

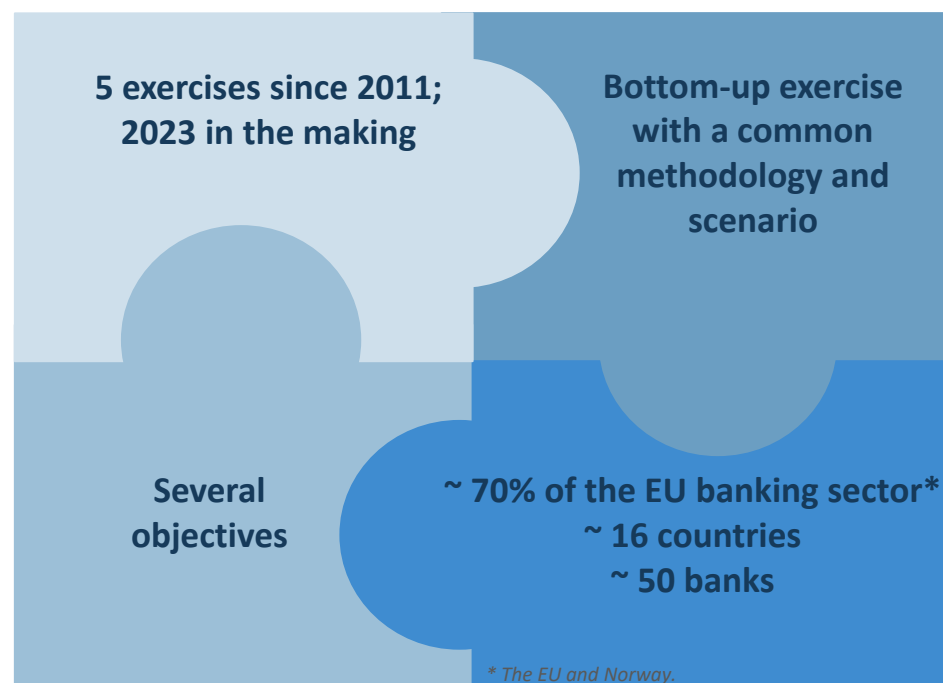
Evolution of the EU-wide stress test – past, present and future

Jacob Gyntelberg

Belgian Financial Forum – 12 January 2022

THE PAST

The EBA EU-wide stress test: An important exercise with a long track-record



The EU-wide stress and micro-prudential supervision



The main **objectives of the EBA EU-wide stress test** exercise are:

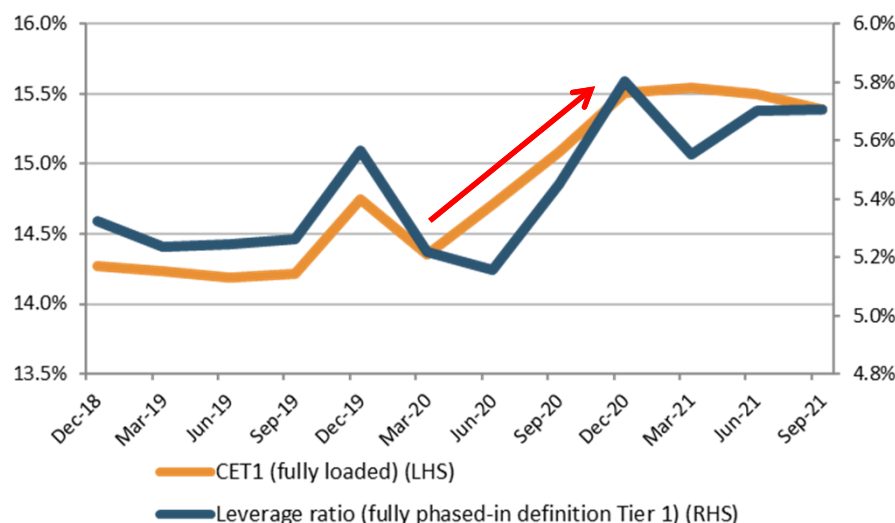
- Identify risks and vulnerabilities in the banking system.
- Assess the resilience of banks to adverse developments.
- Support the supervisory decisions with regard to capital demand and mitigation actions.
- May cause regulators to challenge bank capital positions and dividend plans.
- Support and foster better bank stress-testing and risk management capabilities – including models, data quality and risk management practices.
- Strengthen market discipline by enhancing transparency and comparability across banks.

