



Global Economic Prospects: Broad-Based Upturn, but for How Long?

January 2018

M. Ayhan Kose



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Global Economic Prospects – January 2018

- Global Outlook
- Regional Outlooks
- Weak Potential Growth: Sources and Remedies
- With the Benefit of Hindsight: The Impact of the 2014–16 Oil Price Collapse
- Education Demographics and Global Inequality

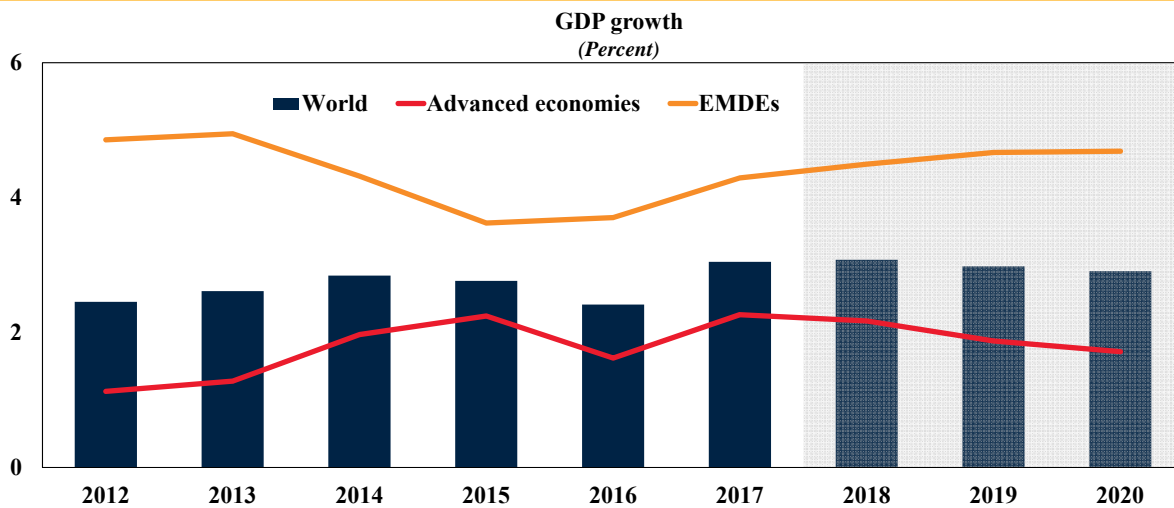
** EMDEs = Emerging Market and Developing Economies*

Four Questions

- 1 What is the state of the global economy? *A broad-based cyclical upturn underway as global slack is closing*
- 2 What are potential growth prospects? *Weakness in potential growth is likely to persist in the coming decade*
- 3 What are the major risks? *Financial stress, policy uncertainty, geopolitical tensions, protectionism, and weaker-than-expected potential growth*
- 4 What are the policy resolutions for the new year? *Implement a comprehensive set of measures to boost potential growth, mitigate risks, and address global challenges*

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Global Growth: *Rebounding*

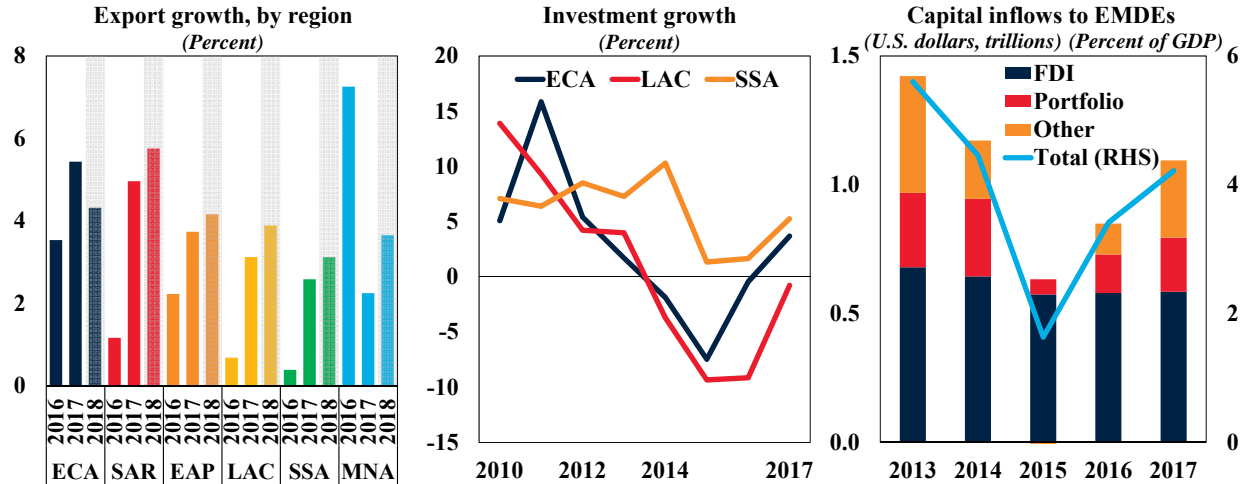


Source: World Bank.

