



MAPFRE Economics

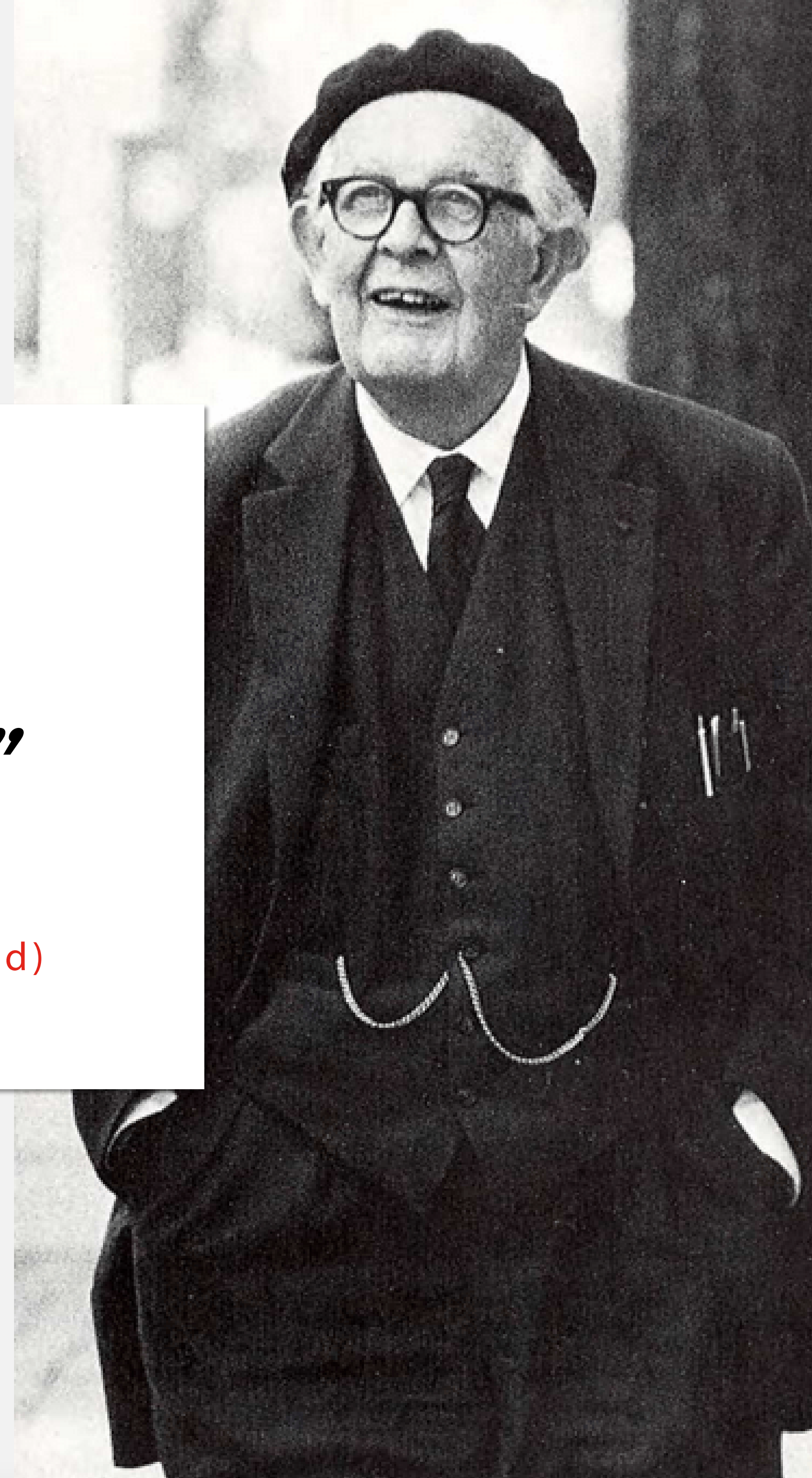
Scenario Modelling at Mapfre Economics

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Madrid, November 18th. 2025

***“Narratives help
construct meaning
and organize experience”***

(Piaget, 1945 – Play, Dreams and Imitation in Childhood)



Scenario creation: "Rather be wrong with a coherent story than correct by chance"

Scenario definition and update

1. RATIONALE:

a need to portray consistent alternative realities, their likelihood & their costs as to strategically plan and ensure economic resiliency.

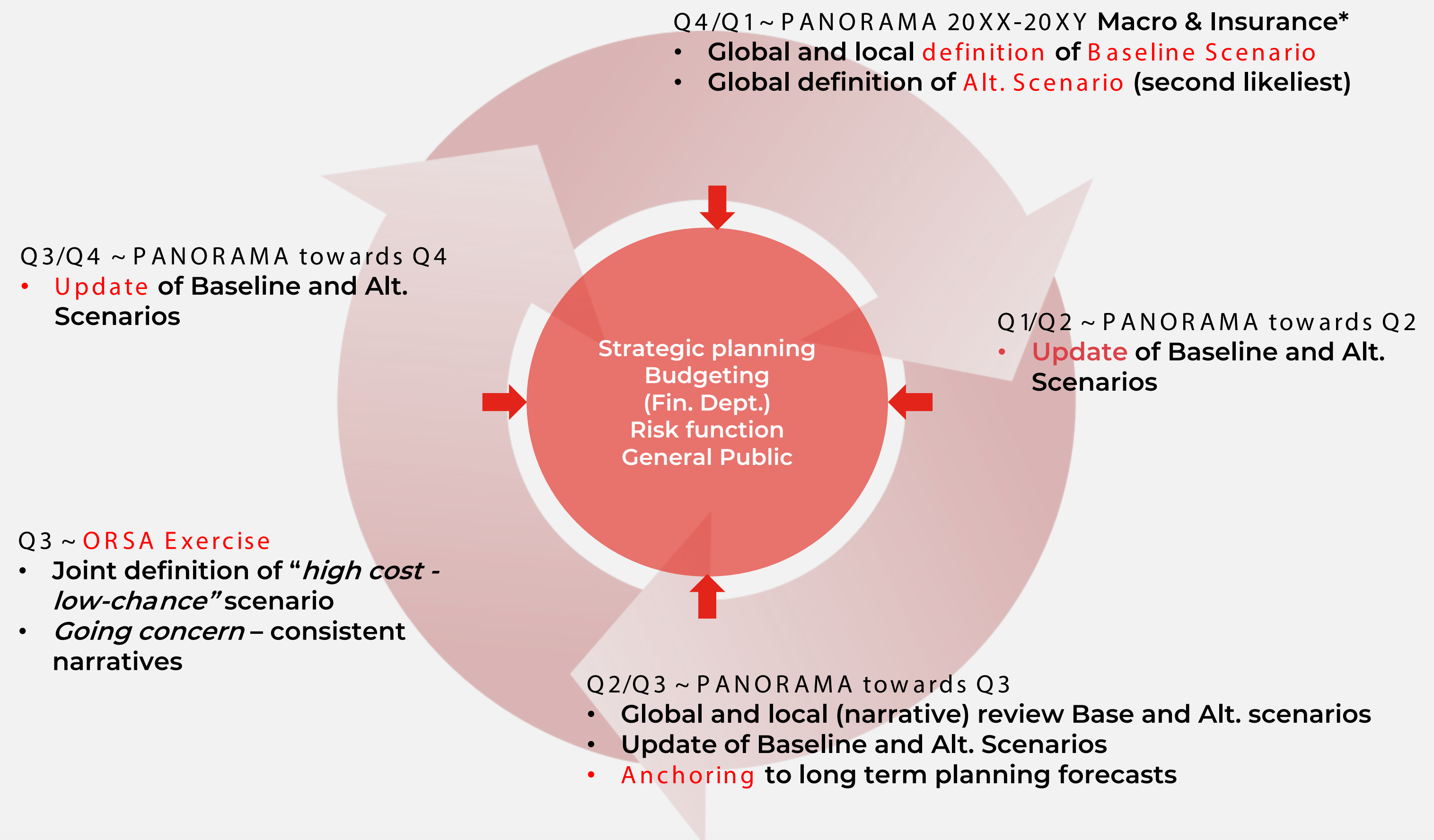
2. CLIENTS:

general economic literacy, corporate strategic planning and financial functions, resiliency and stability supervisory bodies.

3. FREQUENCY:

permanent fact and data-driven update of the narrative and the implications that could affect the economy, sector and the corporate.

PERMANENT UPDATE - CHRONOGRAM



Scenario creation: "Rather be wrong with a coherent story than correct by chance"

Scenario definition and update

1. ECONOMIC SCENARIO

Forecasts of the economic, financial and sector environment in which the Insurer operates, covering base-case (most likely) and alternative scenarios for economic, financial and sector's balance-sheet and P&L variables.

2. ANNUAL DETAILED DESCRIPTION

Detailed definition of baseline and risk scenario(s) : 2 years horizon, quarterly & monthly frequency on a set of macro variables (GDP, inflation, employment, ...), term curve, exchange rates, and balance sheet. Anchoring to long term forecasts. Covering our footprint(+).