THE PRESENT

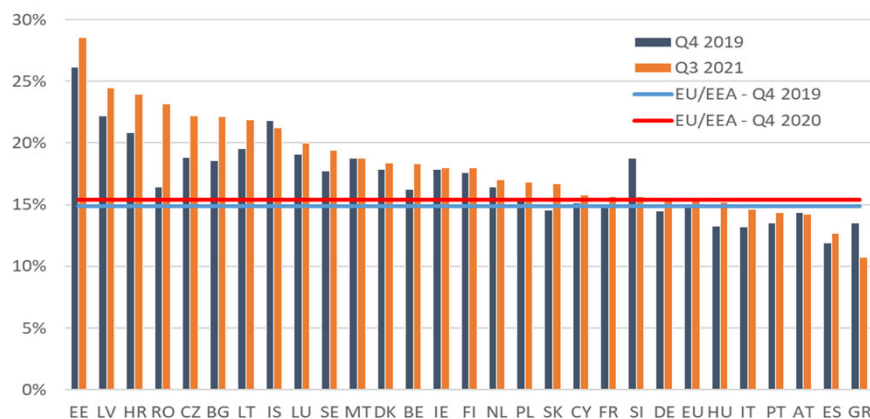
Most – but not all - banks have sufficient capital buffers



Trend of CET1 and Leverage ratio ratios – December 2018 – September 2021



Fully loaded CET1 capital ratios by country –December 2019 and September 2021



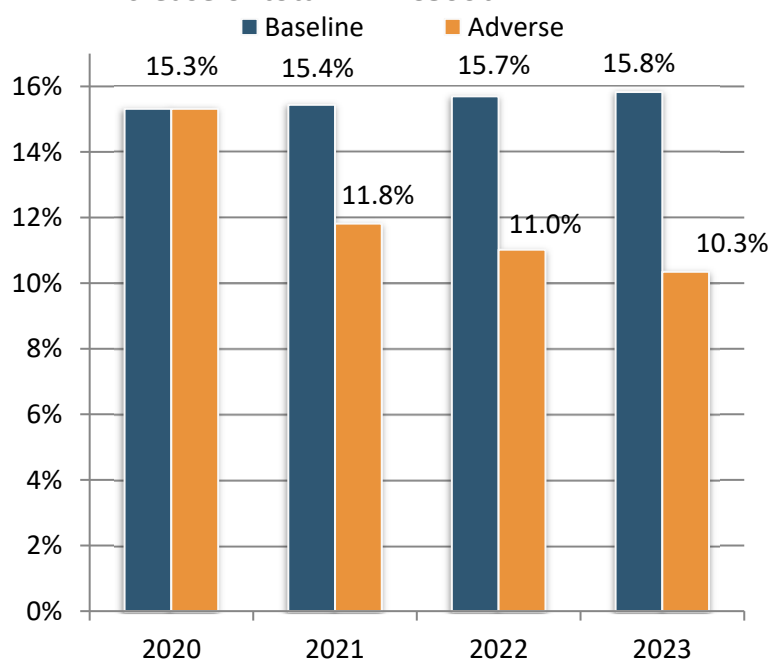
Source: EBA Supervisory reporting data

- For most banks the capital ratio is comfortably above the regulatory minimum.
- In Q3 2021, the EU average CET1 fully loaded ratio was 15.4% - around 100bps more since start of Pandemic. During the last year, capital ratios have stabilised above December 2019 pre-pandemic level of 15%.
- This number compares to a 12.5% CET1 ratio at end-2014.
- Response to the Covid-crisis focused on ensuring capital adequacy and hence bank lending.
- Banks in CEE countries report higher capital ratio increases than other regions.
- Trend in capital ratio also reflect in the average leverage ratio (5.7% in Q3 2021, compared to 5.5% in Q3 2020).

2021 ST results – Impact on EU aggregate CET1 ratio

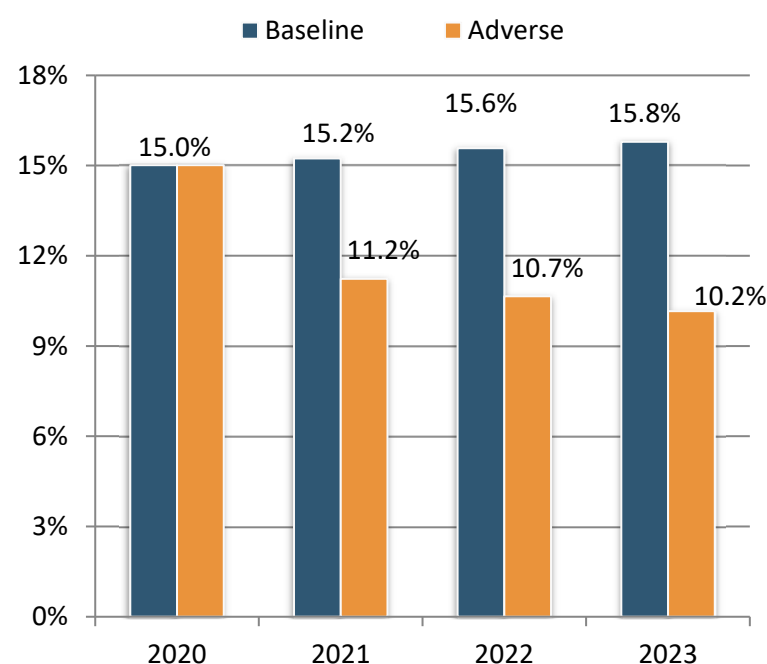
Transitional – starting point 15.3%

- Stress test impact: -497bps
- Capital depletion: €273bn
- Increase of total REA: €866bn



