

Regulatory stress tests: current status and possible evolutions

Evolution of regulatory stress tests

Group Strategic and Integrated Risks

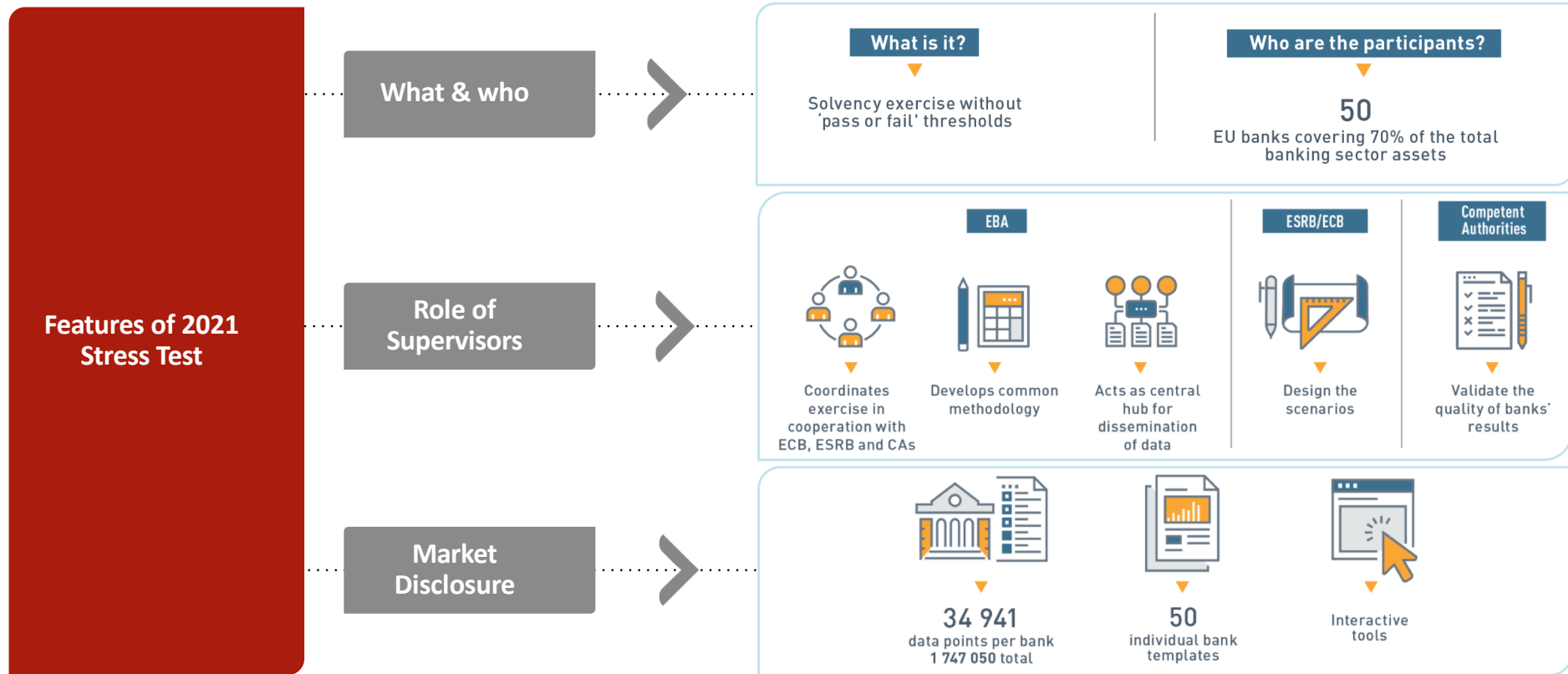
June 21st, 2022



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2021 EU-wide stress test at a glance



EU-wide stress test: a constrained bottom-up exercise assessing the impacts of adverse scenario on bank's regulatory capital

