

February 2026  
(Data as December 2025)

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# Country Risk Report 2026

# Summary



## Sovereign ratings & spreads:

- **US geoeconomic** measures, reflecting an **increased** reliance on **trade barriers**, **sanctions**, and industrial policy as tools of strategic competition, together with **significant geopolitical** events over the year, have **driven** a **sharp increase** in **economic** policy **uncertainty** and **global risk-aversion** measures.
- **However, mostly positive rating cycle in Emerging Economies (EE), with a mixed direction in Advanced Economies (AE).** Changes have been clearly positive in Peripheral Europe, while other large AE such as the US and France have been downgraded. **Several EE Europe countries have seen upgrades**, while China's downgrade stands out as an important exception in EE.
- **Sovereign spreads have continued narrowing or remained stable across the board, extending the previous two years trend.**



## Financial, fiscal and private sector vulnerabilities:

- **In 2025, macroeconomic vulnerabilities kept improving across the board** (GDP growth and lower inflation), and even **fiscal vulnerabilities like public debt levels seem to be improving** in regions like **Peripheral Europe** where they had stubbornly remained elevated for several years.
- However, **there are noticeable exceptions like the US and China**, who not only share being the largest economies, but also having **elevated and growing levels of public debt, and worrisome fiscal deficits**. These two economies, together with France, also have in common concerningly **high levels of private leverage and an excess of private debt** above what we estimate as their equilibrium levels.
- A looming global risk that is worth noticing comes from the **outstanding growth of the stock market across the board in the last couple of years**, with some countries in Peripheral and EE Europe standing out.
- **Real housing prices have grown strongly again and their gaps (vs long-term equilibria) have worsened significantly in several AE.** Northern Europe, Portugal and Türkiye present the highest disequilibrium levels. On the positive side, China's gap has kept improving.
- **The likelihood of banking crises remains contained.** However, China, France and the US also share a large probability of facing a crisis according to our EWS.

# Summary



## Special topic: measuring Structural Geopolitical Risk (SGR)

- **We are incorporating into our analysis a newly developed measure of geopolitical risk**, which differentiates from the most commonly used geopolitical indicators in its structural viewpoint.
- **Typically, short-term changes in geopolitical risk are monitored by high-frequency, news-based indices** (eg. Caldara & Iacoviello, 2022; BBVA Research Geopolitics Monitor). **We want to complement those timely measures with indicators that capture longer-term, structural shifts in geopolitical risks.**
- To do so, **we have combined a number of indicators for a large number of countries and regions into a new set of geopolitical indices (SGR)**. We use long time series variables such as indices of democracy, inequality, rule of law and military spending. **Crucially, our new indices take into account, for each country X, not only the internal dimension of these variables, but also their external dimension** (variables for all the partners and geostrategic rivals of country X) through different measures of geospatial and ideological distance.
- Our indicators suggest, among other things, that:
  - Driven by a deterioration in democratic standards, a pronounced increase in political polarization, and recent military rearmament, **internal risks have reappeared across the board**
  - Stemming from contiguous states, neighboring countries, and ideological rivals, **external-originated geopolitical risks are most pronounced along the Russia–Ukraine border and the Middle-East.**
  - Structural **geopolitical risks are returning to levels not seen since the late 1980's.**

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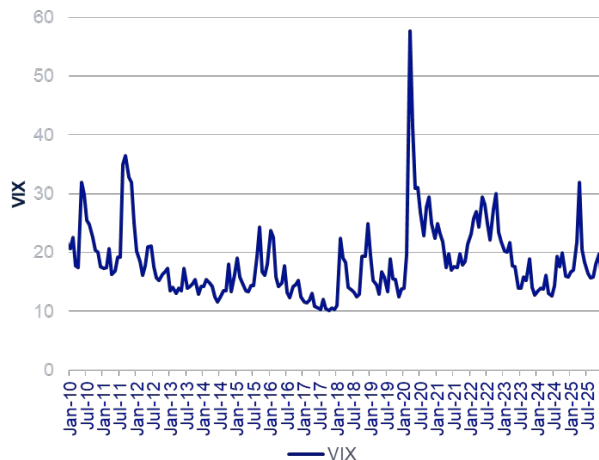
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# **Sovereign Markets and Ratings Update**

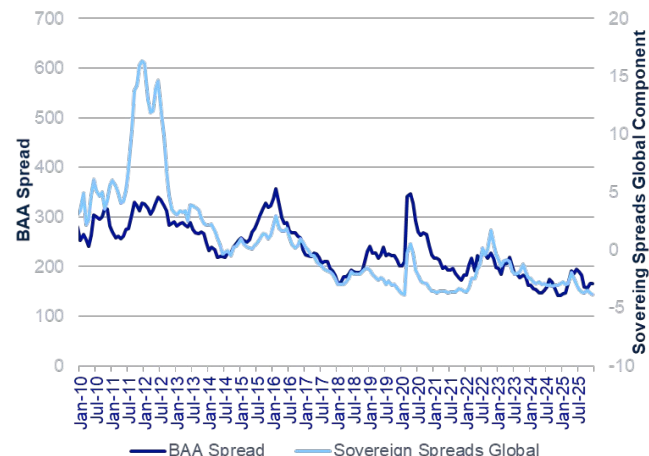
# Global risk aversion indicators

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## GLOBAL RISK AVERSION INDICATOR: VIX (MONTHLY AVERAGE)



## BAA SPREAD & GLOBAL COMPONENT IN SOV. SPREADS (MONTHLY AVERAGE)

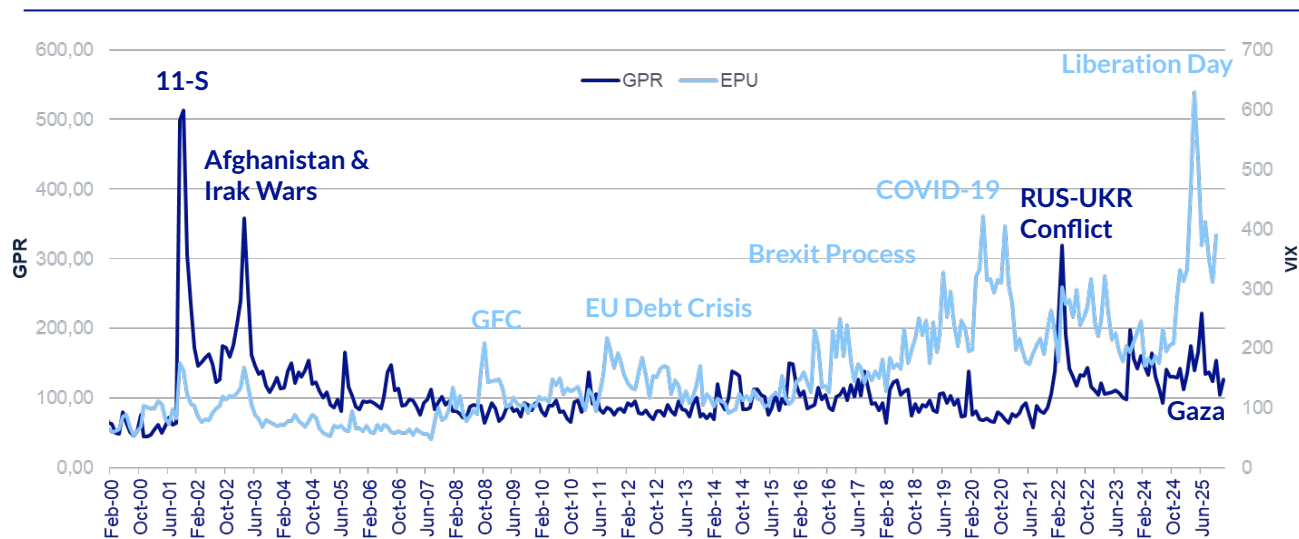


\* The global component of sovereign spreads corresponds to the first component from a PCA Analysis on 51 Sovereign Spreads from both EEs and DMS  
Source: FED, BBVA Research.

**The reciprocal tariffs announcement (Liberation Day) significantly drove up global risk aversion indicators, while BAA and sovereign spreads remained more contained.**

# Global risk aversion indicators

GLOBAL RISK AVERSION INDICATOR: VIX (MONTHLY AVERAGE)

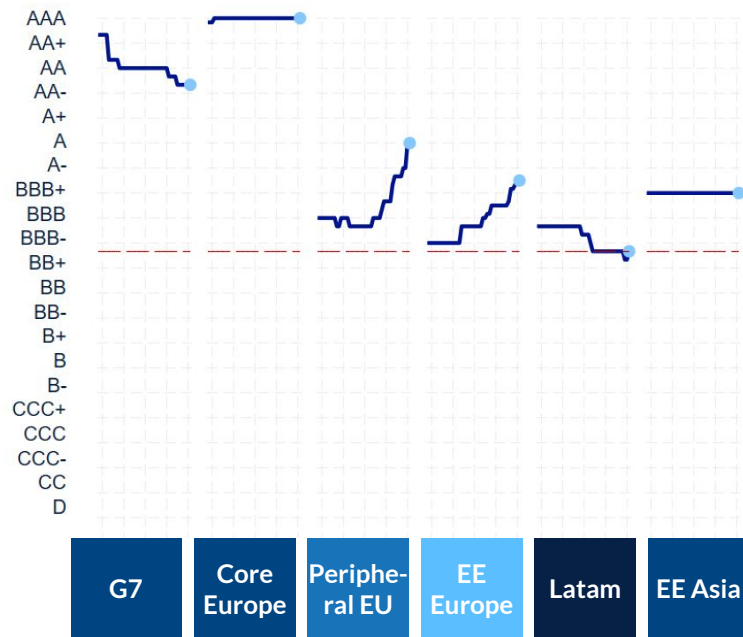


Source: BBVA Research and Caldara & Iacoviello (2022) and Baker, Bloom and Davis (2016).

**2025 has been characterized by a pronounced escalation in economic policy uncertainty, largely attributable to the trade and economic measures enacted by the US administration. In parallel, the conflict between Israel and Gaza has intensified geopolitical risks over the course of the year's midpoint.**

# Sovereign debt markets and rating agencies update

## MEDIAN SOVEREIGN RATING INDEX 2016-2025



- **Agencies' ratings upgrades** have been concentrated in **peripheral EU countries** (all except Ireland) **and emerging Europe**.
- **Ratings have stabilized in G7**, although hiding **heterogeneous** dynamics: **downgrade of France** (Fitch & S&P) and **upgrade of Italy** (all three).
- With the exception of Ireland (stable at AA), **all peripheral EU countries** have experienced rating **upgrades**.
- During 2025, some emerging European countries were **upgraded**, specifically, **Bulgaria, Slovenia and Turkey**.
- In **Latam**, relatively **stable in aggregate** terms but **different stories at the country level**: **Argentina significantly upgraded** and **Colombia downgraded** (both by the three main agencies).

