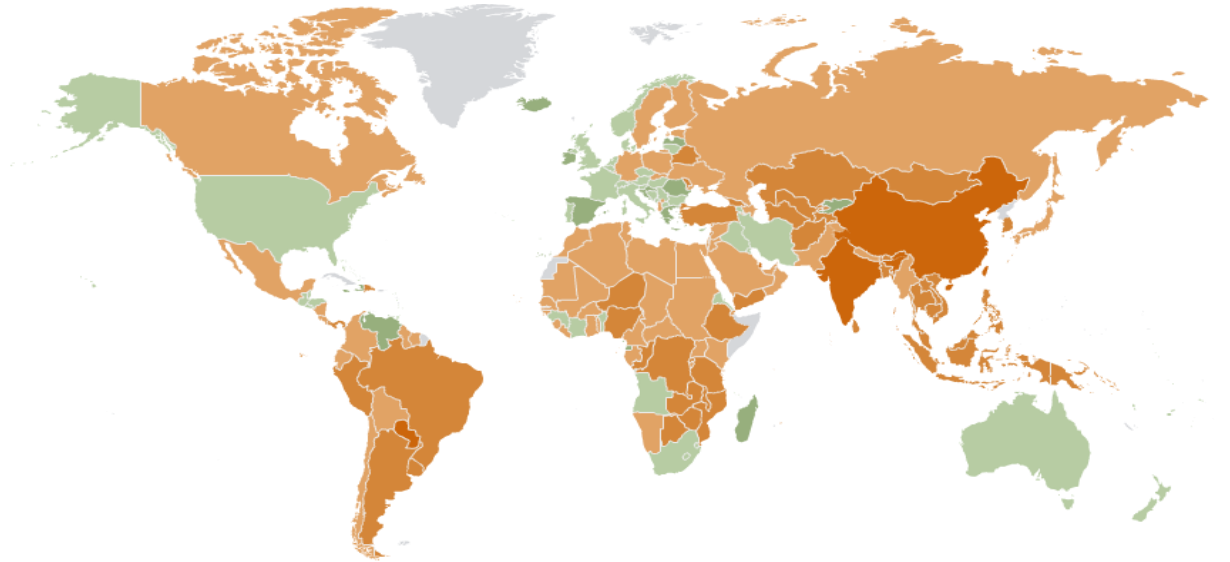


# World real GDP growth in 2010

*Annual percent change*



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- 10% or more
- 6-10%
- 3-6%
- 0-3%
- Less than 0%
- No data

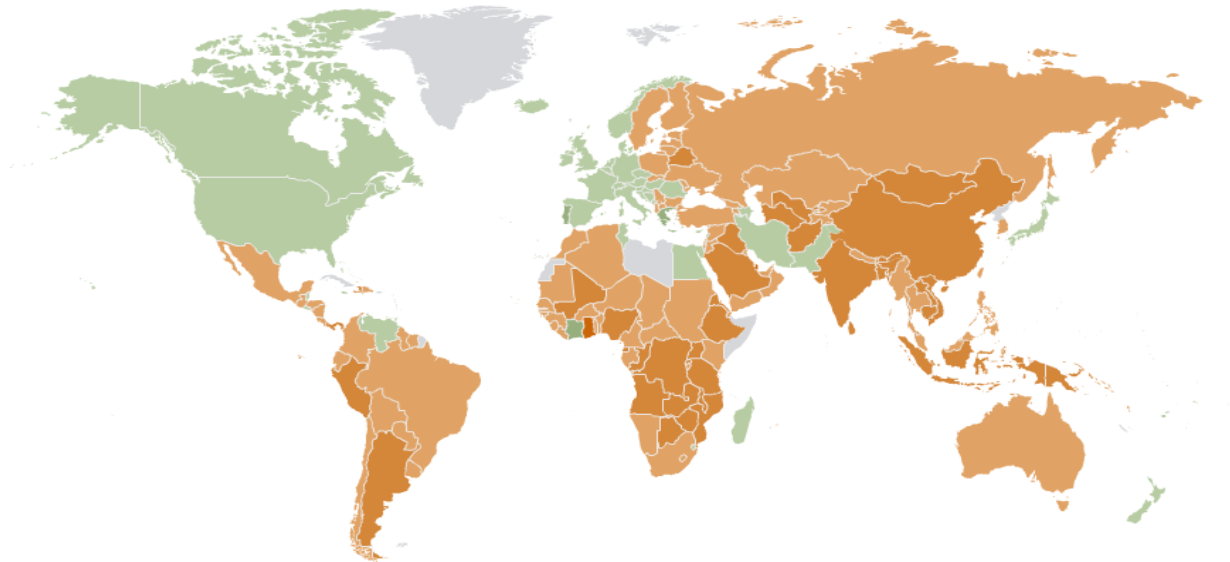
Source: International Monetary Fund.

# World real GDP growth in 2011

*Annual percent change*



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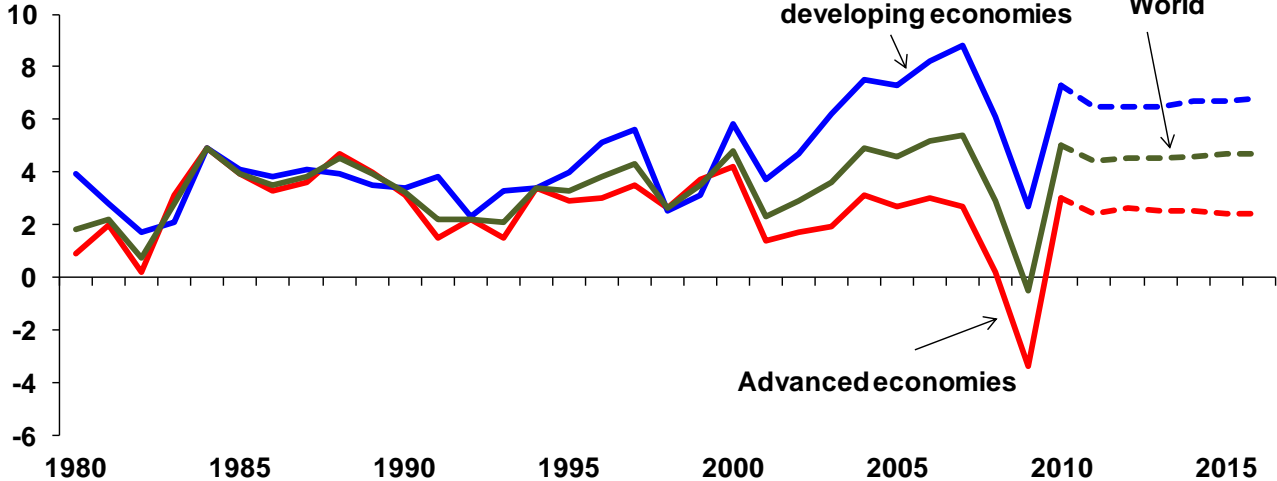
- 10% or more
- 6-10%
- 3-6%
- 0-3%
- Less than 0%
- No data

Source: International Monetary Fund.

# Solid recovery

*World real GDP grew by 5 percent in 2010*

Real GDP growth, percent



Source: World Economic Outlook, International Monetary Fund, April 2011 update.

# World output forecasts

*Percent change from previous year*



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	2010	2011F	2012F
<b>World</b>	<b>5.0</b>	<b>4.4</b>	<b>4.5</b>
<b>Advanced economies</b>	<b>3.0</b>	<b>2.4</b>	<b>2.6</b>
United States	2.8	2.8	2.9
Japan	3.9	1.4	2.1
United Kingdom	1.3	1.7	2.3
Euro area	1.7	1.6	1.8
<b>Emerging and developing economies</b>	<b>7.3</b>	<b>6.5</b>	<b>6.5</b>
Brazil	7.5	4.5	4.1
China	10.3	9.6	9.5
India	10.4	8.2	7.8
Russia	4.0	4.8	4.5

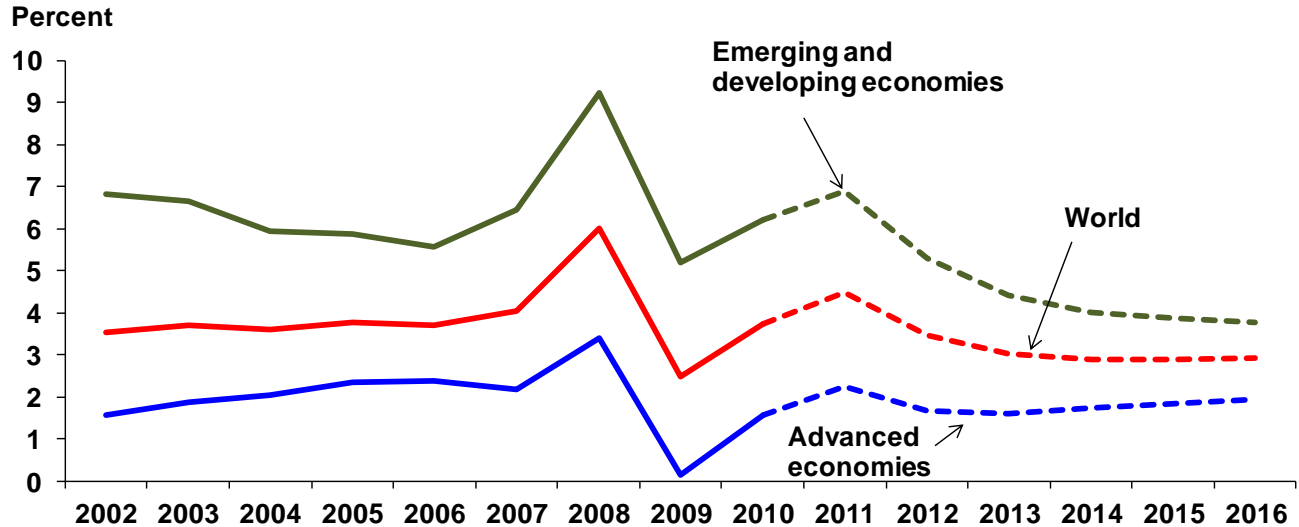
Source: World Economic Outlook, International Monetary Fund, April 2011.