Note: Aggregate growth rates calculated using constant 2010 U.S. dollar GDP weights. Shaded area indicates forecasts. EMDEs refer to emerging market and developing economies.

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Investment and Capital Flows: *Synchronized Pickup*



Sources: International Monetary Fund, World Bank.
 Left Panel. Exports measured as the volume of goods and services. EAP, ECA LAC, MNA, SAR, SSA stand for, respectively, East Asia and Pacific, Europe and Central Asia, Latin America and the Caribbean, Middle East and North Africa, South Asia, and Sub-Saharan Africa. Center Panel. Based on commodity exporters only. ECA, LAC, and SSA stand for, respectively, Europe and Central Asia, Latin America and the Caribbean, and Sub-Saharan Africa. Right Panel. Based on top 28 recipients of capital flows. "Other" investment category includes all financial transactions not covered in FDI, portfolio investment or reserve assets. Data for 2017 are estimated.

Global and Regional Forecasts: *Expansion Underway, but Pace Differs across Regions*

	GDP growth (Percent)					Change from June 2017	
	2011-15	2016	2017e	2018f	2019f	2017	2018
World	2.8	2.4	3.0	3.1	3.0	0.3	0.2
Advanced economies	1.6	1.6	2.3	2.2	1.9	0.4	0.4
EMDEs	4.8	3.7	4.3	4.5	4.7	0.2	0.0
East Asia and Pacific	7.3	6.3	6.4	6.2	6.1	0.2	0.1
Europe and Central Asia	3.2	1.6	3.7	2.9	3.0	1.2	0.2
Latin America and the Caribbean	2.1	-1.5	0.9	2.0	2.6	0.1	-0.1
Middle East and North Africa	3.5	5.0	1.8	3.0	3.2	-0.3	0.1
South Asia	6.4	7.5	6.5	6.9	7.2	-0.3	-0.2
Sub-Saharan Africa	4.3	1.3	2.4	3.2	3.5	-0.2	0.0

Source: World Bank.
 Note: e and f refer to estimates and forecasts, respectively.

Four Questions

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What are potential growth prospects?

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What is Potential Growth? *Many Measures; Focus on One*

Defining Potential Growth:

- Growth in an Economy's Full-Employment, Full-Capacity Output

Measuring potential growth

- **Statistical Filters: Multivariate or univariate filters**
 - Advantage: For MVF, consistency between cyclical output swings and other measures of demand pressures (inflation, unemployment); for UVF, easy implementation
 - Disadvantage: Correlation with actual growth, end-point problem
- **Production Function Approach:**
 - Advantage: Model fundamental drivers of growth
 - Disadvantage: Measurement of fundamentals
- **Expectations:**
 - Advantage: In principle, incorporate judgment during structural breaks
 - Disadvantage: In practice, highly persistent around structural breaks

Focus here,
But results are robust to other measures

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How is Potential Growth Measured?

Production Function Approach

$$\text{Potential Output} = TFP \times L^\beta \times K^{(1-\beta)}$$

Potential Total Factor Productivity *TFP*

Fitted value from panel regression of trend TFP growth on catchup potential (distance from average advanced-economy per capita GDP), demographics (share of working age population), human capital (secondary completion rates) and physical capital accumulation (five-year average investment-to-GDP changes).

Potential Labor Supply *L*

Actual population share times fitted value from panel regression of age- and gender-specific labor force participation rates on secondary and tertiary school enrolment and completion rates, fertility rates and life expectancy, controlling for the business cycle and cohort effects.

