



## EUROPEAN DEPARTMENT

In collaboration with the Fiscal Affairs and  
Research Departments

# Infrastructure in Central, Eastern and Southeastern Europe (CESEE)

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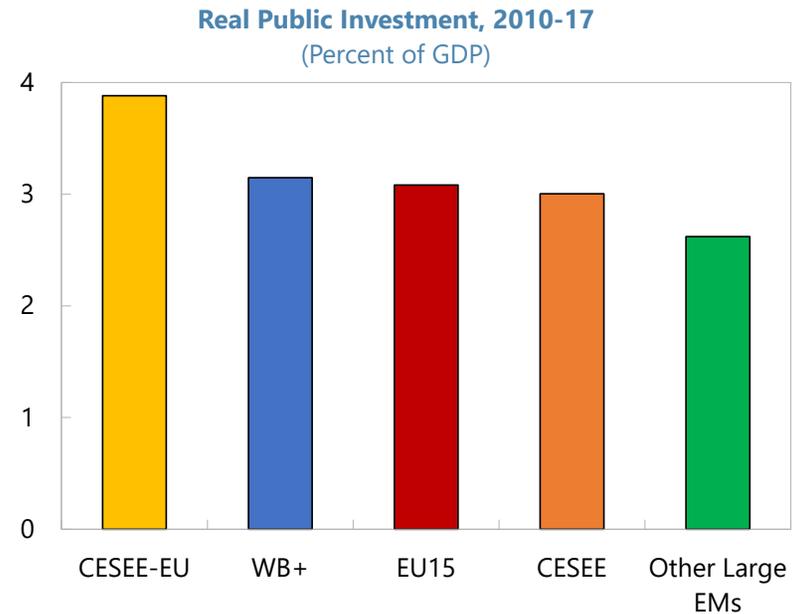
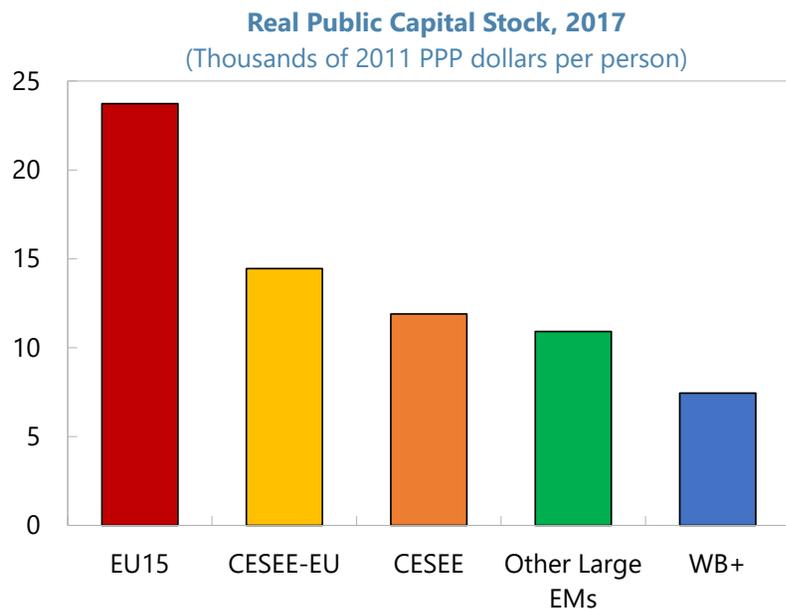
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## Roadmap

- I. Benchmarking CESEE infrastructure
- II. Getting the most from infrastructure investment
  - Macroeconomic effects of infrastructure investment
  - Enhancing infrastructure governance
  - Strengthening private participation
  - Coordinating investment across CESEE
  - Enhancing long-term resilience and supporting climate action
- III. Conclusion

# I. Benchmarking CESEE Infrastructure

# CESEE countries have only half of the per capita capital stock available in EU15—considerable heterogeneity within CESEE



Sources: IMF, Fiscal Monitor database; WDI; WEO; IMF staff calculations.

Note: Bars indicate the weighted average in each country group. CESEE-EU includes Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic, and Slovenia. Large emerging markets (EM) includes Russia, Turkey, and Ukraine. Western Balkans plus includes Albania, Belarus, Bosnia and Herzegovina, Kosovo, Moldova, Montenegro, North Macedonia, and Serbia.

