

BBVA

RESEARCH

Tracking **geopolitical & social events** with

Big Data at

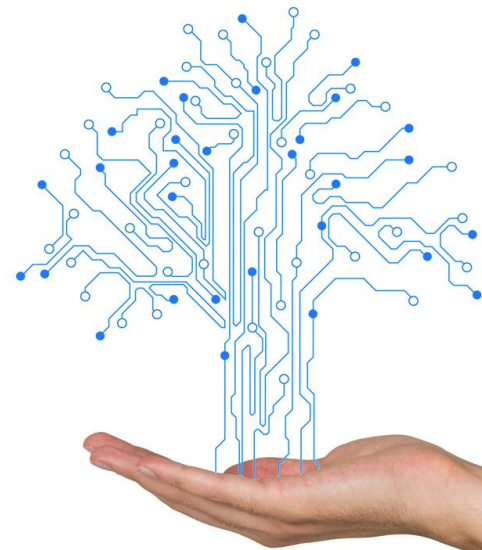
BBVA Research

DEIA Encuentros Digitales. Bilbao

Tomasa Rodrigo

Cross- Country emerging markets unit

September 2015



What is Big Data?

Velocity

Volume

Variety

Why it is important?

Big data is key to research

Geopolitical Analysis

GDELT + SQL + R + our analysis

Business Analysis

BBVA databases + our analysis

Sectorial Analysis

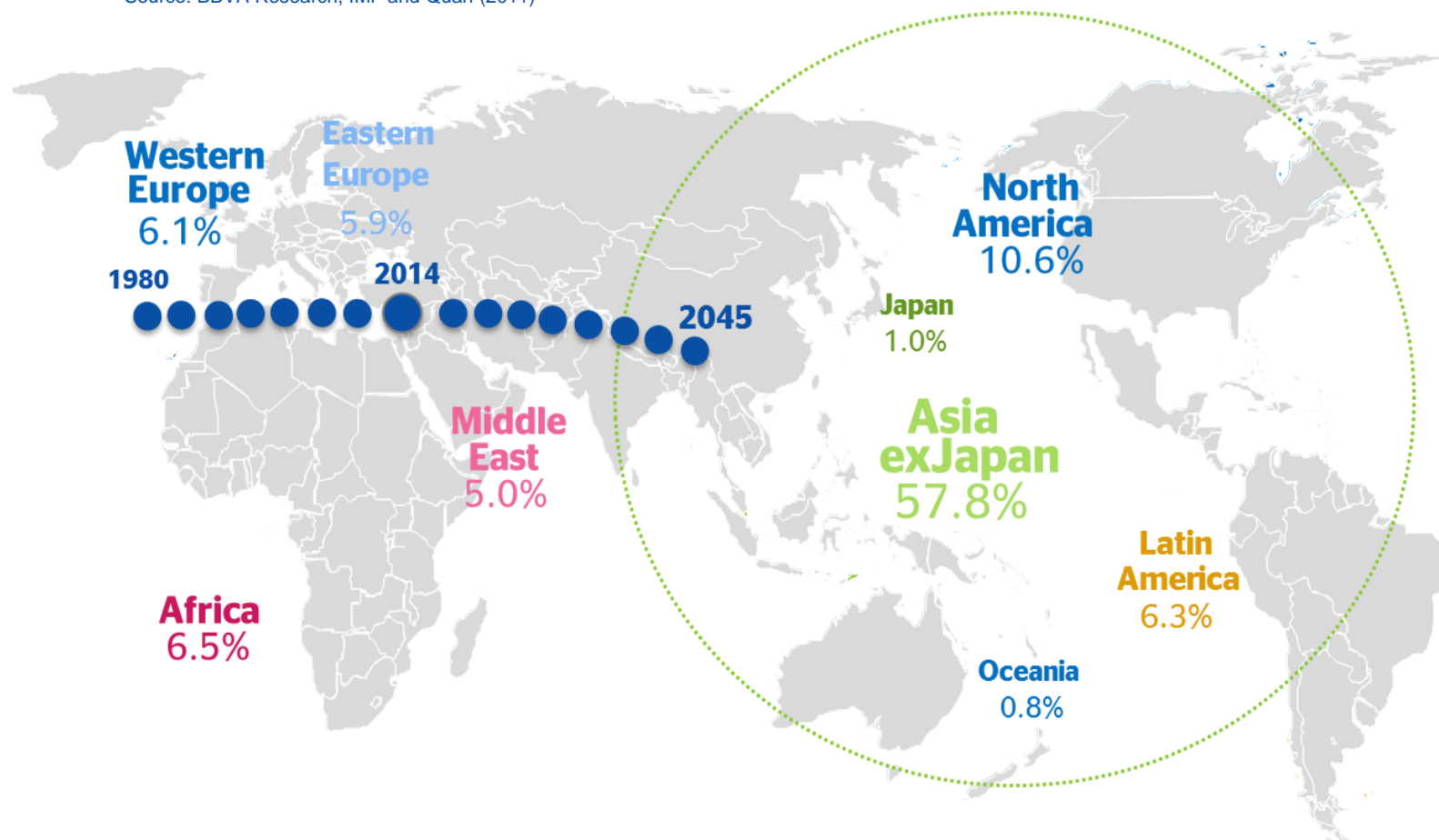
Google searches + our analysis

A changing geopolitical landscape: from politics to geopolitics

The global economy's centre of gravity is moving to the East

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

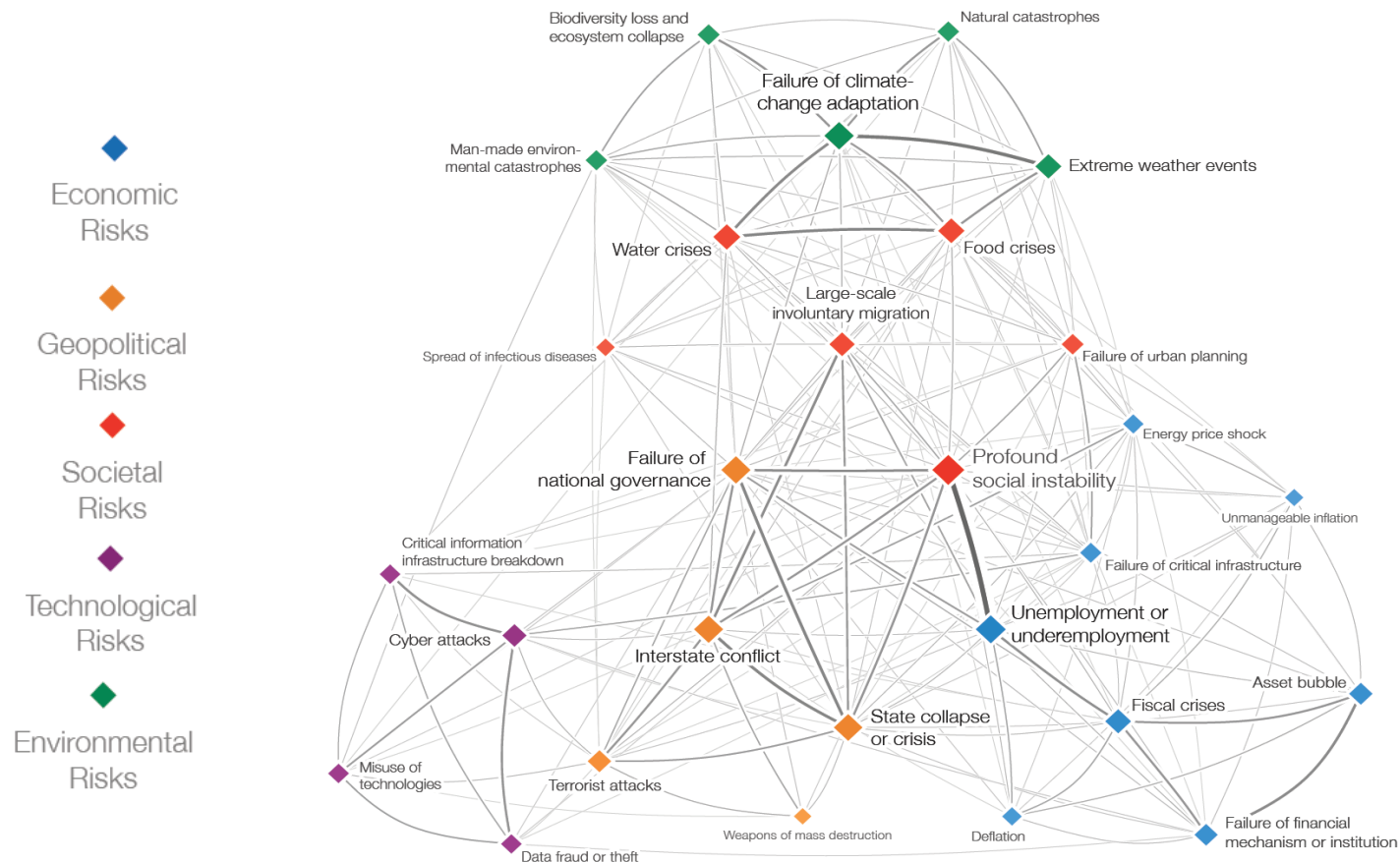
