Growth prospects and challenges in EBRD countries of operation
Post-crisis slowdown in convergence became more protracted, affected emerging markets globally

- Is this slowdown part of a broader phenomenon: Trapped in middle income?
- Has the region’s recent growth performance fallen short of that of other emerging markets?

**Average GDP per capita at PPP, in % of US**

Source: IMF and authors’ calculations.
EBRD region consistently outperformed comparators in 1998-2008, underperformed since 2009

EBRD region outperformance yielded 15% higher output; underperformance cost 9% of output

For each country, construct synthetic comparator (15+ countries with max weight 15%) in each year (income per capita, population)

Source: IMF WEO and authors’ calculations. For instance, Tunisia’s comparators include Ecuador, Indonesia, Sri Lanka, ++.
Weaker performance in SEMED, stronger in Central Europe

Source: Penn World Tables, IMF, World Bank and authors’ calculations.
Growth in 1998-2008 driven by TFP

Factors of production had been combined inefficiently under central planning
Market reforms helped to boost productivity and close TFP gap

Decomposition of sources of growth, 1998-2008, percentage points

Source: Penn World Tables, IMF, World Bank and authors’ calculations.
Growth since 2009 driven by capital accumulation; TFP growth slow

Common pattern for emerging markets although Emerging Asia an exception
TFP slowdown in (small) part reflects lower capacity utilisation (limited data)

Decomposition of sources of growth, 2008-14, percentage points

Source: Penn World Tables, IMF, World Bank and authors’ calculations.
Productivity challenge looming large in Central Europe and the Baltics

Decomposition of sources of growth, 2008-14, percentage points

Source: Penn World Tables, IMF, World Bank and authors’ calculations.
TFP slowdown a common challenge for middle-income economies since 1998

Consistent with Neo-Schumpeterian view – hard to move from imitation to innovation

EBRD economies enjoyed faster TFP growth – driven by the pre-crisis years

Initial per capita income and total factor productivity growth, 1998-2014

Source: IMF, World Bank, Penn World Tables and authors’ calculations. The trend line is based on a polynomial fit.
Middle-income countries tend to industrialise yet firms may not deploy the most advanced and climate-friendly technologies.

GDP per capita and emissions per unit of GDP in 2013

Source: World Resources Institute, IMF and authors’ calculation. The trend line is based on a polynomial fit.
Investment in almost all EBRD economies has been well below comparators’ levels

Total capital stock gap € 2.2 trillion (~18% of capital stock), of which ~ €500 bn due to 2008-14
~ 40% is due to infrastructure deficit; 60% due to equipment, buildings, intellectual property

**Capital stock growth, 2008-14**

Source: Penn World Tables, IMF and authors’ calculations.
What drives underperformance
Are boom-bust growth patterns common? Look at outperformance / underperformance episodes

Outperform synthetic controls for 8+ years, at least 90% of the time, with an average of at least 1% outperformance per year

Source: IMF, World Bank, Penn World Tables and authors’ calculations.
Sustaining outperformance and avoiding reversals is hard: only 17% of episodes last 2 decades or longer

- 43% end in hard landings – 8+ years with cumulative underperformance of 8pp+
- Hence EBRD region’s experience is not uncommon
- Countries naturally exhaust their advantages (such as cheap labour), need a new growth model

Source: IMF, World Bank, Penn World Tables and authors’ calculations.
Korea: Sustained outperformance key to attaining high income: 42 years, first growing TFP, then capital

Balanced contributions from all factors: large human capital gains; high investment financed domestically
Focus on lower end of high-tech exports: gradual shift imitation → innovation, facilitated by human capital ↑
Hard hit by multiple crises of 1980 and 1998 but recovered swiftly; GDP per capita now 48% of US (66% at PPP)

Cumulative outperformance and TFP in South Korea

Source: IMF, World Bank, Penn World Tables and authors’ calculations.
In a typical growth episode, capital formation exceeds that of peer economies by at least 2 percentage points.

Investment typically responds to improved outlook – but could be boosted by infrastructure.

EBRD region relied unusually heavily on foreign savings – hence hit particularly hard by 2008-09 crisis.

Source: IMF, World Bank, Penn World Tables and authors’ calculations.
Drivers of growth outperformance: high investment financed by domestic savings, quality of institutions

Finance matters, in particular equity and longer-term debt
Trade and financial openness reduce chances of underperformance episodes

Determinants of growth outperformances and underperformances since 1995: Shapley decomposition

Source: IMF, World Bank, Penn World Tables and authors’ calculations.
In EBRD countries, positive correlation between democracy and quality of economic institutions.