# Inflation risk ahead?



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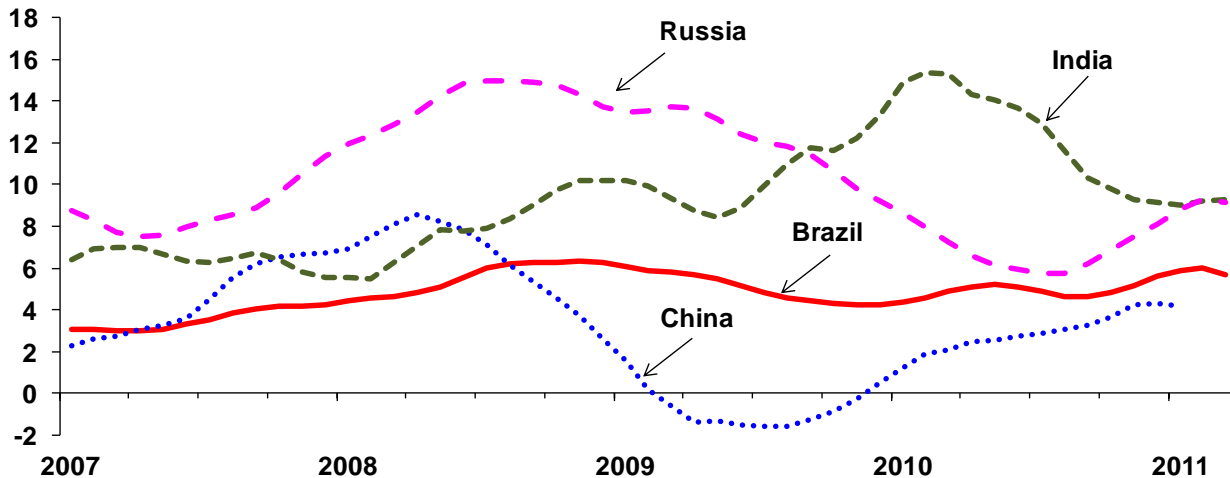
*Percent change in consumer prices (year-to-year)*



Source: World Economic Outlook, International Monetary Fund, April 2010 update.

# Inflation pressure rising in emerging countries

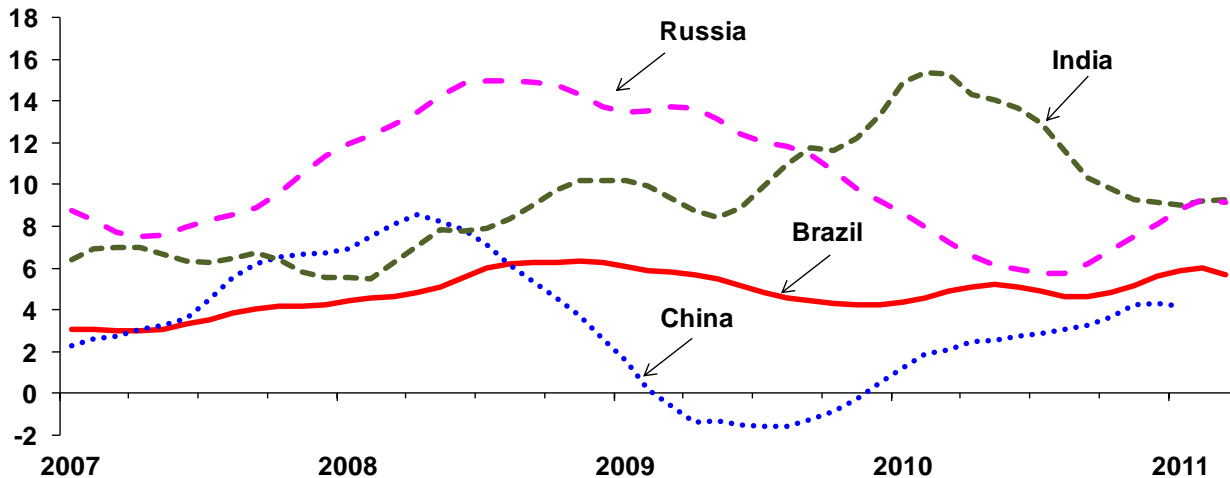
% change in consumer price index, 3-month rolling average



Source: OECD, Milken Institute.

# Inflation pressure rising in emerging countries

% change in consumer price index, 3-month rolling average



Source: OECD, Milken Institute.

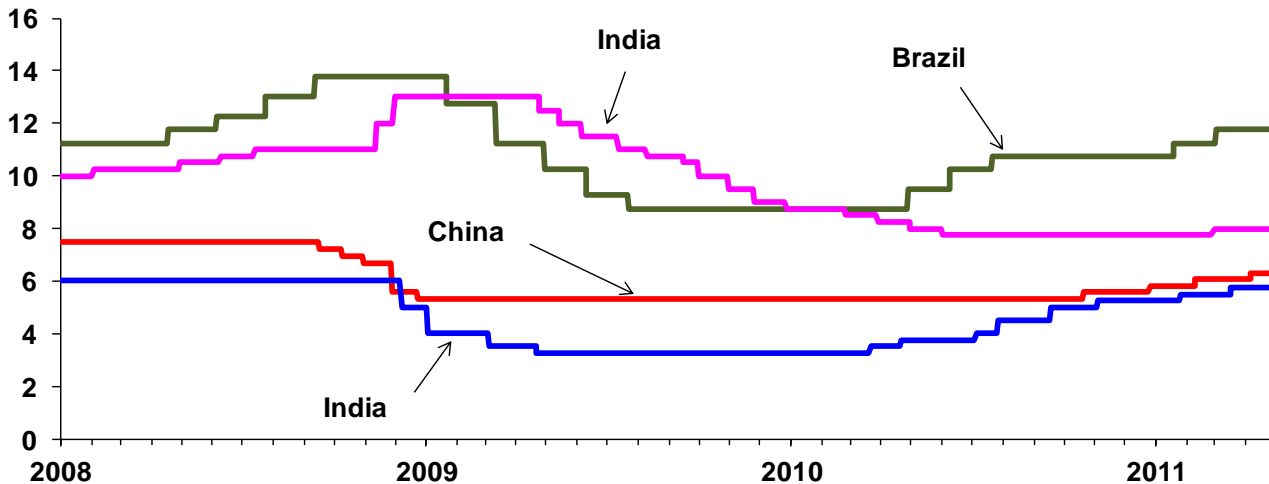
# Emerging countries have tightened monetary policy in fear of inflation

*Target interest rates of central banks*



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Policy interest rates, percent

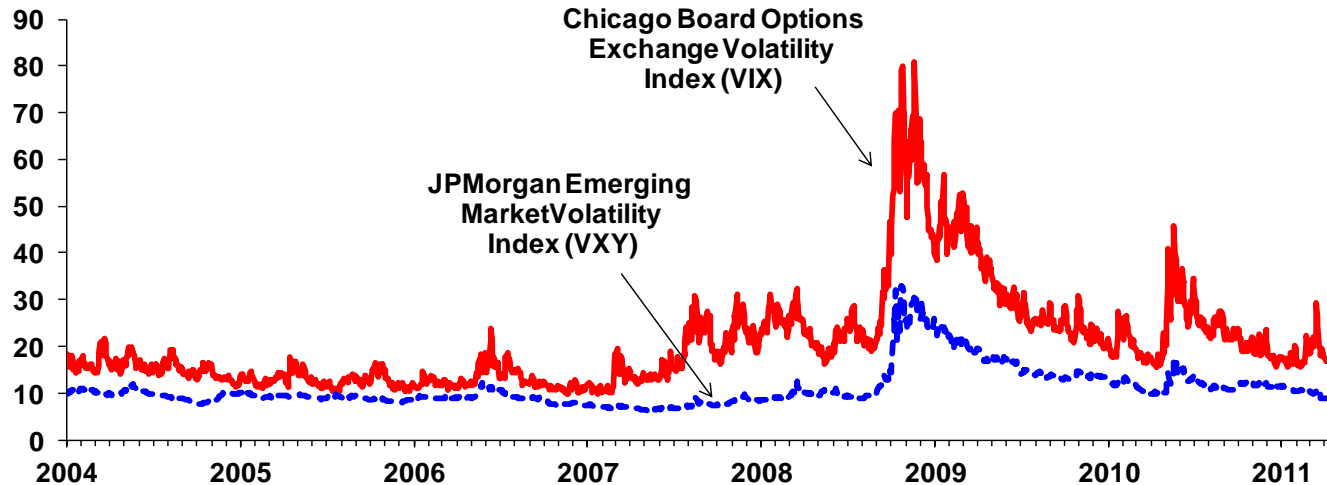


Source: Bloomberg.