3. QUARTERLY UPDATE

Quarterly update of the baseline & alt. scenario figures and qualitative assessment of risks factors

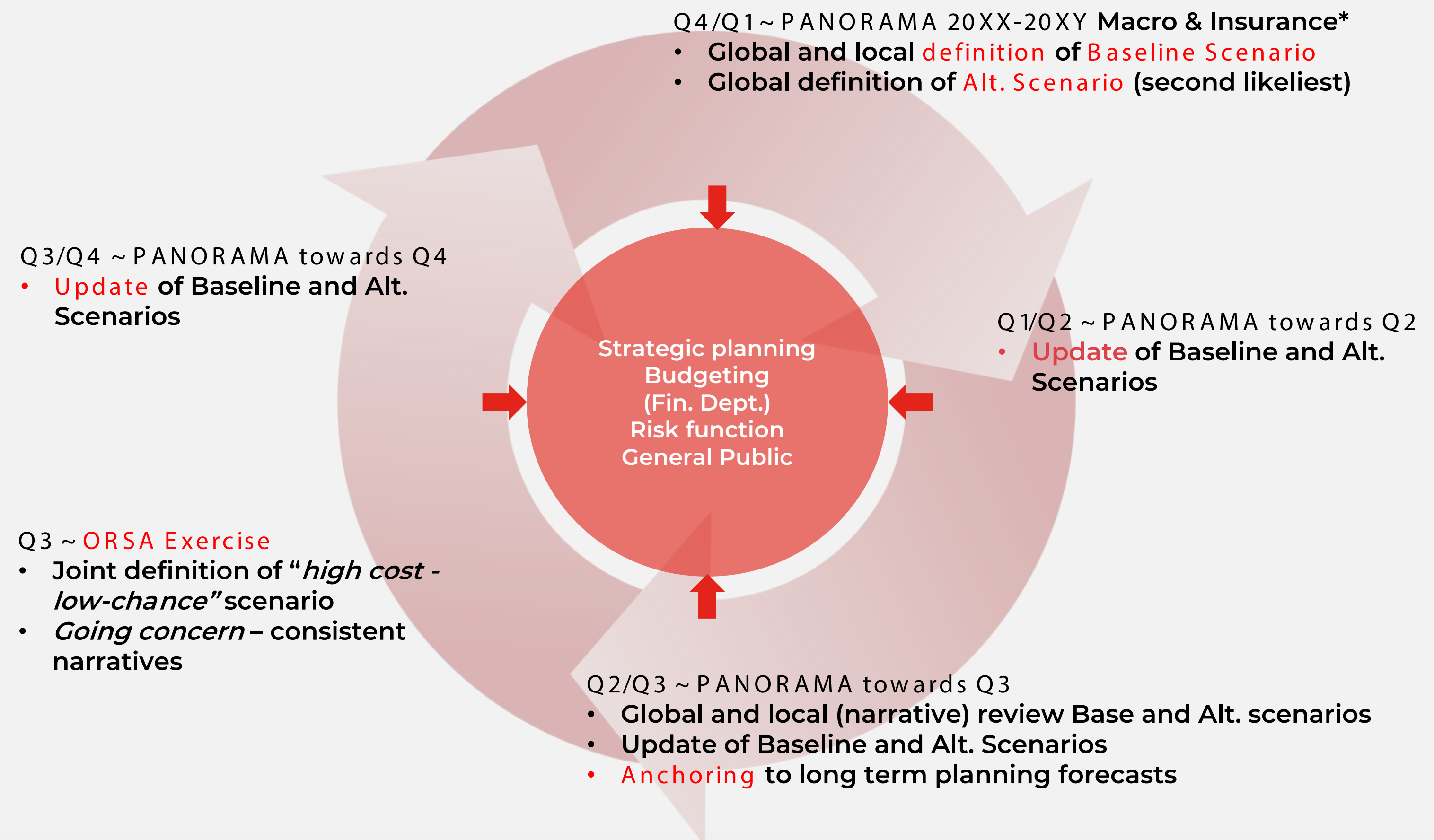
4. MONTHLY UPDATE (INTERNAL)

Monthly update of policy rates, term curve and exchange rates and assessment of biases for the macro baseline

5. AD HOC ANALYSIS OR REQUESTS

Simulations of impact of different events (Ven. Arg, fx)

PERMANENT UPDATE - CHRONOGRAM

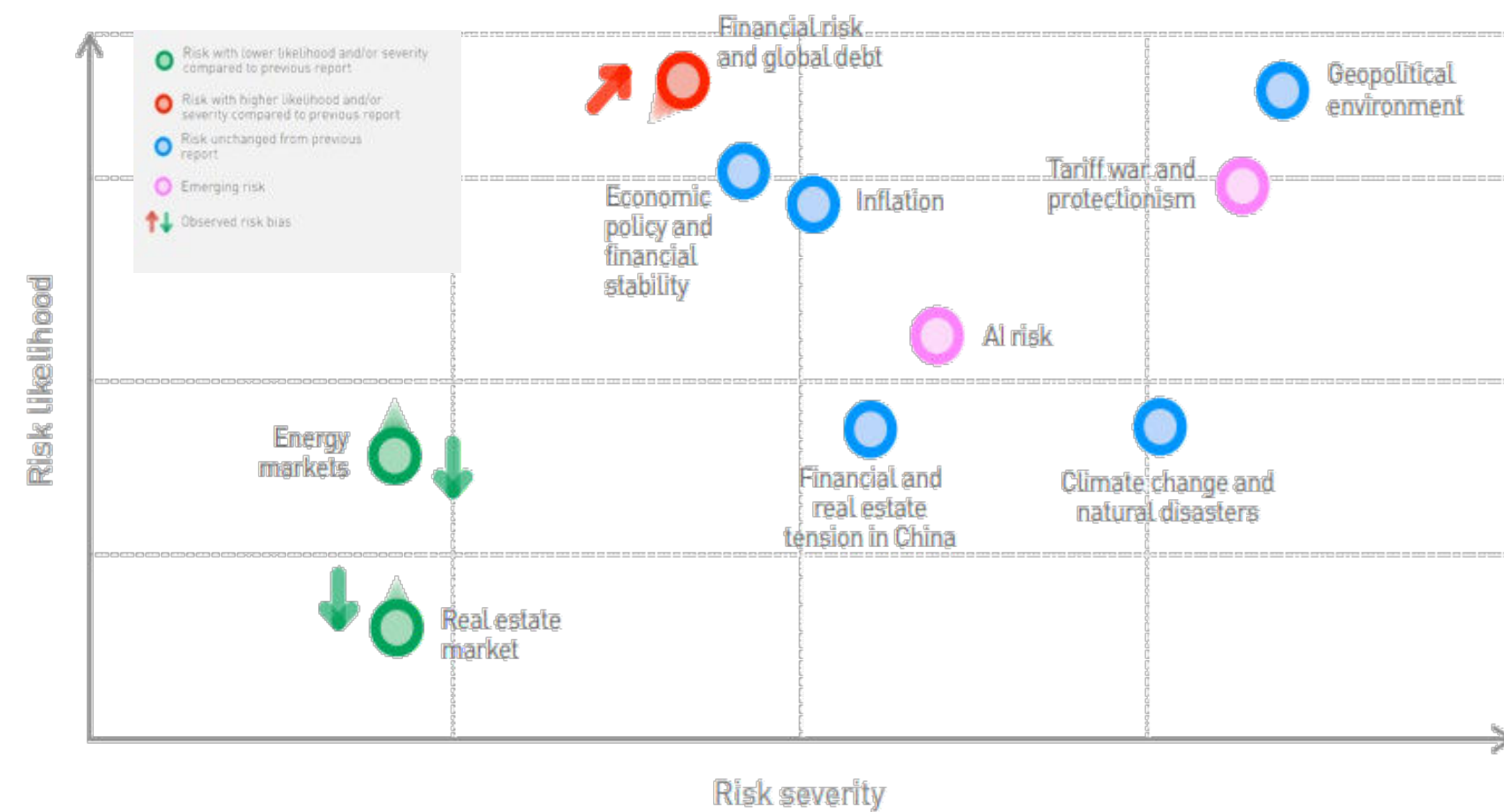


Scenario creation 2: From looming risks to unfolding narratives

Building blocks of the scenario narrative (1/3)

RISK BALANCE

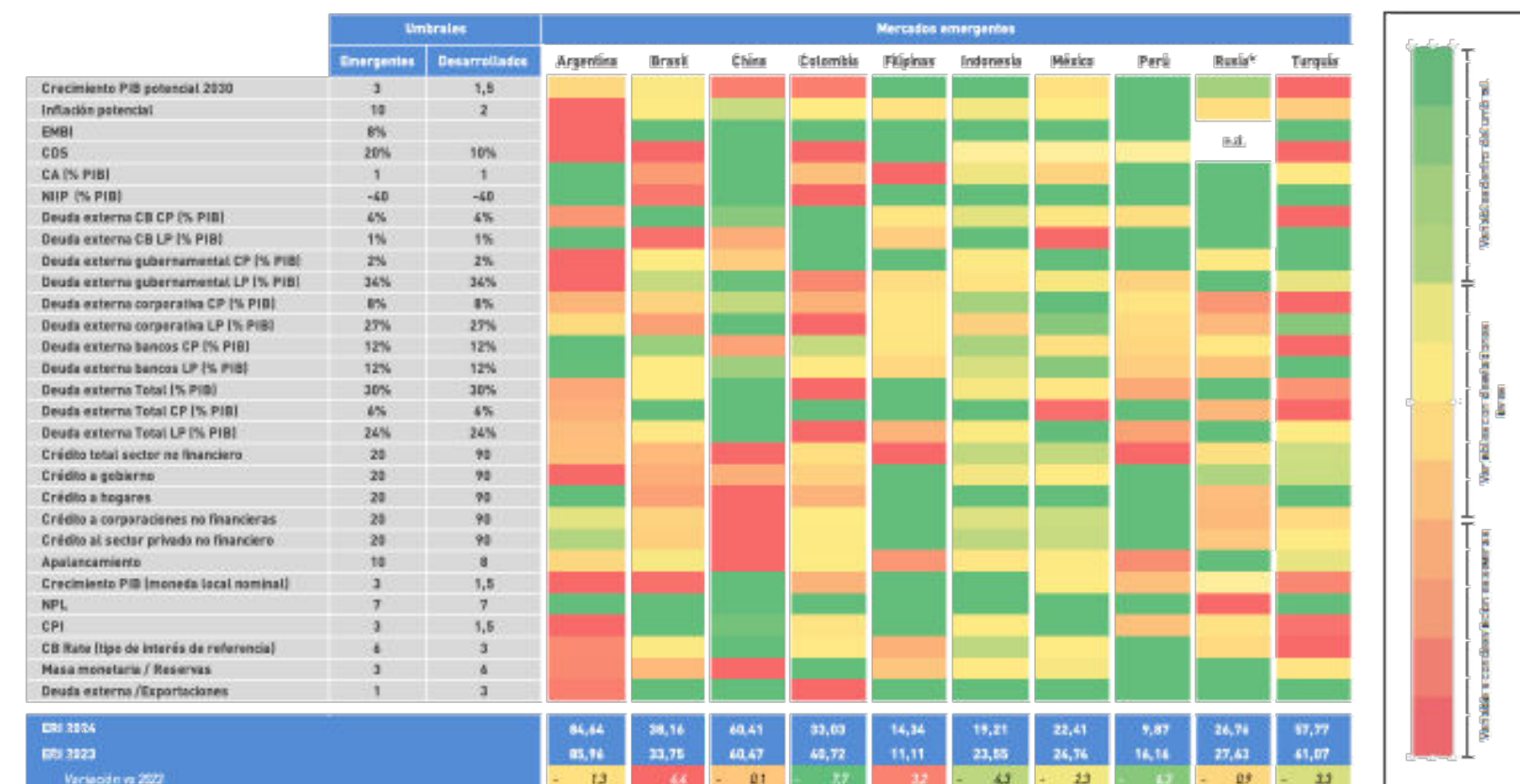
(market risk, sovereign risk, credit risk, etc.)



