Current issues

Greening Central Banking

- analysis of Central Bank activities to align monetary policy to ecological sustainability criteria -

Structure

(1) Climate systemic risk

(2) Effective policy measures

(3) Are Central Banks mandated to conduct climate policy?

(4) Examples for Central Banks climate policy

(5) Leading and following Central Banks

(6) Conclusion: **More action is feasible** (even within the mandate)

Why care about climate change?

- "climate systemic risk" (Aglietta & Espagne, 2016)
- Climate change is a systemic stability threat to the financial system
- "high degree of certainty that some combination of physical and transition risks will materialise in the near future" (NGFS, 2019)
- (A) **physical risk**, e.g., stranded assets, and (B) **transition risk**
- "*I want to explore all possible ways to fight climate change*" Christine Lagarde (FAZ, 2020)

Aglietta, M., Espagne É. (2016) Climate and finance systemic risks, more than an analogy? The climate fragility hypothesis, CEPII Working Paper, Centre d'Etudes Prospectives et d'Informations Internationales

FAZ (23.09.2020) EZB macht Ernst mit Klimaschutz, Frankfurter Allgemeine Zeitung

What are effective policy measures?

- Regulatory interventions
  - Sectorial emission caps, prescription of maximum (car)fleet emissions, quotas for renewable energy, etc.
- Market mediated instruments
  - carbon price; tax policy disfavouring emissions, such as a CO2 tax, CBAM - carbon border adjustment mechanism; climate-related disclosures;
- Role of financial markets?

Theoretical paradigms guiding economic behaviour

	Efficient market hypothesis	Radical uncertainty hypothesis
Seminal works	Pigou (1920), Coase (1960)	Knight (1921), Keynes (1936)
Vision of the future	All information about future possible states is available	Unforeseen events might arise
Objective	Optimal approach	Collective insurance approach
Pivotal economic actors	Individuals	Intermediary economic and financial institutions
Coordination of expectation	GHG market price/ GHG tax	Social value of carbon/money
Role of carbon price	Internalise the climate externality	Reduce climate uncertainty

Source: A similar summary table appeared in Aglietta and Espagne (2016, 13)

Central Banks mandated to do climate policy?

- Neo-classical / Orthodox central bank
  - Price stability is most important policy objective, everything ese secondary
  - Market participants manage risks out of intrinsic motivation

- Keynesian / Unorthodox central bank
  - Central banks role evolve with the financial system
  - Parallelly to financial stability, climate risk is also a macro-risk (Volz, 2017)

Volz, U. (2017) On the role of central banks in enhancing green finance, Inquiry Working Paper, 17/01, United Nations Environment Programme

Climate-friendly interventions by central banks (and financial regulators)

Types of interventions	Selected current applications
Assessment of climate-related financial risks (research)	De Nederlandsche Bank (DNB), Bank of England, TCFD
Macroeconomic modelling of low-carbon transition (research)	Only outside central banks and regulators (private sector and academia)
Support to international activities on green finance (research, communication)	G20 Green Finance Study Group, Sustainable Insurance Forum, NGFS
Disclosure of climate-related financial risks (policy)	TCFD, French Energy Transition Law
Environmentally aligned prudential regulation policy	Banque du Liban, Banco Central do Brasil
Green central bank financing (policy)	Bangladesh Bank, Bank of Japan
Lending quotas (policy)	Reserve Bank of India, Bangladesh Bank
ESG factors in asset eligibility criteria (policy)	Only for own purchase, for example, DNB, Norges Bank
Green quantitative easing (policy)	Assets purchased only if they meet the central bank's eligibility criteria, such as EIB bonds

Source: A similar summary table appeared in Campiglio, E. et al. (2018, 464) Climate Change Challenges for Central Banks and Financial Regulators, Nature Climate Change, Vol. 8, No. 6, pp. 462-468.

Leading and following Central Banks – an international comparison

- High-income economies' Central Banks are more reluctant
  - No mandate to act against climate risks
  - Principle of market neutrality, e.g., quantitative easing

- Emerging economies' Central Bank are more active
  - Mandates are broader
  - Climate-financing gap, e.g., green bond market is relatively underdeveloped

Leading and hesitant institutions – an international comparison

Percentage of sustainable investing assets relative to total managed assets					
	2012	2014	2016	2018	2020
Europe	49.0	58.8	52.6	48.8	41.6**
Canada	20.2	31.3	37.8	50.6	61.8
USA	11.2	17.9	21.6	25.7	33.2
Australia/New Zealand	12.5	16.6	50.6	63.2	37.9**
Asia	0.6	0.8	0.8	-***	-***
Japan	-*	-*	3.4	18.3	24.3

Source: Global Sustainable Investment Alliance, Annual reviews 2015, 2017, 2019, 2021

Conclusion

- Central Banks should not be overburdened
- Other institutions are more suitable and legitimized
- But **more action is feasible** (even within the mandate)
- Especially on climate-related financial disclosure

  "*But unfortunately, the disclosure of aligned information is still low.*" (Weidmann, 2021)
- Further research: How do Central Banks' mandates differ and how this influences their actions on climate related risks.

Weidmann, J. (2021) Climate risks, financial markets and central banks risk management, Speech at the Green Swan 2021 Global Virtual Conference