Source: BBVA Research, IMF and Quah (2011)



Why is geostrategic analysis so important?

Geopolitical risks are highly interconnected

Source: The Global Risk Report, WEO 2014



GDELT database: definition and examples

GDELT

geo-referenced events from 1979-today

Language

CAMEO, World Bank's taxonomy

Algorithm

Dyadic Relations, Tabari, Petracht

Software

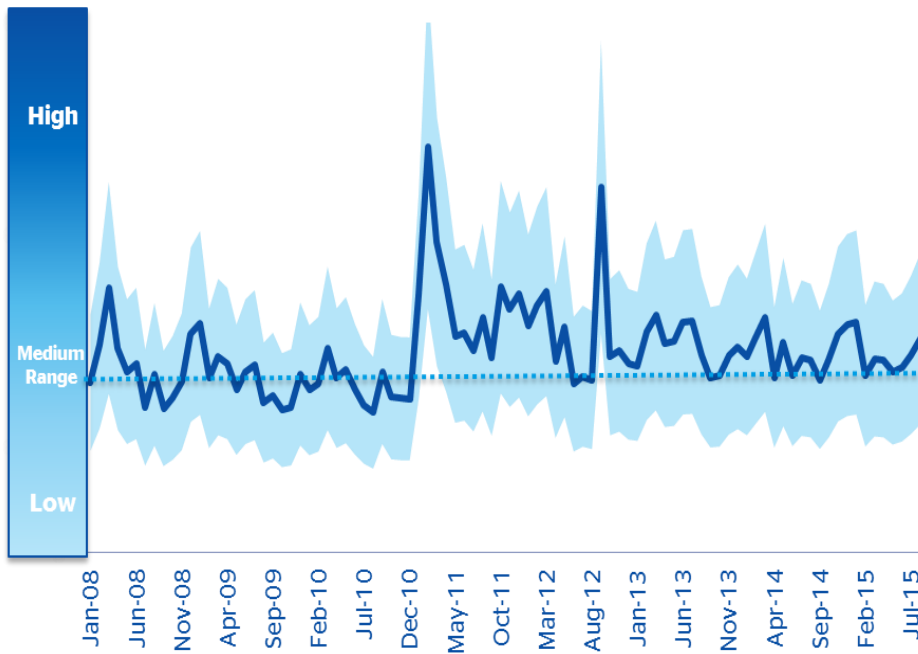
SQL, BigQuery, R, Python

The global awakening will introduce new challenges

World Protest Intensity Index 1980 - 2015

(Number of protests in the world/ Total events in the world)

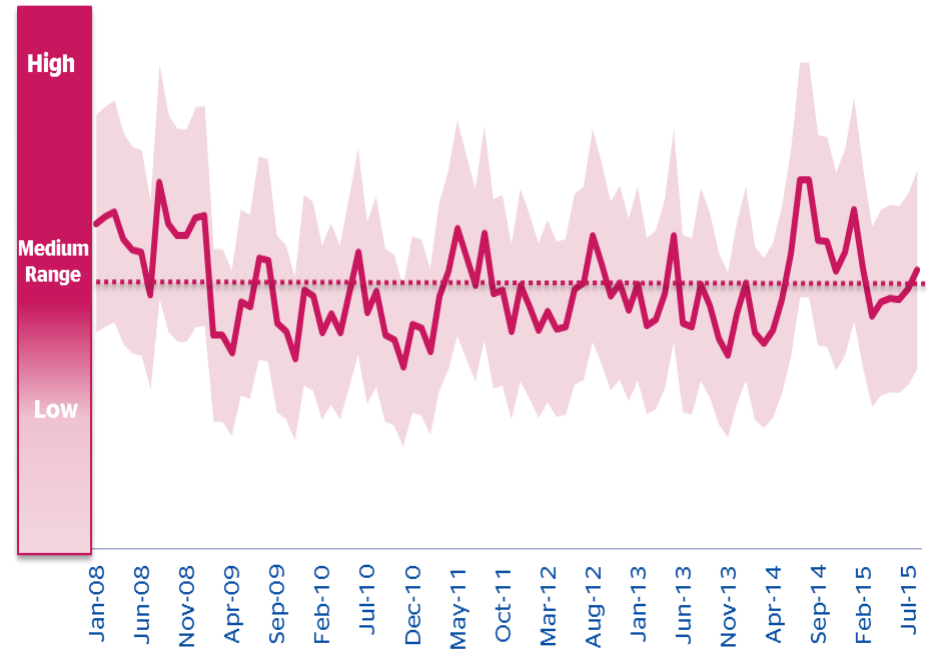
Source: www.gdelt.org & BBVA Research



World Conflict Intensity Index 1980 - 2015

(Number of conflicts in the world/ Total events in the world)

