EUROPEAN CENTRAL BANK

EUROSYSTEM

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Targeting a sustainable recovery with Green TLTROs

A discussion

Presentation at Positive Money Webinar

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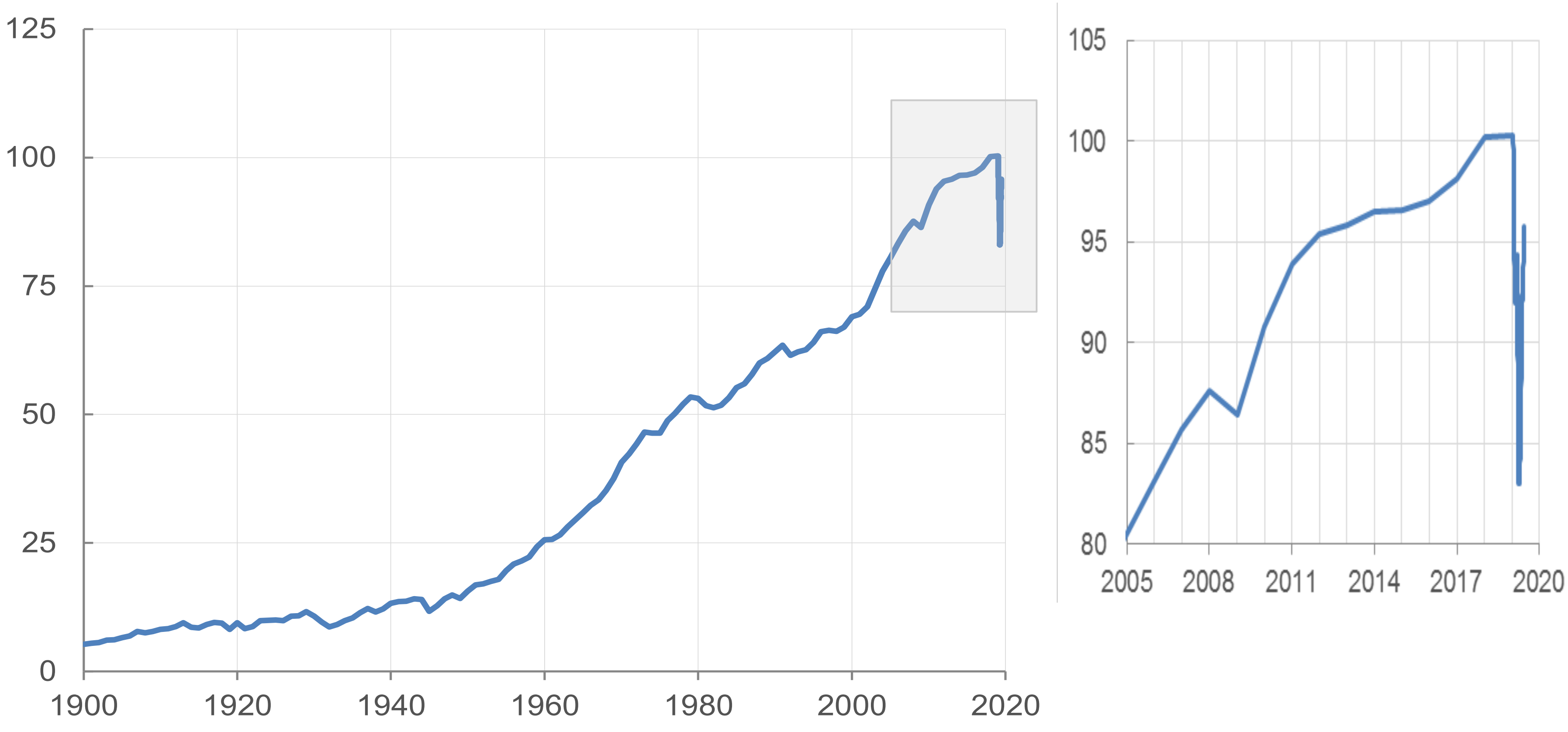
The views expressed in this presentation represent solely those of the presenter and not of the European Central Bank