Potential capital stock *K*

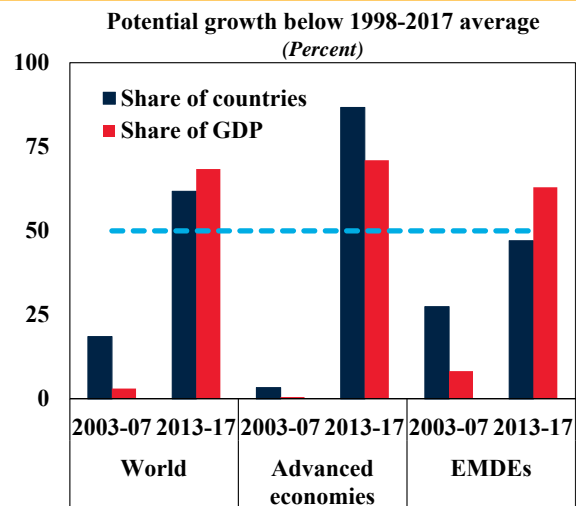
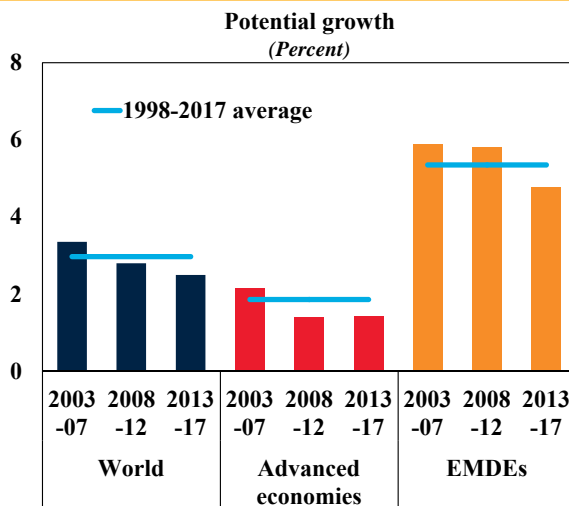
Actual capital stock (from PWT), spliced with investment-to-GDP ratio from 2014 onwards.

Data used here includes 30 advanced economies and 50 EMDEs for 1998-2017.

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Potential Growth:

Persistent and Broad-Based Weakness

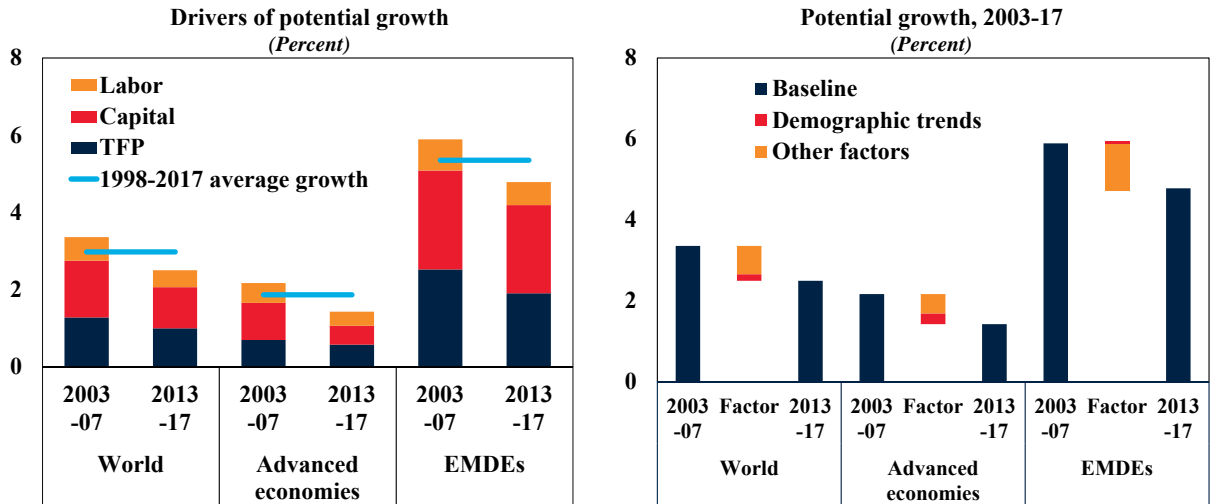


Sources: Penn World Table, World Bank.

Note: Based on potential growth derived using production function approach. Left Panel. GDP-weighted averages for a sample of 30 advanced economies and 50 EMDEs. Right Panel. Share of economies among 30 advanced economies and 50 EMDEs with potential growth in each period below the longer-term average (1998-2017) and these economies' share in global GDP. The horizontal line indicates 50 percent.

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Drivers of Potential Growth: *Multiple and Pushing Down*



Sources: Penn World Table, World Bank.
 Note: GDP-weighted averages of production function-based potential growth estimates. Left Panel. TFP stands for total factor productivity. Sample includes 30 advanced economies and 50 EMDEs. Right Panel. Other factors include declining population growth, convergence-related productivity growth, health and education policy changes, cohort effects, and a slowdown in investment growth relative to output growth. "Factor" refers to contributing factor in percentage points to changes between 2003-07 and 2013-17.

