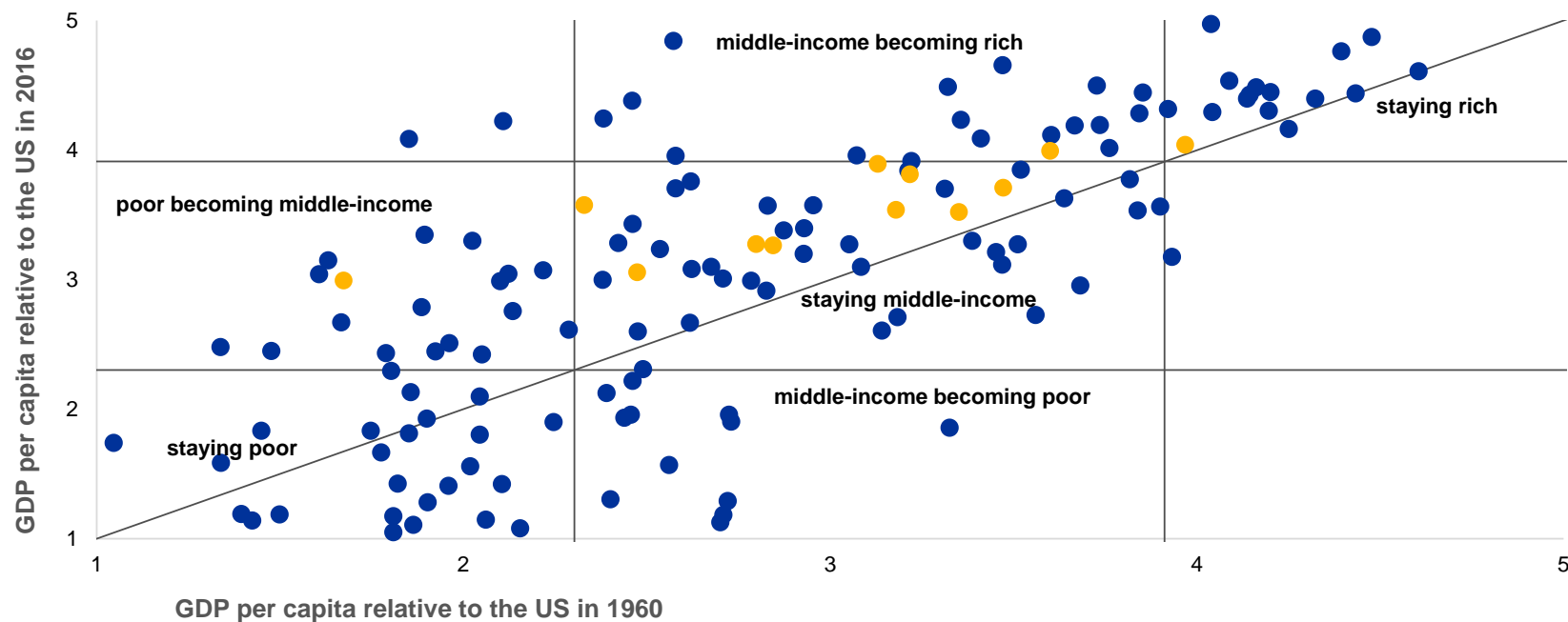
Overview

Convergence – a long-term global perspective

GDP per capita (PPP) relative to the US in 1960 and 2016
in 147 economies (log of %)

Sources: Maddison Project Database (2018 version) and Bolt, J., Inklaar, R., de Jong, H. and van Zanden, J.L., "Rebasing 'Maddison': new income comparisons and the shape of long-run economic development", Maddison Project Working Paper No 10, 2018 (available for download at www.ggdc.net/maddison).
Notes: Middle income is defined arbitrarily as the income between 10% and 50% of the US GDP per capita. The yellow dots represent CESEE economies for which data were available. A similar chart can be found in Agénor, P.R., Canuto, O. and Jelenic, M., "Avoiding Middle-Income Growth Traps", Economic Premise Number 98, World Bank, 2012.

- **Only few countries have successfully converged from low/middle income to high income since 1960**

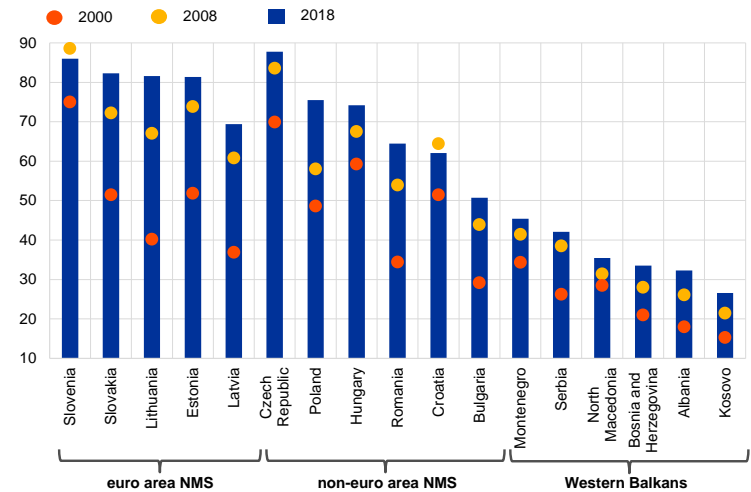# Convergence in CESEE – relative to the EU28