Results will be input for the SREP

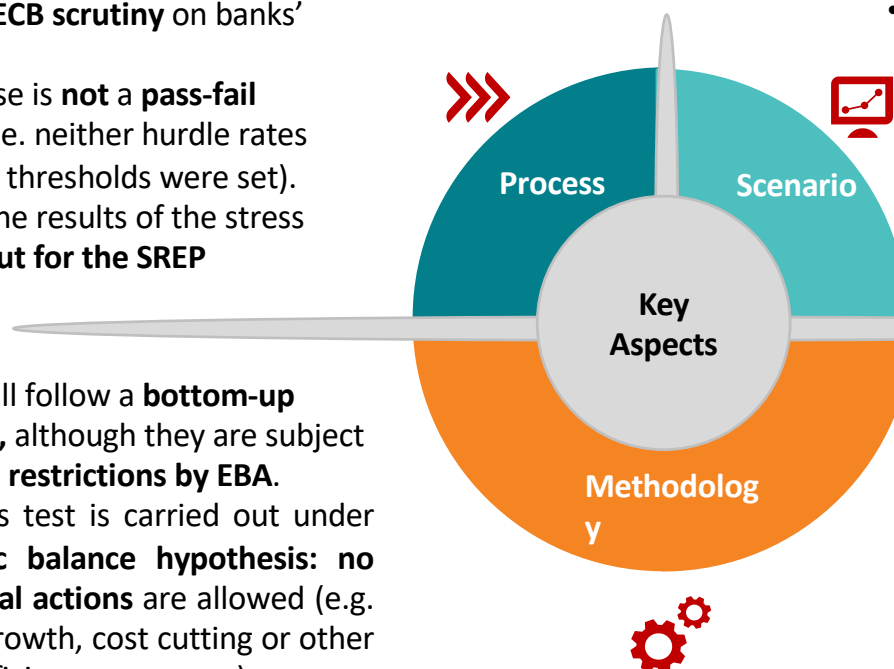
- Extensive **ECB scrutiny** on banks' projection
- The exercise is **not a pass-fail exercise** (i.e. neither hurdle rates nor capital thresholds were set).
- ECB uses the results of the stress test as **input for the SREP**
- Banks shall follow a **bottom-up approach**, although they are subject to several **restrictions by EBA**.
- The stress test is carried out under the **static balance hypothesis: no managerial actions** are allowed (e.g. volume growth, cost cutting or other capital efficiency measures)

Bottom-up approach and static balance...