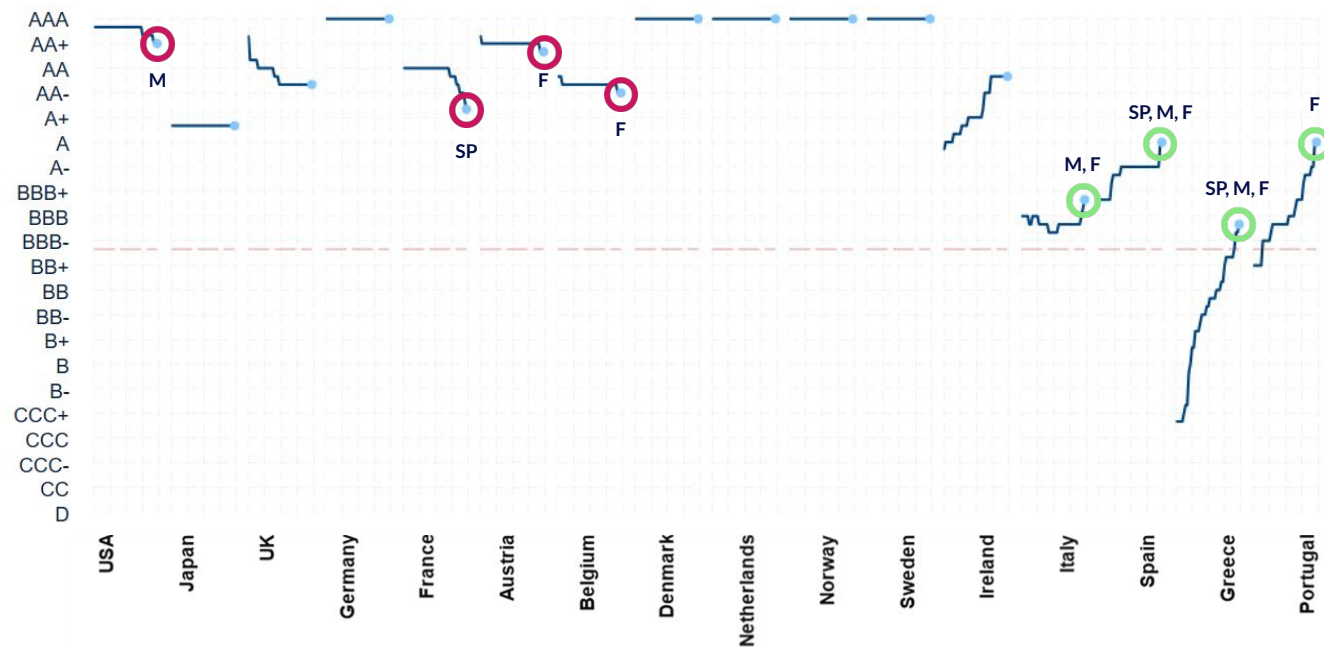
Sovereign Rating Index: An index that translates the three important rating agencies ratings letters codes (Moody's, Standard & Poors and Fitch) to numerical positions from 20 (AAA) to 0 (default). The index shows the average of the three rescaled numerical ratings.  
Source: BBVA Research by using S&P, Moody's and Fitch data



# Sovereign markets and rating agencies update

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## SOVEREIGN RATING INDEX 2016-2025 (AND CHANGES IN 2025): ADVANCED ECONOMIES



Changes in 2025:

Downgrade

Upgrade

SP: Standard &amp; Poor's

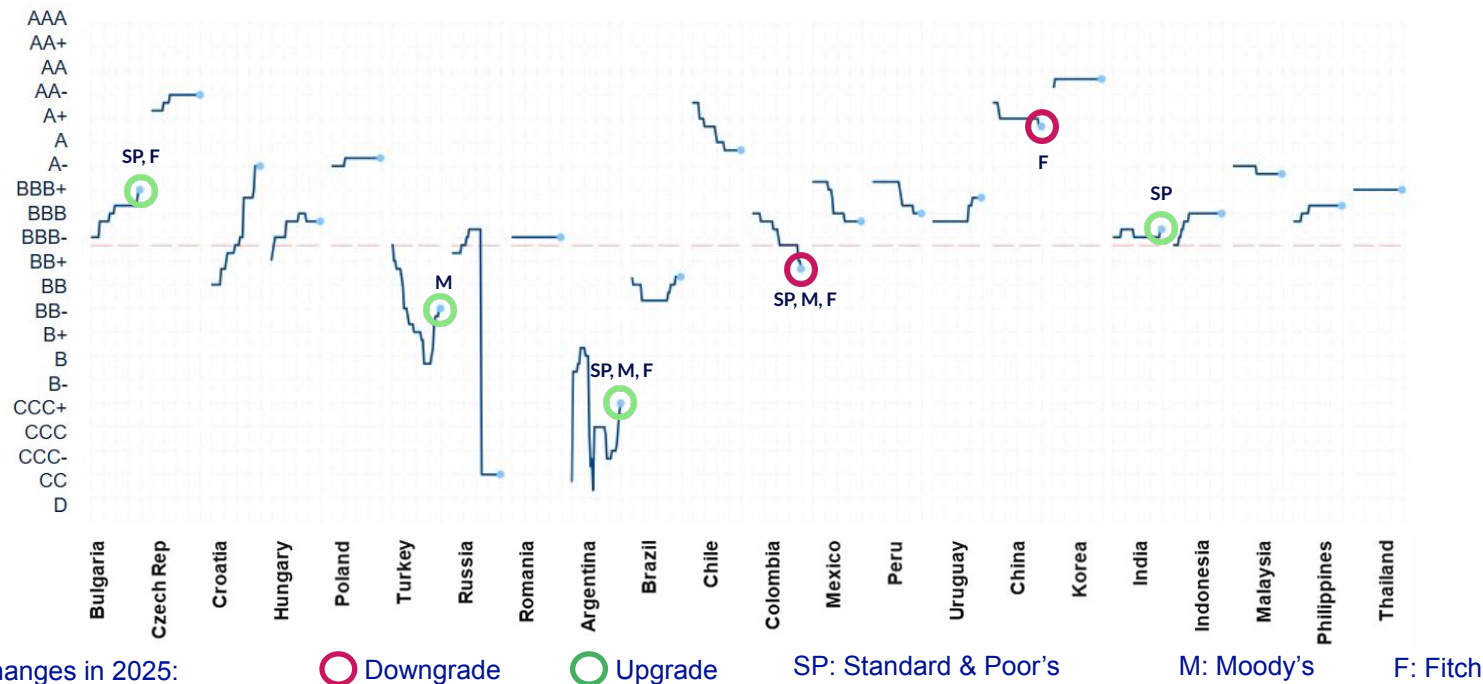
M: Moody's

F: Fitch

# Sovereign markets and rating agencies update

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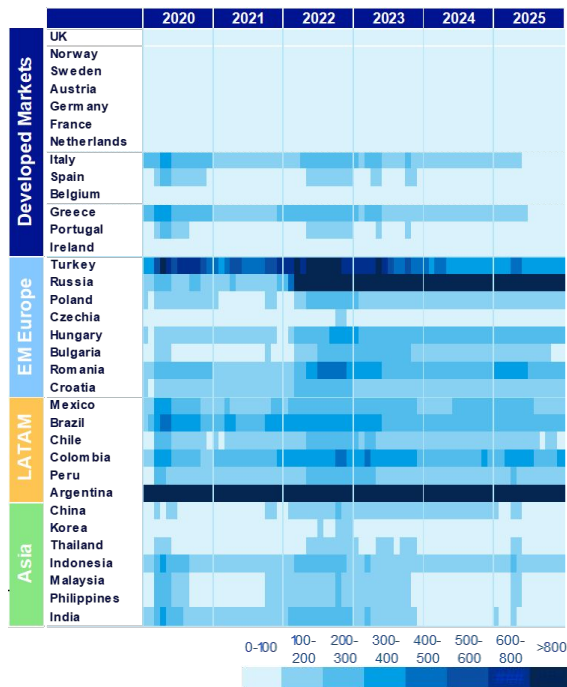
## SOVEREIGN RATING INDEX 2016-2025 (AND CHANGES IN 2025): EMERGING ECONOMIES\*



# Sovereign spreads

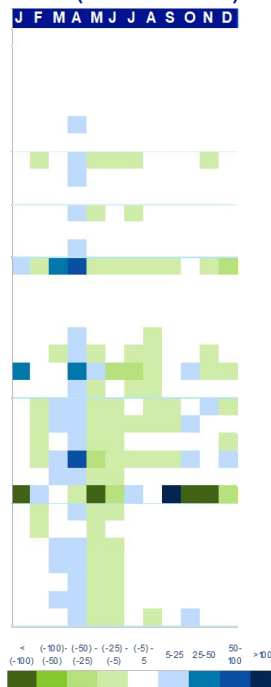
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## SOVEREIGN SPREADS\*



\*10-year spread against Germany in Europe  
Source: BBVA Research.

## MoM Changes (last 12 months)



Sovereign spreads have narrowed across the board, especially in EE Europe and Latam, although with some volatility during April. They have shown a remarkable resilience against US trade announcements and a risk-on feeling in global markets amid a depreciation of the dollar.

- Few changes in AE. Positive evolution (spreads' narrowing) of Italy and Greece (continued from 2024).
- However, the **Liberation Day** (2nd April) led to an almost **worldwide transitory widening** of spreads. **Risk aversion** pushed investors into **safe-haven** assets, while **riskier** assets faced **broad sell-offs**.
- **Asian** spreads **narrowed** after the April shock as US–China trade **tensions** quickly **de-escalated** through negotiated truces.

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# **Macroeconomic Vulnerability and In-house Regional Country Risk Assessment**

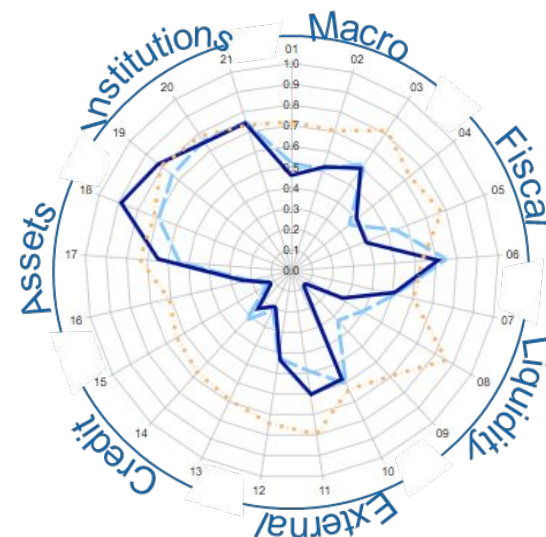
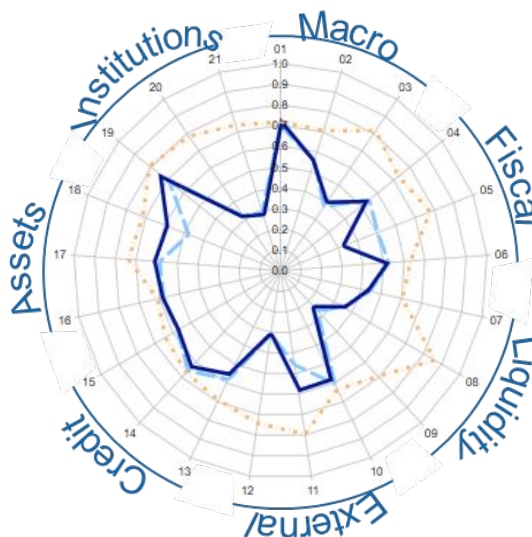
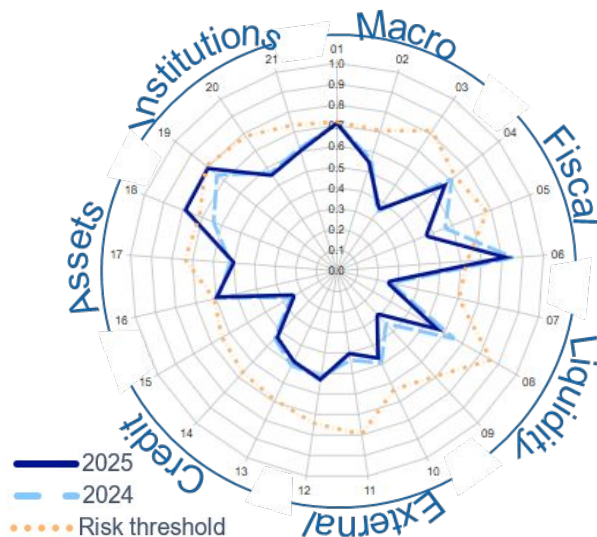
# Developed Markets: Vulnerability Radar 2025

(Relative position for the developed countries. Risk equal to threshold=0.8, Min risk=0. Previous year data is shown as a dotted line)

**G7:** slight decrease of **interest-growth** differentials, although **public debt remains substantially above the risk threshold**. **Equity** gaps have **worsened**, the same as political stability.