Real GDP per capita growth in PPP 2000-2018

(annual growth rate, period average, as a percentage)
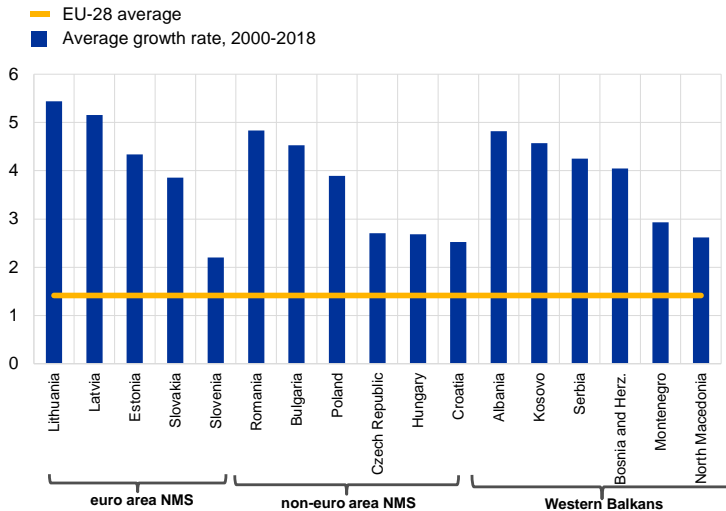
Real GDP per capita level in PPP in 2000, 2008 and 2018
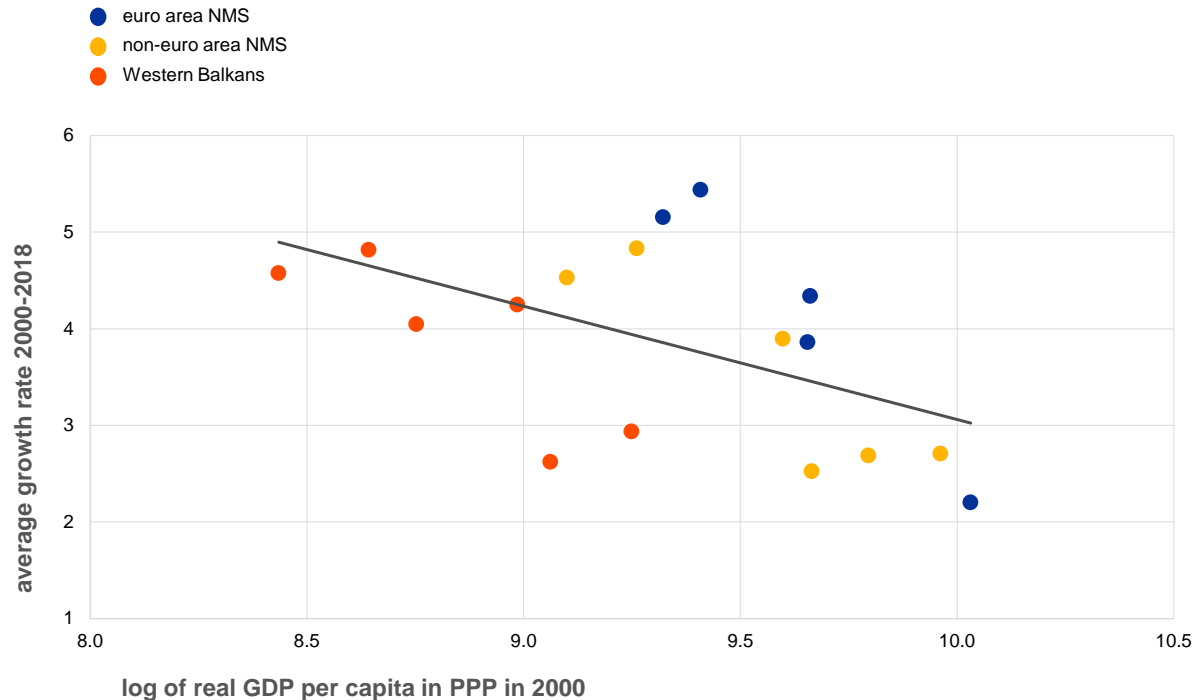
(as a percentage of EU28 average)

Sources: Haver Analytics, World Bank and ECB staff calculations.

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- **Real GDP per capita growth exceeded the EU28 average, and the level increased in percent of the EU28 average over 2000-2018 in all CESEE economies**

- **Growth and catching-up slowed down since the global financial crisis in 2008**

Initial income levels and average GDP growth between 2000 and 2018 (β convergence)

- euro area NMS
- non-euro area NMS
- Western Balkans

log of real GDP per capita in PPP in 2000

average growth rate 2000-2018

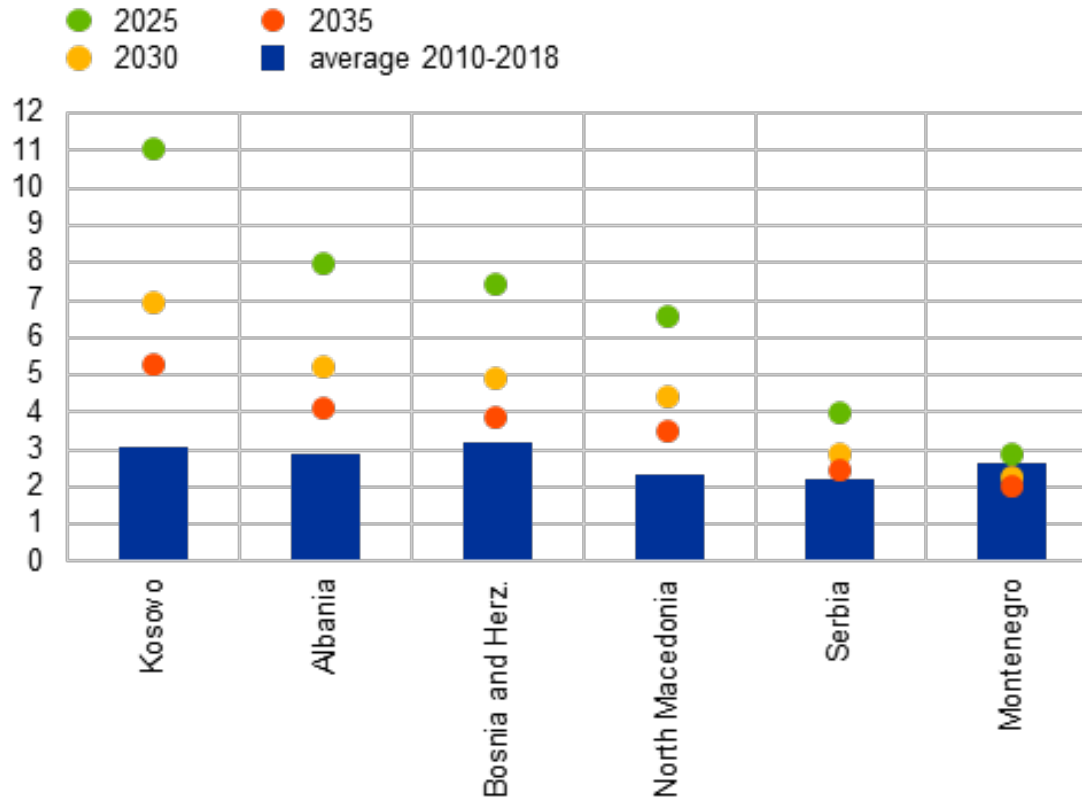*Sources: Haver Analytics, World Bank and ECB staff calculations.*
Notes: The blue dots depict new Member States which have adopted the euro, the yellow dots new Member States not part of the euro area and the red dots the Western Balkan economies.