# Implied volatility: U.S. vs. emerging markets

Implied volatility, percent



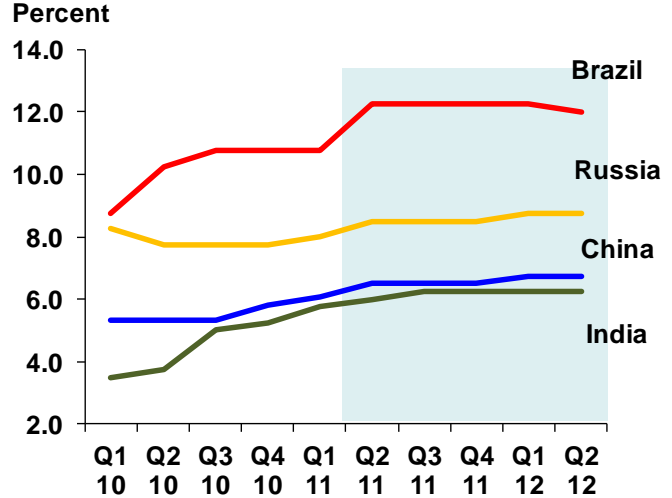
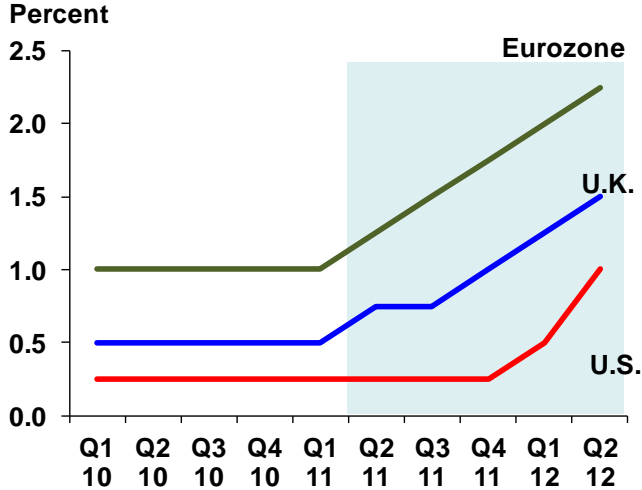
Source: Bloomberg.

# End of the era of cheap capital?

*Consensus forecasts: Central bank rates will increase in the next 12 months*



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Source: Bloomberg.

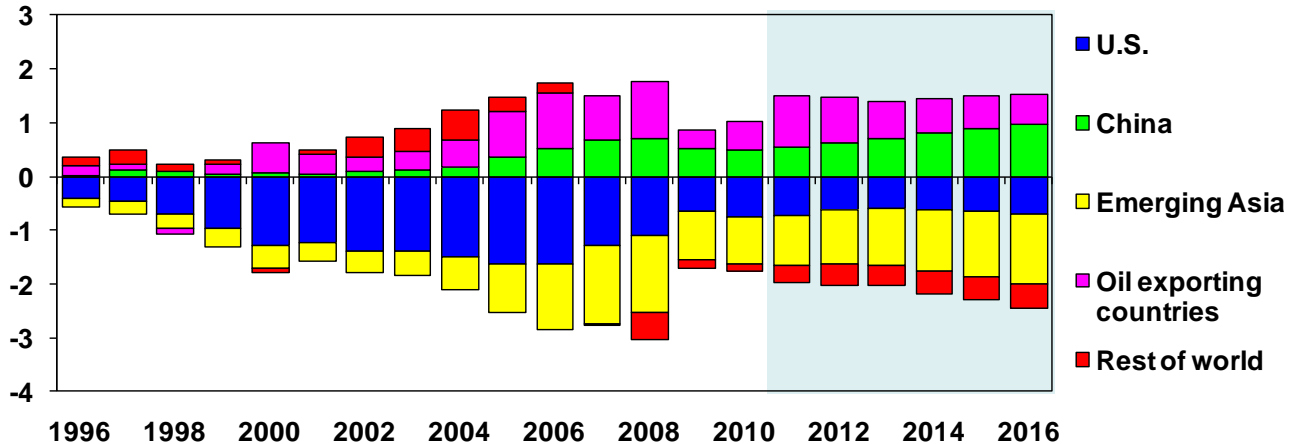
# Global imbalances on the rise again

*Projections after 2010*



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Percent of world GDP



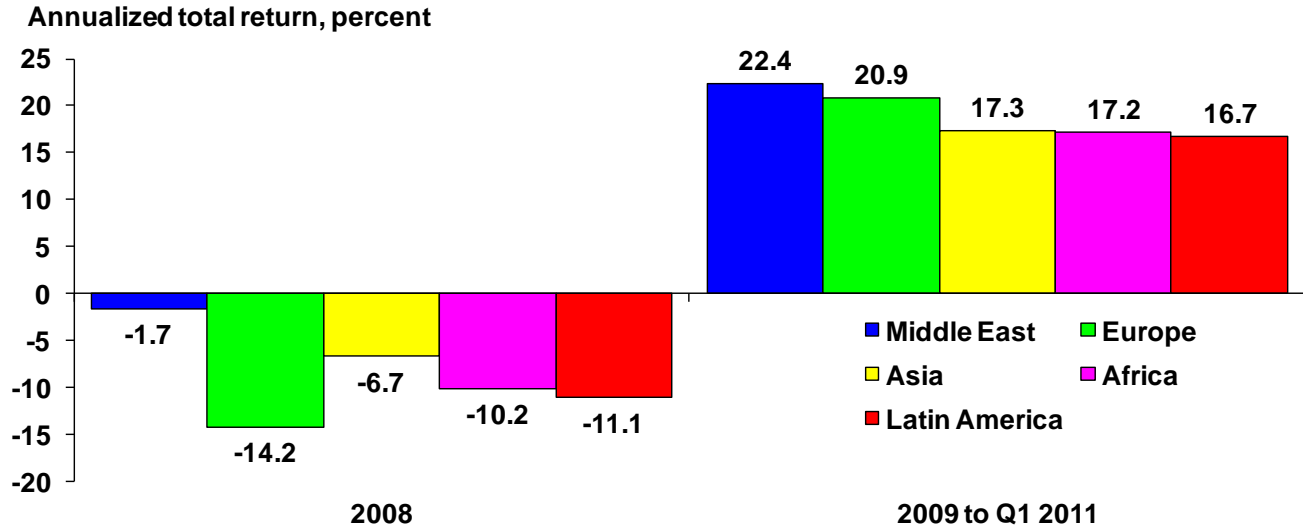
Sources: International Monetary Fund, Milken Institute.  
Note: Discrepancies are not plotted.

# Performance of emerging bond markets

## Total return of JPMorgan EMBI Global indexes



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Sources: DataStream, Milken Institute.

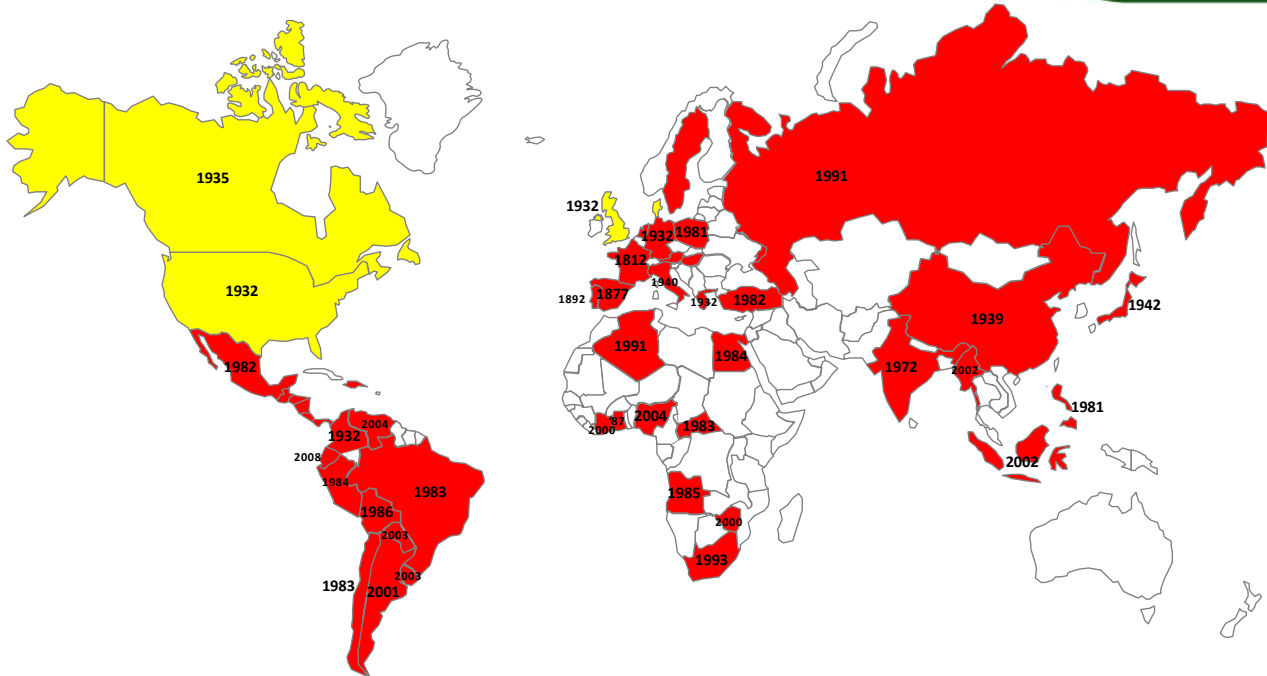


# The persistence of sovereign defaults

## Sovereign defaults in selected countries, 1824 to 2008

Argentina	Ecuador	Paraguay	Uruguay	Venezuela
<ul style="list-style-type: none"><li>• 1830</li><li>• 1890</li><li>• 1915</li><li>• 1930s</li><li>• 1982</li><li>• 2001</li></ul>	<ul style="list-style-type: none"><li>• 1832</li><li>• 1868</li><li>• 1911</li><li>• 1914</li><li>• 1931</li><li>• 1982</li><li>• 1999</li><li>• 2008</li></ul>	<ul style="list-style-type: none"><li>• 1827</li><li>• 1874</li><li>• 1892</li><li>• 1920</li><li>• 1932</li><li>• 1986</li><li>• 2003</li></ul>	<ul style="list-style-type: none"><li>• 1876</li><li>• 1891</li><li>• 1915</li><li>• 1933</li><li>• 1983</li><li>• 2003</li></ul>	<ul style="list-style-type: none"><li>• 1832</li><li>• 1878</li><li>• 1892</li><li>• 1898</li><li>• 1932</li><li>• 1998</li></ul>