Fully loaded – starting point 15%

- Stress test impact: -485bps
- Capital depletion of €265bn
- Increase of total REA: €868bn

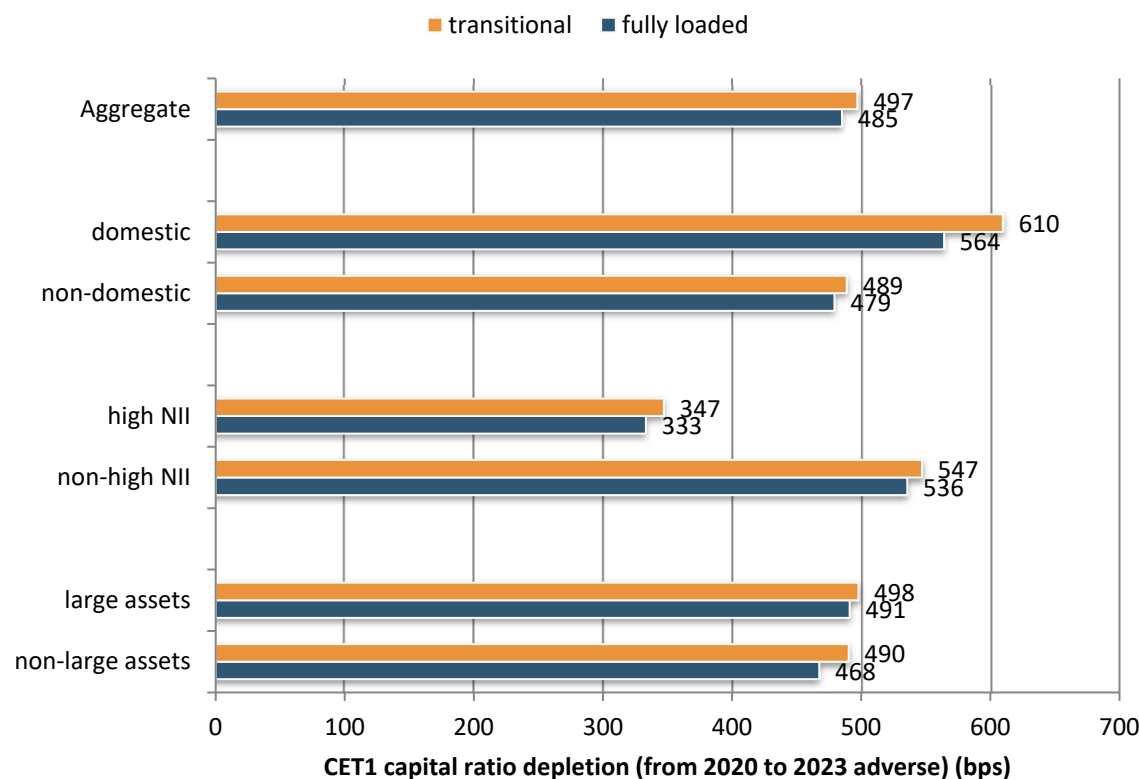


The impact (adverse) on CET1 capital ratio varies significantly across banks, ranging from a minimum decrease of -80 bps to a maximum decrease of -1,179 bps (transitional) or -80 bps to -996 bps (fully loaded).

The CET1 ratio impact in the 2018 EU-wide stress test amounted to 410bps transitional and 395bps fully-loaded.

In the baseline scenario, banks' CET1 ratio increase by 51bps on transitional (78bps on fully-loaded) basis.

