Reacfin

ASALV WEBINAR

Les impacts des risques de transition sur les institutions financières

6TH MAY 2021

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AGENDA

Part 1: the financial industry will be deeply impacted by the transition risks

Part 2: new regulations addressing the climate-change related risks

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- Part 1: the financial industry will be deeply impacted by the transition risks
- Part 2: new regulations addressing the climate-change related risks

PART 1: THE FINANCIAL INDUSTRY WILL BE DEEPLY IMPACTED BY THE TRANSITION RISKS

The financial industry is exposed to two Climate change-related risks: Physical and Transition risks

- Climate change related risks impacting the financial industry are traditionally categorized **in two main types**:

Physical Risk

- Economic losses resulting from increased frequency and/or severity of adverse climate events
  - Directly related to the changes in climate and weather patterns or gradual loss of ecosystem
  - *Examples: costs of damages resulting from floods, storms, drought, fires, etc.*

Transition Risk

- Economic losses **resulting from initiatives to limit climate changes** (i.e., from the transition towards a carbon-free economy)
  - Resulting from the introduction of new policies or regulations, technology breakthroughs or changes in the market behavior
  - *Example: stocks or credit that see their valuation affected by market participant expectations*

- Note that the market is gradually considering **legal and reputational risks** as a third category of climate related risk for the financial industry

Climate change-related risks: timing and severeness

- The climate change related risks are function of the **transition pathway** and the **strength of response** of the transition
- Yet, **in all scenarios, the financial industry will be severely hit**

Transition pathway	Strength of response (whether or not climate targets are met): Met	Strength of response (whether or not climate targets are met): Not Met
Disorderly	**Disorderly met** Sudden and unanticipated response is disruptive but sufficient enough to meet climate goals	**Too little, too late** We do not do enough to meet climate goals, the presence of physical risks spurs a disorderly transition
Orderly	**Orderly** We start reducing emissions now in a measured way to meet climate goals	**Hot house world** We continue to increase emissions, doing very little, if anything, to avert the physical risks

Transition Risks

Physical risks

Source: ECB: Climate change and financial stability (29 May 2019), page 5

Climate change-related risks: timing and severeness

- The climate change related risks are function of the **transition pathway** and the **strength of response** of the transition
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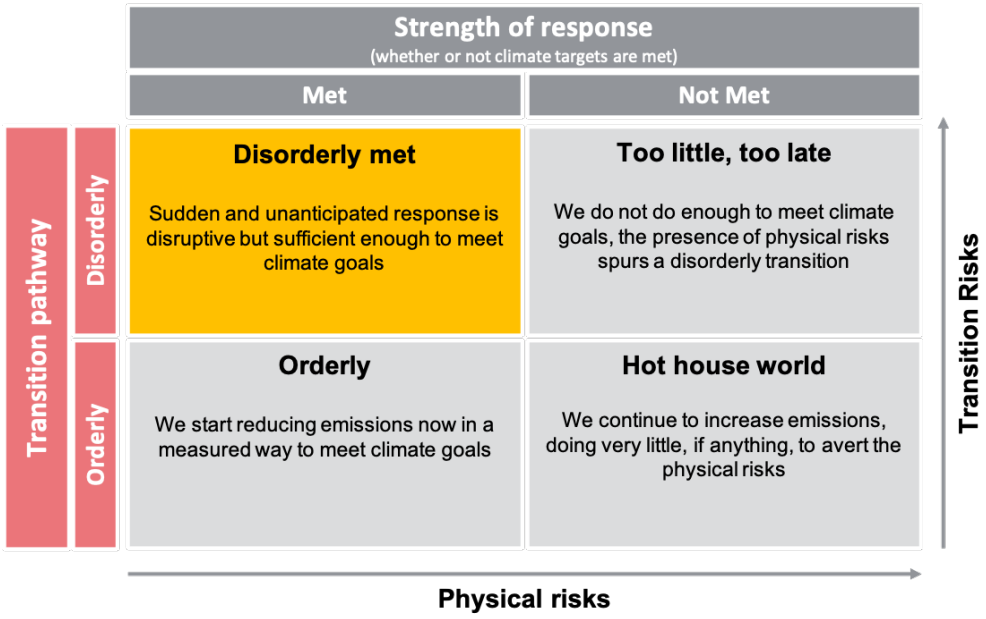
- Meeting the targets in a disorderly way: possible scenarios
  - Unexpected acceleration triggers (pandemic outbursts, beyond-expectation weather conditions, wars)
  - Disruptive technological (re)volutions
  - Quick market sentiment evolutions
  - Immediate and aggressive policy changes
- Consequences for the financial industry
  - Market crashes
  - Systemic solvency destruction
  - …



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Climate change-related risks: timing and severeness