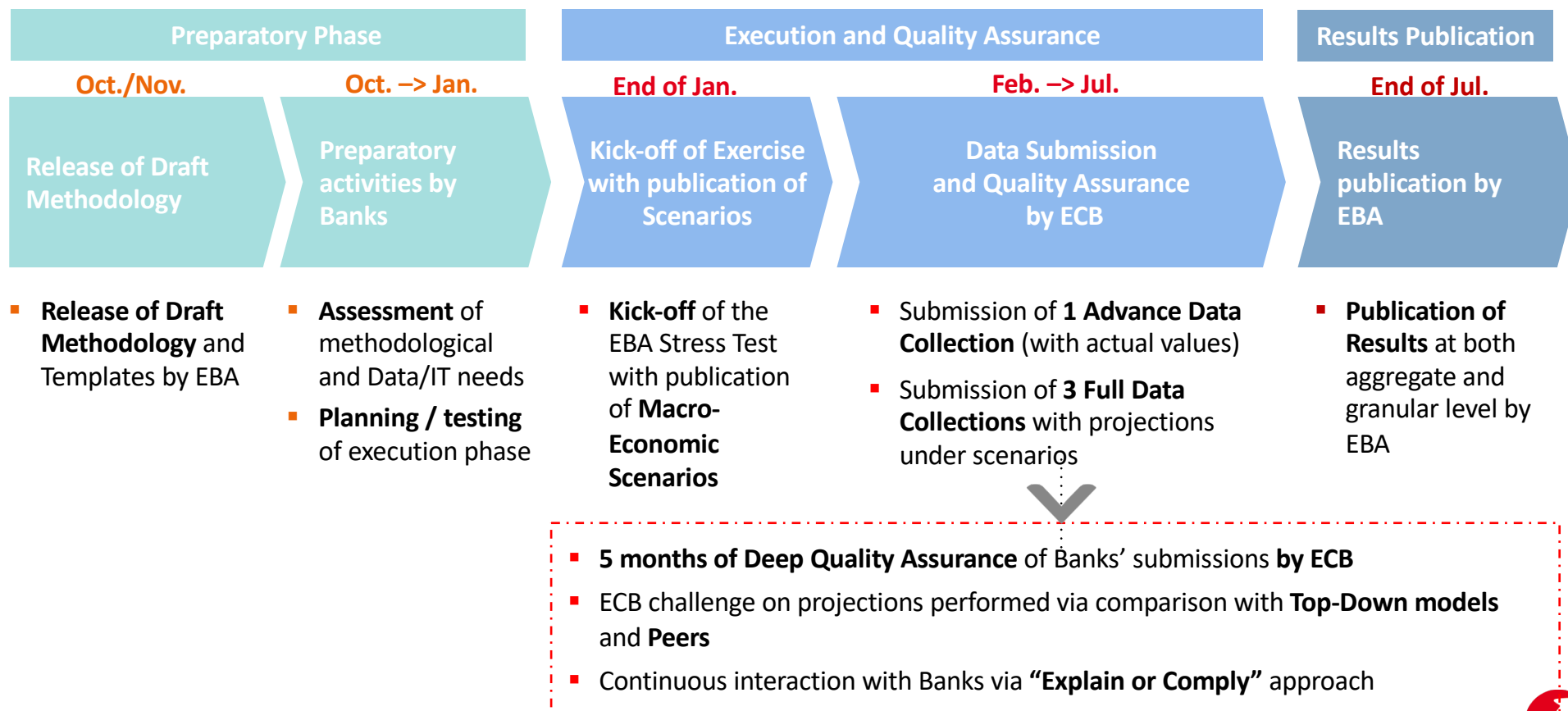
Baseline and Adverse scenarios

- The exercise includes two common scenarios: a **baseline** and an **adverse scenario**
 - The exercise is carried out using the latest **year-end data**, over a 3-year time horizon.
 - The impact is reported in terms of **CET1 capital. Tier 1 capital ratio, total capital ratio and LCR** are reported
- Banks are required to stress:
 - **Credit risk**, including securitisations
 - **Market risk, CCR and CVA**
 - **Operational and conduct risk**
- Banks are required to stress **NII, P&L** and **equity** elements.

...and covered risks



Current process highly resource-intensive both for regulators and banks, with extensive ECB scrutiny on banks' submissions



Methodology prescriptive on main risk projections, with a set of constraints also on revenues, and no managerial actions allowed

		Capital Impact ¹ Baseline vs Adverse
Credit risk	<ul style="list-style-type: none"> Use of internal parameters (e.g. PD, LGD) and stress models allowed Several methodological constraints (e.g. Stage 2 migrations, RWA, etc) Banks' projections challenged through ECB top-down stress models and peers analysis 	~40%
Net interest income	<ul style="list-style-type: none"> Several methodological restrictions and floors, all limiting banks' repricing ability 	~20%
Market Risk	<ul style="list-style-type: none"> Fair value measurement assessed via a full revaluation after applying a common set of stressed shocks, with several floors (e.g. on trading income) 	~20%
Conduct and operational risk	<ul style="list-style-type: none"> Conduct risk losses, subject to floors: <ul style="list-style-type: none"> ✓ Material events: evaluated on a qualitative basis ✓ Non-material events: evaluated using banks' quantitative methods Losses from operational risk stressed using internal methods, subject to floors 	~20%
Non-interest income, expenses and capital	<ul style="list-style-type: none"> Banks must use internal methods subject to methodological constraints or floors, e.g.: <ul style="list-style-type: none"> ✓ Fees cannot be higher of 90% of latest reported value ✓ Costs cannot fall below the latest reported value, unless an adjustment for one-offs is permitted. No future cost savings allowed even if fully priced-in (e.g. lay-off plans) 	

(1) Industry average



Points of attention from overall exercise

Very high level of granularity of templates/ overall exercise

Managerial actions excluded at all (e.g. cost savings initiatives)

ECB challenger model – limited visibility making difficult to reply

Resulting cumbersome exercise



Regulatory Stress Testing: different approaches across jurisdictions

Topic	EU-Wide	CCAR	BofE
SREP implication	<ul style="list-style-type: none"> No hurdle rates or capital thresholds P2G not binding calculated on ST results and not MDA relevant 	<ul style="list-style-type: none"> 4.5% CET1 hurdle rate Relevant for Capital Distribution 	<ul style="list-style-type: none"> P2 buffer set based on individual bank
Frequency	<ul style="list-style-type: none"> Two-years (~ 50 banks) 	<ul style="list-style-type: none"> Annual (~ 30 banks) 	<ul style="list-style-type: none"> Annual (7 banks)
Methodology	<ul style="list-style-type: none"> Static Balance Sheet 3 Year time horizon 1 Adverse 1 Baseline scenario Credit, NII, Market & Operational Risks 	<ul style="list-style-type: none"> Dynamic balance sheet 2 years 2 Adverse + 1 Baseline Credit, NII, Market & Operational Risks 	<ul style="list-style-type: none"> Dynamic balance sheet with and without managerial actions 5 years time horizon 1 Adverse 1 Baseline scenario Credit, NII, Market & Operational Risks
Approach	<ul style="list-style-type: none"> Constrained Bottom-up (banks model allowed with methodological constraints) ECB challenge Banks projections with Top-Down /peers benchmarking (explain or complain) 	<ul style="list-style-type: none"> Top-Down (Fed Models with banks data used) Banks publish results of their models 	<ul style="list-style-type: none"> Banks model results challenged by BofE top-down models
Disclosure	<ul style="list-style-type: none"> High-level (bank by bank) 	<ul style="list-style-type: none"> High-level (bank by bank) 	<ul style="list-style-type: none"> High-level (bank by bank)



