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Green Economics: Impact on Monetary and Financial Policies

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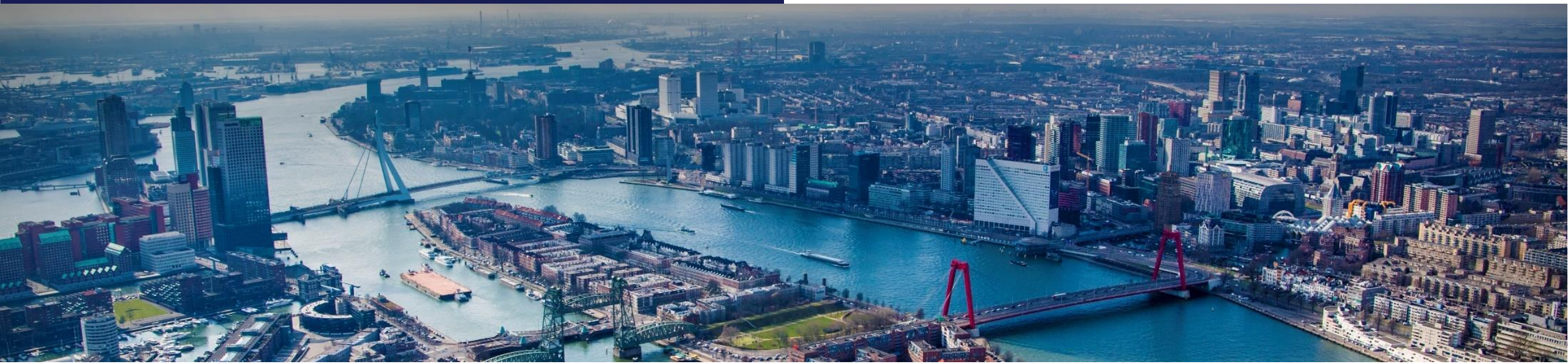


Agenda

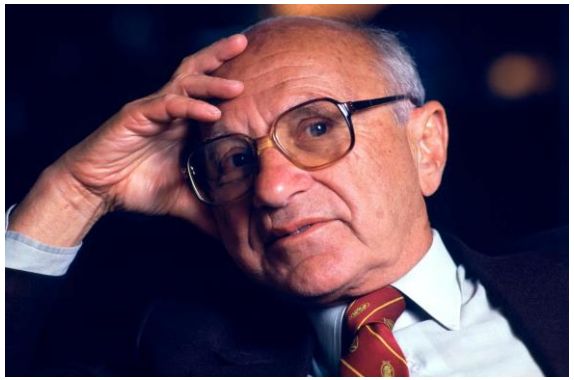
1. Evolution ECB
2. Market economics
3. Green economics
4. Impact on policy
   - Green monetary policy
   - Green financial stability
   - Green financial supervision
5. Concluding reflections

Evolution ECB

- Central banks are '**a child of their own time**'
  - **Bank of England**: finance war against France + stabilise financial markets 17th century
    -> **broad central bank**
  - **Bundesbank**: rebuild Germany after war with hyperinflation -> **narrow central bank**
  - **ECB:** construct of Great Moderation 1980s -> **narrow central bank**

- **Prevailing paradigm**: strong belief in **markets** + German ordoliberal influence






➢ ECB as **monetary policy rule**, no role financial stability / supervision (as markets need little guidance)