Potential Growth Prospects: *Baseline Scenario Assumptions*

$$\text{Potential Output} = TFP \times L^\beta \times K^{(1-\beta)}$$

Demography (population growth, working age population)

UN Population Projections (median fertility scenario)

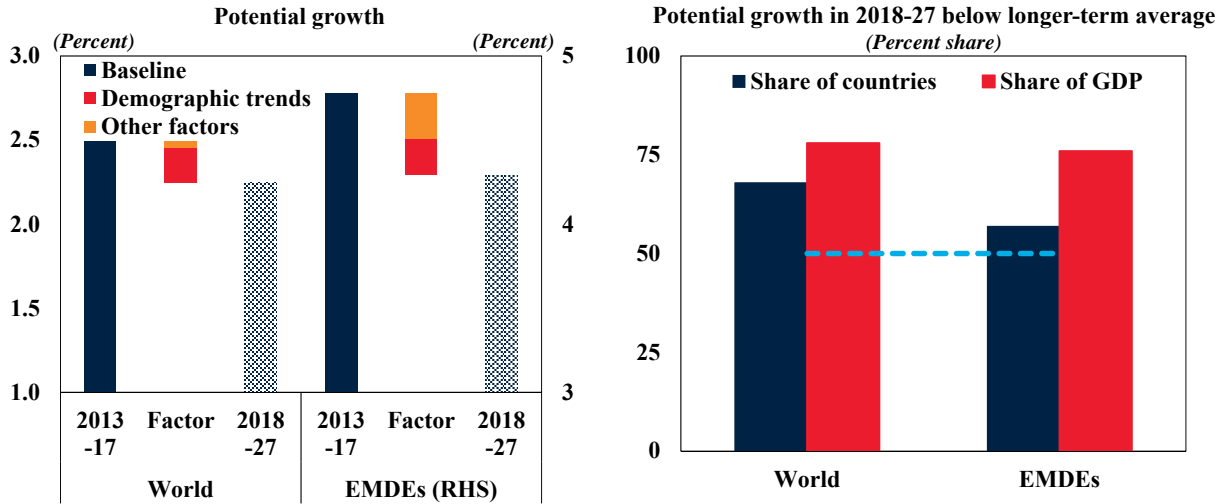
Human capital (educational attainment, schooling, life expectancy)

Trend improvements continue

Physical capital

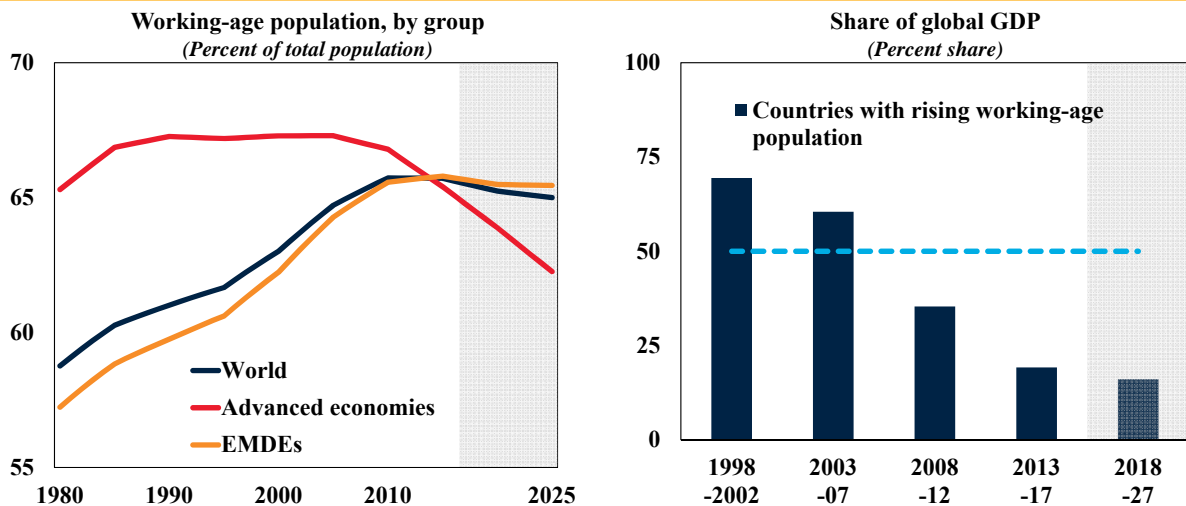
Longterm average investment growth

Prospects for Potential Growth: *Slowing in Majority of Countries*



Source: World Bank.
 Left Panel. GDP-weighted averages. Derived using the production function-based potential growth. "Factor" refers to contributing factor to changes in potential growth between 2013-17 and 2018-27, including changing demographic trends (aging), declining population growth, convergence-related productivity growth, health and education policy changes, cohort effects, and a slowdown in investment growth relative to output growth. Shaded bars indicate forecasts. Right Panel. Share of economies among 80 economies (including 50 EMDEs) in which potential growth in 2018-27 is below the longer-term average (1998-2017) and these economies' share in global GDP. The horizontal line indicates 50 percent. 16