**Core Europe:** relevant **decrease** in **interest-growth** differentials (indicating a **improvement** of fiscal **vulnerability**), in contrasts with a **worsening** of **equity** gaps.

**Periphery EU:** **public debt levels** still pose a significant vulnerability. As well as REER appreciation (vulnerability deterioration), similar to **equity** gaps and political stability.



**Macro:** (1) GDP (% YoY) (2) Prices (% YoY) (3) Unemployment (% LF).

**Fiscal:** (4) Government Balance (%GDP) (5) Interest rate – GDP %YoY (6) Public debt (% GDP).

**Liquidity:** (7) Debt by non-residents (%total) (8) Financial needs (%GDP) (9) Short-term External Debt (%). **External:** (10) External debt (%GDP) (11) RER appreciation (% deviation) (12) CAC balance (%GDP).

**Private Debt:** (13) Household (%GDP) (14) Corporate (%GDP) (15) Credit-to-deposit (%). **Assets:** (16) Private Debt Gap (%GDP) (17) Housing Prices Gap (%GDP) (18) Equity gap (%).

**Institutions\*:** (19) Political stability (20) Corruption (21) Rule of law. (\*relative position of each group vis-à-vis the Developed/Emerging regions as a whole. **Institutional indicators are updated annually and last data corresponds to 2024**).

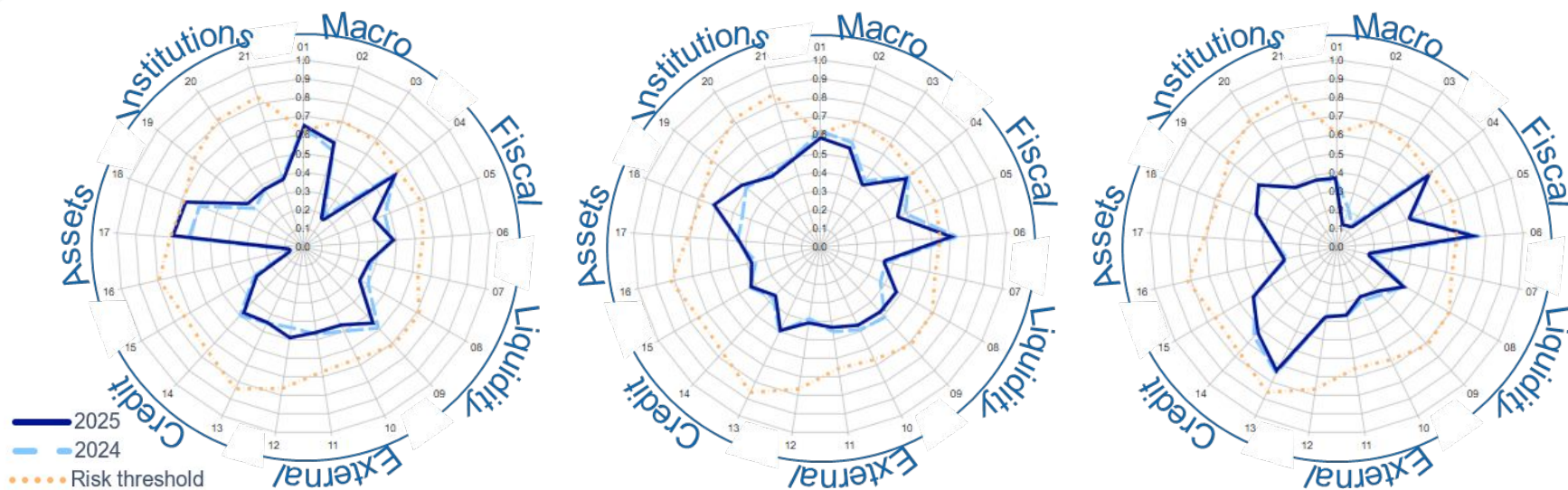
# Emerging Economies: Vulnerability Radar 2025

(Relative position for the emerging economies. Risk equal to threshold=0.8, Min risk=0. Previous year data is shown as a dotted line)

**EE Europe:** notable increase in housing prices vulnerability and equity gaps. Only GDP growth risks remain near the risk threshold.

**LatAm:** all vulnerabilities (except for public debt, which is on the limit) remain below the risk thresholds, with a significant deterioration in equity gaps.

**EE Asia:** vulnerabilities and risks remain under control, although public debt still remain over the risk threshold and almost unchanged.

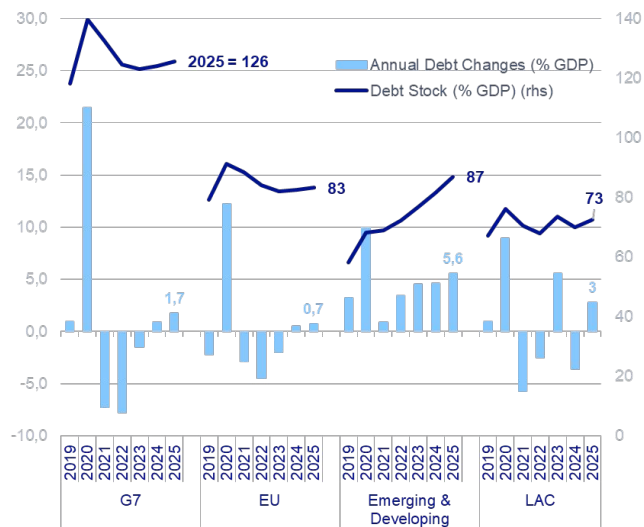


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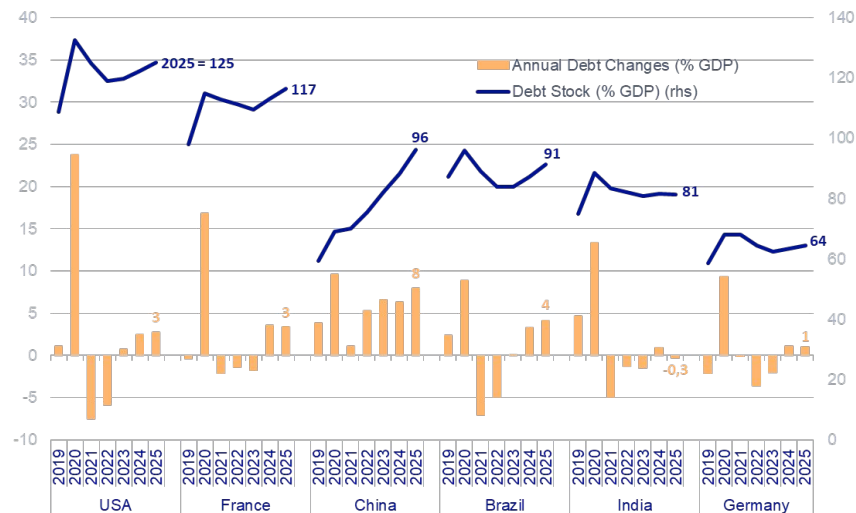


# Global public debt evolution

## REGIONAL EVOLUTION OF GROSS GOVERNMENT DEBT (% GDP)



## COUNTRY EVOLUTION OF GROSS GOVERNMENT DEBT (% GDP)



LAC: Latin America and the Caribbean.

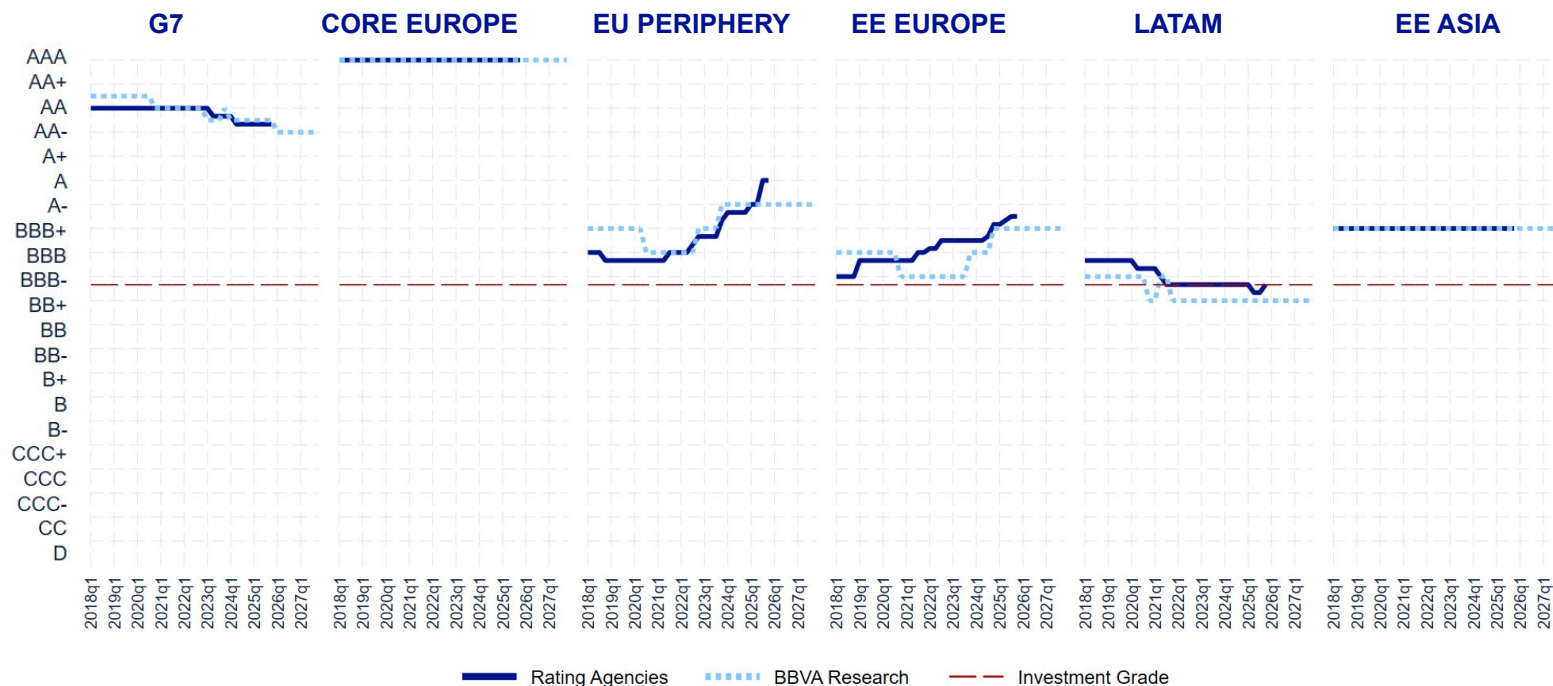
Source: BBVA Research from IMF World Economic Outlook October 2025.