1

CONTEXT OF VULNERABILITIES

Debt, liquidity, \$-leverage, inequality, sticky inflation, etc.



2

TRIGGERS - SHOCKS

- Oil Price shock / energy shortage
 - Commodity cycle slump
 - Financial Markets impairment
 - Monetary policy mismanagement
- (...)

3

Source: MAPFRE Economics PANORAMA

Source: MAPFRE Economics ERI

Identification of existing risks. Matching risk nature with possible triggering events (example: sovereign risk - 10y T-bill term premia). References in the [“Economic and Sector Outlook”](#) and [“Risk Environment. Classification and analysis”](#) documents

Analysis of the vulnerability context (asset price bubbles, currency misalignments, \$-leverage, debt, policy procyclicality, etc.). As analyzed at the [“Emerging Risk Index”](#) Report and [“Currency volatility, flows and balance of payments”](#).

Selection of plausible shocks (with reference in previous events or as from supervisory guidelines)

Scenario creation 3: Quantifying the impact

Building blocks of the scenario narrative (2/3)

4

TRANSMISSION CHANNELS

Financial disruption in China with impact on domestic activity and spillovers on global economy

Commodity prices relapse in 2016-17
Global trade slowdown

Sluggish recovery in EMU & USA

Deterioration of financial conditions
Strong contagion to other EM
Portfolio flows disruption

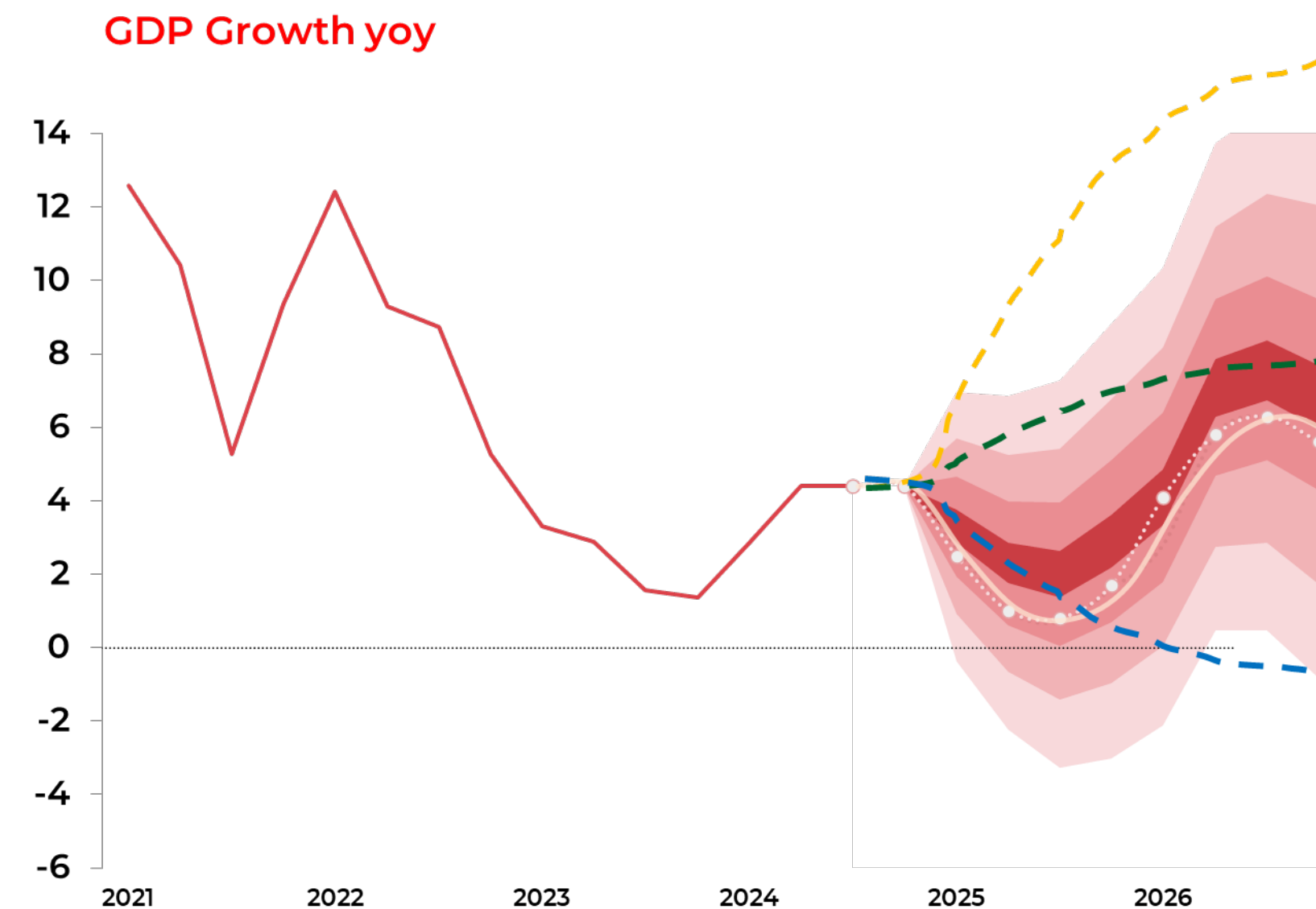
Source: MAPFRE Economics PANORAMA

Taking stock of the possible transmission and amplification channels (expectations channel, portfolio channel, etc.). Financial – real side effects, sector effects, transmission to the rest of the world and contagion between risks.

5

CONDITIONAL PATH SIMULATIONS

Yielding scenarios and probability intervals



Numerical simulations of the impacts onto dependent variables (conditionality, restrictions, etc.) Various statistical and econometric techniques.

6

IMPACT VARIABLES

GDP slump, growth divergence, increased inequality

Global USD appreciation
Sharp EM currencies depreciations

Flattening yield curves in DM
(long term IR below Base Scenario)
New rounds of QE are not phased out

Higher risk premium, mainly in EM

Analyzing the coherence of the impact and reaction of the variables that define the macro financial and sectorial context.

Scenario creation 4: Stablising the scenario relevance hierarchy

Building blocks of the scenario narrative (3/3)

1. Experts' insight to stablish a frontier of plausible events (probability and severity).
2. Stablising possible scenarios to be used according to internal and external needs and requirements.
3. Probabilities are subjective and conditional to previous experiences.