Source: www.gdelt.org & BBVA Research

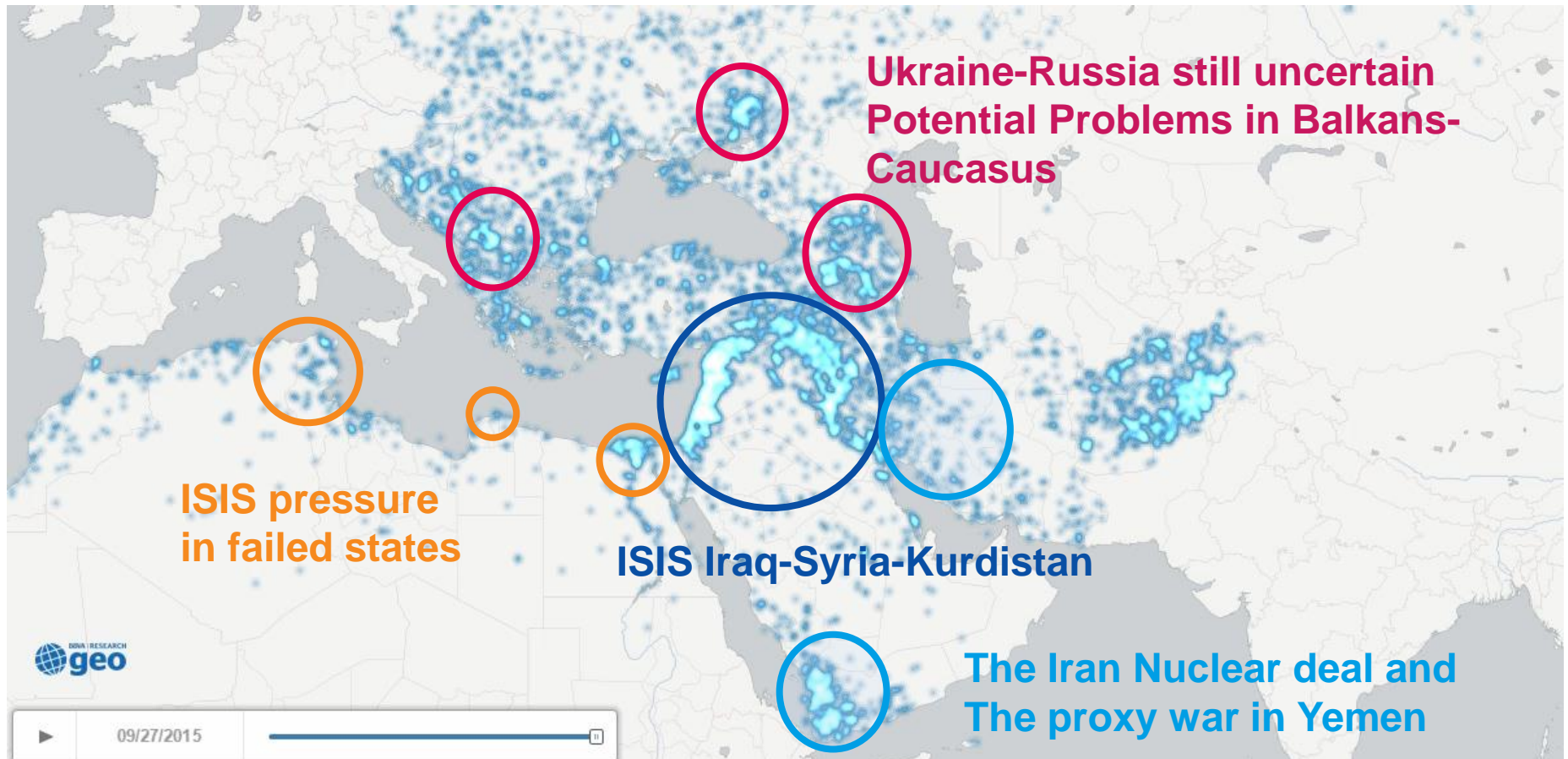


A problematic framework: Europe's ring of fire

BBVA Conflict Heatmap (4Q14 to Sep-15)

(Number of conflicts / Total events)

Source: www.gdelt.org & BBVA Research

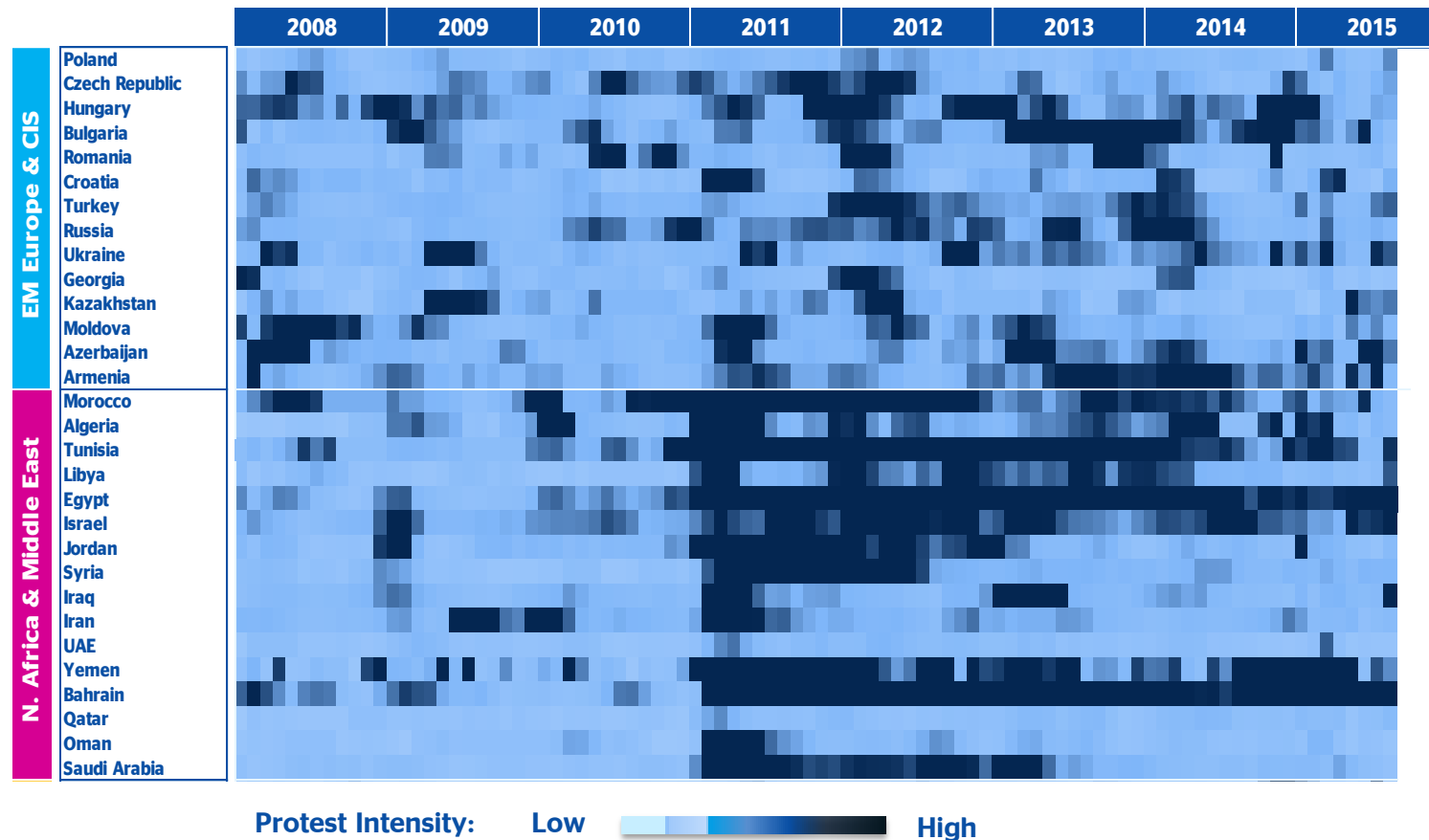


Protest Intensity Map

BBVA Research World Protest Intensity Map Jan 2011 – Sep 2015

(Number of protests / Total events. Dark Blue: High Intensity)