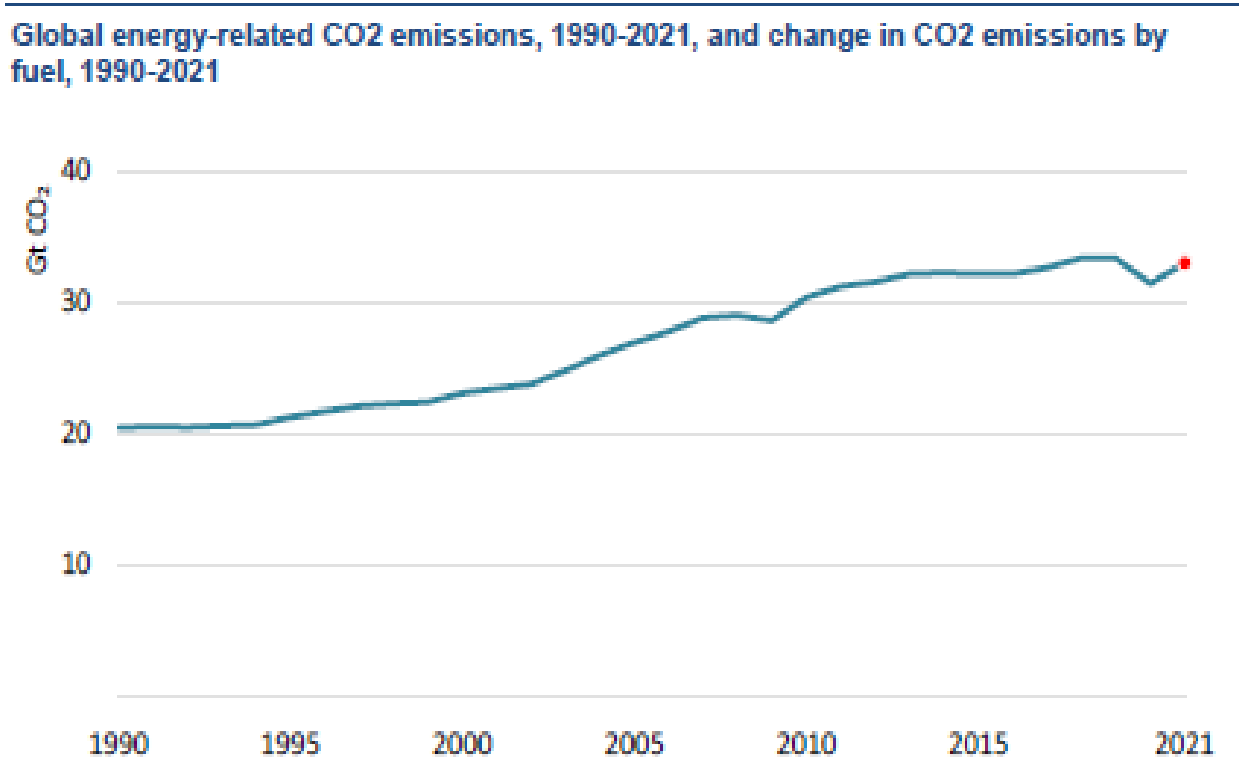
First reset: global financial crisis

- Global financial crisis was a first wake-up call
  - **Financial markets** are **not self-equilibrating**

- ECB from **narrow** to **broad central bank**
  - Stronger role in financial stability
  - Full role in banking supervision

Second reset: climate crisis

- Climate crisis is another wake-up call
  - ➢ **Market economics** are **not reducing carbon emissions**



Source: IEA, 2021

Market economics

Dominance of market economics

Evolution ECB

- EMU was designed and built in 1980s / 1990s
- Deregulation -> reduce role of government
- Prevalence of market economics thinking

Market economics

- Economy is a “self-contained structure of relation of production, distribution and consumption of goods and services within a geographical space”
- Ecology / sustainability missing from economy’s definition
- So, difficult to solve sustainability problems if not part of the system

Central yardstick is **GDP**

- Economic theory does not look at composition or distribution of GDP (Robinson, 1972)
- GDP does not distinguish between desirable and undesirable activities
- Only market transactions count; more is better (= economic growth)

Dominance of market economics (2)

Core values of market economics

- **Utility maximising** of individuals
- **Strict assumptions** (invisible hand conditions): independence of decisions, perfect information, perfect markets, etc.
- **Substitutability** between natural resources and other production factors

Consequence

- Valuation goods and services depends on impact on human preferences
- Impact on ecosystems ignored