- The climate change related risks are function of the **transition pathway** and the **strength of response** of the transition
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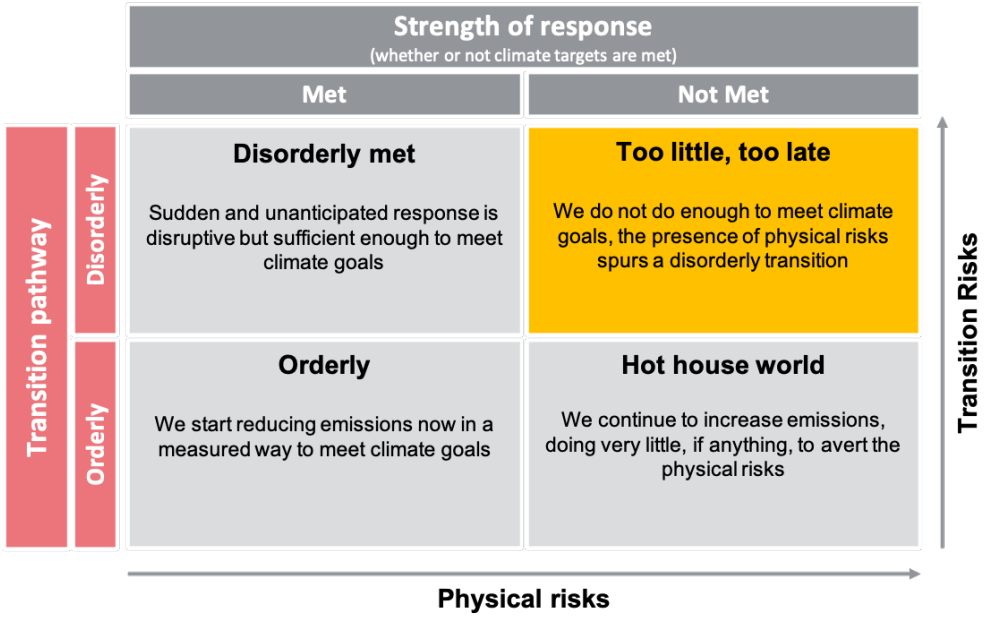
- Not meeting the targets **and** in a disorderly way: possible scenarios
  - ”business as usual” scenario: a lot of plans, meetings, summits, translating in ”too little, too late”
  - Natural disasters increasing in quantity and magnitude
  - Gradual politic and economic degradation

- Consequences for the financial industry
  - Prolonged uncertainty
  - Higher risk premiums
  - Volatile markets
  - Confidence crisis
  - …



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Climate change-related risks: timing and severeness

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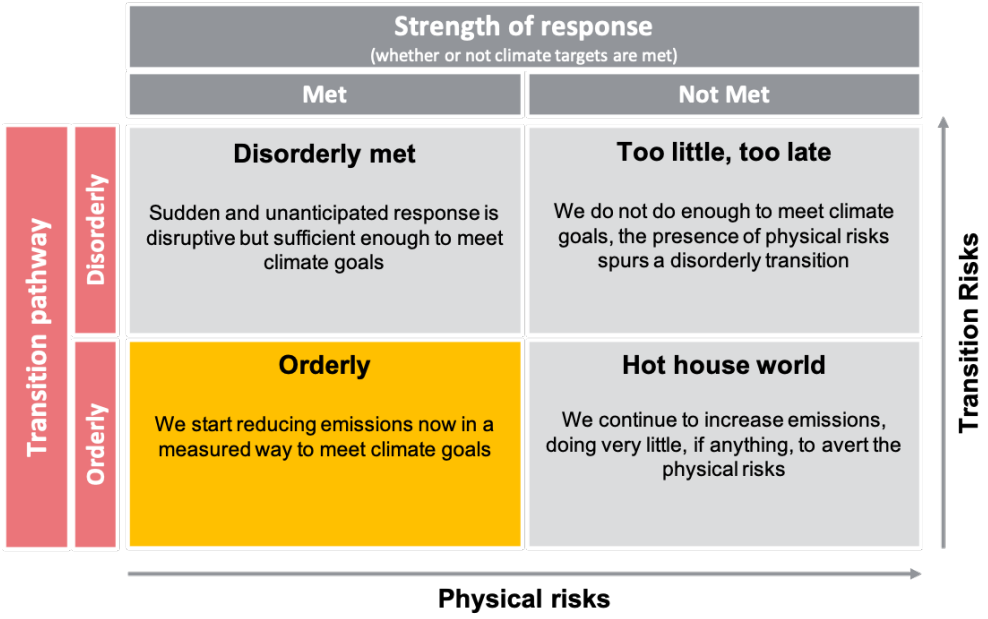
- Targets orderly met:
  - The ideal scenario
  - Quick but orderly transition
  - Fast market adaptation
  - "Best in class" mindset

- Consequences for the financial industry
  - Unavoidable systemic solvency challenge
  - Extremely high investments/financing needs



