

# Crossroads, trends and challenges in an uncertain world

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# Long-term drivers in a troublesome world

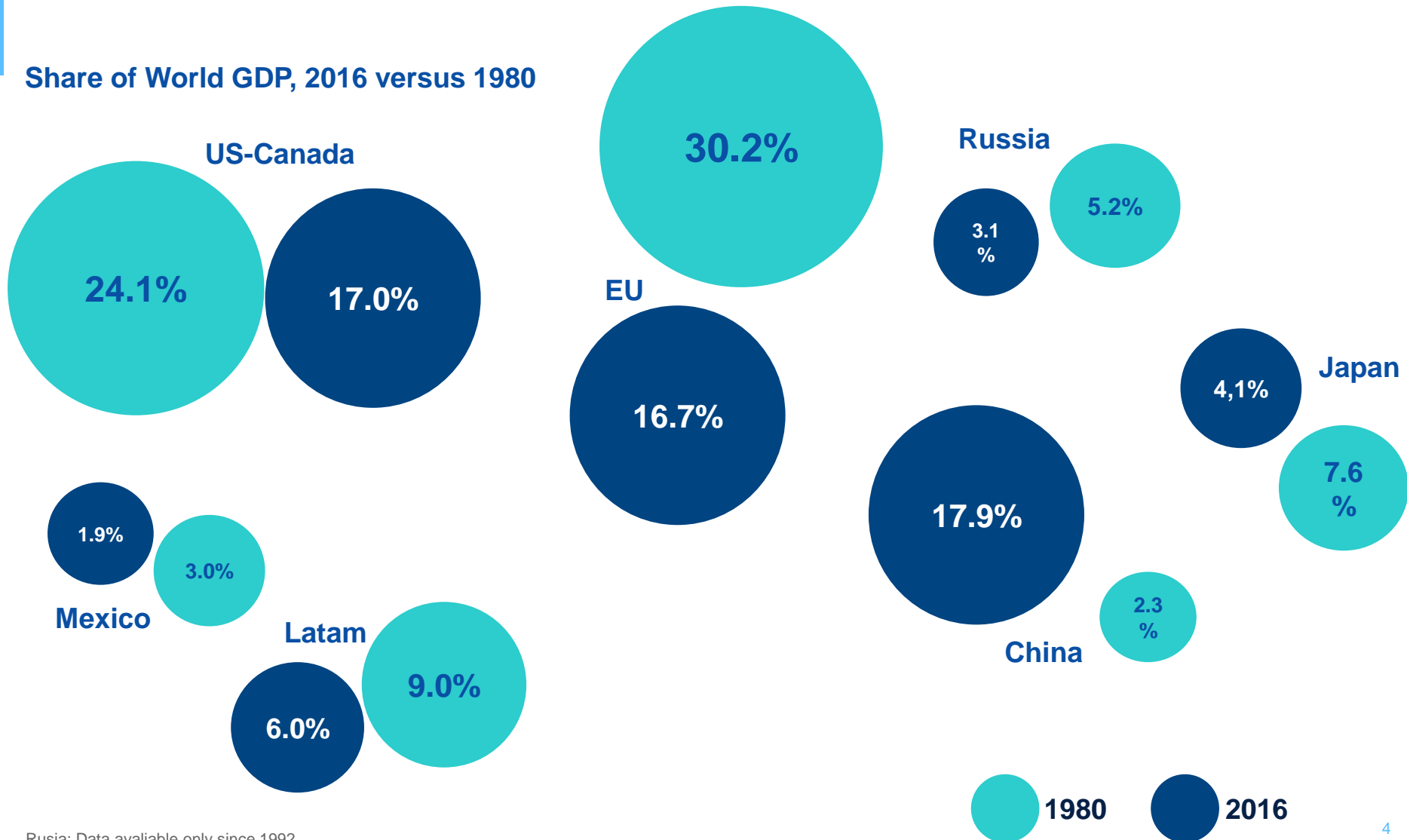


# Long-term drivers in a troublesome world

|    |  |  |    |  |  |
|---|---|---|---|---|---|
| <b>01</b>   | <b>02</b>   | <b>03</b>   | <b>04</b>   | <b>05</b>   | <b>06</b>   |
| <p><b>Geopolitics are extremely troubling</b></p> <p>Hope, fear and humiliation</p> | <p>Populism is rising and is here to stay</p> <p>New challenges</p>               | <p>Protectionism is a still a (high) risk</p> <p>Slowdown of globalization</p>    | <p>Digitalization and robotics are all around</p> <p>With risks and opportunities</p> | <p>Long term Economic Facts</p> <p>Policy stress and boundaries</p>                 | <p>Macro policy framework is changing</p> <p>It needs to be rethought</p>           |

# Global economic growth is moving towards Asia very quickly

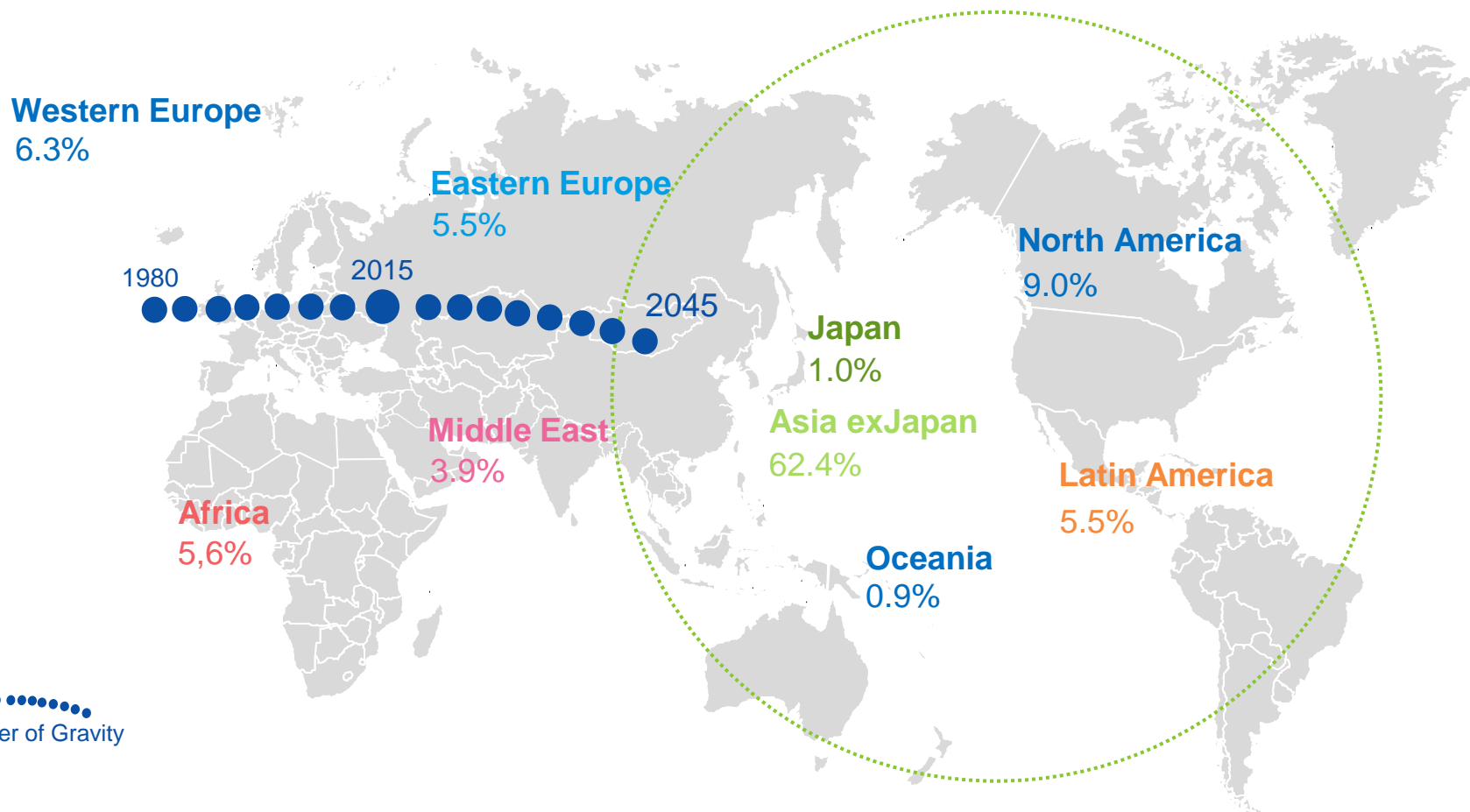
Share of World GDP, 2016 versus 1980



Rusia: Data available only since 1992

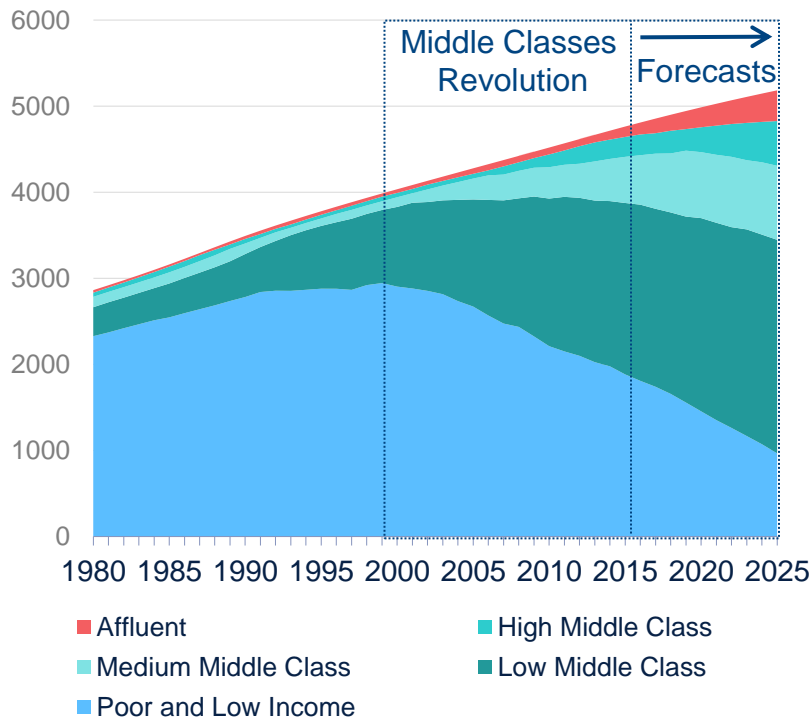
# And this shift of the economic center of gravity from the Atlantic to the Pacific area will continue

Regional contribution to world growth in the next ten years (%)



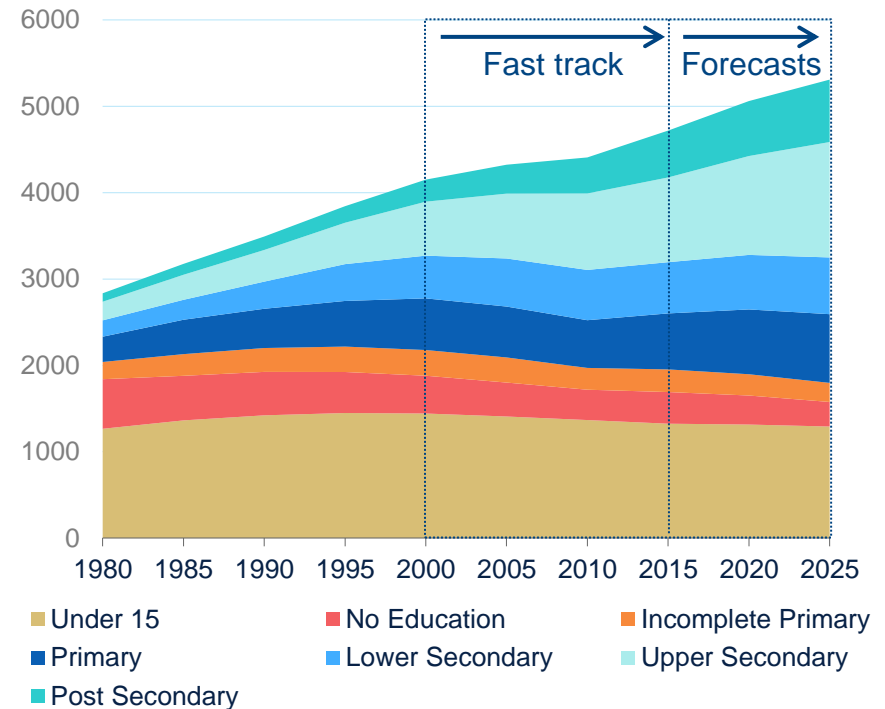
# The middle class revolution in emerging economies reduced poverty, and has the potential to increase skills in the population

**Emerging countries' middle classes (1980-2025)**  
(millions)



NB: Based on PPP-adjusted 2010 USD; Poor and Low Income (<USD5,000), Low Middle Class (USD5,000-15,000), Medium Middle Class (USD15,000-25,000), High Middle Class (USD25,000-40,000), Affluent (>USD40,000). See the annex for further information about the methodology.  
Source: BBVA Research, UN, WB, IMF

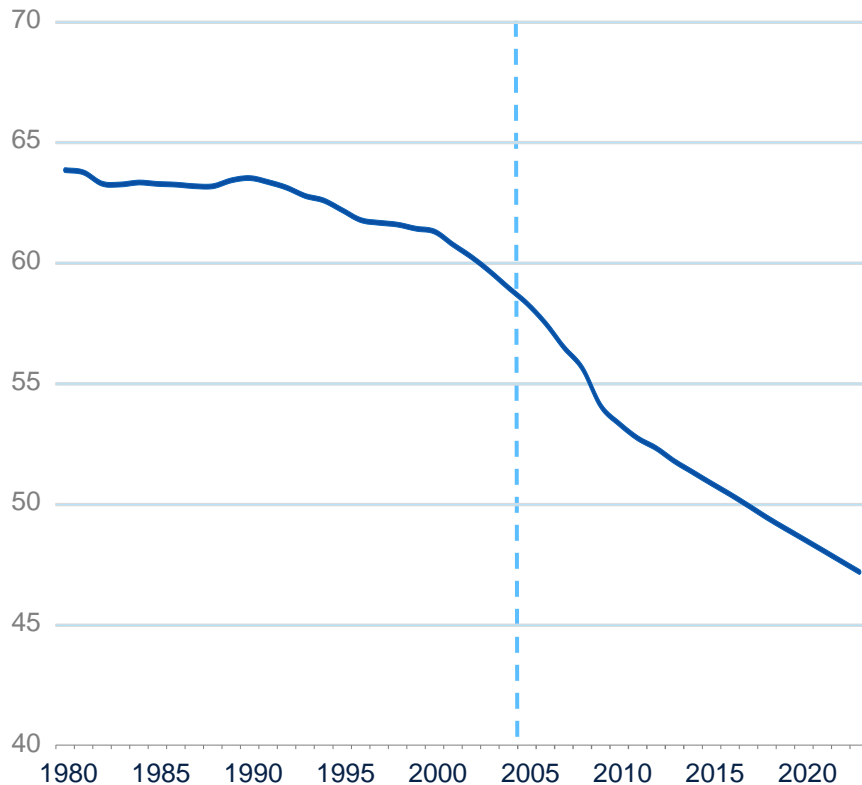
**Emerging countries' demographic transition by education (millions)**



Source: BBVA Research, IIASA

# As a consequence of the catch up of emerging countries (mostly in Asia), global inequality has decreased since the 1990's

**Global GINI index over GDP per capita\***  
(1980-2023f)



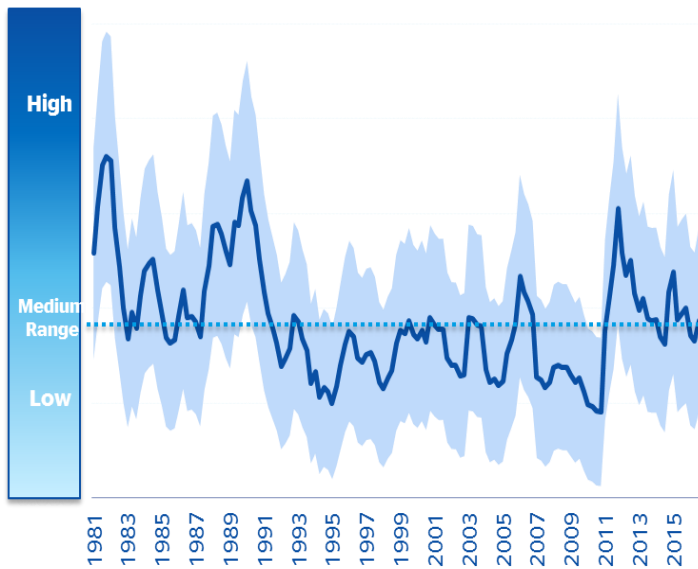
- ◆ Globalization has brought about lower inequality, due to the higher growth of lower income countries
- ◆ Within countries, the story is different

\*Equal distribution is assumed on a country level  
Source: BBVA Research, IMF, World Bank, United Nations

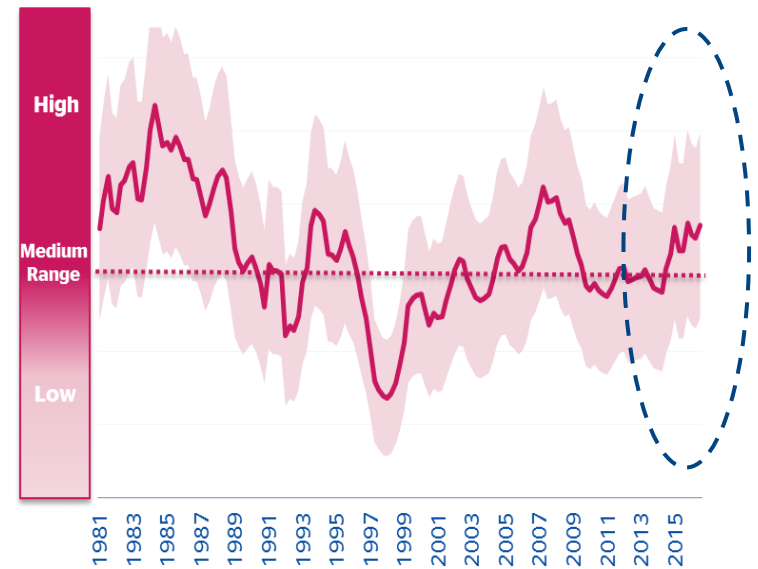
# Protests are going back to average (focused on different areas) and conflict is raising again

