BBVA Research

BBVA EAGLEs

First Seminar on Emerging Economies

Madrid, November 15th, 2010

Outline

BBVA EAGLEs
First Seminar on Emerging Economies

Introducing BBVA EAGLEs

1. World rotation: slowdown in the G7 vs sustained growth in EM

2. Anticipation: beyond BRICs, other EMs smaller but as important for world growth
   - Absolute GDP size is static, absolute change is a more relevant concept

3. EAGLEs: Emerging And Growth-Leading Economies

4. Robust: even adjusting for volatility, margin for underperformance

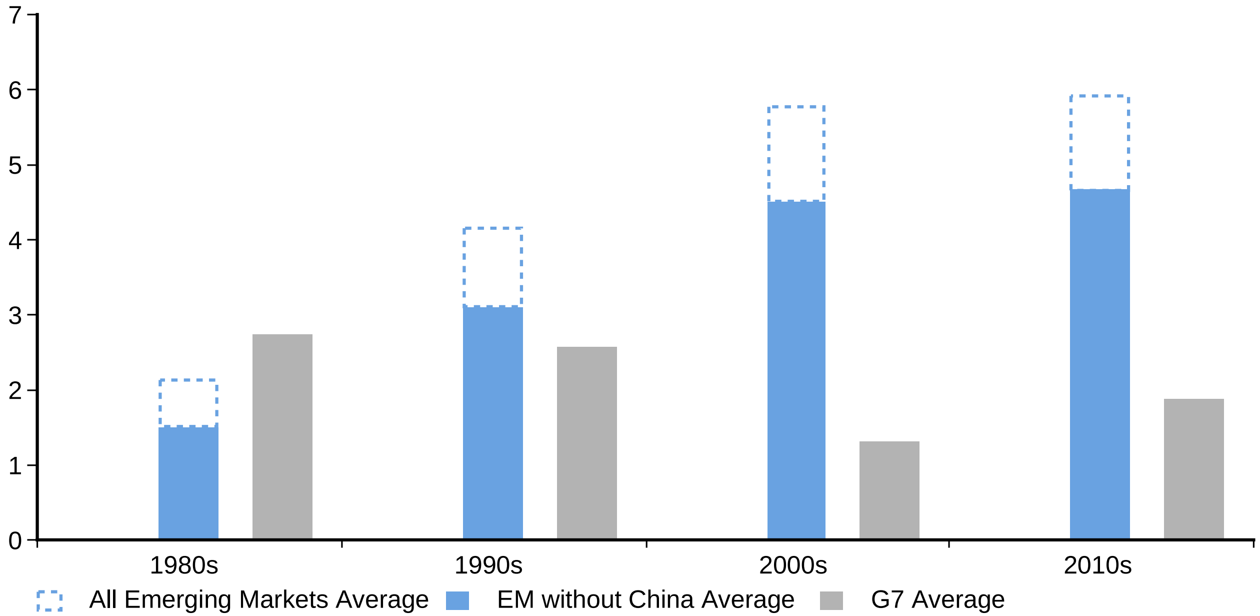
Section I

World rotation: slowdown in G7 vs. sustained growth in EM

- G7 countries' growth is expected to remain below 2% for the next 10 years
- Emerging markets growth will outpace the G7 average by 4pp including China and 2,5pp excluding the Asian giant

GDP adjusted by PPP: growth rate

Source: BBVA Research and IMF



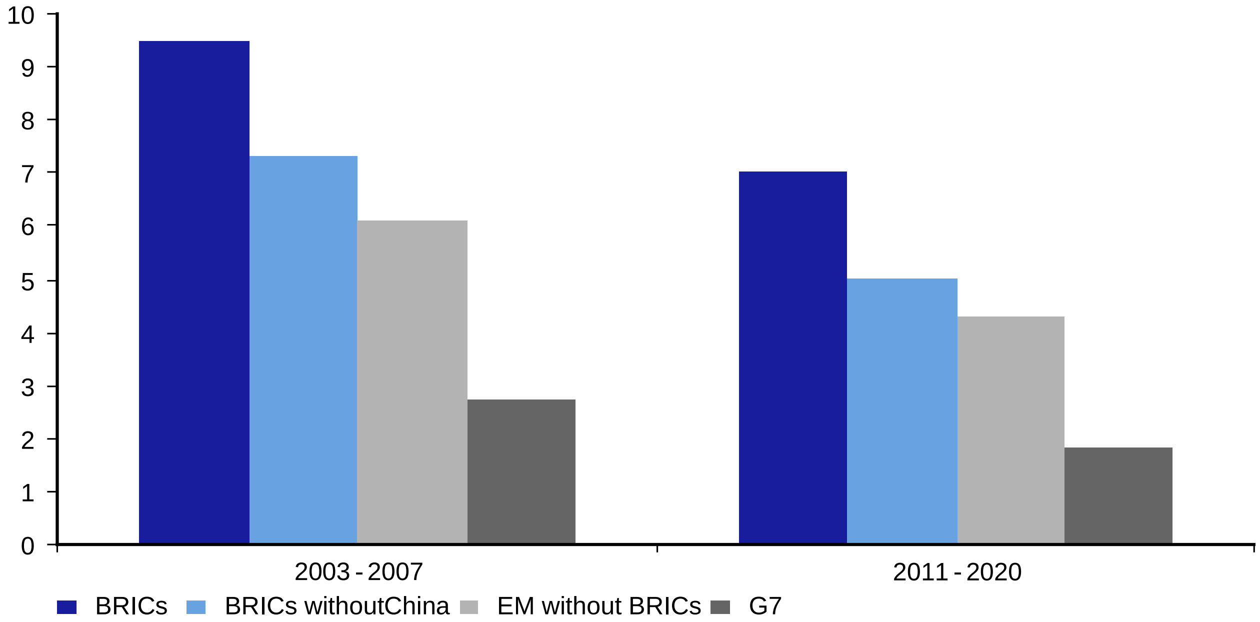
Note: 45 Emerging Markets– Argentina, Bahrain, Bangladesh, Brazil, Bulgaria, Chile, China, Colombia, Czech Rep., Egypt, Estonia, Hungary, India, Indonesia, Iran, Jordan, Korea, Kuwait, Latvia, Lithuania, Malaysia, Mauritius, Mexico, Morocco, Nigeria, Oman, Pakistan, Peru, Philippines, Poland, Qatar, Romania, Russia, Slovak Rep., South Africa, Sri Lanka, Sudan, Taiwan, Thailand, Tunisia, Turkey, Ukraine, UAE, Venezuela, Vietnam.

Anticipation: going beyond BRICs

- China is a clear outlier in terms of size, speed and relevance
- Excluding China, the growth prospects of the remaining BRICs are very similar to other EM

GDP: growth rate. Average by group

Adjusted by PPP.
Source: BBVA Research and IMF

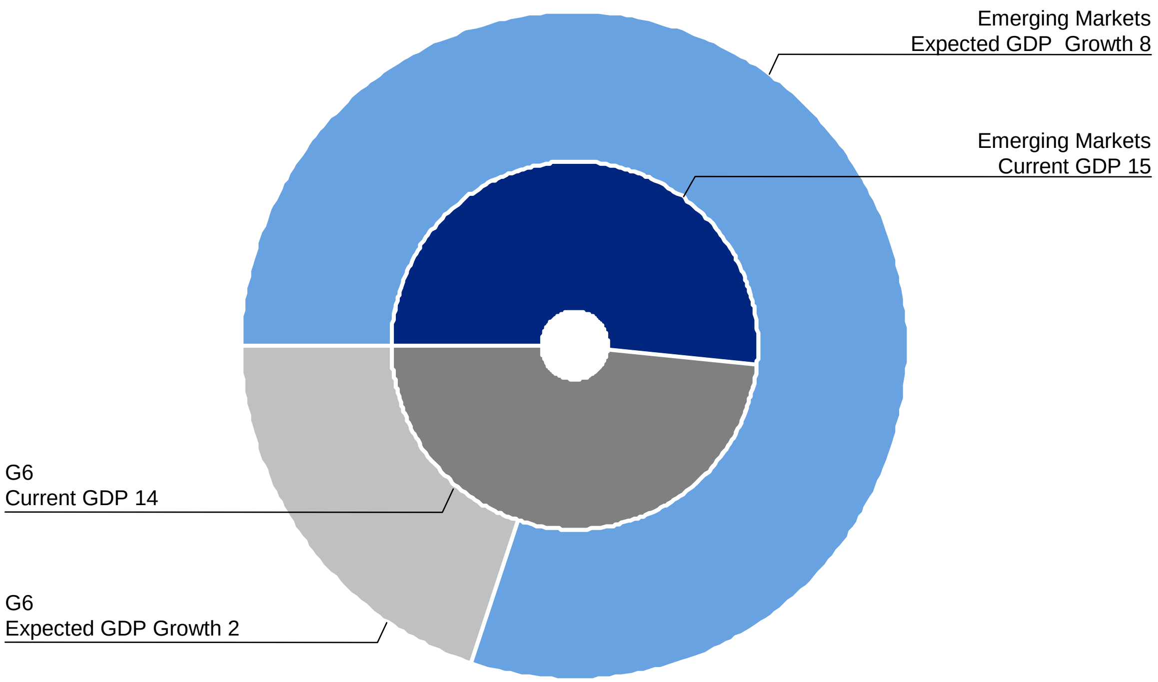


Anticipation: other EMs smaller, but as important for growth

- The “other EM” are about the combined size of the “G6” (ie. the G7 excluding the US)
- However, their contribution to global growth in the next 10 year will be about 4 times larger
- Out of a total GDP growth expected for the world of 41 trillion, the “other EM” will add 8 trillion vs. 2 for the G6

GDP: current and expected change (trillions)

PPP Adjusted. Source: BBVA Research and IMF



G6 Aggregate: Canada, Germany, France, Italy, Japan and UK
Emerging Markets: other Emerging Markets excluding Brazil, Russia, India and China