Outcome

- Market economics systems leads to **expansion of goods and services -> economic growth**
- **Ignoring social and environmental factors** (by excluding them)

Market economics in policy

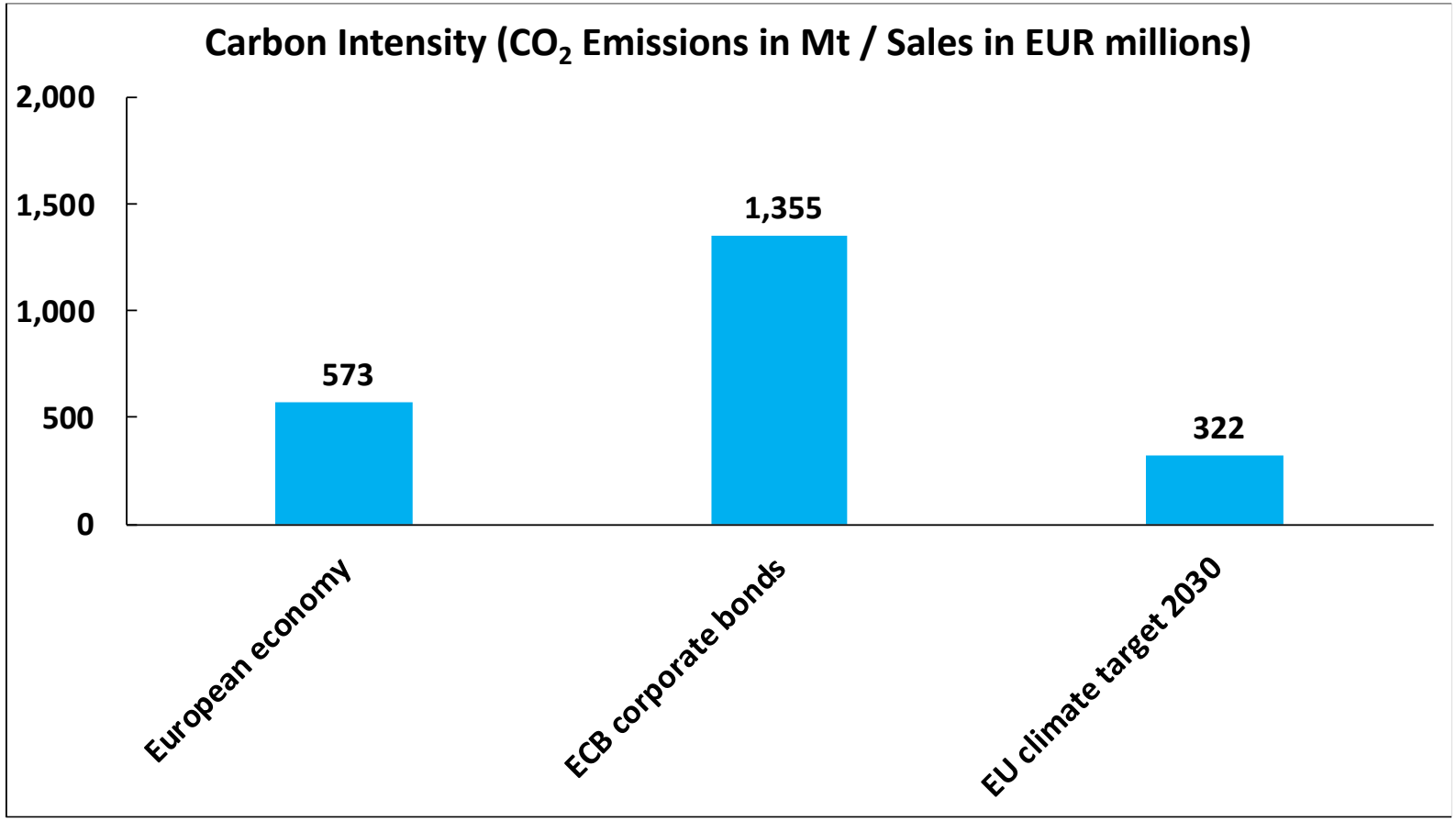
Market neutrality in monetary policy

- ECB buys bonds proportionally to outstanding debt (i.e. follows market structure)
- Market neutral approach does not disturb relative prices
- But does not follow strictly from Treaty: in accordance with open market economy
- Empirically: market has carbon bias