BBVA Research World Protest and Conflict Intensity Index 1979-2017

Protests



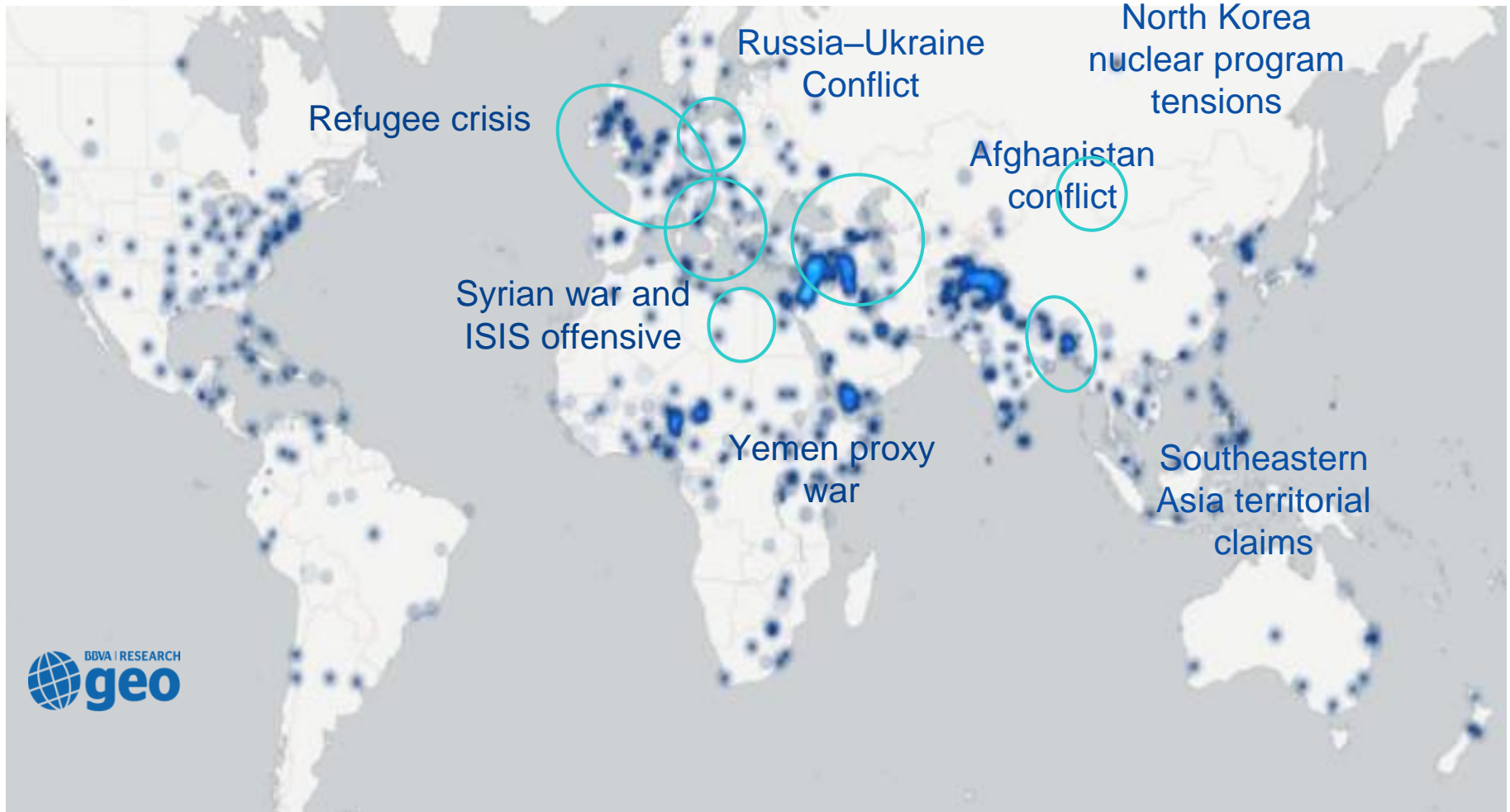
Conflict





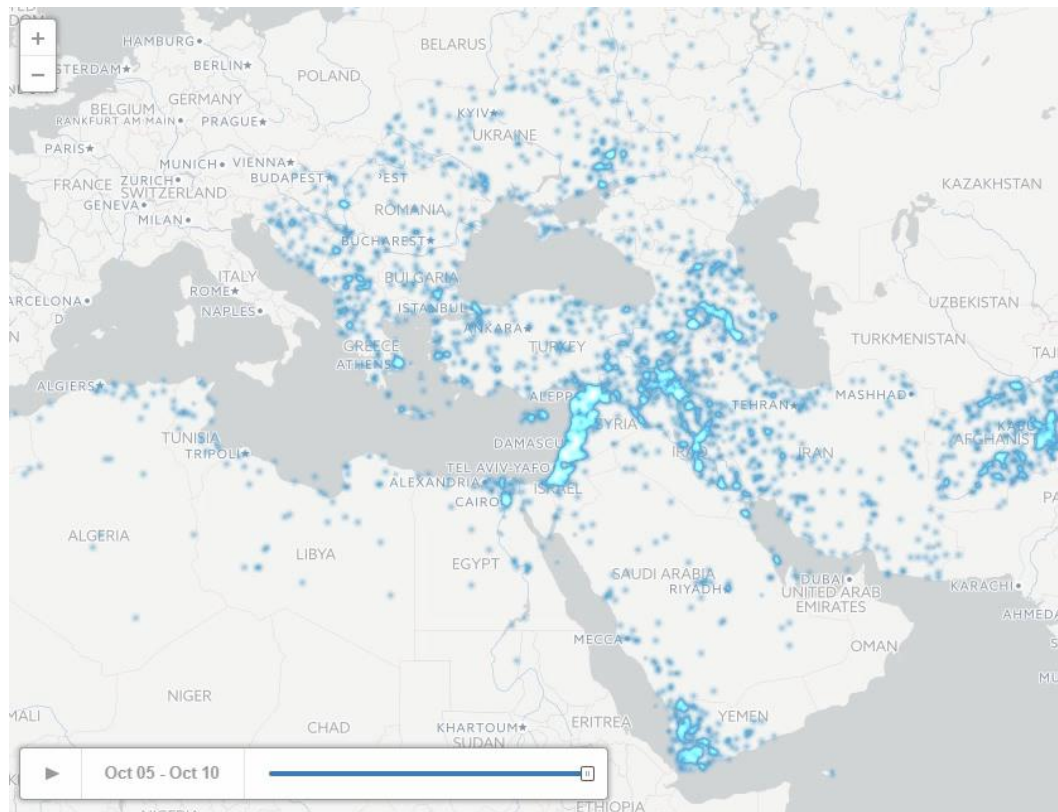
# BBVA Conflict Heatmap in 2017

(Number of conflicts / Total events)



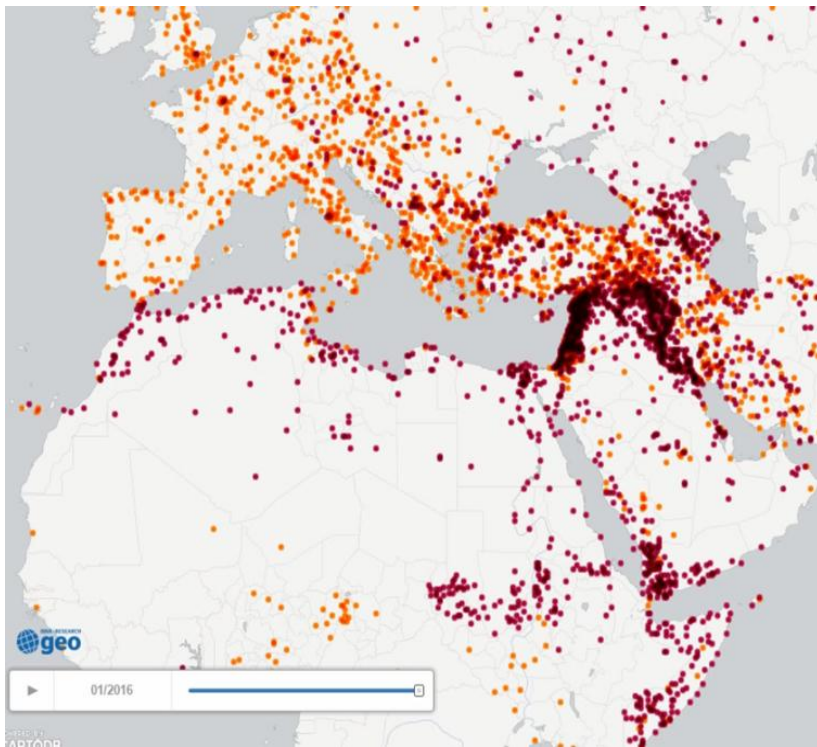
# A focus on the Middle East

## Conflict Intensity Map 2017 (Number of conflicts/ Total events)

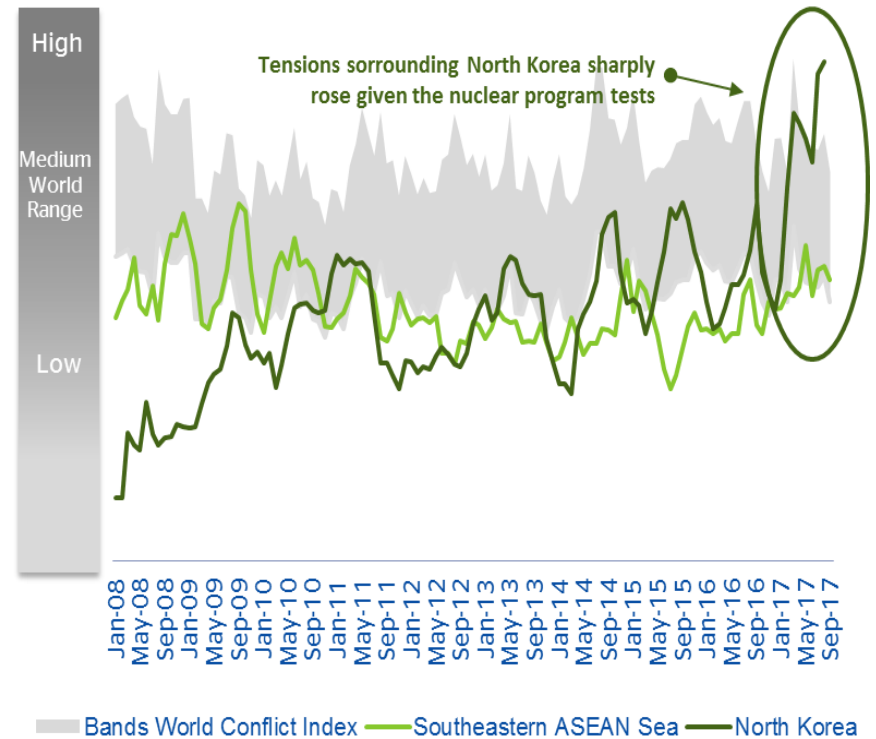


# The refugee crisis in Europe and North Korea are recent hotspots

**BBVA Research Refugees Flows Map in 2015-17**  
 Number of media citations about refugees' inflows and outflows



**BBVA Research Asia Conflict Intensity Index 2008-17**



# Long-term drivers in a troublesome world



↓

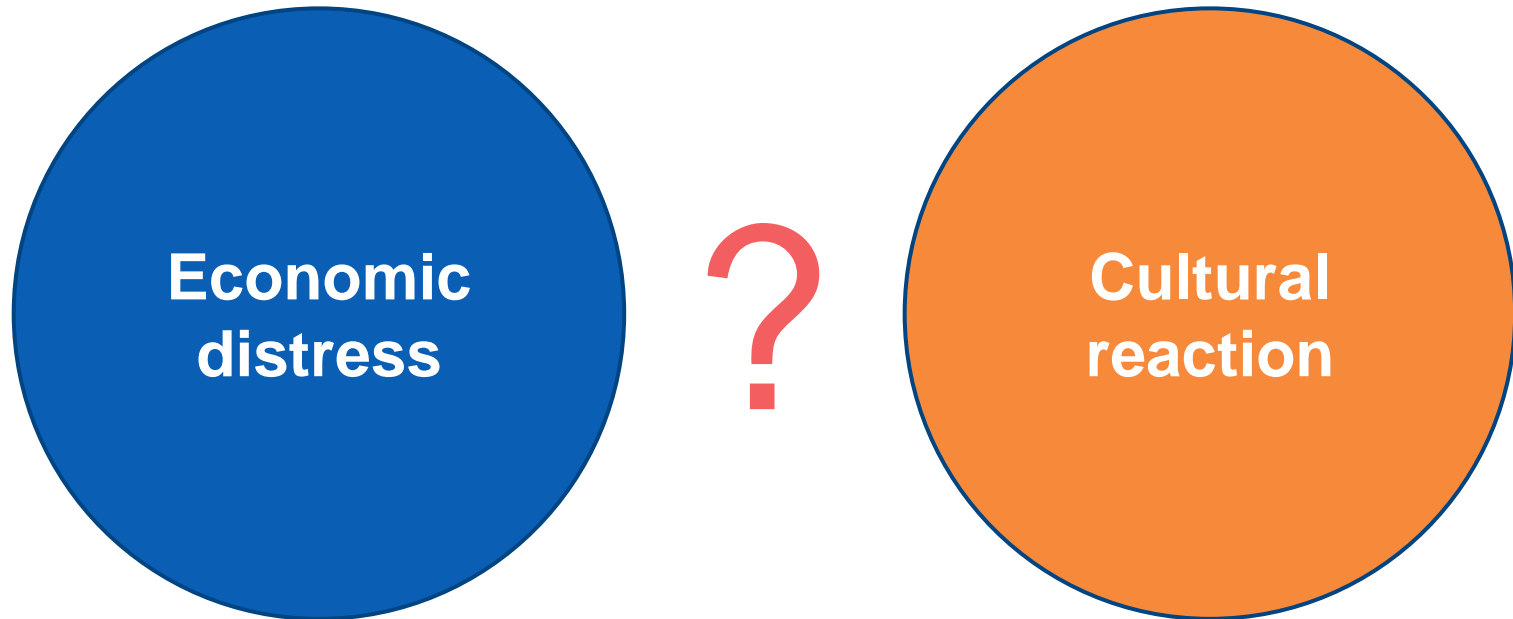
**Geopolitical uncertainty**

Conflict in the Middle East (**humiliation**)

change in the rules of the game “against” the West (**fear**)

Asia rising (**hope**)

Two potential sources of discontent leads to populism, which one predominates? (depends on the school of thought)

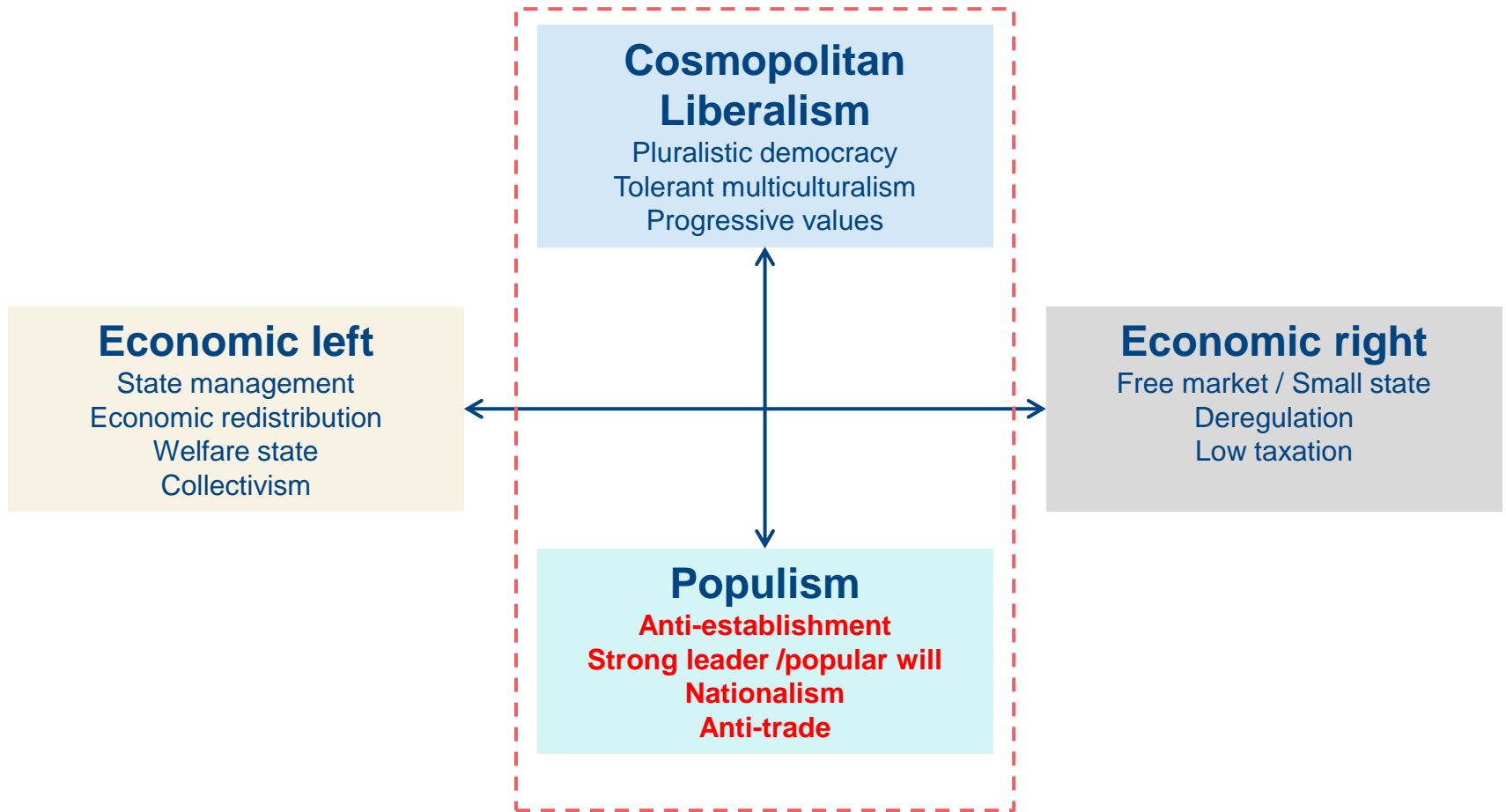


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Spread out by the impact of **social networks** (a game changer):  
Facebook, Twitter ...

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# The mapping of the anti-establishment / economic dimension is complex and changes dramatically the political process



# Brexit showed a protest on multiculturalism, globalization, immigration... like in other countries (except perhaps old vs young)

How did people voted in the Brexit referendum according to sociological issues...but also on perceptions about “forces for bad”?