Banking industry calling for a more realistic exercise in the discussions with supervisors on the future evolution of EU stress testing

Area of Concerns	Description
Clarity in EU-Wide ST Objectives	<ul style="list-style-type: none"> The current exercise entails double objectives that are in conflicting : <ul style="list-style-type: none"> ✓ a micro prudential purpose as stress test results feed the SREP of each bank ✓ stress test results used by Regulator as macroprudential analysis for assessing systemic risks Also EBA recognizes that it should be decided which purpose shall prevail
Realism of Results	<ul style="list-style-type: none"> The methodological constraints (e.g. static balance sheet) while allowing for a better comparability of results and easier quality assurance by ECB, lower the realism of the outcomes making the exercise not really meaningful to measure capital evolution
Ownership of Results	<ul style="list-style-type: none"> As banks projections can be overridden by the supervisory benchmarks and challenger models the banks are not always fully recognized in the final results
Resources Absorption	<ul style="list-style-type: none"> It is widely recognized that the exercise is highly resource-intensive and time-consuming (6/7 months 20/30 FTE) both for Regulators and Banks. There is general agreement that the exercise should become more cost-efficient

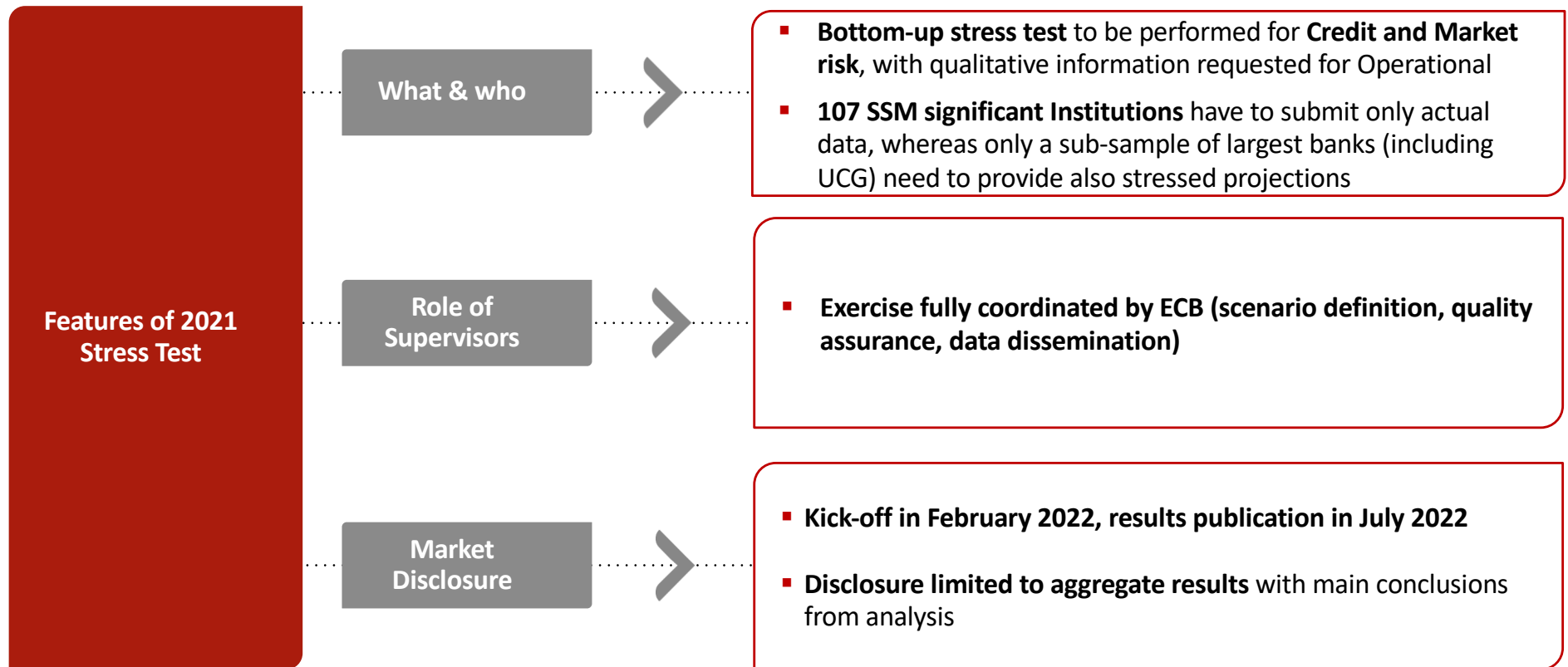
Is it currently **under assessment** by EBA:
the inclusion of **dynamic elements** (managerial actions)
a two-leg approach (as in the US CCAR), with one top-down simulation done by ECB and one bottom-up by the banks