Climate shocks are inevitable

- **2020:** drop in global CO_2 emissions estimated to be between -4 and -7%
- **Meeting Paris agreement** requires an annual drop of -7.6% between 2020-2030 (UN)

Global annual CO_2 emissions (in million tonnes)

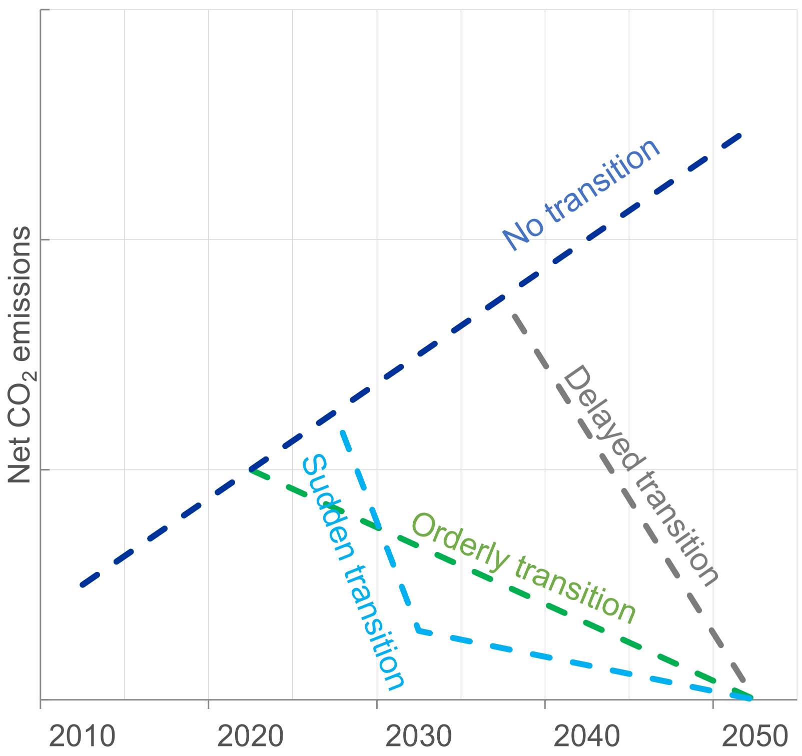


Source: Le Quéré et al. (2020). Global Carbon Project combined with Carbon Dioxide Information Analysis Center (CDIAC) (prior to 1959).
Latest observation: 11 June 2020

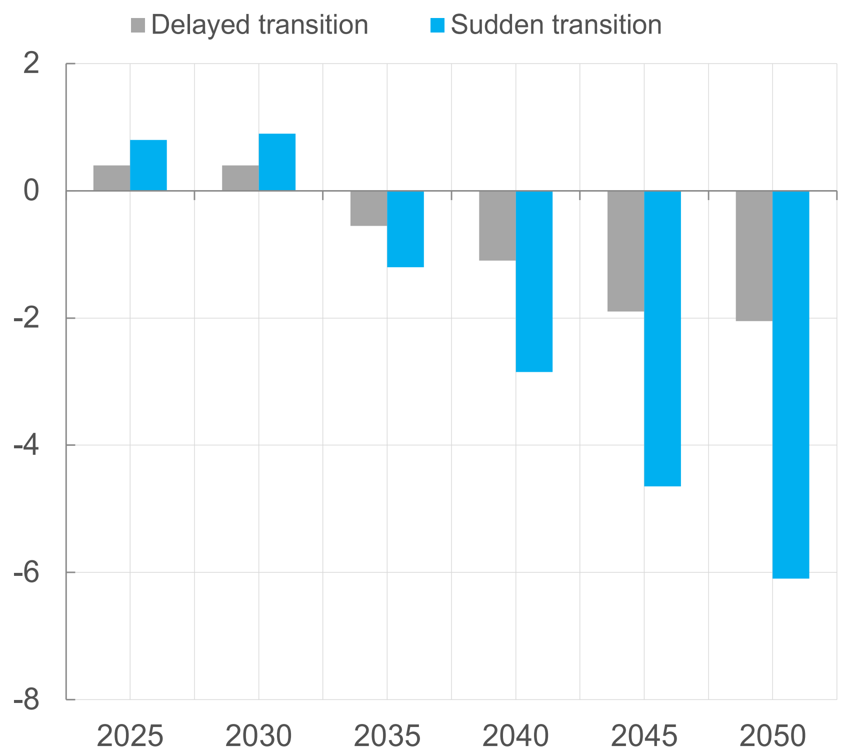
Physical and transition risks of climate change