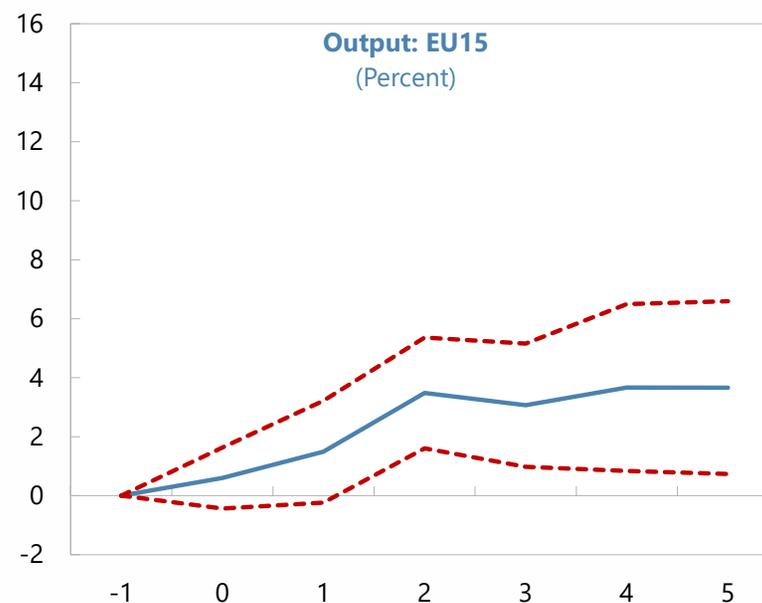
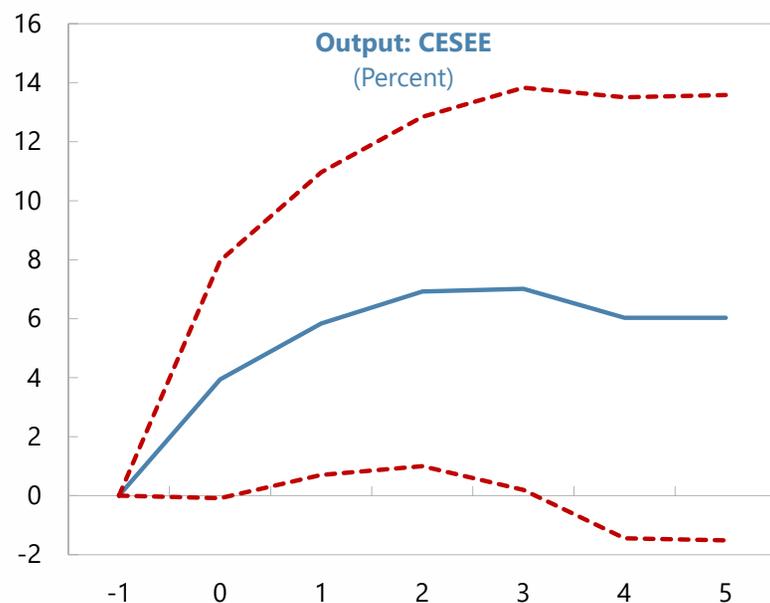
## **II. Getting the Most from Infrastructure Investment**

## **The COVID-19 crisis raises the need for more and better public investment to boost short-term growth and potential output**

- **Public investment to support the recovery and raise productivity**
  - Key tool due to its high multiplier, and discretionary and lumpy nature
  - Potential to crowd in private capital (e.g., long-term investors) while corporate investment is likely to remain depressed
- **Policy Implications**
  - Strengthen infrastructure governance to achieve more effective and integrated public investment and risk management (esp. for PPPs) and get the most out of taxpayers' money
    - Availability of de-risking options for private investors while managing fiscal risks
  - Reprioritize capital spending towards well-planned, selected, and implemented projects that can enhance long-term resilience (e.g., green and digital infrastructure), including upgrades
  - Review capacity constraints and identify potential for cross-border collaboration

# **A. Macroeconomic Effects of Infrastructure Investment (Empirical and Model Estimates)**

## Public investment booms are associated with a significant increase in output, especially in CESEE



Sources: Fiscal Monitor; WEO; IMF staff estimates.

Note: Cumulative response of GDP growth for CESEE (left) and EU15 (right) following public investment boom episodes. The episode is normalized such that public investment as percent of GDP increases by 1 ppt on impact.  $t = 0$  is the year of the shock; dashed lines denote 90 percent confidence bands.

# Simulations using the IMF's Globally Integrated Monetary and Fiscal (GIMF) model

## Shock

- Infrastructure investment is increased by 1 percent of GDP for 10 years

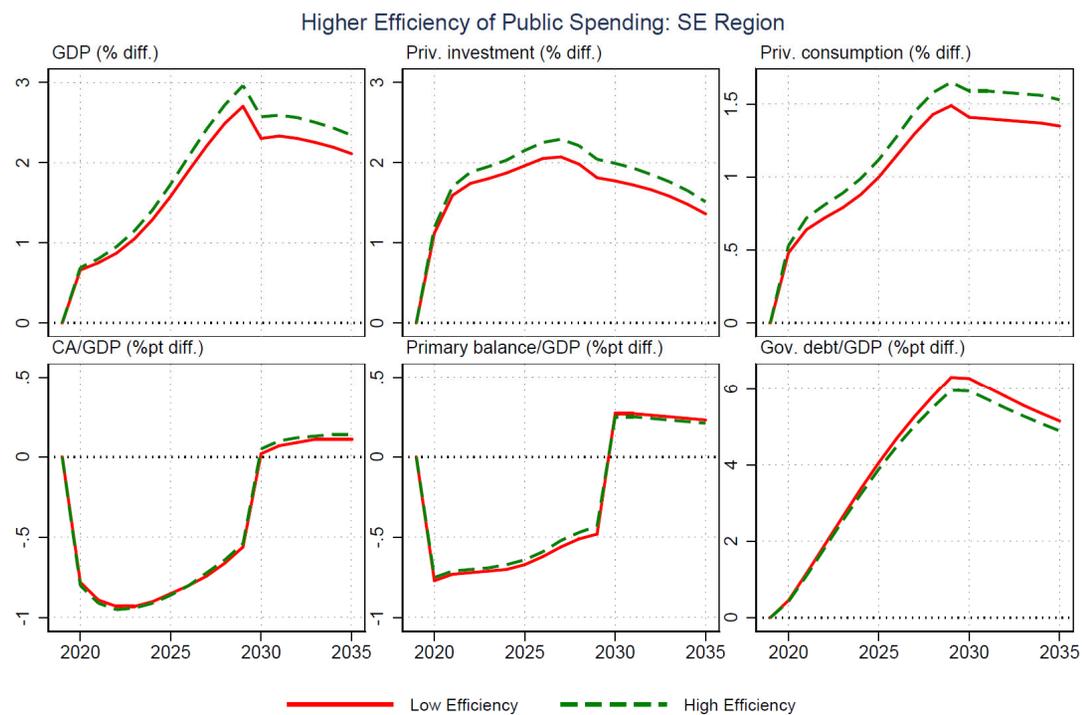
## Scenarios

- Higher efficiency of public spending

*Not shown (in background section)*

- Alternative modes of financing (public debt accumulation, higher consumption taxes, lower public consumption)
- Cross-border projects that improve regional connectivity and lower trade barriers