Demographic Trends: *From Tailwinds to Headwinds for Potential Growth*



Sources: United Nations, World Bank.
 Note: Shaded areas are forecasts. Left Panel. Population-weighted averages. The working-age population is defined as people aged 15-64 years. Right Panel. Simple averages of the shares over the respective periods. For a sample of 38 advanced economies and 148 EMDEs. The horizontal line indicates 50 percent. 17

Four Questions

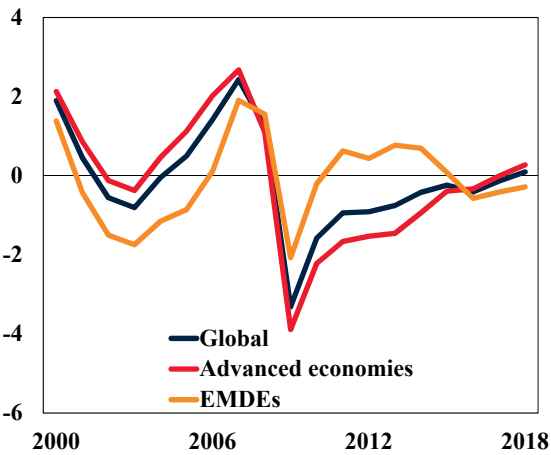
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What are the major risks?

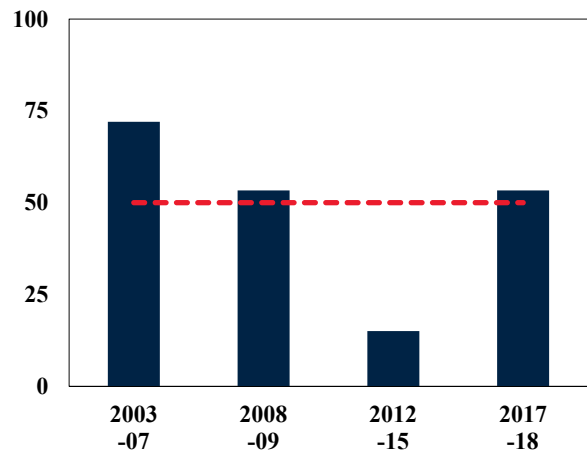
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Output Gap: *Global Slack Closing... A First Since 2008*

Output gaps
(Percent of potential GDP)



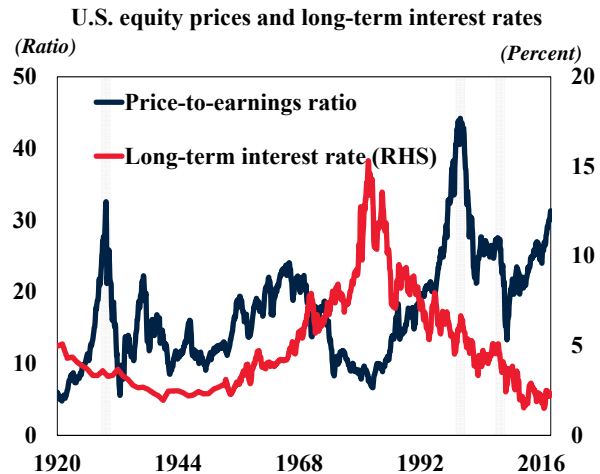
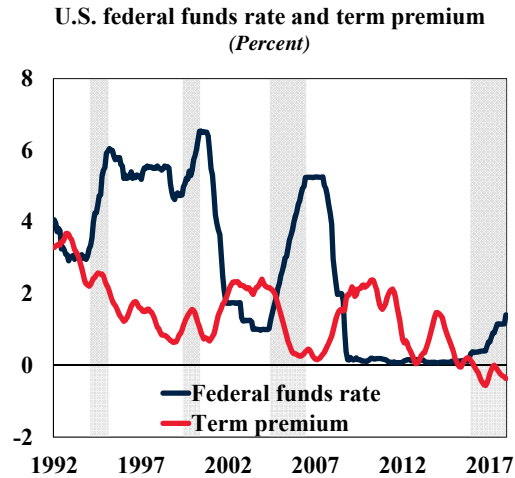
Advanced economies with positive output gaps
(Percent share)



Source: World Bank.
Note: Output gaps calculated using multivariate filter. Aggregated output gaps are calculated using constant 2010 U.S. dollar GDP weights. The sample includes 15 advanced economies and 23 EMDEs.

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Monetary Policy Normalization and Asset Prices: *Term Premium Declining and Valuations Rising*



Sources: Bloomberg, Federal Reserve Bank of St. Louis, Shiller (2015), World Bank.