Anticipation: absolute size is static, absolute change is best

BRIC (GS)	BBVA EAGLEs definition
Based on absolute size	**Based on absolute growth**
• Bigger does not necessarily determine market potential	• Large enough size plus… • Fast enough growth
Static concept	**Dynamic concept**
• Allows no anticipation: too much inertia • Too long horizon: at least 20-25 years • Why four countries? Subjective	• Anticipation: dynamic concept • Shorter horizon: next 10 years • Flexible number of countries: “Club admission” depends on performance
No clear cut-off	**Defined Cut-off: the G6**

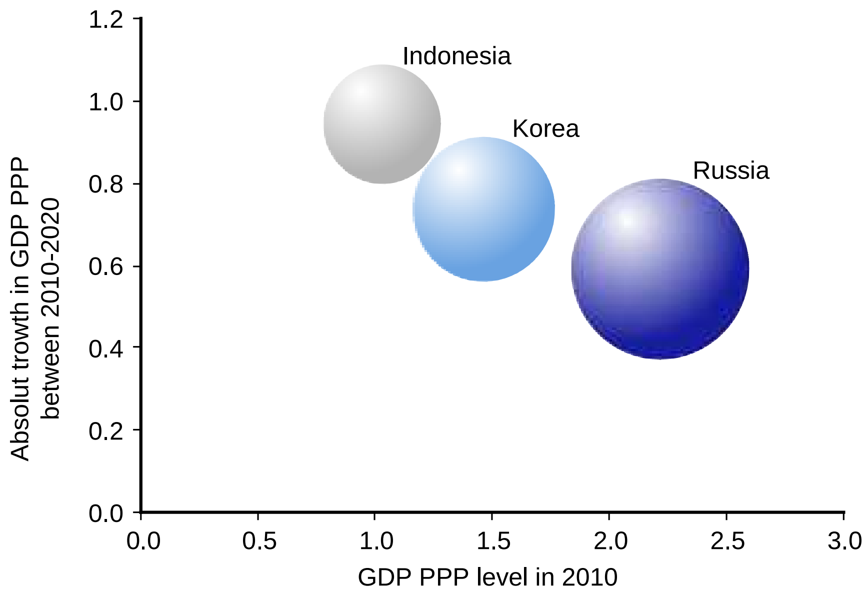
BBVA EAGLEs is the set of countries whose contribution to World GDP growth is expected to be larger than that of the average G6 economy

Section I

EAGLEs vs BRIC: Russia as the weaker link

- Absolute growth vs GDP size; for instance the case of Indonesia and Korea compared to Russia
- This case also challenges the current BRIC concept

GDP adjusted by PPP and change in 2010-2020
(trillions)
Source: BBVA Research and IMF



Anticipation: absolute size is static, absolute change is best

N-11 (GS)

Based on population/GDP size

- Includes high population economies, which do not necessarily determine market potential

Static concept

- Some countries with political instability
- Too long horizon between 20-45 years
- Based on absolute size

No clear cut-off

CIVETS (EIU, HSBC)

Based on young population

- Colombia, Indonesia, Vietnam, Egypt, Turkey and South Africa

Static concept

- Missing key economies (Mexico, Korea)
- Several large economies are missing
- No clear horizon from 2020 onwards
- Average growth above 4.5% over 20 years

No clear cut-off

- Cut off is established as reaching the size of smallest G7 economy, but timing is different for each country

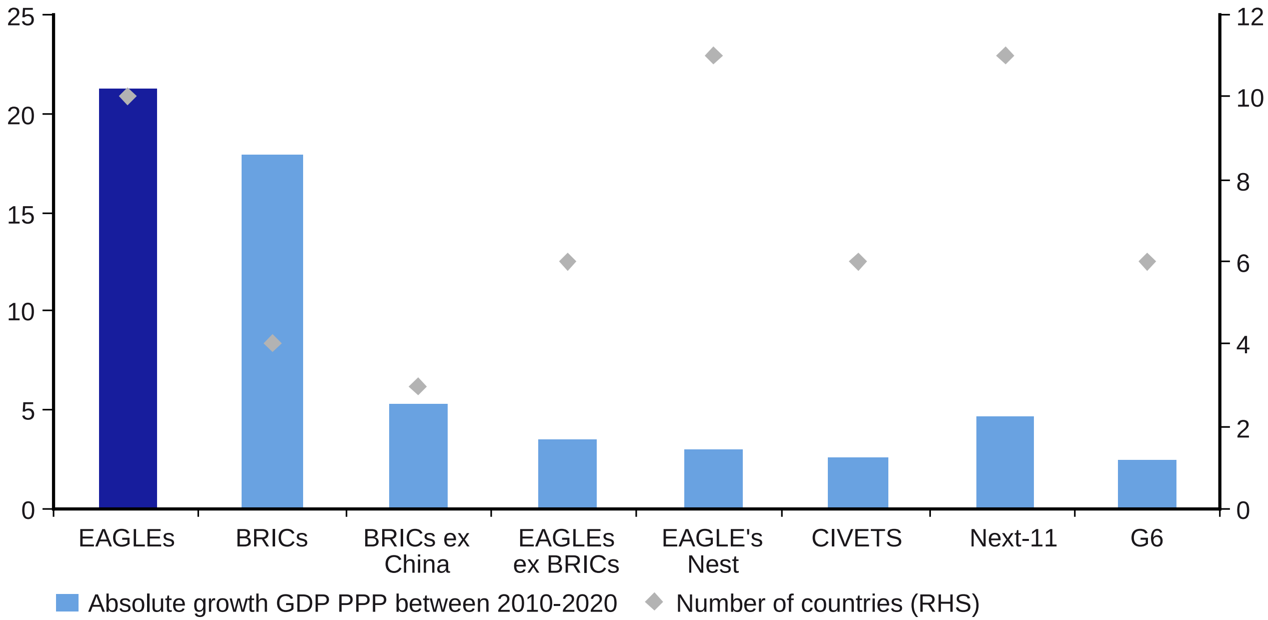
CIVETS: Colombia, Indonesia, Vietnam, Egypt, Turkey and South Africa. Next 11: Bangladesh, Egypt, Indonesia, Iran, Mexico, Nigeria, Pakistan, Philippines, Korea, Turkey and Vietnam

EAGLEs: a superior concept, both in terms of geography and GDP

- EAGLEs ex BRICs contribution to world growth is faster than other concepts. Results for “Next 11” are tricky since this set considers a larger number of countries

EAGLEs and other concepts: absolute growth 2010-2020 **(USD PPP trillions)**

Source: BBVA Research and IMF

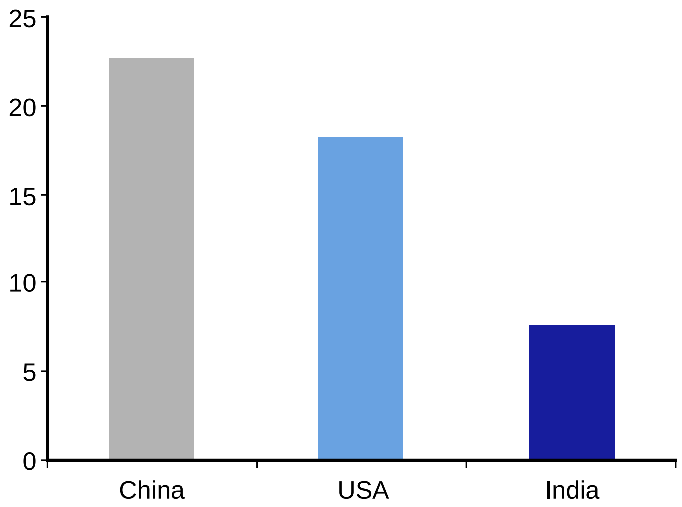


CIVETS: Colombia, Indonesia, Vietnam, Egypt, Turkey and South Africa. Next 11: Bangladesh, Egypt, Indonesia, Iran, Mexico, Nigeria, Pakistan, Philippines, Korea, Turkey and Vietnam

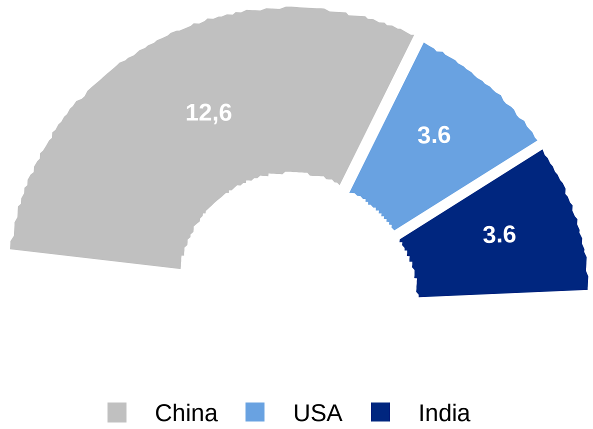
EAGLEs: Emerging And Growth-Leading Economies

- The three Giant economies will lead the World in terms of levels and contributions in the coming 10 years
- China is expected to grow nearly 4 times faster than the US and India

GDP adjusted by PPP: level in 2020
(trillions)
Source: BBVA Research and IMF



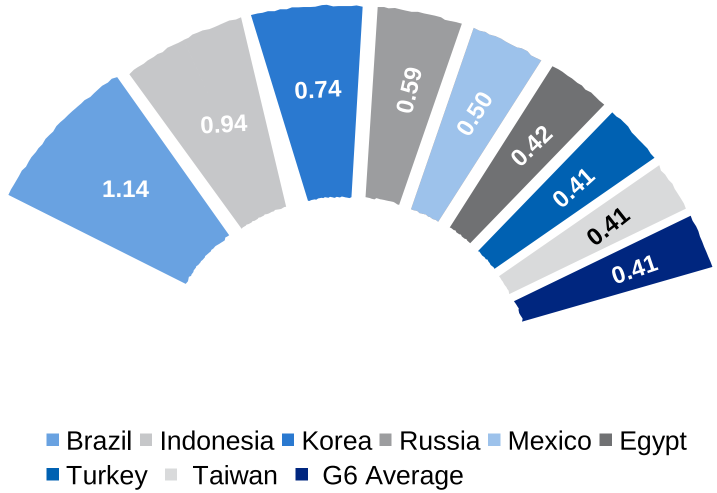
GDP adjusted by PPP: change in 2010-2020
(trillions)
Source: BBVA Research and IMF