- **Poorer CESEE countries experienced stronger economic growth between 2000 and 2018**

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Convergence – looking ahead

Growth in GDP per capita in the Western Balkan countries required to achieve 50% of the EU28 average by 2025, 2030 and 2035*

(per capita, in PPP as a percentage)

Sources: Haver Analytics, World Bank and ECB staff calculations.

* Assuming GDP growth in the EU28 (per capita, in PPP) at 1.4%, i.e. the growth rate observed between 2010-2018 on average.

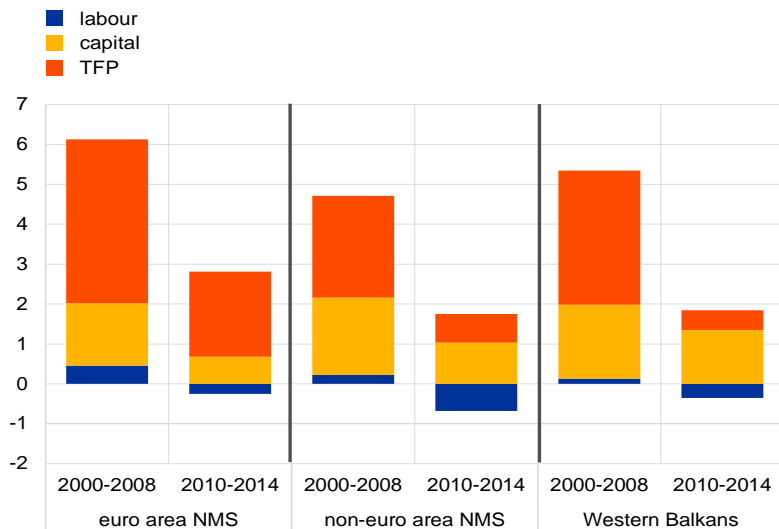- **Growth in the Western Balkans insufficient to ensure rapid catching-up**

Overview

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Growth accounting and capital accumulation

Contributions to economic growth in 2000-2008 and 2010-2014

(percentage points)

Sources: Penn World 9.0 database, WEO IMF and ECB staff calculations.
Notes: The labour share in Albania and Montenegro is assumed to be equal to the average of North Macedonia, Bosnia and Herzegovina, Serbia and Croatia. Average hours worked in the Western Balkan countries are assumed to be equal to the average in the new Member States. The calculations assume a standard Cobb-Douglas production function.

Capital stock per person employed and labour productivity in CESEE in 2014

(index: EU28 = 100)
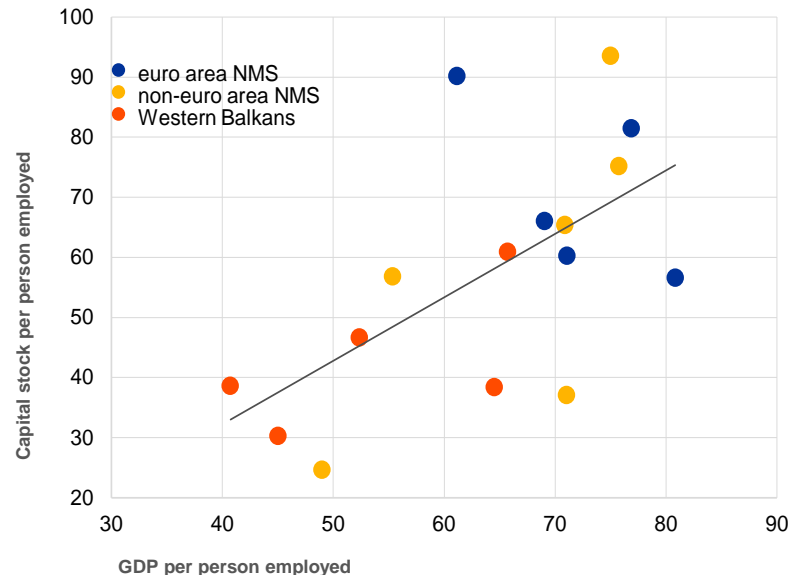
Sources: Penn World Table version 9.0 and IMF (World Economic Outlook).
Notes: Data are available only up to 2014. The blue dots depict new Member States which have adopted the euro, the yellow dots new Member States not part of the euro area and the red dots the Western Balkan economies

- **Growth mainly driven by TFP and capital accumulation**
- **Slowdown since 2008 largely due to lower TFP growth**
- **Capital gaps still substantial and often accompany lower labour productivity**