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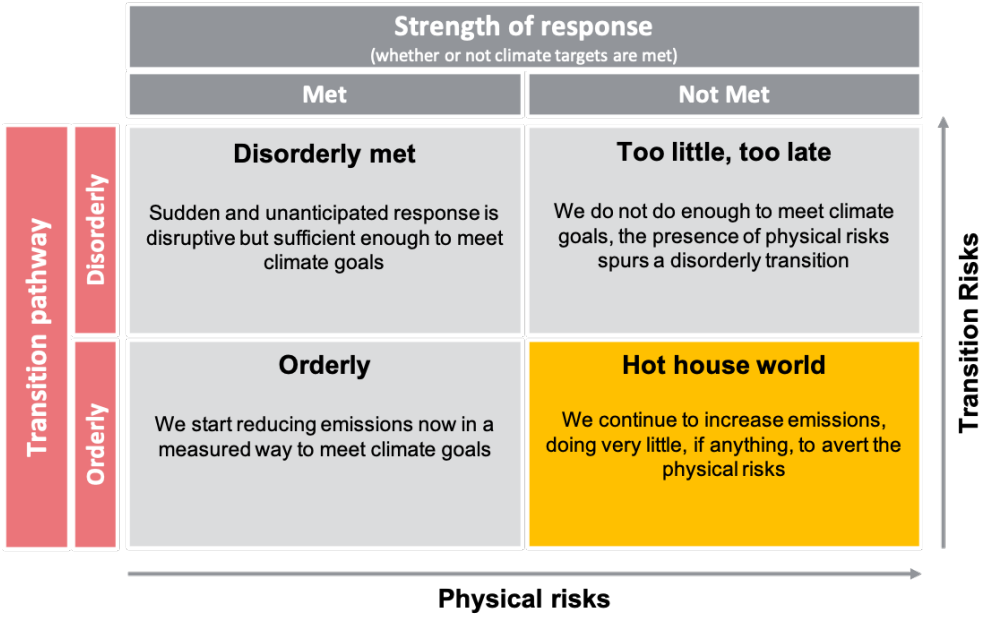
Climate change-related risks: timing and severeness

- The climate change related risks are function of the **transition pathway** and the **strength of response** of the transition
- Yet, **in all scenarios, the financial industry will be severely hit**

- Not meeting the targets in an orderly way
  - Exponential increase of Physical risks
  - transition risks not materializing, yet piling up
  - Time-bomb effect: delaying increases the magnitude of the risks

- Consequences for the financial industry
  - Prolonged uncertainty
  - Higher risk premiums
  - Volatile markets
  - Fragile systemic solvency pattern
  - …



Source: ECB: Climate change and financial stability (29 May 2019), page 5

Climate change-related risks impacts on the financial industry

- The impact of physical and transition risks will affect most institutions in the financial industry
- However, not all financial institutions will be affected by the same types of climate risks

Legend:

Most relevant climate change risks
- High Physical Risk
- High Transition risk
- Both risk (High)
- Limited impact

Rationale

Bank

- Assets:
  - New climate related charges (Transition risk) for borrowers increase default rates and loss-given defaults on loan books
  - Securities impacted by transition risk as a result of new Opex, Capex & potential stranded assets
  - Potential increase in volatilities of assets & new interdependencies

Insurer

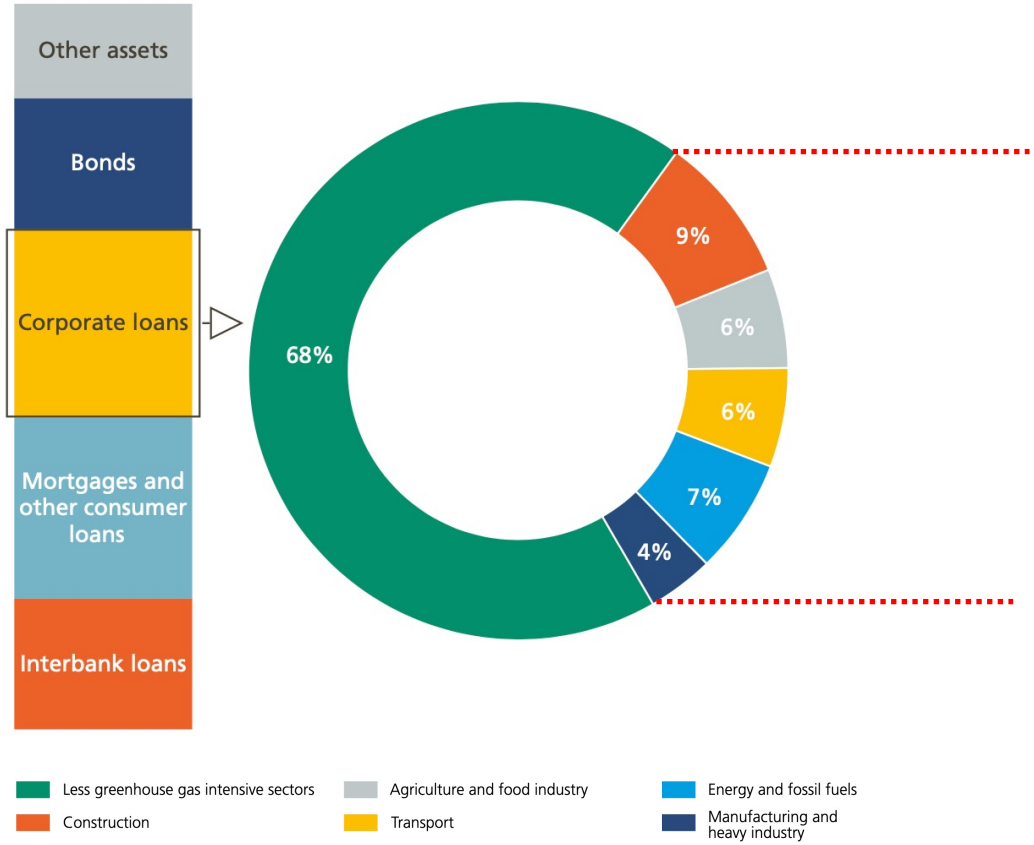
- Assets:
  - Similar to banks for securities in their investment book
  - Potential increase in volatilities of assets & new interdependencies
- Liabilities:
  - Increased climate-events related claims in the insurance liabilities as a result of surging physical risks (particularly for Non-Life Insurers)