Source: www.gdelt.org & BBVA Research

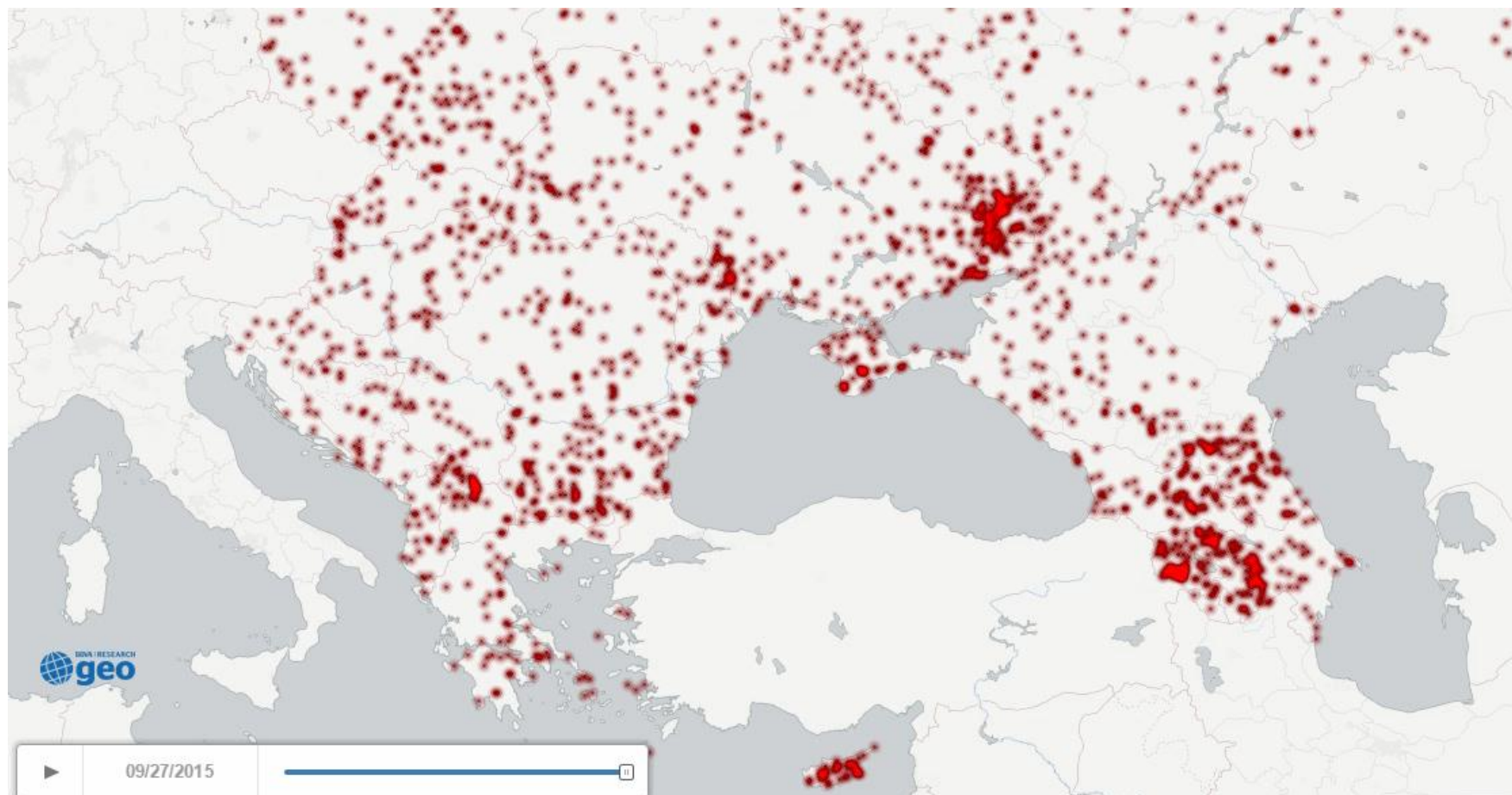


Ukraine-Russian Conflict: escalation with potential spill-overs to other countries

The situation in Ukraine and the Caucasus: Conflict Index (4Q14 to Sep 15)

(Cumulative Number of Conflicts)