# Infrastructure investment: the role of public sector efficiency

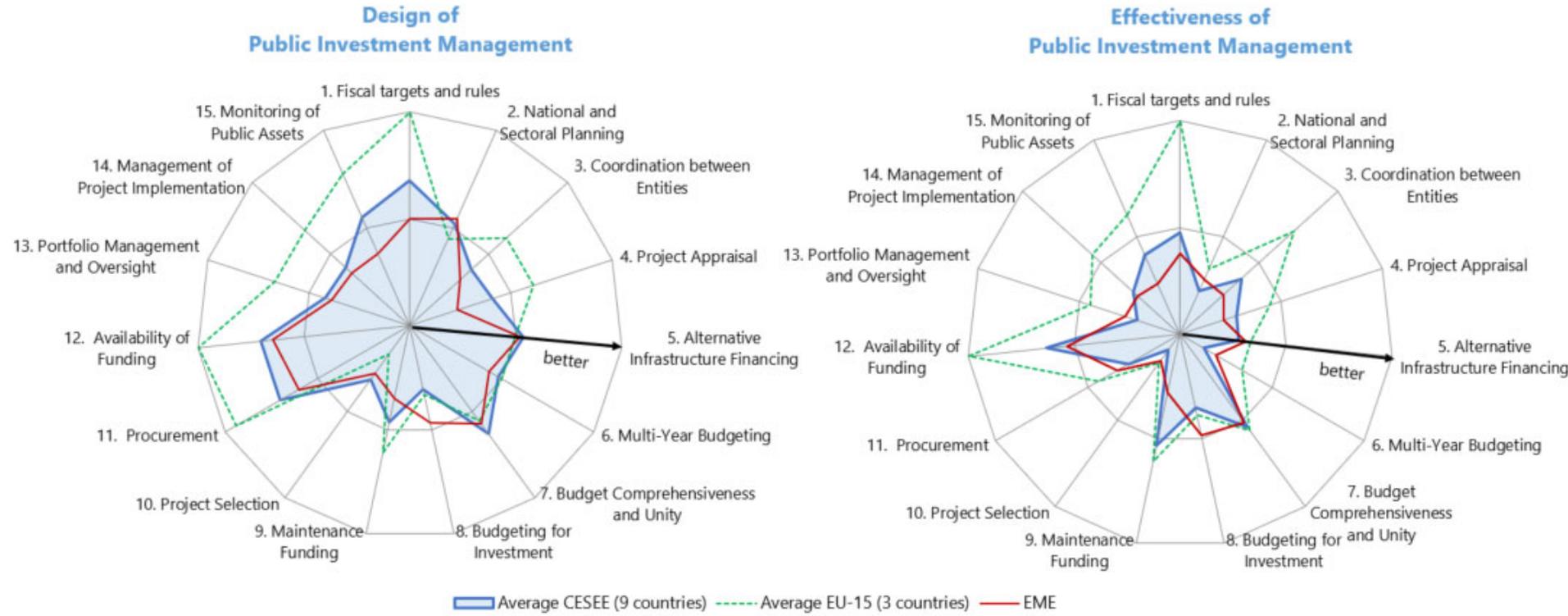


SE: Bulgaria, Croatia, Romania, Czechia, Poland, Hungary.

Source: IMF staff calculations.

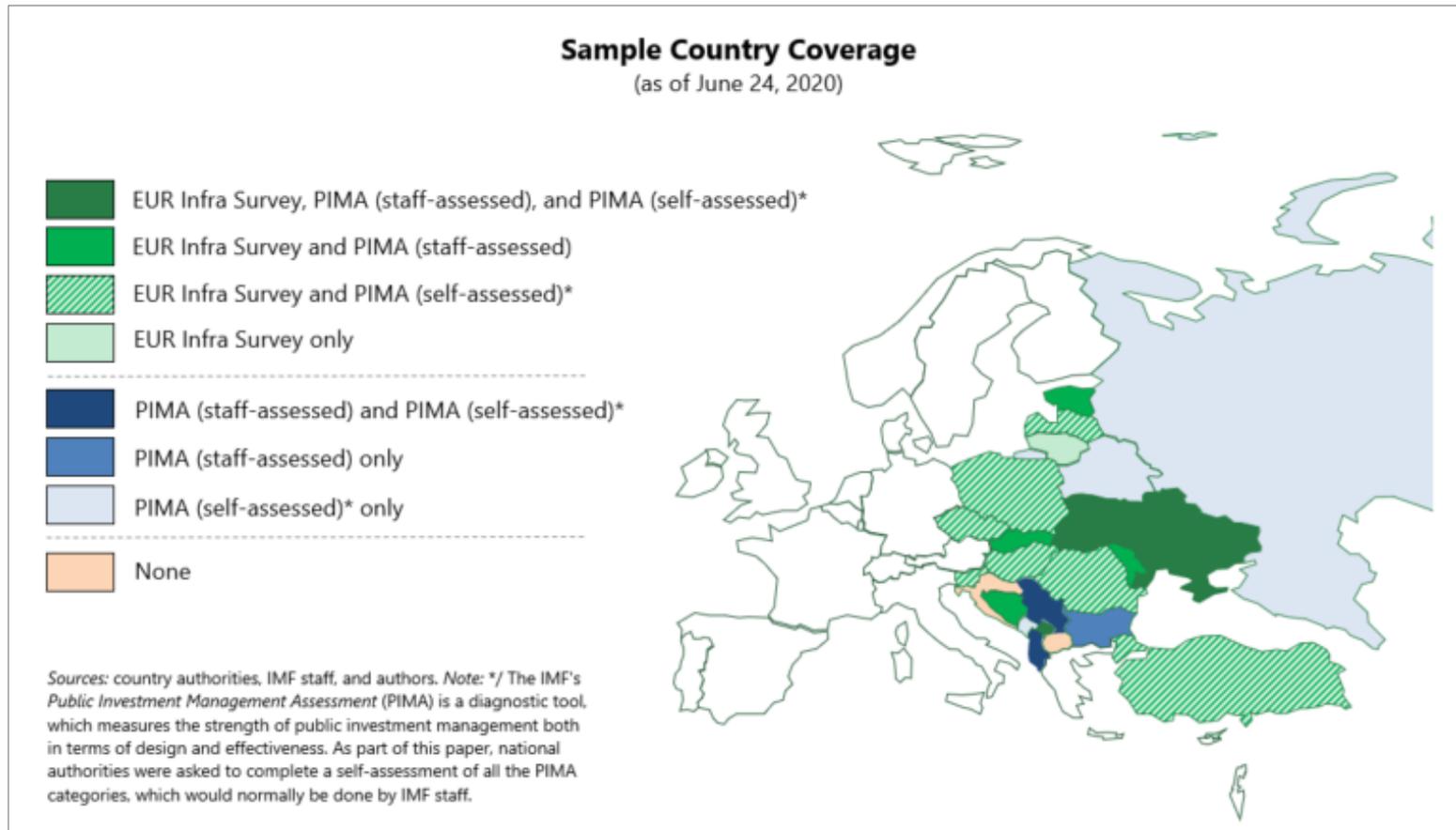
## **B. Enhancing Infrastructure Governance: Public Investment and Risk Management**