Self-equilibrating markets for financial stability

- Markets are best left to themselves -> avoid (over) regulation
- After financial crisis: ECB crisis manager
- One financial issue left: ECB should take over ELA role for individual banks from NCBs
- Next challenge: dealing with climate / biodiversity shocks

Average carbon intensity of companies



Carbon bias Europe

- Very large
- Mainly energy, materials & manufacturing

Main reasons

- Industry structure: large vs SMEs
- Organisational form: plc versus partnership or cooperative

Market economics in policy (2)

Basel capital adequacy rules based on **market principles**

1. Assumption **historical default patterns** is indicator of future risk
   - Credit risk: historical loss rates
   - Market risk: historical market volatility

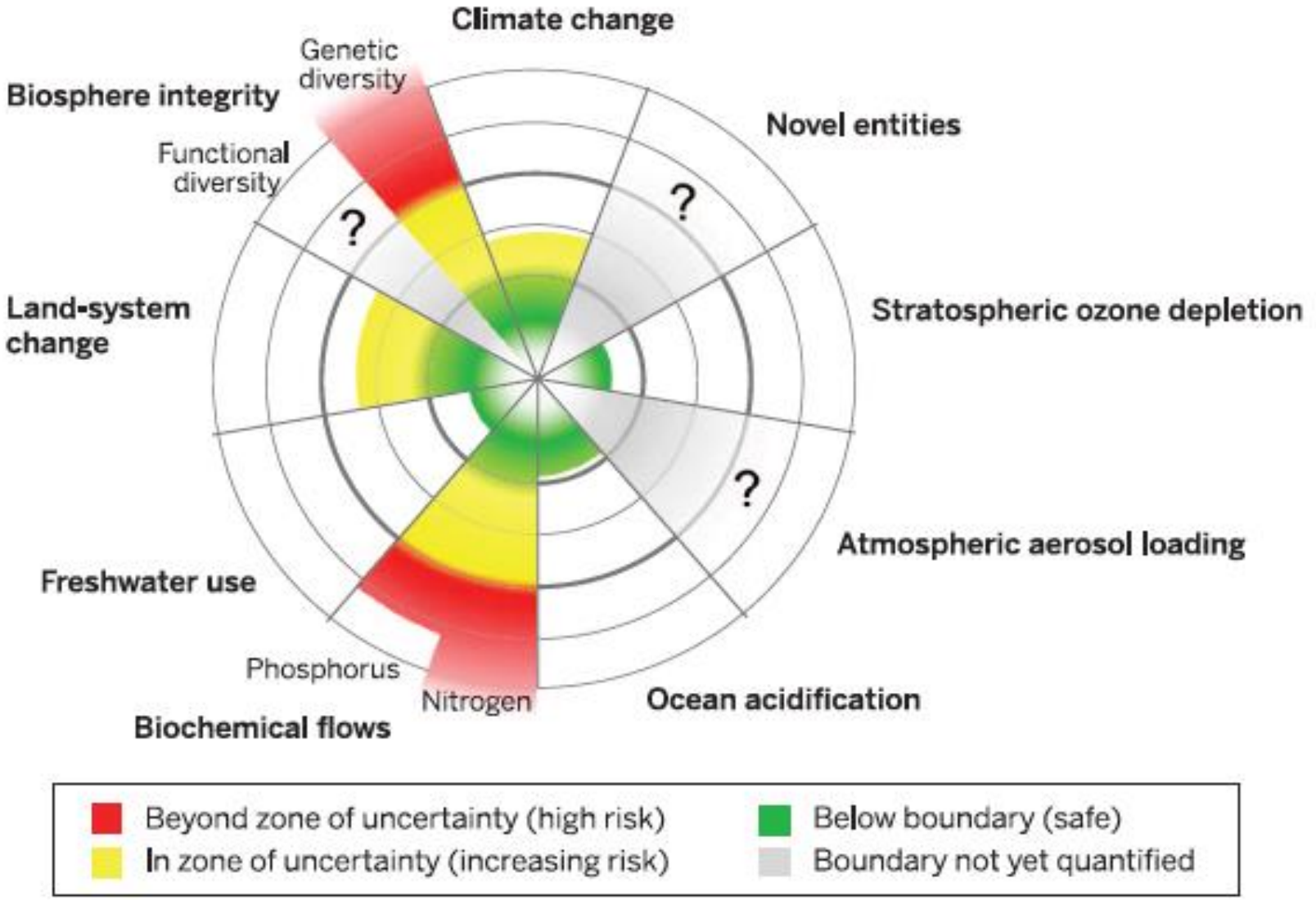
➢ But what about **structural change** in economy due to sustainability transition?