**Global public debt remains far from stabilising, mainly due to weak fiscal outcomes in the US, China, parts of Europe and some Latam countries (notably Brazil). A shift is evident away from the post-COVID downward debt trajectory.**

# BBVA-Research sovereign ratings by region

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## AGENCIES' SOVEREIGN RATING VS. BBVA RESEARCH RATING (Median)



Latam includes: Argentina, Brazil, Chile, Colombia, Mexico, Paraguay, Peru, Uruguay and Venezuela.  
Source: Standard & Poor's, Moody's, Fitch & BBVA Research



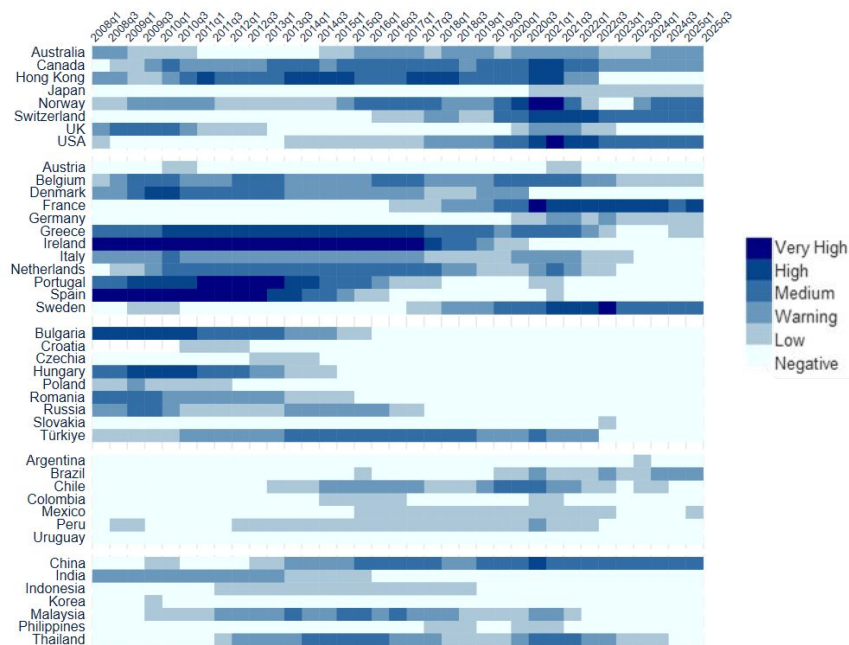
3.

# **Assessment of Financial, Fiscal and External Disequilibria**

# Private debt gaps by country

## PRIVATE DEBT GAPS COLOR MAP (2008-2025 Q3)

(GAP BETWEEN PRIVATE DEBT-TO-GDP RATIO AND ITS LONG-TERM STRUCTURAL TREND)



Debt gaps (debt vs. equilibrium) levels have stabilized overall in the last year, reflecting subdued private credit growth amid moderate nominal GDP growth and controlled inflation. In some AEs, gaps have consolidated at elevated levels.

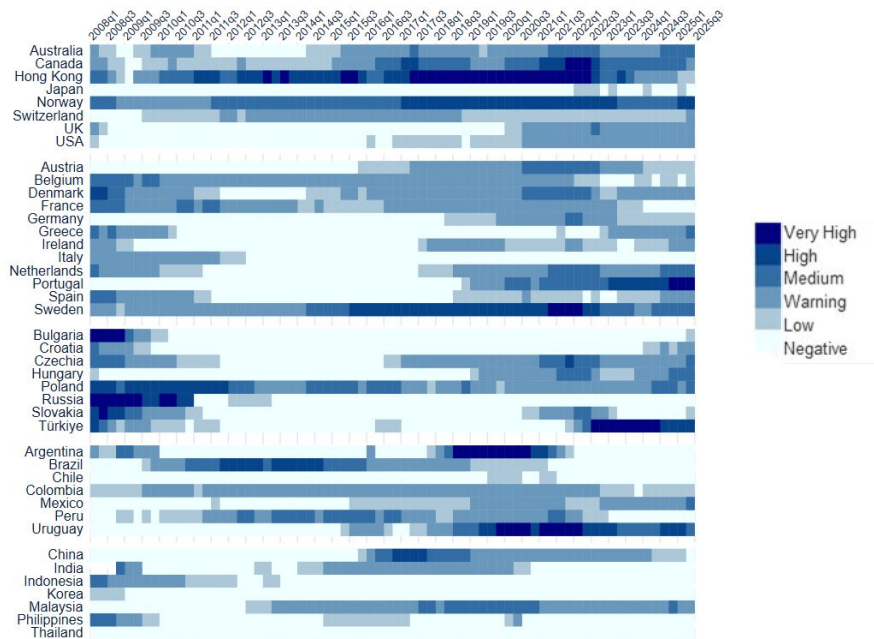
- **Gaps in US, Norway, Switzerland, Sweden and particularly in France remain elevated.** Few changes in the rest of AE, and contained evolution in Italy and Greece (low gaps).
- **Gaps across EE Europe remain contained** (negative) since 2016. Elevated inflation rates, although declining, keep helping, especially in the case of Türkiye.
- **Debt gaps in Latam and Asia have remained contained**, except for warning gaps in Brazil (household and private credit at high levels), low levels in Mexico and high levels in China.

# Housing prices gaps by country

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## REAL HOUSING PRICES GAPS COLOR MAP

(2008-2025 Q3) (GAP BETWEEN HOUSING PRICES AND ITS LONG-TERM STRUCTURAL TREND)



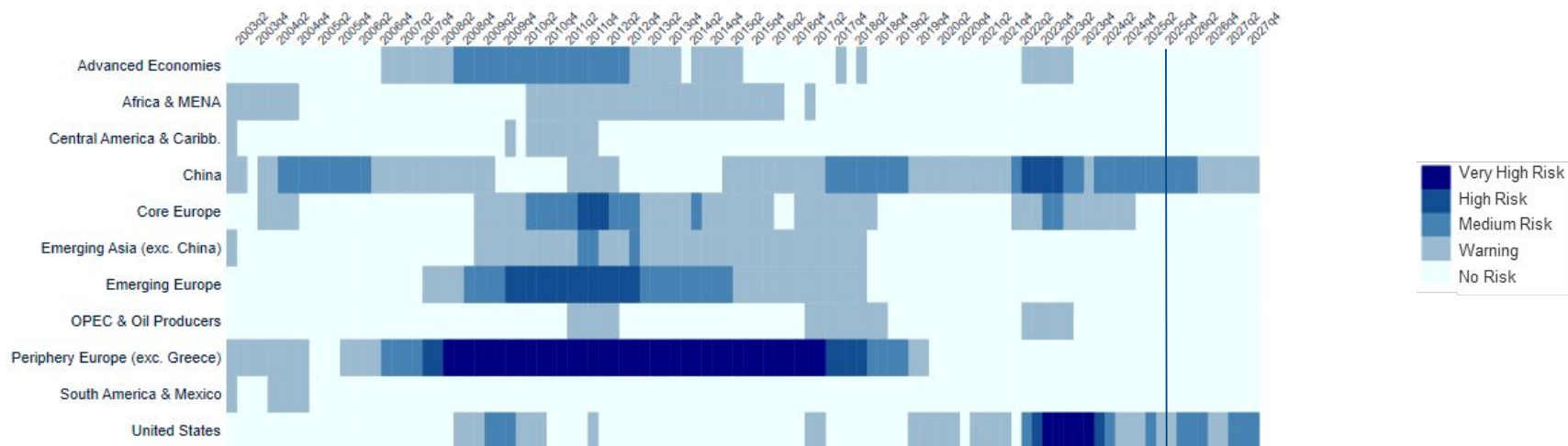
Housing prices gaps have continued expanding, and are currently at warning and medium levels in several AEs. The highest disequilibrium levels continue to be seen in northern Europe, Portugal and Türkiye.

- Gaps have consolidated at high levels in **Australia and Norway**, and at warning level in Canada, Switzerland (from a long period at low levels), UK and USA.
- Also, **very high** disequilibrium persist in **Portugal**, and **Spain and Greece** show signs of housing prices tensions. **Eastern EU** has experienced a **broad increase of prices and gaps**.
- Gaps in **Latam** remain **controlled** except for **Uruguay, Mexico and Colombia (low)**. And, regarding Asia, **China** seems to have **completed a progressive gaps receding phase**.

# Early Warning System (EWS) of banking crises

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## PROBABILITY OF A SYSTEMIC BANKING CRISIS (2003Q1-2027Q4) (BASED ON 8-QUARTERS LAGGED DATA\*)



- A banking crisis in a given country follows the definition by Laeven and Valencia (2012), which is shown in the Appendix
- The complete description of the methodology can be found at <https://goo.gl/r0BLb1> and at <https://goo.gl/VA8xXv>
- The probabilities shown are the simple average of the estimated individual countries probabilities for each region. The definition of each region is shown in the Appendix.

\* The probability of a crisis in Q4-2026 is based on Q4-2024 data.

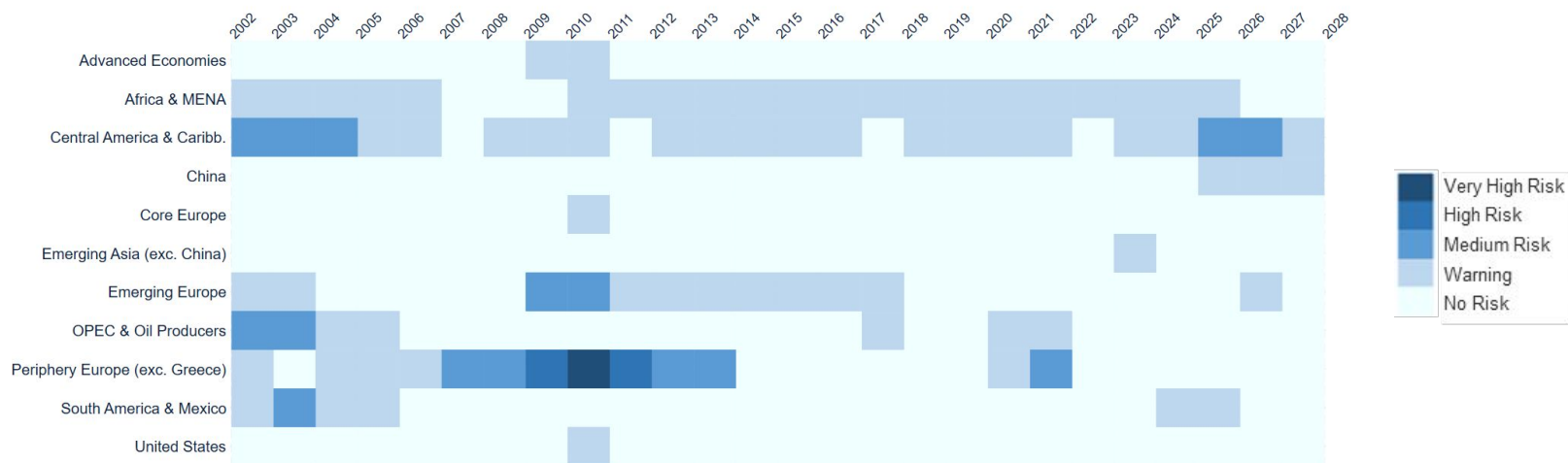
Source: BBVA Research

**Reduced likelihood of future banking crises across the board, with the exception of the two major economies: China, still at a warning level, due to its persistently high leverage but with receding signs, and US, also with elevated private leverage.**

# Early Warning System (EWS) of fiscal stress

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## PROBABILITY OF A FISCAL STRESS EPISODE (2002 - 2028) (BASED ON 1-YEAR LAGGED DATA)



- The Fiscal Stress Early Warning System EWS estimates the probability of a fiscal crisis or stress, which is defined as one of four different events: Public default or restructuring, a large IMF-Supported program, a very high inflation rate (implicit default) or a extreme spike in the sovereign spread.
- The probabilities shown in the table are the simple average of the individual countries probabilities for each region.