Basis point impact on average CET1 ratio by bank cluster



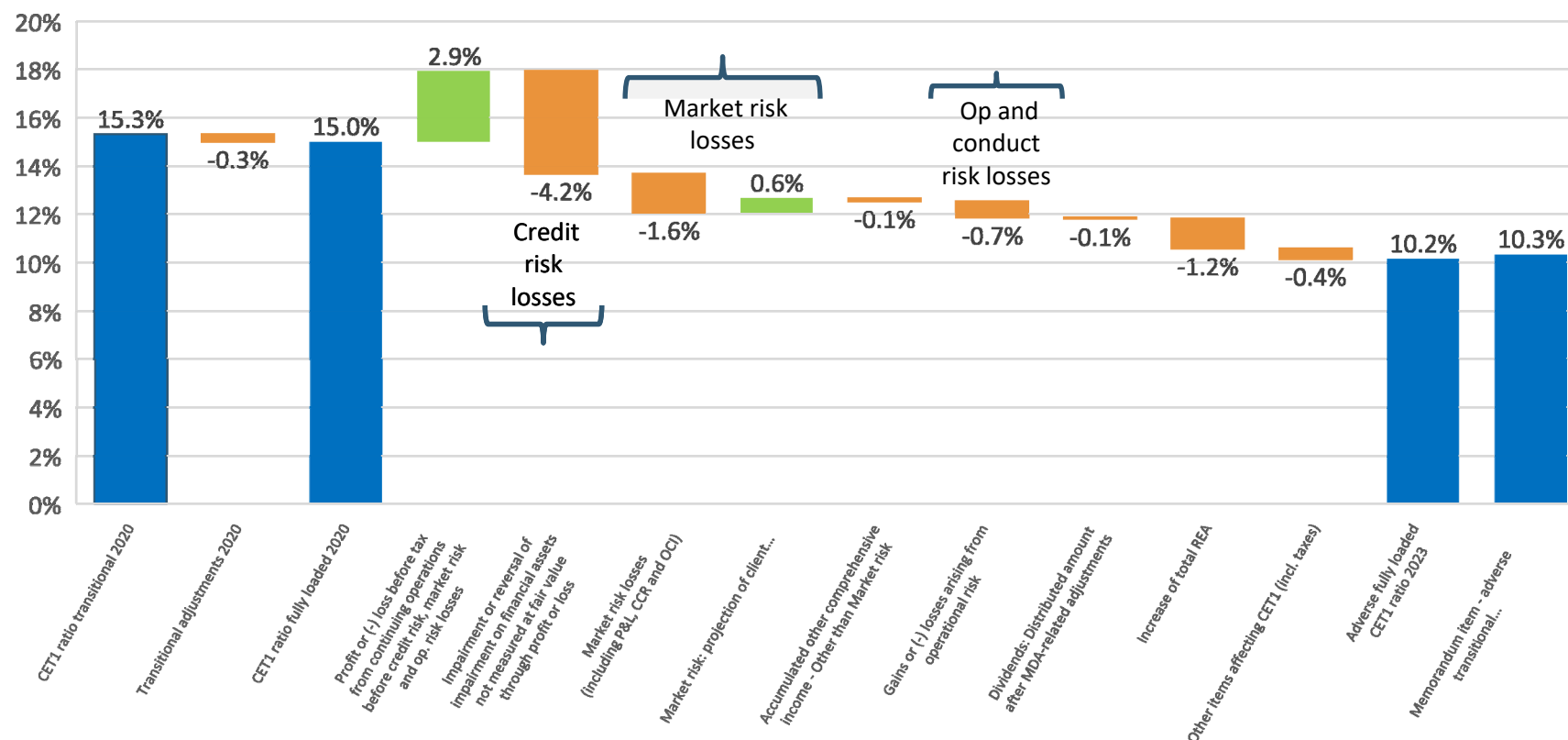
Cumulative capital depletion of 497 bps transitional (485 bps fully loaded)

Banks more focused on domestic market have higher depletion than more geographically diversified banks

Banks with higher Net Interest Income have lower capital depletion than other banks

The size of banks (in terms of total assets) is not a key driver for capital depletion

Aggregate CET1 ratio waterfall



Contribution from P&L: 2.9pp (3.9pp in 2018). The main sources of income, NII and NFI, decrease by 23% and 14% respectively, compared to the starting point.

Credit losses have the highest impact: -€308bn, -423bps (-425bps in 2018).

Market risk impact (including OCI): -€74bn, -102bps (-52bps in 2018).

Op. risk: -€49bn, -68bps (-100bps in 2018), mostly conduct risk, -37bps (-65bps in 2018).

REAs increase by 12% compared to 2020, with a negative impact on capital of 121bps (-160bps in 2018).

Credit risk impact

- As a consequence of the severity of the scenario the **stock of provisions** more than doubled over the stress test horizon (+127%). The increase is higher than in 2018 exercise (+100%)*
- The **increase of provisions for stage 3 exposures** is higher (161%) and widely above the increase reported in 2018 (+106%).
- The **starting point of banks in terms of credit risk** was better than in 2018 (e.g. the share of stage 3 exposures at the starting point is 2% in 2021, as reported in the following slide; it was 3% in 2018)
- The combination of a **more severe scenario** and a **better starting point for banks** resulted in a **Credit risk impact on the CET1 ratio of -423 bps** - in line with the previous exercise (-425 bps).

* The sample of banks involved in the 2018 stress test was different from the one of the 2021 exercise.

Findings based on 2021 EU-wide stress test

- Banks started the exercise with the higher CET1 ratios compared to all previous EU-wide stress tests.
- The 2021 scenario was very severe (more so than the one in 2018) and had a different and very specific narrative focused on the impact of the pandemic.
- The results show a high depletion close to 500 bps – even so banks finish the exercise with a CET1 ratio above 10% on average.
- Credit risk remains the main driver - but there is a higher impact on NII compared to previous stress tests.
- The results show notable dispersion across banks. Banks more focused on domestic activities or with lower net interest income (NII) have a higher depletion.
- The baseline scenario results provide comparable information about individual banks in the context of a gradual exit from the pandemic.
- The results facilitate market discipline and will be used as an important input into the SREP process.