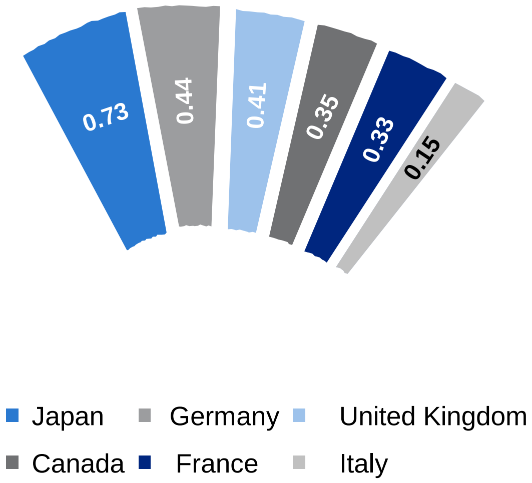
EAGLEs: Emerging And Growth-Leading Economies

- Each EAGLE country will grow more in absolute terms than the average G6 country
- Four BRICs plus Korea, Indonesia, Mexico, Turkey, Egypt and Taiwan

GDP adjusted by PPP: change in 2010-2020
(trillions)
Source: BBVA Research and IMF



GDP adjusted by PPP: change in 2010-2020
(trillions)
Source: BBVA Research and IMF



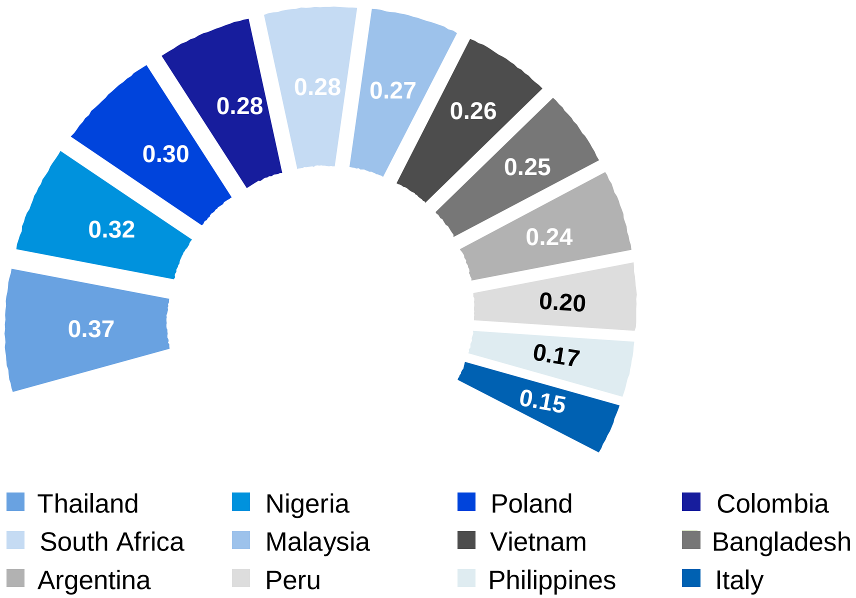
G6 Average: Canada, Germany, France, Italy, Japan and UK

EAGLEs “Nest”: other economies to watch

Additional 11 economies are expected to add to global growth somewhere between the G6 average and Italy’s figure

GDP adjusted by PPP: change in 2010-2020 (trillions)

Source: BBVA Research and IMF



EAGLEs “Nest”: other economies to watch

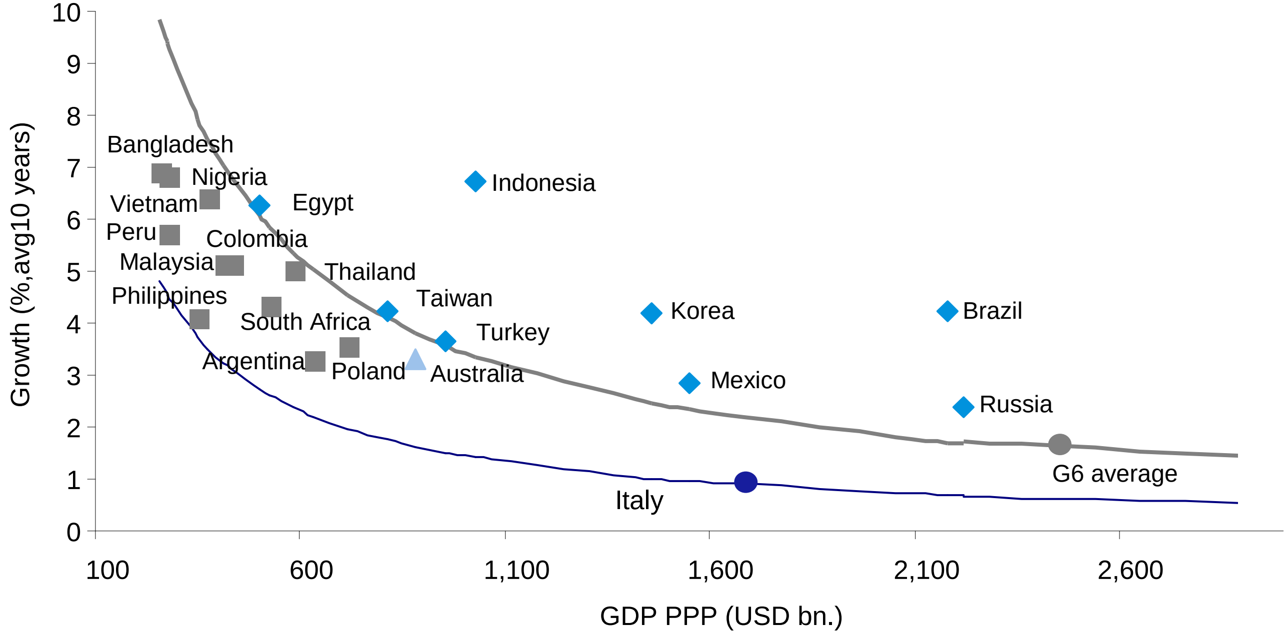
The “EAGLEs Nest”
Thailand
Nigeria
Poland
Colombia
South Africa
Malaysia
Vietnam
Bangladesh
Argentina
Peru
Philippines

Source: BBVA Research

Some of the EAGLEs could fall from the list, some of these countries could make it into it

Indifference Curve: Growth and size in the watch list countries

Source: BBVA Research



Outline

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Analysis and Robustness

1 **Model behind our analysis: main sources of growth**

2 **Results and comparison vis-à-vis other forecasts**

3 **Robustness**

- Exchange rate: PPP or USD, not much different
- A reasonable margin for error remains when adjusting for volatility
- External demand: transition towards a sustainable model
- Macroeconomic disequilibria: better fundamentals than advanced economies
- Institutions: Recent improvements allow to expect further upgrades in institutional quality

Potential Growth Estimates

Estimates are based on sequential approach

Demographic factors from national and international forecasts

Estimates of NAIRU from local models. Substituting employment rate for structural level allows building potential GDP forecasts

Capital deepening based on projections of investment over GDP rates and local data

TFP estimates are obtained as residuals. Modeled as time-series with adjustments based on analysis of crisis impact

Section II

Potential Growth Estimates

EAGLEs forecasts are based on detailed bottom-up production function estimates of potential GDP (as in Domenech, Estrada and Gonzalo-Calvet (2008))

$$\Delta \ln \frac{PIB_t}{L_t} \cong \Delta \ln \frac{PIB_t}{H_t} + \Delta \ln \frac{H_t}{L_t^d} + \Delta \ln \frac{L_t^d}{L_t^s} + \Delta \ln \frac{L_t^s}{L_t^{15-64}} + \Delta \ln \frac{L_t^{15-64}}{L_t},$$

- PIB per capita
- GDP per hours worked
- Hours per worker
- Employment rate
- Active population rate
- Working age population

$$\Delta \ln \frac{Y_t}{h_t L_t^d} = \frac{1}{1-\alpha} \Delta \ln A_t + \frac{\alpha}{1-\alpha} \Delta \ln \frac{K_t}{Y_t}$$

+ Population growth

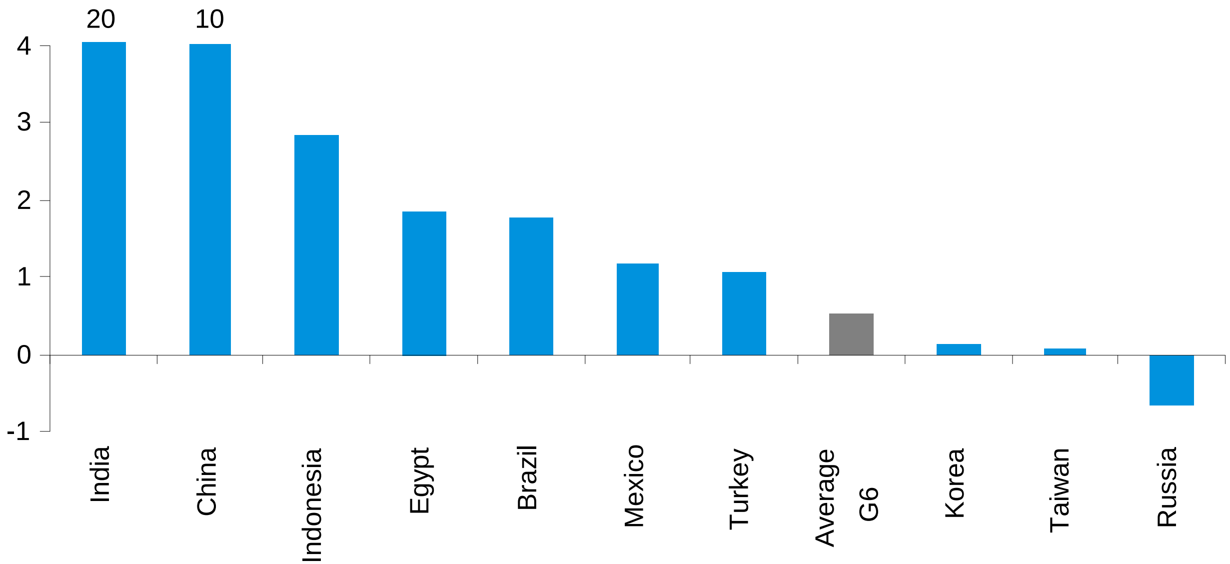
- Total Factor Productivity
- Capital intensity