Source: BBVA Research

**Persistent warning levels of fiscal stress in EE, Latam and Africa explained by high public debt levels and problematic interest-growth differentials. AEs remain far from potential fiscal stress episodes, although dealing with high debt.**

#### 4. Special Topic

# Structural Geopolitical Risk (SGR) Analysis

# How to measure geopolitical risks?

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## Literature on internal political instability and the causes & consequences of conflicts:

- **Political instability depresses investment:** channel from socio-political risk to weaker growth (Alesina & Perotti, 1996)
- **External geopolitical shocks** (e.g., wars, embargoes) **can trigger economic collapse**, especially in societies lacking strong institutions (Rodrick, 1999)
- **Conflicts** (a proxy for geopolitical risk) **disrupt** trade and economic growth (Martin, Mayer, and Thoenig, 2008)
- **Causes** of conflicts: **contiguity** and **short distance** most important spatial **predictors** of **interstate** conflicts (Bremer, 1992; Vasquez, 1995)



## Geopolitical Risk Analysis: the irruption of the GPR Index (Caldara & Iacoviello, 2022)

- **News-based** measurement of Geopolitical Risk influenced by **media attention**
- Substantial **impact** on economic activity: GDP and Inflation (Caldara et al. 2022)
- **Applications** of GPR: Local-news effects (Bondarenko et al., 2024), Cross-border banking exposures (Niepmann and Shen, 2025) and Transmission Channels of GPR Across Countries (Bali et al., 2022)

# Novelty

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## Compared to the analysis based on GPR or news-based indexes, our approach of structural analysis of geopolitical risks:



- **Assesses the impact of the long-term trends** driving news-based events
- **Differentiates** between **internal** and **external** risks and their potential interaction, with the **external** perspective being **completely innovative**
- **Covers most countries** since the **1960s in an annual basis until 2024**.
- **Unbiased** towards any **country** (avoid US-centric bias in GPR)
- It can be further **decomposed** into **political**, **military**, or **ideological** subcomponents, and/or between **global** and **idiosyncratic**.
- **Definition of Structural Geopolitical Risk (SGR):** *"the latent factor behind the occurrence of adverse events associated with wars, tensions, and conflicts among states and political actors, which may affect the peaceful course of international relations".*

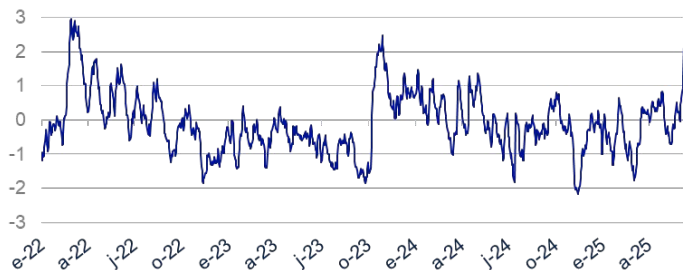
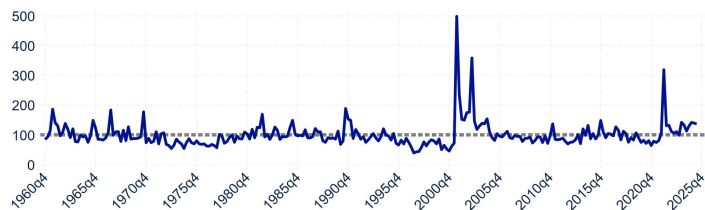


# News-based geopolitical indices,

Very useful to follow short-term trends, need to be complemented with indicators that reflect long-term political, ideological and military structural changes

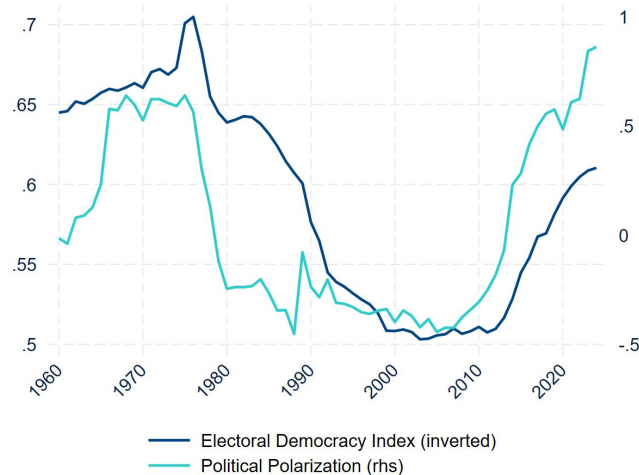
## GEOPOLITICAL RISK INDEX

(CALDARA & IACOVIELLO; BBVA RESEARCH\*)



## ELECTORAL DEMOCRACY

(1 = AUTOCRACY, 0 = LIBERAL DEMOCRACY) & POLITICAL POLARIZATION  
(1960-2024, POPULATION WEIGHTED)



\* Caldara & Iacoviello (2022) geopolitical risk index is the world-wide index, while BBVA Research indicator is US-based.  
Source: BBVA Research from V-DEM Database and Caldara and Iacoviello (2022).

# Introducing Structural Geopolitical Risk (SGR)

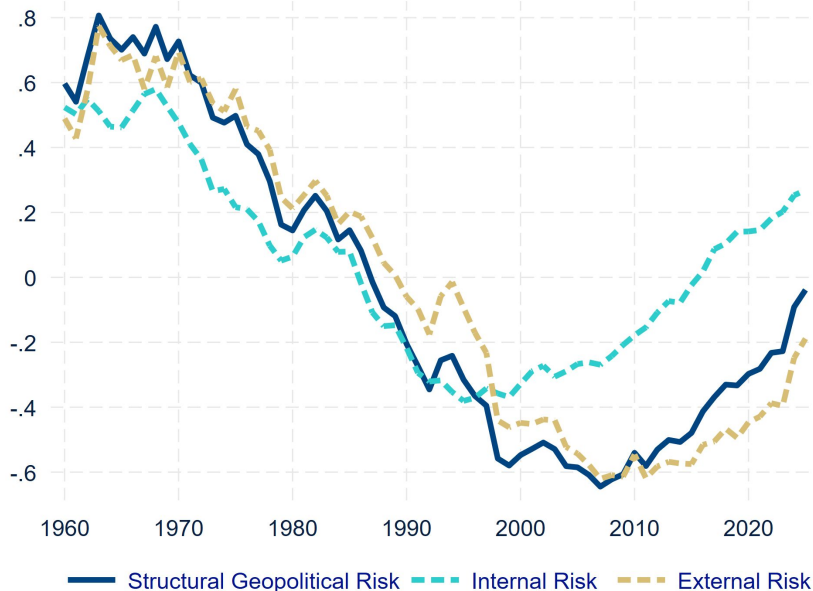
The SGR combines political, institutional, military, and ideological data to assess internal risks and external risks stemming from the rest of the world



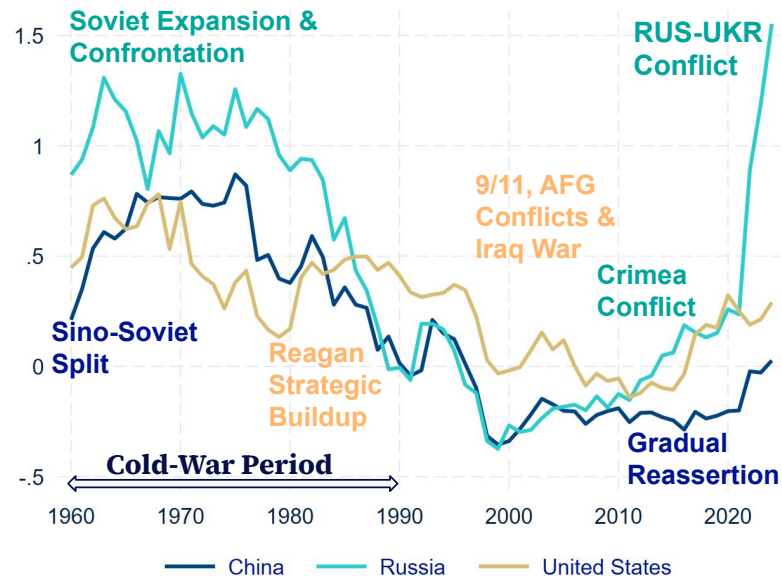
**Principal innovation of SGR relies on the external perspective: size and evolution of risks faced by each country, weighted by geospatial and ideological distances**

# SGR Reflection of Historical Structural Geopolitical Shifts

**GLOBAL STRUCTURAL GEOPOLITICAL RISK (SGR)  
(1960-2024) (GDP WEIGHTED)**



**STRUCTURAL GEOPOLITICAL RISK (SGR) (1960-2024)  
(STANDARDIZED VALUES)**



Note: total geopolitical risk is calculated by equally-weighting internal and external risk.

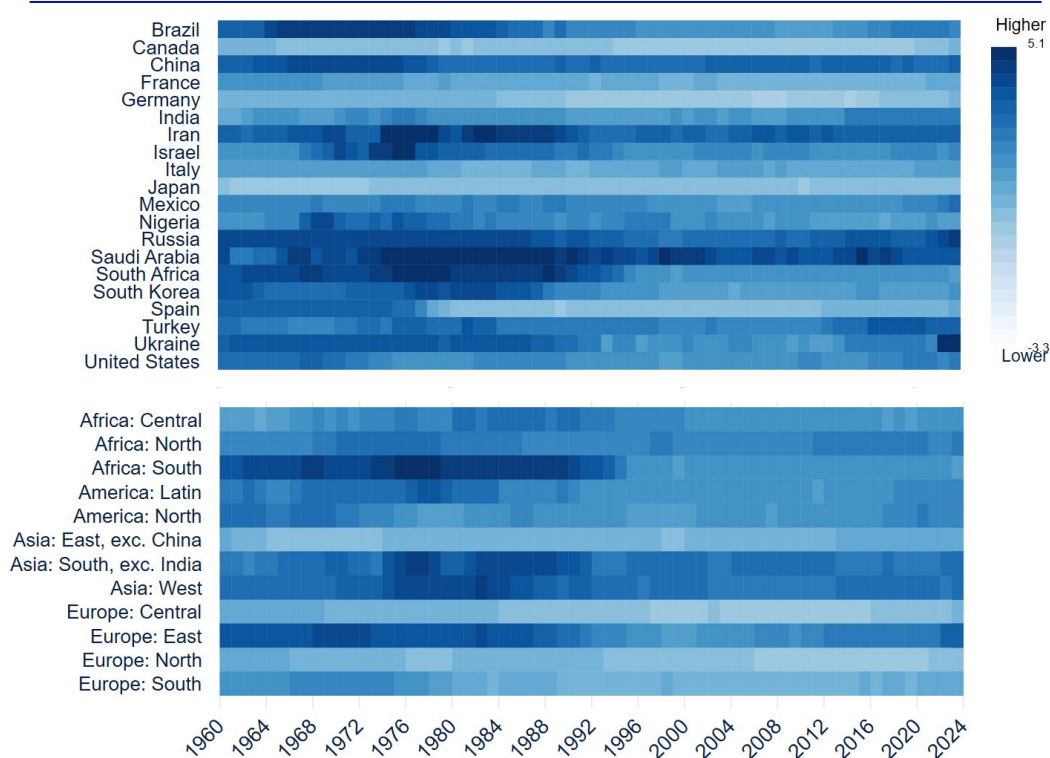
Source: BBVA Research.

# Internal Risk

Internal risk has remained structurally higher and more volatile in emerging and conflict-prone economies, while advanced economies display persistently lower and more stable risk levels over the long run.

- **AEs** are generally **less exposed to internal risks**, reflecting relatively **strong institutional performance**, although a **deterioration trend** is observable in some cases.
- The ongoing **Russia-Ukraine** conflict has translated into **rising internal risk levels** in both economies, reflecting **heightened military preparedness** and **weakening institutional performance**, especially in **Russia**.