# IMF Public Investment Management Assessments (PIMA) indicate significant scope for improving infrastructure governance in CESEE, with large variation across countries



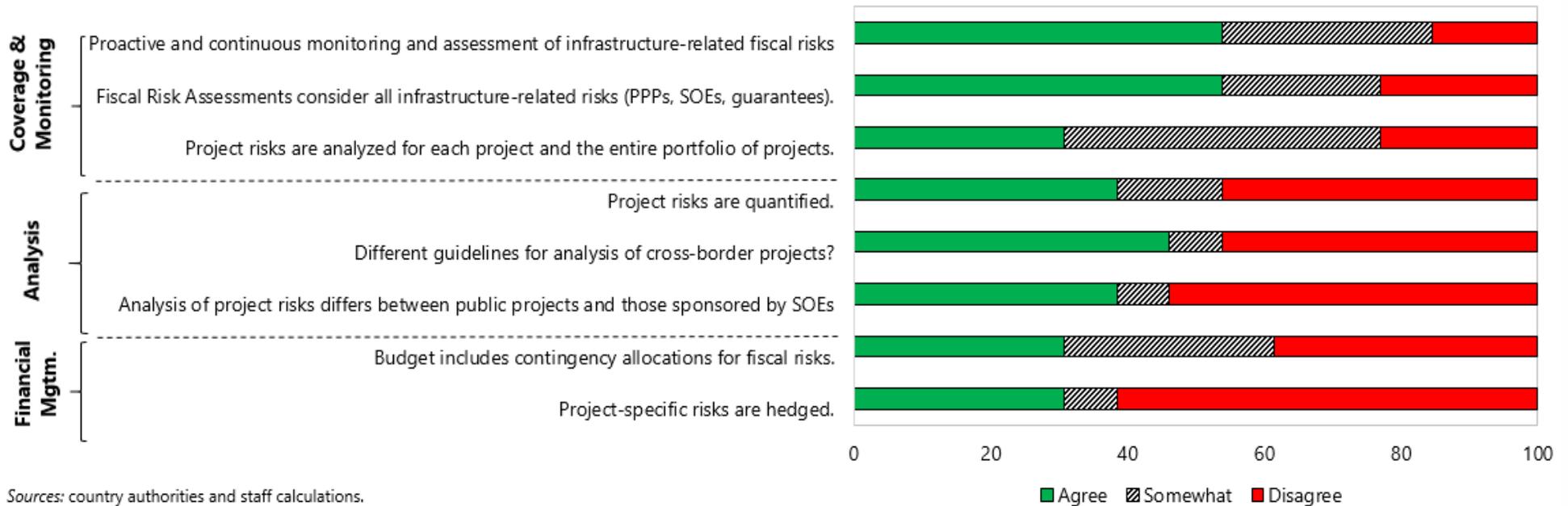
Source: IMF staff calculations based on Public Investment Management Assessments (PIMA) completed as of March 2020.