- **Estimated costs of no action:** -10% GDP in 2100 (OECD); USD 20 trn stranded assets by 2050 (IRENA)
- **Investment needed to reach Paris target** (global warming < 1.5˚C) : USD830 bn p.a. until 2050 (IPCC)

Proposed scenarios
(in terms of emissions)



Impact on real GDP - Europe
(% deviation from orderly transition baseline)



Sources: Allen et. al (2020). Climate-Related Scenarios for Financial Stability Assessment: an Application to France. Banque de France working paper number 774, July 2020.

A role for the ECB? Risk based or also catalytic approach?

Prudential supervision/financial stability:

- **Contribute to the safety and soundness of the banking system and the stability of the financial system**

Monetary policy: Hierarchy of objectives for the Eurosystem; in pursuit of secondary objective the ECB should not extend its competences; act in accordance with open market economy principle

- **Currently under consideration in the ECB strategy review**
- **Primary objective: price stability:** risk based approach - Balance sheet risks; Risk to the transmission of monetary policy; Policy space
- **Secondary objective: take into account the broader economic goals of the Union** Catalytic role?
  - Art 127[1] TFEU: "[…] Without prejudice to the objective of price stability, the ESCB shall support the general economic policies in the Union […]." Specifically: Art 3[3] TEU: "[…] It shall work for the sustainable development of Europe based on balanced economic growth and price stability, […], and a high level of protection and improvement of the quality of the environment." Art 11 TFEU: "Environmental protection requirements must be integrated into the definition and implementation of the Union's policies and activities."

What is the ECB already doing

Defining rules and standards

- Member of the NGFS and active contributor in three NGFS workstreams
- Contribution to the development of the EU taxonomy of sustainable economic activity; Member of EC platform on sustainable finance
- Input into the European Commission's public consultations on the Renewed Sustainable Finance Strategy and the revision of the Non-Financial Reporting Directive

Prudential supervision

- Active contribution to BCBS and FSB initiatives
- Taking stock of SSM' banks' climate related risk practices and disclosures
- ECB guide on climate-related and environment risks (forthcoming)
- Develop stress-testing scenarios (and related modeling tools) that incorporate climate-related and environmental risks

Investment strategy

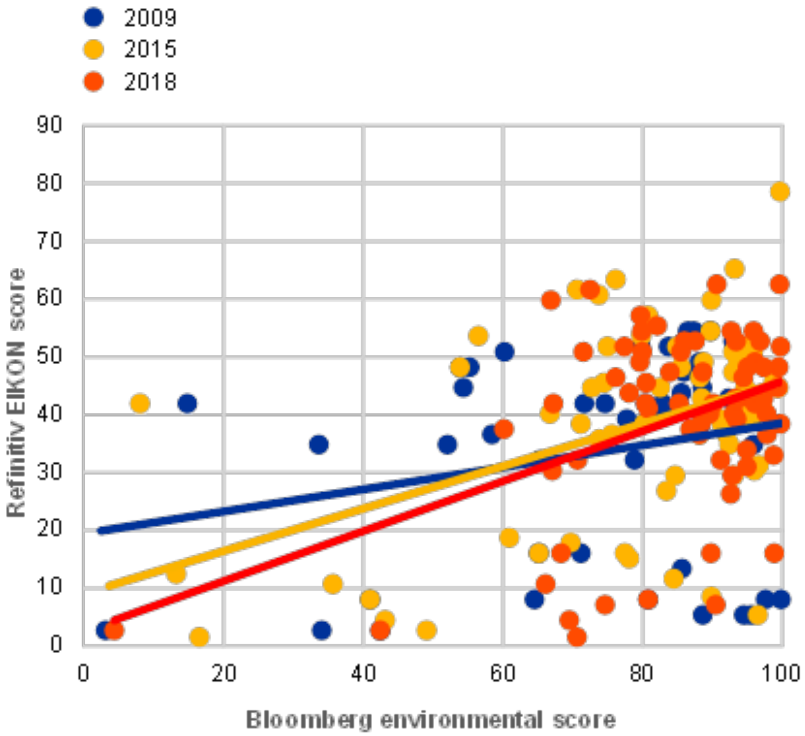
- Own pension fund investments
- Non monetary policy portfolio