## COUNTRY-SPECIFIC AND REGIONAL HISTORICAL INTERNAL RISK (1960-2024) (HIGHER VALUE INDICATES GREATER RISK)

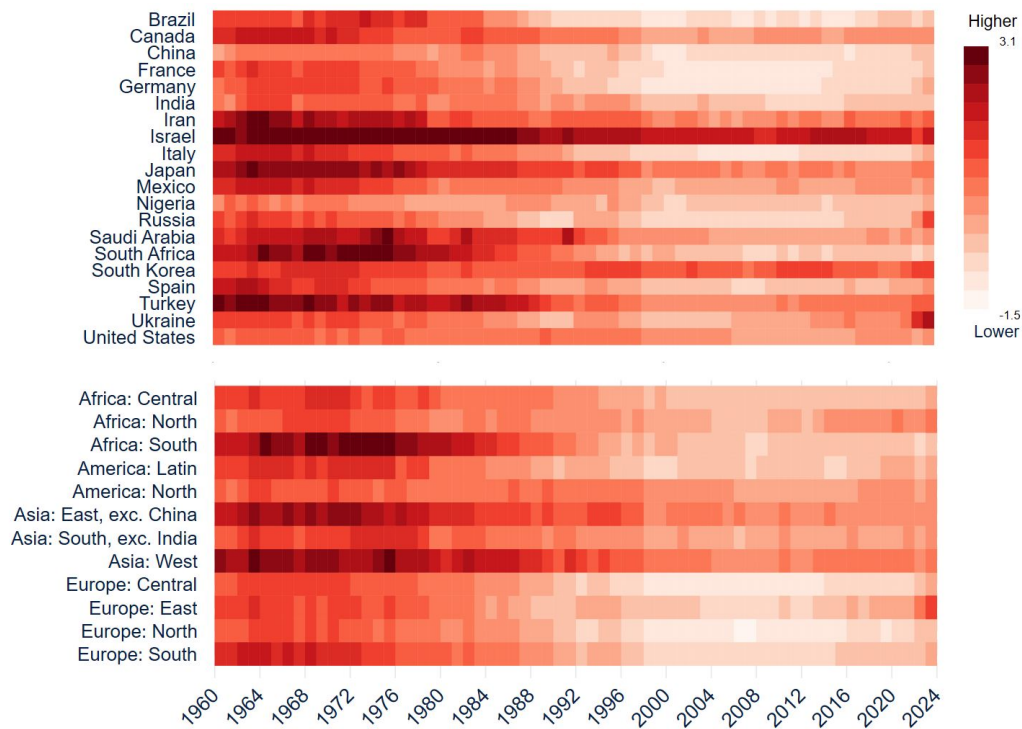


# External risk

External risk captures the extent to which institutional, political, and military tensions originating abroad affect a given country.

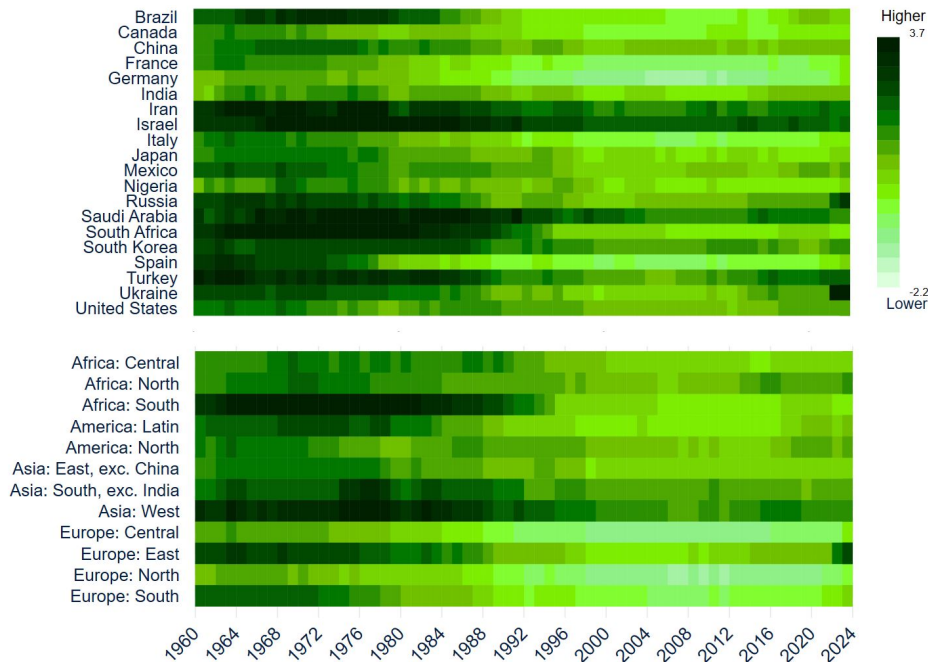
- **AEs** and **Latam** exhibit comparatively **low** external risk, reflecting **limited** direct **exposure** to foreign institutional, political, and military **tensions** and stronger **insulation** from **external shocks**.
- **Ukraine** stands out with markedly **elevated** external risk, driven by **direct** spillovers from the Russia–Ukraine **conflict** and its **prolonged geopolitical** and **military exposure**.
- **Eastern Europe** faces **elevated** and **increasing** external risk, **transmitted** through the **proximity** to **Russia**.

## COUNTRY-SPECIFIC AND REGIONAL HISTORICAL EXTERNAL RISK (1960-2024) (HIGHER VALUE INDICATES GREATER RISK)



# Structural Geopolitical Risk (SGR)

## COUNTRY-SPECIFIC AND REGIONAL HISTORICAL STRUCTURAL GEOPOLITICAL RISK (1960-2024) (HIGHER VALUE INDICATES GREATER RISK)



SGR represents the conjunction of internal and external risks. Ukraine, Russia, Israel, Iran and Eastern Europe face the greatest risks.

- **AEs** and **Latam** display relatively **low** and **stable** structural geopolitical risk, reflecting **geographical distance** to **prolonged** and new **conflicts**.
- **Eastern Europe** exhibits a **renewed increase** in geopolitical **risk**, driven by **proximity** to conflict zones and **heightened** regional **security concerns** since the mid-2010s.
- From a **historical** perspective, the **SGR** captures periods of **interstate conflict** (e.g., **Israel–Iran**) as well as episodes of **military** and **authoritarian regimes** (such as in **Brazil** and **Spain**).

# Key messages stemming from the analysis of SGR:

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## INTERNAL RISKS



Driven by a **deterioration** in **democratic** standards, a pronounced **increase** in **political polarization**, and recent **military rearmament**, **internal** risks have **flourished** in Ukraine, Russia, Eastern Europe, Iran, West Asia, and China, thus leading to high internal risk levels in **2024**.

## EXTERNAL RISKS



Stemming from **contiguous** states, **neighboring** countries, and **ideological rivals**, **external-originated** geopolitical **risks** are most **pronounced** along the **Russia–Ukraine border**, Israel, in the Middle East, and in West Asia

## STRUCTURAL GEOPOLITICAL STRESS



**Ukraine, Russia, Israel, Iran, and Eastern Europe** have the **greatest** geopolitical risk (slide 32). After declining from 1960 to 2000, the GDP-weighted global Structural Geopolitical Risk (SGR) index has **upticked since 2000**, peaking in the early 2020s, explained by **internal** and **external** institutional and political tensions, and military buildups.

Annex

# **Vulnerability Indicators table by country**



# Vulnerability indicators: Advanced Economies

	Fiscal sustainability			External sustainability			Liquidity management			Macroeconomic performance			Credit and housing			Private debt			Institutional		
	Fiscal balance (1)	Interest rate GDP growth differential 12025-29	Gross public debt (1)	Current account balance (1)	External debt (1)	REER appreciation (2)	Gross financial needs (1)	Short-term public debt (3)	Debt held by non-residents (3)	GDP growth (4)	Consumer prices (4)	Unemployment rate (5)	Private credit to GDP gap (4)	Real housing prices gap (4)	Equity markets gap (4)	HH debt (1)	NF corporate debt (1)	Financial liquidity (6)	WB political stability (7)	WB control corruption (7)	WB rule of law (7)
United States	-7.4	-0.9	125.1	-4.0	92.4	-1.3	28.1	16.6	26.4	2.0	2.8	4.2	38.7	10.6	25.9	68.0	73.0	45.9	-0.1	1.1	1.0
Canada	-2.2	-3.4	113.9	-1.4	140.3	-4.4	9.0	6.0	22.4	1.2	2.0	6.9	19.5	15.4	25.8	99.1	115.6	115.3	0.6	1.6	1.5
Japan	-1.3	-2.4	229.6	3.9	105.2	-7.4	22.0	9.0	12.1	1.1	3.3	2.6	1.5	-0.4	25.4	64.0	115.3	47.8	1.1	1.4	1.5
Australia	-2.7	-2.8	51.0	-1.9	92.8	-1.7	5.1	4.6	29.2	1.8	2.6	4.2	24.0	16.1	6.8	113.5	61.6	118.8	0.8	1.9	1.5
Korea	-1.5	-3.2	53.4	4.8	36.2	-6.4	2.5	1.8	17.1	0.9	2.0	3.0	-39.9	-30.6	22.1	89.7	110.8	105.0	0.6	0.8	1.1
Norway	12.7	-9.5	42.7	16.2	146.9	-1.4	-8.7	-0.4	66.8	1.2	2.4	4.3	40.5	30.4	13.6	85.8	132.6	186.1	0.9	2.0	1.9
Sweden	-1.4	-3.6	34.2	5.8	153.0	3.2	5.1	10.9	17.1	0.8	2.3	9.0	45.6	17.2	8.6	83.6	153.7	160.9	0.6	2.0	1.7
Denmark	1.8	-5.9	29.6	12.2	132.5	0.7	0.1	6.4	39.8	1.8	1.9	3.0	-2.7	12.9	-30.5	84.4	135.8	241.9	0.8	2.3	2.0
Finland	-4.6	-1.8	86.8	0.1	189.7	0.7	11.1	7.5	49.2	0.5	1.8	9.0	22.7	-18.2	1.9	63.2	115.1	146.2	0.8	2.2	2.0
UK	-4.3	-1.2	103.4	-3.1	254.3	4.0	8.7	4.2	24.2	1.3	3.4	4.7	-7.5	11.9	10.4	74.2	58.5	95.3	0.3	1.5	1.3
Austria	-4.2	-1.6	82.0	1.8	146.1	4.1	8.5	5.2	56.1	0.3	3.6	5.7	-11.3	1.0	24.8	42.2	85.0	94.6	0.5	1.3	1.7
France	-5.4	-0.7	116.5	-0.1	233.0	0.7	11.4	5.1	43.4	0.7	1.1	7.6	43.3	-1.5	7.7	60.0	155.0	101.7	-0.2	1.2	1.0
Germany	-2.5	-1.4	64.4	5.4	137.4	2.9	7.0	6.9	40.3	0.2	2.1	3.7	4.5	2.0	21.3	49.2	89.7	86.9	0.1	1.8	1.6
Netherlands	-2.1	-1.9	44.0	9.5	317.4	3.5	6.2	9.3	36.3	1.4	2.9	3.8	-4.7	18.9	10.2	93.9	169.0	96.2	0.4	1.9	1.7
Belgium	-5.5	-1.0	107.5	-0.9	225.6	2.4	16.5	10.2	50.8	1.1	2.6	6.1	10.2	0.7	17.4	56.6	119.1	62.0	0.1	1.5	1.3
Italy	-3.3	0.2	136.8	1.0	111.9	1.1	7.8	3.3	30.4	0.6	1.7	6.7	0.5	-17.8	30.9	35.9	59.1	71.3	0.3	0.6	0.6
Spain	-2.4	-1.9	100.4	3.1	151.0	2.0	5.8	3.1	40.9	2.9	2.6	10.6	-29.2	13.0	38.2	43.9	78.8	70.1	0.0	0.7	0.9
Ireland	1.0	-4.2	33.0	11.1	518.2	3.3	-0.9	0.4	47.0	9.1	1.7	4.6	-47.1	6.5	26.0	24.4	99.7	32.8	0.7	1.6	1.6
Portugal	0.2	-2.1	90.9	1.8	135.4	1.5	5.0	5.7	44.8	1.9	2.2	6.4	-21.8	43.6	19.1	53.1	77.0	77.4	0.5	0.8	1.1
Greece	0.0	-2.0	146.7	-5.8	222.6	2.4	0.0	0.0	81.5	2.0	3.1	9.0	10.5	15.1	41.5	38.5	57.4	45.4	0.1	0.3	0.3

\*Vulnerability indicators: (1) % GDP. (2) Deviation from four-year average. (3) % of total debt. (4) % year on year. (5) % of Total labour force. (6) Financial system credit to deposit. (7) Index by World Bank governance indicators.