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Savings and investment

Average savings and investment rates in the periods 2000-2008 and 2010-2016
(as a percentage of GDP)
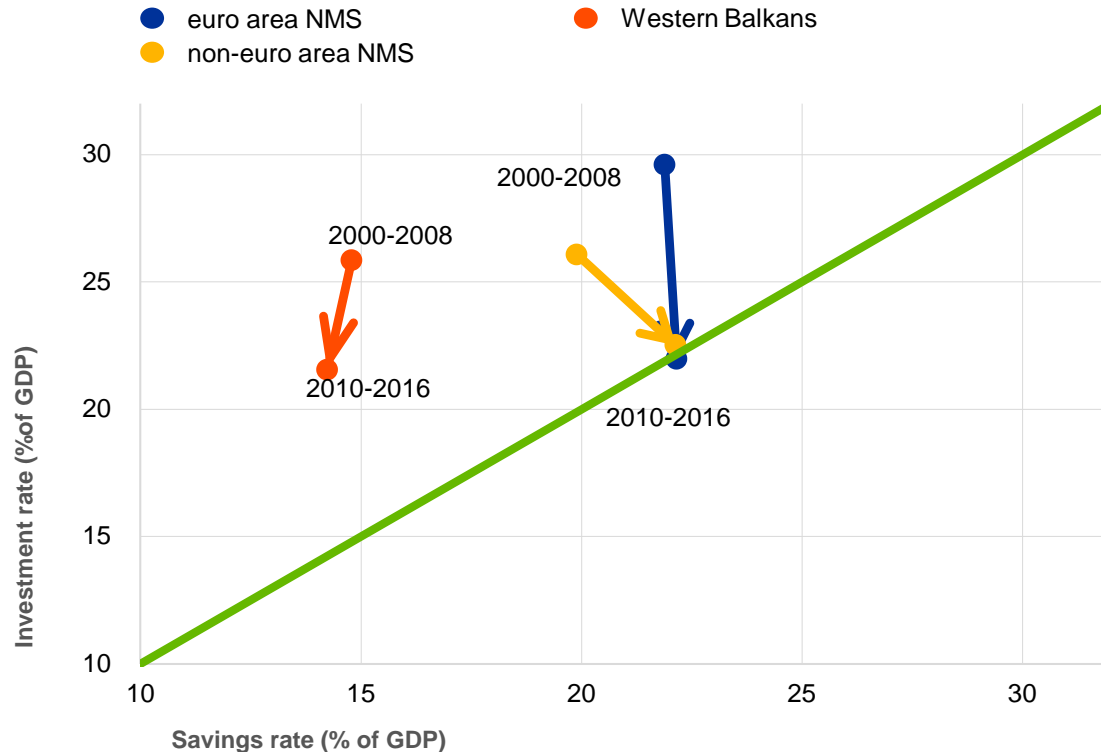
Sources: IMF (World Economic Outlook) and ECB calculations.
Notes: 45-degree line shown in green. Simple average of country-specific data for regional aggregates.

- **Savings and investment became generally more aligned after the crisis**

- **Stable sources of financing savings gaps are important**

The contribution of labour

Share of population aged 15-64 in total population in 2000, 2016 and projected in 2030
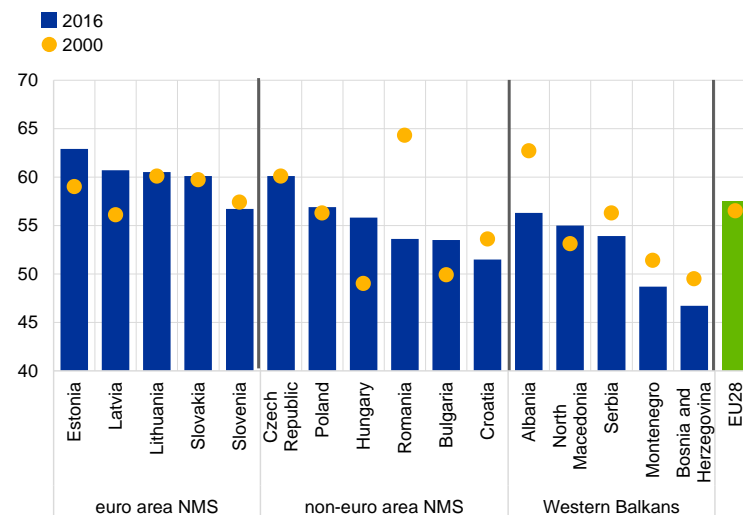(percentages)

Legend: 2016, 2000, 2030
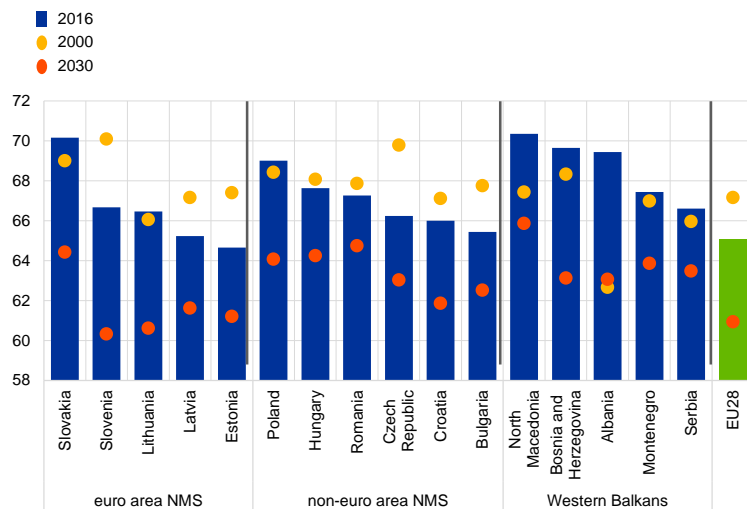
Sources: World Bank (WDI).
Note: Data for Serbia include Kosovo.

Labour participation rate in 2000 and 2016

(as a percentage of the total population aged 15 and above)

Legend: 2016, 2000

Sources: World Bank (WDI) data compiled by the International Labour Organisation.
Note: Statistical break in Romania in 2002.

- **Only few CESEE countries could reap a demographic dividend**
- **Challenges are expected to increase with ageing**
- **Increased labour participation and/or immigration could partly mitigate the impact on the labour force**

Human capital

Share of the population with at least a bachelor's (or equivalent) degree in 2015
(as a percentage of the population aged 25 or older)
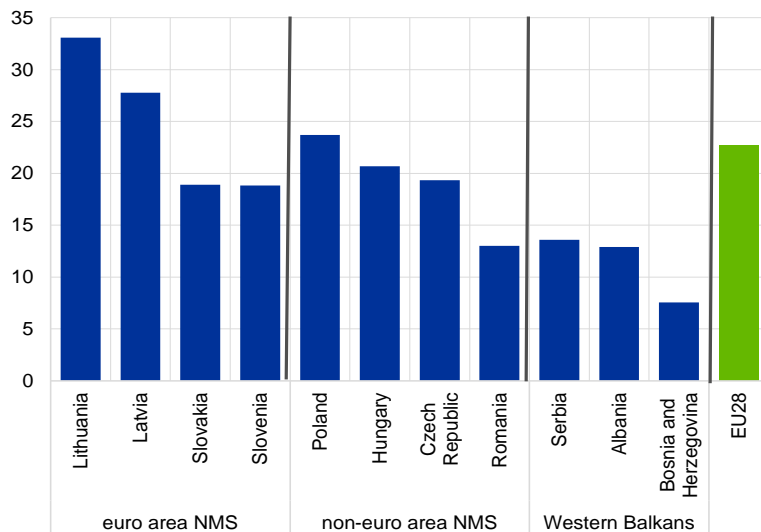
Sources: World Bank (WDI).
Notes: Data are not available for all CESEE countries. Data refer to 2014 for Poland and Romania and to 2012 for Albania. The EU average is calculated from all countries for which data are available.