Source: www.gdelt.org & BBVA Research



With second derivatives

Russian economic sanctions network

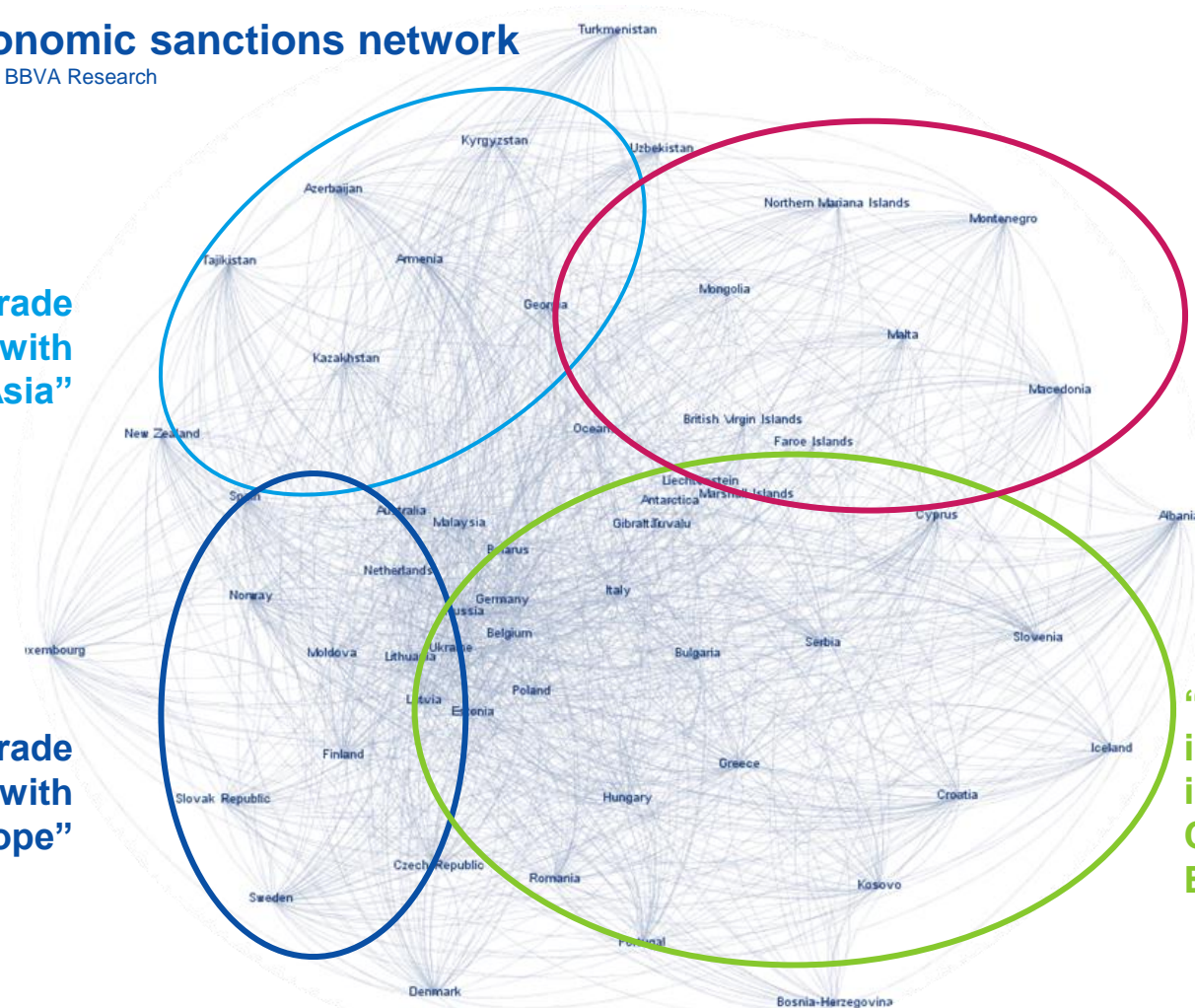
Source: www.gdelt.org & BBVA Research

“Trade Implications with Central Asia”

“Trade Implications with Eastern Europe”

“Financial Relation to off-shores interrupted”

“Investment interests impinged in Central Europe”

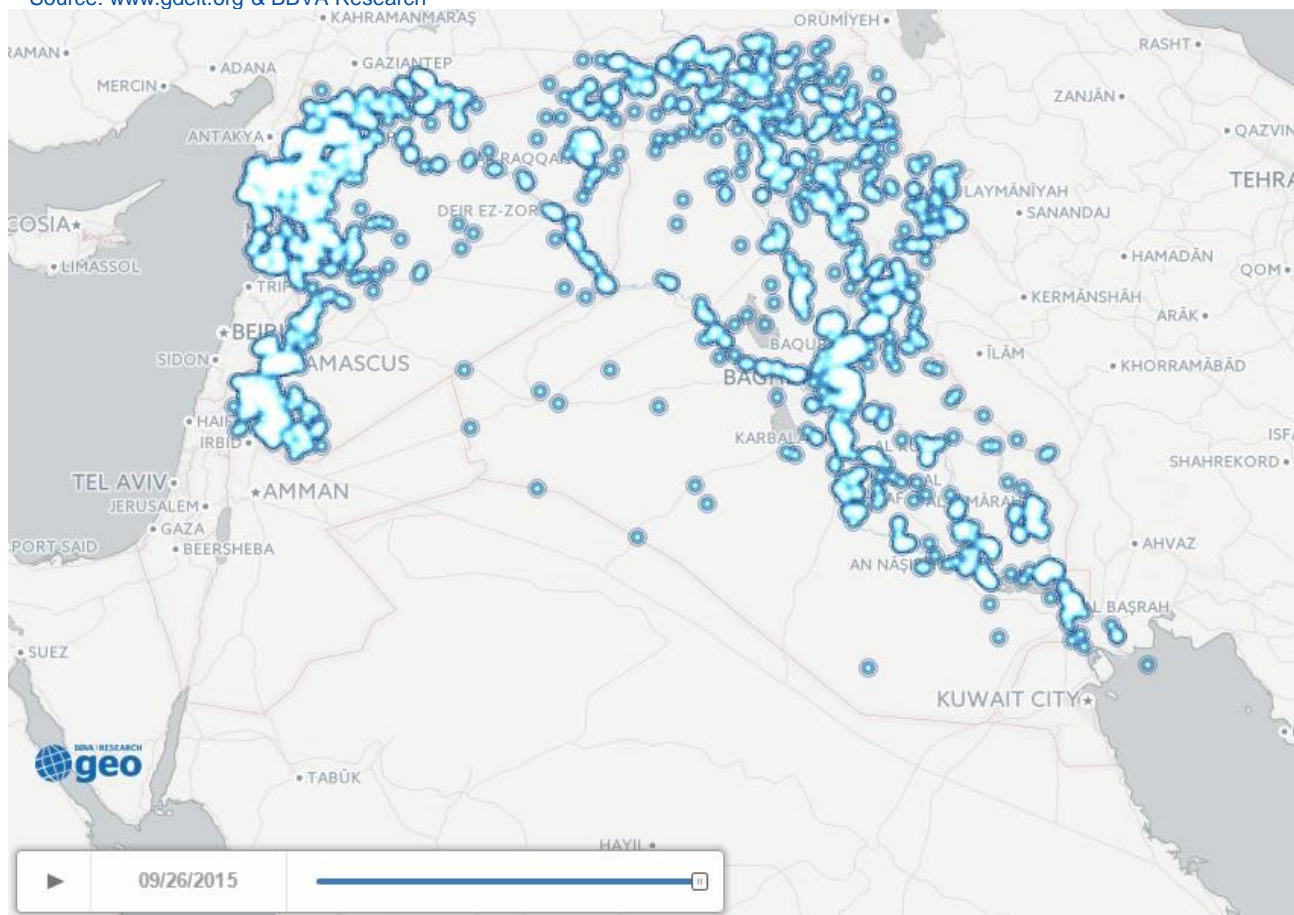


The South: uncertain dynamics with multiple players

The situation of ISIS in Syria & Iraq (4Q14 to Sep-15)

(Accumulated conflicts from ISIS)