Source: BBVA Research, Haver, BIS, IMF and World Bank

# Vulnerability indicators: Emerging Economies

	Fiscal sustainability			External sustainability			Liquidity management				Macroeconomic performance			Credit and housing		Private debt			Institutional		
	Fiscal balance (1)	Interest rate GDP growth differential 1 2025-29	Gross public debt (1)	Current account balance (1)	External debt (1)	Reserves to ARA Metric	Gross financial needs (1)	Reserves to short-term external debt (3)	Reserves to Imports	Debt held by non-residents (3)	GDP growth (4)	Consumer prices (4)	Unemployment rate (5)	Private credit to Gap (4)	Real housing prices Gap (4)	HH debt (1)	NF corporate debt (1)	Financial liquidity (6)	WB political stability (7)	WB control corruption (7)	WB rule of law (7)
Bulgaria	-3.4	-4.3	28.4	-3.8	42.9	1.9	3.5	3.2	8.8	36.0	3.1	3.6	3.5	-11.5	2.8	27.4	52.7	72.5	0.0	-0.2	0.0
Slovakia	-5.2	-2.5	59.6	-2.9	93.6	0.5	7.5	0.2	1.3	51.9	0.9	4.2	5.5	-1.6	0.3	43.1	40.9	109.0	0.6	0.1	0.6
Croatia	-2.9	-3.9	57.0	-1.6	61.8	0.1	9.1	0.1	0.9	32.8	3.1	4.4	5.0	-24.2	10.9	29.5	46.1	68.0	0.6	0.1	0.4
Hungary	-4.7	-0.6	74.8	1.2	124.6	1.1	12.8	0.7	3.2	31.3	0.6	4.5	4.3	-19.2	23.4	17.4	68.4	72.1	0.4	0.0	0.2
Poland	-7.0	-1.9	60.0	-0.7	47.3	1.6	12.6	1.8	5.1	24.0	3.2	3.8	2.9	-25.6	14.3	22.3	34.7	61.4	0.5	0.8	0.6
Romania	-8.2	-2.6	61.2	-8.0	52.3	1.1	13.4	2.4	5.4	46.1	1.0	7.3	5.9	-16.6	0.0	11.9	26.7	67.8	0.2	0.0	0.4
Russia	-2.7	-3.2	23.1	1.7	12.4	3.4	3.5	3.0	13.3	3.9	0.6	9.0	2.4	-31.8	-11.0	21.0	75.4	102.1	-0.9	-0.9	-1.2
Türkiye	-3.6	-14.0	22.4	-1.3	35.2	0.7	5.7	0.4	2.6	37.3	3.8	35.1	8.6	-19.4	30.3	9.7	39.3	85.7	-1.0	-0.6	-0.8
Argentina	0.3	-17.5	81.7	-2.0	38.3	0.4	28.0	1.0	4.2	32.5	4.5	41.7	7.8	-3.6	-27.2	5.4	19.7	70.3	-0.2	-0.3	-0.3
Brazil	-8.4	0.6	91.4	-2.5	32.3	1.3	18.6	2.5	10.4	9.8	2.4	5.2	7.1	19.3	-2.9	36.5	54.3	100.1	-0.5	-0.4	-0.4
Chile	-2.1	-3.7	42.7	-2.5	72.5	0.9	3.6	1.5	5.5	34.1	2.5	4.3	8.6	0.4	-22.3	44.7	90.0	149.3	0.1	1.1	0.7
Colombia	-6.6	0.3	60.5	-2.5	47.8	1.3	11.3	2.9	9.1	30.1	2.7	5.2	8.6	-14.5	5.5	25.4	28.9	91.2	-1.0	-0.3	-0.6
Mexico	-3.7	3.0	51.4	0.0	33.2	1.3	13.6	2.9	4.2	19.8	0.7	3.8	2.8	1.6	15.8	16.7	21.5	69.8	-0.7	-0.9	-1.2
Peru	-2.2	-1.1	31.9	2.6	30.2	2.6	3.4	8.1	13.6	38.8	3.3	1.5	6.0	-8.0	-10.2	15.3	34.5	104.1	-0.7	-0.7	-0.5
China	-8.6	-3.6	96.3	2.4	12.8	0.6	4.4	2.5	12.7	2.1	5.0	0.0	5.0	31.1	1.4	59.6	142.0	105.1	-0.2	0.1	-0.6
India	-7.1	-3.6	81.4	-1.0	18.2	1.1	13.2	4.5	7.7	5.0	6.7	2.8	4.9	-8.6	-6.4	42.6	52.0	97.3	-0.8	-0.3	0.0
Indonesia	-2.8	-1.6	40.8	-1.1	31.7	1.2	6.4	2.5	5.7	35.2	4.9	1.8	5.0	-12.1	-29.4	15.8	23.5	83.4	-0.6	-0.5	-0.2
Malaysia	-3.6	-2.7	70.4	1.5	67.7	1.0	11.7	1.3	4.9	19.3	4.5	1.6	3.0	-34.9	14.4	70.0	88.1	105.4	0.4	0.5	0.3
Philippines	-3.6	-3.5	58.2	-3.8	28.8	1.9	13.4	4.5	5.8	30.1	5.4	1.6	3.9	-10.0	-12.5	12.4	26.9	69.5	-0.8	-0.6	-0.6
Thailand	-2.6	-1.1	64.9	1.7	36.9	2.2	10.0	3.0	7.8	7.9	2.0	0.2	1.0	-4.4	-10.4	87.7	76.2	89.3	-0.7	-0.5	-0.2

\*Vulnerability indicators: (1) % GDP. (2) Deviation from four-year average. (3) % of total debt. (4) % year on year. (5) % of Total labour force. (6) Financial system credit to deposit. (7) Index by

World Bank governance indicators. ARA Metric: see <https://www.imf.org/external/np/pp/eng/2011/021411b.pdf>

Source: BBVA Research, Haver, BIS, IMF and World Bank

# Methodological Appendix

# Methodological Appendix

## Indicators and maps

- **Financial Stress Map:** It stresses levels of stress according to the normalized time series movements. Higher positive standard units (1.5 or higher) stand for high levels of stress (dark blue) and lower standard deviations (-1.5 or below) stand for lower level of market stress (lighter colours)
- **Sovereign Rating Index:** An index that translates the letter codes of the three important rating agencies' rating (Moody's, Standard & Poor's and Fitch) to numerical positions from 20 (AAA) to default (0). The index shows the average of the three rescaled numerical ratings
- **Sovereign Spreads Maps:** It shows a colour map with six different ranges of sovereign spreads (darker >500, 300 to 500, 200 to 300, 100 to 200, 50 to 100 and the lighter below 50 bp). For European countries the spread corresponds to the difference of the local 10-year bond yield vs. Germany.
- **Vulnerability Radars:** A Vulnerability Radar shows a static and comparative vulnerability for different countries. For this we assigned several dimensions of vulnerabilities, each of them represented by three vulnerability indicators. The dimensions included are: Macroeconomics, Fiscal, Liquidity, External, Excess Credit and Assets, Private Balance Sheets and Institutional. Once the indicators are compiled, we reorder the countries in percentiles from 0 (lower ratio among the countries) to 1 (maximum vulnerabilities) relative to their group (Developed Economies or Emerging Economies). Furthermore, Inner positions (near 0) in the radar shows lower vulnerability, while outer positions (near 1) stand for higher vulnerability. Furthermore, we normalize each value with respect to given risk thresholds, whose values have been computed according to our own analysis or empirical literature. If the value of a variable is equal to the threshold, it would take a value of 0.8 in the radar
- **Equity Prices Gap:** Equity Prices Indexes are first transformed to real prices using the CPI index. The gap is estimated as the deviation of the current value of the logarithm of real equity prices vs. its corresponding 4-year moving average.

# Methodological Appendix

## Risk Thresholds Table

\* (ARA Metric = 10% × Exports + 10% × Broad Money + 30% × Short-term Debt + 20% × Other Liabilities)

Vulnerability Dimensions	Risk Thresholds Developed Economies	Risk Thresholds Emerging Economies	Risk Direction	Source
<b>Macroeconomics</b>				
GDP	1.0	3.0	Lower	BBVA Research (based on historical percentiles)
Inflation	4.0	10.0	Higher	BBVA Research (based on historical percentiles)
Unemployment	10.0	10.0	Higher	BBVA Research (based on historical percentiles)
<b>Fiscal Vulnerability</b>				
Government fiscal balance (% GDP)	-4.0	-4.0	Lower	Baldacci et Al (2011). Assessing Fiscal Stress. IMF WP 11/100
Expected Interest rate GDP growth differential 5 years ahead	0.8	0.0	Higher	Baldacci et Al (2011). Assessing Fiscal Stress. IMF WP 11/100
Gross Public Debt (%GDP)	60.0	40.0	Higher	IMF Public Debt Sustainability Analysis (DSA) in Market-Access Countries, 2013
<b>External Vulnerability</b>				
Current Account Balance (% GDP)	-5.0	-3.0	Lower	BBVA Research (based on historical percentiles)
External Debt (% GDP)	200.0	60.0	Higher	BBVA Research (based on historical percentiles)
Real Exchange Rate (Deviation from 4 yr average) (Developed)	5.0		Higher	EU Commission (2012) and BBVA Research (based on historical percentiles)
Reserves to ARA Metric (Emerging)		0.8	Lower	Baldacci et Al (2011). Assessing Fiscal Stress. IMF WP 11/100
<b>Liquidity Problems</b>				
Gross Financial Needs	25.0	15.0	Higher	IMF Public Debt Sustainability Analysis (DSA) in Market-Access Countries, 2013
Debt Held by Non Residents	55.0	45.0	Higher	IMF Public Debt Sustainability Analysis (DSA) in Market-Access Countries, 2013
Short Term Debt Pressure				
Public Short-Term Debt as % of Total Public Debt (Developed)	15.0		Higher	Baldacci et Al (2011). Assessing Fiscal Stress. IMF WP 11/100
Reserves to Imports (Emerging)		3.0	Lower	BBVA Research (based on historical percentiles)
Reserves to Short-Term Ext. Debt (Emerging)		1.0	Lower	Baldacci et Al (2011). Assessing Fiscal Stress. IMF WP 11/100
<b>Private Balance Sheets</b>				
Household Debt (% GDP)	84.0	54.0	Higher	BBVA Research (based on historical percentiles)
Non Financial Corporate Debt (% GDP)	120.0	80.0	Higher	BBVA Research (based on historical percentiles)
Financial liquidity (Credit/Deposits)	130.0	110.0	Higher	EU Commission (2012) and BBVA Research
<b>Excess Credit and Assets</b>				
Private Credit to GDP (annual Change)	12.0	12.0	Higher	BBVA Research
Real Housing Prices growth (% yoy)	12.0	12.0	Higher	BBVA Research
Equity prices gap (%)	20.0	20.0	Higher	BBVA Research (based on historical percentiles)
<b>Institutions</b>				
Political Stability	1 (9th percentile)	-0.6 (8th percentile)	Lower	World Bank Governance Indicators
Control of Corruption	1 (9th percentile)	-0.6 (8th percentile)	Lower	World Bank Governance Indicators
Rule of Law	1 (8th percentile)	-1 (8th percentile)	Lower	World Bank Governance Indicators

# Methodological Appendix

## Methodology: Sovereign Rating Index Model

The dependent variable is the average of the three rating agencies (Moody's, Standard & Poor's and Fitch) translated to numerical positions from 20 (AAA) to default (0).