THE FUTURE

2023 EU-wide stress test (and beyond)

- Mostly business as usual for credit risk and market risk.
- Continue to improve realism.
- Increase efficiency/try to lower burden for banks from bottom-up stress test.
- Introduce a “hybrid” approach by complementing the constrained bottom-up approach with a top-down elements for some risk areas.

Climate stress tests - What's next?



- **Forthcoming mandates for the EBA on climate risk stress testing**, from the European commission (renewed sustainable finance strategy and draft CRD VI):
 - Developing methods and scenarios for climate risk stress tests jointly with other ESAs to be used by supervisors and supervised entities in their specific sectors.
 - Running a one-off system wide climate stress test (with other ESAs and ECB)
 - Running regular climate risk stress tests
 - Drafting guidelines for banks and supervisors on climate risk stress testing
- **EBA preparatory work for an EU-wide climate risk stress test:**
 - Take learnings from the EBA pilot exercise and other exercises run by EU CAs (i.e., ECB/SSM).
 - Exploring data challenges and methodological issues.
 - Define and shape the framework along with EU supervisors. Feedback from the industry will be also key.

APPENDIX – PILOT EXERCISE ON CLIMATE RISK

EU-wide pilot exercise on climate risk: overview



- **First EU-wide exercise** run on climate risk: paving the way for future EBA work on climate risk:
- **No focus on capital implications:** not a stress test but a first step to get there.
- **Moving away from the “unknown”:** learning by doing project, in line with what done by other authorities, for analyzing key challenges to address before moving forward.
- **Experience gained in mapping exposures was key:** exploring data limitations was the main goal of the exercise. Estimates regarding the level of sustainability of banks’ exposures to be considered as starting points for future EBA work.
- **Testing banks’ readiness to apply the EU taxonomy:** raising awareness and understanding banks’ level of development.
- **Strengthening the dialogue with banks on climate risk assessment:** good level of cooperation with the industry reached during the exercise. Bilateral meetings on lessons learnt between EBA and banks also helped keeping the dialogue with banks active.

Key features of the pilot exercise (1/2)



- **Objectives:**

- Explore **main data and methodological challenges** for banks to assess climate risks.
- First attempt to collect data based on the **EU green taxonomy**.

- **Sample**

- **Voluntary exercise:** 29 banks from 10 jurisdictions, covering 50% of EU banking system total assets.
- **Heterogeneous business models:** commercial banks, public banks, saving banks, cooperative banks

- **Data scope**

- **Large (Non-SME) corporate exposures** (IRB and STA) towards EU countries (non-financials) at obligor level.
- Data collection from beginning of May to mid-December 2020.

Key features of the pilot exercise (2/2)



■ Core Analysis

- Multiple data classification approaches:
 - ▶ Sector-based (NACE level 4)
 - ▶ Green House Gas (GHG) emissions-based
 - ▶ EU green taxonomy classification
 - Best effort basis of banks to apply the EU green taxonomy
 - Questionnaire to get feedback on the coverage and approach
 - ▶ Scenario Analysis (EBA/ECB/NGFS): exploring methodologies and scenarios

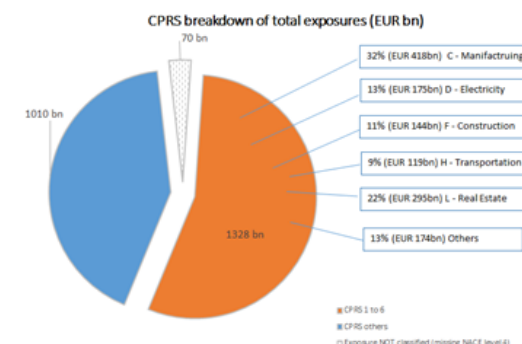
■ Results:

- Final report published in May 2021 (<https://www.eba.europa.eu/risk-analysis-and-data/eu-wide-pilot-exercise-climate-risk>)
- Bilateral meetings with banks

Results of the pilot exercise

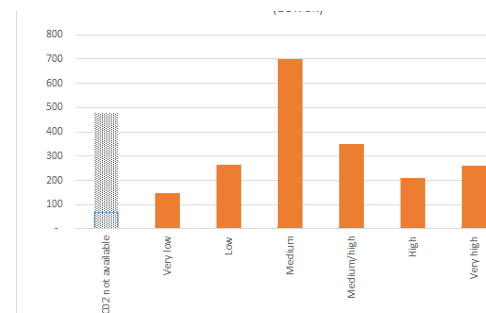
■ Sector-based classification (NACE level 4)

- At EU level, **55% of non-SME corporate exposures** (EUR 1.3trn) allocated towards climate policy relevant sectors
- **Exposures are concentrated in 5 sectors:** Manufacturing , Electricity , Construction, Transportation and Real Estate , accounting for EUR 1,153bn



■ Green House Gas (GHG) emission classification

- At EU level, **42% of non-SME corporate exposures** (almost EUR 816bn are **towards obligors with significant GHG emission intensity**).