Pension fund

- Assets:
  - Similar to banks for securities in their investment book
  - Potential increase in volatilities of assets & new interdependencies

The exposure of the Belgian banking sector [1]

- Breakdown of Belgian bank's exposure to transition risks by sector



- 32% of the Belgian banks' corporate loans portfolio – an exposure of € 81 Bn – is exposed to vulnerable sectors
- The potential vulnerability of Belgian banks is not limited to corporate portfolios: other asset classes (e.g., residential mortgages) are also subject to potential impacts (we will analyse the mortgage business case later in the presentation)

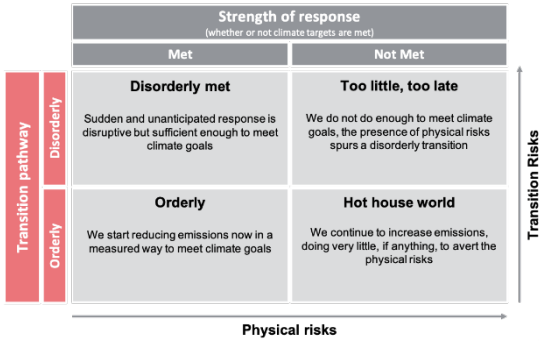
(1) NBB - Climate-related risks and sustainable finance - 2019

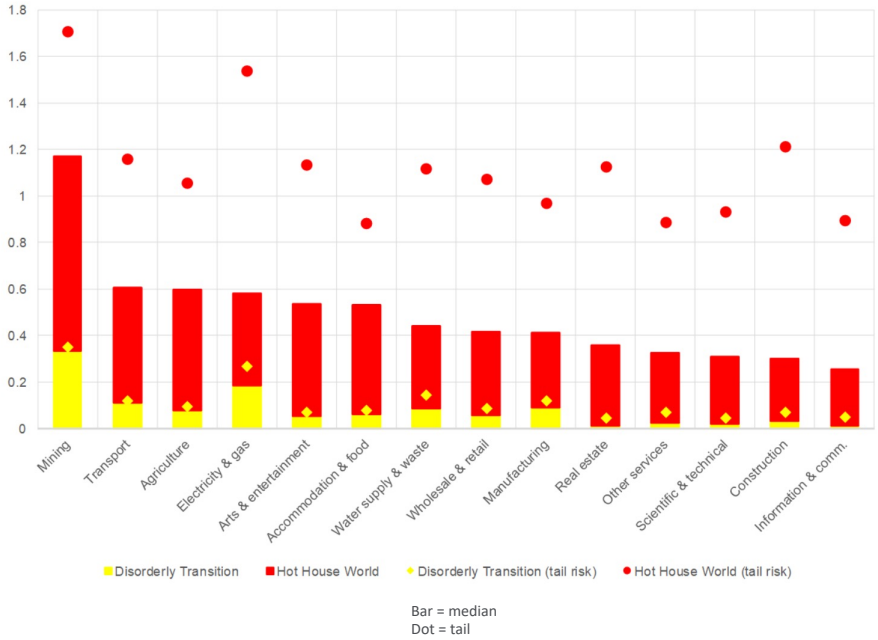
PART 1: THE FINANCIAL INDUSTRY WILL BE DEEPLY IMPACTED BY THE TRANSITION RISKS

March 2021 ECB's economy-wide climate stress test [1]

- Goal: assess the exposure of euro area banks to future climate risks by analysing the resilience of their counterparties under various climate scenarios
- Test parameters
  - Transition + physical
  - 30 years horizon
  - 4m firms, 2k banks
- Outcome of the stress test: PD's (Probabilities of Default) are much higher in all cases

  - « Hot House » compared to « orderly »
  - « Disorderly » compared to « orderly »





(1) https://www.ecb.europa.eu/press/blog/date/2021/html/ecb.blog210318~3bbc68ffc5.en.html#short

Rationale for Transition Risks & expected effects

Main Risk Drivers

- **Policies and regulations:**
  - since the Paris agreement, in 2015, policies and regulations are rapidly developed across the world to both discourage practices that have a negative impact on the climate, and conversely help to develop best practices
  - Example: all EU regulators (Banking, Insurance, Pension Funds) are in the process of rolling out new regulations that will have a far-reaching impact in term of risk management for the financial sector
- **Technology breakthroughs:**
  - even though the timing of innovation is uncertain, enormous effort and important capital are dedicated to research. Therefore, a cascade of technology breakthroughs is highly probable, that will trigger important valuation shocks throughout the financial system
  - Example: Hydrogen Fuel cells, Teleworking technologies, etc.
- **Market's participants behavior**:
  - households, corporates and public bodies are expected to adapt their behavior to the climate change transition conditions, therefore creating new offer-and-demand situations in numerous market segments
  - Example: sharp decrease in meat consumption triggers financial stress situation throughout the meat consumption value chain

Transmission to the economy

- **Increased Capital Expenditures**
  - investments required to reduce emissions and to adapt to new low-carbon standards
- **Increased Operational expenses**
  - Increases of costs resulting from increasing costs of carbon (or « GHG-equivalents») emissions (modelled for instance through « Carbon Delta Approach »)
- **Stranded assets**
  - (Accelerated) losses on assets (through depreciations, impairments, etc.) as a result of evolving regulations (e.g., Fossil energy resources, existing production sites, etc.)
- **New business opportunities**