# A novel IMF survey on infrastructure investment in CESEE complements these PIMA findings



# According to survey, there are still sizable gaps in fiscal risk analysis and management in most CESEE countries

**Infrastructure Survey of CESEE Authorities: Risk Management Practices**  
(Percent)



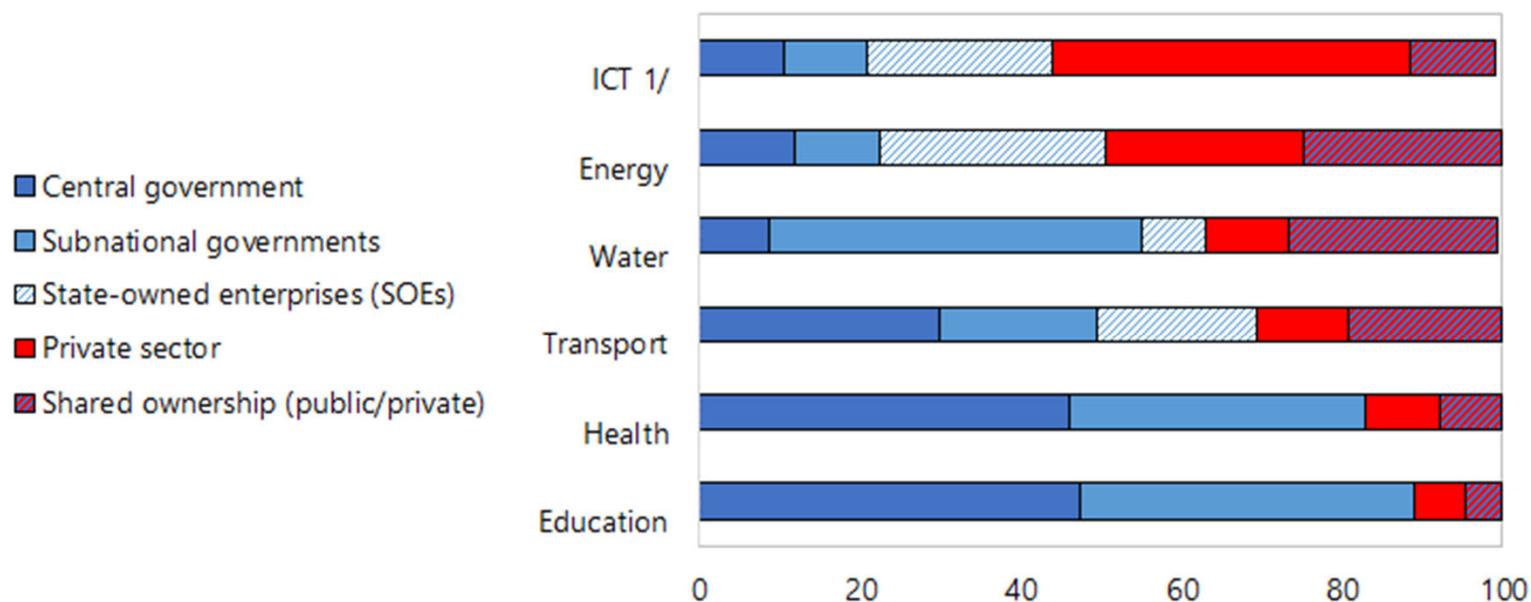
Sources: country authorities and staff calculations.

■ Agree ■ Somewhat ■ Disagree

## **C. Strengthening Private Participation**

## In CESEE, the private sector is involved mostly in economic infrastructure, where SOEs are also more prevalent

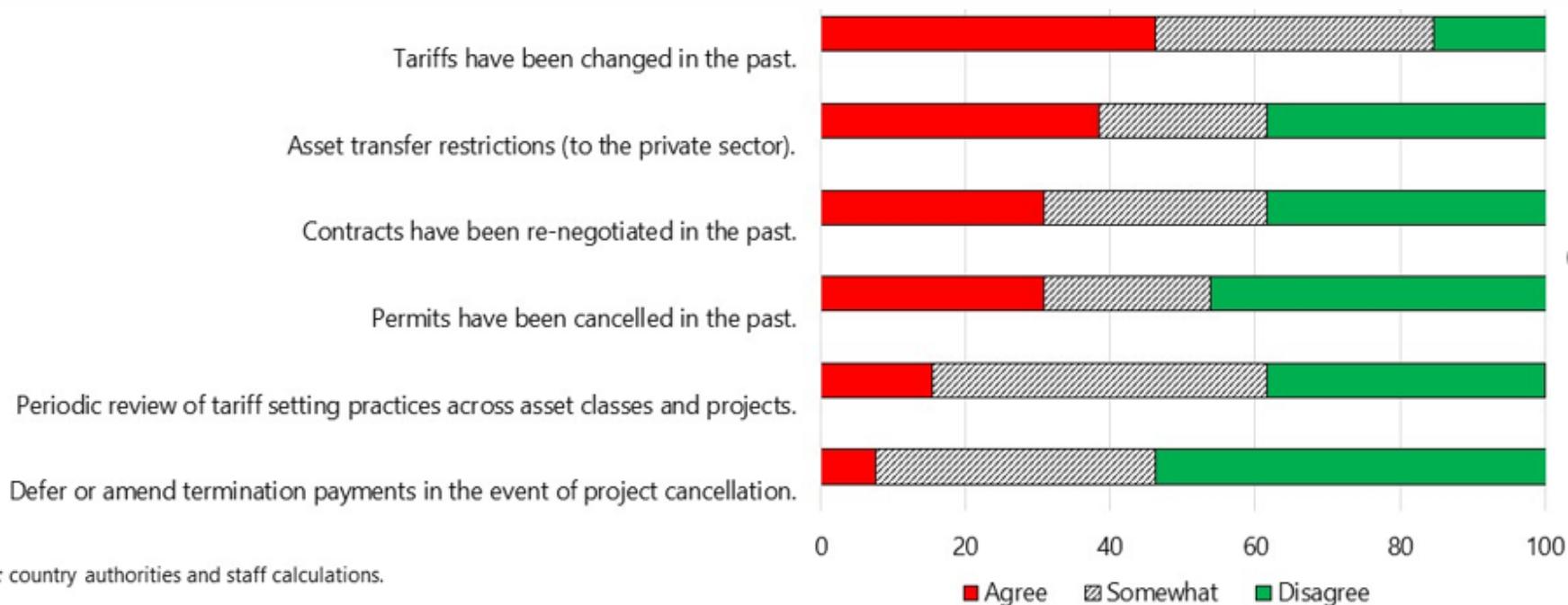
Infrastructure Survey of CESEE Authorities: Project Ownership by Sector  
(Percent)



Sources: country authorities and staff calculations. Note: 1/ ICT = information and communications technology.