PISA average scores in mathematics, reading and science in 2015 (aged 15 years)
(higher scores indicate better performance)
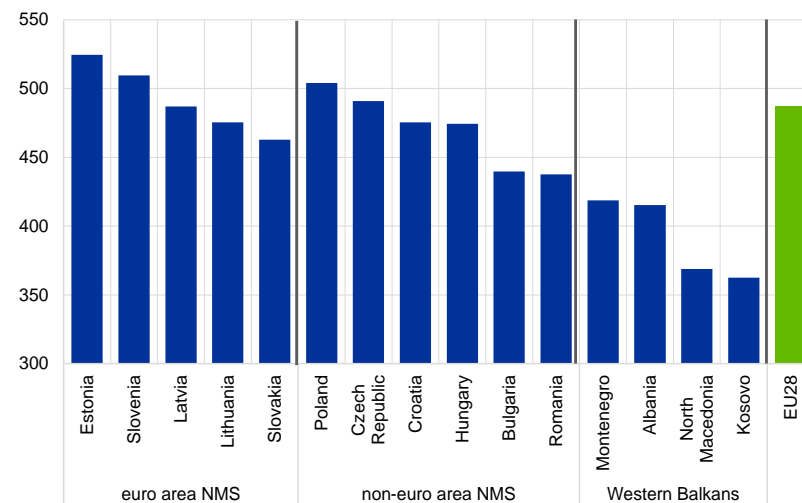
Sources: OECD and ECB staff calculations.

- **Human capital levels appear relatively high in CESEE**
- **Nevertheless, in SEE still significant gaps persist**
- **PISA scores point to low quality of education in SEE**
- **The alignment of skills to labour market needs remains weak overall**

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Trade and external competitiveness

Trade openness in the period 2000-2016

(sum of exports and imports of goods and services as a percentage of GDP)

- euro area NMS
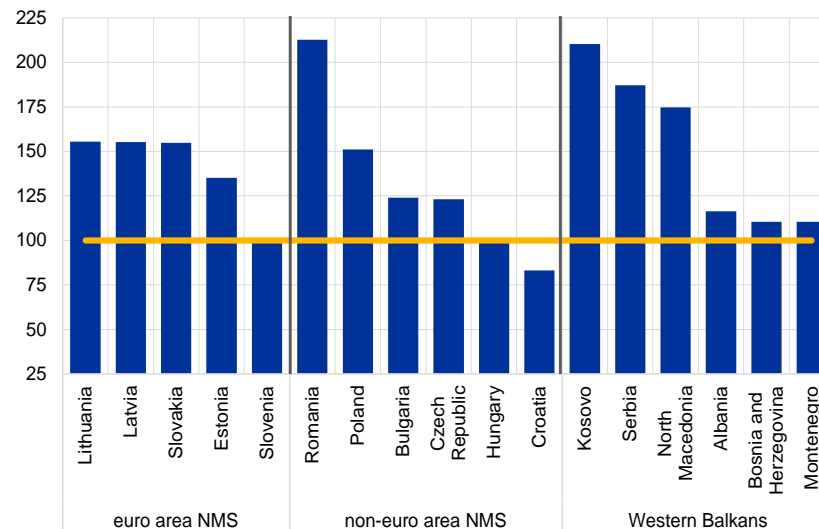- non-euro area NMS
- Western Balkans
- EU28
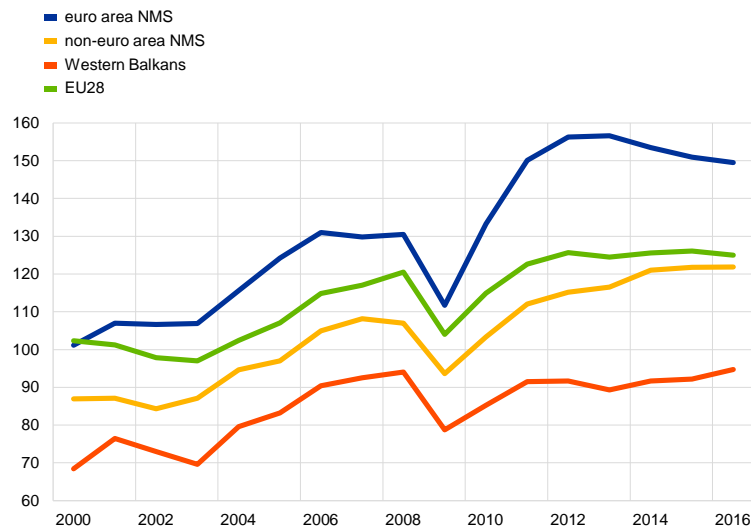
Sources: IMF (World Economic Outlook) and ECB staff calculations.
Notes: Data for Montenegro are available only from 2001 onwards. Simple averages of country-specific data for regional aggregates.

Change in world export market shares from 2004 to 2016

(index: 2004 = 100)

*Sources: IMF (World Economic Outlook) and ECB staff calculations.*
Note: The base year is 2004 due to the lack of data for some countries in the sample.