Left Panel. Federal funds rate is the effective rate. Term premium estimates are for 10 years and shown as a 6-month moving average. It is obtained from the model described in Adrian, Crump, and Moench (2013). This model characterizes yields as linear functions of a set of pricing factors. It imposes no-arbitrage restrictions which ensure that the time series and cross-section of bond yields are consistent with one another. Shaded areas are the U.S. monetary tightening cycles. Last observation is December 2017. Right Panel. Price-to-earnings ratio is the cyclically-adjusted ratio as described in Shiller (2015). Long-term interest rates are the nominal 10-year Treasury constant maturity rates. Last observation is November 2017 for price-to-earnings ratio and October 2017 for interest rates.

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Risks:

More Balanced but Still Tilted to the Downside

Upside risk

- *Stronger recovery in large economies*

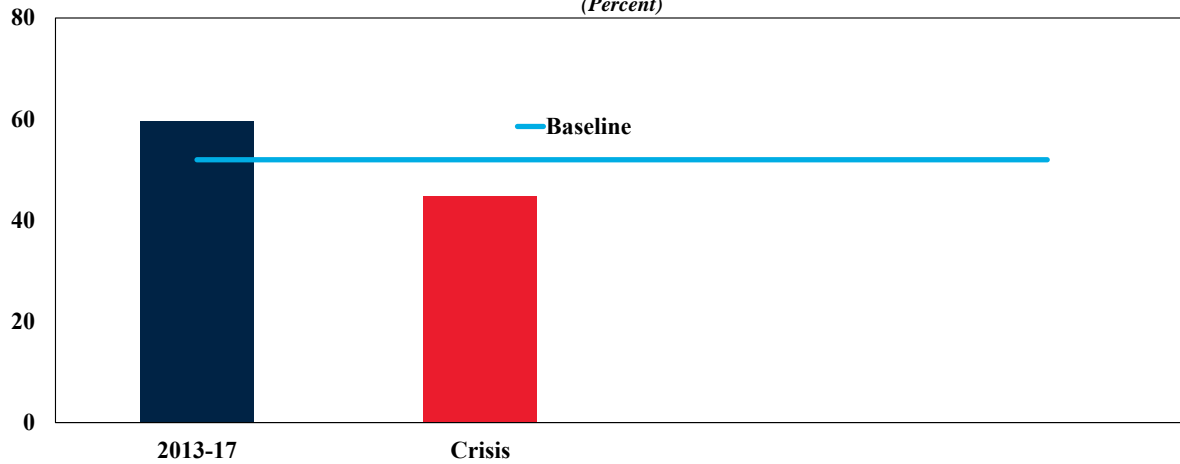
Downside risks

- *Financial stress*
- *Elevated policy uncertainty*
- *Geopolitical risks*
- *Protectionism*
- *Weaker potential growth*
- *History repeats itself?*

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The Big Risk: History Repeating Itself? *A Crisis in the Next Decade... Very Costly*

EMDE cumulative potential output change, 2018-27
(Percent)



Source: World Bank.

Note: GDP-weighted averages. Crisis scenario assumes that potential growth is reduced by 1 percentage point for five years and then reverts to baseline scenario. Policy push scenario assumes 0.2 percentage point increase in global potential growth (0.4 percentage point for EMDE potential growth) during 2018-27 compared with 2013-17 because of investment boost (0.2 percentage point), improved human capital (0.1 percentage point) and increased labor supply (0.1 percentage point). Policy push and crisis scenario assumes that potential growth is reduced by 1 percentage point for five years and then reverts to policy push scenario.

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Four Questions

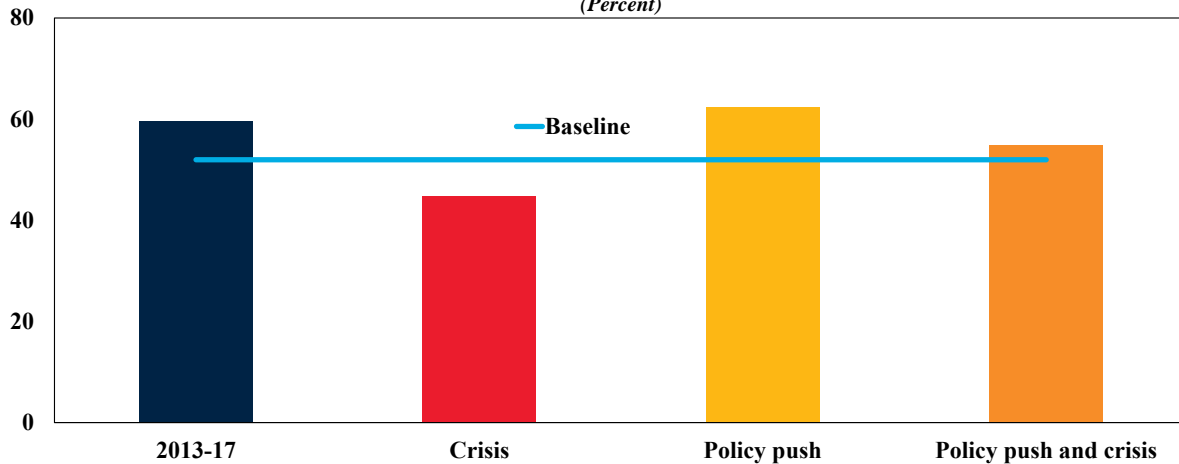
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What are the policy resolutions for the new year?