6

IMPACT VARIABLES

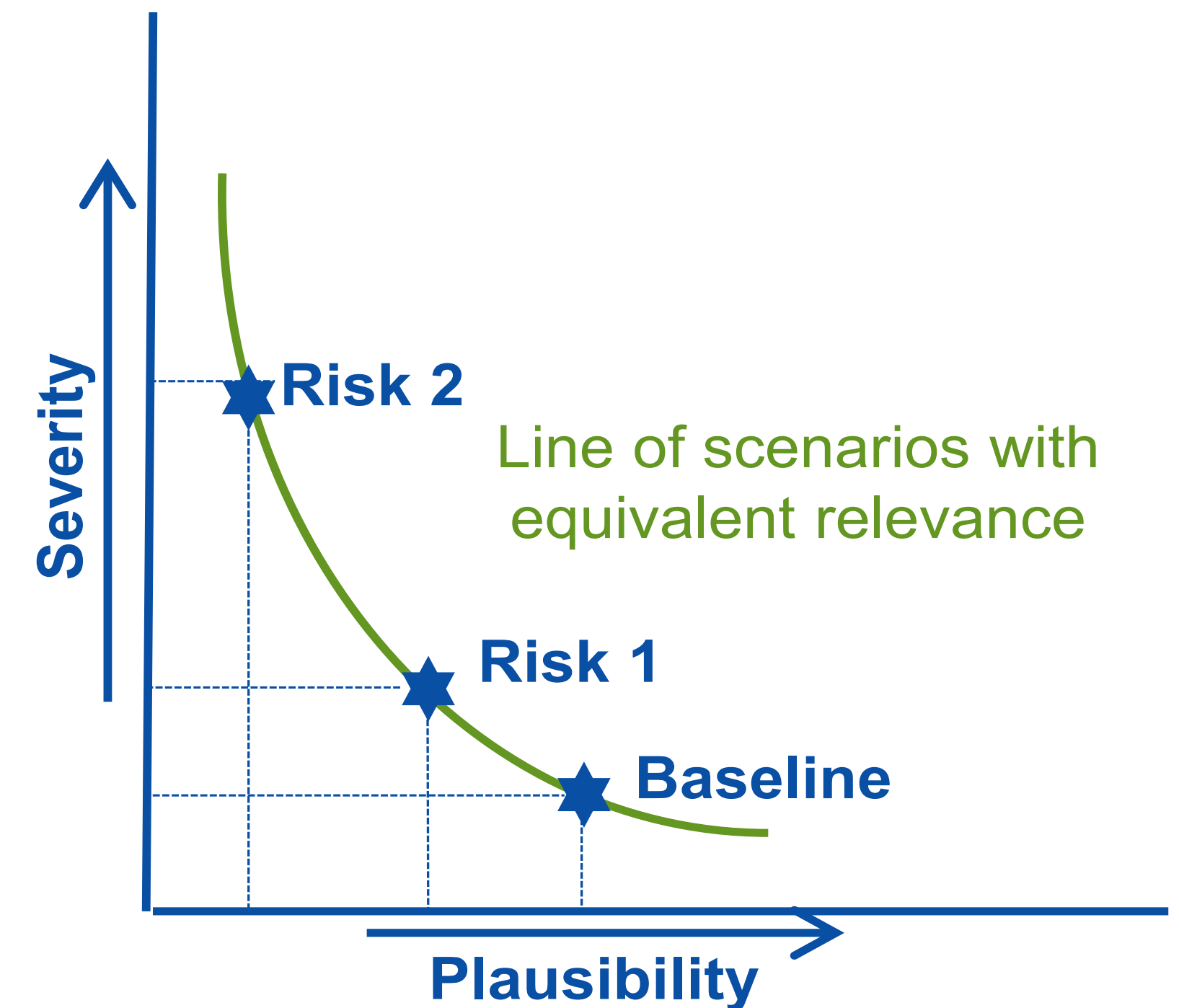


Set of Stress Scenarios
+
Probability
+
Economic Rationale

7

RELEVANCE CURVE

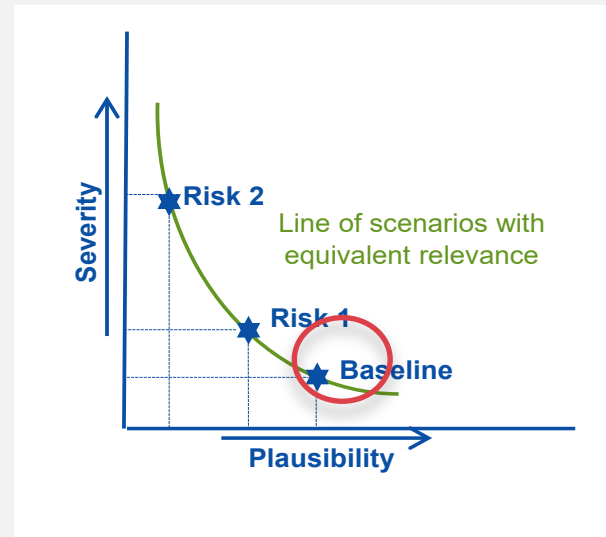
Helps stablishing the hierarchy of possible scenarios



Scenario creation 5: baseline narrative

Baseline scenario narrative in a nutshell

The baseline scenario envisages a stable but modest growth environment for 2025–26: enough to support business but not to spur sharp expansion. For strategy and planning (especially in insurance or capital-intensive sectors) the message is “hold the line”: don’t count on outsized upside, build in buffers for slower growth, and keep an eye on interest-rate and inflation dynamics.

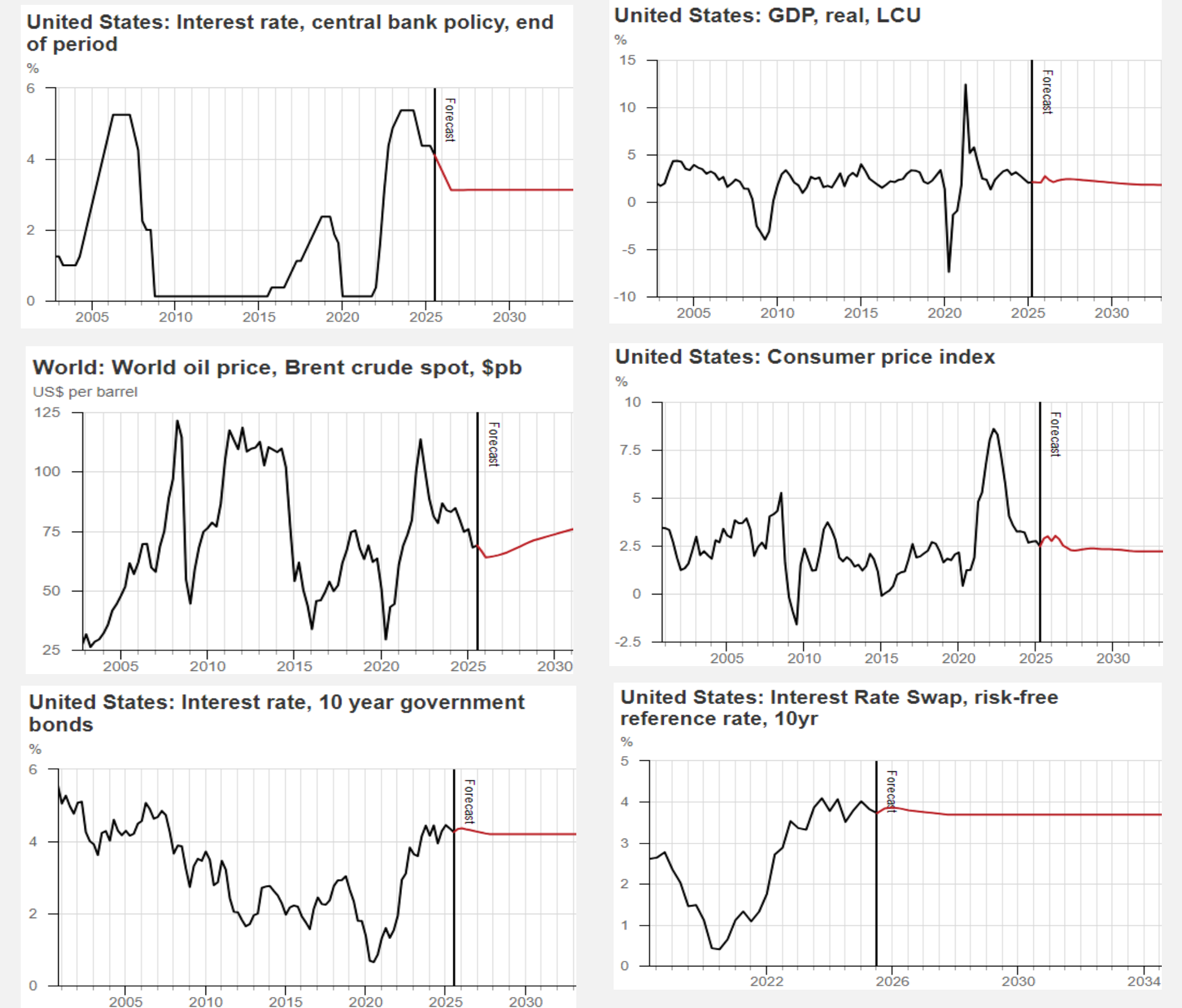
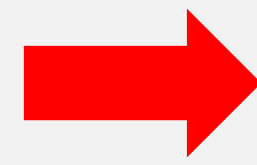


Baseline scenario narrative building blocks

<p>Global GDP growth slows moderately to about 3.1% in 2025 and 3.0% in 2026.</p>	<p>Emerging markets remain the main driver of growth; developed economies continue to face structural constraints in productivity, fiscal and monetary policy.</p>	<p>In developed economies growth remains below potential, limiting the capacity to absorb shocks.</p>	<p>The insurance industry remains exposed to inflation risks, interest-rate shifts and global growth volatility despite the favorable broad context.</p>
<p>Global inflation moderates gradually to around 3.5% in 2025 and 3.0% in 2026.</p>	<p>The insurance sector operates in a benign environment: positive real interest rates, moderate inflation, stable consumption, favourable for savings-type life insurance business.</p>	<p>Fiscal space and monetary policy leeway are constrained in many advanced economies.</p>	