## Some patterns

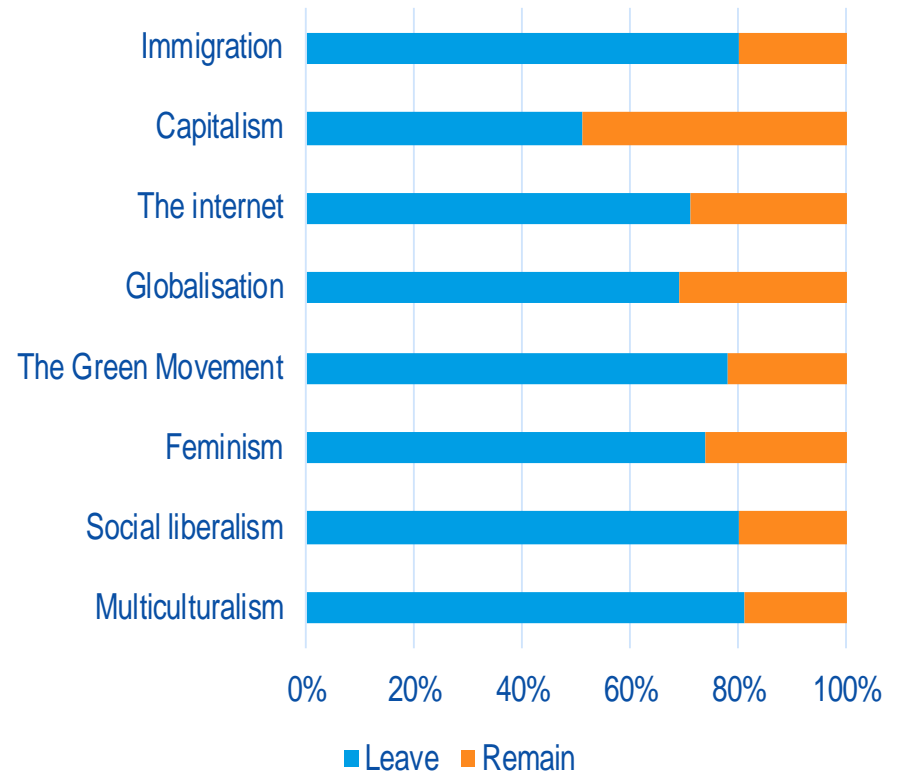
Old versus young

High versus low skilled

Export oriented regions versus not

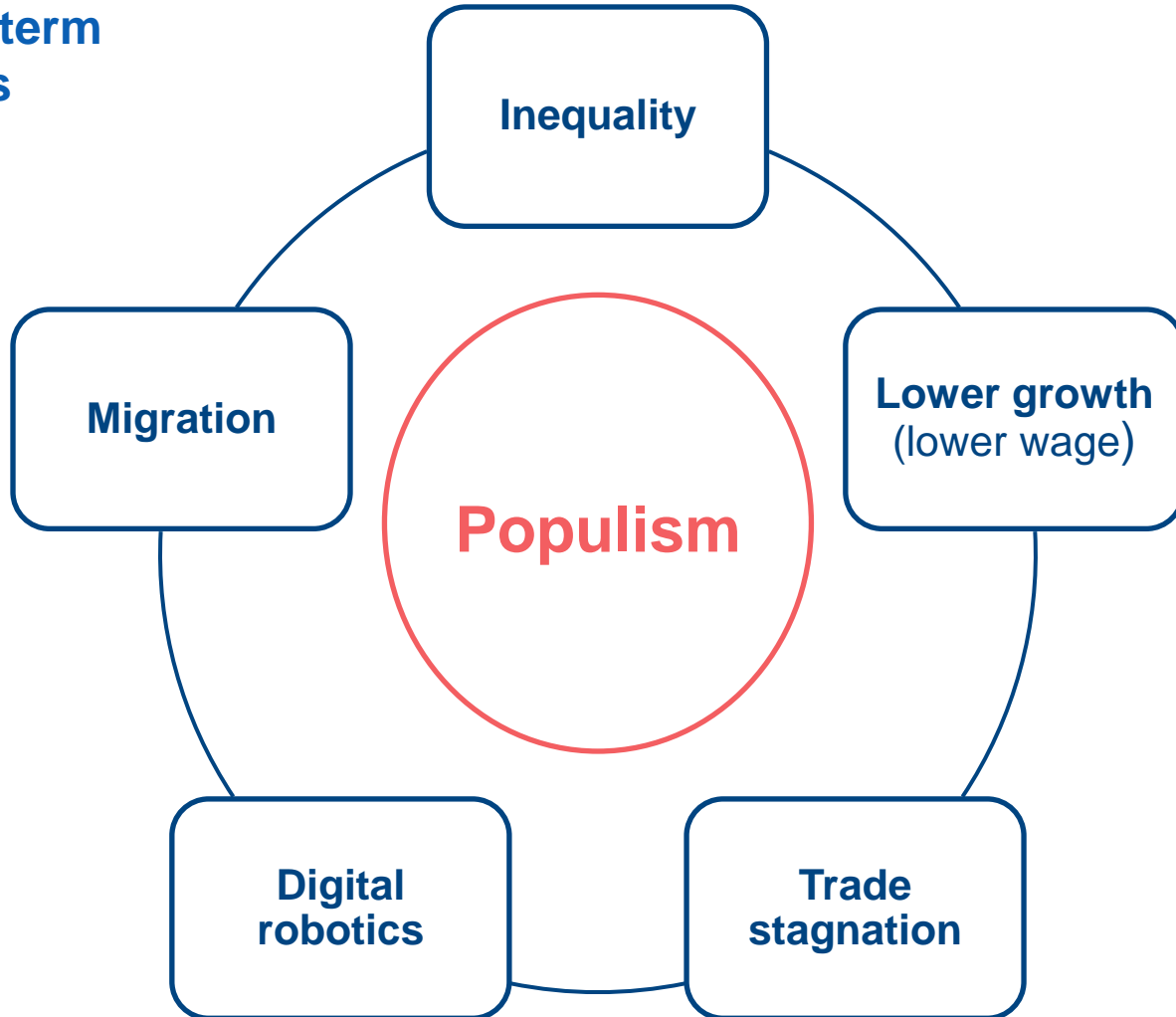
High versus low income regions

## Forces for Bad



**But many economic drivers are also behind populism... Those were a source in some countries and certainly a trigger in others**

**Long-term trends**

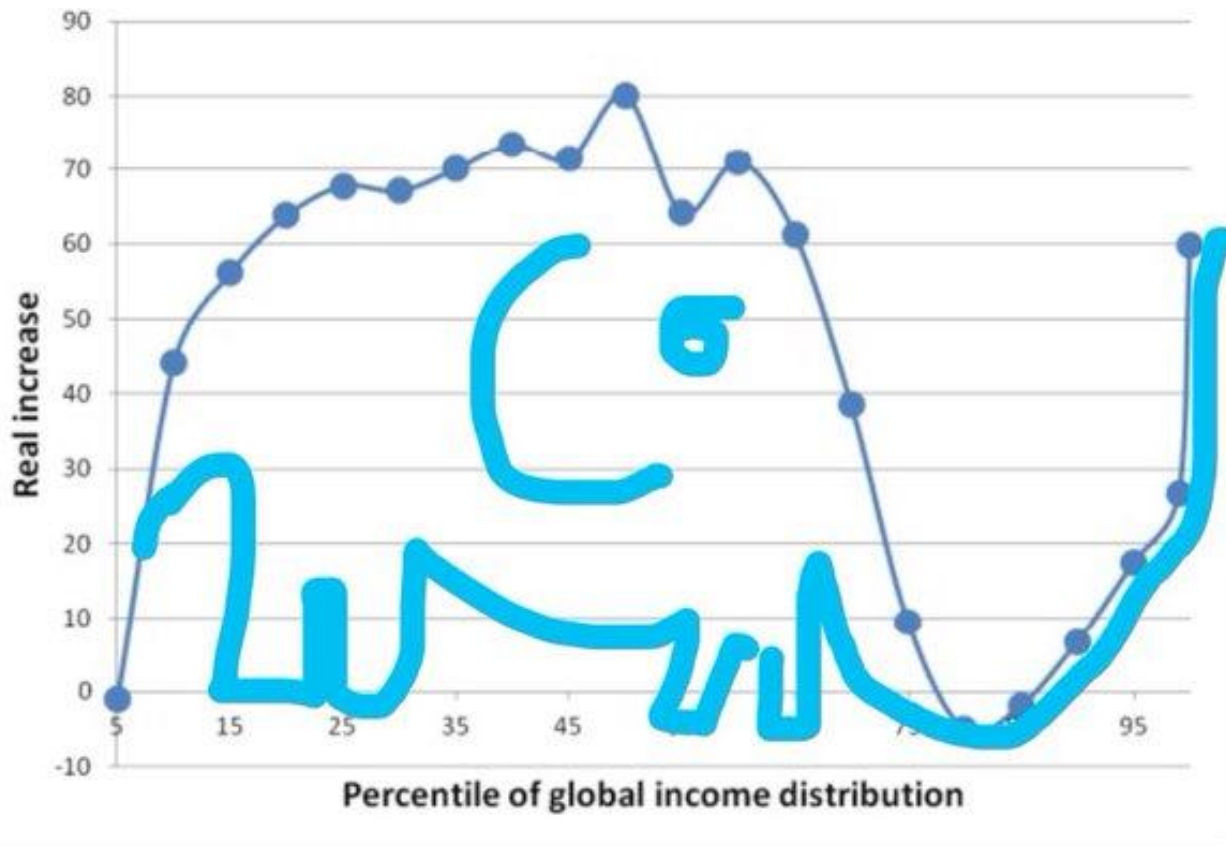


**Short-term triggers**



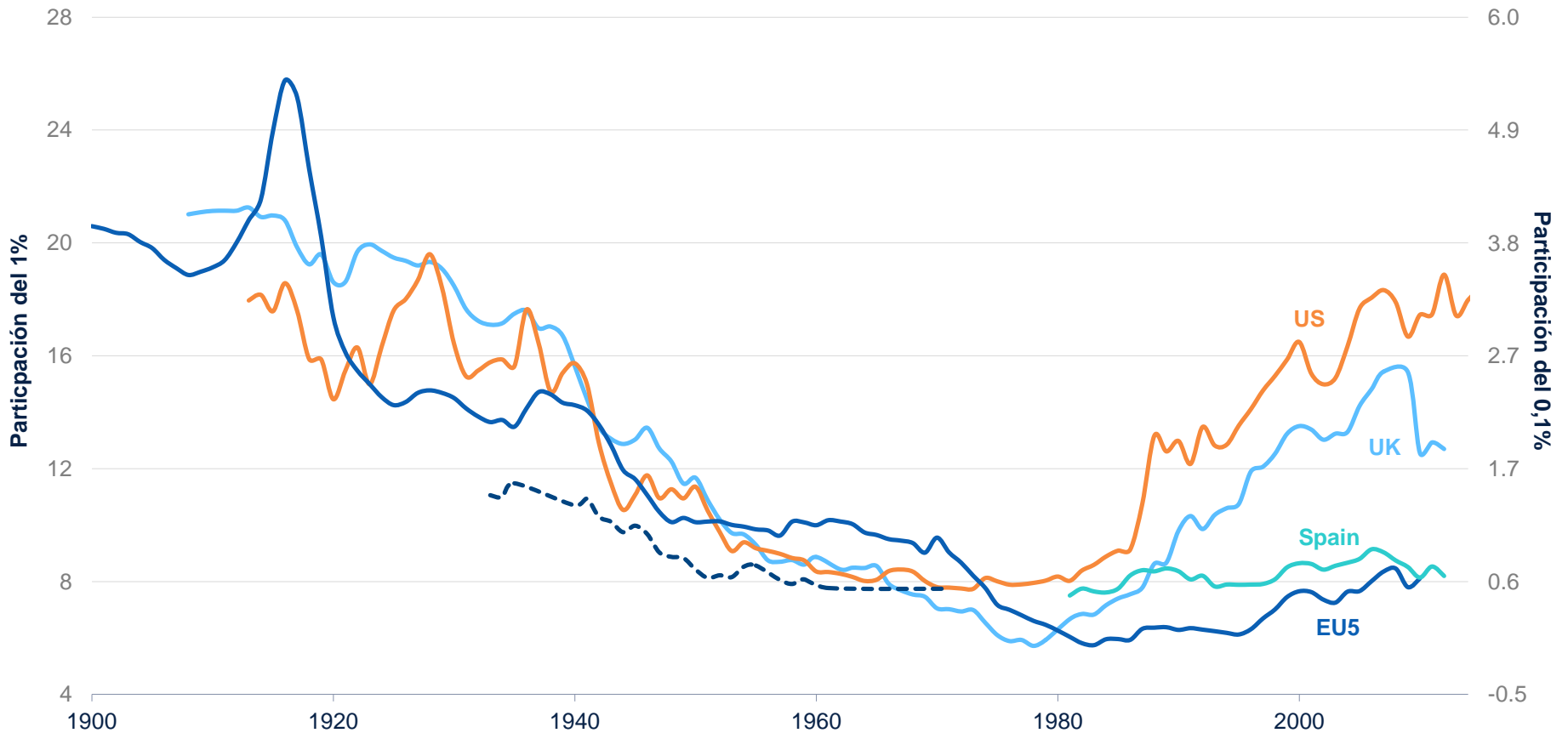
# It makes sense to talk about the impact of inequality

Change in real income 1998-2008 at various percentiles of global income distribution  
(calculated in 2005 international dollars)



# Inequality: the local versus the global puzzle

## Share of top 1 per cent in gross income



Source: elaboración propia en base a [www.wid.world](http://www.wid.world)  
 UE5: Alemania, Dinamarca, Finlandia, Holanda y Suecia

## Populism... builds on true concerns and anxieties. It shows that there is a “democratic recession” (Martin Wolf)

...feeds on real problems and anxieties

Displaced workers with low relative income

Cultural fears dominate: losing their foundations

Anger on corruption, abuse of power, ...

... it is open to dramatic new solutions

They demand dramatic solutions and quick fixes

Attracted to decisive leaders (that could get rid of checks and balances of liberal economies)

...uses half-lies and fallacies in their path

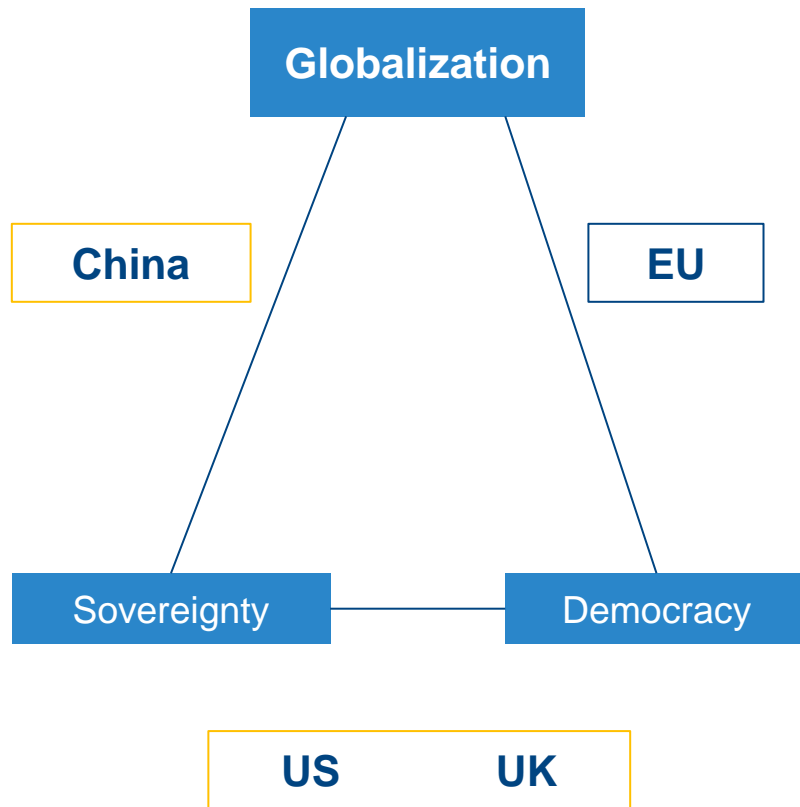
On the consequences of trade, of monetary policy, of debt

Proposes wrong solutions

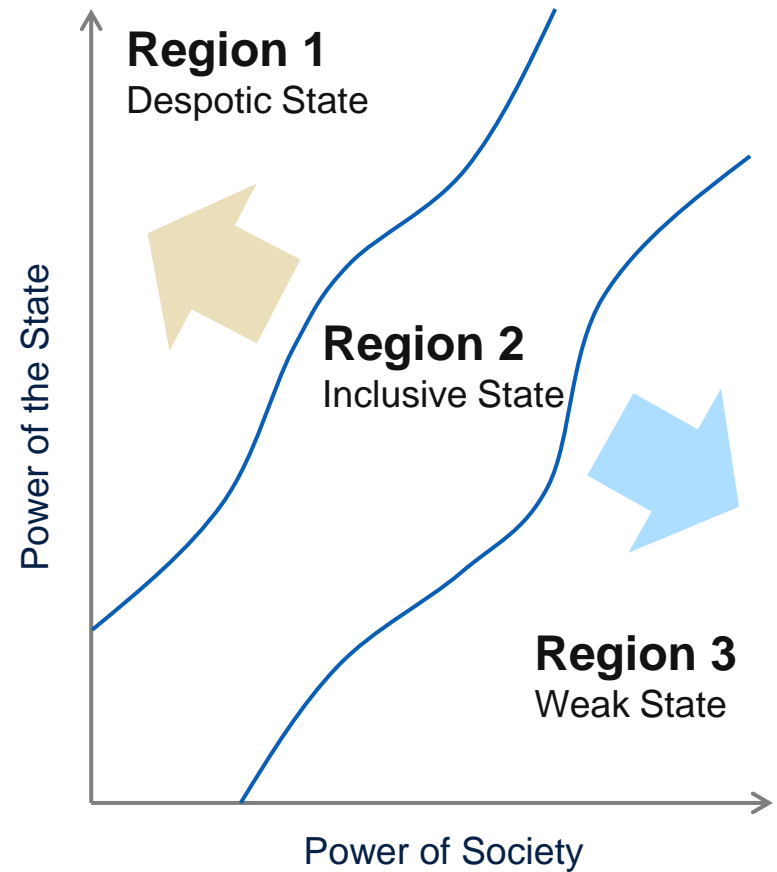
...when they care to spell them out!

# Populism will affect policy making everywhere... never spells out the trade offs and real alternatives

Rodrik's augmented trilemma:  
A country can pick only two!  
(If fully implemented)



The race between the State and Society  
(Acemoglu)



## Where are we seeing it? Everywhere



US

- ◆ What is Trump saying and doing? Allergy to international coordination processes, bilateral view of trade, taxes which might not accommodate his political bass. And yet...



UK

- ◆ What is going on with Brexit? A mess



Europe

- ◆ We should worry about extreme parties and perception of what democracy can bring? The discontent is far from gone

# Long-term drivers in a troublesome world



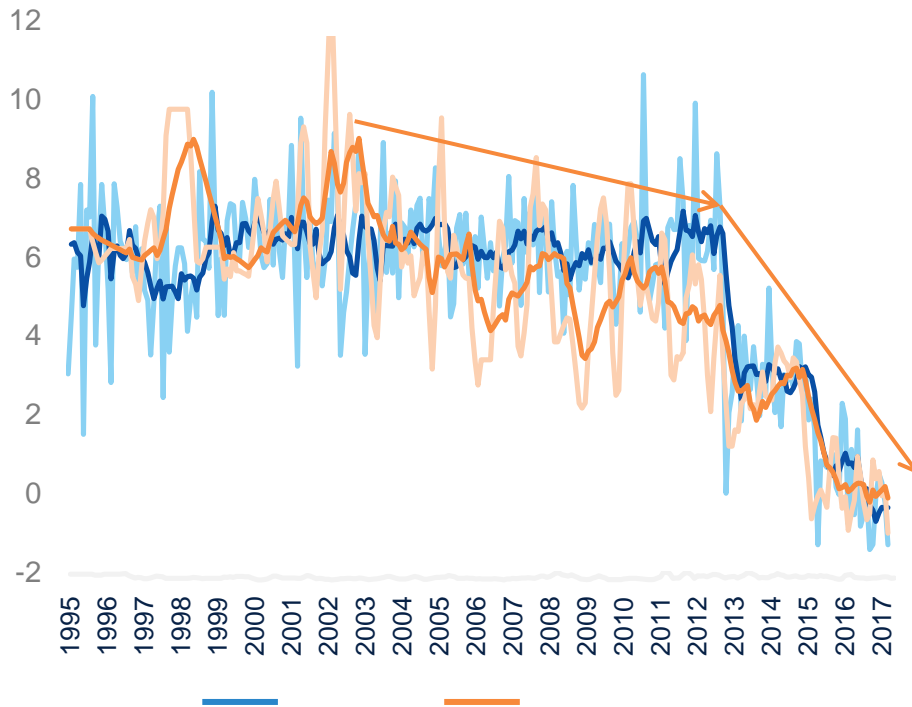
**Uncertainty**

Many paths are open!