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The Big Risk: History Repeating Itself? A Crisis in the Next Decade... Very Costly

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Reform Options for the "Policy Push" Scenario: Stylized Scenarios

$$\text{Potential Output} = TFP \times L^{\beta} \times K^{(1-\beta)}$$

Human capital improvements

Raise each country's educational attainment, schooling, and life expectancy over 2018-22 by as much as its largest historical ten-year improvement. Hence, on average in EMDEs:

- Raise secondary and tertiary school enrolment rates by 7 percentage points
- Raise secondary school completion rates by 5 percentage points
- Raise life expectancy by 2.5 years

Labor market reforms

Raise each country's female labor force participation rates in 2018-22 by its largest historical ten-year increase (but not above male labor force participation rates). Hence, on average in EMDEs:

- Raise female labor force participation rates by 10 percentage points

Investment push

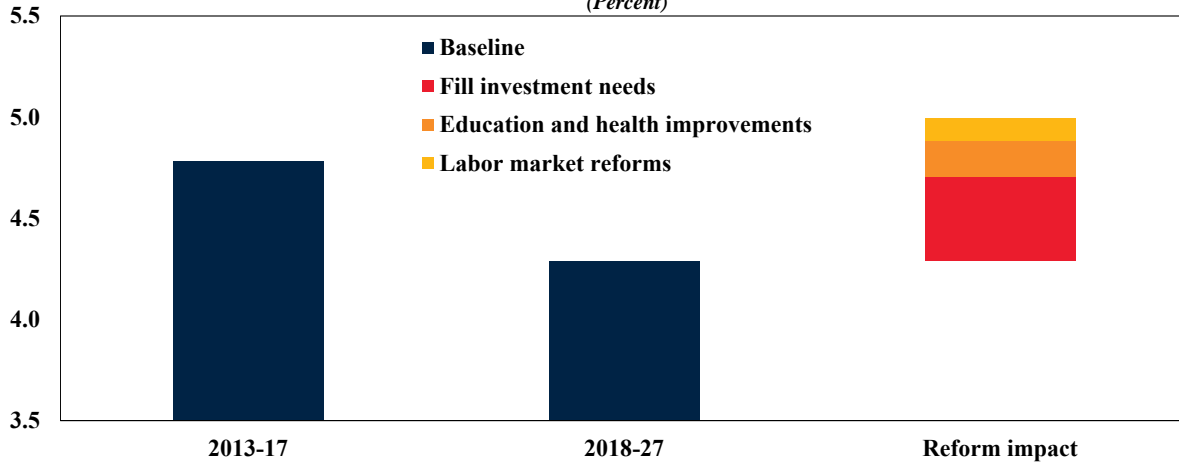
Raise investment-to-GDP ratio by its largest historical ten-year increase

- Raise investment-to-GDP ratio by 2.7 percentage point

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Policies to Stem Declining Potential Growth in EMDEs: *Available!*

EMDE potential growth under reform scenarios
(Percent)

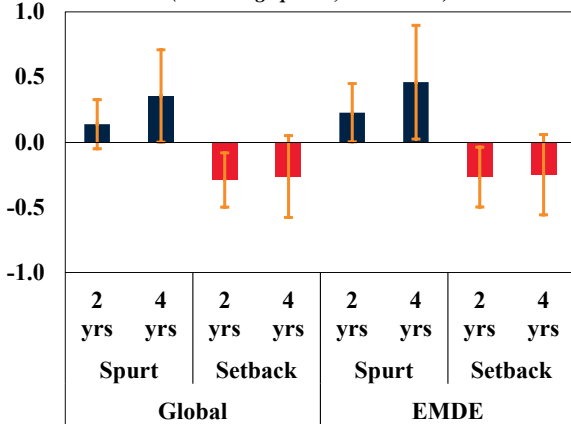


Source: World Bank.
Note: GDP-weighted averages.