## Regulatory, legal and political risks are major bottlenecks to private participation in CESEE infrastructure projects

Infrastructure Survey of CESEE Authorities: Sources of Risk for Private Investors  
(Percent)



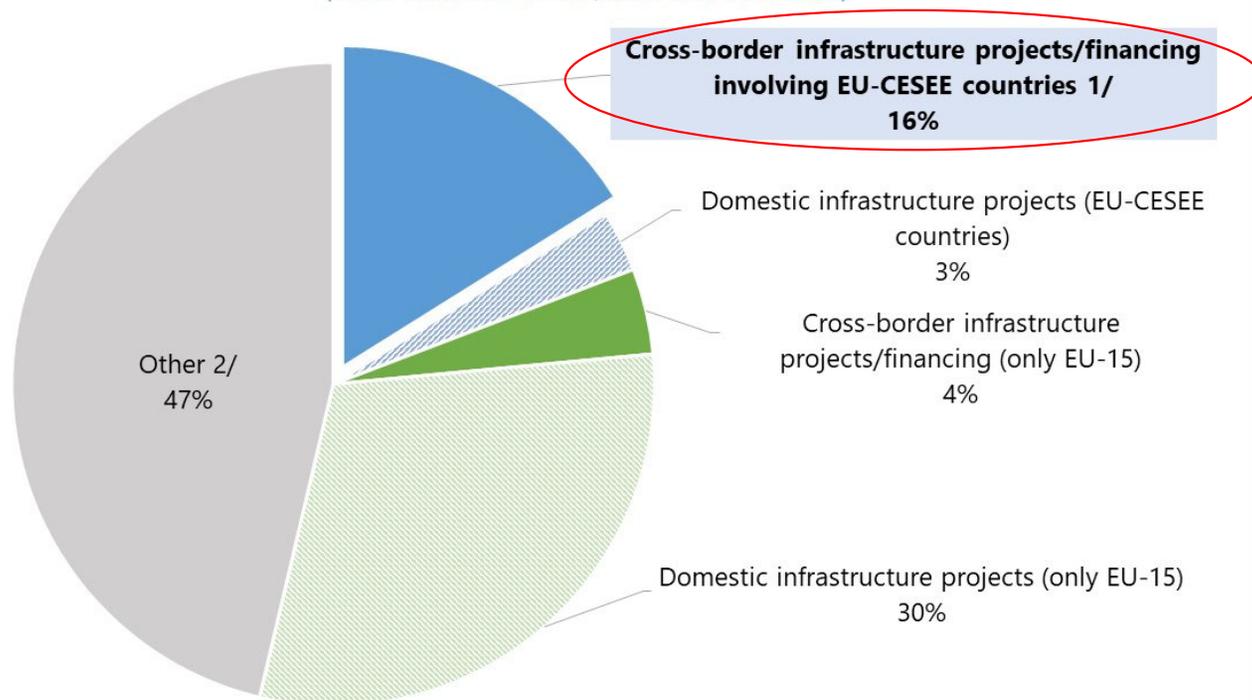
Sources: country authorities and staff calculations.

## **D. Coordinating Investment across CESEE**

# Most of “Juncker Plan” financing of CESEE infrastructure is pooled across multiple countries and/or involves cross-border projects ...

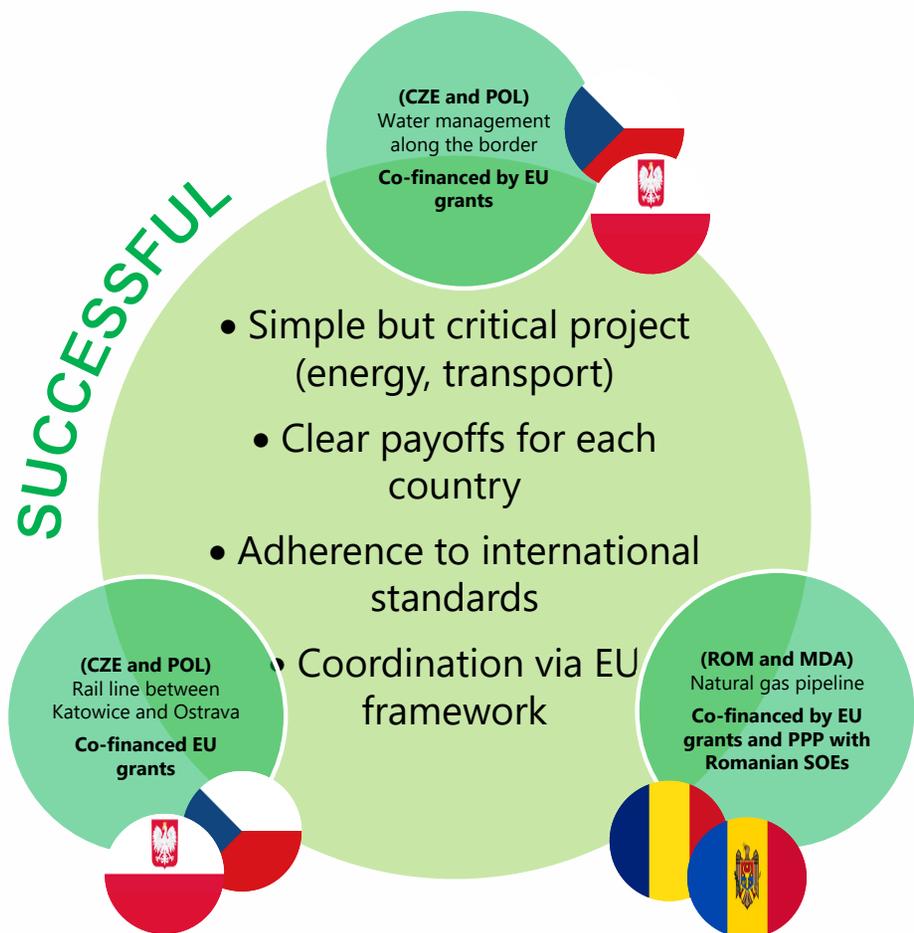
## European Fund for Strategic Investments (EFSI): Signed Projects (2015-2020)

(Total: EUR254.3 billion, as of end-June 2020)



Sources: EIB; IMF staff calculations. Note: 1/ either as part of an EU-wide project or together with one or more EU-15 countries - there is no cross-border project comprising only Member States in CESEE; 2/ "other" includes cross-border and domestic non-infrastructure projects/finance in EU countries.