Population: strong demographic bonus in EAGLEs

The EAGLEs can count on stronger population growth, with the exception of Korea, Taiwan and most notably Russia

Contribution to growth of world's population: 2010-2020

Source: UN Population Statistics



Note: China and India are out of scale

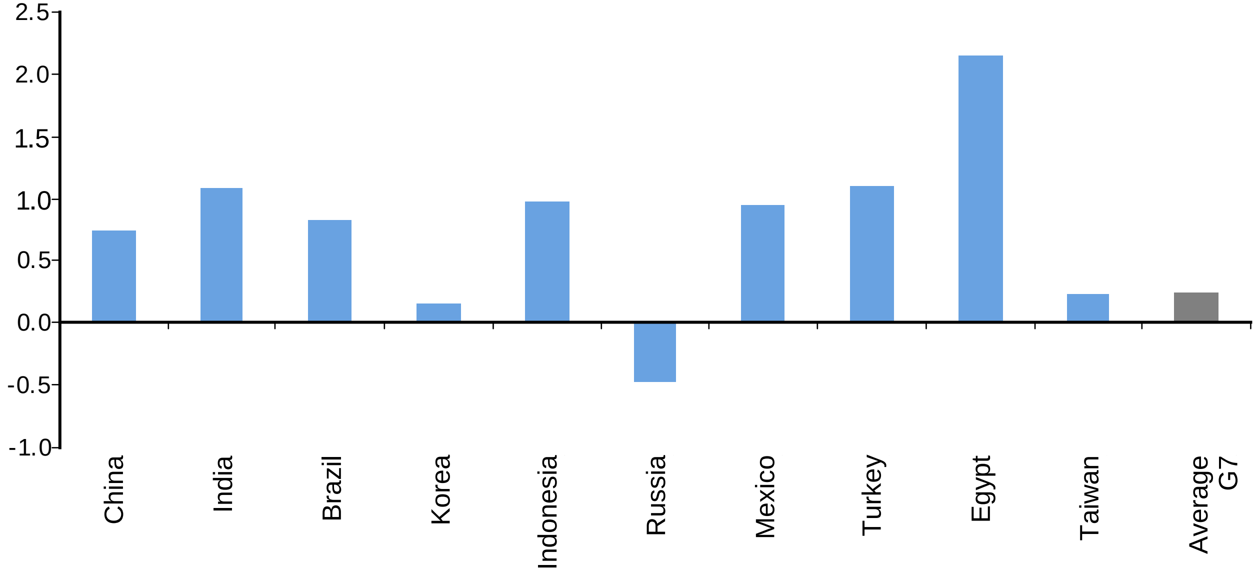
Section II

Population: strong demographic bonus in EAGLEs

The effect of population growth drives the contributions to GDP growth, with additional impact for working age population (which does not start falling in the next decade, even in China) and employment rates

Contribution to potential GDP growth: population growth, working age population rate and NAIRU

Source: BBVA Research

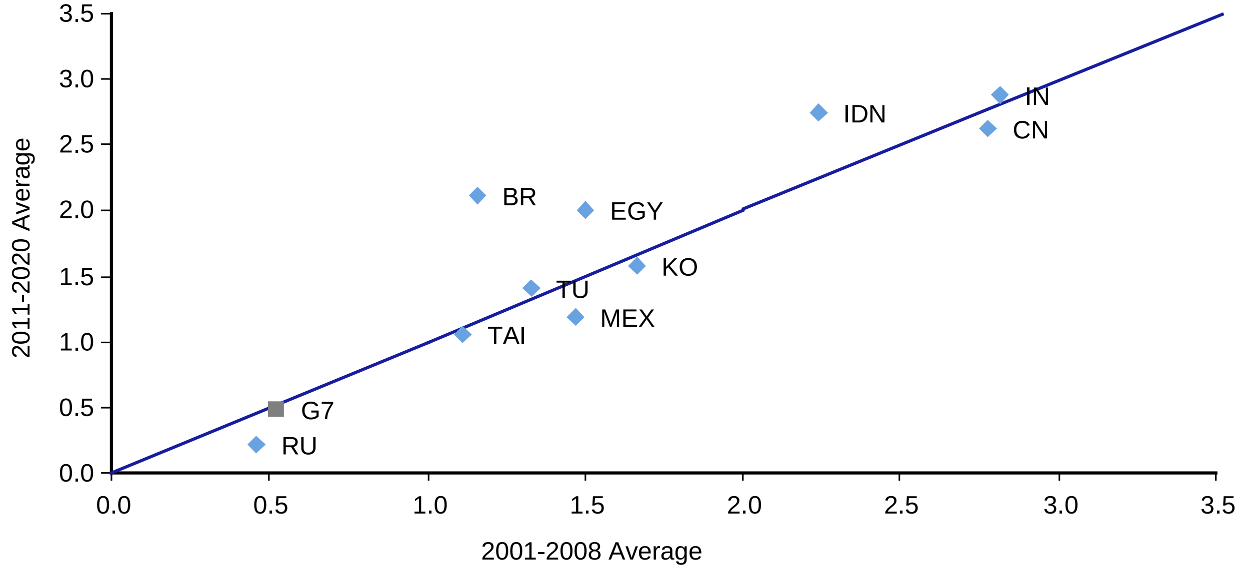


Capital deepening: continuation, with some improvements

Forecast for capital accumulation are generally in line with the experience in the previous decade (and generally below the pre-crisis peak), with some success stories, based on commodity exposure and institutional improvements

Contribution to potential GDP growth: capital accumulation

Source: BBVA Research

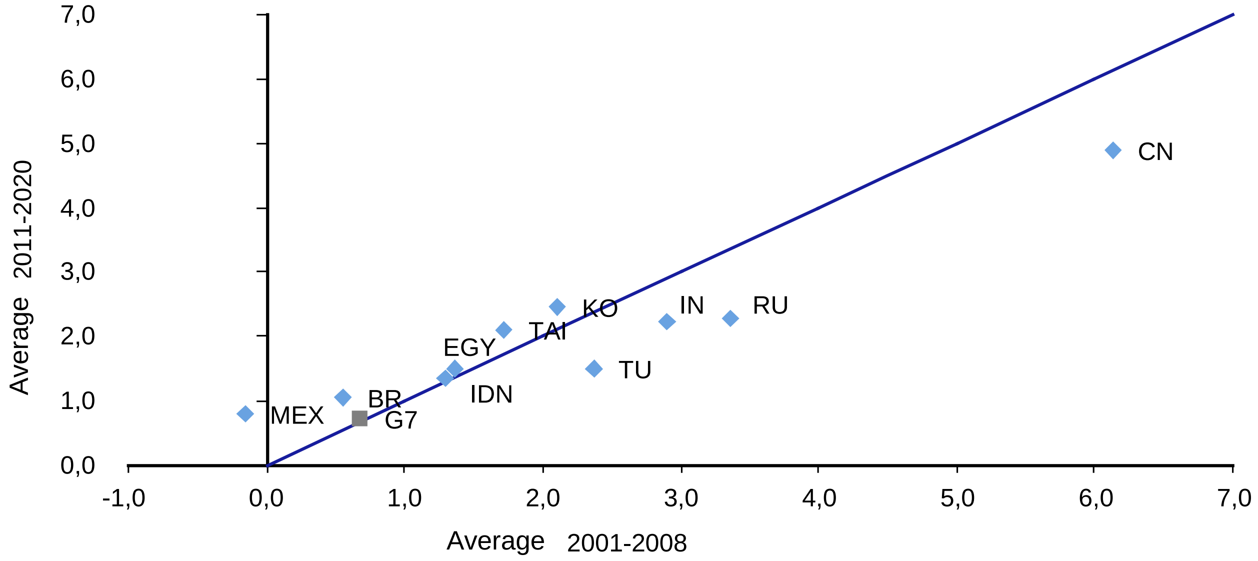


TFP: No miracles, with decreasing or stable contributions

An acceleration of total factor productivity is not generally required for achieving these forecasts. Given institutional and macro stability improvements in the last decade, this introduces a potential upward bias in our estimates