# A map for world sovereign defaults



# Sovereign debt most likely to default in five years *As of Q1 2011*



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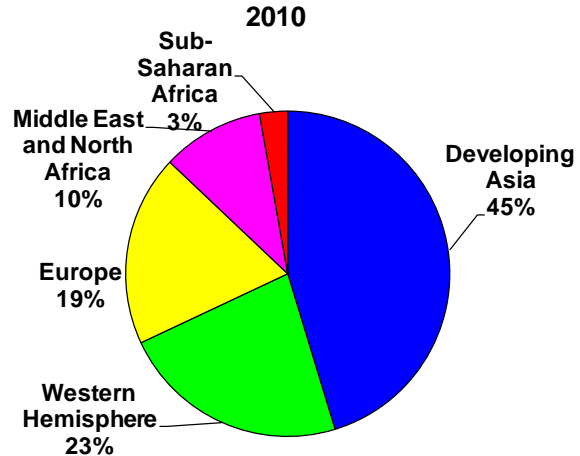
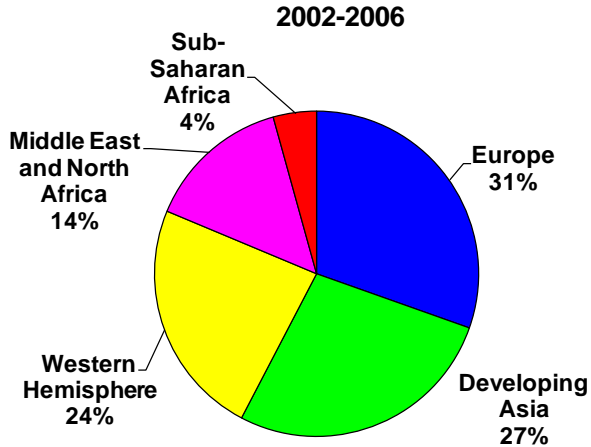
Rank	Country	Five-year cumulative probability of default (%)
1	Greece	57.7
2	Venezuela	51.8
3	Ireland	43.0
4	Portugal	40.1
5	Argentina	34.7

Rank	Country	Five-year cumulative probability of default (%)
6	Ukraine	27.7
7	Dubai	24.7
8	Lebanon	21.9
9	Iraq	21.1
10	Egypt	21.1

Source: CMA Global Sovereign Credit Risk Report.

Note: Ranked by five-year cumulative probability of default.

# Capital raised: Developing Asia attracts the most funding after the crisis

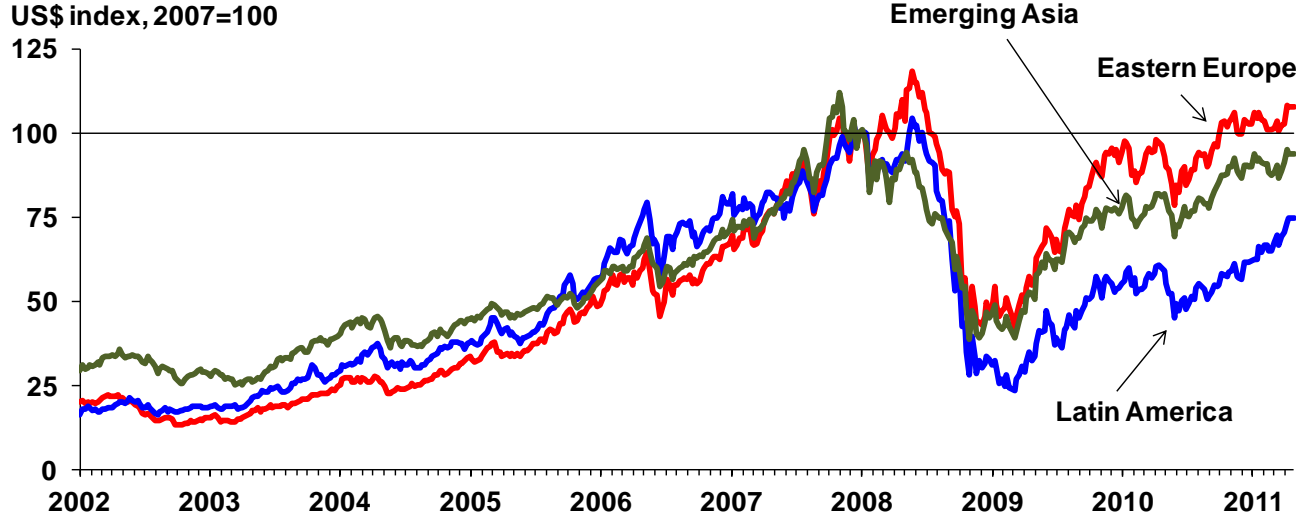




# Emerging markets: Equity markets have returned to pre-crisis level



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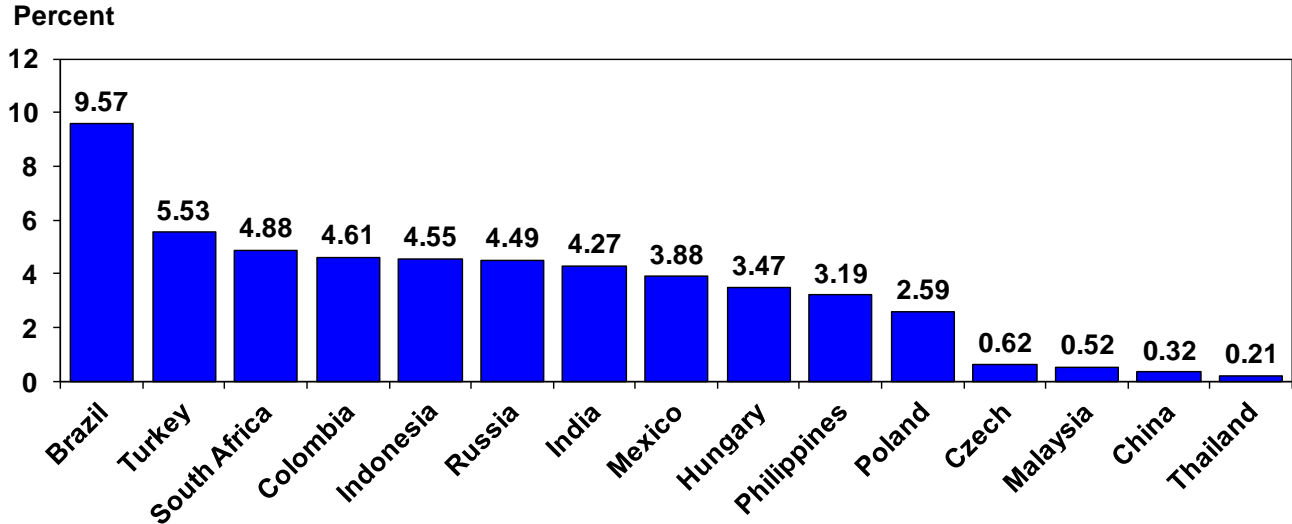
Source: Bloomberg.