■ Green classification (EU Taxonomy)

- **Green asset ratio** projections by banks (7.1%) and by a top-down model (7.9%).
- High dispersion regarding banks' projections; challenges for banks to apply the EU taxonomy mainly related to **definition and availability of data** at activity level.

■ Scenario Analysis (joint EBA/ECB work)

- Concentration of risks in certain parts of portfolios: **main impact coming from Electricity and Real Estate**.
- **High dispersion** across banks in both scenarios

Lessons learned from Pilot exercise on climate risk



- Climate risk evaluation requires **different info than standard stress tests** (sector information, GHG, transition strategy etc.).
- Still significant **challenges for banks in terms of tools and data**
 - more disclosure on GHG emissions and transition strategies by companies will be key.
 - Banks should expand their data systems to gather additional information at client/activity level.
- **Scenarios:** currently available reference scenarios are a good starting point. Additional granularity (i.e., shocks by key climate relevant sectors) would improve their usability for climate risk stress testing purposes. NGFS vintage 2 should bridge this gap.



EUROPEAN BANKING AUTHORITY

Floors 24-27, 20 Av André Prothin, 92927 Paris La Défense

Tel: +33 1 86 52 7000

E-mail: info@eba.europa.eu

<http://www.eba.europa.eu>

The EU-wide stress tests of EBA/SSM: necessity and guarantee for a resilient banking sector?

Wednesday 12 January 2022
1 – 2.30 p.m.

WEBINAR

Introduction by Jo Swyngedouw, Head Financial Stability, AML supervision and Prudential Policy Banks, National Bank of Belgium

Part 1: Evolution of the EU wide stress test – past, present and future by Jacob Gyntelberg, Director of the Economic and Risk Analysis (ERA) Department at the European Banking Authority (EBA)

Part 2: EU wide stress testing - a bank's perspective by Christine Van Rijseghem, Chief Risk Officer KBC Group

EU wide stress testing
-
a Bank's perspective

Christine Van Rijseghem
Group CRO
KBC Group



Health check
for
sporters



Stress testing is an important element in assessing KBC's resilience in adverse conditions

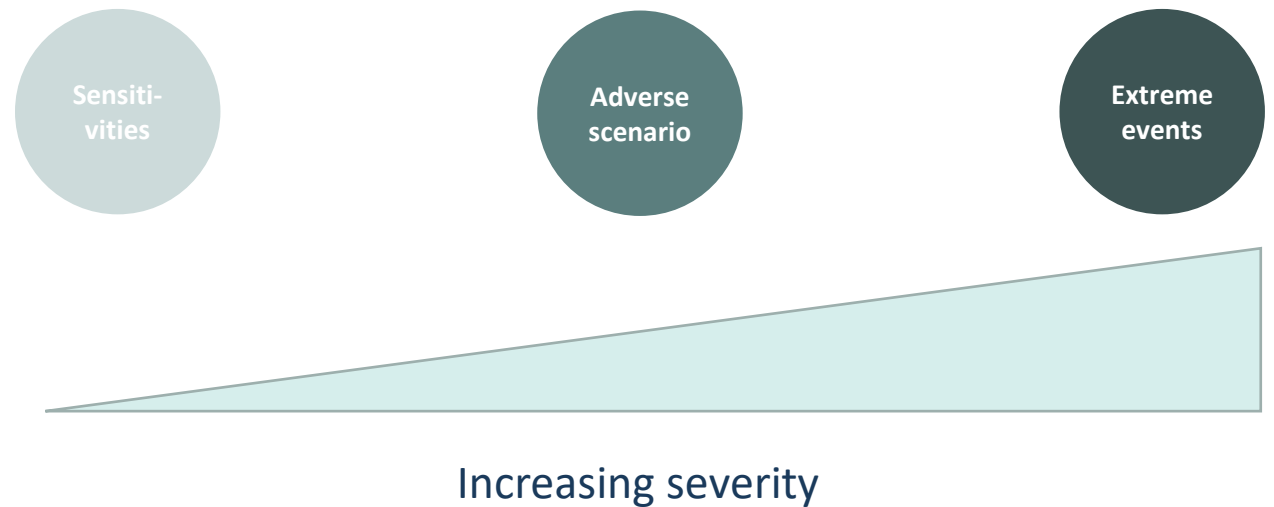


- KBC does not only focus on the business as usual
- We also identify key risks (both financial and non-financial) to which KBC is exposed to
- We measure the potential impact of these risks
- We act upon the potential impacts



Stressing KBC's solid capital position

To assess its capital adequacy, KBC performs a mix of stress tests (ranging from mild to severe) covering key risks for KBC, both from a group and local perspective



How does the EBA stress test fit in this picture?