- **Trade openness has increased in almost all countries in CESEE, creating favourable conditions for convergence**

- **Increases only moderate in the Western Balkans**

- **Changes in world export market shares remained heterogeneous**

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Innovation

European Innovation Scoreboard Index for CESEE and other European economies in 2018
(as a percentage of the EU28 average)
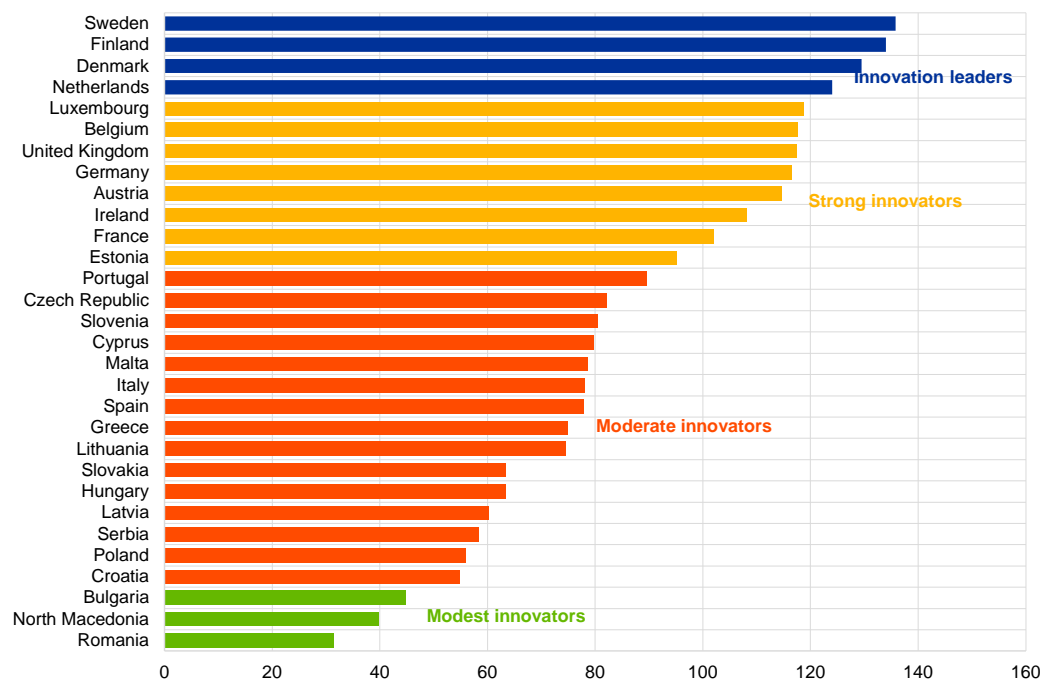
Source: European Commission (2019 European Innovation Scoreboard).
Note: Data are available only for some CESEE economies.

- **Although gradually improving, innovation capacity is still low and most CESEE countries remain only moderate or modest innovators**

Income levels and institutional quality

Income levels and institutional quality in 2018

Legend:
- ■ euro area NMS
- ■ non-euro area NMS
- ■ Western Balkans
- ■ EU17
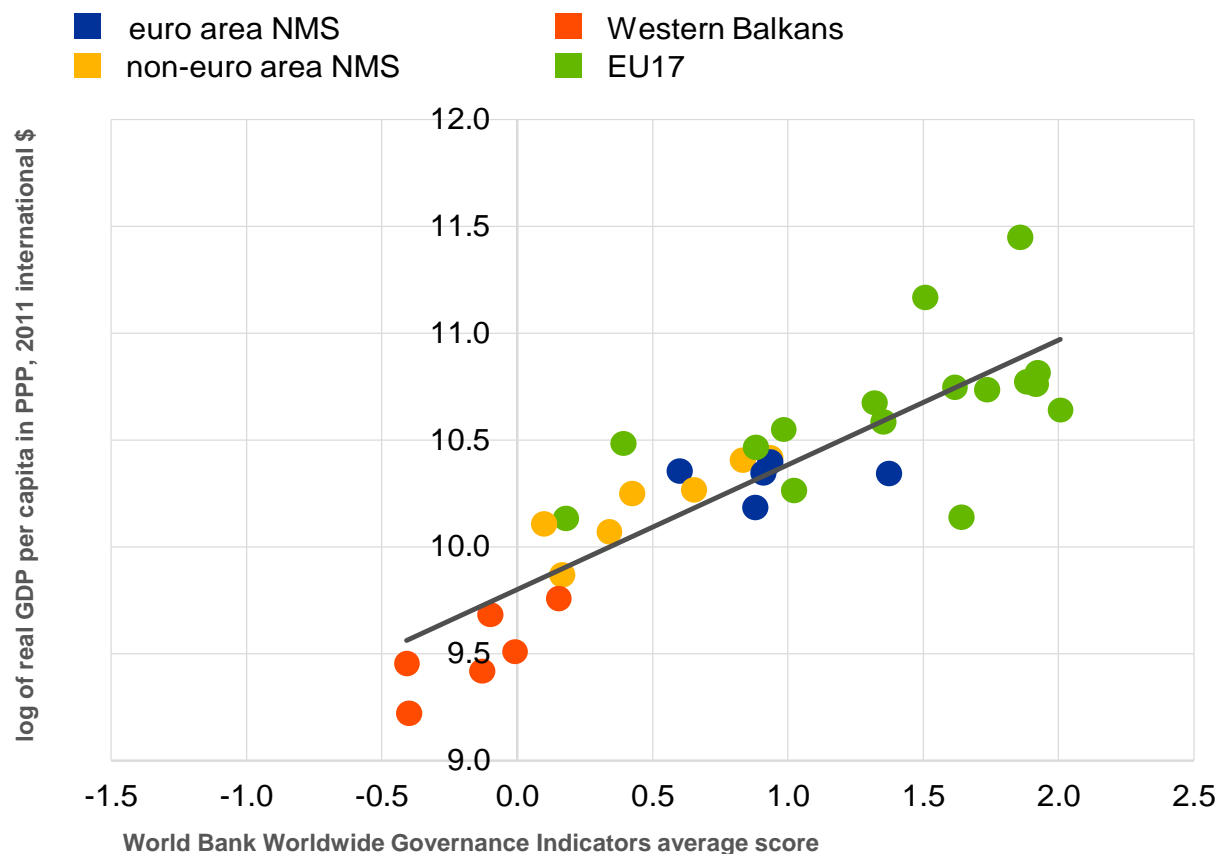
Sources: Haver Analytics, World Bank Worldwide Governance Indicators (WGI – see Kaufman et al (2010) for methodology and ECB staff calculations.
Notes: The WGI average score is a simple average of the regulatory quality, government effectiveness, control of corruption and rule-of-law sub-indicators. A higher index implies a better relative performance in institutional quality. Simple averages of country-specific data for regional aggregates.