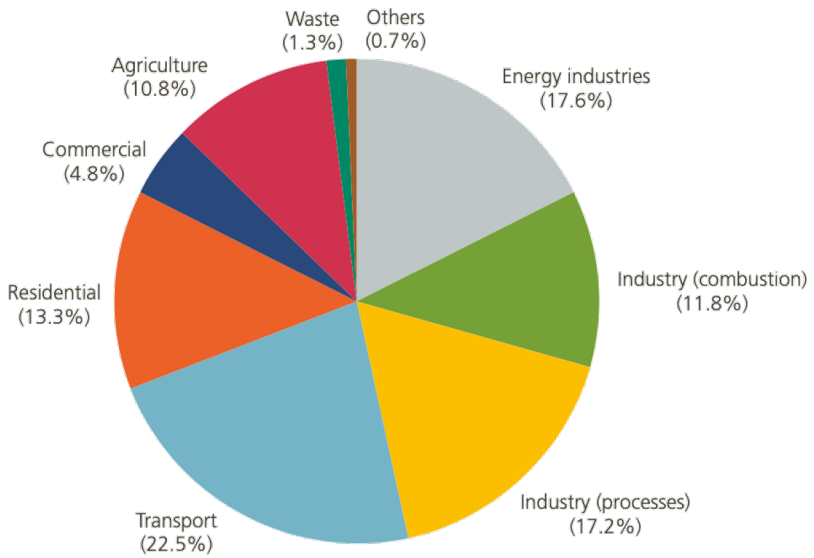
The example of the Belgian residential mortgage market [1]

Real estate is one of the main contributors to greenhouse gas emissions in Belgium

- Represents 18% of the GHG emissions
- High proportion of old buildings
- Natural gas main source of residential heating

Chart 1

Contributions to GHG emissions in Belgium, by sector (2017)



Source: Final National Energy and Climate Plan 2021-2030 Belgium.

(1) NBB FSR 2020 article "Climate-change-related transition risk associated with real estate exposures in the Belgian financial sector"

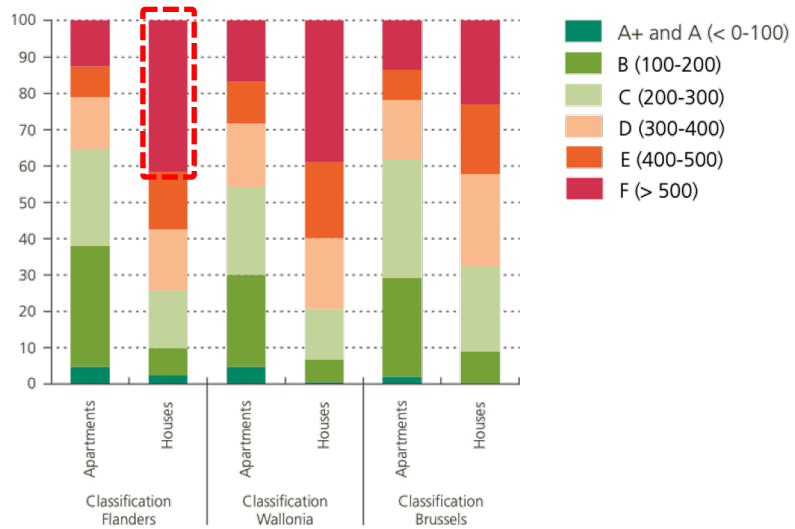
The example of the Belgian residential mortgage market

Real estate is one of the main contributors to greenhouse gas emissions in Belgium

- Represents 18% of the GHG emissions
- High proportion of old buildings
- Natural gas main source of residential heating
- Very low share of energy-efficient buildings in the residential real estate market [1]

Chart 2

Distribution of energy-efficiency scores and labels (Flanders label) of residential buildings



Source: Regional energy/environmental agencies.
Period covered by database: Flanders 2009-2019 – Wallonia 2010-2019 – Brussels 2011-2019.

(1) Even though PEB aren't comparable, the methodology is based on kWh/m^2/year for coherence reasons

PART 1: THE FINANCIAL INDUSTRY WILL BE DEEPLY IMPACTED BY THE TRANSITION RISKS

The climate and environmental changes translate into a solvency impact through a five-step process

1. **Scenario selection**
   - One or more scenarios
   - Relevant(s) for the asset considered

- Select scenario based on exposures (e.g., the risks associated with a mortgage portfolio are derived from a fast transition)

2. **Transmission to the economy**
   - Identification of the relevant risk drivers
   - Risk drivers quantification

- Scenario outputs are the risk drivers for further computation
- Example: TCO_2 / kWh

3. **Financial impacts**
   - Financial impacts computation

- The challenge is to be able to compute the financials impact of the scenario on the bank's exposure: additional costs, asset price reduction a.s.o.
- Data and methodologies availability are key success factors for this step

4. **Risk impacts**
   - Update risk parameters

- Base on outputs of step 3, the bank is now in a position to adapt idiosyncratic risk parameters, based on know methodologies (EAS, PD, LGD, etc.)
- Impact on individual risk-dependent financials: pricing etc

5. **Solvency impacts**
   - Compute solvency (and other key risk metrics) impact

- At aggregated levels, measure impacts on solvency and other risk indicators
- Capacity to assess risks at exposure AND aggregated level