2. **Short horizon** – banks can mitigate risk within certain period (transaction banking)
   - Credit: 1-year holding period; market: 10-day holding period
   - Illiquid assets are punished with high capital charges

➢ But sustainable lending is focused on **stewardship** (relationship banking)

Green economics

Planetary boundaries framework



Green economics

Green economics

- Starting point **ecological constraint** (no substitution) instead of market transactions
- Precautionary principle (stay away from high risk zone)

Politics in the driving seat

- European Commission, Council and Parliament -> EU Green Deal
- Broad: climate, circular economy (recycling) and healthy food (agriculture)
- Ambitious: -55% carbon by 2030; net-zero by 2050
- We can expect big transitions in economy and companies

What is role of ECB?

- Central banks care about healthy development of economy in the long run
- Minimum: do no harm by avoiding negative impact (de-risk financial system)
- Or more ambitious: positive impact by allocation to low-carbon assets

Green policies

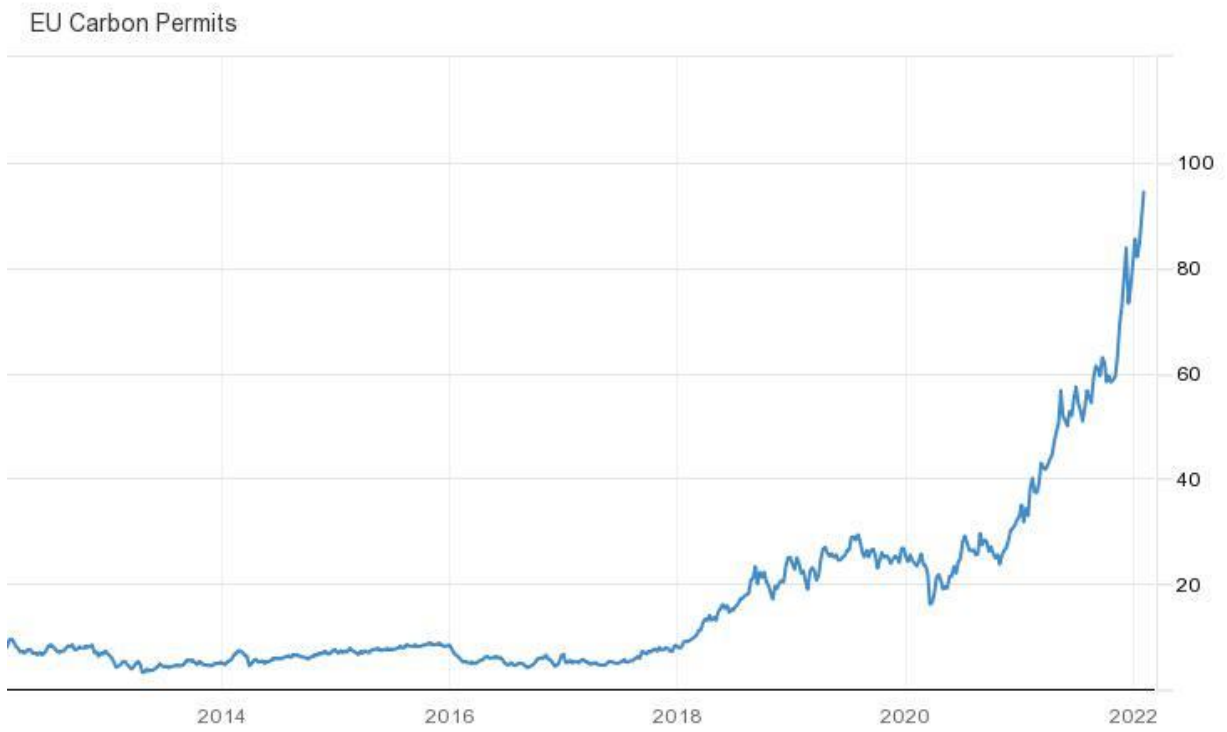
Green monetary policy

Legal mandate

- Primary objective (price stability) and support secondary objectives (incl environment)
- ECB is moving slowly away from strict interpreation of market neutrality
- Follow a general approach (specific policies for politics)

Coordination fiscal and monetary policy

- After fiscal policy is set, ECB can look for appropriate monetary stance