Sources: Policy IV, World Governance Indicators. Based on 2015 data.
Democratic and institutional change went hand in hand in successful countries

Economic reforms can strengthen competition, weaken special interests, build constituencies for democracy

Sources: Policy II&IV, World Governance Indicators, authors’ calculations.
Panel analysis of the determinants of economic institutions: positive effect of democracy and of openness

<table>
<thead>
<tr>
<th>Dependent Variable:</th>
<th>Average of 4 World Governance Indicators</th>
<th>Panel OLS</th>
<th>Panel OLS</th>
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<tr>
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<td>Panel OLS</td>
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<td>Polity2</td>
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<td>(0.0552)</td>
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<td>Financial Openness</td>
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<td>- overall</td>
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Source: Worldwide Governance Indicators, WTO, IMF, authors’ calculations, based on the time period 1997-2014.
Crucial factor for institutional quality in EBRD countries is EU membership, income and democracy

Factors explaining institutional quality difference between top and bottom transition countries:

Source: Stuck in Transition?, authors’ calculations, based on time period 1997-2014.
EU accession played an important role – but a weaker anchor post-accession

Average annual change in governance indicators in EU-10 relative to accession year

Source: World governance indicators, authors’ calculations. On -2.5 to 2.5 scale; standard deviation is 1.
Support for reforms depends on perception of *fairness* of income distribution

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<tr>
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<th>Support for markets</th>
<th>Support for democracy</th>
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<td><strong>Direct channels</strong></td>
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<td>Inequality of opportunity: income</td>
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<td>-4.169*</td>
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<td><strong>Indirect channel</strong></td>
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<td>Observations</td>
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<td>12,185</td>
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Sources: LITS III, IMF, authors’ calculations. Also controlling for unemployment, GDP growth, inequality of opportunity with respect to jobs and education, other characteristics.
Raising productivity of firms
Innovation in the EBRD region lagged behind per capita income: “innovation-light” growth

<1% of firms introduce a product that is new to the world

Change in patents granted and per capita income, 2002-15

Source: World Bank, World Intellectual Property Organization (WIPO) and authors’ calculations
Small firms are abundant in the region (96% of total), accounting for 42% of employment.

Source: CompNet and authors' calculations, based on 2013 data
Smaller firms are relatively inefficient, more so in Central Europe than in EU-15

Median large firm in Central Europe and Romania is 70% more productive than median micro firm – versus 40% difference in EU-15

Source: CompNet and authors’ calculations
Small firms in the region fail to grow

In EU-15 only 20% of firms remain in the same size bracket over 10 years, 40%+ of firms grow.

In Central Europe, firms have roughly equal chance to grow, remain the same or shrink.

Source: CompNet and authors’ calculations
Productivity growth is faster in industries further away from the technological frontier.

In industries with TFP < 60% of Germany’s productivity growth is fast.

On average, little or no convergence between the most productive industries in central Europe and their counterparts in Germany.

Source: WIOD.
With greater trade openness, productivity convergence can be sustained for longer.

**Average annual TFP growth, 1995-2011, depending on initial TFP**

Source: WIOD. “Less open” ~ exports + imports < 10% output (bottom decile), “more open” > 110% (top decile)
Integration in global value chains (GVCs) key to maintaining productivity growth

Source: WIOD. Less integrated source <40% of inputs abroad; more integrated > 80%
More productive industries create more jobs, reallocation of labour boosts growth

Average annual job creation, 2002-2013, depending on initial TFP

Source: CompNet. 95% confidence interval reported. Regressions control for country, industry and year fixed effects.
Concluding remarks: Region in search of new growth drivers

- Growth in the Central and Eastern Europe has lagged comparators’ since 2009
  - Hit particularly hard by the crisis, region is in need of a new growth model
  - Typical problem for middle-income economies
- As TFP catch-up has been exhausted, growth has been led by capital formation
  - But investment has been weak and capital stock is now 18% below comparators, much of it due to infrastructure
  - Institutions also matter
- Small firms in the region are less likely to grow and become more efficient
- In EBRD regions, reallocation between industries is key for job creation
- Productivity growth within industries slows down as income grows –
  - But less so for industries integrated in global economy and especially in global value chains

More in the forthcoming Transition Report 2017-18, to be launched 22 Nov 2017
Backup slides
Demographic tailwinds become headwinds as income rise

First fertility ↓; spending on human capital of each individual ↑ → productivity growth ↑

Then aging, falling labour force, rising pension obligations and taxes

Source: IMF, World Bank, Penn World Tables and authors’ calculations. Unweighted averages