Monetary policy

- Develop modeling tools to understand the macroeconomic implications of climate change
- Purchase of eligible bonds by Eurosystem (holding already 20% of the eligible green corporate bond universe)
- Collateral eligibility: sustainability-linked bonds as collateral (as of January 1st)
- Strategy review

Challenge 1: doing it well! what is green? - classification

Correlations of bank environmental scores by Bloomberg and Refinitiv
Indexes



Typical items to be included in scope 1, 2 and 3 emissions reporting in the financial sector

Upstream

Scope 2: indirect emissions from purchased electricity, steam, heating and cooling

Scope 3: all other indirect emissions (eg travel, employee commuting, purchased paper, waste, office equipment)

Institution

Scope 1: direct emissions from owned or controlled sources (eg. company facilities, vehicles)

Downstream

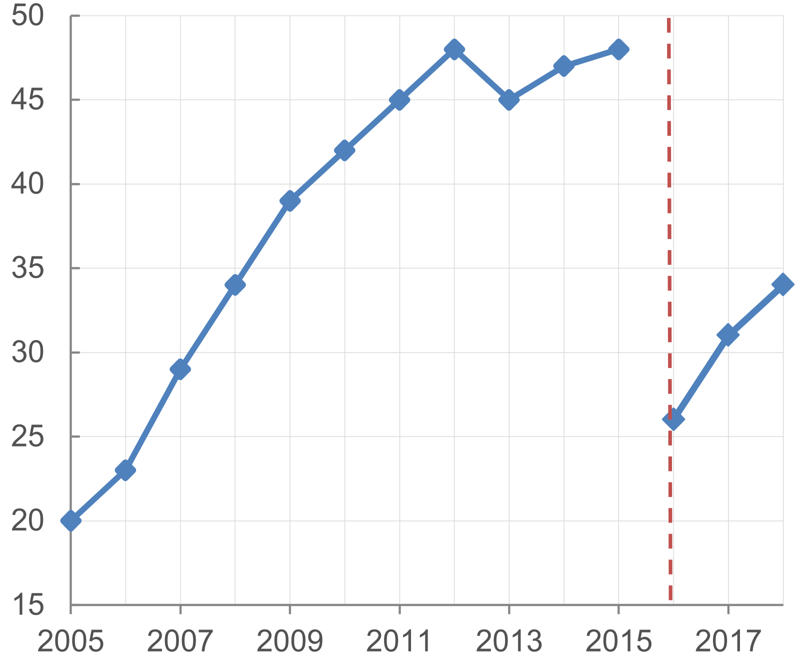
Scope 3: all other indirect emissions (eg financial investments, cash transport, internet banking)

Sources: Bloomberg, Refinitiv EIKON, S&P Global Market Intelligence and Dealogic. Sources: Greenhouse Gas Protocol, annual and sustainability reports of financial institutions and ECB calculations.
Notes: Left panel: The Bloomberg and Refinitiv environmental scores can take values between 0 and 100, whereby a higher value indicates a better performance in terms of environmental variables. The full unbalanced sample consists of 49 banks and 23 insurers in the European Union and the United States.