Contribution to potential GDP growth: total factor productivity

Source: BBVA Research

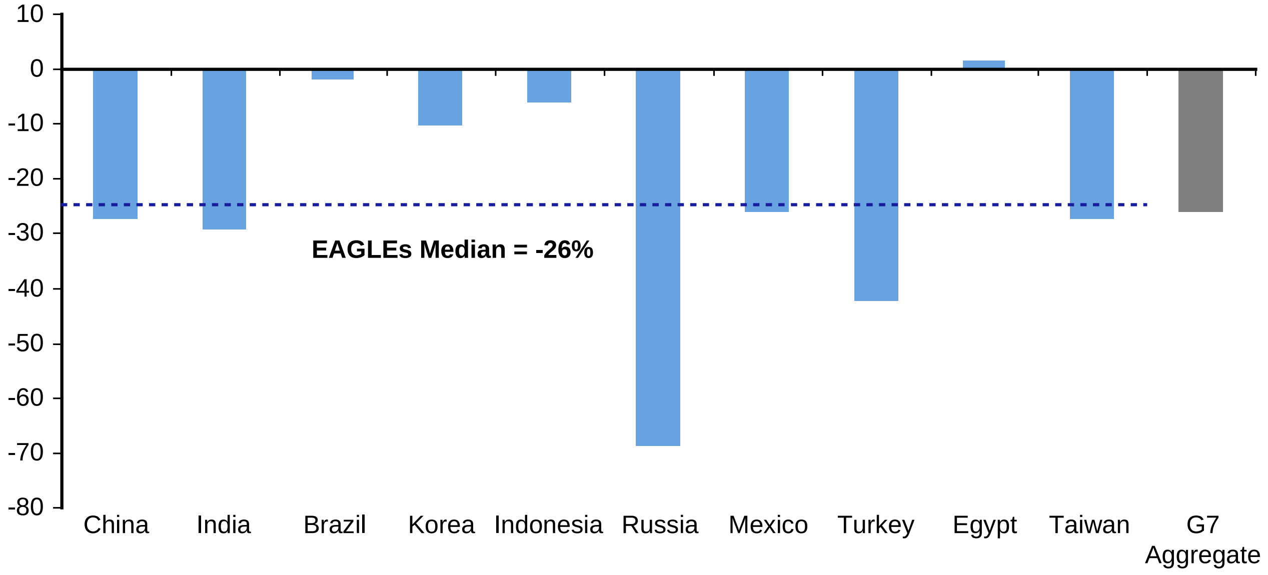


BBVA Research forecasts: a realistic slowdown

BBVA Research forecasts imply a median adjustment of about one quarter versus the maximum growth observed in 2005-2007

2010-2020 GDP forecasts: percent change vs 2005-2007 growth rates

Source: BBVA Research



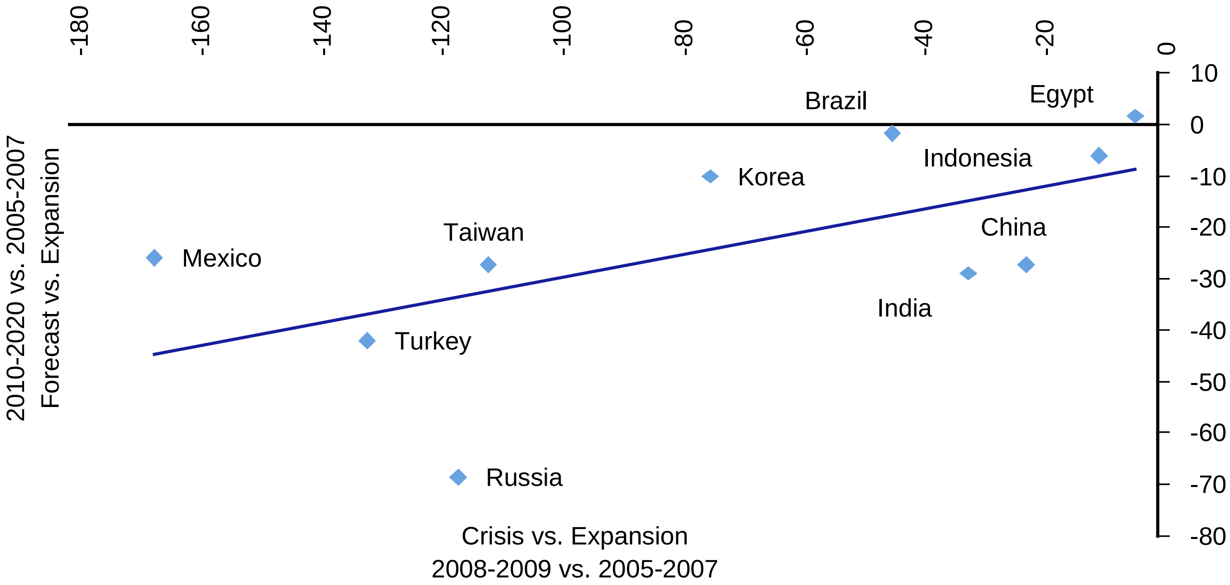
G7 aggregate: Canada, Germany, France, Italy, Japan, UK and US

BBVA Research forecasts: a realistic slowdown

Across EAGLEs countries, an important driver in the revision vs. pre-crisis growth rates is the resilience during the crisis

GDP forecasts: percentage change in growth rates

Each axis is percentage points change vs. reference period
Source: BBVA Research



Robustness: will other sources make any difference?

- Robustness tests confirms our expectations about the EAGLEs countries except when using IMF data, whose forecasts for G6 economies are higher than BBVA and EIU's estimations
- According to IMF's figures, Turkey and Egypt fall slightly below G6 average

Robustness. Share of World growth according to different forecasters (2010-2020)

BBVA		IMF		EIU	
Country	**Contribution**	**Country**	**Contribution**	**Country**	**Contribution**
China	30.2	China	35.7	China	26.9
India	8.5	India	11.5	India	11.2
Brazil	2.7	Russia	2.7	Russia	3.6
Indonesia	2.3	Brazil	2.6	Brazil	3.1
Korea	1.8	Indonesia	2.3	Mexico	2.8
Russia	1.4	Mexico	1.9	Indonesia	2.0
Mexico	1.2	Korea	1.7	Korea	1.8
Egypt	1.0	Taiwan	1.2	Taiwan	1.6
Taiwan	1.0	**Average G6**	**1.2**	Egypt	1.4
Turkey	1.0	Turkey	1.1	Turkey	1.4
Average G6	**0.9**	Egypt	1.0	**Average G6**	**1.0**

G6 Average: Canada, Germany, France, Italy, Japan and UK
Source: BBVA Research

Analysis and Robustness

1

Model behind our analysis: main sources of growth

2

Results and comparison vis-à-vis other forecasts

3

Robustness

- Exchange rate: PPP or USD, not much different
- A reasonable margin for error remains when adjusting for volatility
- External demand: transition towards a sustainable model
- Macroeconomic disequilibria: better fundamentals than advanced economies
- Institutions: Recent improvements allow to expect further upgrades in institutional quality

Exchange rates: PPP or USD, the story is the same

- The ranking of countries is not affected by using today's dollar GDP as the basis for the calculation
- Only Egypt falls from the lists, substituted by Thailand

Rank of EAGLEs by change in GDP: PPP vs. USD

Country	Ranking PPP	Ranking USD	Change
China	1	1	0
India	2	2	0
Brazil	3	3	0
Indonesia	4	4	0
Korea	5	5	0
Russia	6	6	0
Mexico	7	8	-1
Egypt	8	14	-6
Taiwan	9	9	0
Turkey	10	7	3

Source: BBVA Research

Rank of Watch list countries by change in GDP: PPP vs. USD

Country	Ranking PPP	Ranking USD	Change
Thailand	11	10	1
Nigeria	12	15	-3
Poland	13	12	1
Colombia	14	13	1
South Africa	15	11	4
Malaysia	16	16	0
Vietnam	17	21	-4
Bangladesh	18	19	-1
Argentina	19	17	2
Peru	20	18	2
Philippines	21	20	1

Source: BBVA Research

Robustness: adjusting for volatility, margin still exists

- The volatility of growth is not that different from the G6, considering higher average
- Margin for underperformance vs. BBVA baseline is significant, with some exceptions

Standard deviation of growth (relative to average) 1990-2010	
China	0.2
India	0.3
Egypt	0.4
Taiwan	0.6
Average G6	**0.6**
Korea	0.7
Brazil	0.7
Indonesia	1.0
Turkey	1.3
Mexico	1.3
Russia	3.7

G6 Average: Canada, Germany, France, Italy, Japan and UK
Source: BBVA Research

Number of standard deviations from baseline to increase GDP size less than Italy. 2010-2020	
China	8.7
India	5.3
Egypt	3.4
Brazil	2.9
Taiwan	1.4
Korea	1.3
Indonesia	1.2
Mexico	0.9
Turkey	0.7
Russia	0.5

Source: BBVA Research

Higher risk

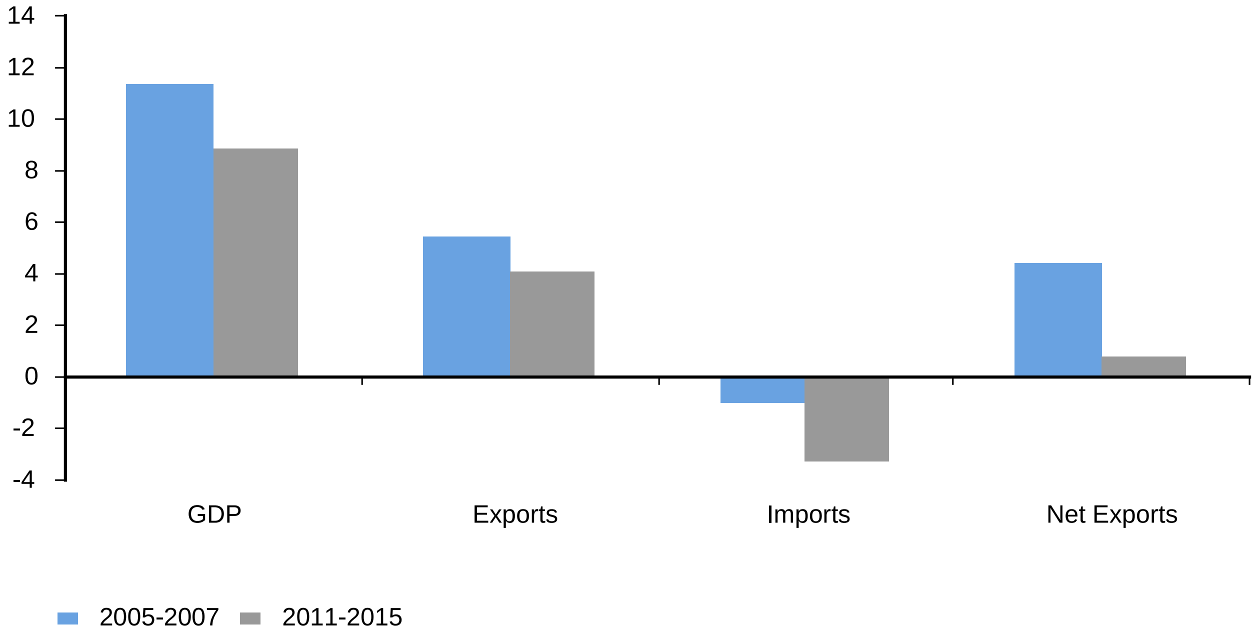
Higher risk

Robustness: lower importance of external demand

- China is key: BBVA research forecasts imply a moderation of exports of about 1/3 vs. pre-crisis levels
- This is in line with a reduction of private demand in developed countries, but should be partially compensated by strong demand in other emerging markets
- Imports are expected to accelerate, on the back of a rebalancing of growth towards internal sources, even if gradual