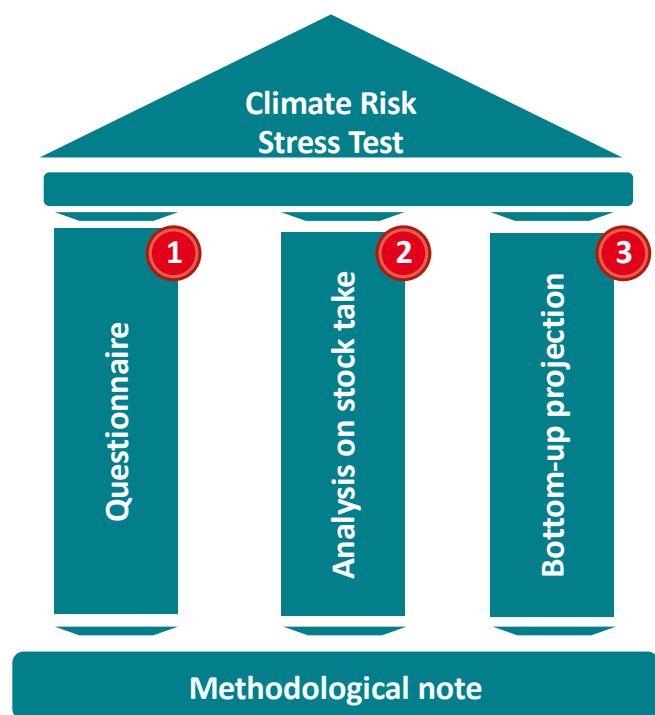
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2022 Climate Risk Stress Test at a glance



Climate risk stress test: three modules with tailored data quality and quality assurance processes