- Good news that ETS price is rising
- But shadow carbon price is €157
- Of course, fiscal policy is more powerful



source: trandingeconomics.com

Green monetary policy (2)

Which approach to counter carbon bias?

- Depends on one's view on **market failure**: mispricing vs ecological constraint

Market economics paradigm (pricing/risk)

- **Market efficiency**: need to correct for potential mispricing of credit risk factor
- Point 8 of ECB's detailed roadmap
- But 'adjustment' in credit risk will not do much against carbon bias

Green economics paradigm (allocation)

- **Ecological constraint**: need to move to low-carbon allocation
- Carbon bias is not due to ineffcient markets but due to structure of markets
- Point 4 of ECB's detailed roadmap
- This argues for a separate carbon tilting factor (e.g. separate haircut)

Green financial stability policy

Environmental shocks (climate, biodiversity)

- **Green swan**: high uncertainty -> tail risk for the financial system
- Dominant scenario: Too late, too sudden (ASC, 2016) -> stranded assets

Climate / biodiversity stress tests

- To identify concentrations of risk -> overexposure
- Outcomes show benefits of acting early

Large exposure limits

- To protect financial system against climate / biodiversity shocks
- At macro level, aggregate exposure < 50 or 75% of bank's eligible capital
- LE limits reduce risk and speed up allocation to low carbon assets