Source: www.gdelt.org & BBVA Research

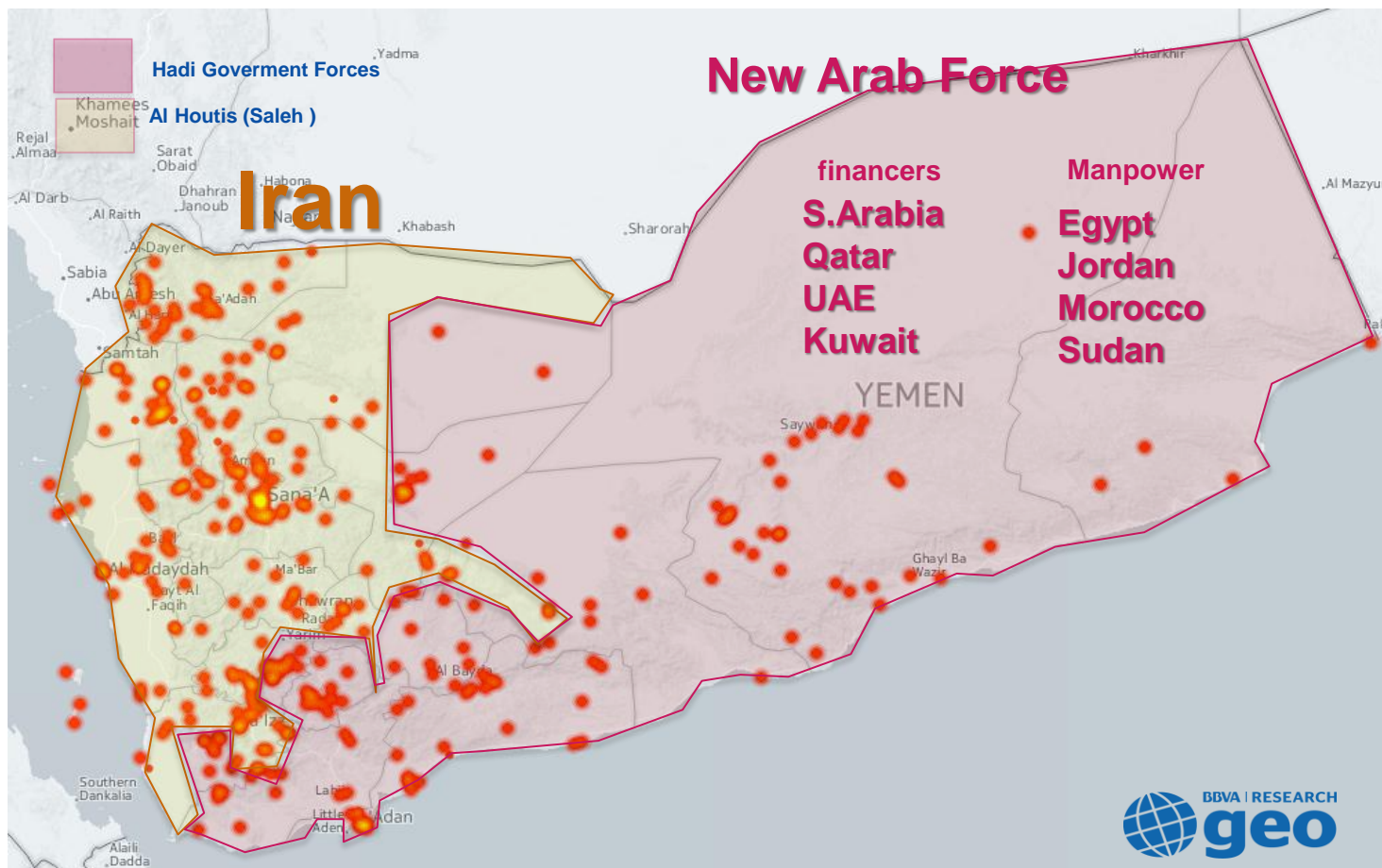


Yemen: a new scenario for a proxy war

Conflict activity in Yemen (Jan 14 - Sep15)

(Cumulative Number of Conflicts)

Source: www.gdelt.org & BBVA Research

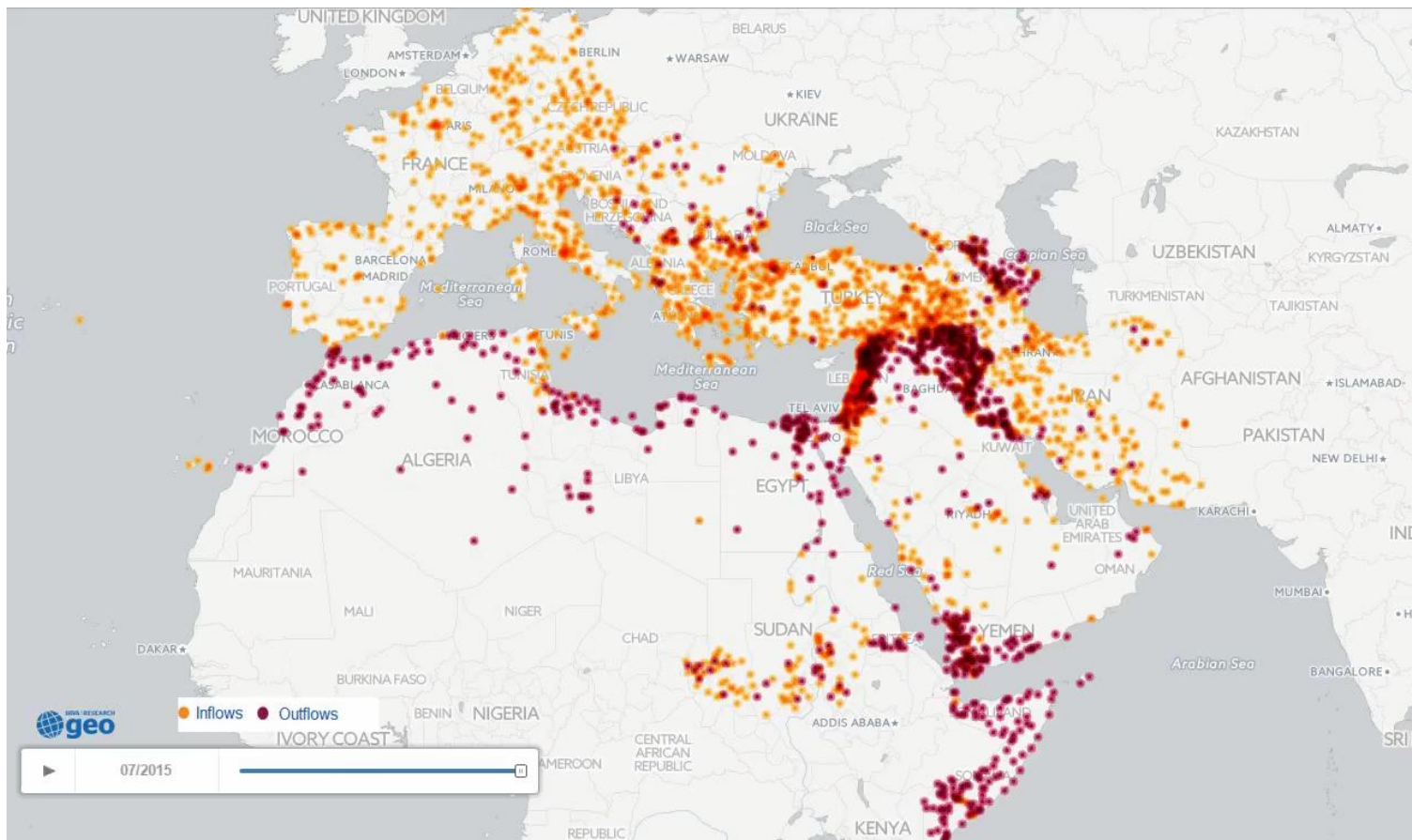


...security problems in Europe as ISIS will increase pressure in failed states

BBVA Research Refugees Flows Map (Jan 14 to Sep 15)

(Number of media citations about refugees' inflows and outflows)