Source: MAPFRE Economics PANORAMA

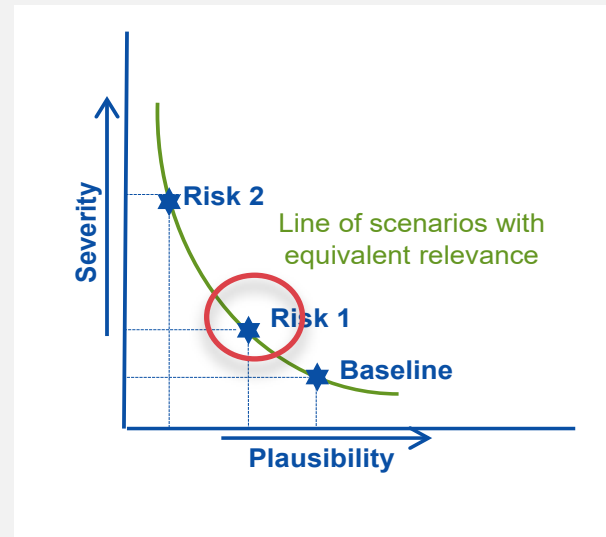
Shocks and response examples



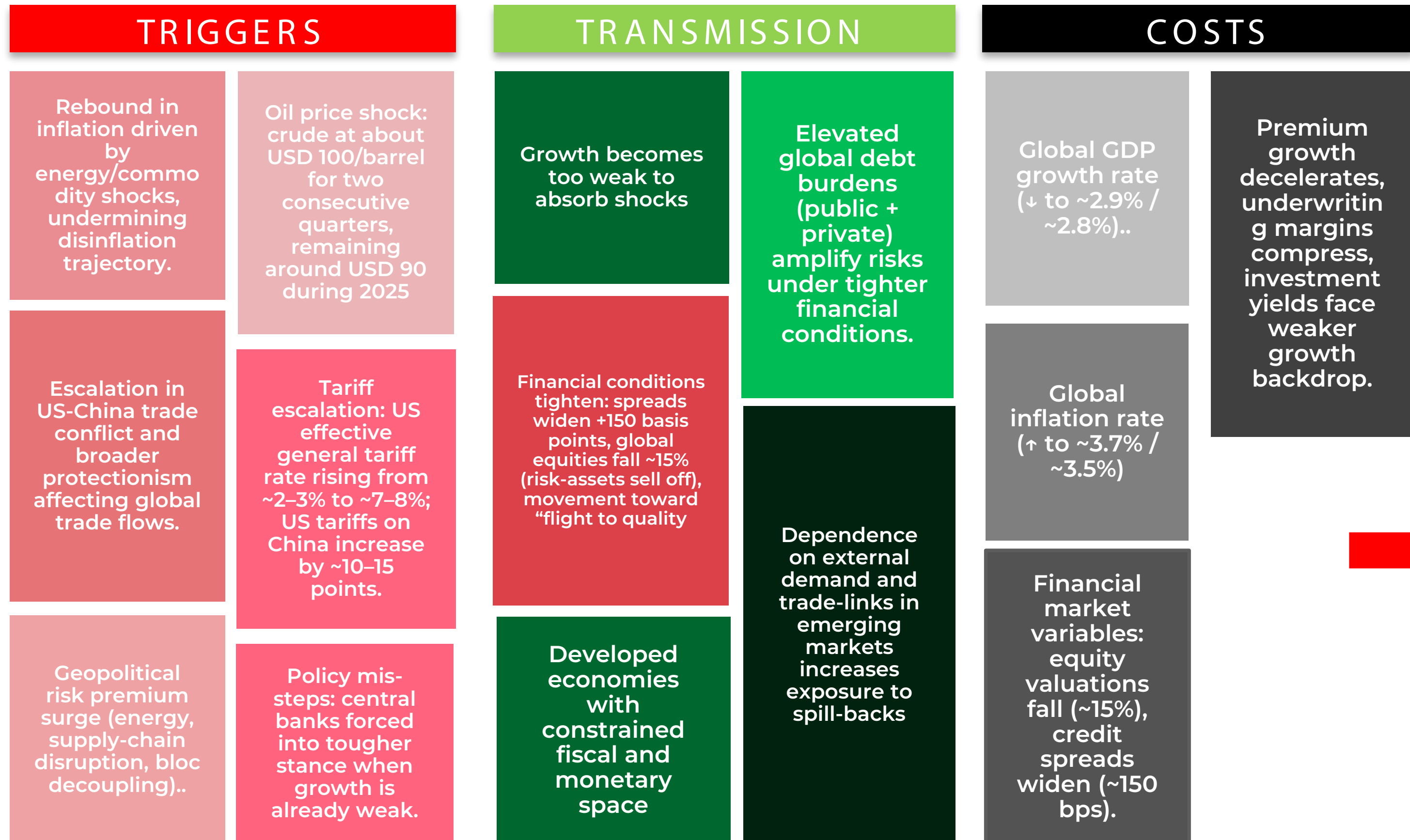
Scenario creation 6: alternative narrative

Alternative (second most likely) scenario narrative in a nutshell

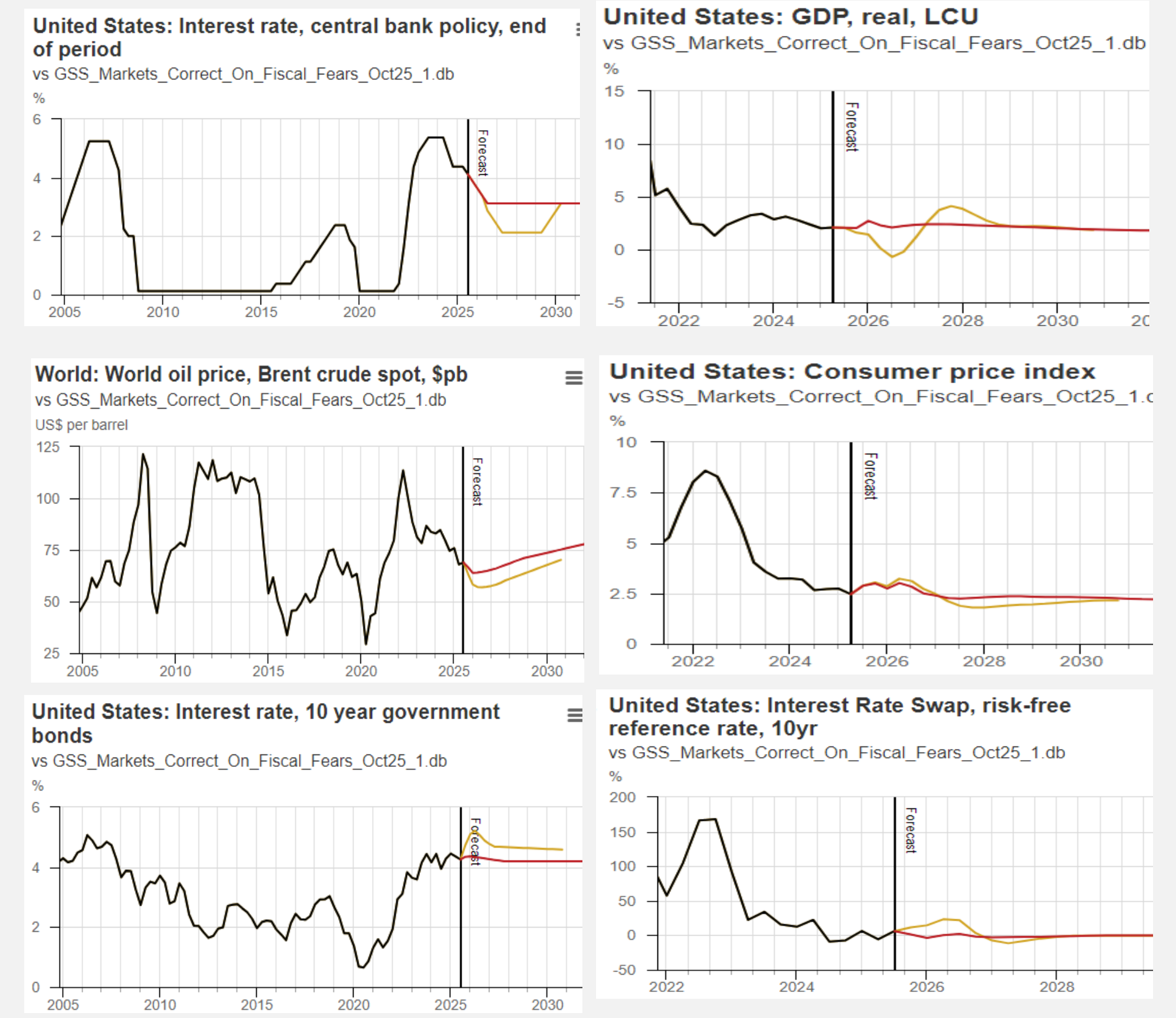
In the alternative scenario the outlook shifts from “moderate slowdown” to a more adverse mix of weaker growth and higher inflation — a stagflation-type outcome. The strategic implication: build resilience now, assume lower returns and higher volatility, test business models under stress.



Triggers & Transmission Channels, Vulnerabilities and outcomes



Shocks and response examples

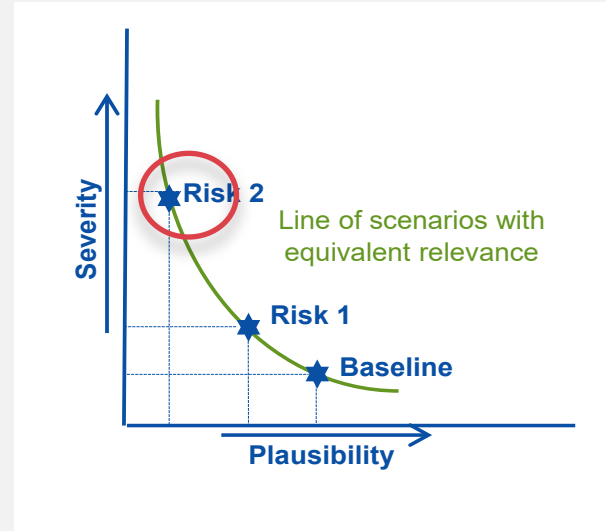


Source: MAPFRE Economics PANORAMA

Scenario creation 7A: High Level Risk scenario

Practitioner Guidelines

1. Find a narrative that defines a stress scenario of with low likelihood and high severity so that it satisfies a “going concern” nature as defined by the group and the supervisory bodies
2. Impact variables must be macroeconomic (growth, inflation, etc.) and financial (share prices, credit spreads, fx...) but
3. Must be a direct link to our industry relevant variables affecting the P&L and the Balance Sheet (income flows, financial costs, asset prices, yield curves, etc.)
4. Reverse engineering is very often the mean of finding that HLR scenario that we call ORSA scenario



AIMING TO ACHIEVE CONSISTENCY WITH SUPERVISORY GUIDELINES IN THE DEFINITION OF STRESS SCENARIOS

1

PERIMETER

aiming to create shocks enough to impact the perimeter of the groups as defined by supervisors (highest level of consolidation)

2

NATURE OF SHOCKS

assessing performance of the footprint under a common global shock (locally scaled by macro financial conditions of each country)

3

PURPOSE

shocks are macro-driven but insurers risk -aimed. Forecasts are aimed at providing sufficient stress to provide a “going-concern” scenario (not the resolution).