## ... and the conditionality of EU Structural/Cohesion Funds is a key success factor for cross-border projects in the region

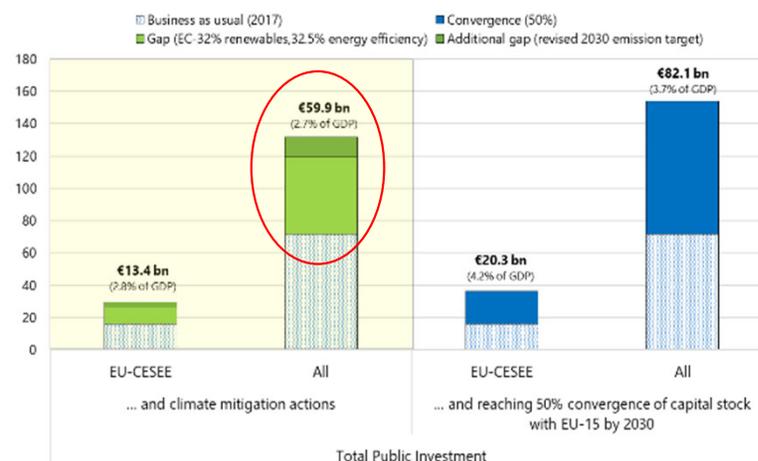


# **E. Enhancing Long-term Socio-Economic Resilience and Supporting Climate Action**

## CESEE region will require additional public and private resources to achieve the desired “green and digital” transition

- COVID-19 lessons and recovery: (1) enhance long-term, socio-economic resilience and (2) “build better” (i.e., climate change mitigation and adaptation)
- Reliable telecommunications/digital services, education and health care
- Facilitate the “green” transition (renewable energy generation, low-emission transport, and energy efficiency)
- Mitigate the impact of natural disasters and progressive global warming
- Still large infrastructure gaps despite considerable NGEU resources (up to €212 billion of grants and loans (~6% of GDP)) and ambitious plans for green infrastructure and digitalization
- **Additional “green” investment of ~1.5% of GDP per year** (comparable to the required capital spending for reaching 50 percent convergence with the EU15)

CESEE: Average Annual Investment Need for Climate Mitigation (until 2030) vs. Reaching 50% Convergence to EU-15 (EUR billion, 2013 prices)



Sources: European Commission, European Investment Bank, and staff calculations. Note: (1) (3) (4) Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic, and Slovenia; \* including boilers; \*\* includes storage, refuelling and recharging infrastructure in transport sector; estimates do not include the following other sectors/activities contributing to climate mitigation: industry (manufacturing and process driven emissions, including cement), transport (vehicles), agriculture, and some social infrastructure (if relevant for climate change mitigation, e.g., public buildings).

# III. Conclusion

## Conclusion

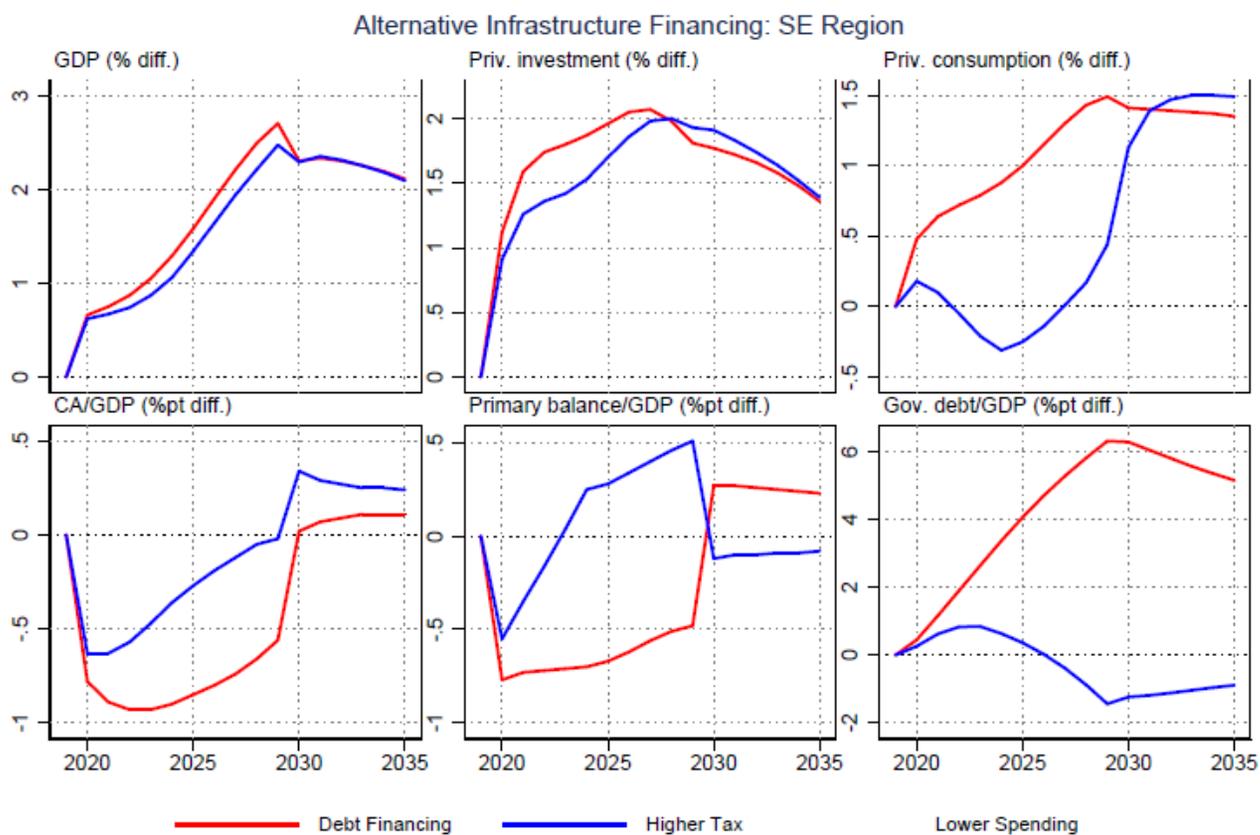
- Relative to EU-15, **CESEE falls short both in terms of per-capita public capital** and various measures of physical infrastructure quantities, with considerable cross-country variation
  - Filling 50% of the gap will require significant investment (3-8% of GDP for 10 years)
- Scaling-up infrastructure investment is important to support the post-COVID19 recovery and speed up convergence
  - Getting the most of this investment would require better “**infrastructure governance**”, recognizing significant difference across countries → IMF PIMA can help identify shortcomings
  - Opportunity to **enhance long-term resiliency by shifting towards green and digital infrastructure** (which would require additional investment of 1.5% of GDP for 10 years)
- **Attracting private participation** will be essential but requires better risk allocation and more effective fiscal risk management, especially in PPPs → IMF PPP Fiscal Risk Assessment Tool (P-FRAM) can provide guidance
- **Cross-border projects** involve coordination challenges but could yield greater growth dividends if they improve regional connectivity and integration