Source: www.gdelt.org & BBVA Research

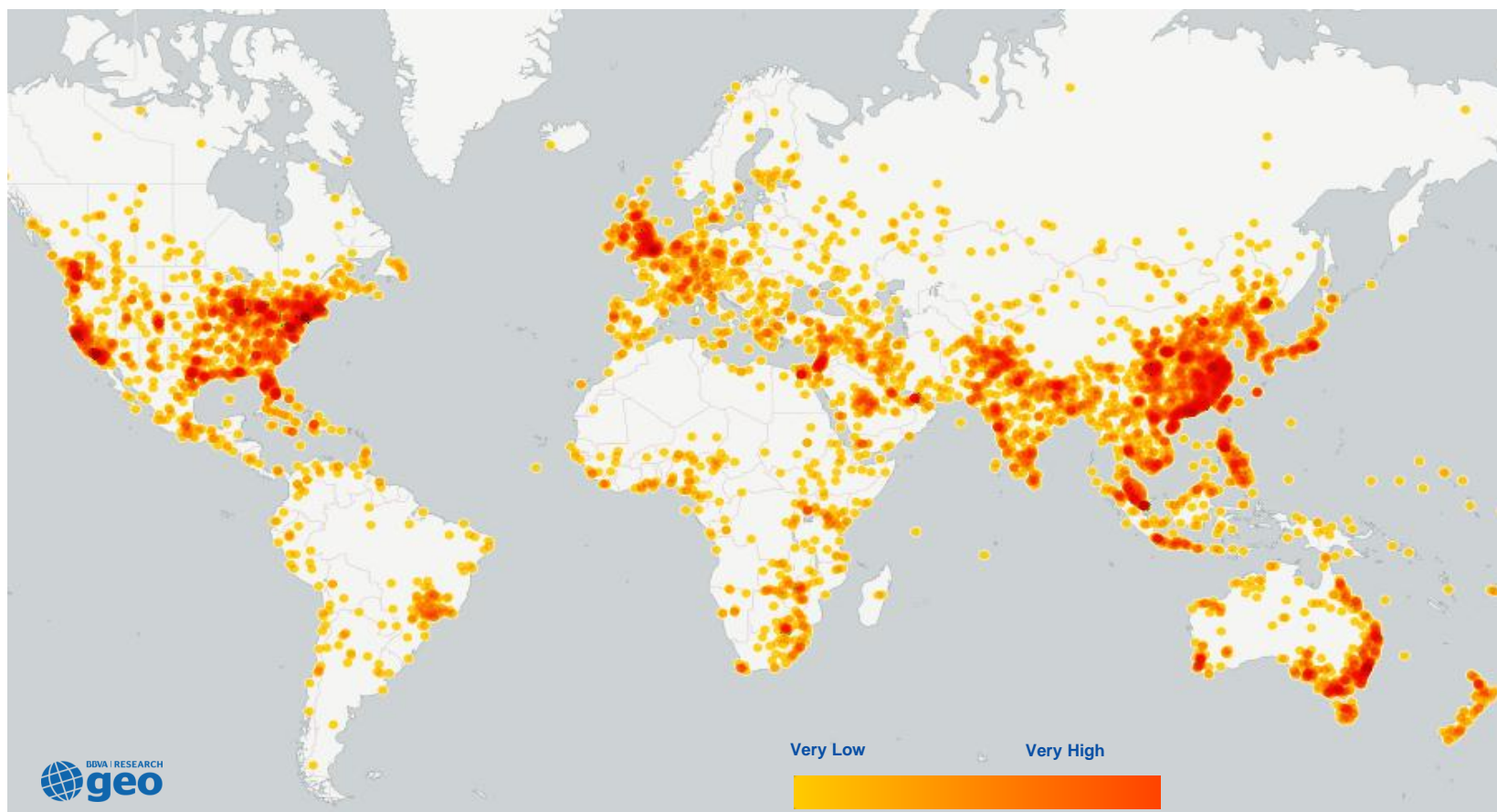


China: concerns and contagion

BBVA Research World sentiment about China's slowdown

(Media coverage about concerns of China's slowdown around the world)

Source: www.gdelt.org & BBVA Research

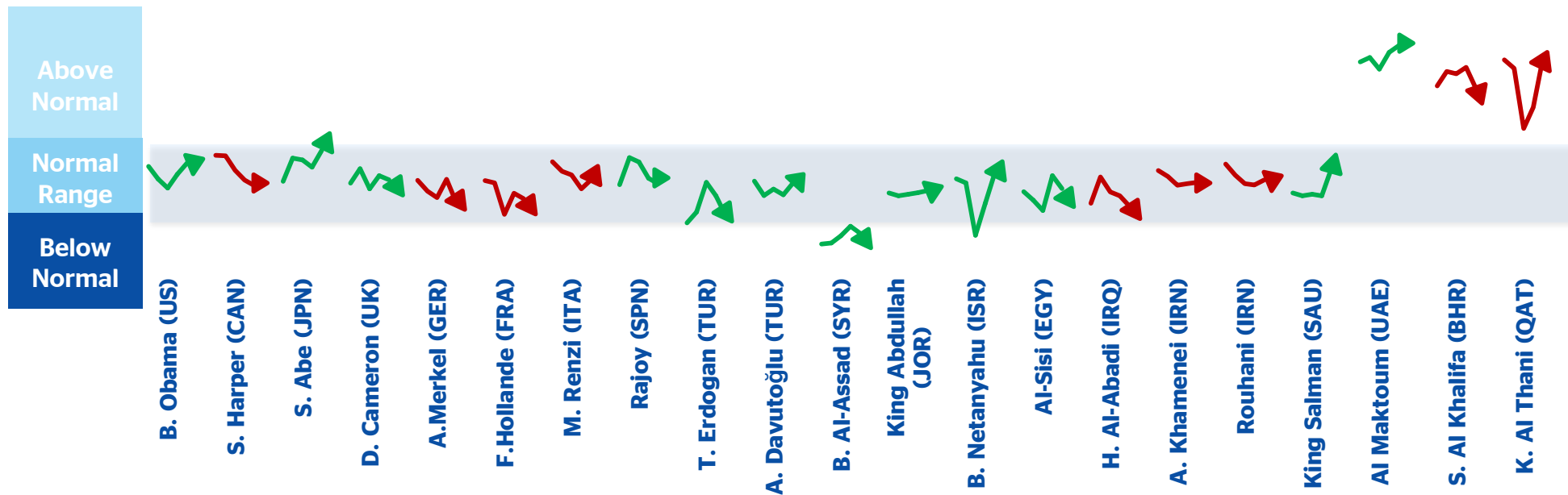


World leaders scorecard

World Leader Tone index (Evolution from Jun 2014 to Jul 2015)

(Evolution of the "Tone" of world leaders)