4

RISK PARAMETERS

we don't control for risk parameters, yet scenarios and variables shocked should provide sufficient stress to check effect on all types of positions and their valuation options.

5

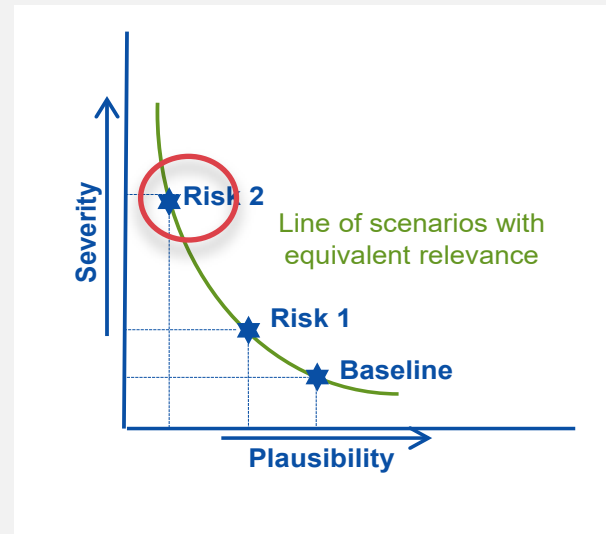
COVERAGE

stressed scenarios provided intend provide macro insight to cover credit, market and sovereign risk. Analyzing risks with an impact on regulatory requirements are also factored in the creation of Stress Scenarios.

Scenario creation 7B: Own Risk Systemic Assessment scenario

Narrative: *“Severe inflationary recession with policy mismanagement and market correction”*

A global trade war triggers a inflationary recession: economic activity collapses while inflation resurges. Policy tools become misaligned, financial markets reprice sharply; safe-haven flows boost the dollar and destabilize other currencies. The shock is globally synchronized but regionally asymmetric—advanced economies contract while emerging markets stagnate under financial stress and commodity volatility.

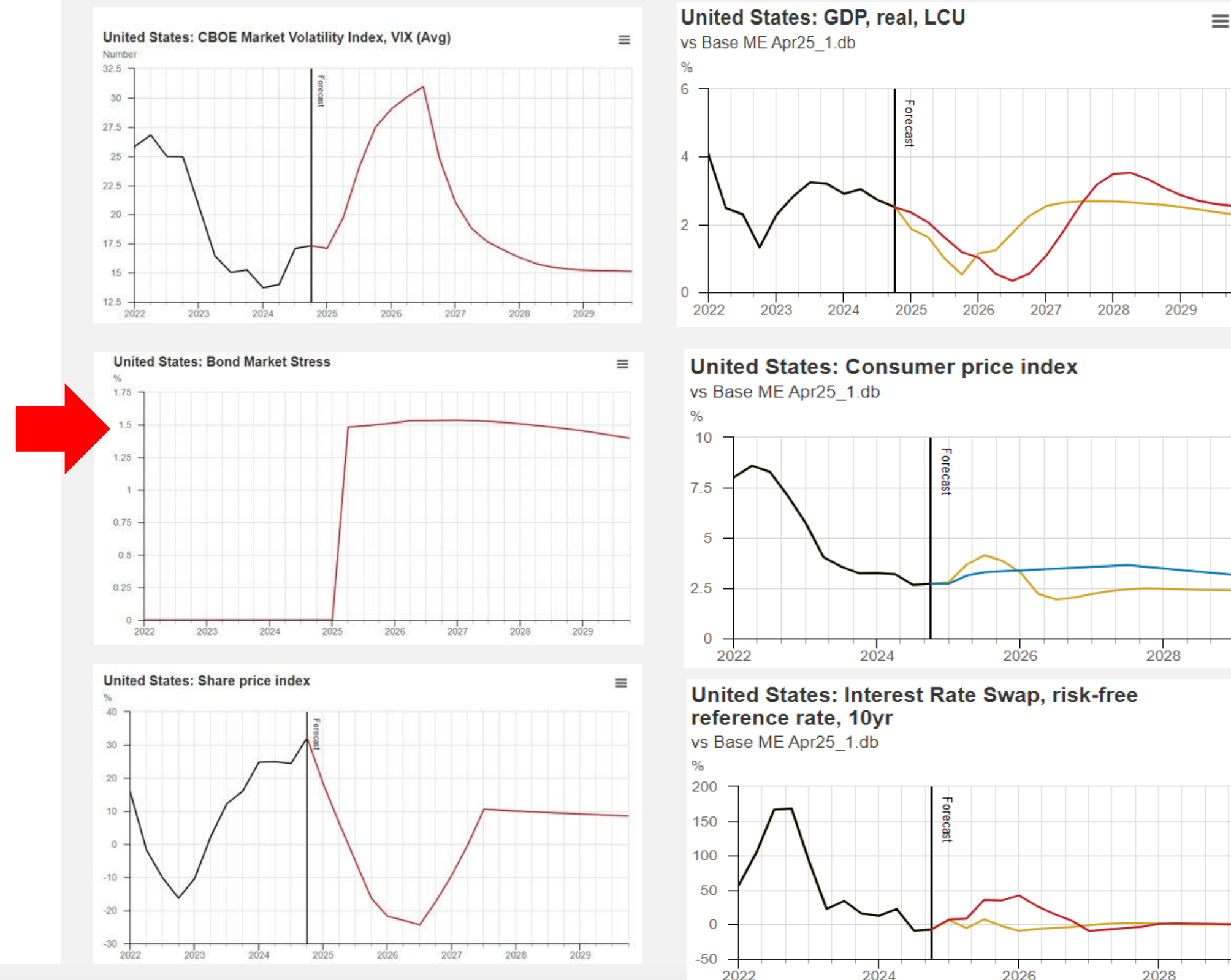


Triggers & Transmission Channels, Vulnerabilities and outcomes

TRIGGERS		TRANSMISSION		COSTS	
Severe trade tensions between global blocs. Disruption of global trade flows, generating a simultaneous supply and demand shock.	Dual shock to supply and demand: Supply: trade barriers, cost inflation, input shortages. Demand: deterioration in consumption and investment.	Inflation remains elevated despite falling growth, undermining base-case disinflation trends	Policy inconsistency and procyclical: tightening Monetary loosening Fiscal policy. <i>Fiscal Dominance</i>	Global recession in 2025–2026: world GDP growth below 2%, meeting recession thresholds Asymmetric and slow recovery beyond this period.	Asymmetric global impacts: DMs -1/-2% Ems +2% conditional to flows and commodity cycle
Global yields +150–200 bps, German bund +40 bps, U.S. Treasuries +150 bps. U.S. equities fall up to 25%, Contagion to other global stock markets -15%. Volatility index reaches +30 (2x normal levels)	Retaliatory tariff escalation, leading to higher trade barriers across countries			Bond markets stressed: Risk-free rates rise by >200 bps across the curve	CDS widen by ~350 bps. Equity markets fall >25%. Volatility spikes to +3σ Real estate markets

Source: MAPFRE Economics using References in EIOPA [guidelines](#) and 2008 -GFC & 2012- Eurocrisis data

Shocks and response examples



Wrap up

1

Building different scenarios must be consistent with reality but also create coherent narratives

2

Different scenarios adapt for different purposes and clients

3

Regulatory guidelines must be incorporated into the framework

Thanks

Appendix

Output: Base and Alt. GDP scenarios

Baseline and stressed scenarios: gross domestic product
[annual growth, %]

	Baseline Scenario (BS)						Stressed Scenario (SS)					
	2021	2022	2023	2024	2025(p)	2026(p)	2021	2022	2023	2024	2025(p)	2026(p)
United States	6,2	2,5	2,9	2,8	1,8	1,8	6,2	2,5	2,9	2,8	1,7	0,6
Eurozone	6,3	3,7	0,5	0,8	1,1	1,1	6,3	3,7	0,5	0,8	0,9	0,3
Germany	3,9	1,9	-0,7	-0,5	0,2	0,9	3,9	1,9	-0,7	-0,5	0,1	0,0
France	6,8	2,8	1,6	1,1	0,5	0,8	6,8	2,8	1,6	1,1	0,4	0,2
Italy	8,8	5,0	1,1	0,5	0,5	0,7	8,8	5,0	1,1	0,5	0,4	0,0
Spain	6,7	6,4	2,5	3,5	2,9	1,9	6,7	6,4	2,5	3,5	2,8	1,2
Portugal	5,6	7,0	3,1	2,1	2,0	1,9	5,6	7,0	3,1	2,1	1,8	1,3
United Kingdom	8,5	5,1	0,3	1,1	1,1	1,2	8,5	5,1	0,3	1,1	1,0	0,2
Japan	2,8	0,9	1,2	0,1	1,0	0,7	2,8	0,9	1,2	0,1	0,9	0,1
Emerging markets	7,0	4,3	4,7	4,3	3,7	3,4	7,0	4,3	4,7	4,3	3,3	2,7
Latin America	7,4	4,3	2,4	2,4	2,1	2,0	7,4	4,3	2,4	2,4	1,9	1,4
Mexico	6,3	3,7	3,4	1,2	0,5	1,5	6,3	3,7	3,4	1,2	0,4	0,7
Brazil	5,1	3,1	3,2	3,0	2,2	1,6	5,1	3,1	3,2	3,0	2,0	1,2
Argentina	10,4	6,0	-1,9	-1,3	4,6	3,3	10,4	6,0	-1,9	-1,3	4,5	3,2
Colombia	10,8	7,3	0,7	1,6	2,4	2,8	10,8	7,3	0,7	1,6	2,3	1,7
Chile	11,5	2,2	0,6	2,4	2,3	2,3	11,5	2,2	0,6	2,4	2,2	1,4
Peru	13,4	2,8	-0,4	3,3	3,0	2,8	13,4	2,8	-0,4	3,3	2,8	2,1
Emerging markets, Europe ¹	7,2	0,5	3,6	3,5	1,8	2,2	7,2	0,5	3,6	3,5	1,8	2,2
Turkey	11,8	5,4	5,0	3,3	3,4	3,3	11,8	5,4	5,0	3,3	3,3	2,8
Asia Pacific	7,8	4,7	6,1	5,3	4,7	4,3	7,8	4,7	6,1	5,3	4,5	3,5
China	8,6	3,1	5,4	5,0	4,6	4,2	8,6	3,1	5,4	5,0	4,4	3,5
Indonesia	3,7	5,3	5,0	5,0	4,8	4,8	3,7	5,3	5,0	5,0	4,7	4,0
Global	6,6	3,8	3,5	3,3	3,1	3,0	6,6	3,8	3,5	3,3	2,7	2,2