# Emerging market bond yield spreads

*As of April 8, 2011*



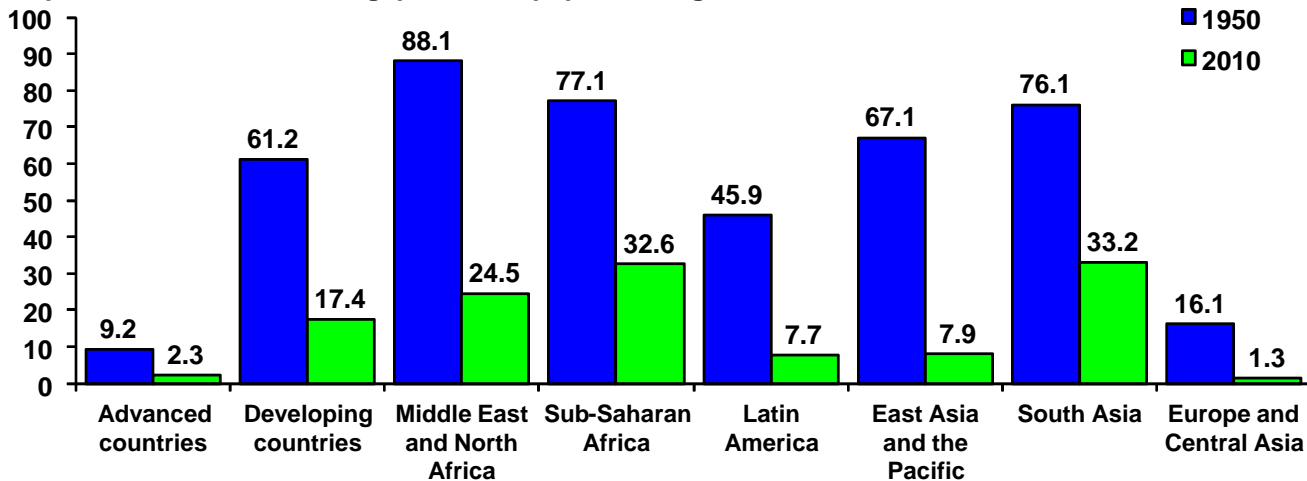
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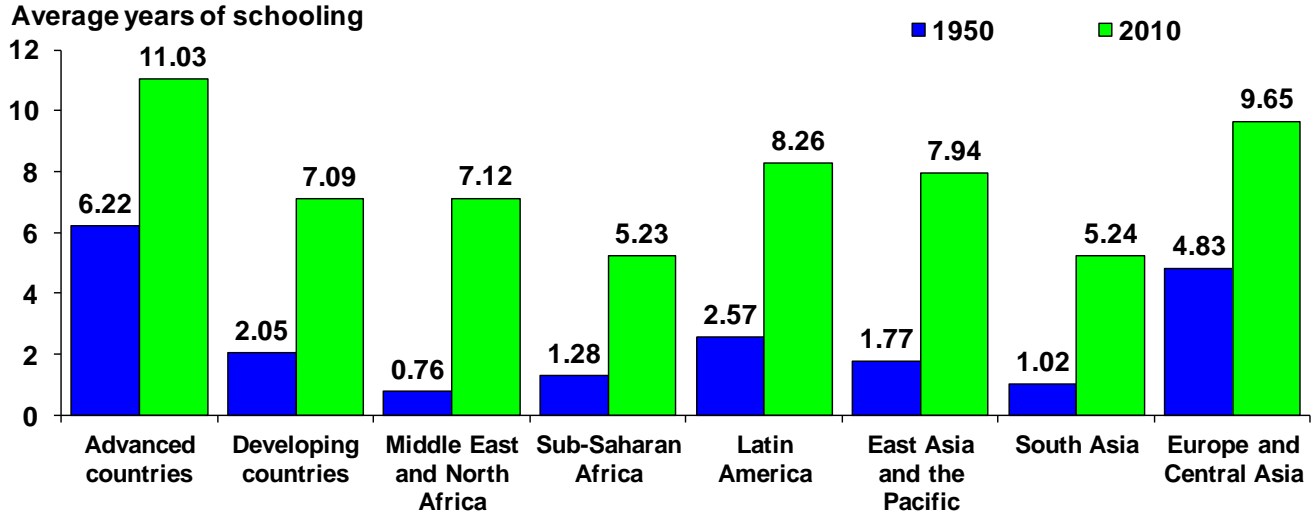
Sources: Bloomberg, Milken Institute.

# The education gap across regions

Population with no schooling, percent of population age 15 and over

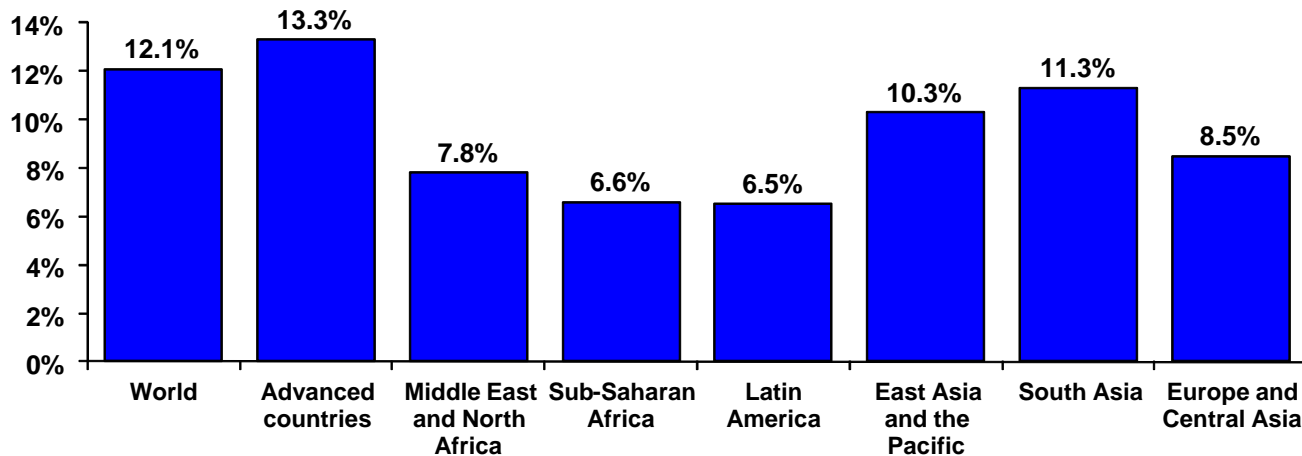


# Average years of schooling increased dramatically for developing countries in the past 60 years



# Return on human capital

Rate of return on an additional year of schooling, percent



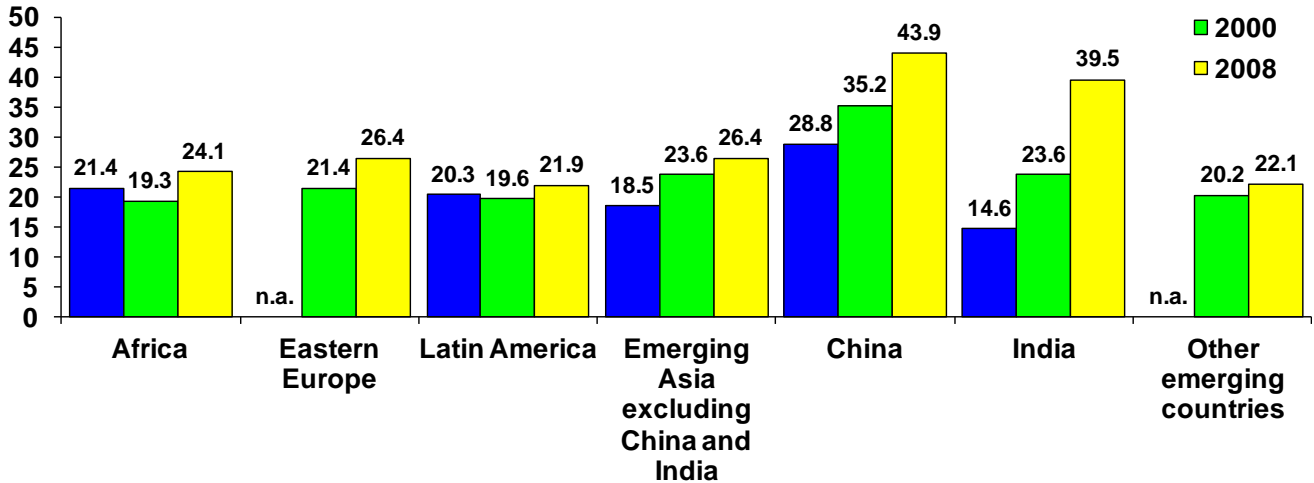
Source: Robert Barro and Jong-Wha Lee (2010).

# Investment rates have increased across all emerging market regions since 2000



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Investment, percent of GDP



Source: McKinsey Global Institute.

# Emerging countries vs. developed countries

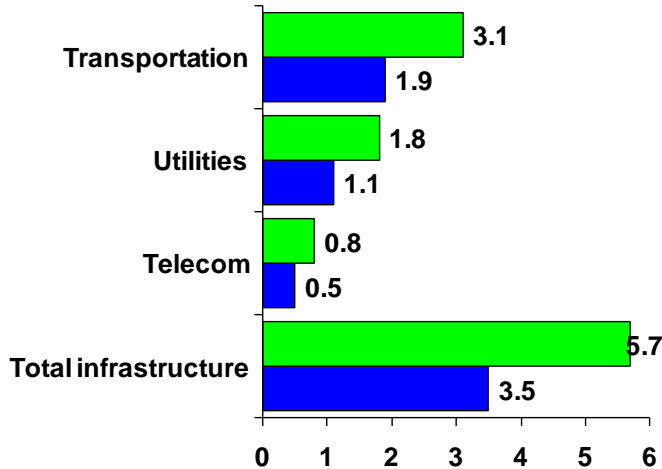


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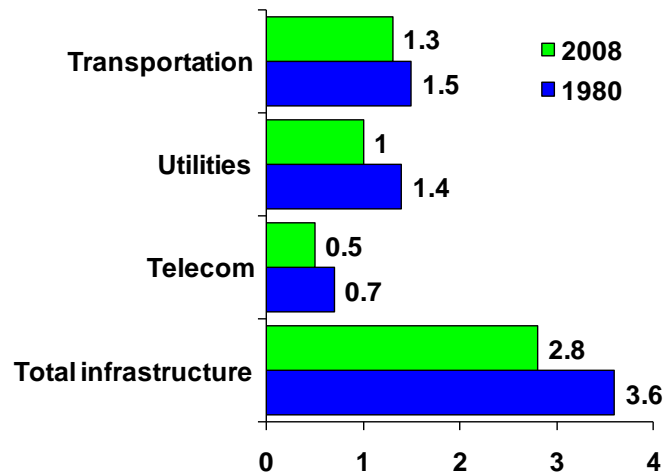
*Investment in infrastructure as a share of GDP, nominal values*

% GDP

Emerging economies



Developed economies



Source: McKinsey Global Institute; McKinsey Global Economic Growth Database.