Source: www.gdelt.org & BBVA Research



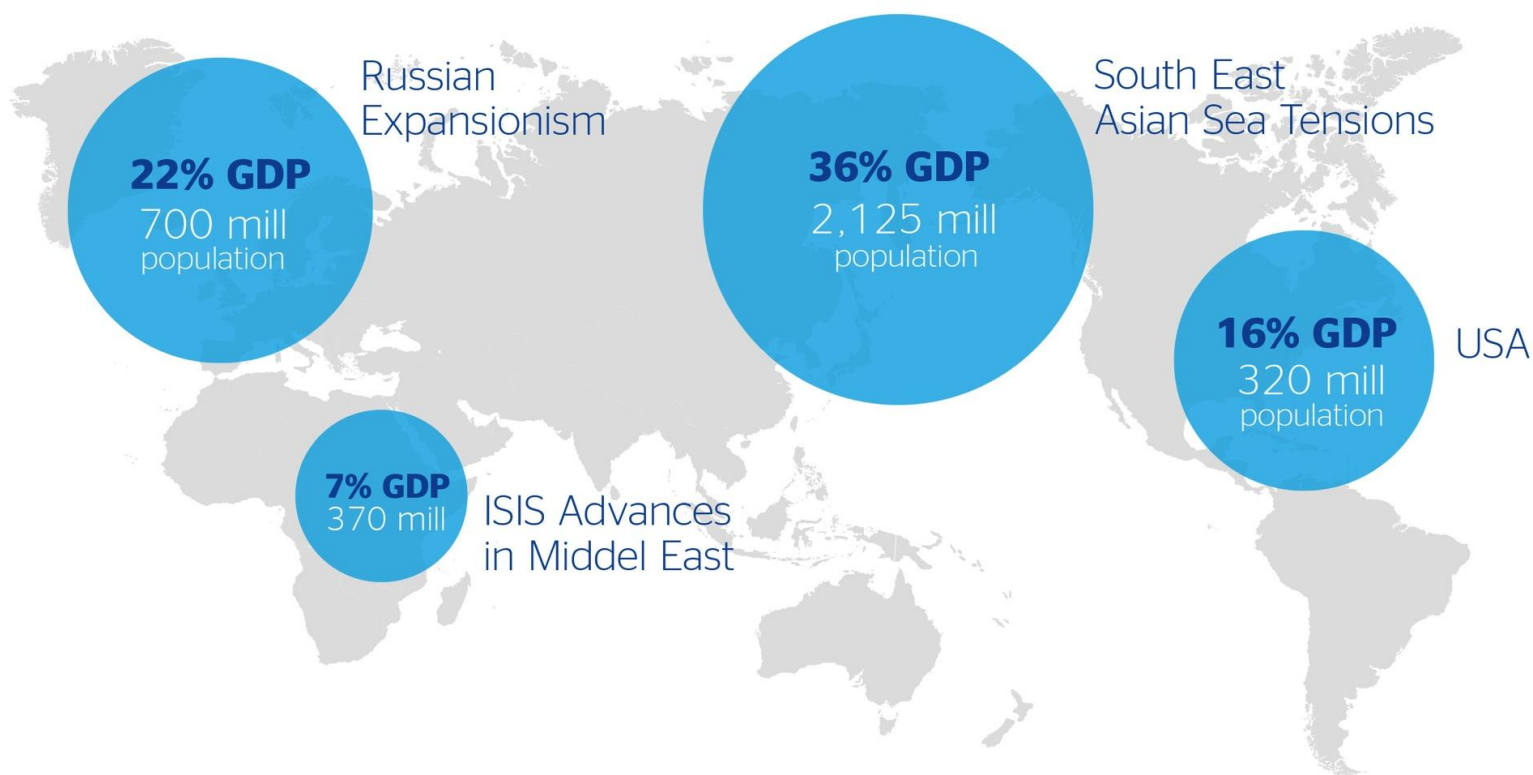
* We use the "tone" of the world's news media coverage of the leaders as a sort of popularity index that might give us insights into their respective futures . it's closer to an assessment of his strength as a leader. (higher numbers indicate more positive tone, while negative numbers indicate more negative tone).

Geostrategic scenarios potential impact

World conflicts: direct income and population

(% of PPP GDP and population)

Source: www.gdelt.org & BBVA Research



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BBVA Research geostrategic tools and products

✓ **Geo Strategic Reports** to quantify geopolitical trends and to analyse main hotspots:

- **Geo World Report** with monthly updates ([Geo-World: Conflict & Social Unrest May Update](#))

- **Geo Mena Report**

✓ **Global Hot topics** to track the current situation and main geopolitical events:

- **The Refugee Crisis: Challenges for Europe**

- **The Iran deal: a positive step in the centrifuge-oil balance**

✓ **Working papers** to model social unrest dynamics, social behaviour and state response in different regions:

- **An Empirical Assessment of Social Unrest Dynamics and State Response in Eurasian Countries**

- **An Empirical Assessment of Social Unrest Dynamics and State Response in MENA Countries** (in progress)

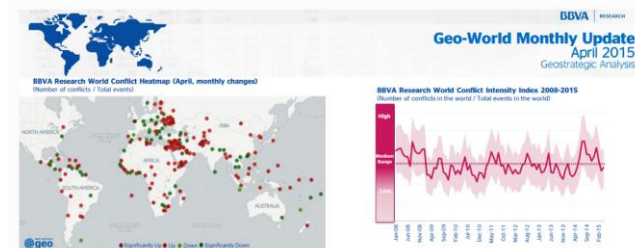
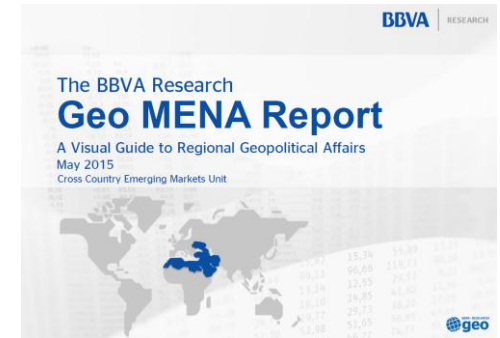
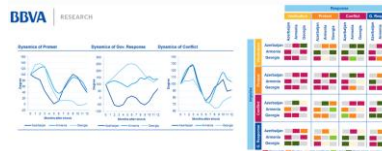
✓ **Confidential notes and reports**

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Working Paper, Nº 15/20
Madrid, June 2015

An Empirical Assessment of Social Unrest Dynamics and State Response In Eurasian Countries

Gonzalo de Cadenas-Santiago
Alicia García Herrero
Álvaro Ortiz Vidal-Ababá
Tomasa Rodríguez López



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Global Hot Topics
June, 26th 2015

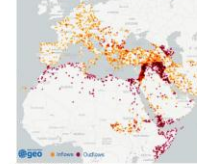
The Refugee Crisis: Challenges for Europe

Álvaro Ortiz and Tomasa Rodríguez, BBVA Cross Emerging Markets Unit

The Middle East and North Africa region are facing complex and multiple emergency situations that are posing important humanitarian challenges for Europe. The significant influx of refugees has introduced some security problems which could reshape migration European policies looking for a more coordinated response. Especially worrisome is the situation in Syria, which leads more than 3.5 millions of people to flee to neighboring countries (Turkey, Lebanon and Jordan) and to Europe.

BBVA Research Refugees Flows Map (Jan 14 to Jun 15)

(Number of media citations about refugee influx and outflow)



The migrant problems in the "South"

Europe is facing its most serious migration crisis since the end of the Second World War. The massive refugee influx from North Africa and the Middle East has greatly increased during last year, introducing complex challenges for Europe. There are several reasons why migrants through the Mediterranean Sea have increased dramatically. The post-Arab Spring social instability, human rights violation and security problems have increased notably the migrant flows from North Africa. The fall of some of the dictatorship (i.e. Libya, Tunisia), which was a backstop for Sub-Saharan African migrants, has disappeared, fostering the flow of migrants from these countries. The ISIS advance in Syria and Iraq and the recent proxy war in Yemen have triggered a massive flow of migrants to neighboring countries (Turkey, Lebanon, Jordan and Saudi Arabia), and from them to Europe. The conflict in the Caucasus is complicating further the security situation.

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The BBVA Research Geo World Report

A Visual Guide to Geopolitical Affairs

Cross Country Emerging Markets Unit



Thank you!