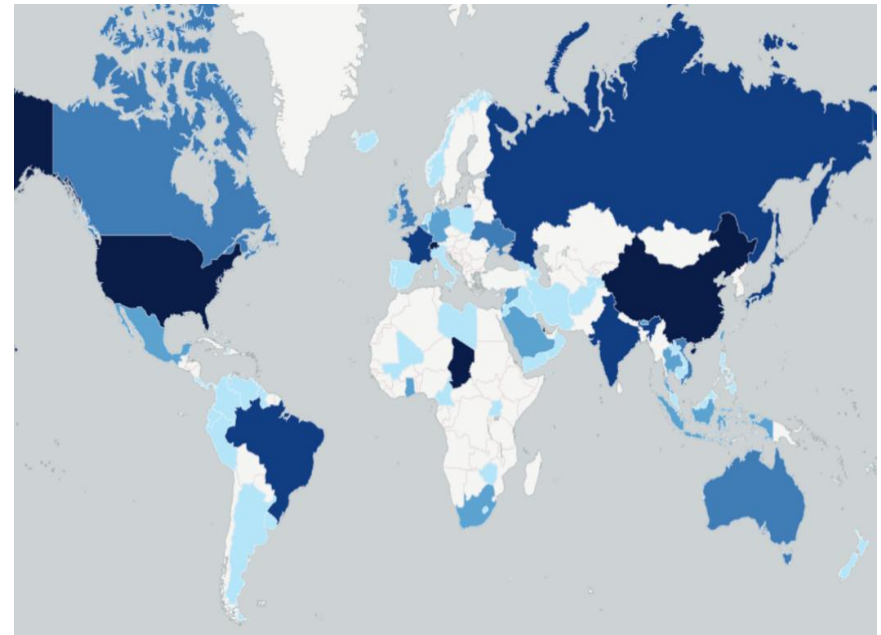
Anxiety / lack of references

# Material and verbal support of World trade has diminished abruptly...

**BBVA Research Trade Support Index in real time**  
(Tone & Coverage verbal cooperation at WTO)



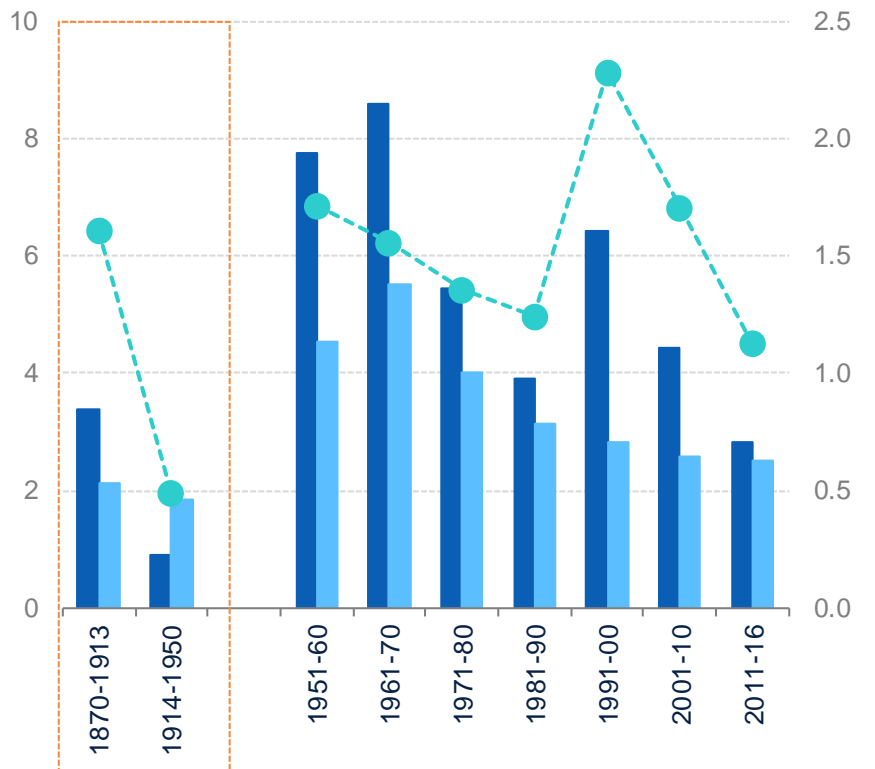
**BBVA Research Trade Support Index Changes 2008-17**



# Global trade is shrinking...Why? And what next?

## Worlds exports' volume and GDP

(y/y,%)



Exports. Merchandise GDP Income Elasticity of Trade, rhs

### Structural factors:

- Changes in value chains
- Role of China
- Role of services

### Cyclical factors

- ◆ Strong evidence supporting that trade brings higher income...and the periods of high growth have been related with strong trade

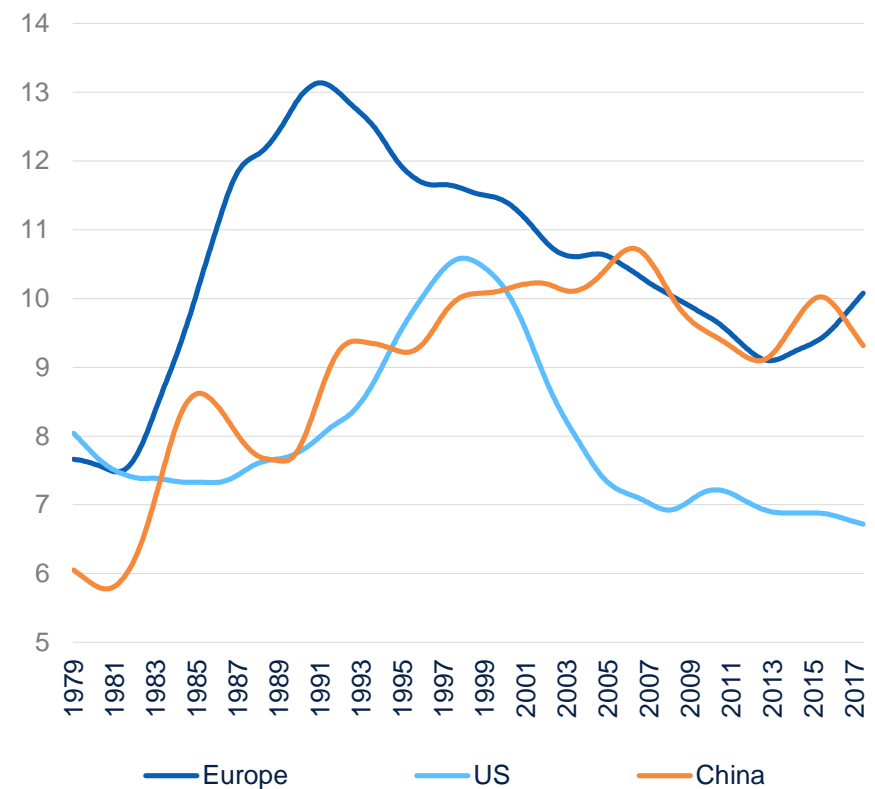
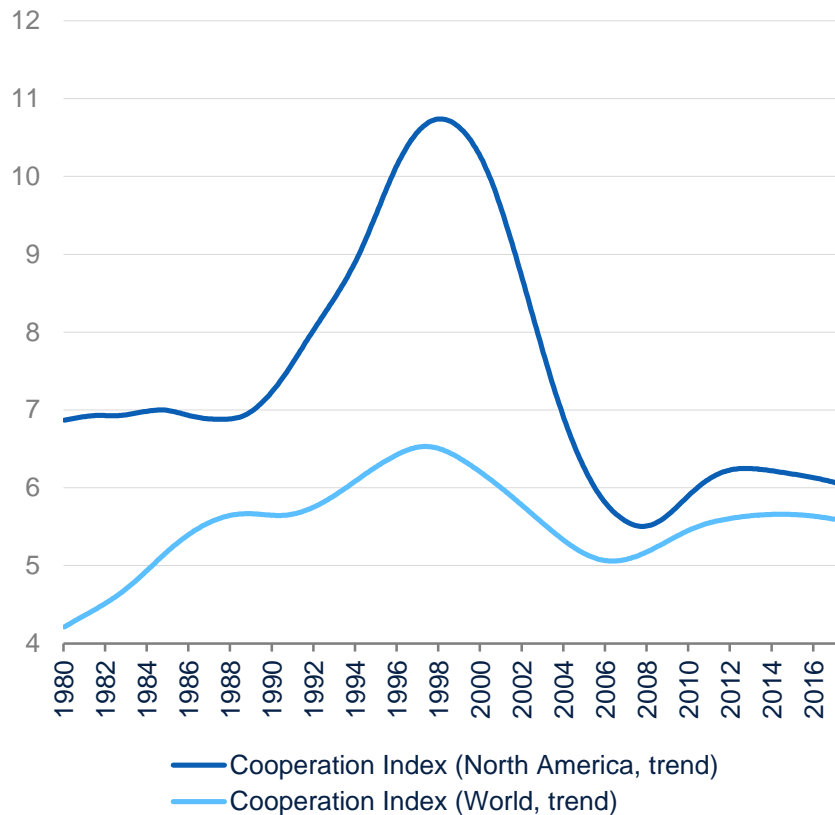
### Still...There are losers



# Global cooperation is shrinking: Why? What next?

## Trend of cooperation index

(Ratio of number of events of cooperation of demand, HP filtered)



## US: where does it stand on trade and what bilateralism means

### Cooperation & Trade

- US out of TPP
- US out of climate deal
- China playing the long term game with potential important benefits for Asia

### Next step: NAFTA

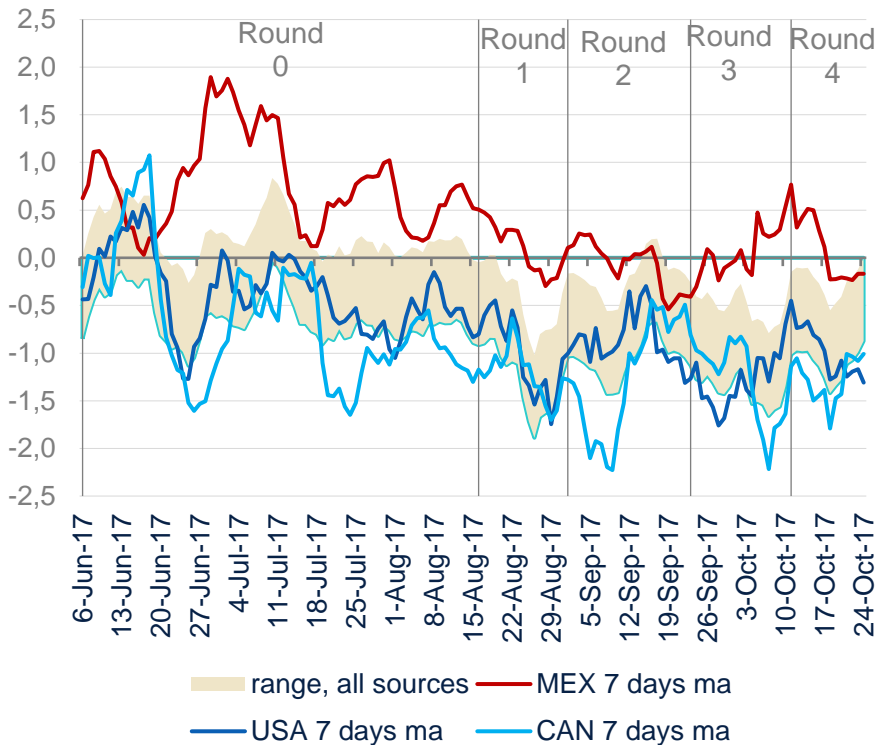
- It remains the main short-term risk. **There is risk of a break-up**
- **Key issues still pending to know for sure.** The key will be the auto sector (manufacturing matter more to negotiators than services)
- **More impact on investment than on trade** and negative for US firms
- To what extent is a negotiation strategy? **Trump has been consistent**

### Global impact?

- **It has the potential to become a global shock** (bilateral view of the world will be present after NAFTA)
- **It can escalate beyond NAFTA**
- **Shifts “reliability” out of the US into the hands of other players**

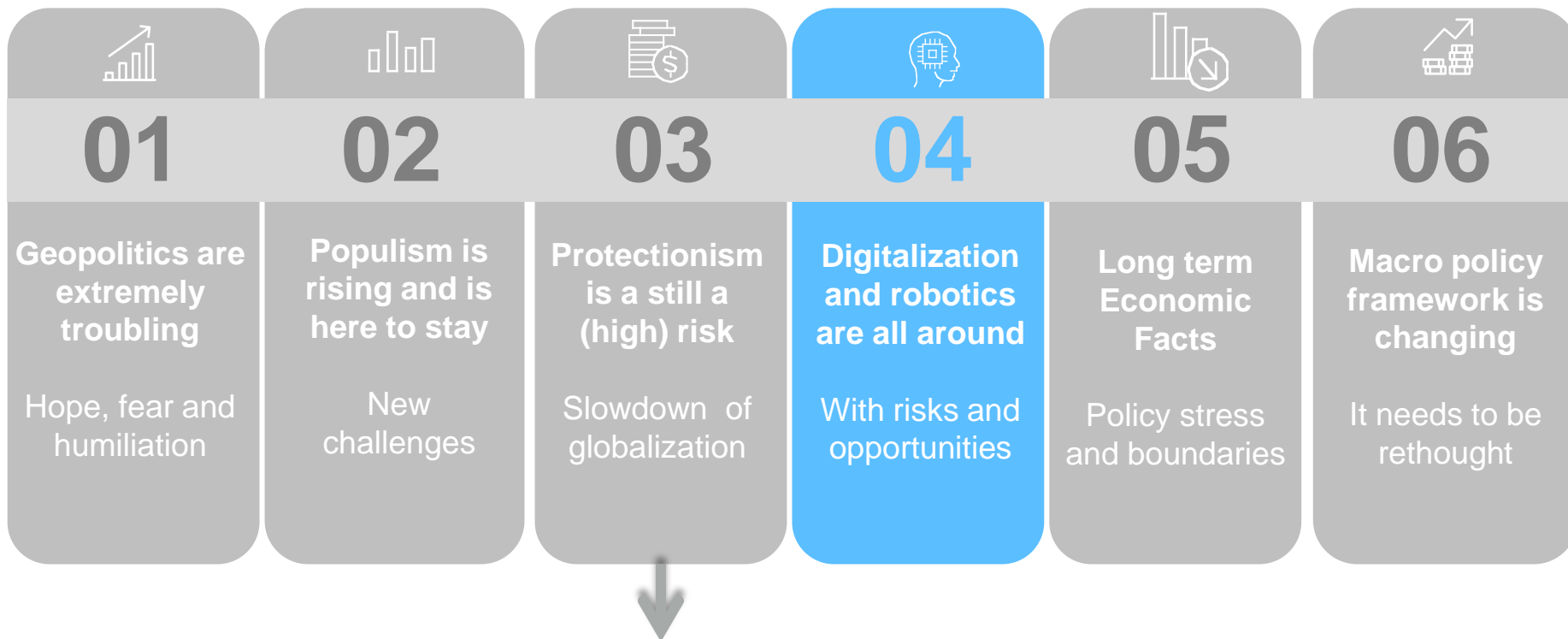
# Differences in the media sentiment between Mexican news and the Canadian and US ones

## NAFTA media sentiment during the negotiations period



- ◆ **Round 1:** some of the most controversial points were discussed (resolution mechanism and rules of origin).
- ◆ **Round 2:** some progress was made on issues such as digital commerce, competition and telecommunications.
- ◆ **Round 3:** agreed incentives for the growth of SMEs in the three countries, a critical issue in Mexico since it supposes 80% of the total companies
- ◆ **Round 4:** most controversial issues came up (sunset clause, changing rules of origin, weakening of dispute settlements)
- ◆ **Round 5:** Counterproposals of Mexico only on the sunset clause

## Long-term drivers in a troublesome world



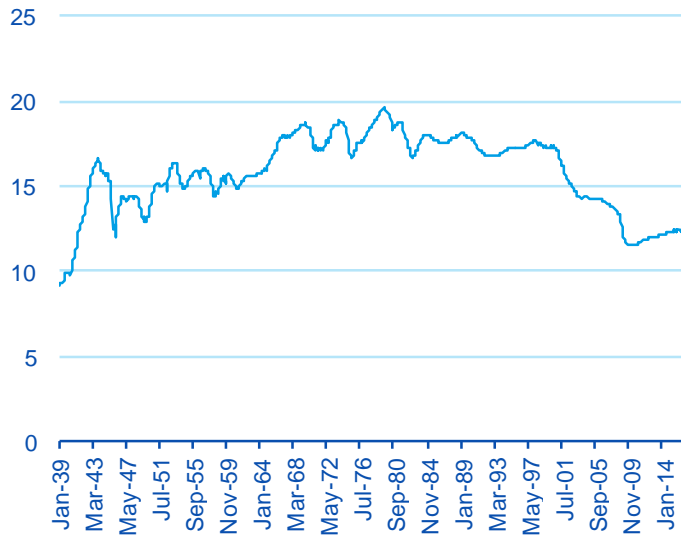
### How to grow without trade?

Less cooperation in a world with global problems

Dealing with the consequences for policy makers

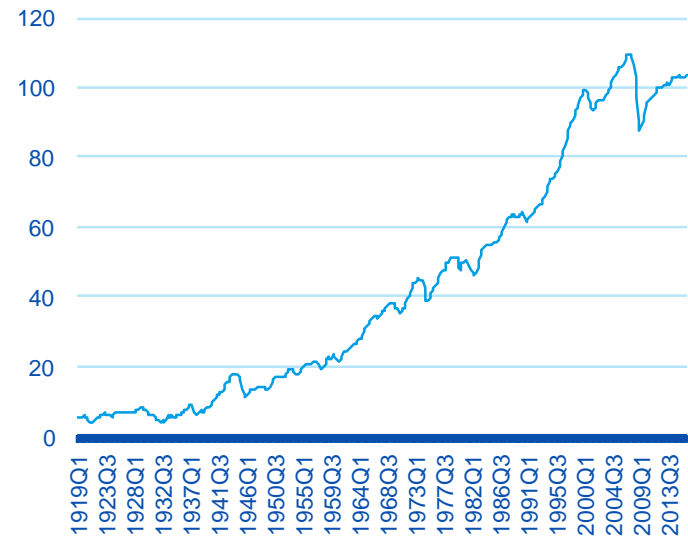
# It is trade...but it is not the only story

**Employment in the US manufacturing sector**  
(Millions of persons, s.a.)



Source: BBVA Research with BLS data

**US manufacturing production**  
(Index 2012 = 100, s.a.)



Source: BBVA Research with Federal Reserve data

Higher productivity, and not free trade, is at play; "knowledge of electrical engineering, computation or robotics is a must-have skill to land a job in the US manufacturing sector. This trickles down through the economy to other sectors" (Newman, Winston 2017)

## Effects of the technological and digital transformation

The effects of technological change on employment depend on several factors:

**Complementarity or  
Substitutability between  
labor and machinery**

**Competition in goods  
and services markets**

**Elasticity of labour  
supply and wages**

**Elasticity of the demand  
for goods and services  
to income**

**Regulation in the  
labour market**

**Income effect of  
technological change  
(link: aggregate  
consumption, productivity,  
leisure and work)**

**Skills & education**

## Overview: pessimists vs optimists

### PESSIMISTS

- ◆ **Luddites** (1811 -1816) the **Swing Riots** (1830) and **Marx** (1867)
- ◆ **Frey and Osborne** (2013) on US jobs (47% jobs under threat)
- ◆ **Brynjolfsson and McAfee** (2014) on stagnation of wage income and **Piketty** (2014) on capital gains exacerbating inequality
- ◆ **Autor** (2015) the biggest risk is not technology per se, but poor governance

### OPTIMISTS

- ◆ **Moreti** (2010) each job created in high-tech sectors creates a further 4.9 in non-trade goods sectors; and **Mokyr** (2014), **Gregory et al** (2016), **Conseil d'Orientation pour l'Emploi** (2017): the future holds occupations that will seem as strange to us as many of those today to our grandparents. Our lack of imagination is largely responsible for current pessimism
- ◆ **Arntz et al** (2016) against **Frey & Osborne** (2013): when one considers the various different tasks in each occupation, only 9% of employment is capable of being automated

# Technological and digital transformation represents an opportunity, yet also a huge challenge: transition will be costly

## Opportunities

**Transition is key**  
between destroyed and  
created jobs.  
Protect people, not jobs

## Risks

- ◆ **Progress and welfare**  
boosts productivity,  
wages and income per  
capita
- ◆ **Employment rates**  
have risen on aggregate  
in the last two centuries  
despite all technological  
changes

How long will the  
long term be?