China: contributions to GDP growth

Source: BBVA Research

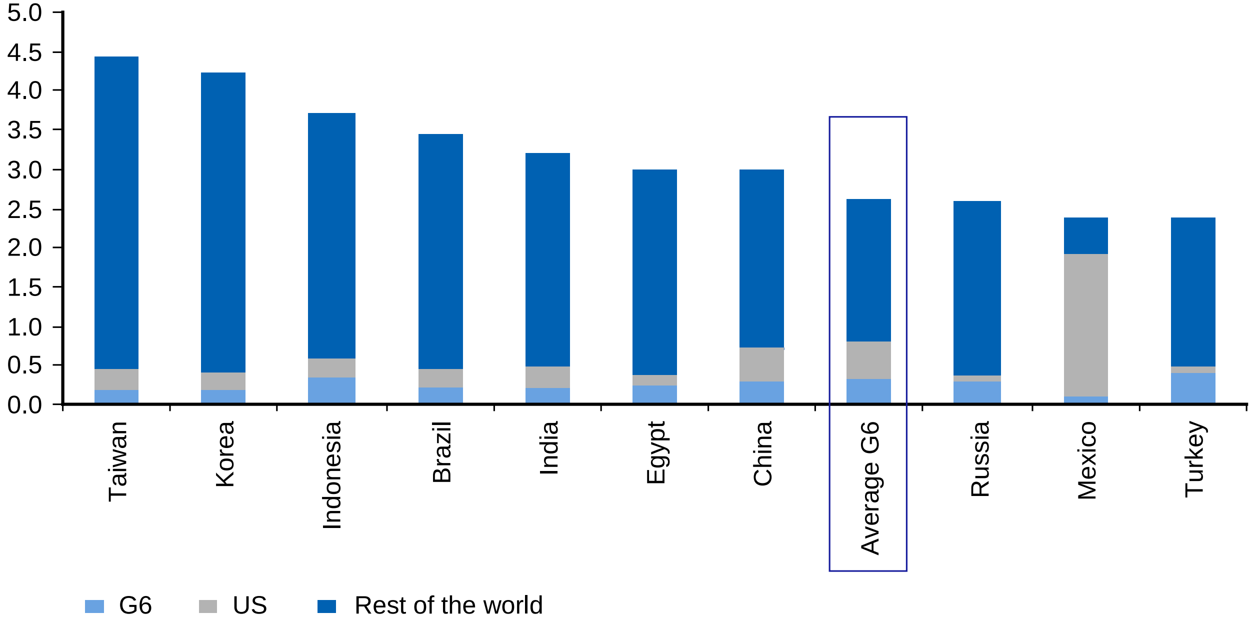


Robustness: trade, transition towards a more sustainable model

South-South trade implies in any event that the export performance of the EAGLEs is generally expected to be better than for the developed world

Forecasted GDP growth of export partners weighted by trade

Source: BBVA Research



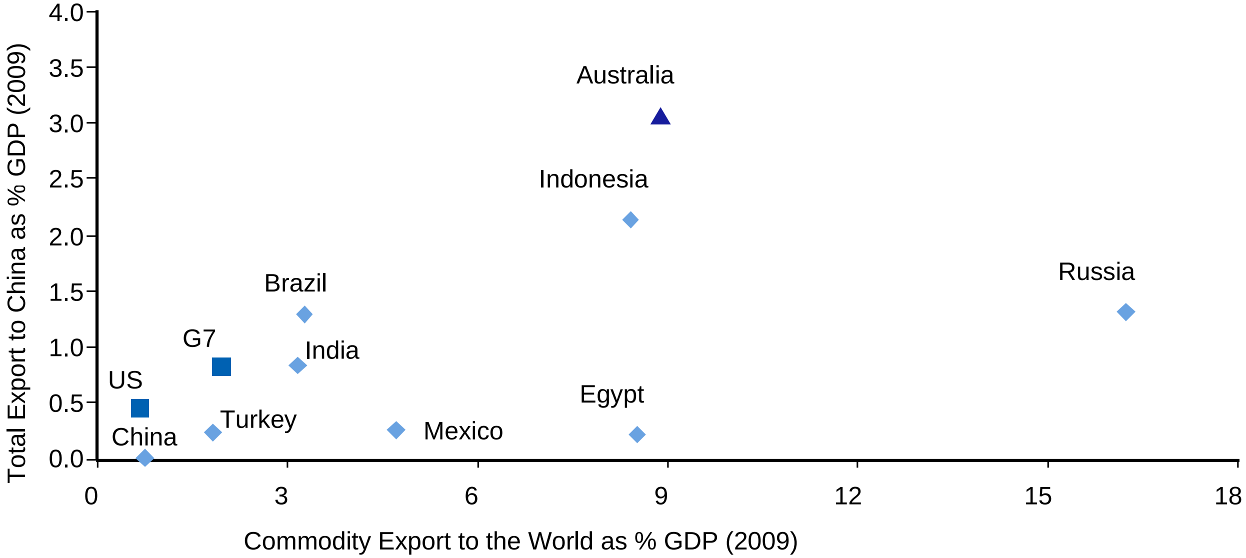
Average G6: Canada, Germany, France, Italy, Japan and UK

Robustness: lower exposure to external shocks

- Exposure to commodities poses larger risk than dependence on China, but only Russia really stands out with a very large exposure in the EAGLEs group
- In the Nest, some smaller economies are more dependent on the China-commodities connection

Exports to China and commodities export: % of GDP

Source: BBVA Research



Note: Australia is not an emerging market.

Out of scale:

- Korea = exports to China 10%, commodity exports 3%
- Taiwan = no data, but very high

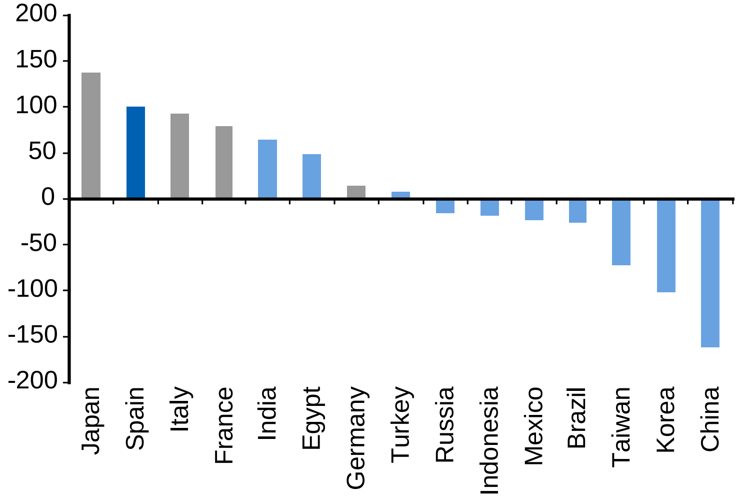
Section II

Robustness: lower macroeconomic imbalances

- The macroeconomic position of the EAGLEs is better: no immediate limitation imposed by external sector or fiscal sector
- Institutions have historically worsened the risk valuation of EMs vs developed, but the continuation of that feature can not be taken for granted anymore

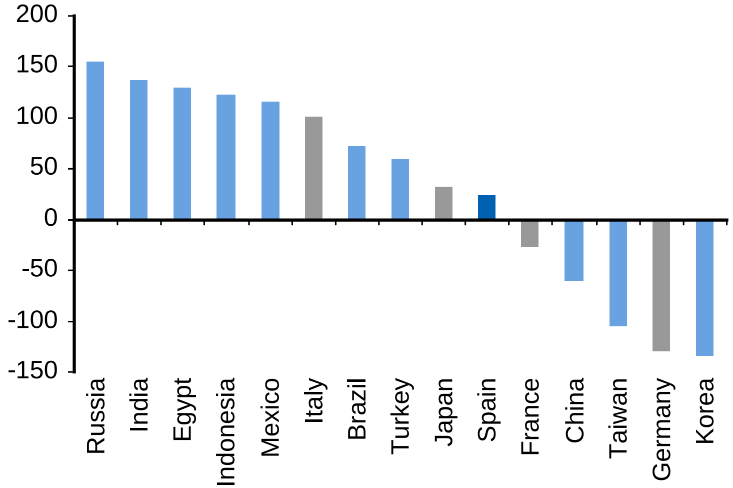
Risk ranking according to macro variables, but excluding institutional variables. 2010-2015 Average

Source: BBVA Research



Risk ranking including institutional variables.2010-2015 Average

Source: BBVA Research



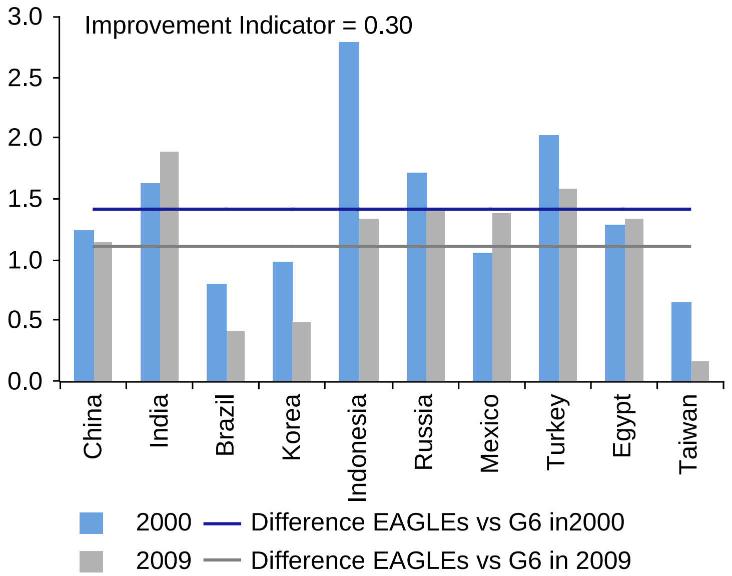
Note: Every Idiosyncratic country-risk is shown as the basis points deviation from the average global risk in CDS markets. It is calculated as a function of seven macro and institutional variables, including GDP growth, inflation, fiscal balance, public debt, current account and external debt.