# Ruben Vardanian slides

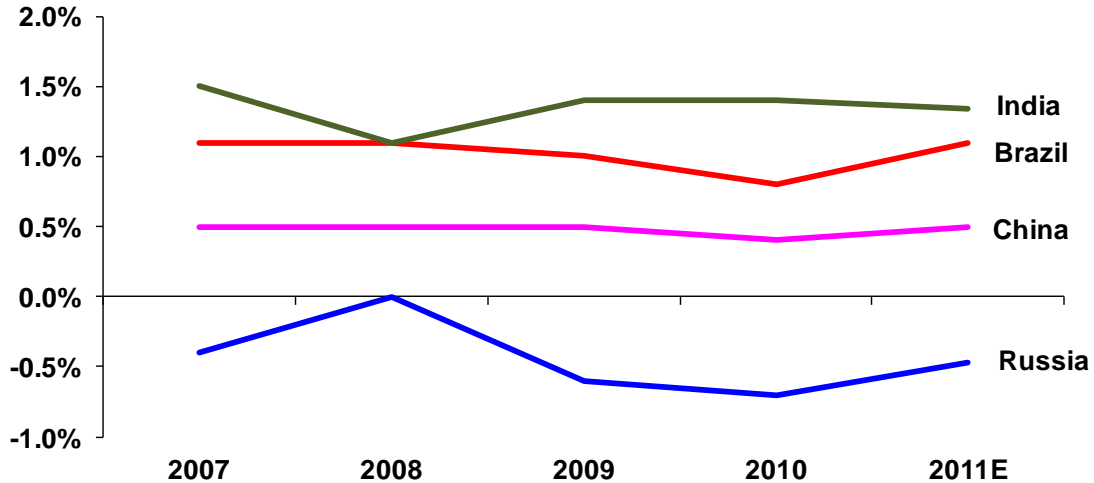


# Population growth

*Percent*



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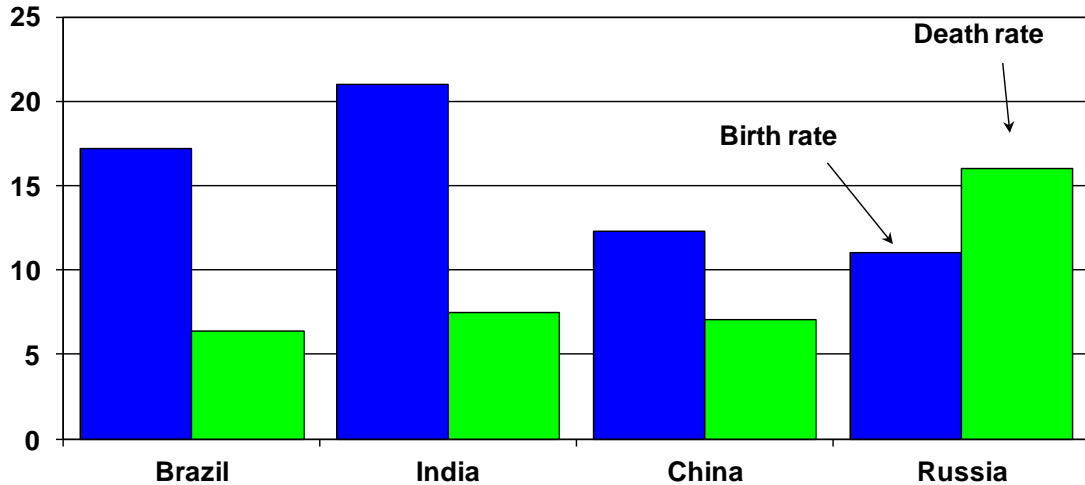
Source: CIA 2010 World Factbook.

# Birth and death rates

*Pro mille*



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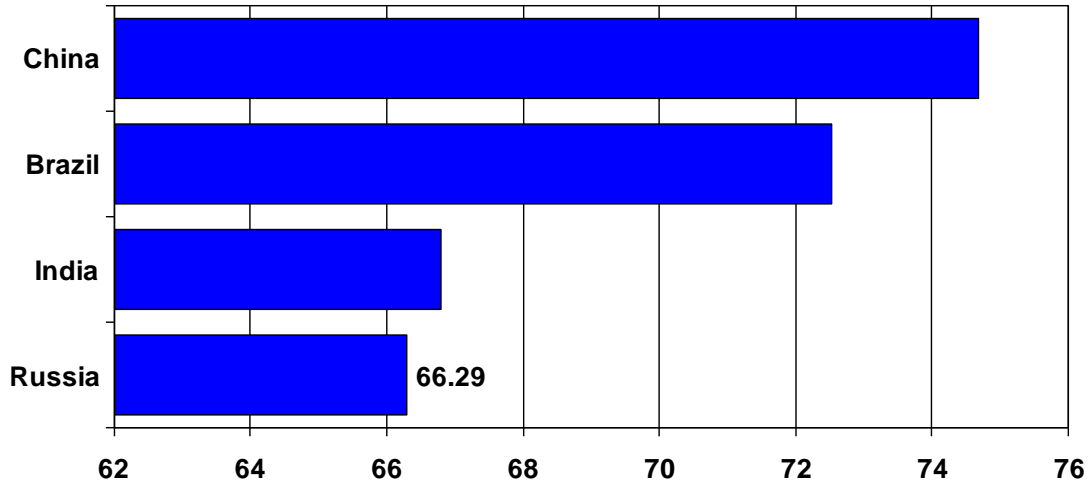
Source: CIA 2010 World Factbook.

# Life expectancy

Years



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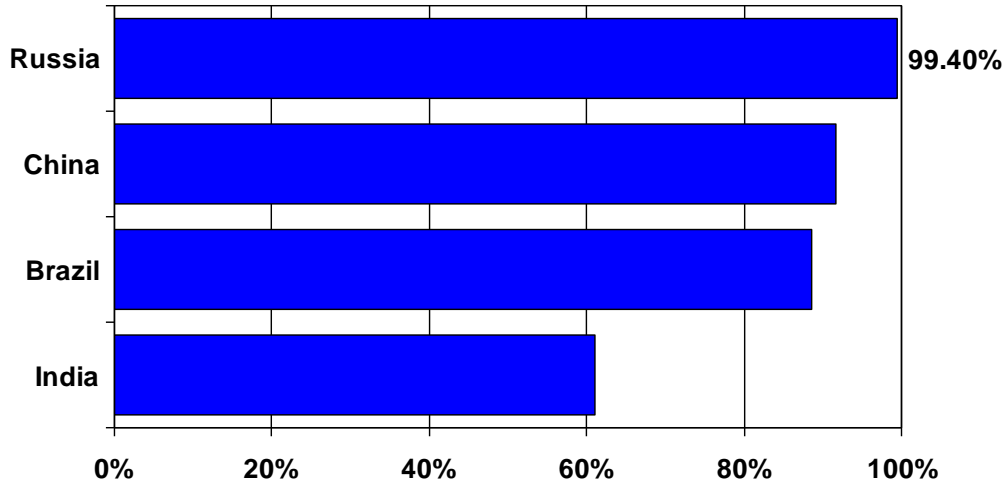
Source: CIA 2010 World Factbook.

# Literacy

*Percent*

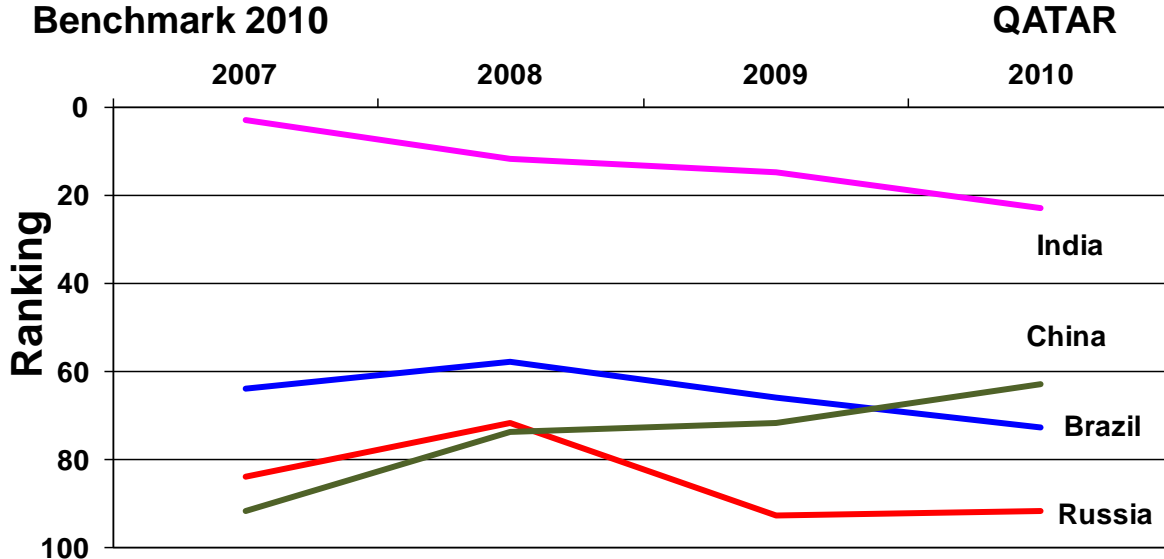


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Source: CIA 2010 World Factbook.