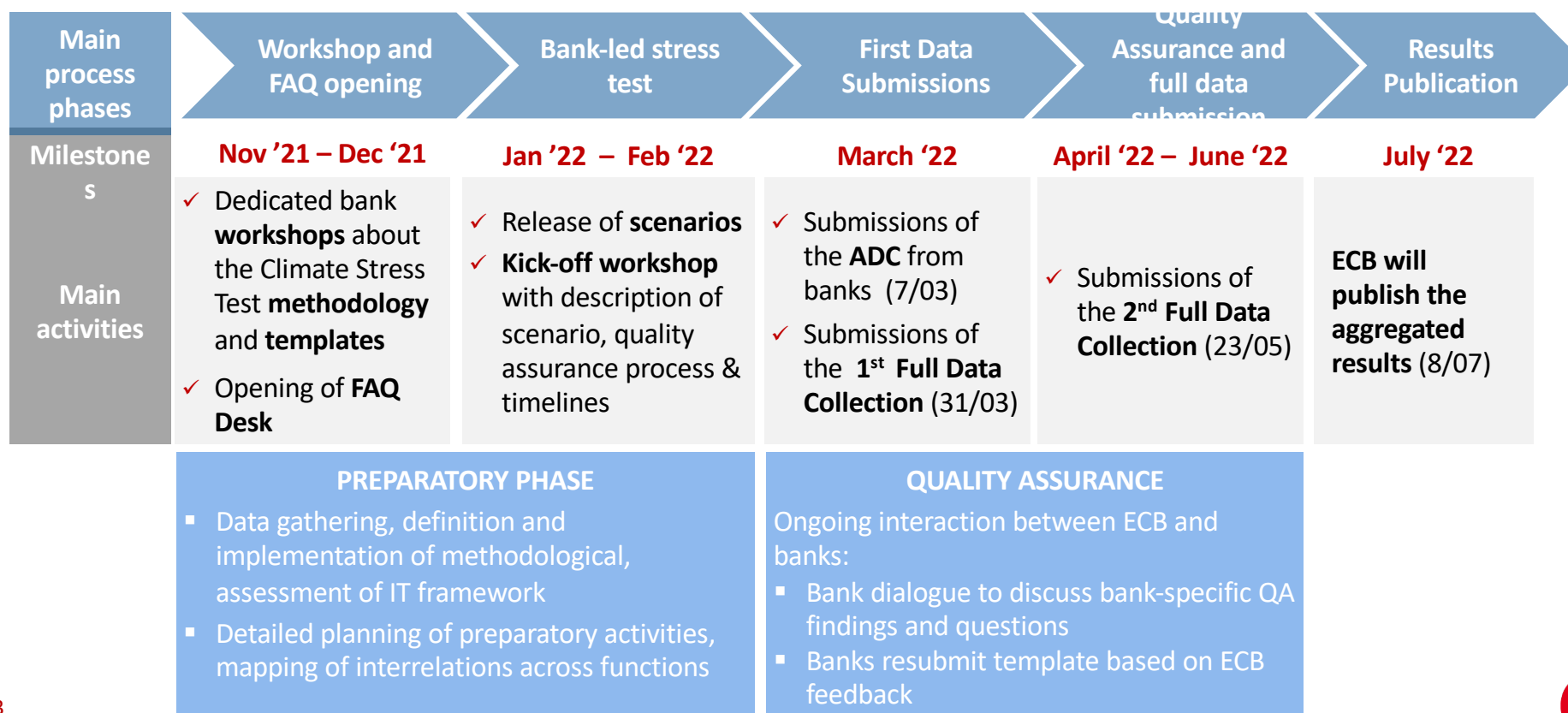


3 Pillars of 2022 ECB Climate Risk Stress Test

- 1 Questionnaire on bank's practices**
78 closed end questions for systematic assessment of internal end-to-end climate risk stress test framework (incl. climate strategy and governance)
- 2 Analysis on stock take**
Two climate metrics that provide insights into:
 - **Banks' income** related to transition risk industries
 - **Exposure to carbon-intensive** industries based on emission data for largest corporates**Stress Test projections (EBA-like)**
- 3 Bottom-up stressed projections, based on 7 scenarios** covering:
 - Short-term (3y) and long term (30y) horizon
 - **Transitional and Physical Risk** for corporates and mortgages
 - Additional **specific Op Risk** qualitative questions



Climate risk stress test: a long exercise with a timeline similar to EBA stress test



Climate risk stress test: highlights, challenges and possible evolutions

Highlights

- **A learning exercise** to enhance both banks and supervisors' capacity in assessing climate risk
- **Create awareness** of climate risk and identify **banks' vulnerabilities**
- The results will **inform the 2022 SREP** only via qualitative approach, with **no direct capital impact via P2G** decision. Only in **specific cases** (material weaknesses), potential impact on P2R

Key challenges

- **Data awareness** (e.g. emission levels): still scarcity of relevant, comparable, reliable **data across industry**
- **Development / internalization of methodologies** to translate climate scenarios into **financial impacts** for the bank
- **Limited visibility on ECB benchmarking on module 2 and 3 metrics** – to be commented in explanatory note
- **ECB challenge on methodology?** Robustness of methodology?