- **Strong correlation between the quality of institutions and GDP per capita**

Institutional quality in the Western Balkans

Worldwide Governance Indicators, 2018

■ Western Balkans ■ Average EU-11
■ Turkey ■ Average EU-15
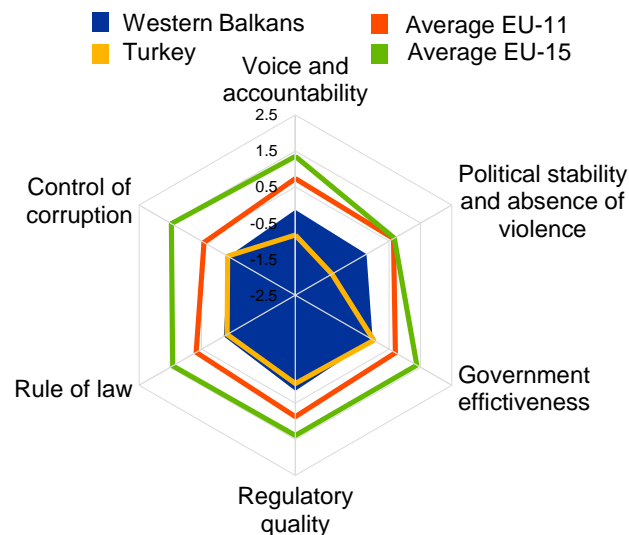
Sources: World Bank and ECB staff calculations.
Notes: Simple average of the worldwide governance sub-indicators and regional aggregates . EU-11 comprises countries that joined the EU in 2004 and thereafter, except Cyprus and Malta. EU-15 covers EU members prior to this date.

Worldwide Governance Indicators

(2018 (bars) compared with 2013 (lines), range -2.5 to +2.5, higher score indicates better governance)
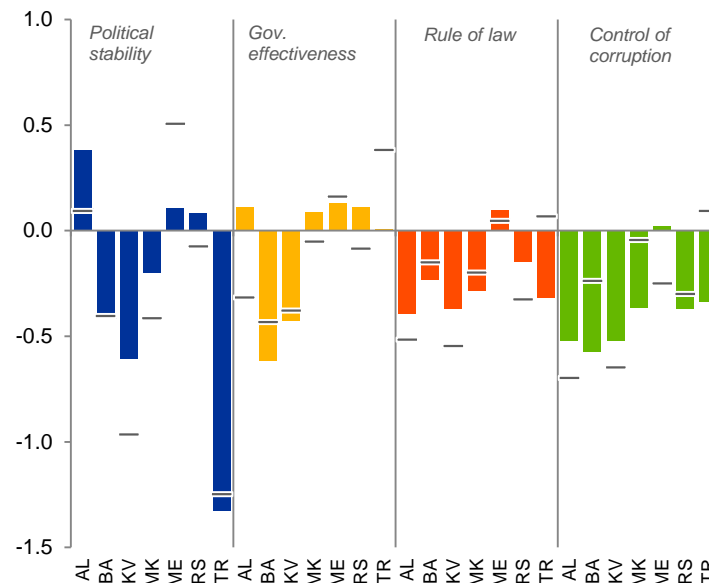
Sources: National authorities, Haver Analytics and ECB staff calculations.

- **Business and institutional environment remain key issues notably in the Western Balkans**
- **EU (potential) candidates lagging behind EU (incl. CEE)**
- **No clear improvement discernible in many cases**

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3	**EU and euro area membership: some lessons**

Timing of improvements in institutional quality

Average annual change in the Worldwide Governance Indicators (delivery index) in new EU Member States relative to the year of EU accession
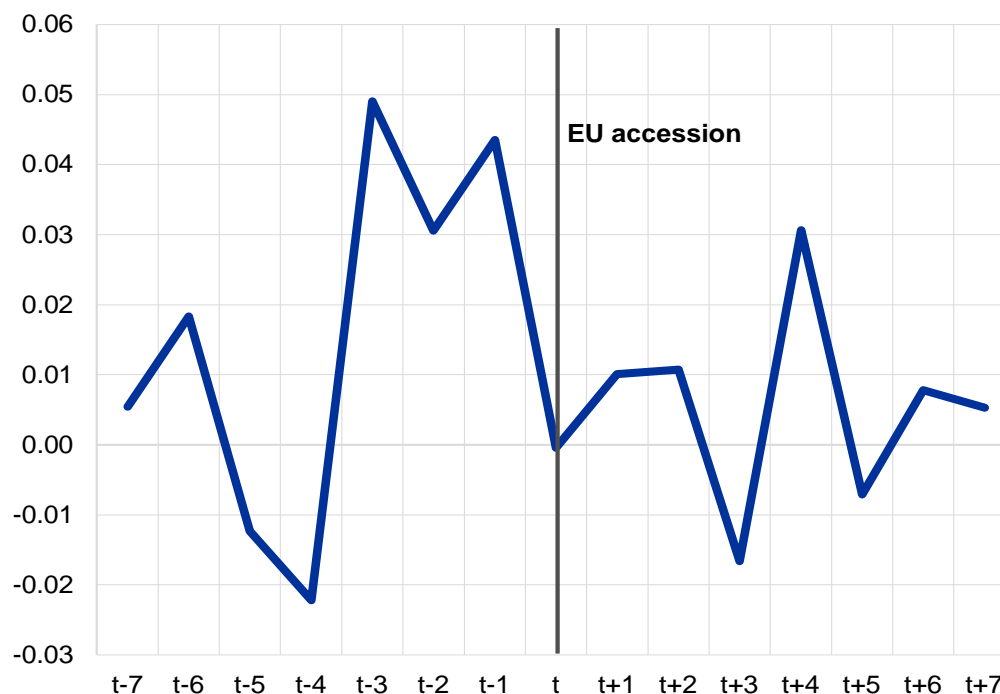

Sources: World Bank (WGI), EBRD and ECB staff calculations.

Notes: Simple averages of individual country performances. The WGI delivery index is a simple average of the regulatory quality, government effectiveness, control of corruption and rule-of-law sub-indicators. A higher index implies a better relative performance in institutional quality.