Setup of the stress test

- Not a pass or fail test
- Same scenarios for all banks
- Same methodology for all banks (caps, floors,...)
- Large data collection exercise (+250,000 data points to be delivered)
- Challenging timings

Internal use

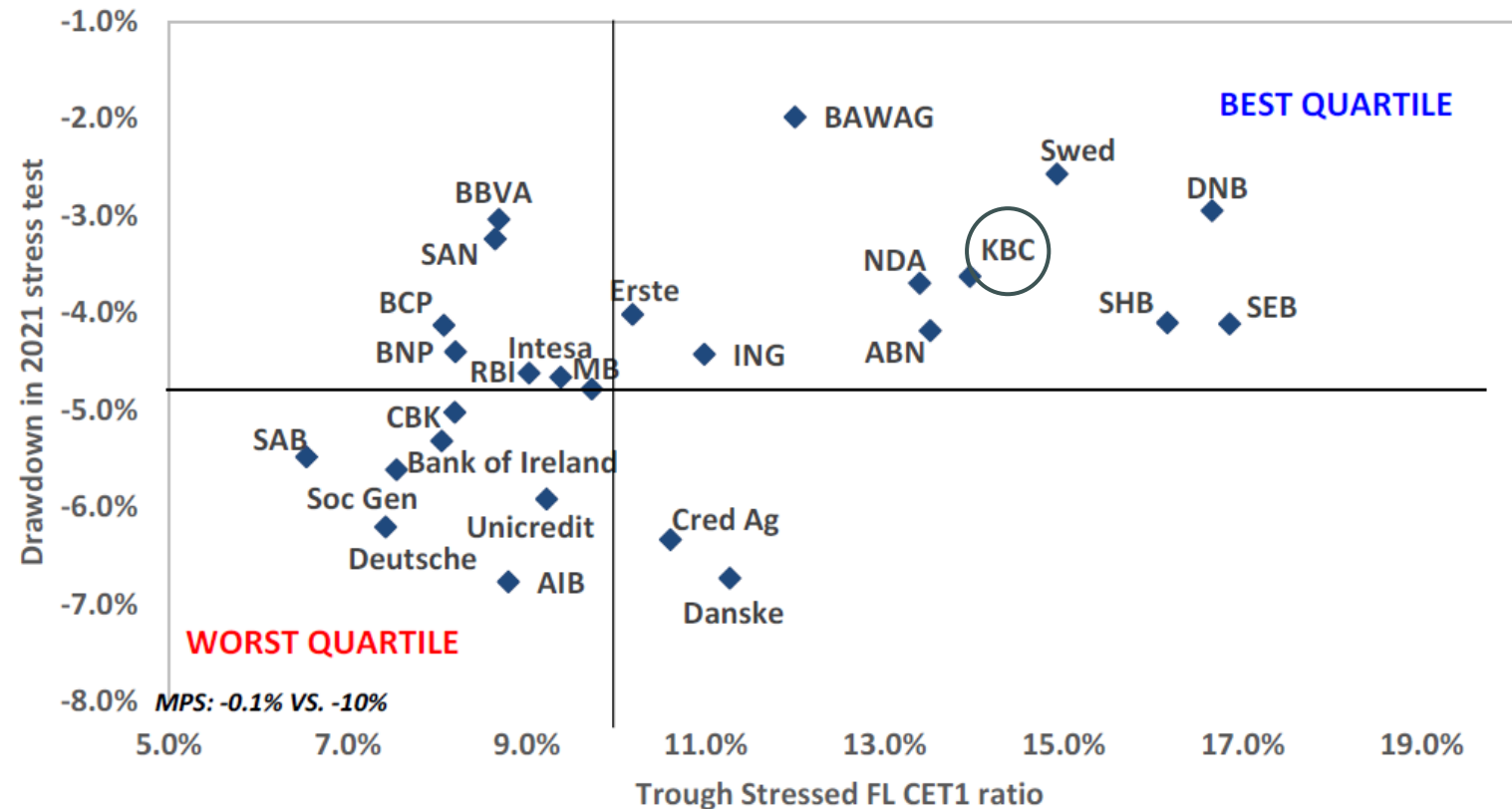
- Challenge for KBC's data collection capabilities
- Similar setup as one of KBC's fully integrated stress tests
- Limited internal use, as methodology is constrained (caps, floors,...)
- Mainly used for benchmarking

High demand on resources, both at the level of banks and ECB and EBA

Outcome of the 2021 EBA stress test

Key takeaways

- KBC Group's fully loaded CET1 ratio drops to 14,07% (-351bp) over a 3 year horizon in the adverse scenario.
- KBC continues to be among the best capitalized banks in Europe.
- The impact of the adverse scenario is less pronounced for KBC than for most other banks of the EBA universe.