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Part 2: new regulations addressing the climate-change related risks

PART 2: NEW REGULATIONS ADDRESSING THE CLIMATE-CHANGE RELATED RISKS

Regulators and policy-makers are developing a framework to address climate & environmental changes

Main world-level Policy Making Bodies

- The United Nations
  - The UNCC: Unite Nations Climate Change program
  - The Paris Agreement
- The Bank for International Settlements (BIS)
  - The Basel Committee for Banking Supervision (BCBS)
- The Financial Stability Board (FSB)
- The Task-force on Climate-related Financial Disclosures (TCFD)
- The Network for Greening the Financial System (NGFS)
- The World Bank
- The International Monetary Fund

Main new regulations impacting Belgian banks

- The European Union Commission
  - European Green deal
  - Sustainable Finance Action Plan
  - Non Financial Reporting Directive
- The ECB and European Supervisory Authorities (EBA, EIOPA, ESMA)

PART 2: NEW REGULATIONS ADDRESSING THE CLIMATE-CHANGE RELATED RISKS

The EU Sustainable Finance[1] Action Plan

- Reorienting capital flows towards a more sustainable economy
  1. EU **Taxonomy** (i.e. a classification system, establishing how sustainable economic activities are)
  2. EU **Green Bond Standard**
  3. Fostering investment in sustainable projects ("the € **1Tn investment plan**")
  4. Incorporating sustainability in **financial advice** (see impact on MiFID etc.)
  5. Developing sustainability **benchmarks** (i.e. new indexes)
- Mainstreaming sustainability into risk management
  6. Better integrating sustainability in **ratings** and market **research**
  7. Clarifying asset managers' and institutional investors' duties regarding sustainability (**SFRD**)
  8. Introducing a 'green supporting factor' in the **EU prudential rules for banks and insurance companies**
- Fostering transparency and long-termism
  9. Strengthening **sustainability disclosure** and accounting rule-making
  10. Fostering sustainable corporate governance and attenuating short-termism in **capital markets**

- In Europe, the EU Sustainable Action plan is the overarching legislation addressing the climate change risk management for the financial industry
- The plan has a deep and far-reaching impact at all levels: governance, business, risk-management, a.s.o.

(1) https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance_en

The EU Taxonomy for sustainable activities - introduction

- What is the EU Taxonomy?

The EU Taxonomy is a **tool** to determine whether an economic activity can be classified as an **"Environmentally Sustainable Economic Activity"** (ESEA)

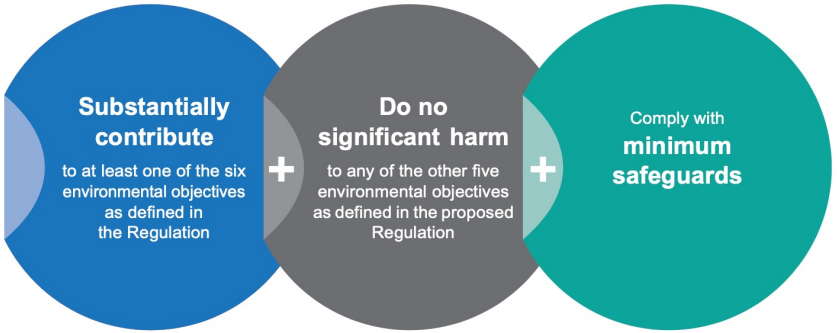
The economic activity is not sustainable ("brown")

The economic activity is sustainable ("green")

- EU Taxonomy benefits
  - Creates standardised framework for all stakeholders:
    - Companies who have to disclose
    - Investors
    - Banks and insurers for disclosure and risk-management purposes
  - Helps creating a coherent data model for sustainable activities
  - Helps reducing greenwashing
  - Facilitates client support/acceptance
  - Supports channelling capital towards sustainable activities
  - Creates new business opportunities
  - Forms basis for international standards

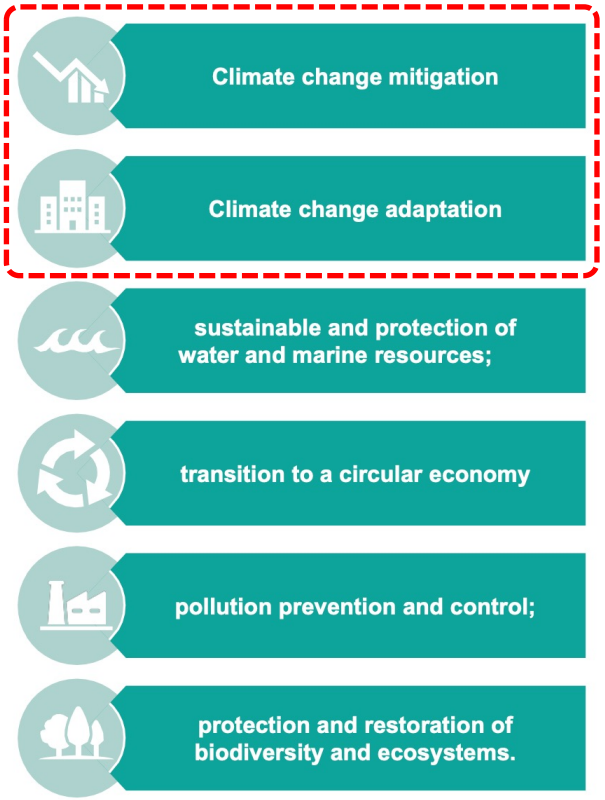
The EU Taxonomy for sustainable activities in practice