Output: Base and Alt. Inflation scenarios

Baseline and stressed scenarios: inflation
[% YoY, average]

	Baseline Scenario (BS)						Stressed Scenario (SS)					
	2021	2022	2023	2024	2025(p)	2026(p)	2021	2022	2023	2024	2025(p)	2026(p)
United States	4,7	8,0	4,1	3,0	3,0	2,6	4,7	8,0	4,1	3,0	3,4	2,8
Eurozone	2,6	8,4	5,4	2,4	2,1	1,8	2,6	8,4	5,4	2,4	2,0	1,4
Germany	3,1	6,9	5,9	2,3	2,2	1,8	3,1	6,9	5,9	2,3	2,2	1,5
France	1,6	5,2	4,9	2,0	1,0	1,7	1,6	5,2	4,9	2,0	1,1	1,1
Italy	1,9	8,2	5,6	1,0	1,8	1,7	1,9	8,2	5,6	1,0	1,9	1,4
Spain	3,1	8,4	3,5	2,8	2,6	1,8	3,1	8,4	3,5	2,8	2,7	1,7
Portugal	1,3	7,8	4,3	2,4	2,1	2,1	1,3	7,8	4,3	2,4	2,2	1,5
United Kingdom	2,6	9,1	7,3	2,5	3,4	2,5	2,6	9,1	7,3	2,5	3,5	2,3
Japan	-0,2	2,5	3,3	2,7	2,9	1,8	-0,2	2,5	3,3	2,7	3,0	1,3
Emerging markets	5,9	9,7	8,2	7,9	4,1	3,8	5,9	9,7	8,2	7,9	4,3	3,6
Latin America	9,9	14,2	14,8	16,6	8,8	8,1	9,9	14,2	14,8	16,6	8,9	7,9
Mexico	5,7	7,9	5,5	4,7	3,9	3,7	5,7	7,9	5,5	4,7	4,0	3,5
Brazil	8,3	9,3	4,6	4,4	5,2	4,4	8,3	9,3	4,6	4,4	5,3	4,0
Argentina	48,4	72,4	133,5	219,9	41,6	29,0	48,4	72,4	133,5	219,9	41,8	30,0
Colombia	3,5	10,2	11,7	6,6	4,9	3,8	3,5	10,2	11,7	6,6	5,1	3,5
Chile	4,5	11,6	7,3	3,9	4,4	3,0	4,5	11,6	7,3	3,9	4,5	2,6
Peru	4,0	7,9	6,3	2,4	1,6	2,2	4,0	7,9	6,3	2,4	1,7	2,3
Emerging markets, Europe ¹	9,1	25,4	17,3	16,9	13,5	9,3	9,1	25,4	17,3	16,9	13,5	9,3
Turkey	19,6	72,3	53,9	58,5	34,8	23,6	19,6	72,3	53,9	58,5	36,0	22,5
Asia Pacific	2,3	3,9	2,4	1,9	0,2	1,0	2,3	3,9	2,4	1,9	0,3	0,8
China	0,9	2,0	0,2	0,2	0,0	0,8	0,9	2,0	0,2	0,2	0,1	0,7
Indonesia	1,6	4,1	3,7	2,3	2,0	2,5	1,6	4,1	3,7	2,3	2,1	2,2
Global	4,7	8,7	6,7	5,8	3,4	3,0	4,7	8,7	6,7	5,8	3,6	2,8

Output: Base and Alt. monetary and financial key variables

Table A-3
Baseline and stressed scenarios: 10-year government bond yield
(end of period, %)

	Escenario Base (EB)						Escenario Estresado (EE)					
	2021	2022	2023	2024	2025(p)	2026(p)	2021	2022	2023	2024	2025(p)	2026(p)
United States	1,52	3,88	3,88	4,58	4,36	4,27	1,52	3,88	3,88	4,58	4,75	4,83
Eurozone	0,32	3,39	2,79	3,00	3,16	3,32	0,32	3,39	2,79	3,00	3,77	4,12

Source: MAPFRE Economics
Forecast end date: July 10, 2025.

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Tabla 1.2-d
Escenarios Base y Estresado: tipos de cambio
(final del período, %)

	Escenario Base (EB)						Escenario Estresado (EE)					
	2021	2022	2023	2024	2025(p)	2026(p)	2021	2022	2023	2024	2025(p)	2026(p)
USD-EUR	0,88	0,94	0,90	0,96	0,85	0,86	0,88	0,94	0,90	0,96	0,81	0,82
EUR-USD	1,13	1,07	1,11	1,04	1,17	1,17	1,13	1,07	1,11	1,04	1,24	1,21
GBP-USD	1,35	1,20	1,27	1,25	1,34	1,34	1,35	1,20	1,27	1,25	1,42	1,39
USD-JPY	115,00	132,65	141,91	156,65	149,68	146,03	115,00	132,65	141,91	156,65	142,45	141,47
USD-CNY	6,35	6,90	7,10	7,30	7,15	7,11	6,35	6,90	7,10	7,30	7,18	7,13

Source: MAPFRE Economics
Forecast end date: July 10, 2025.

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Tabla 1.2-e
Escenarios Base y Estresado: tipo de interés oficial de referencia
(final del período, %)

	Escenario Base (EB)						Escenario Estresado (EE)					
	2021	2022	2023	2024	2025(p)	2026(p)	2021	2022	2023	2024	2025(p)	2026(p)
United States	0,25	4,50	5,50	4,50	3,75	3,25	0,25	4,50	5,50	4,50	3,75	3,50
Eurozone	0,00	2,50	4,50	3,25	2,00	1,75	0,00	2,50	4,50	3,25	2,00	1,75
China	2,25	2,00	1,75	1,50	1,50	1,25	2,25	2,00	1,75	1,50	1,25	1,25

Output: Base and alt. nominal premiums

Life Premiums

	PREVISIONES 3Q25			PREVISIONES 4Q25		
	VIDA			VIDA		
	2024 (e)	2025 (p)	2026 (p)	2024	2025 (p)	2026 (p)
Estados Unidos	<u>5,66</u>	4,8	4,6	<u>9,42</u>	5,0	5,1
Eurozona						
Alemania	<u>2,93</u>	2,8	3,6	<u>2,92</u>	3,4	4,2
Francia	<u>1,79</u>	3,2	4,4	<u>12,40</u>	2,6	3,7
Italia	<u>2,76</u>	2,9	3,4	<u>17,30</u>	3,6	4,2
España	<u>-13,68</u>	11,6	6,6	<u>-13,68</u>	14,0	7,6
Portugal	<u>35,29</u>	8,0	5,7	<u>35,29</u>	11,3	6,6
Reino Unido	<u>4,58</u>	4,5	4,7	<u>2,36</u>	5,6	5,3
América Latina						
México	<u>18,11</u>	8,6	9,1	<u>18,11</u>	9,1	9,1
Brasil	<u>16,18</u>	8,1	7,5	<u>16,18</u>	-0,5	6,3
Argentina	<u>111,04</u>	41,7	21,9	<u>111,04</u>	43,4	30,3
Colombia	<u>14,89</u>	8,8	11,0	<u>14,89</u>	12,5	9,4
Chile	<u>7,66</u>	9,5	9,9	<u>7,66</u>	14,0	10,2
Perú	<u>15,73</u>	10,9	10,1	<u>15,73</u>	11,0	7,5
Emergentes Europeos						
Turquía	<u>77,79</u>	38,3	25,7	<u>77,79</u>	39,0	27,8
Emergentes Asia Pacífico						
China	<u>4,80</u>	6,9	6,3	<u>15,45</u>	7,2	6,6
Indonesia	<u>6,82</u>	7,0	6,7	<u>3,40</u>	5,7	6,4
Japón	<u>2,99</u>	3,0	2,9	<u>-1,30</u>	3,2	3,0
Mundo (1)	<u>6,12</u>	6,2	6,0	<u>9,21</u>	6,2	6,5

Fuente: MAPFRE Economics

(1) Previsiones de crecimiento nominal anual en USD

Fecha de cierre de previsiones: 21 octubre 2025

Non Life Premiums

	PREVISIONES 3Q25			PREVISIONES 4Q25		
	NO VIDA			NO VIDA		
	2024 (e)	2025 (p)	2026 (p)	2024	2025 (p)	2026 (p)
Estados Unidos	<u>5,04</u>	4,9	4,4	<u>7,78</u>	5,0	4,5
Eurozona						
Alemania	<u>2,27</u>	2,9	3,1	<u>6,07</u>	3,0	2,9
Francia	<u>2,06</u>	2,9	3,4	<u>7,67</u>	2,9	3,0
Italia	<u>2,53</u>	2,9	3,2	<u>8,42</u>	3,1	2,9
España	<u>7,82</u>	6,3	4,4	<u>7,82</u>	7,1	4,9
Portugal	<u>10,45</u>	7,3	6,9	<u>10,45</u>	7,9	6,6
Reino Unido	<u>6,37</u>	5,2	5,5	<u>7,68</u>	5,7	5,4
América Latina						
México	<u>15,21</u>	10,1	11,2	<u>15,21</u>	11,2	11,5
Brasil	<u>7,77</u>	7,0	6,6	<u>7,77</u>	8,4	7,8
Argentina	<u>117,54</u>	44,1	24,1	<u>117,54</u>	45,8	32,6
Colombia	<u>8,74</u>	6,2	6,9	<u>8,74</u>	11,4	8,7
Chile	<u>5,50</u>	5,5	5,5	<u>5,50</u>	7,1	8,1
Perú	<u>6,91</u>	5,5	5,7	<u>6,91</u>	3,8	5,7
Emergentes Europeos						
Turquía	<u>74,59</u>	36,9	25,0	<u>74,59</u>	37,7	27,2
Emergentes Asia Pacífico						
China	<u>5,13</u>	5,3	5,2	<u>5,13</u>	5,6	7,6
Indonesia	<u>7,02</u>	5,9	6,5	<u>6,19</u>	3,8	4,3
Japón	<u>4,21</u>	3,2	2,2	<u>3,16</u>	3,7	2,5
Mundo (1)	<u>5,94</u>	5,2	5,3	<u>8,20</u>	5,4	5,6