Challenge 1: doing it well - what is green? – disclosure and monitoring

Share of firms that disclose carbon emissions across 42 countries

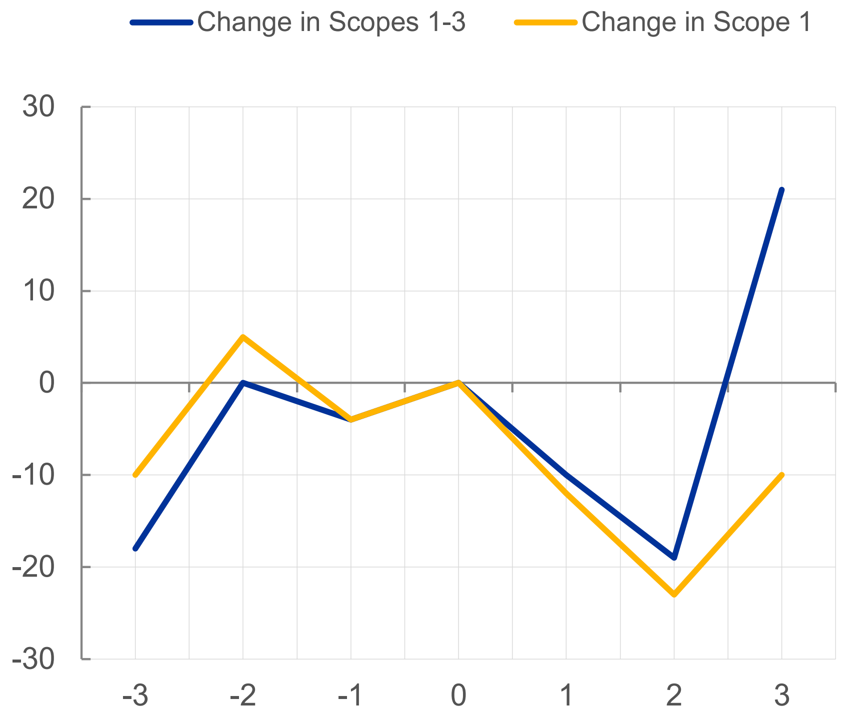
Percentage of all firms



Sources: S&P Trucost as in Ehlers et. Al (2020). *Green bonds and carbon emissions: exploring the case for a rating system at the firm level.* Note: there was a structural break in the data in 2016 due to an outsized increase in S&P Trucost.

Total average change in carbon intensity before and after green bond issuance

Issuance at t=0

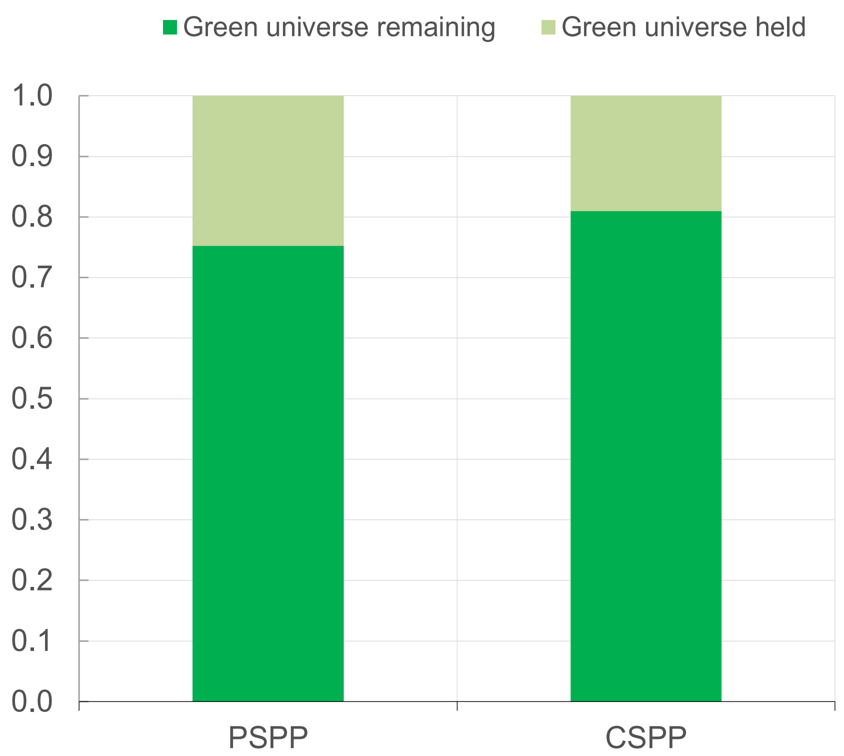


Sources: Ehlers et. Al (2020). *Green bonds and carbon emissions: exploring the case for a rating system at the firm level.* Notes: Scope 1 covers direct emissions. Scopes 1-3 also includes indirect emissions.