Section II

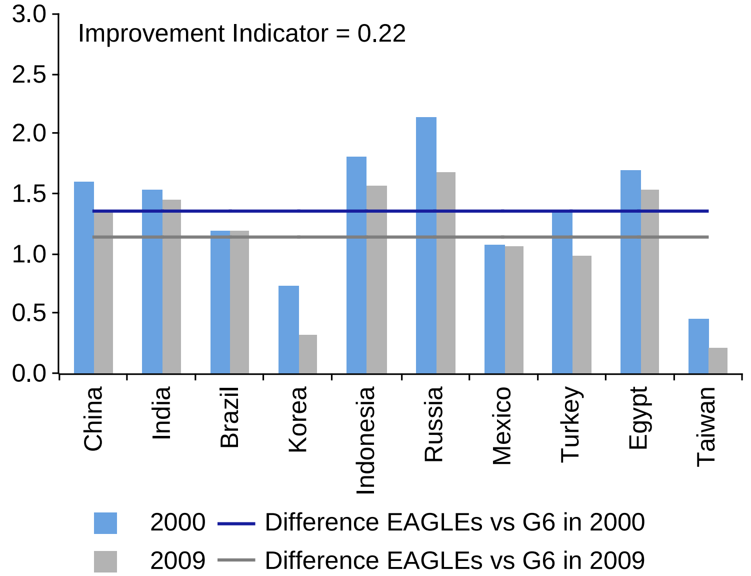
Robustness: Institutions improve, gap with G6 shrinks

- Most EAGLEs have achieved improvements in terms of institutional indicators in the last ten years
- Largest improvements were made in political stability

Institutions for growth: GAP in Political Stability & Absence of Violence/Terrorism
Source: BBVA Research & WB



Institutions for growth: GAP in Government Effectiveness and Regulatory Quality
Source: BBVA Research & WB



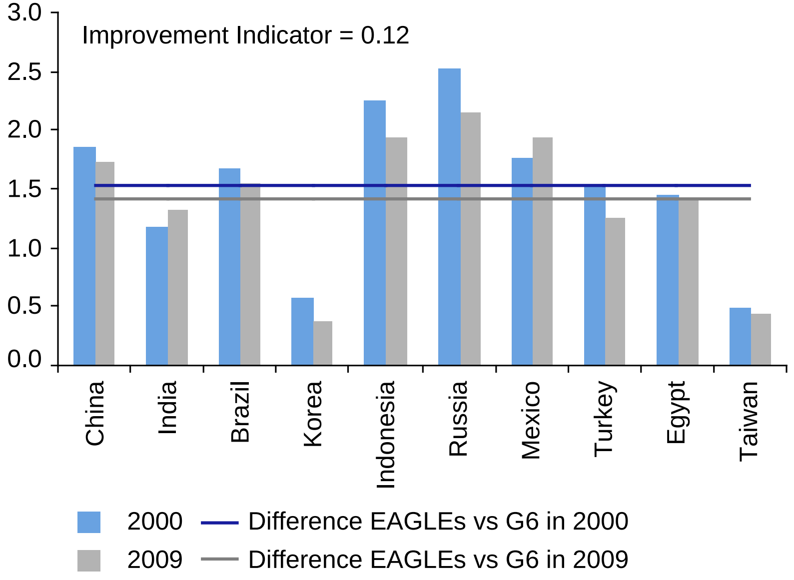
Note: The bar charts show the difference between EAGLEs countries and G6 average level regarding to the 4 Indicators derived from some composite indicators in the Worldwide Governance Indicator: 1. Political Stability & Absence of Violence 2. Government Effectiveness and Regulatory Quality (simple average) 3. Rule of Law 4. Control of Corruption. Two lines are the average gap between EAGLEs and G6.
G6: Canada, Germany, France, Italy, Japan and UK

Robustness: Institutions improve, gap with G6 shrinks

- Improvements in rule of law indicators have been modest
- In spite of an important improvement in corruption control, it is still the weakest indicator

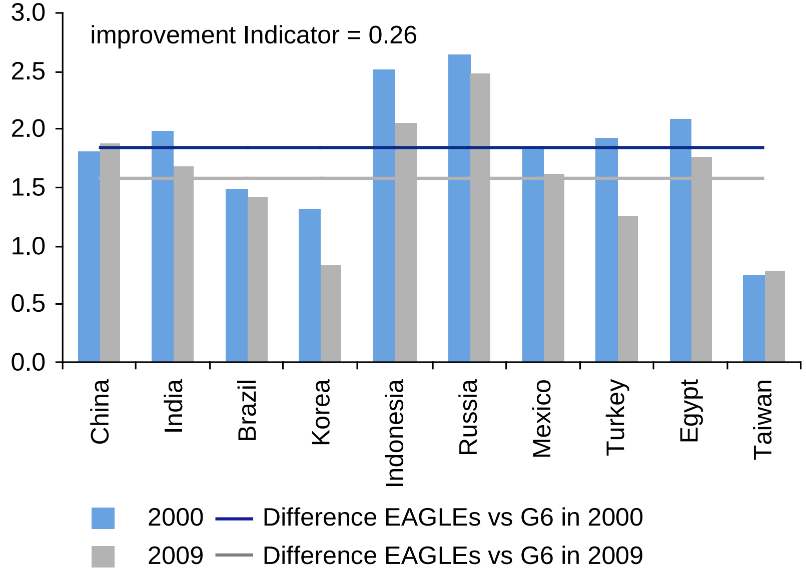
Institutions for growth: GAP in Rule of Law

Source: BBVA Research & WB



Institutions for growth: GAP in Control of Corruption

Source: BBVA Research & WB



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G6: Canada, Germany, France, Italy, Japan and UK

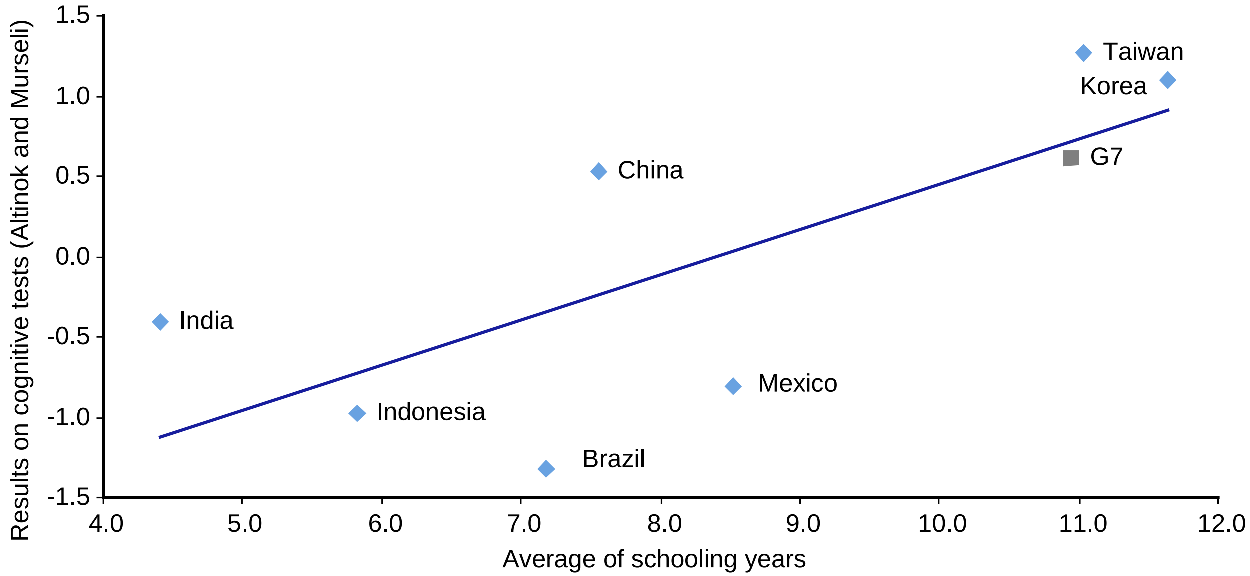
Section II

Institutions: improvements in education

- Most EAGLEs fall behind G7 but strong trend of improvement in education can be observed
- China's average of schooling years is far behind the G7 but its score is close to those from the G7
- Taiwan and Korea are the outliers achieving higher scores than G7 economies

Education: cognitive test results

Source: Altinok and Murseli (2006)



Results on cognitive tests: average test score in math and science, primary through end of secondary school, all years.