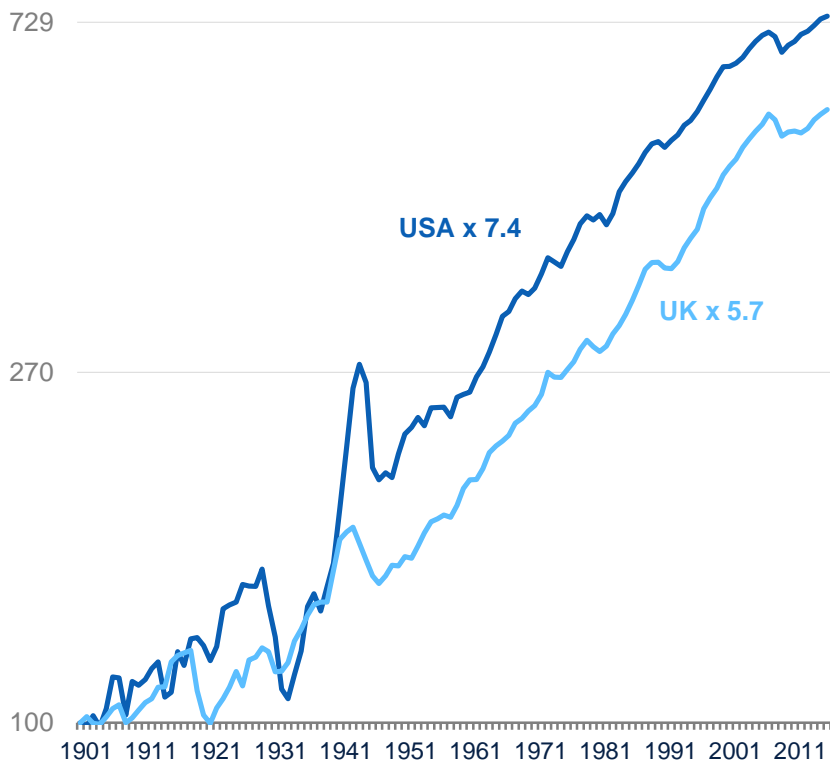
Education and  
redistribution will  
be key issues

- ◆ **Polarization**  
Technological progress  
is biased against  
routine work (in some cases  
It can be a regulatory choice)
- ◆ **Increasing inequality**  
if labor force is not  
complementary to  
technological change

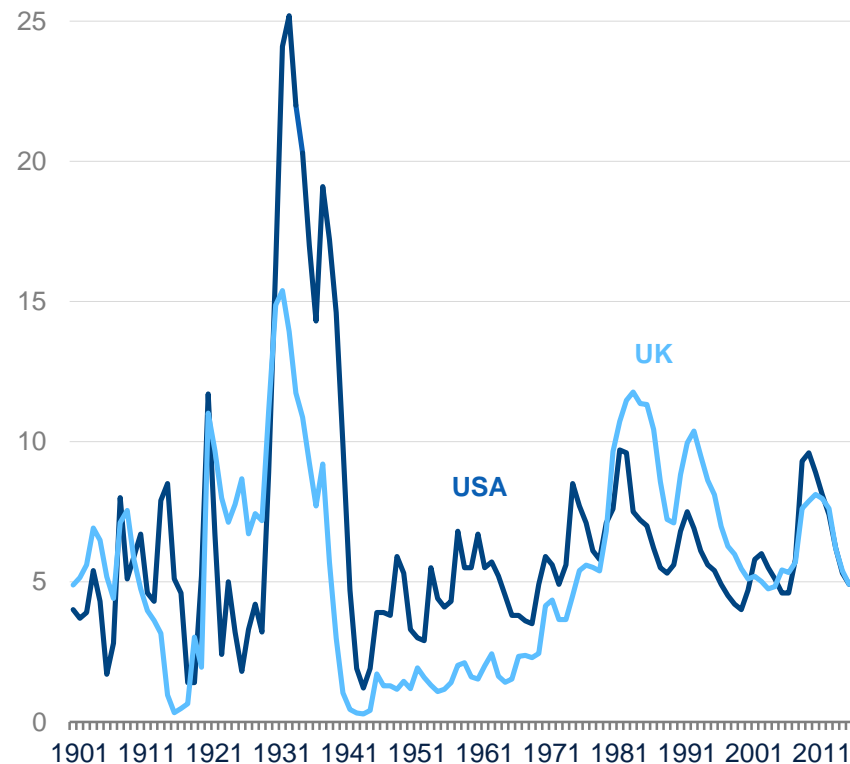


# Unemployment in 2016 was at the same level as in 1901

Per capita GDP in the United States and the United Kingdom, 1901-2016 (1901=100)

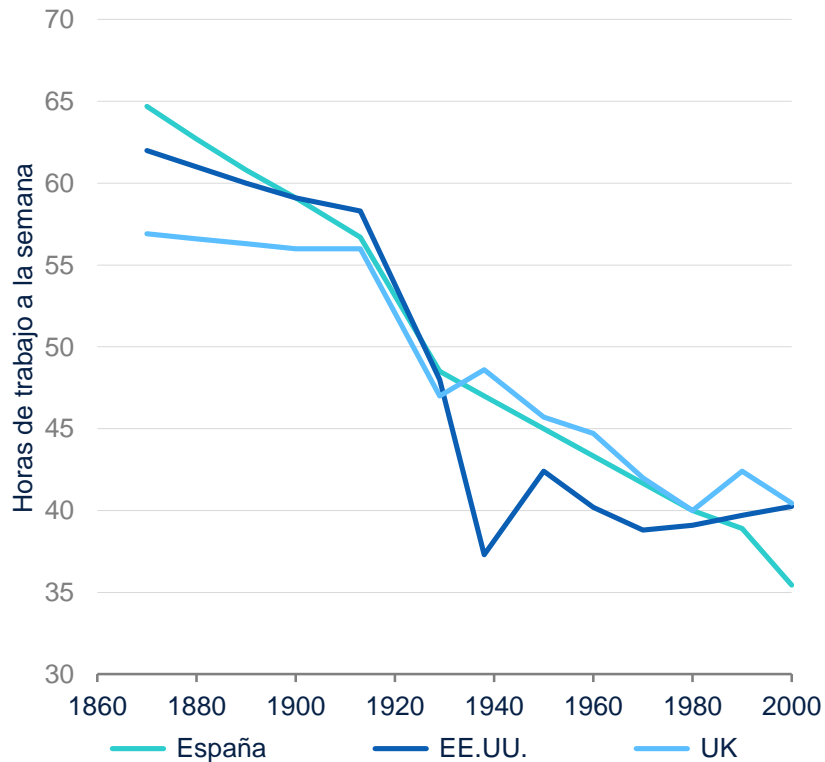


Unemployment rate in the United States and the United Kingdom, 1901-2016



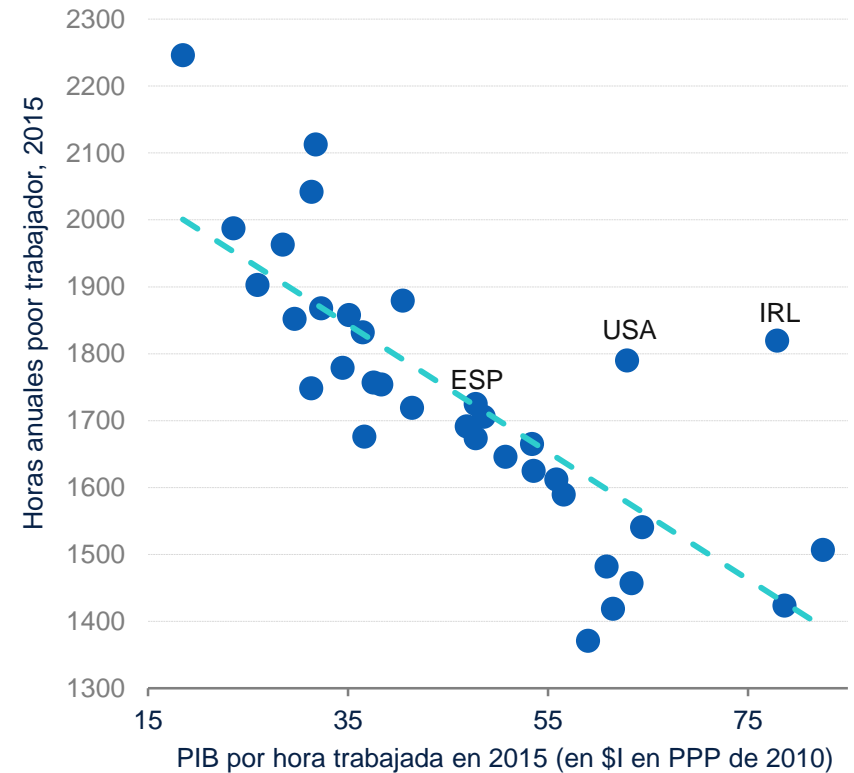
# Hours worked fall with technical progress

Weekly hours worked in the United States, the United Kingdom and Spain, 1870-2000



Source: own research based on Huberman and Minns (2007).

Hours worked and productivity in the OECD, 2015



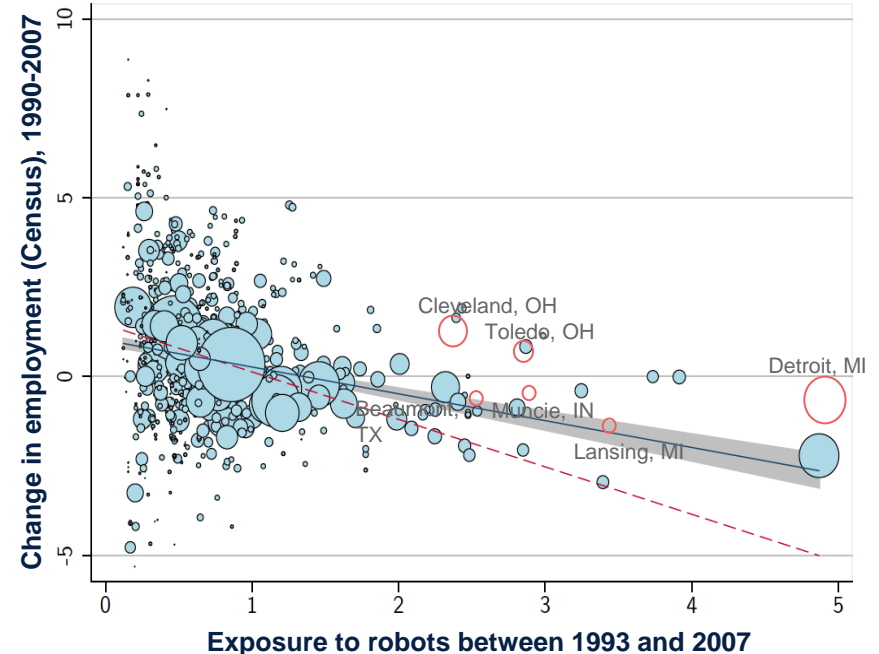
Source: own research based on the OECD

# Does automation destroy employment?

## Man's race against the machine

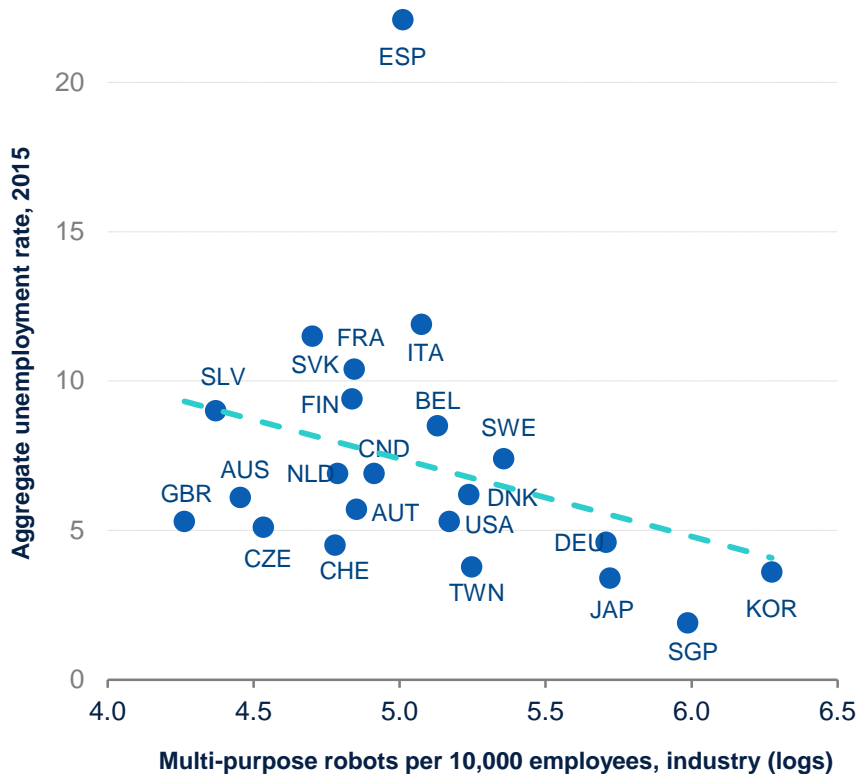
- ◆ Acemoglu and Restrepo (2017) analyse metropolitan areas of the US (1990-2007)
- ◆ One additional robot per thousand employees reduces employment rate by 0.18-0.34pp and wages by 0.25-0.5pp
- ◆ The effect is greater among workers with **manual occupations and workers without university education**
- ◆ Graetz and Michaels (2016) analyse 14 industries in 17 countries (1993-2007): robots boost productivity and wages, and reduce prices but not aggregate employment, **although they do that among the least skilled**

## Correlation between exposure to robots and employment for metropolitan areas of the United States 1990-2007



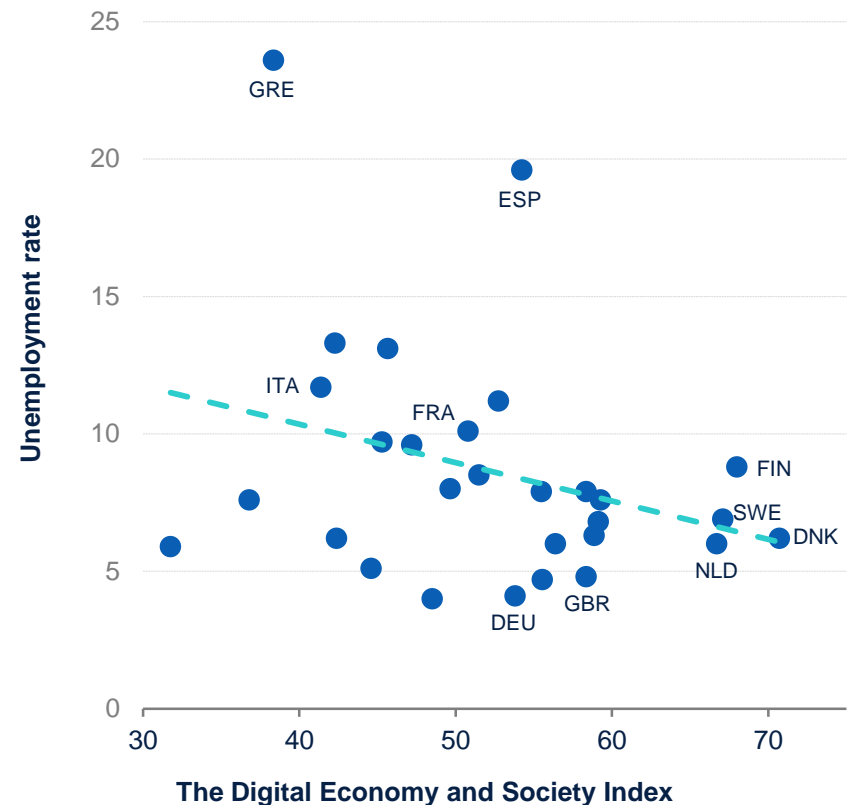
# Neither automation nor digitalization imply higher aggregate unemployment

## Robots in industry and the unemployment rate in the 22 most automated countries, 2015



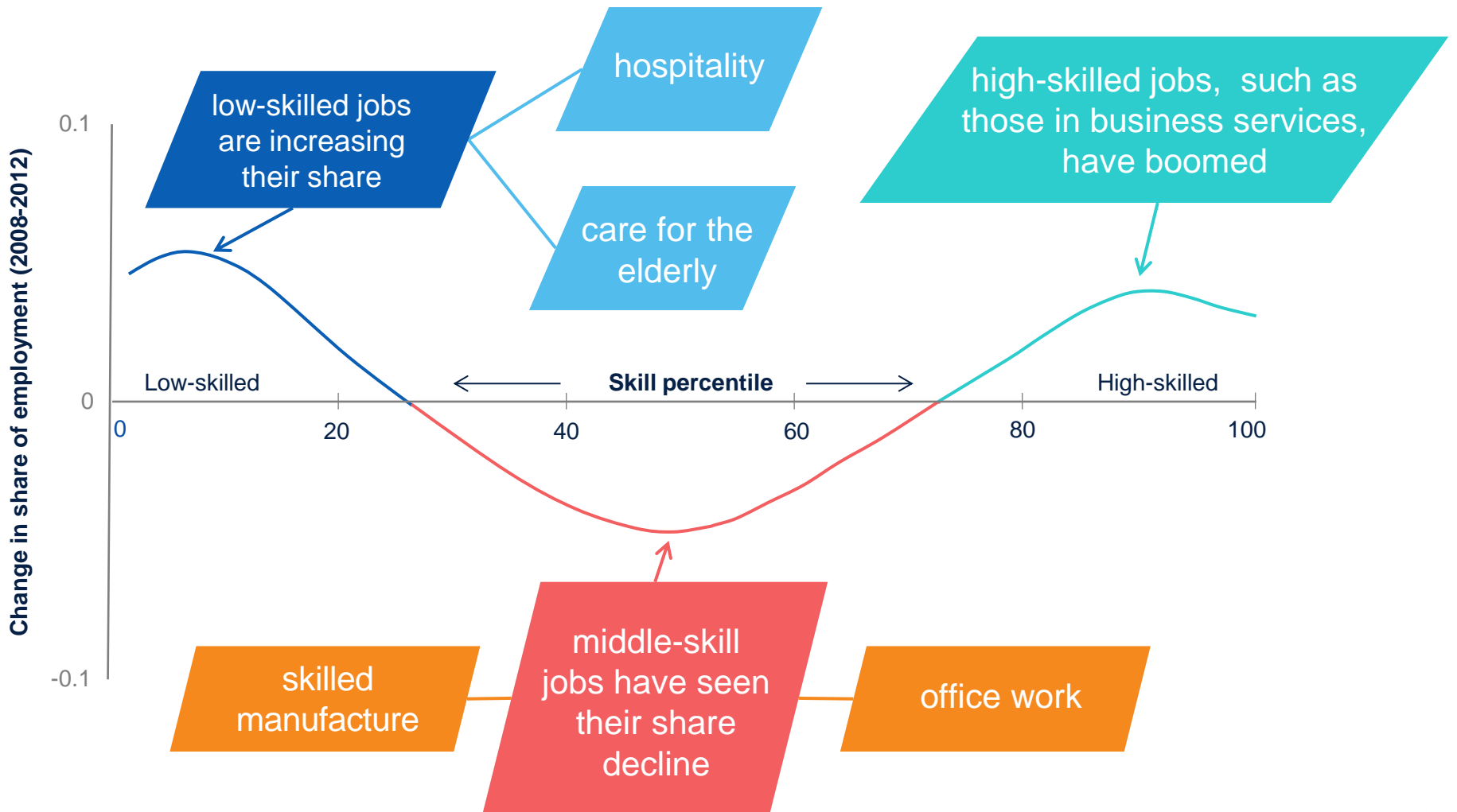
Source: BBVA Research based on the International Federation of Robotics, OECD and ILO