Source: EBA, Autonomous

External impact on KBC of the EBA stress test

ECB

- Benchmarking
- Input for the Supervisory review process, leading to capital targets
 - P2G: linked to quantitative outcome
 - P2R: linked to qualitative outcome

The market

- Limited interest
- KBC received on 2 questions (both related to capital)
- Market asks for more disclosure on capital targets

KBC advocates a balanced, proportionate way forward

Climate risk identified as a top risk

- Environmental, Social & Governance risks (ESG) risks, with a special focus on climate risk, are top of mind at KBC.
- Top level responsibility for sustainability and climate strategy
- Embedded in KBC's risk appetite objectives, supporting KBC in defining and realizing its strategic goals

Addressing climate risk is a shared responsibility



For the sustainability report of 2020, we refer to the [KBC.COM](https://www.kbc.com) website

We want to better understand the drivers and impact of climate risk

Uncertain path

- A combination of physical and transition risks will materialize in the future.
- The exact outcomes, time horizon and future pathway are uncertain.

- Scientific and policy views (what is a green, brown, black?) still in development
- To which extent and how will KBC (and the economy) be affected?

Uncertain impact

KBC is incorporating climate-related risks more explicitly
in its stress testing and sensitivity analyses

Upcoming EU climate stress test: hurdles on data collection



Scope 1: direct emissions

Scope 2: indirect emissions

Scope 3: all other indirect emissions

Banks have to report on these three categories for their main counterparties in different sectors.

This data is currently not available in the market.



EPC values

Energy Performance Certificates will be used to segment the mortgage and corporate real estate exposures.

Heterogeneity exists within and across countries.

Data gaps: Not all real estate already received an EPC value.

Upcoming EU climate stress test: multitude of projections, different time horizons

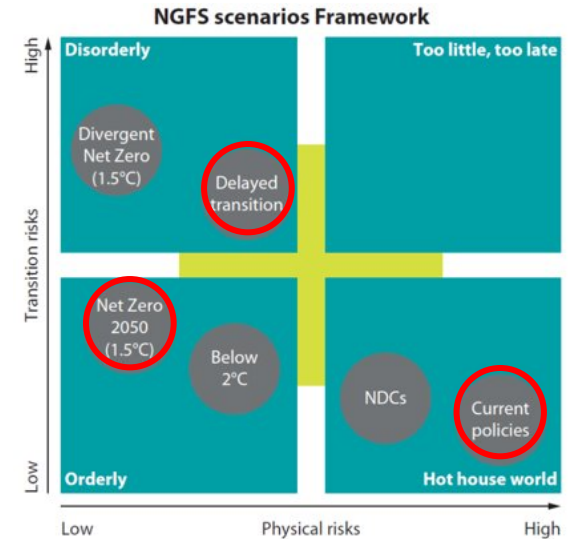
Banks have to make projections for 9 scenarios, split in

Transition risk

- Orderly, disorderly and hot house world scenario
- Covering both the short term (next three years) and long term (30 years)
- Long-term projections will be based on a dynamic balance sheet and will require projections for 2030, 2040 and 2050

Physical risk

- One year time horizon
- Drought & heat scenario + Flood scenario



Physical risks: risks related to physical phenomena associated with both climate trends (e.g. changing weather patterns, rising sea levels, increasing temperatures etc.) and extreme weather events (e.g. floods, fires, heatwaves or droughts).

Transition risks: risks arising from disruptions and shifts associated with the transition to a low-carbon, climate-resilient or environmentally sustainable economy which include policy and legal, technological progress or behavioural changes.

2022 Climate stress test will prove to be challenging

Data
collection

Both short
and long term
horizon

Translation of
the scenarios
into

a long term evolution
of KBC's balance sheet

potential losses

This stress test will help in creating

- awareness both within individual banks and within the sector
- understanding how climate risk can impact individual banks and the economy as a whole
- insights on how impacts can be measured and could be acted upon

This is to be seen as a **learning exercise**, both at the level of the supervisor and at the level of the banks. No concrete capital consequences can be attached to the outcome of the stress test.



The EU-wide stress tests of EBA/SSM: necessity and guarantee for a resilient banking sector?

Wednesday 12 January 2022
1 – 2.30 p.m.

WEBINAR

Introduction by Jo Swyngedouw, Head Financial Stability, AML supervision and Prudential Policy Banks, National Bank of Belgium

Part 1: Evolution of the EU wide stress test – past, present and future by Jacob Gyntelberg, Director of the Economic and Risk Analysis (ERA) Department at the European Banking Authority (EBA)

Part 2: EU wide stress testing - a bank's perspective by Christine Van Rijseghem, Chief Risk Officer KBC Group