Fuente: MAPFRE Economics

(1) Previsiones de crecimiento nominal anual en USD

Fecha de cierre de previsiones: 21 octubre 2025

Output:

Multiyear forecasts in the base, alternative and ORSA scenarios



Hoja de cálculo
de Microsoft Excel

Appendix:

Summary of stressed variables



Documento de
Microsoft Word

Modelling toolkit: From multivariate systems to latent variable models

An Open Economy VARX for each country

$$y_t^{ARG} = B_1 y_{t-1}^{ARG} + H_1 x_t^{PARTNERS} + \varepsilon_t^{ARG},$$

$$\varepsilon_t^{ARG} \sim N[0, \Omega_1] \text{ and } x_t^{PARTNERS} = W_t^{ARG} y_t^{GLOBAL}$$

+

$$y_t^{CHIL} = B_2 y_{t-1}^{CHIL} + H_2 x_t^{PARTNERS} + \varepsilon_t^{CHIL},$$

$$\varepsilon_t^{CHIL} \sim N[0, \Omega_2] \text{ and } x_t^{PARTNERS} = W_t^{CHIL} y_t^{GLOBAL}$$

+

$$y_t^{COL} = B_3 y_{t-1}^{COL} + H_3 x_t^{PARTNERS} + \varepsilon_t^{COL},$$

$$\varepsilon_t^{COL} \sim N[0, \Omega_3] \text{ and } x_t^{PARTNERS} = W_t^{COL} y_t^{GLOBAL}$$

Unrestricted Dynamic Simultaneous Equation Model

$$G y_t^{GLOBAL} = B y_{t-1}^{GLOBAL} + \varepsilon_t^{GLOBAL}$$

Global VAR

$$y_t^{GLOBAL} = A y_{t-1}^{GLOBAL} + u_t$$

with $u_t \sim N[0, \Sigma]$

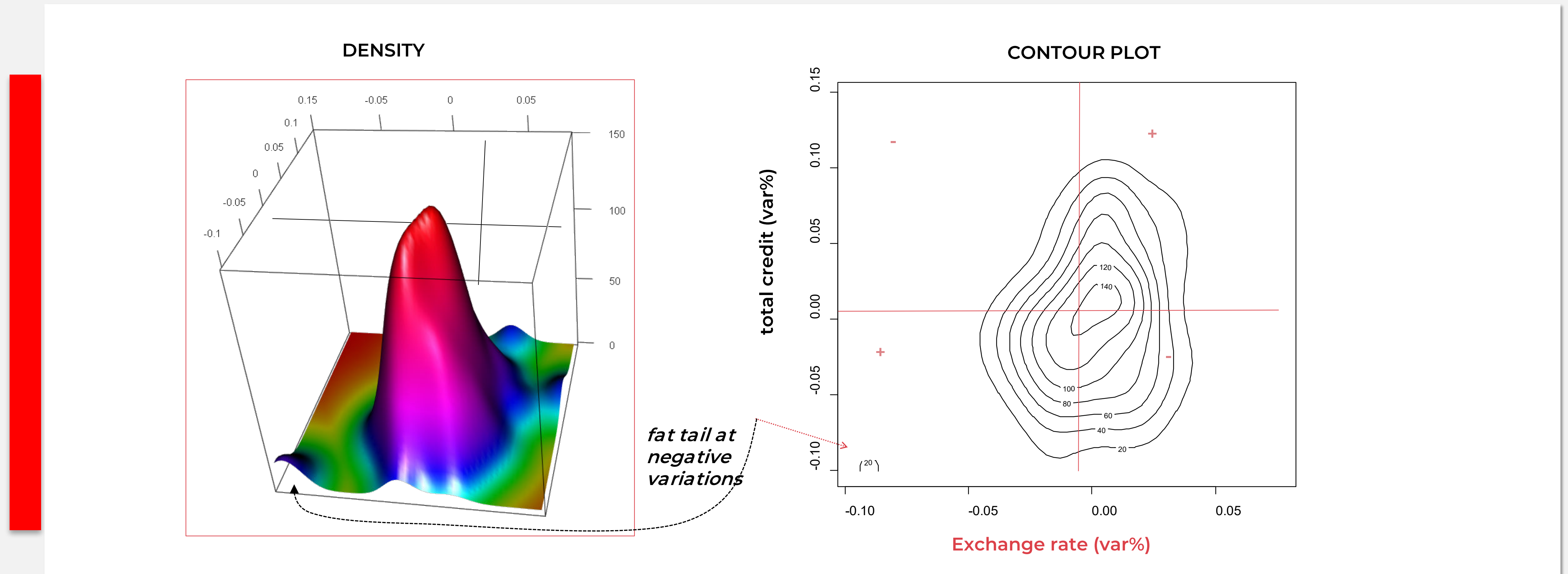
and $A = G^{-1} B, \Sigma = G^{-1} \Omega G^{-1}$,

Models

1. VAR/VECM
2. Block recursive S.
3. Dynamic Factors
4. Single equation models
5. Educated experts' view

Modelling toolkit: From multivariate systems to latent variable models

Empirical Probability Distribution of Residuals (marginal joint density)



The pattern of correlation signs chosen by the experts constrains the area of the probability distribution of errors used in the GVAR simulation of the risk scenarios.

The expert should choose the pattern of correlation signs (and 0s) he expects from the mixture of economic shocks which underlies to the rationale of the risk scenario.

Resumen– ORSA 2025 (MAPFRE)

Fecha de referencia: 31/12/2024 | Documento publicado en junio 2025

1. Conclusiones generales

El Grupo MAPFRE mantiene una posición de solvencia sólida, con un ratio de solvencia del 207,4%, en zona verde según el Apetito de Riesgo definido. Las proyecciones indican continuidad en el cumplimiento de los requisitos regulatorios incluso ante escenarios de tensión. Las pruebas de resistencia evidencian que, salvo eventos de impacto extremadamente bajo (retorno 1 en 2.381 años), la solvencia se preserva.

2. **Apetito y perfil de riesgo**

El ratio de solvencia se mantiene dentro de los límites establecidos (entre 175%-225%). El SCR se calcula mediante la fórmula estándar, salvo para el subriesgo de longevidad en MAPFRE Vida, cubierto con modelo interno parcial. El capital económico crece un 3,3%, mientras que los riesgos estimados aumentan un 5,3%, lo que ajusta el rating interno al 137,8%. Los riesgos más relevantes son suscripción No Vida, mercado y contraparte.

3. Proyecciones de solvencia

El Grupo proyecta ratios de solvencia crecientes (217,5% en 2027), sin comprometer la distribución de dividendos prevista. Las estimaciones no incorporan aún los cambios esperados por la revisión de Solvencia II. El cumplimiento continuo del SCR mínimo (1.846,5 millones EUR) es holgado, con un ratio del 399,2%.

4. Fungibilidad y transferibilidad de fondos propios

Se estima que entre el 89,4% y el 96,2% de los excesos de fondos propios serían transferibles, dependiendo de los países considerados. No se identifican restricciones regulatorias significativas para la repatriación de capitales en las jurisdicciones principales del Grupo.

5. Pruebas de resistencia

MAPFRE realiza múltiples ejercicios, incluyendo:

- o Ciberseguridad: tres escenarios, con resultados positivos, pero se recomienda seguir mejorando segmentación de redes.
- o Tensiones geopolíticas (test EIOPA): el ratio de solvencia caería al 142,5%.
- o Cambio climático: en escenarios adversos, el impacto sobre los fondos propios varía del -5,3% al -11,9%. Las carteras más expuestas son bonos corporativos y renta variable en sectores medio o bajo riesgo.
- o Impacto macro por recesión global: el ratio de solvencia bajaría 14-16 p.p. respecto al escenario base, manteniéndose en niveles adecuados (203,8% en 2027).
- o Devaluación de divisas (USD, BRL, PEN, MXN): impacto de hasta -628 millones EUR sobre fondos propios.
- o Eventos catastróficos: un escenario extremo con cinco catástrofes simultáneas reduce el ratio a 105,4%.
- o Longevidad: un escenario de mejora sostenida de mortalidad (escenario 1 en 100 años) reduciría ligeramente el ratio (205,9%).

6. Adecuación del perfil a la fórmula estándar

Se considera adecuada, salvo para el subriesgo de longevidad (modelo interno parcial). Se estudia desarrollar un modelo interno para riesgos de primas y reservas en automóviles. No se han identificado riesgos relevantes no incluidos en los modelos actuales.

7. Gestión del riesgo de liquidez (Anexo)

El Grupo cumple con el marco IAIS, incluyendo políticas, seguimiento de límites, identificación de vulnerabilidades y realización de stress test de liquidez. Se dispone de planes de contingencia adecuados.

MAPFRE  Economics