## Digitalisation and the unemployment rate in Europe, 2016



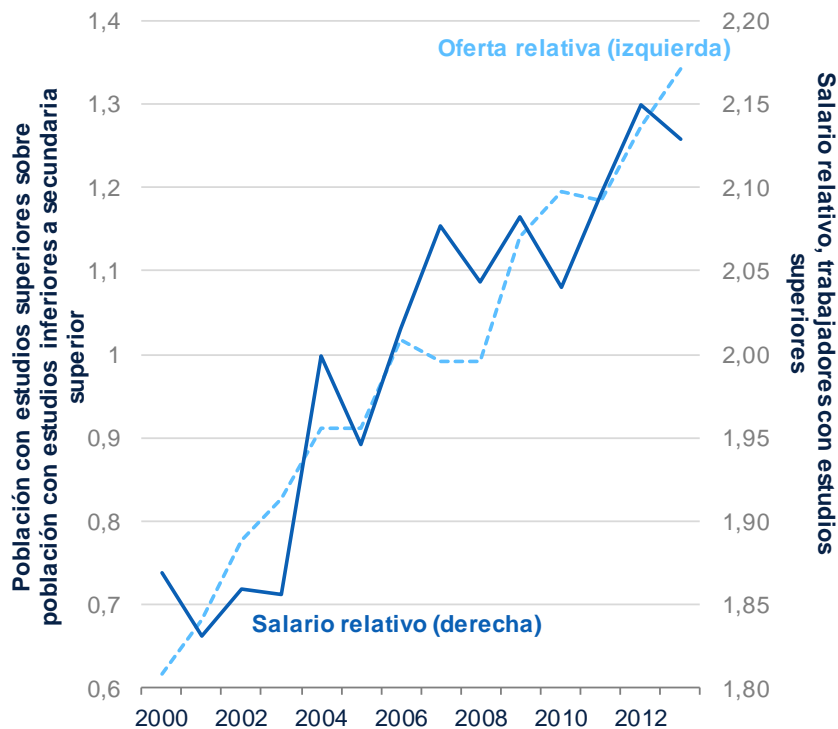
Source: BBVA Research based on the DESI (2017) and Eurostat

# The challenge from labor markets however does exist: emptying the “middle”

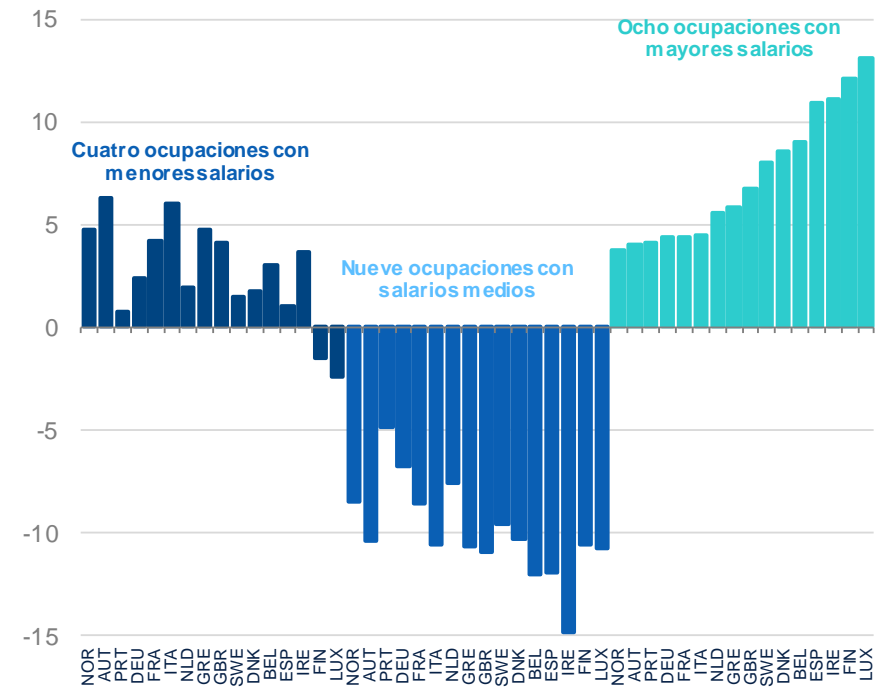


# Polarization and inequality: technologically biased technical progress, which is biased against routine work

The relative supply of human capital and relative wage in 33 countries, 2000-13

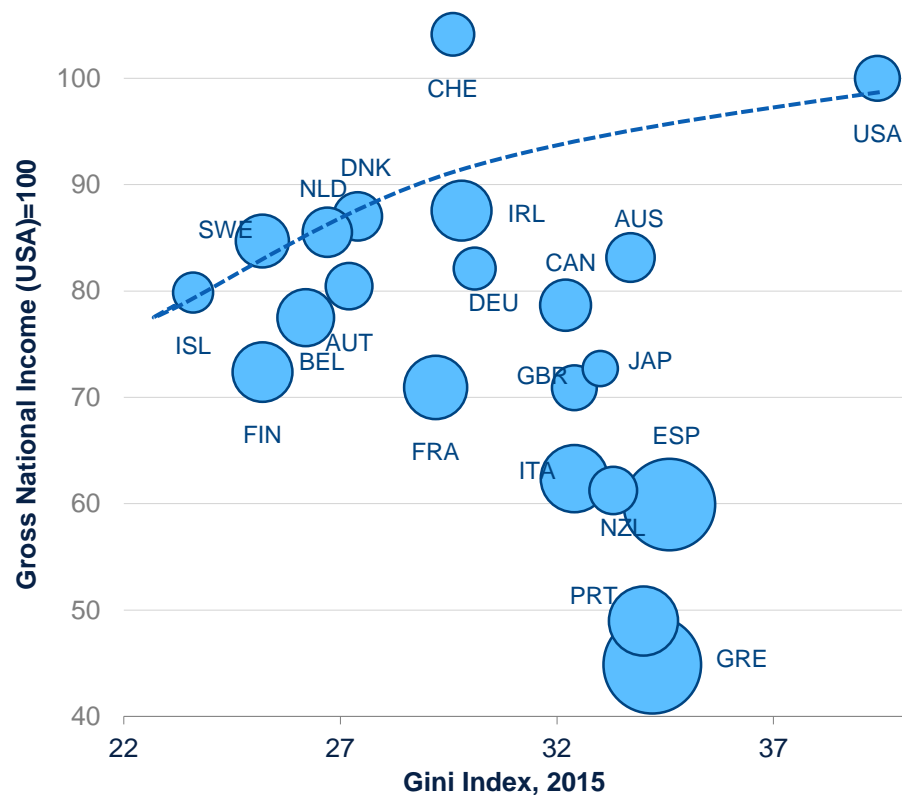


Change in employment between 1993 and 2010 in 16 European countries



# An efficient and fair transition should improve per capita income, unemployment and equality

Per capita income, inequality and unemployment  
OECD, 2016



Policies for managing technological change

**Education**

- Complementary skills
- Quality of jobs in the service sector
- Enhancing expertise, training...

**Employment**

- Removing barriers job creation, investment and corporate growth
- Effective active passive polices
- Modernizing labor regulations

**Fairness**

- Education and employment policies
- Reducing transition costs: ensuring equal opportunities and then insurance in adverse individual situation later on
- The challenge has not changed: to distribute wealth and not curbing it

# Long-term drivers in a troublesome world



**High uncertainty about the future**

change in the rules of the game

anxiety



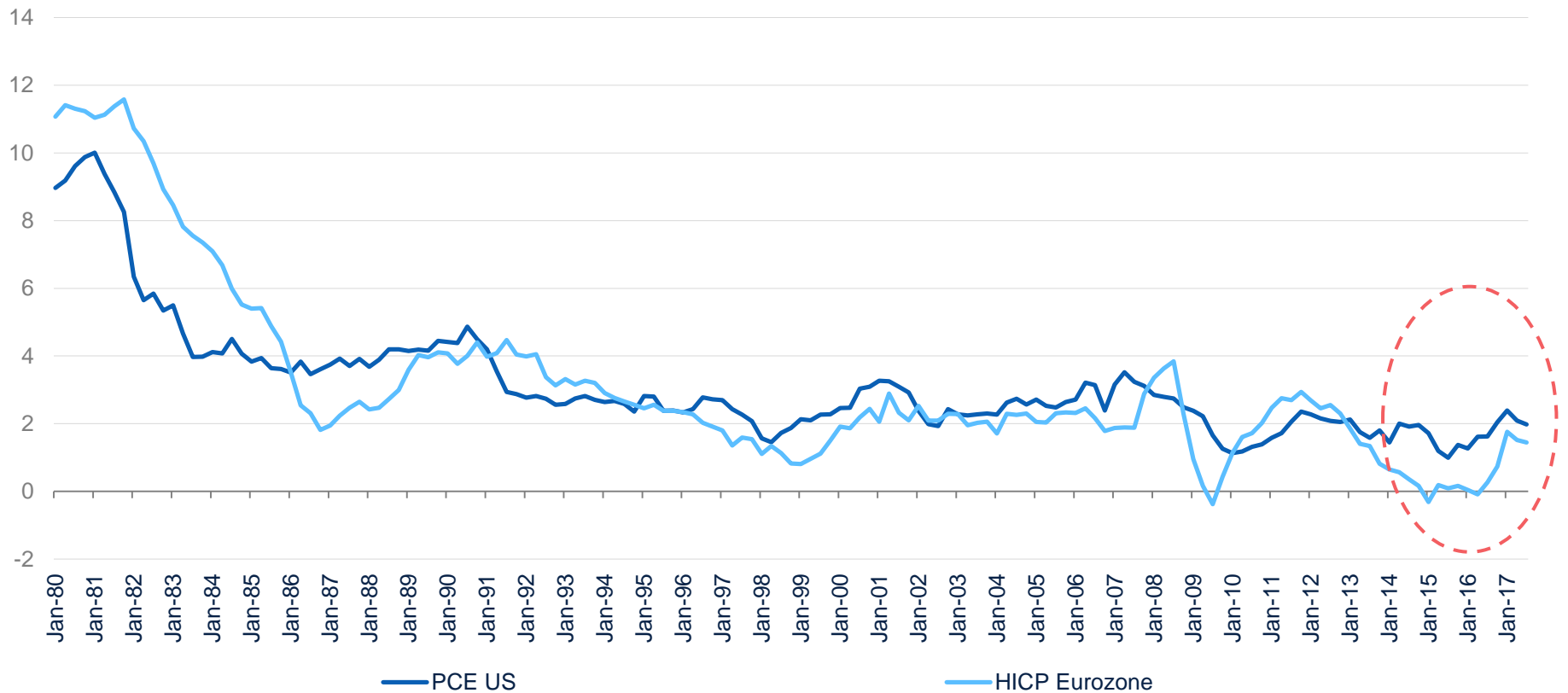
# Alternative theories of low growth, with different policy recommendations

|                | Why?                       | What to do?                              |
|----------------|----------------------------|--|
| <b>Rogoff</b>  | Leverage                   | Wait and bring leverage down             |
| <b>Summers</b> | Secular stagnation         | Stimulate domestic demand and investment |
| <b>Gordon</b>  | No productivity and invest | Accept & Educate                         |

# Inflation not yet consolidating its return to targets, showing a long term trend (globalization, digitalization)

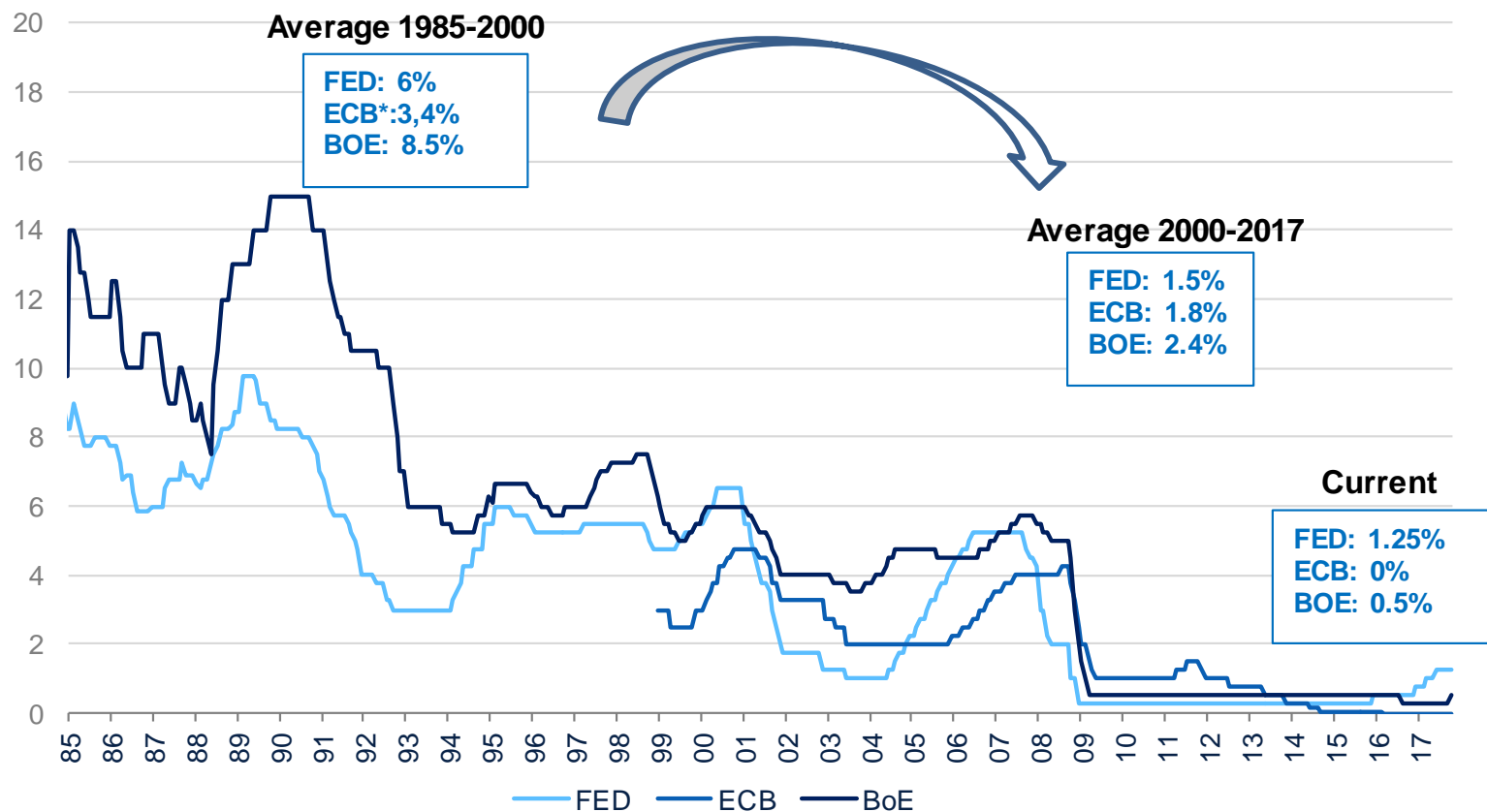
## Inflation in the US and Europe

(y/y %)



# Policy interest rates on a downward trend since the mid-1980s

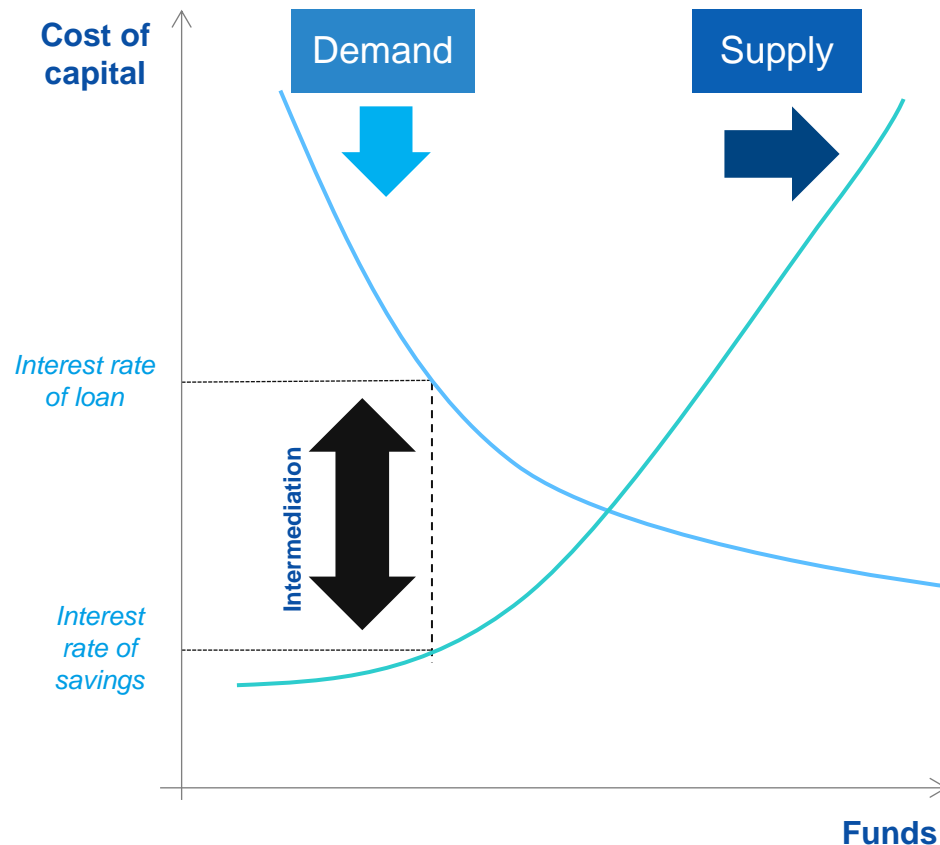
## Main reference rates of developed central banks (%)