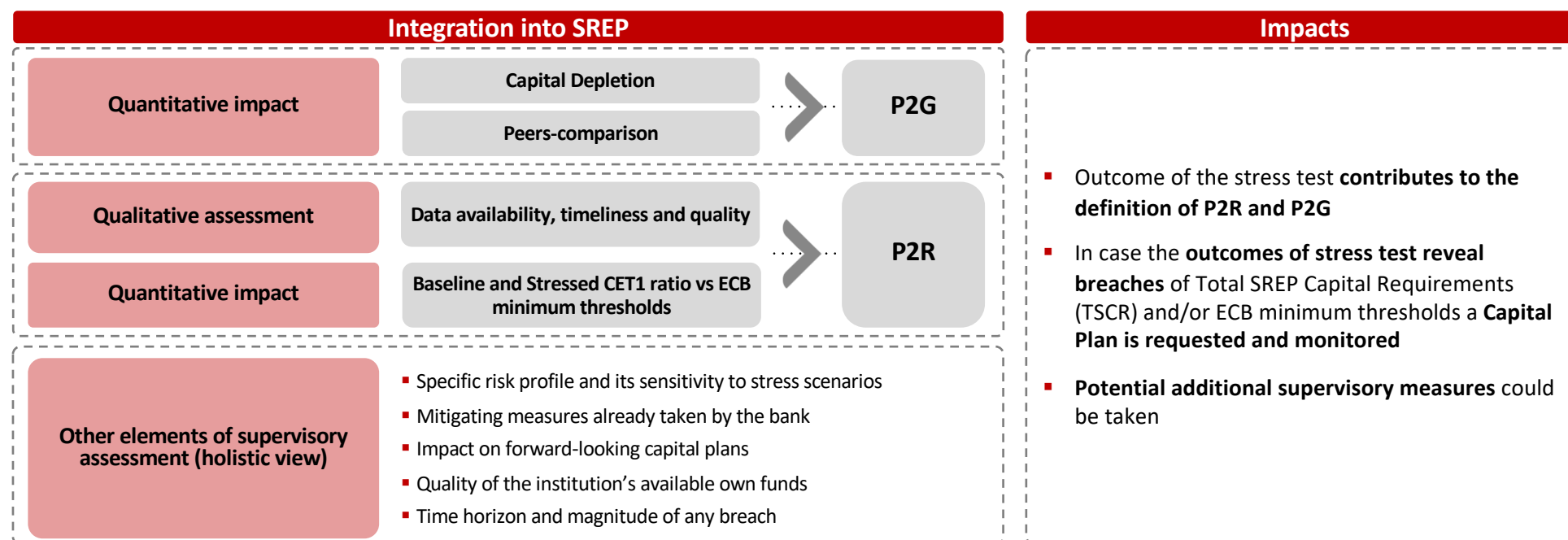
Beyond 2022 exercise

- Increasingly stringent **regulatory expectations** for an **integrated Climate risk management framework** (e.g. scenarios evolution, coverage of non financial risks)
- Development and roll out of **internal Climate Risk Stress Testing** as part of ICAAP
- **Feeding into SREP** still to be clarified



Results are integrated into SREP with impacts on Pillar 2 Requirement (P2R) and Pillar 2 Guidance (P2G)

No hurdle rates or capital thresholds are defined for the purpose of the **2021 EBA Stress Test exercise**. However results will be integrated into the **SREP**. In particular the outcome of the stress test will be included in the determination of **both the P2G (not MDA-relevant) and P2R (MDA-relevant)**



2021 EBA Stress Test has a similar architecture to previous exercises, though with a series of changes due to the new economic background

Highlights of 2021 EBA Stress Test

Credit Risk

- All **moratoria** assumed to end by **Dec'20**
- Distribution of exposures and provisions **across IFRS 9 stages** at the beginning of 2021 is required to be **restated** (keeping overall provisions unchanged) to reflect removal of moratoria
- Parameters to be modelled **disregarding the mitigating effect of moratoria** and all **additional support measures** which are assumed to be embedded in macro-economic indicators
- **Public guarantee scheme** included when projecting impairments and RWA including replacement of guarantees if expired
- **New definition of default** to be used in Credit Risk projections only if implemented by 31st December 2020

NII

- Pre-moratoria conditions shall be applied for maturity, schedule and EIR

Key changes with respect to previous exercises

- **Disregarding effects of moratoria on Credit and NII**
- **FX effects to be incorporated in NFCI**
- **2 additional templates (Credit Risk Covid-19 and NPL)**



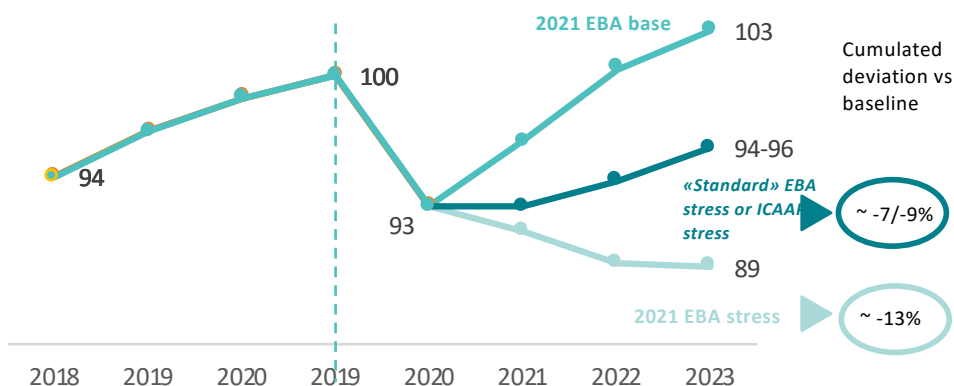
2021 Adverse Scenario is the most severe to date: three more years of recession in Eurozone after 2020 GDP drop, in a context of ultralow interest rates

GDP shocks add stress on already stressed pandemic-hit economy...