Robustness: Conclusions

Simple methodology: count number of appearances on riskier/worse side of any variable

Criteria	Rational	Worse countries
2010-2020 forecast vs. pre-crisis	Higher implies more optimistic	Egypt, Brazil
External demand		
Contribution from net exports	Higher, implies more optimistic	China, Taiwan
Trade partners growth	Lower, implies less dynamism	Mexico, Turkey
Weight of China/Commodities	Higher, implies greater exposure	Taiwan, Russia, Indonesia
Macroeconomic risk	Higher, implies large imbalances	Egypt, India
Growth Model		
Population growth	Lower, implies stagnation risks	Russia, Korea
Change in share of TFP	Higher, more optimistic	Russia, Brazil
Institutions	Lower, higher uncertainty	Russia, Mexico

Robustness: Conclusions

Results

Country	Vulnerability	Total count
China	External dependence	1
India	Macro imbalances	1
Brazil	Optimistic growth, high TFP	2
Korea	Low population growth	1
Indonesia	Exposure to China/Comm	1
Russia	Weight of China/Comm, low population growth, institutions	4
Mexico	Low growth of trade partners, institutions	2
Turkey	Low growth of trade partners	1
Egypt	Optimistic, macroeconomic imbalances	2
Taiwan	External dependence, Weight of China trade	2

Outline

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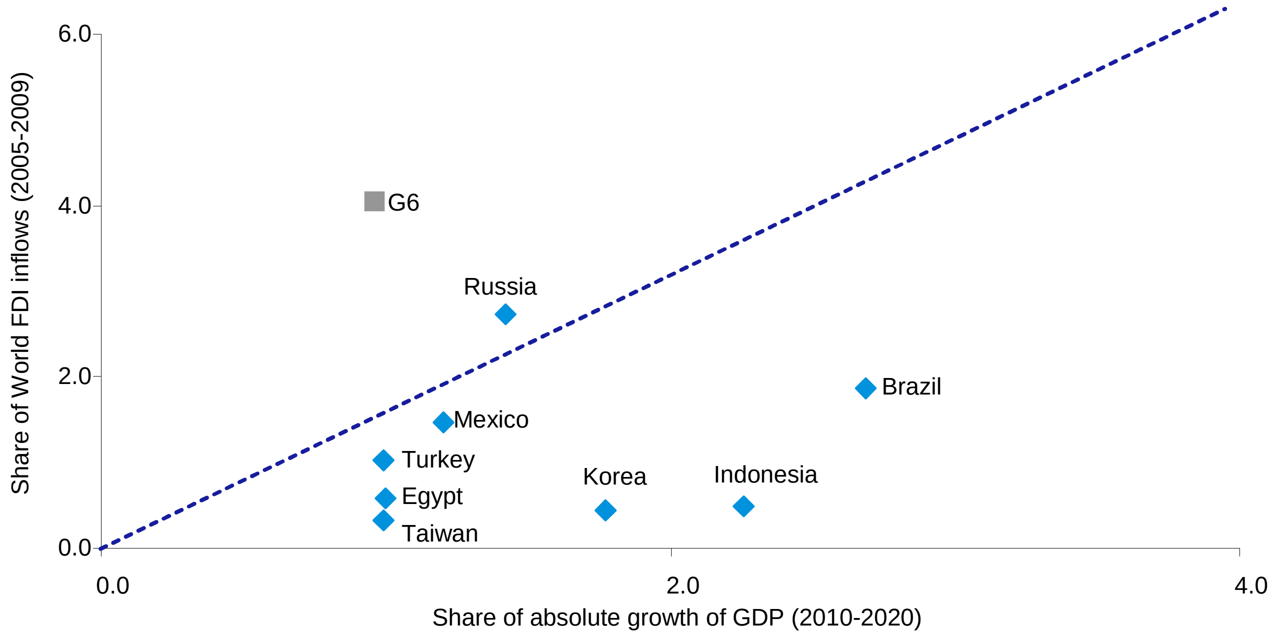
FDI: an opportunity, these countries are underrepresented

- **These countries remain underrepresented in their FDI share:** they will continue being huge recipient of foreign direct investment in coming years
- **G6 is clearly overrepresented**

Share of World GDP growth and inward FDI flows

Source: BBVA Research & UNCTAD



G6: Canada, Germany, France, Italy, Japan and UK

Out of scale:

- China = 6% FDI share, 30% growth share
- India = 2% FDI share, 9% growth share

Section III

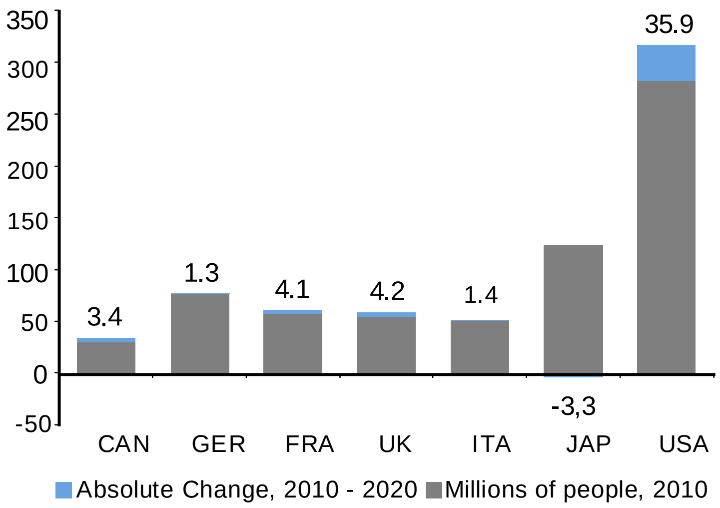
FDI: middle class dynamics

- **China and the US are clear outliers,** reporting the highest levels and increases among countries
- **EAGLEs (ex China) middle class is expected to increase faster** than G6 implying a higher and sustainable raise in household consumption in these economies in the next 10 years. This support the idea of a GDP growing process with an important role from internal demand

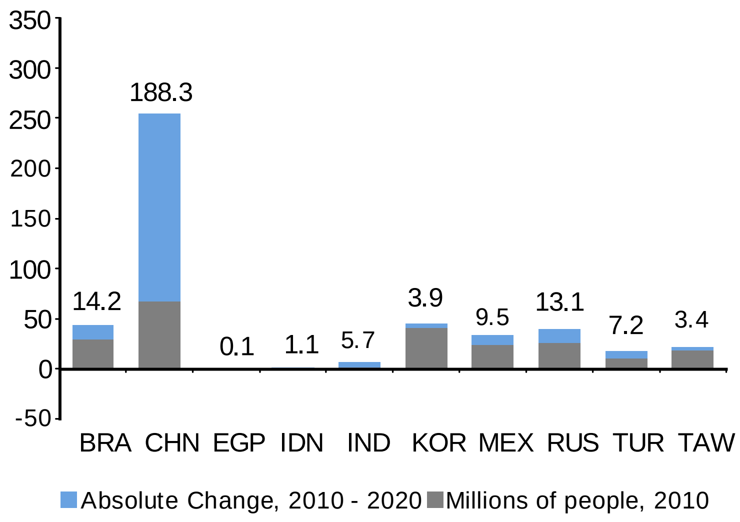
Growth of middle-class population. **Millions of people with annual income over USD9,600**

Source: BBVA Research

G7



EAGLEs



Section III

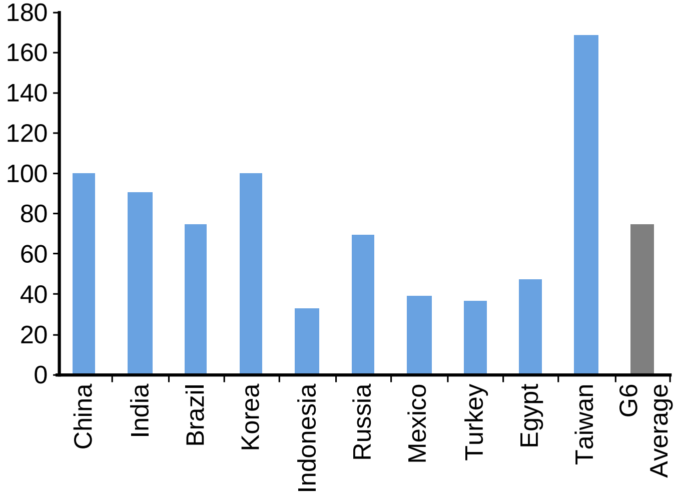
Opportunities in portfolio investment

- **Most countries stand at comparatively high levels of market capitalization,** which however fail to take into account future expected growth. Some of them however impose restrictions on portfolio investment (China and Egypt)
- **Some stand out as relatively underdeveloped:** Indonesia, Egypt, Mexico or Turkey. Local factors are important (coverage of stock index, etc.)

Stock market capitalization over GDP

(%, 2009)

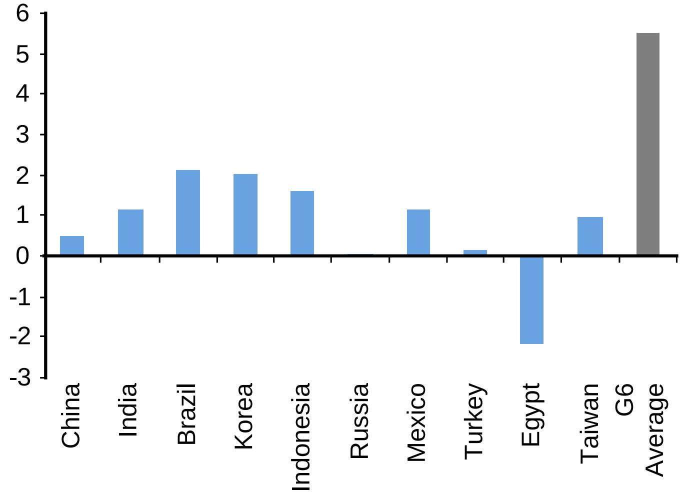
Source: BBVA Research, WDI and CEIC



Portfolio Investment flow over GDP

(%, Avg 2007-2009)

Source: BBVA Research, IMF and CEIC



Average G6: Canada, Germany, France, Italy, Japan and UK

Course for action

1. Quarterly and annual reports on BBVA EAGLEs and NEST
2. Building a locally based knowledge network
3. Support to the internationalization strategies (FDI) of BBVA clients
4. Support to portfolio investment and coverage in these countries

BBVA EAGLEs

First Seminar on Emerging Economies

Madrid, November 15th, 2010