- **EU accession acted as a catalyst for structural reforms**
- **The years preceding EU accession proved most conducive to reforms**

Convergence in the euro area

GDP per capita
(GDP at constant prices per capita in PPS levels)

Legend:
- Euro area 12
- Italy
- Greece
- Estonia
- Latvia
- Lithuania
- Slovakia

EU accession
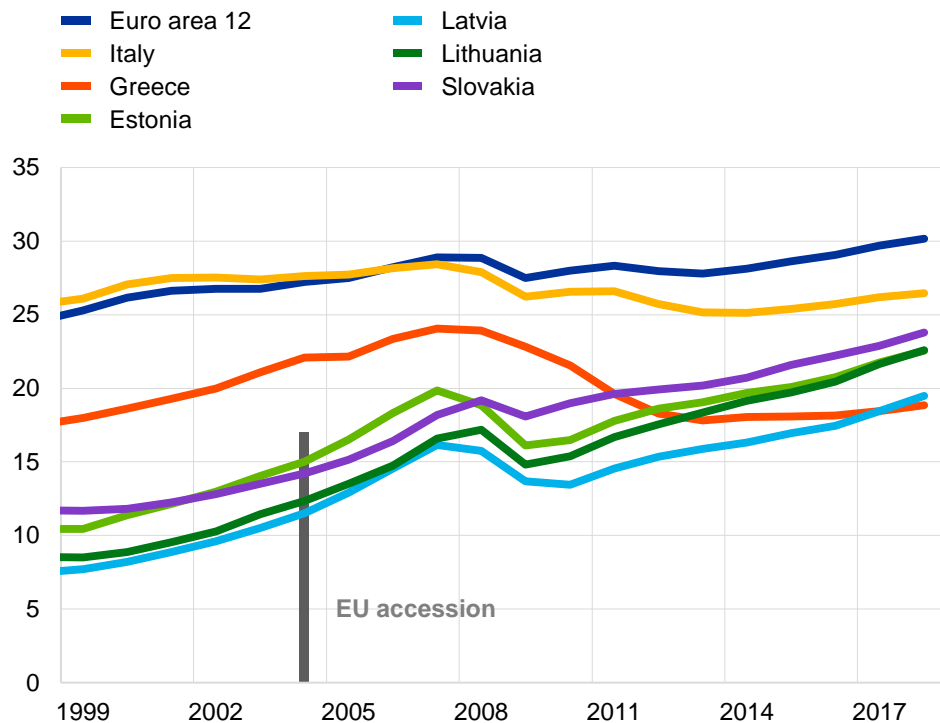
Sources: European Commission and ECB staff calculations.

% of EA12

	1999	2018
Italy (1999)	103%	88%
Greece (2001)	71%	63%
Slovakia (2009)	46%	79%
Estonia (2011)	41%	75%
Latvia (2014)	31%	65%
Lithuania (2015)	34%	75%

Note: Year of euro adoption in parenthesis.

- **Mixed evidence as regards convergence in the euro area**

- **Nominal convergence necessary, but not sufficient condition for sustainable real convergence**

Institutional quality:
ranking of euro area/EU Member States
(ranking)
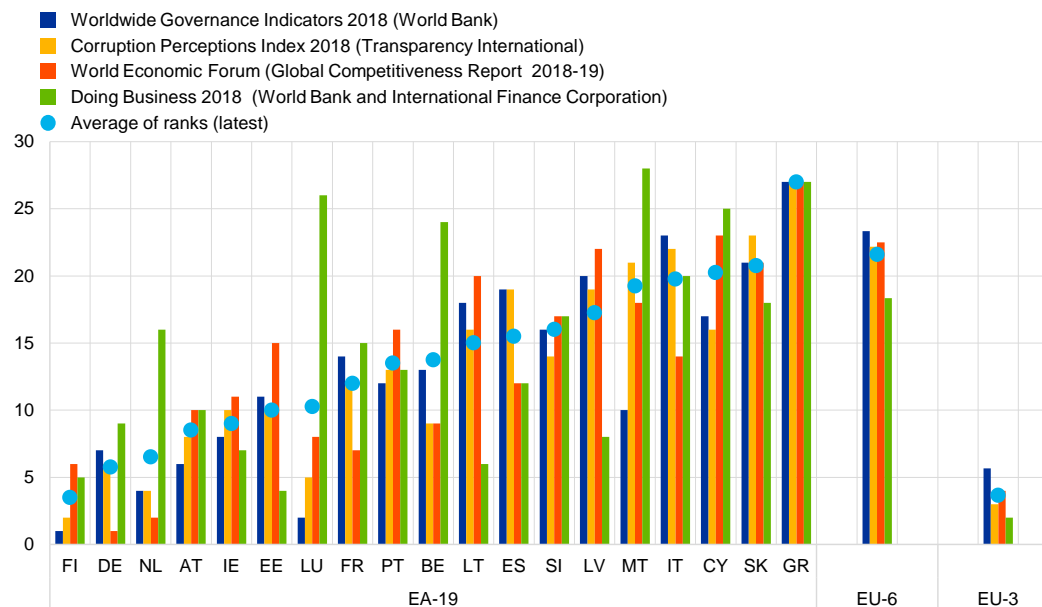
Sources: World Bank (Worldwide Governance Indicators 2018), Transparency International (Corruption Perceptions Index 2018), Global Competitiveness Report 2018-19 (World Economic Forum), and World Bank and International Finance Corporation (Doing Business 2019).
Notes: Countries are ranked from one (best performer in the EU) to 28 (worst performer in the EU) and ordered according to their average position in the rankings. The comparison with previous years could be affected by changes in the surveys. EU6 represents the unweighted average of Bulgaria, the Czech Republic, Croatia, Hungary, Poland and Romania, while EU3 represents the unweighted average of Denmark, Sweden and the United Kingdom.

- **Differences in institutional quality between euro area Member States**

- **Link to economic performance within the euro area**

Conclusions

- **Considerable progress in real convergence in CESEE since the onset of transition**

- **Convergence needs to be sustainable**

- **Macroeconomic stability is a necessary, but not sufficient condition for sustainable real convergence**

- **Institutional quality is key for sustainable convergence**

- **Sustainable convergence requires continuous policy effort**

- **EU and euro area accession can be a powerful catalyst for convergence, but are not a panacea**

Thank you for your attention!