Green financial supervision

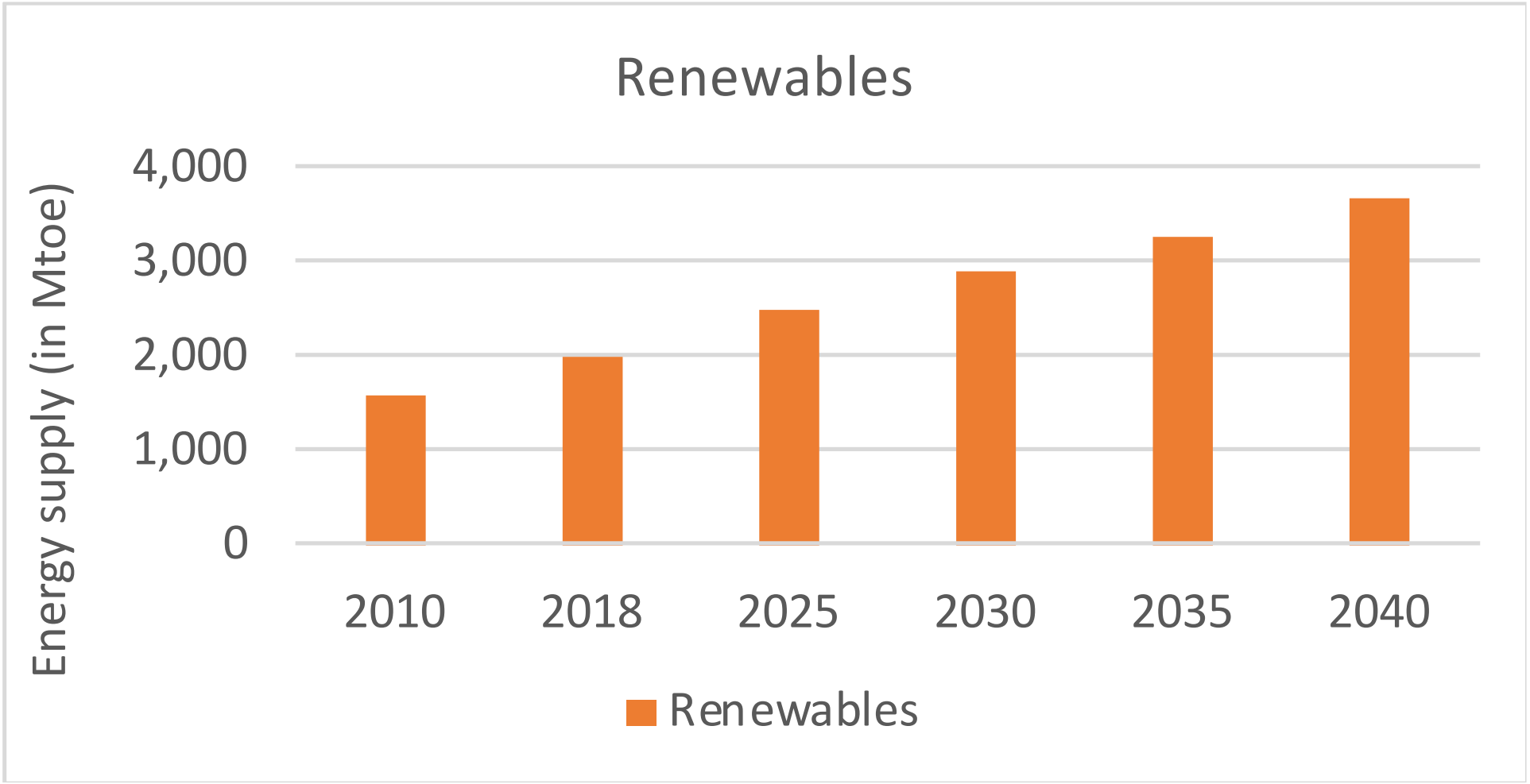
Banks are centre stage

- Banks fully exposed to transition and physical risks in real economy
- Not only increase green assets, but also reduce brown assets