Challenge 2: market size

PEPP and PSPP green eligible bond universe and Eurosystem holdings

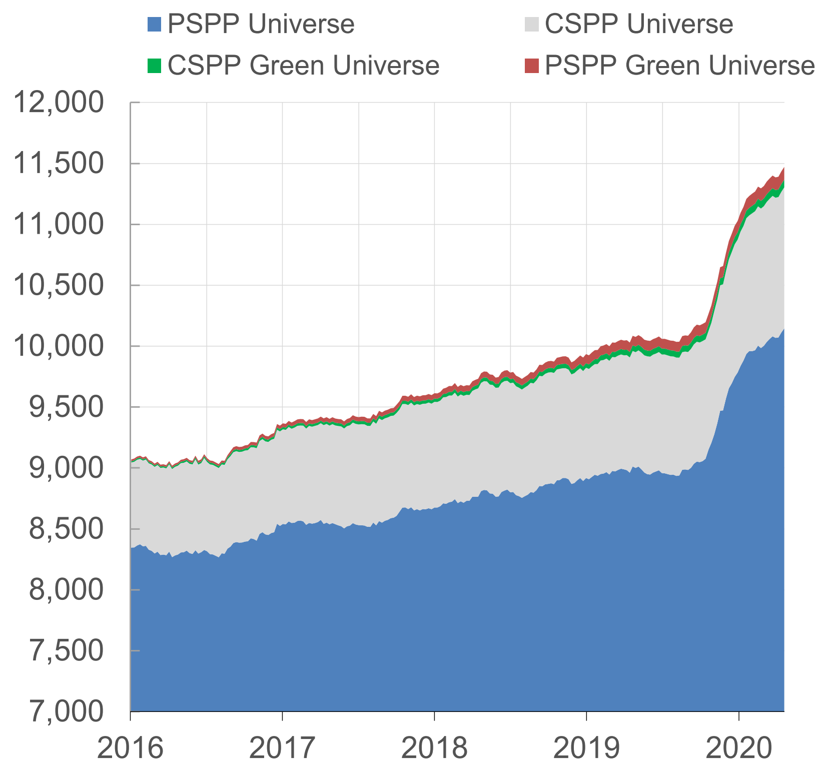
Average since 2018



Source: EADB and ECB calculations
Last observation was for 25 September 2020.

PEPP and PSPP universes and respective green universes

In EUR billions



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Discussion of green TLTRO paper

Welcome paper. Strategy review: ECB listens!

Some questions from my side:

- **Objective of Green TLTRO?**
  - TLTRO play a central role in the pandemic to ensure continued funding to firms in the context of an unprecedented liquidity shock.
  - Green TLTROs should not jeopardize capacity to deliver on primary objective

- **Timing?**
  - Can act as a catalyst (eg disclosure linked eligibility criteria) but…
  - Introduction when COVID liquidity crisis is still on-going may not be ideal
  - Operationalization issues: better data needed; taxonomy; reporting burden for SMEs
  - Regulatory framework needs to be supportive of green investment (TLTROs: you can lead a horse to water, but you can't make him drink)

Discussion of green TLTRO paper

Some questions (continued)

- **Side effects?**
  - Implication for other "secondary objectives"?
  - Possible level playing field issues due to cross country differences (asymmetric distribution of potential borrowers of green loans; considerable differences in fiscal frameworks)

- **Right instrument?**
  - No silver bullet? equity still better than debt: given the high capital intensity, high risks and long-term horizon of most projects *(See De Haas, R., and Popov, A. (2019), "Finance and carbon emissions", ECB Working Paper No 2318; and Financial Integration and Structure in the Euro Area, European Central Bank, Frankfurt am Main, March 2020.)*
  - Climate = structural challenge; TLTROs not structural in nature