- The EU Taxonomy is a classification of economic activities according to their **positive** or **negative contribution** to the **environmental objectives** of the EU
  - Does the economic activity contribute to the environmental objectives?
  - Does it harm any of the other environmental objectives?
  - Does the activity comply with the minimum safeguard (1)



- The assessment is based on specific thresholds
- Thresholds: **TSC or "Technical screening Criteria"**
- Final version in the "Delegated Acts" published April 2021 (see below)
- Basis: 593 p. of the technical annex (TEG)

EU Taxonomy Six Objectives



Applicable as from 31st dec 2021

(1) OECD Guidelines on Multinational Enterprises and the UN Guiding Principles on Business and Human Rights

The EU Taxonomy for sustainable activities – an example of the use of TSC's

- Renovation of existing buildings (1)
  - « Substantially Contributes »
    - Leads to a reduction of primary energy demand (PED) of at least 30 %
    - In Belgium, it will be measured with the two main indicators of the EPC/PEB (100kWh/m²/year

Scope of the DA's

  - « Does Not Significantly Harms » (DNSH) the other objectives
    - Objective 3: « Sustainable use and protection of water and marine resources » (non exhaustive)
      - Taps have a maximum water flow of 6 litres/min
      - Showers have a maximum water flow of 8 litres/min
      - WCs, including suites, bowls and flushing cisterns, have a full flush volume of a maximum of 6 litres and a maximum average flush volume of 3,5 litres
      - Etc…
    - Objective 5: « Pollution prevention and Control »
      - Building components and materials used in the building renovation that may come into contact with occupiers emit less than 0,06 mg of formaldehyde per m3 of material or component upon testing in accordance with the conditions specified in Annex XVII to Regulation (EC) No 1907/2006 and less than 0,001 mg of other categories 1A and 1B carcinogenic volatile organic compounds per m3 of material or component, upon testing in accordance with CEN/EN 16516 or ISO 16000-3:2011 or other equivalent standardised test conditions and determination methods …

(1) Cfr. Annex 1 of the DA's: https://ec.europa.eu/finance/docs/level-2-measures/taxonomy-regulation-delegated-act-2021-2800-annex-1_en.pdf

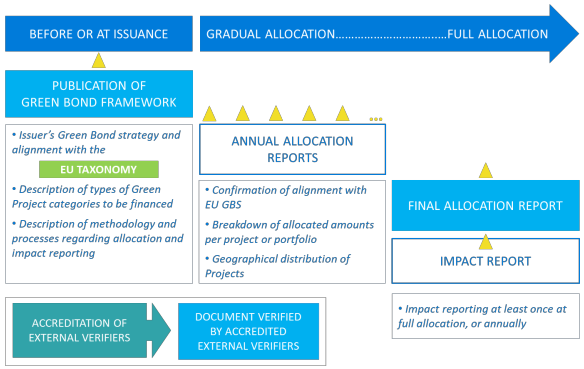
PART 2: NEW REGULATIONS ADDRESSING THE CLIMATE-CHANGE RELATED RISKS

Focus: the EU Sustainable Finance[1] Action Plan

- Reorienting capital flows towards a more sustainable economy
  1. EU **Taxonomy** (i.e. a classification system, establishing how sustainable economic activities are)
  2. EU **Green Bond Standard**
  3. Fostering investment in sustainable projects ("the € **1Tn investment plan**")
  4. Incorporating sustainability in **financial advice** (see impact on MiFID etc.)
  5. Developing sustainability **benchmarks** (i.e. new indexes)
- Mainstreaming sustainability into risk management
  6. Better integrating sustainability in **ratings** and market **research**
  7. Clarifying asset managers' and institutional investors' duties regarding sustainability (**SFRD**)
  8. Introducing a 'green supporting factor' in the **EU prudential rules for banks and insurance companies**
- Fostering transparency and long-termism
  9. Strengthening **sustainability disclosure** and accounting rule-making
  10. Fostering sustainable corporate governance and attenuating short-termism in **capital markets**

The Green Bonds Standards (GBS)

1. Alignment with the EU taxonomy
2. Framework e.g., issuer strategy, use-of-proceeds
3. Reporting
4. Verification



(1) https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance_en

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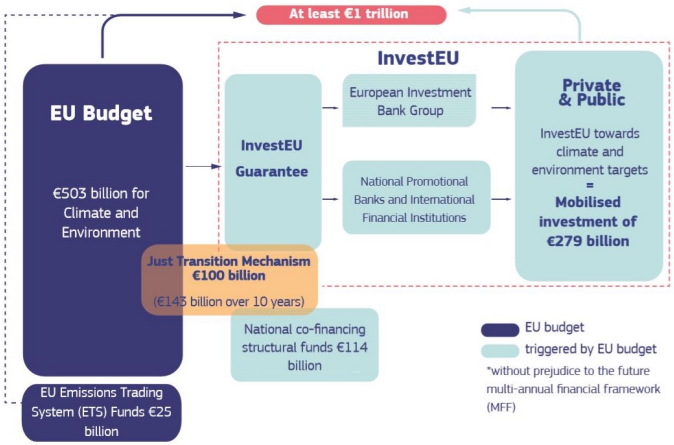
The European Green Deal Investment Plan (EGDIP)