# Quality of management schools

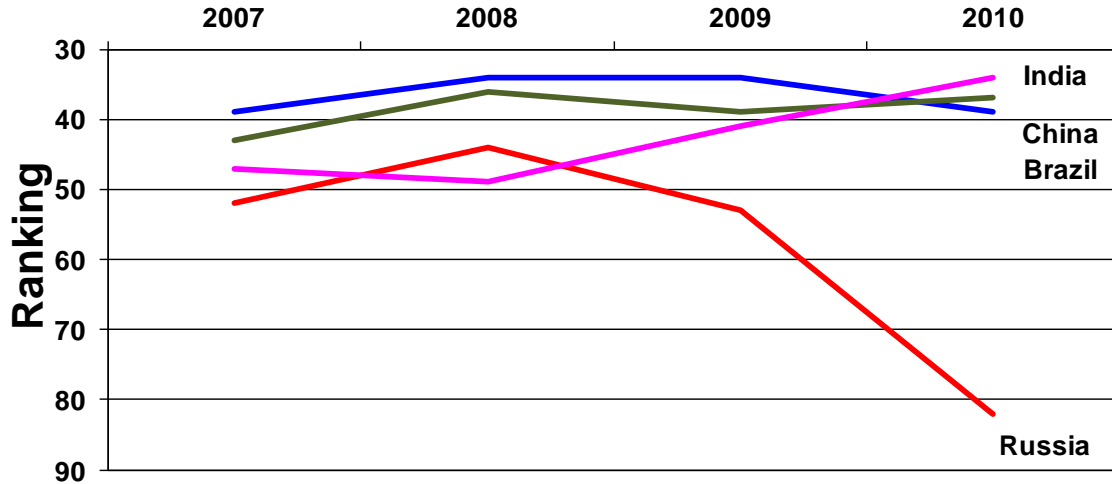


Source: Global Competitiveness Report 2007-2011.

# Brain drain

Benchmark 2010

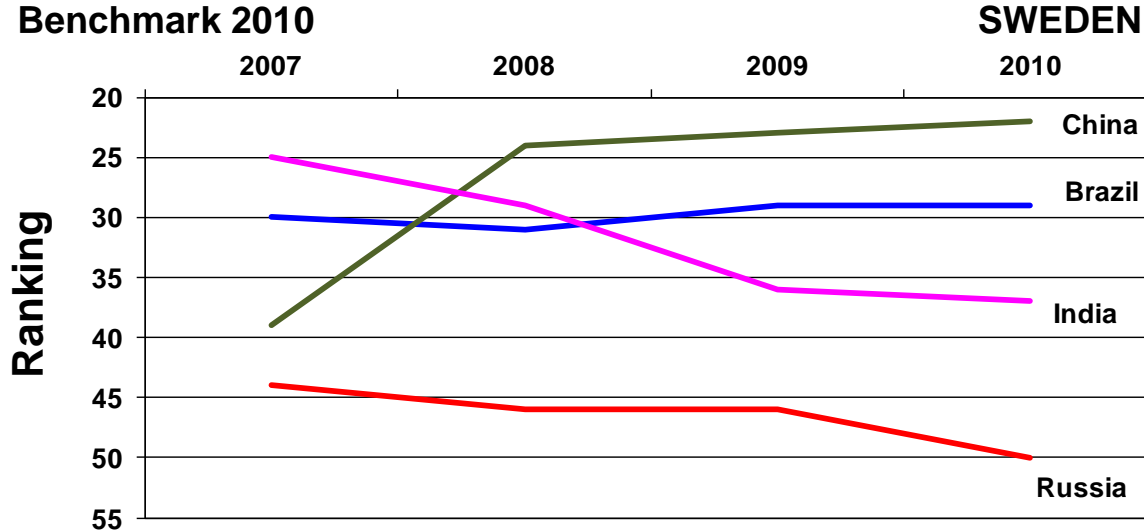
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# Corporate spending on R&D



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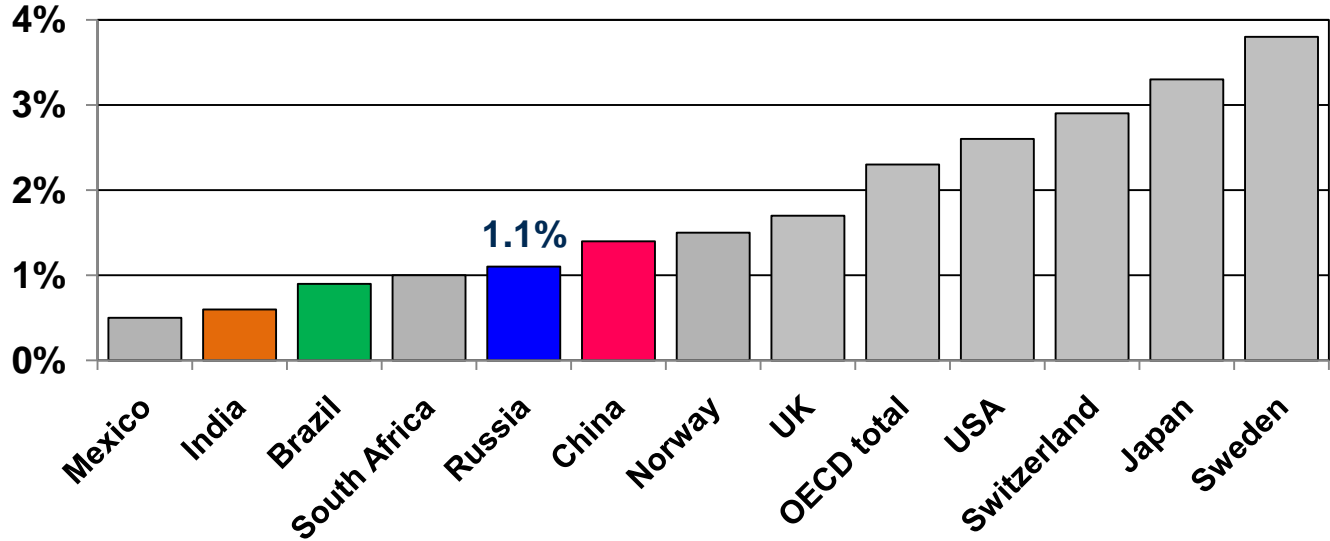
Source: Global Competitiveness Report 2007-2011.

# Government spending on R&D

*Percent of GDP*



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Source: OECD, 2010.





## **Peter Dattels slides**

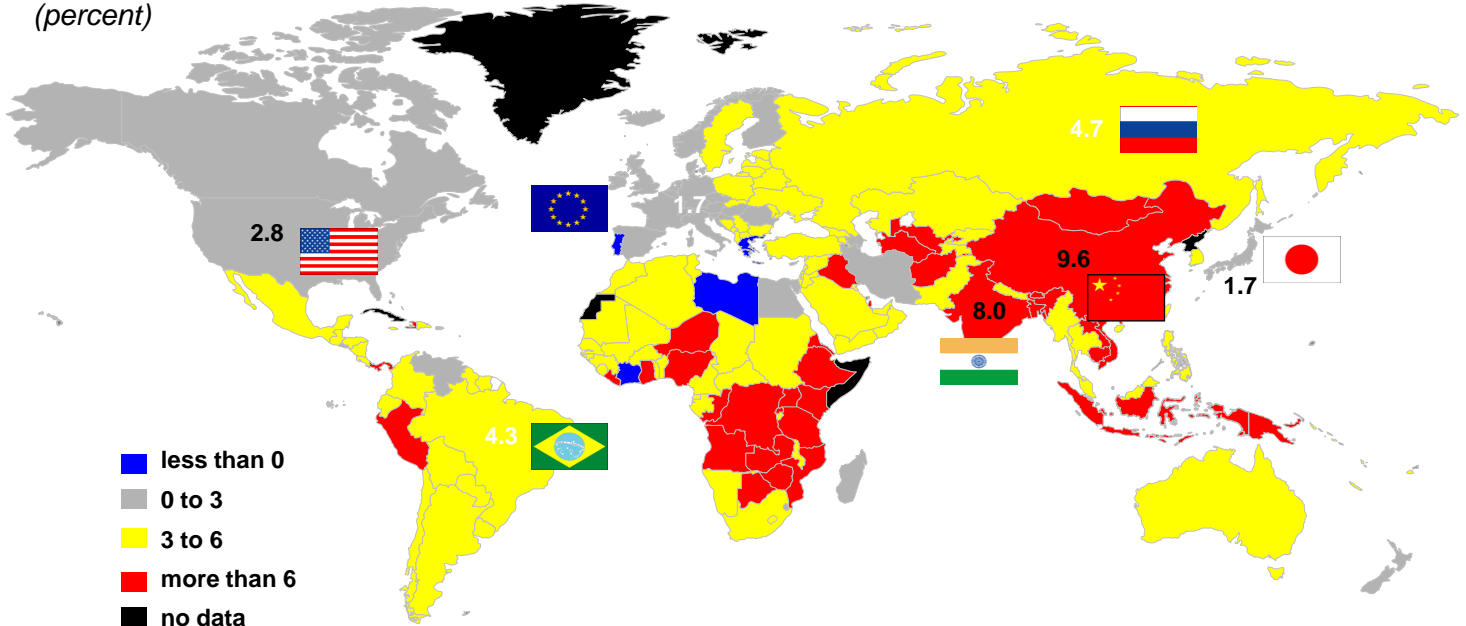
# The two-speed global recovery poses challenges