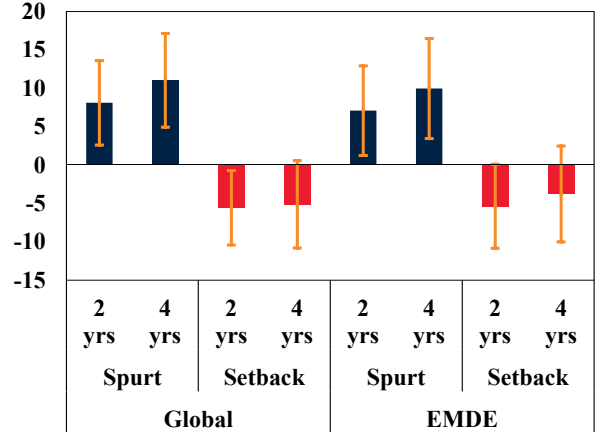
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Policies to Stem Declining Potential Growth in EMDEs: *Governance Reforms to Raise Investment and Productivity*

Change in productivity growth 2-4 years after reform
(Percentage points, cumulative)



Change in investment growth 2-4 years after reform
(Percentage points, cumulative)



Source: World Bank estimates.

Notes: GDP weighted averages. Regression coefficients of potential TFP growth (left panel) or real investment growth (right panel) on dummies for structural reform spurts and setbacks—defined as statistically significant changes in four Worldwide Governance Indicators—from local projections model for lags of two and four years, for a sample of 136 EMDEs and 38 advanced economies during 1996-2015. Vertical bars show 90 percent confidence interval.

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Policy Responses:

Measures to Boost Potential Growth, Mitigate Cyclical Risks and Address Global Challenges

How to boost potential growth?

- Invest in physical and human capital
- Undertake governance, labor, and business reforms

How to mitigate cyclical risks?

- Reinforce cyclical policy frameworks and buffers
- Employ macroprudential tools to mitigate financial risks

How to address global challenges?

- Facilitate global policy coordination
- Strengthen multilateral frameworks

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Four Questions and Answers

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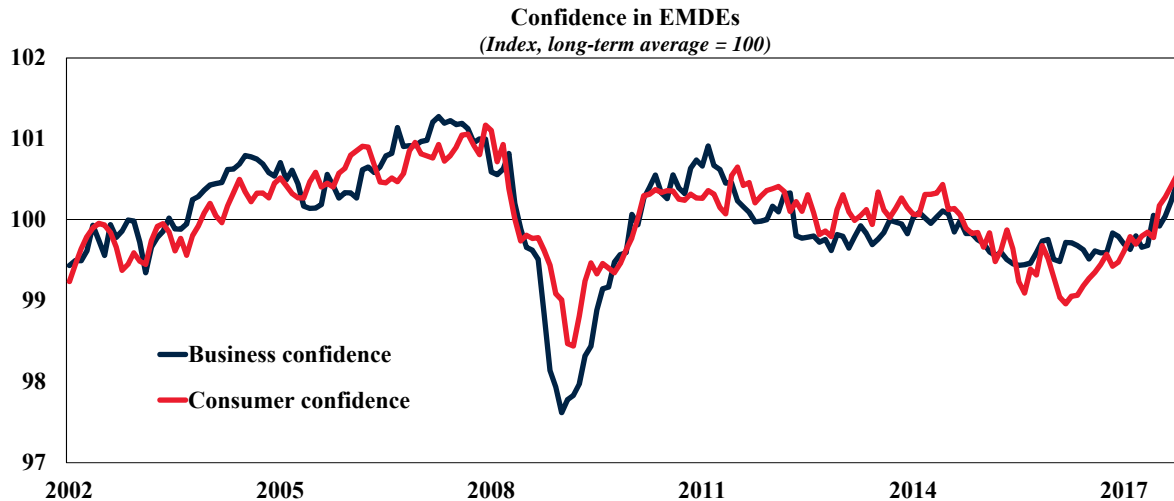
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Booming Confidence in EMDEs: *What Next?*



Source: Organisation for Economic Co-operation and Development.

Note: Median confidence across EMDEs. Sample changes over time, but at most 12 countries and 10 countries are included in business confidence and consumer confidence, respectively. Last observation is November 2017.

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Select Publications by DECPG

- *Global Economic Prospects – January 2018*
(January and June)
- *Commodity Markets Outlook – April 2018*
(April and October)
- *Global Monthly and Global Weekly*
- *Asset Prices and Macroeconomic Outcomes* – November 2017
- *Macroeconomic Implications of Financial Imperfections* – November 2017

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Questions & Comments
Thanks!

M. Ayhan Kose
Development Prospects Group
The World Bank
akose@worldbank.org