1. € 1 Tn sustainable Investments
2. A framework for PPP



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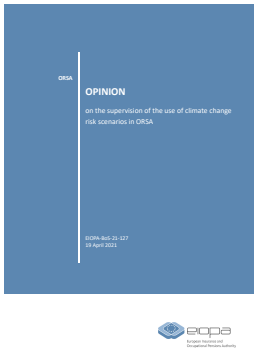

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PART 2: NEW REGULATIONS ADDRESSING THE CLIMATE-CHANGE RELATED RISKS

19 April 2021 EIOPA opinion on the supervision of the use of climate change risk scenarios in ORSA

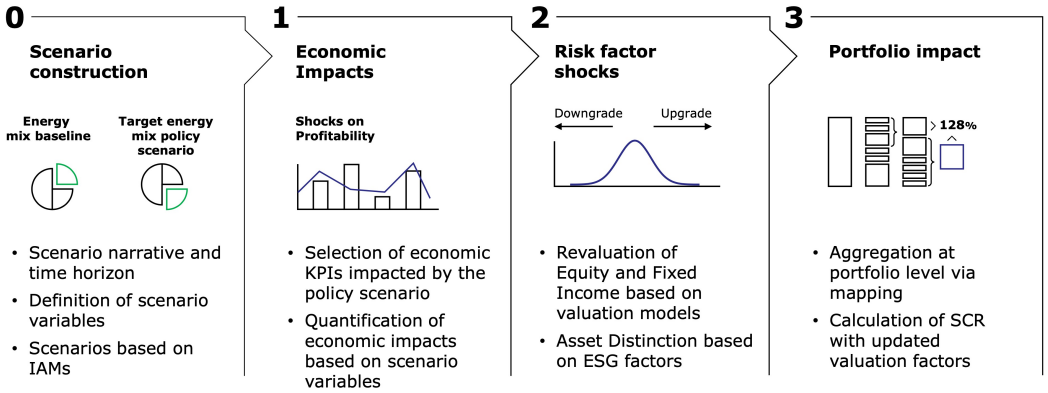
EUROPEAN INSURANCE AND OCCUPATIONAL PENSIONS AUTHORITY

"Regulators should require Insurers to integrate climate change risks in their system of governance, risk-management system and Own Risk Self Assessment, similar to all risks undertakings are or could be exposed to, and this in the short term"

EAA Webinar on "Quantifying Climate Change Risks with Solvency II"

european actuarial academy

- Climate change related risks are material within the exposure of Insurers
- Regulators are expecting Insurers to actively address these risks within their risk management



PART 2: NEW REGULATIONS ADDRESSING THE CLIMATE-CHANGE RELATED RISKS

ECB final guidelines on climate-related and environmental risks (1/2)

1. Business Environment	Institutions are expected to understand the impact of climate-related and environmental risks on the business environment in which they operate, in the short, medium and long term, in order to be able to make informed strategic and business decisions
2. Business Strategy	When determining and implementing their business strategy, institutions are expected to integrate climate-related and environmental risks that impact their business environment in the short, medium or long term
3. Management Bodies	The management body is expected to consider climate-related and environmental risks when developing the institution's overall business strategy, business objectives and risk management framework and to exercise effective oversight of climate-related and environmental risks
4. Risk Appetite	Institutions are expected to explicitly include climate-related and environmental risks in their risk appetite framework
5. Governance and Organisation	Institutions are expected to assign responsibility for the management of climate-related and environmental risks within the organisational structure in accordance with the three lines of defence model
6. Reporting	For the purposes of internal reporting, institutions are expected to report aggregated risk data that reflect their exposures to climate-related and environmental risks with a view to enabling the management body and relevant sub-committees to make informed decisions.
7. Risk Management Framework	Institutions are expected to incorporate climate-related and environmental risks as drivers of existing risk categories into their risk management framework, with a view to managing, monitoring and mitigating these over a sufficiently long-term horizon, and to review their arrangements on a regular basis. Institutions are expected to identify and quantify these risks within their overall process of ensuring capital adequacy

ECB final guidelines on climate-related and environmental risks (2/2)

8. Credit Risk Management	In their credit risk management, institutions are expected to consider climate-related and environmental risks at all relevant stages of the credit-granting process and to monitor the risks in their portfolios
9. Operational Risk Management	Institutions are expected to consider how climate-related and environmental events could have an adverse impact on business continuity and the extent to which the nature of their activities could increase reputational and/or liability risks
10. Market risk Management	Institutions are expected to monitor on an ongoing basis the effect of climate-related and environmental factors on their current market risk positions and future investments, and to develop stress tests that incorporate climate-related and environmental risks
11. Scenario Analysis and Stress Testing	Institutions with material climate-related and environmental risks are expected to evaluate the appropriateness of their stress testing, with a view to incorporating them into their baseline and adverse scenarios
12. Liquidity Risk Management	Institutions are expected to assess whether material climate-related and environmental risks could cause net cash outflows or depletion of liquidity buffers and, if so, incorporate these factors into their liquidity risk management and liquidity buffer calibration
13. Disclosure Policies and procedures	For the purposes of their regulatory disclosures, institutions are expected to publish meaningful information and key metrics on climate-related and environmental risks that they deem to be material, with due regard to the European Commission's Guidelines on non-financial reporting: Supplement on reporting climate-related information

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