REAL GDP Growth % - Eurozone

	2020	2021	2022	2023
EBA Baseline	-7.3	3.9	4.2	2.1
EBA stress	-7.3	-1.5	-1.9	-0.2

GDP deviation from baseline (2019 = 100) – Eurozone



... jointly with extraordinary low interest rates and very severe shocks on all asset classes

Interest Rates

Euribor 3M projected flat at ~ -50/-55 bps

IR curve Inverted the first year (IRS 10Y at -80bps, below Euribor), then flat in year 2 and 3

Market Risk

Extreme Equity Markets shocks (e.g. ITA -51% vs -32% in previous stress test)

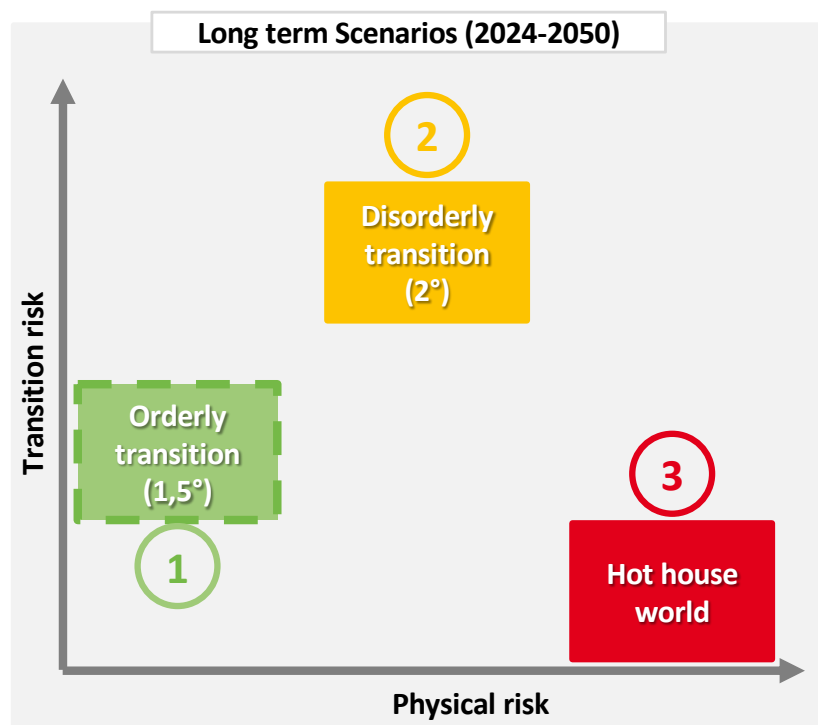
ITA Sovereign Credit Spread increasing by +156 bps (+66 bps in previous exercise)

Real Estate

Commercial RE shocks at around -30% in ITA and GER, almost doubled vs previous exercise



Climate scenarios combine transition and physical risk with a short and long term view



Transition risk	Short term	Disorderly short term stress scenario (2022-2024) <ul style="list-style-type: none"> Delayed policy measures to reduce carbon emissions Carbon price increase No economic recovery promoted by the green transition
	Long term (2024-2050)	<p>1 Orderly transition (limited physical risk)</p> <ul style="list-style-type: none"> Early and effectively implemented policies Limited costs from transition and physical risk <p>2 Disorderly transition (average physical risk)</p> <ul style="list-style-type: none"> Delayed policies implemented High costs from transition and average costs from physical risk <p>3 Hot house world (extreme physical risk)</p> <ul style="list-style-type: none"> No new policies implemented (only current policies) Very limited costs from transition but extremely high costs from physical risk
Physical risk	1 year	<p>Drought & heat risk</p> <ul style="list-style-type: none"> The key transmission channel of heatwave risk to the economy is through labour productivity <p>Flood risk</p> <ul style="list-style-type: none"> Severe impacts on both human lives and real estate