The determinants of the sovereign ratings are estimated using an ordered-logit model with quarterly data from 51 countries and from 2000Q1 to the most recent quarter. The main determinants are the following:

- GDP per capita (real USD)
- Inflation
- Fiscal Balance to GDP
- Public Debt to GDP (local holders)
- Public Debt to GDP (external holders)
- Institutional Index (Rule of Law, Regulation Quality and Government Effectiveness)
- Composite indicator summarizing the *Number of Years since last Sovereign Default* (squared root) and the *Number of Historical Defaults* (over number of years since last default)
- Individual country dummies
- Time-specific dummies for 2020

The effects of the GDP per capita, inflation, and of Local and External Public Debts are decomposed into a global component (median of all 51 countries) and an idiosyncratic component (the deviation against the global component), allowing each component to have a separate effect on the rating.

Additionally, the effect of the fiscal balance is interacted with a categorical variable indicating different Public Debt levels, allowing different sensibilities depending on how indebted a country is.

# Methodological Appendix

## Methodology: Private Debt Equilibrium & Gaps (Debt-to-GDP)

**Debt Gaps (Debt-to-GDP):** The Debt-to-GDP gaps are the difference between the observed debt ratio and an estimated equilibrium level for every country.

The equilibrium level is estimated through non-linear regression that adjust a Gompertz-curve type of relationship between the debt ratio and income per capita, with a saturation level at the highest levels of income. The regression is estimated using a panel data model with annual data from 88 countries and from 1980 to the most recent available year

The determinants are the following:

- GDP per capita (in PPP adjusted USD)
- Short-term interest rate
- Investment-to-GDP ratio
- Inflation
- Bank spread (loans minus deposit interest rates)
- Index of quality of legal framework
- Gini index
- Regulatory capital to assets ratio
- Banking Concentration

We finally combine our own estimated gaps with the gaps estimated following the BIS methodology (trend based on a HP filter), assigning a weight of 0.75 to our own gaps and 0.25 to the gaps estimated through the BIS methodology. **The full description of our methodology can be found in <https://goo.gl/LTeTHD> and <https://goo.gl/r0BLbI>**

# Methodological Appendix

## Methodology: Housing Prices Equilibrium & Gaps (1)

The housing price gaps are the difference between the observed real price and an estimated equilibrium level for every country. The equilibrium model is estimated through a panel data model in which the dependent variable is an index of real property prices, with annual data from 59 countries and from 1990 to the most recent available year, using a random-effects GLS model allowing for heteroscedasticity and autocorrelation, allowing also for a country-wise autocorrelation coefficient.

Some of the explanatory variables are decomposed into two components: a trend (10-years moving average) and a cyclical component (deviation from the trend). The contribution of the trend components is the one that adds to the estimated equilibrium price level:

- GDP real or GDP real per household
- Bank Credit-to-GDP
- Short-term real interest rates (as a deviation from US Libor interest rates)
- US Libor interest rates
- Unemployment rate

Other variables are not decomposed into cycle and trend components but also add to the equilibrium level:

- Households growth rate (%)
- Population between 25 and 44 years old growth rate
- Change in urban population

We finally combine our own estimated gaps with the gaps estimated following the BIS methodology (trend based on a HP filter), assigning a weight of 0.8 to our own gaps and 0.2 to the gaps estimated through the BIS methodology.



# Methodological Appendix

## Methodology: Housing Prices Equilibrium & Gaps (2)

In order to perform any type of cross-country analysis/comparison we need to have comparable data for all the countries included in the analysis. Therefore, we have mainly relied on the BIS Housing Prices Database that includes about 322 series for about 70 countries and regions classified by 6 different characteristics.

However, we have regrouped the original BIS series into a more comparable set of 42 variables according to only 3 characteristics:

- Geographical coverage (whole country, urban areas, large cities, etc.)
- Type of property (all types, single-family houses, apartments)
- “Vintage” (i.e. all properties, new, existing).

Additionally, since we also need to use other sources of data (Dallas FED, Haver) to complement the BIS database, we have tried to classify/organize them, if possible, according to the same criteria. If the most generic series is not available we chose the second “most generic” one. e.g. if there is no series that includes the whole country we would use the one that includes urban areas.

Importantly, since the dependent variable is defined as an index (2016=100), we now also transform all independent variables into indexes, making it much easier for the data to adjust to changes in the dependent variable

Finally, in order to use the number of households as part of our explanatory variables (e.g. GDP/income per household, etc.), we needed to smooth and carefully treat some of the very noisy original data.

# Methodological Appendix

## Methodology: Early Warning Systems

### EWS Banking Crises:

The complete description of the methodology can be found at <https://goo.gl/r0BLbl> and at <https://goo.gl/VA8xXv>. A banking crisis is defined as systemic if two conditions are met: 1) Significant signs of financial distress in the banking system (as indicated by significant bank runs, losses in the banking system, and/or bank liquidations), 2) Significant banking policy intervention measures in response to significant losses in the banking system. The probability of a crisis is estimated using a panel-logit model with annual data from 68 countries and from 1990 to the most recent year. The estimated model is then applied to quarterly data. The probability of a crisis is estimated as a function of the following leading indicators (with a 2-years lag):

- Private Debt-to-GDP Gap (Deviation from an estimated long-term level)
- Current account balance to GDP
- Short-term interest rate (deviation against US interest rate)
- Libor interest rate
- Credit-to-Deposits
- Regulatory Capital to Risk Weighted Assets ratio

### EWS Fiscal Crises:

The Fiscal Stress Early Warning System EWS estimates the probability of a fiscal crisis or stress, which is defined as one of four different events:

1. Public default or restructuring,
2. A large IMF-Supported program,
3. A very high inflation rate (implicit default) or
4. A extreme spike in the sovereign spread.

The probability is estimated as a function of the following leading indicators

- 10-year sovereign yield US
- Government Effectiveness
- Rule of law
- Short-term interest rate
- Public debt-to-GDP
- Primary fiscal balance to GDP
- External debt to GDP
- Current account balance to GDP
- GDP per capita growth rate (in USD-PPP)

# Methodological Appendix

## Methodology: Early Warning Systems

### EWS Definition of Regions:

- OPEC and Other Oil Exporters: Algeria, Angola, Azerbaijan, Bahrain, Canada, Ecuador, Nigeria, Norway, Qatar, Russia and Venezuela
- Emerging Asia: Bangladesh, China, India, Indonesia, Malaysia, Pakistan, Philippines, Thailand and Vietnam.
- South America & Mexico: Argentina, Brazil, Chile, Colombia, Mexico, Paraguay, Peru and Uruguay
- Other LatAm & Caribbean: Bolivia, Costa Rica, Dominican Rep., El Salvador, Guatemala, Honduras, Nicaragua and Panama
- Africa & MENA: Botswana, Egypt, Israel, Morocco, Namibia and South Africa.
- Emerging Europe: Armenia, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Rep, Slovenia, Turkey, Ukraine
- Core Europe: Austria, Belgium, Denmark, Finland, France, Germany, Netherlands, Sweden and United Kingdom.
- Periphery Europe: Greece, Ireland, Italy, Portugal and Spain
- Advanced Economies: Australia, Japan, Korea, Singapore, Iceland, New Zealand and Switzerland

# Methodological Appendix

## Methodology: Sovereign CDS Model

The dependent variable is the 5-year Sovereign CDS. The determinants of the sovereign CDS are estimated using a panel data model with quarterly data from 48 countries and from 2004Q1 to the most recent quarter, using a random-effects linear model with an AR(1) disturbance. The main determinants are the following:

- BAA Spread
- GDP per capita (real USD)
- Inflation
- Fiscal Balance to GDP
- Public Debt to GDP (local holders)
- Public Debt to GDP (external holders)
- Institutions Index (Rule of Law, Regulation Quality and Government Effectiveness)
- Composite indicator summarizing the *Number of Years since last Sovereign Default* (squared root) and the *Number of Historical Defaults* (over number of years since last default)
- Percentage change in FED's and ECB's Balance Sheets.
- Reserves to Import Ratio
- Specific Default and time-specific dummies for 2020

Some variables (BAA Spread, GDP per capita, Inflation, Fiscal Balance and Public Debt levels) are decomposed into two different components, a long-term component (using a 5-years moving average) and a cyclical component (deviation from 5-y MA), allowing each component to have a different effect. The effects of the long-term components are the ones that determines the equilibrium level, together with the effect of the rest of variables which are not decomposed.

Moreover, the final CDS equilibrium level is estimated by leaving the BAA spread unchanged at its long-term median level (2003-last quarter).

# Methodological Appendix: SGR Construction

## INTERNAL RISK

The internal political risk ( $\text{PolRisk}_{i,t}$ ) is the first principal component of a PCA Analysis of:

- Electoral Democracy Index
- Rule of Law
- Political Polarisation
- GINI Index

$$\text{MilReady}_{i,t} = \frac{1}{3} (M.Exp/GDP_{i,t} + M.Exp/GOV_{i,t} + \text{WorldShare}_{i,t})$$

$$\text{InternalRisk}_{i,t} = \frac{1}{2} \text{PolRisk}_{i,t} + \frac{1}{2} \text{MilReady}_{i,t}$$

## EXTERNAL RISK

**Contiguity Weight:**  $CW_{ij,t} = 1\{\text{border}_{ij} = 1\} \cdot L(\text{Pop}_{j,t})$

**Neighboring Weight:**  $NW_{ij,t} = \frac{\sqrt{\text{Area}_j} L(\text{Pop}_{j,t})}{e^{\text{Dist}_{ij}/1000}}$

**Rivalry Weight:**  $RW_{ij,t} = (\text{IdeolDist}_{ij,t} - \overline{\text{IdeolDist}_t})^2 L(\text{Pop}_{j,t})$

$$\bar{X}_{i,t}^C = \sum_{j \neq i} CW_{ij,t} X_{j,t}, \quad \bar{X}_{i,t}^N = \sum_{j \neq i} NW_{ij,t} X_{j,t}, \quad \bar{X}_{i,t}^R = \sum_{j \neq i} RW_{ij,t} X_{j,t}$$

$$\text{ExtPolRisk}_{i,t} = 0.4 \overline{\text{PolRisk}_{i,t}}^C + 0.2 \overline{\text{PolRisk}_{i,t}}^N + 0.4 \overline{\text{PolRisk}_{i,t}}^R$$

$$\text{ExtIdeolRisk}_{i,t} = 0.4 \overline{\text{IdeolDist}_{i,t}}^C + 0.2 \overline{\text{IdeolDist}_{i,t}}^N + 0.4 \overline{\text{IdeolDist}_{i,t}}^R$$

$$\text{ExtMilRisk}_{i,t} = 0.4 \overline{\text{MilRisk}_{i,t}}^C + 0.2 \overline{\text{MilRisk}_{i,t}}^N + 0.2 \overline{\text{MilRisk}_{i,t}}^R + 0.2 \text{MilGap}_{i,t}$$

$$\text{ExternalRisk}_{i,t} = \frac{1}{3} \text{ExtPolRisk}_{i,t} + \frac{1}{3} \text{ExtIdeolRisk}_{i,t} + \frac{1}{3} \text{ExtMilRisk}_{i,t}$$

## STRUCTURAL GEOPOLITICAL RISK (SGR)

$$\text{SGR}_{i,t} = \frac{1}{2} \text{InternalRisk}_{i,t} + \frac{1}{2} \text{ExternalRisk}_{i,t}$$

or multiplication, alternatively

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