Transition metrics

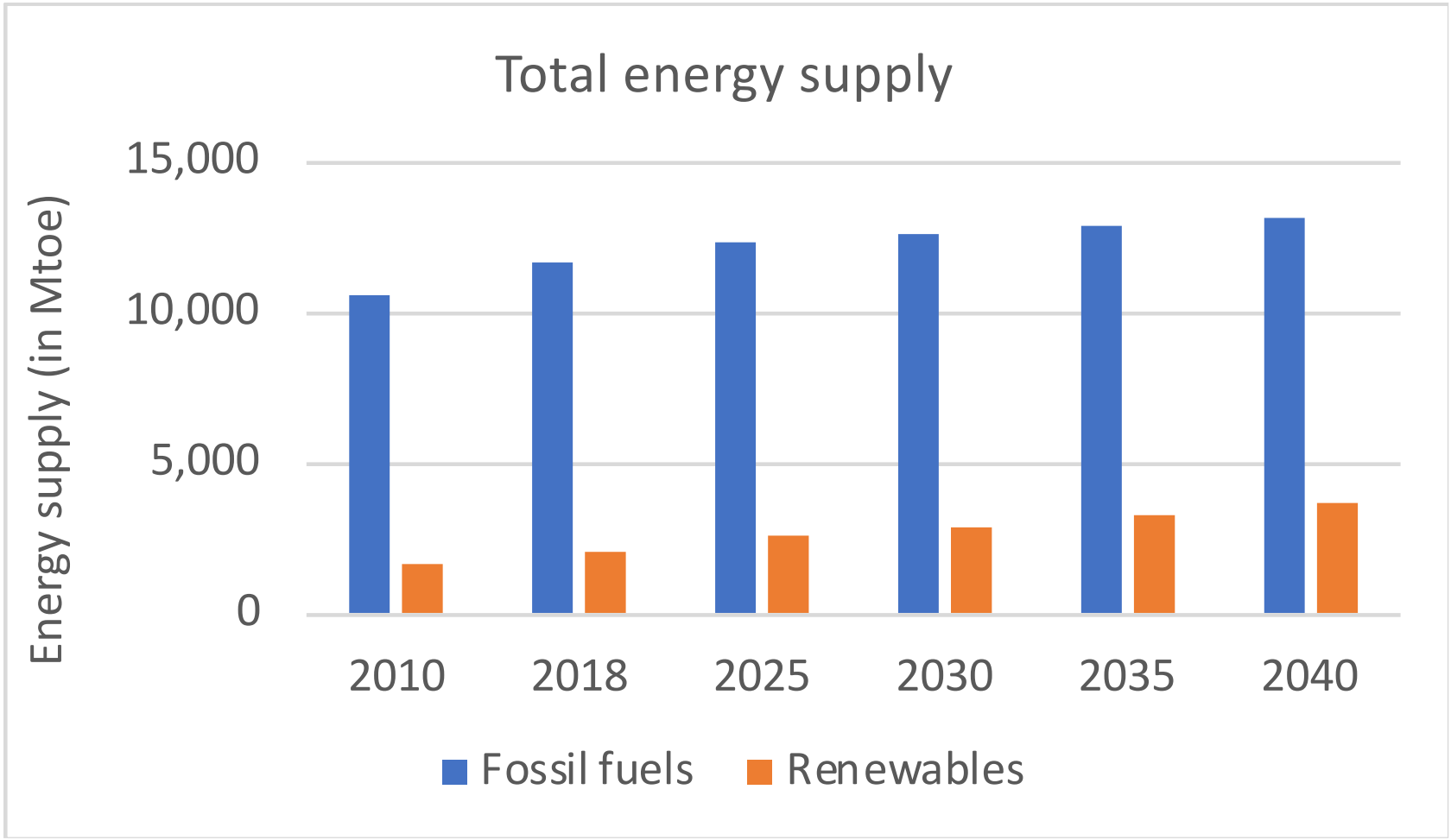
- Transition metrics useful to monitor progress to increase new and reduce old
- But need for clean EU taxonomy – otherwise it is useless
- New disclosure rules (Corporate Sustainability Reporting Directive) are very helpful

Increasing green looks good



Source: World Energy Outlook 2019, IEA

But also need to look at reducing brown



Source: World Energy Outlook 2019, IEA

Green financial supervision (2)

Basel capital adequacy rules

- Now a bit of tinkering in pillar 2 add-ons

Pillar 1 capital

- Recognise climate/biodiversity exposures as **extra source of risk**
- Cannot be done with historical data -> need for **scenario analysis**
- **Higher capital charge for brown** (no discount for green -> standard business risk)

Horizon

- Currently based on timely reduction of risk ("**transaction banking**")
- **Relationship banking**: financier (as steward) engages with company on transition
- Lending: quality and transistion preparedness of borrowing companies
- Investment: long assets like energy infrastructure and land restoration

Concluding

Choice of economics paradigm determines choice of solution

Market economics

- Monetary: market efficiency – just correct credit risk factors
- Financial: historical patterns – don’t see problems coming

Green economics

- Monetary: ecological constraint – tilt allocation from high to low carbon
- Financial: transitions – move away from stranded assets

Q & A