\*ECB average since 1998  
Source: BBVA Research, Bloomberg

# Multiple factors behind a low rates environment, mostly structural (except deleveraging, which is clearly cyclical)

## Credit market: volumes vs prices



## Factors

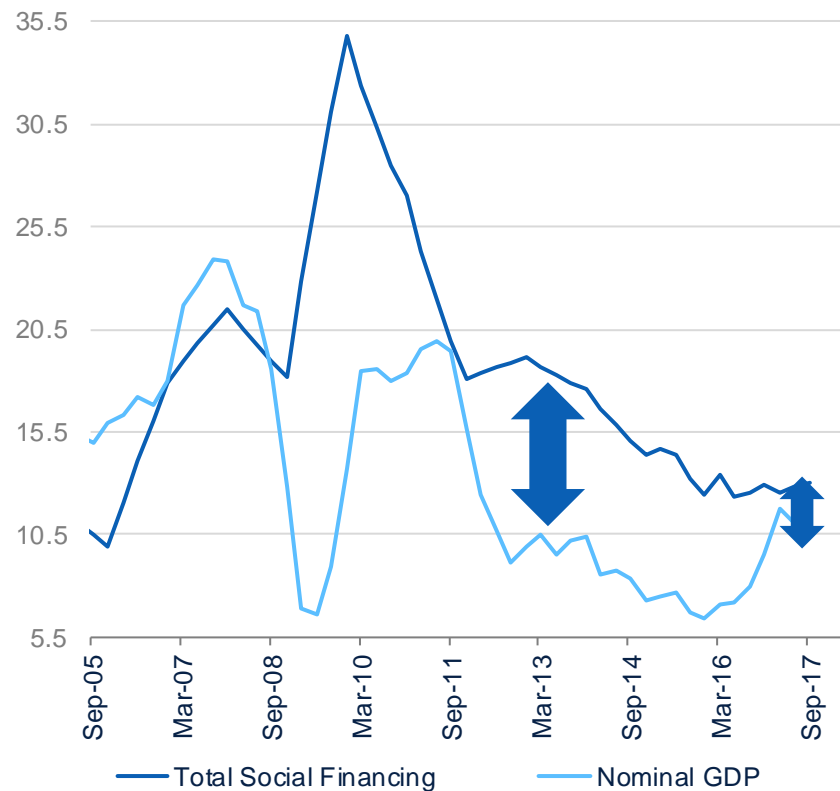
- EM savings
- Ageing baby boomers
- Monetary policy
- Higher risk aversion
- More inequality

- Lower productivity
- Price of capital goods
- **Deleveraging**
- Demands of profitability

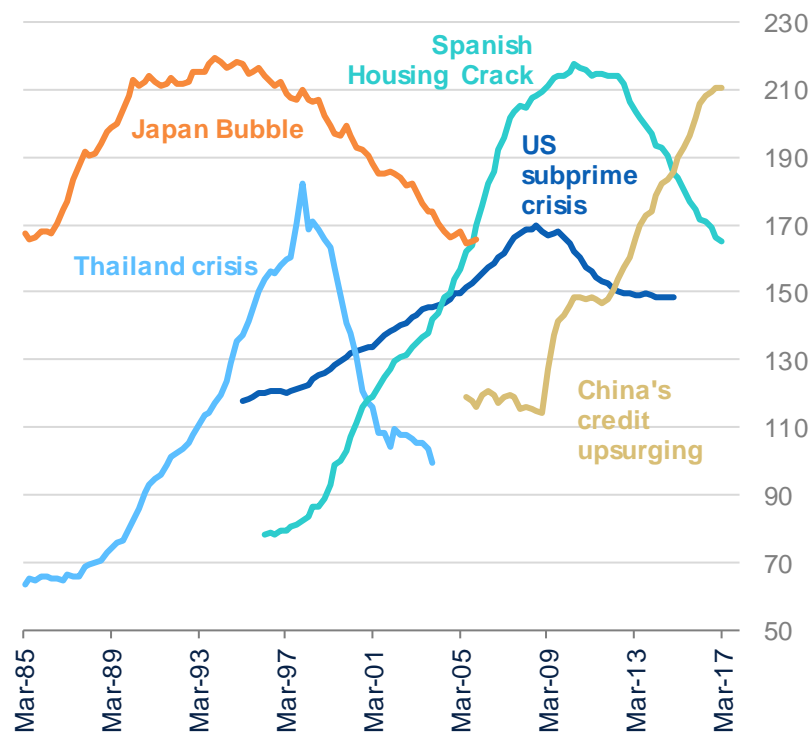
- Regulatory issues (banks, insurance and pension funds)
- Scarcity of safe assets

# China: the gap between the flow of new credit and GDP growth is diminishing, but the accumulated disequilibrium remains huge

**China: nominal GDP and new flow of credit to the real economy (YoY change)**

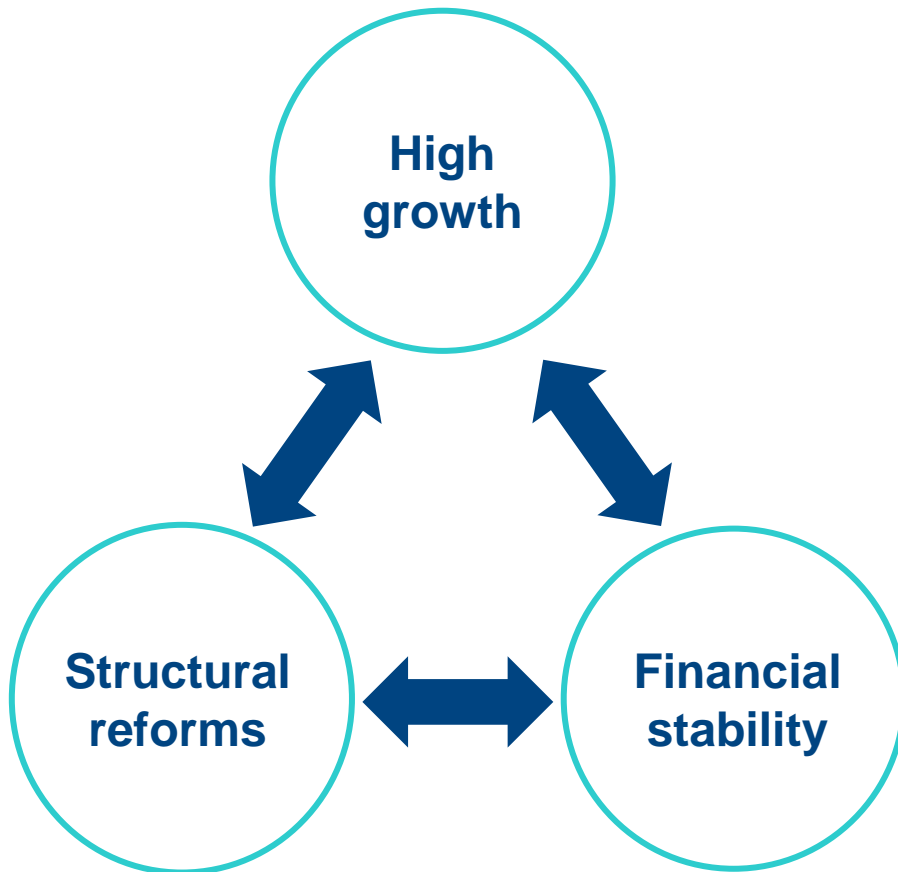


**Non-financial private debt (% GDP)**



# China: Congress seems to be shifting from pursuing “high speed” to “high quality” growth, while keeping the compromise with reforms

## China's trilemma



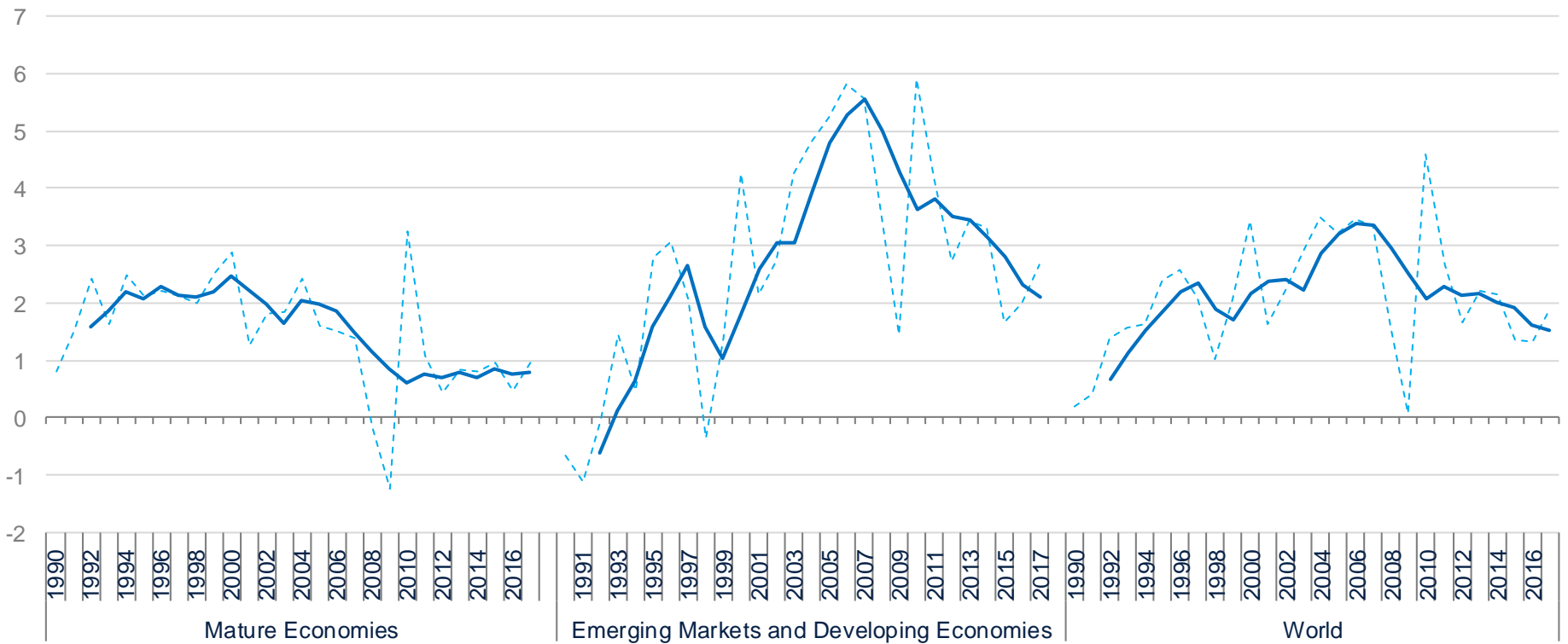
## Party Congress outcome

- ◆ The **growth target** has been **downplayed**
- ◆ Shift from **pursuing high speed** to **pursuing high quality growth** from 2020.  
Other targets:
  - low unemployment
  - more equitable income distribution
  - less environmental costs
- ◆ Leadership renewed commitment with reform plan, but doubts on implementation persist:
  - Dealing with multiple targets
  - Temptation to return to stimulus
  - How to control local authorities

# Lower population growth has been long expected, but the decline in productivity growth has been a big unpleasant surprise

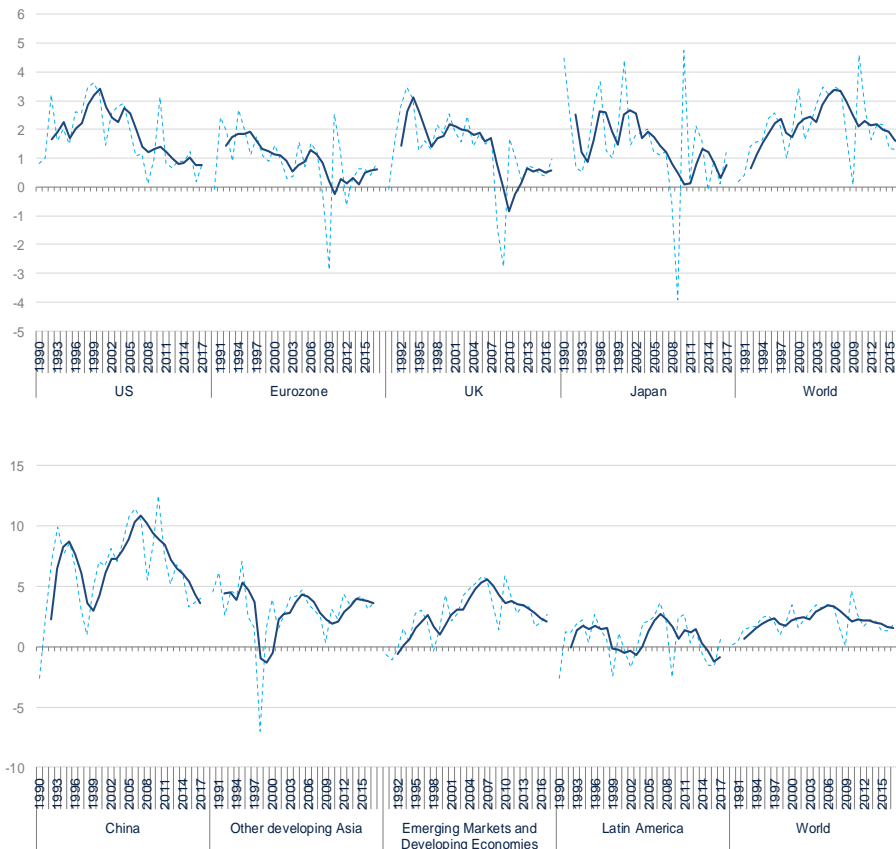
## Growth of labour productivity per person employed

(solid line in percentage change; dot line is the 3-year moving average)



# Productivity growth has diminished over the past decades

**Growth of labour productivity per person employed**  
(solid line in percentage change; dot line is the 3-year moving average)



- ◆ Real or measurement problem?
- ◆ If real (at least part it is for sure!):
  - Decreasing returns to scale
  - Switch to a service economy?
  - Lack of investment during the crisis, and because deleveraging, or due to the new business models?
  - Delay in the adoption of technological breaks?
  - Frontier firms? Winner takes all?
- ◆ Can we forecast productivity?



# Long-term drivers in a troublesome world

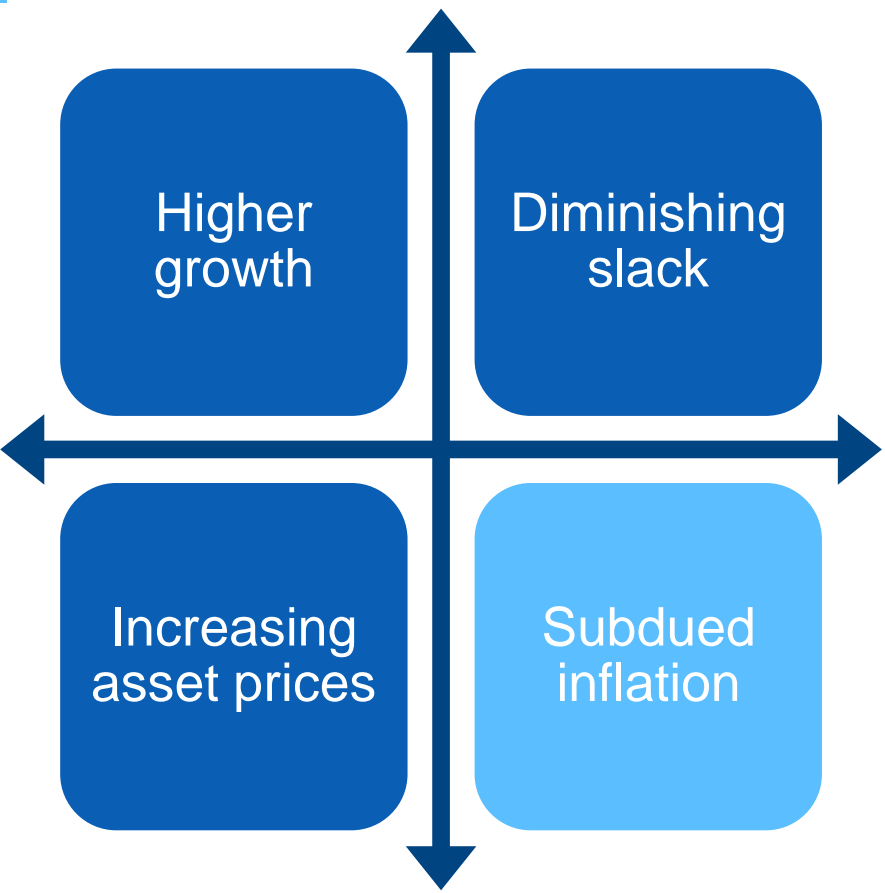


low inflation, interest rates

low productivity

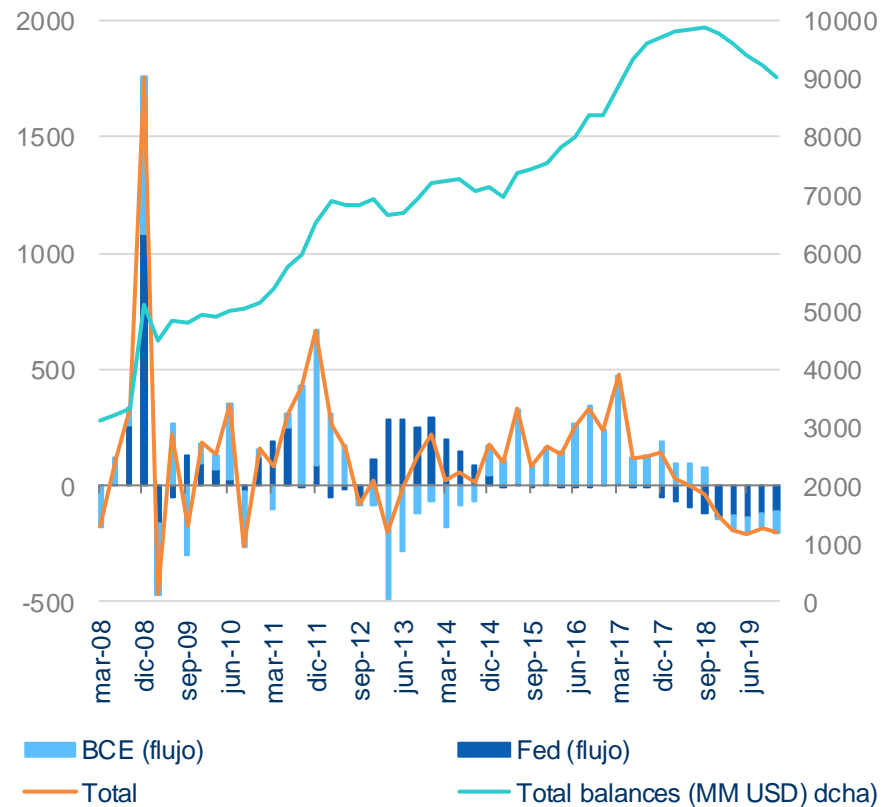
**high debt**

# Challenges for central banks in developed countries (the only game in town!): in the short run



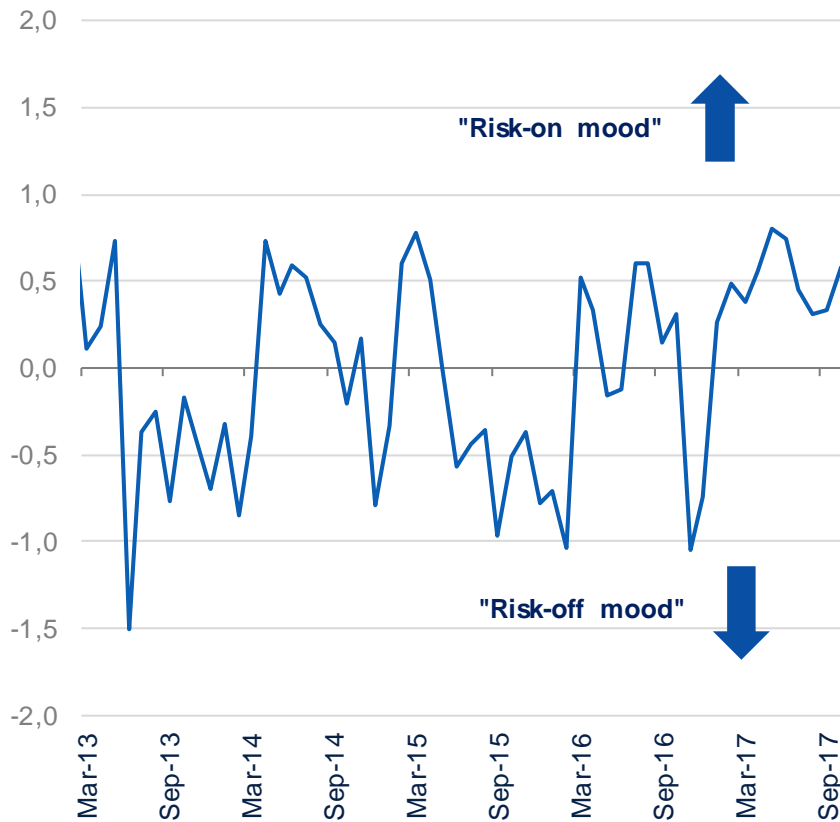
## Fed and ECB balance sheets

(level and quarterly changes, Total balance in stock, USDbn)