# Background Slides

## Reference

- A. Ari, D. Bartolini, V. Boranova, G. Di Bella, K. Dybczak, K. Honjo, R. Huidrom, A. Jobst, N. Jovanovic, E. Ozturk, L. Papi, M. Stone, P. Topalova, and S. Sola, 2020, “Infrastructure in Central, Eastern, and Southeastern Europe: Benchmarking, Macroeconomic Impact, and Policy Issues,” Departmental Paper No. 20/11, September 28 (Washington, D.C.: International Monetary Fund), available at <https://www.imf.org/en/Publications/Departmental-Papers-Policy-Papers/Issues/2020/09/25/Infrastructure-in-Central-Eastern-and-Southeastern-Europe-Benchmarking-Macroeconomic-Impact-49580>.

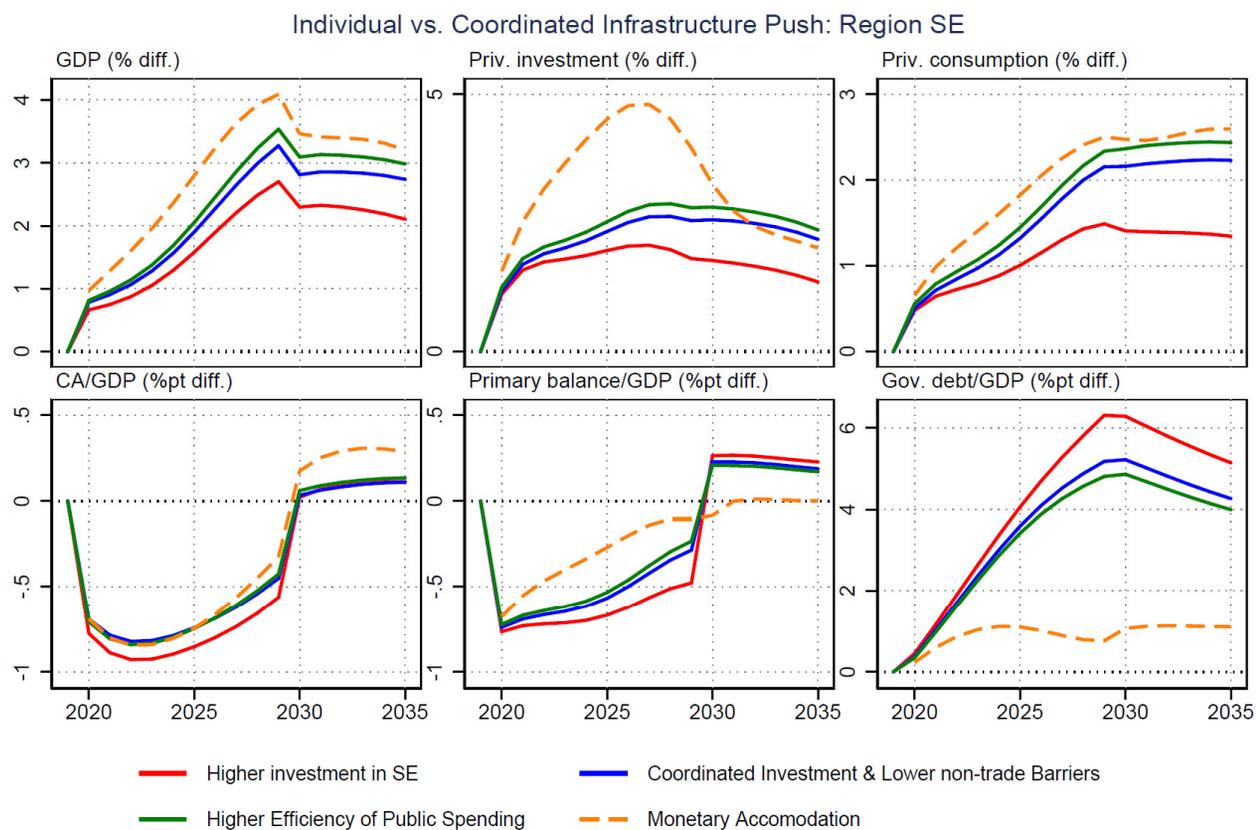
# Infrastructure investment: the role of financing



SE: Bulgaria, Croatia, Romania, Czechia, Poland, Hungary.

Source: IMF staff calculations.

# Infrastructure investment: the role of cross-border coordination



SE: Bulgaria, Croatia, Romania, Czechia, Poland, Hungary.

Source: IMF staff calculations.