## Average projected real GDP growth during 2011-2012

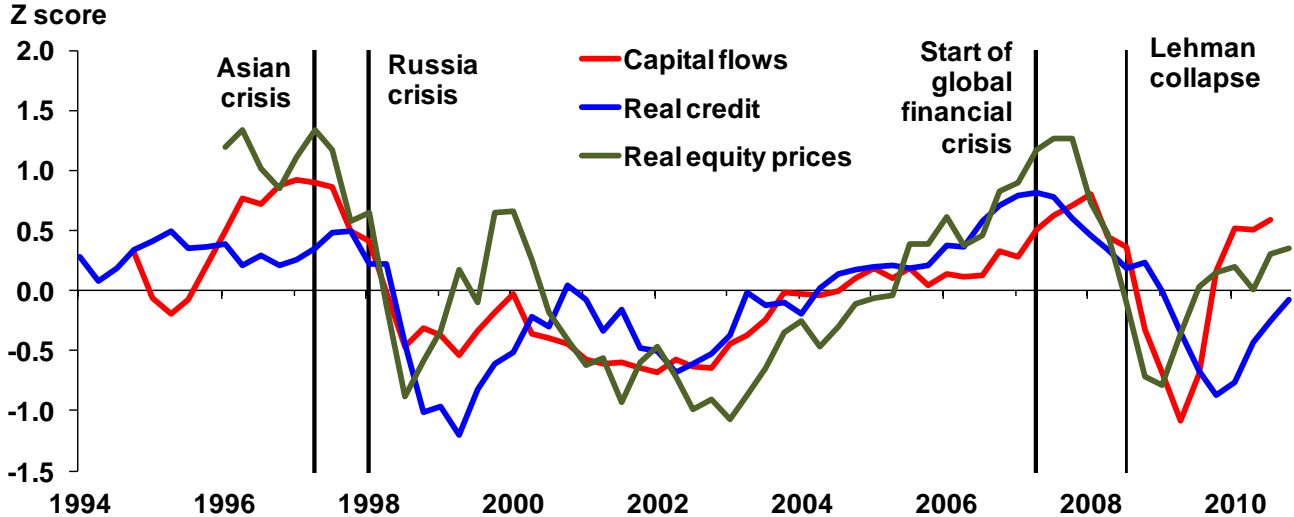
(percent)



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# Will capital flowing into EMs create imbalances?



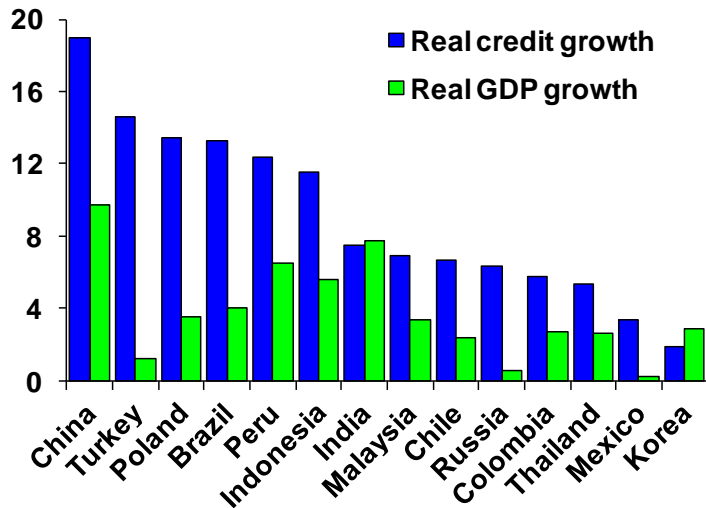
# EM banks expand lending while corporates deleverage



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## Real credit and GDP growth

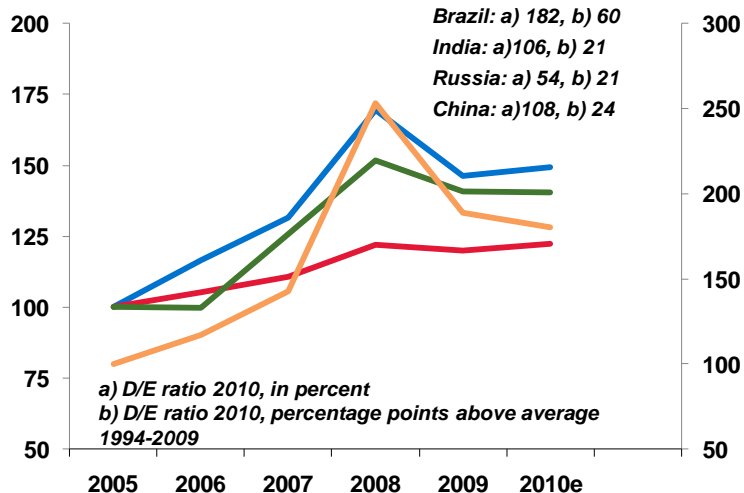
(2008-10, in percent)



Source: International Monetary Fund.

## BRIC Countries: Debt-to-Equity Ratios of the Corporate Sector

(2005 = 100, Russia on right scale)



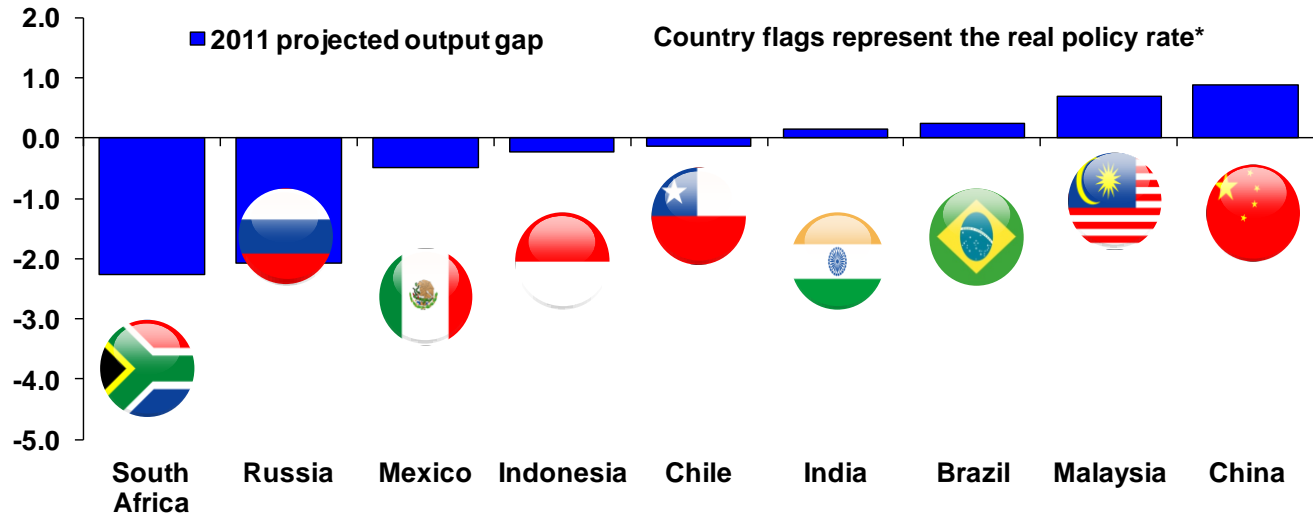
# EM monetary policy: Falling behind the curve?



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## Emerging Economies

(percent of potential GDP)



Source: International Monetary Fund.

\*Real policy rate is defined as current policy rate (Mar. 2011) minus 1-year ahead consensus inflation expectation normalized by its 5-year average (2005-10); percentage points.

# Rebalancing the policy mix between AEs and EMs



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## Advanced Economies

*More structural policies  
needed -- > Cleaning*

- Banks:
  - Mainly in Europe
  - Transparency, Capital, Restructuring/Resolution
- Sovereigns:
  - Most AEs
  - Fiscal consolidation
- Households:
  - Mainly in U.S., some European
  - Reducing debt burdens

## Emerging Markets

*More macroeconomic policies  
needed -- > Leaning*

- Limit overheating and buildup of financial risks:
  - Tighten macro policies
  - Use macro prudential/capital flow measures
- Absorb/channel inflows:
  - Broaden and deepen local capital markets

# Rebalancing the policy mix between AEs and EMs



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## Advanced Economies

*More structural policies  
needed -- > Legacy issues*

- **Banks:**
  - Mainly in Europe
  - Transparency, Capital, Restructuring/Resolution
- **Sovereigns:**
  - Most AEs
  - Fiscal consolidation
- **Households:**
  - Mainly in U.S., some European
  - Reducing debt burdens

## Emerging Markets

*More macroeconomic policies  
needed -- > Cyclical/growth challenges*

- **Limit overheating and buildup of financial risks:**
  - Tighten macro policies
  - Use macro prudential/capital flow measures
- **Absorb/channel inflows:**
  - Broaden and deepen local capital markets