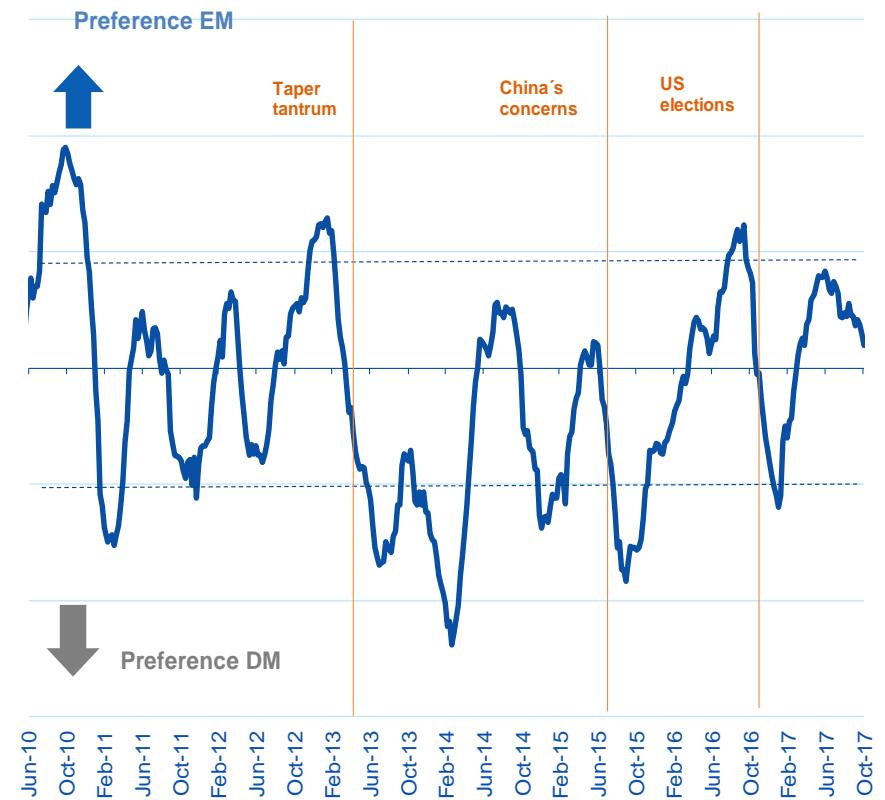
# The risk-on mood of global investors persists despite the monetary policy normalization

## Investment mood index



## BBVA Regional reallocation indicator

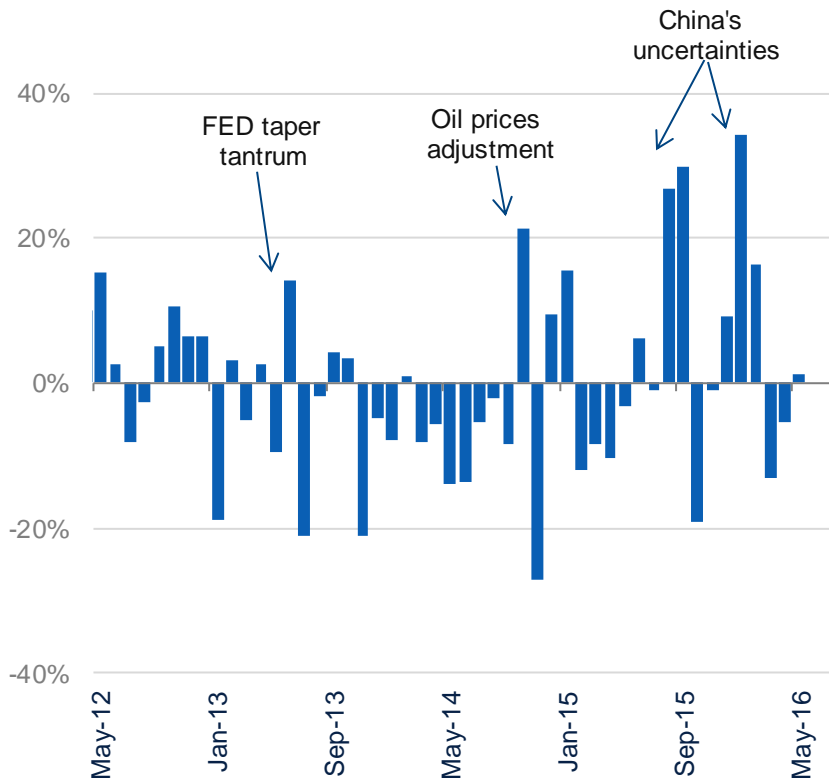
(Based on differences of standard deviations of investment flows)



# In the “new normal” large uncertainty shocks have become more frequent but less persistent (thanks to policies most likely)...

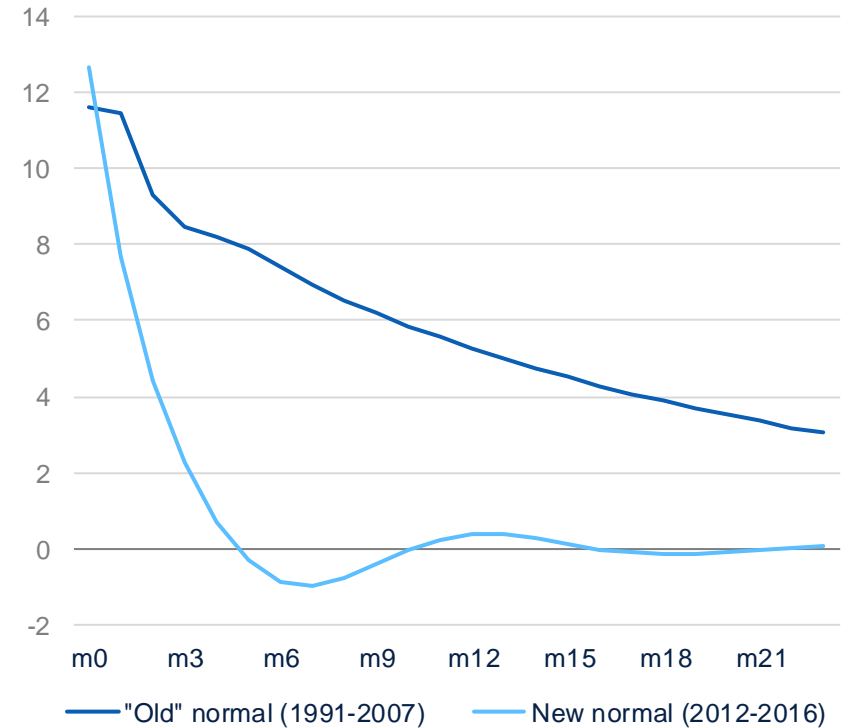
## Uncertainty shocks

(% of VIX variation, immediate change in VIX)



## Reaction of the VIX to a shock that increases uncertainty

(%) (Horizontal axis: months)



It is estimated a vector autoregressive model between VIX and World GDP growth, % Q/Q on a monthly basis. See details in the [BBVA Research GEO 2Q16](#)

## Challenges for central banks: in the medium to long run



Lower neutral interest rates

Limits of monetary policy

- ◆ The **decline in real interest rates** started long before the financial crisis, mainly due to **structural factors**
- ◆ They are **not expected to rise to pre-crisis level** (ie. in the US: 2.75% vs 5%)
- ◆ There would be **less scope** than in the past **for interest rate reduction** (or even for QE)
- ◆ **Other “policies”** should play a **major role**

# Challenges for macro-policy after the crisis: beyond monetary policy

## Monetary policy

- Costly at zero-lower bound
- Policy rate no longer sufficient as markets are segmented
- Financial stabilization role?
- **New targets? (higher inflation, price level, nominal GDP)**

## Fiscal policy

- **Importance as stabilization tool, at ZLB**
- Low interest rates provide fiscal space
- New debt dynamics as  $r < g$
- Need of infrastructure investment, low during the crisis

## Macroprudential policy

- **Closer link of financial regulation and macro developments**
- Financial crisis are non-linear, need to be prevented
- Pre-crisis, there was only role for micro-prudential
- How to reduce the likelihood of too much risk taking?

## Conclusions

- ◆ The economy continues to recover and now growth is more synchronized, for the first time in many years
- ◆ But the crisis has left many scars (protectionism, populism) which are joined to secular trends that pose new long-term problems (low productivity growth, increasing geopolitical risks)
- ◆ The new technological revolution is the one positive trend for the long-term, but in the short term it also poses risks
- ◆ These long-term challenges are behind local uncertainties in many areas: nationalism, trade disputes, political events having a major role on the economy
- ◆ New problems require new and old instruments (including trade cooperation, new macroeconomic framework, more integration in Europe)

# Crossroads, trends and challenges in an uncertain world

Jorge Sicilia, BBVA Research

XVI Jornada Anual del Club de Gestión de Riesgos

November 2017



# Annex

# The future of Europe lies in building confidence and moving towards more integration

## After Brexit...

- After the crisis, Brexit and the 2017 electoral cycle **Europe needs to relaunch the integration process**
- White paper on EU's future, after Five presidents report

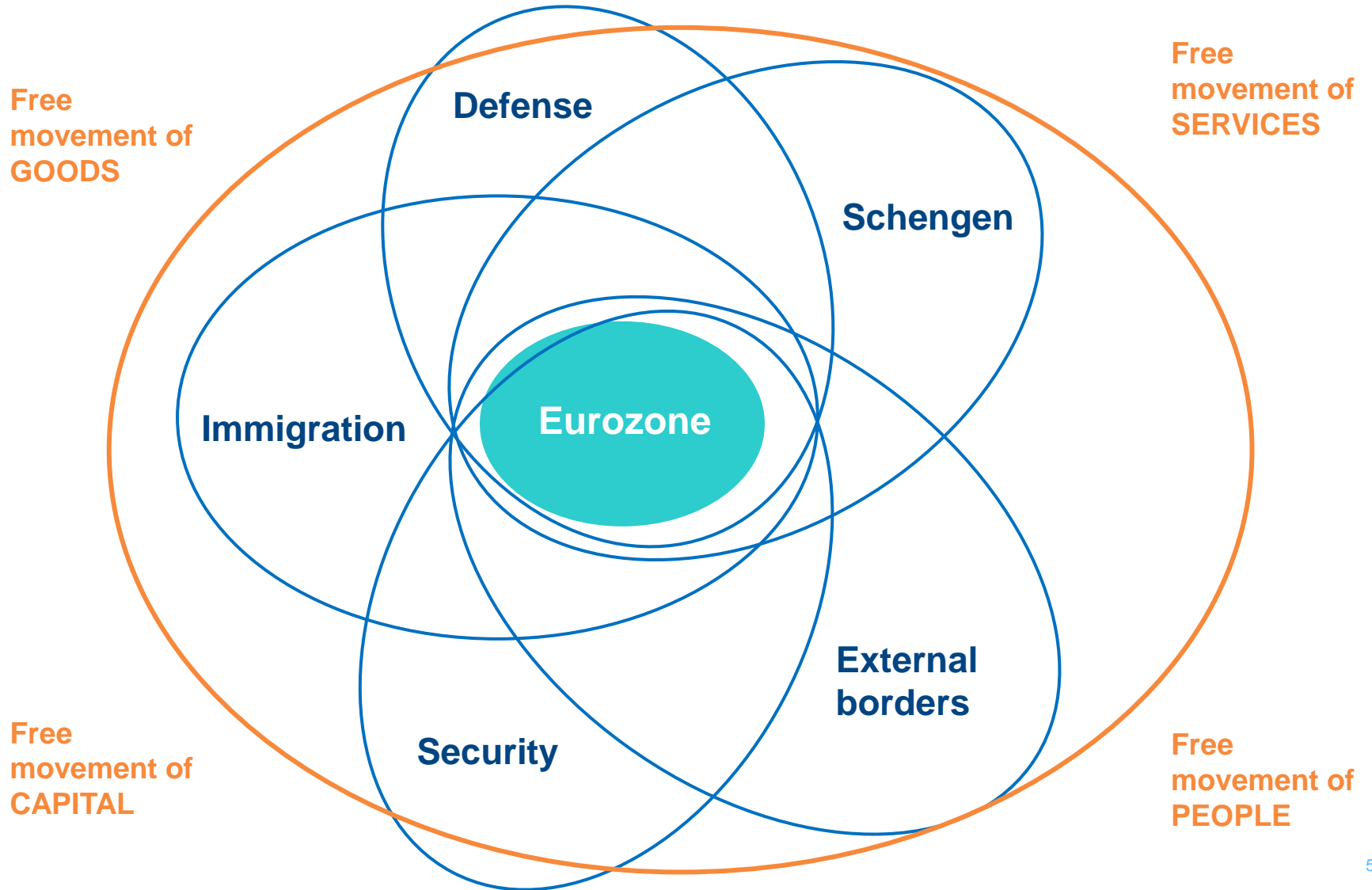
## EU-27

- Broad consensus to pursue further **integration on security, defense and immigration issues**
- Economic integration at EU-27 is not a priority

## Eurozone

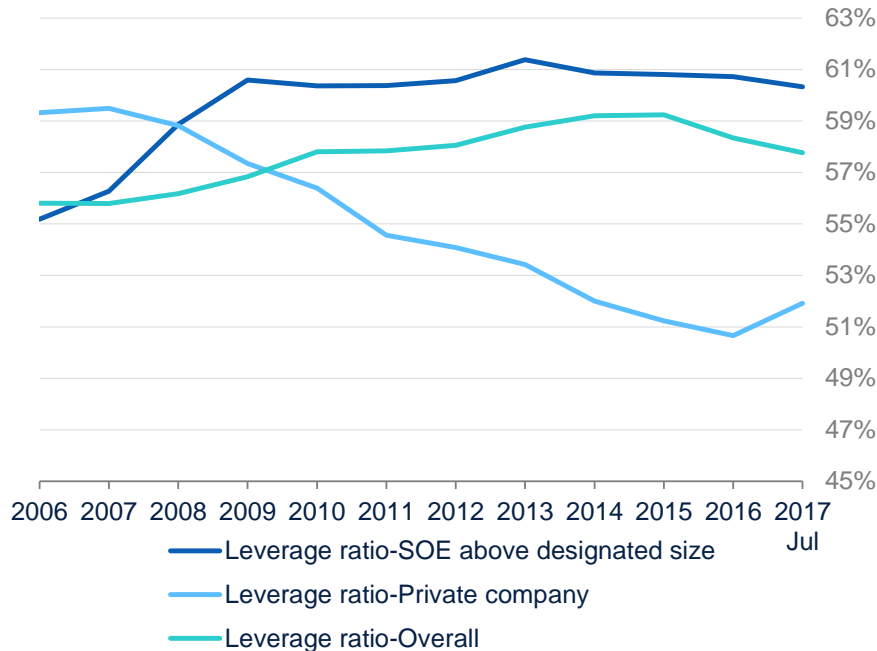
- **Completing EMU with:**
  - Full banking union
  - Fiscal union
- Gradual process: in the short and medium term, **confidence has to be rebuilt**

# A variable geometry / multispeed EU-27 within the single market



# China: Corporate sector leverage still very high but with recent signs of stabilization

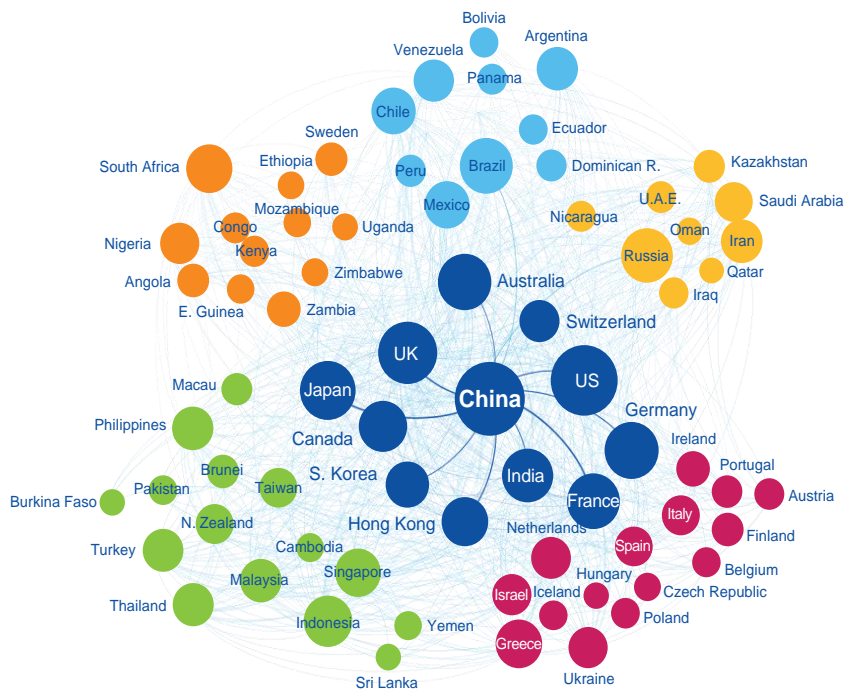
China: leverage of non-financial corporates (total liabilities on total assets)



- ◆ Early signs of improvement in the indebtedness of SOEs
- ◆ **Non-SOEs** have been through some **moderated adjustments**: holding up investments, reducing dividend payment, shedding jobs
- ◆ **SOEs leverage very high due to soft-budget problem**, which leads zombie companies to continue borrowing thanks to the implicit guarantee from the State

# Spill Over effects of China’s slowdown..

## Chinese slowdown: media perception and country network



- Financial & Trade lines impaired (Main trade partners)
- Impact on commodity Exporters from Latam
- Conversation on Oil demand
- Activity Impact in Europe
- Activity Impact in EM Asia
- Impact on commodity Exporters from Africa

