

Green Finance, Regulation and Monetary Policy⁶

Am 4.5.2018 veranstalteten SUERF – The European Money and Finance Forum, die Wirtschaftsuniversität Wien und die OeNB gemeinsam eine Konferenz zum Thema “Grüne Finanzierung, Finanzregulierung und Geldpolitik”. Das Thema ist für Notenbanken, Finanzregulatoren und –aufseher sowie für die Finanzindustrie und Investoren aus mehreren Gründen unmittelbar relevant.

Erstens können Klimarisiken, aber auch Maßnahmen, um diesen zu begegnen, den Wert von Vermögenspositionen und Firmen wesentlich verändern (z. B. Zerstörung von Gebäuden und Produktionsanlagen, Verbot bestimmter Heizmittel und Antriebstechnologien). Daraus ergeben sich für realwirtschaftliche Unternehmen, aber auch für Versicherungen, institutionelle Großinvestoren und Banken erhebliche Risiken. Die für die Erreichung der Pariser Klimaziele nötigen Einschränkungen bei fossilen Brenn- und Antriebsstoffen spiegeln sich in den derzeitigen Bewertungen vieler in diesen Branchen tätigen Firmen noch nicht adäquat wider. Daraus ergibt sich das Risiko schockartiger Preisanpassungen mit Gefahren für die Finanzmarktstabilität.

Zweitens steht die Banken- und Finanzmarktregulierung vor der Frage, ob sie “grüne Investitionen und Sektoren” dadurch begünstigen (bzw. weniger benachteiligen) soll, indem sie beispielsweise von Banken für grüne Vermögenspositionen eine geringere Eigenkapitalunterlegung verlangt oder aber für braune Aktiva einen Aufschlag verlangt. Ein erster wichtiger Schritt ist die transparente Offenlegung klimainduzierter Risiken, und die Durchführung von Klima-Stresstests.

Drittens sind Zentralbanken mit der Forderung konfrontiert, bei ihren geldpolitischen Geschäften grüne Finanztitel zu fördern oder weniger zu benachteiligen, indem sie sie leichter als Sicherheiten akzeptieren oder sie im Rahmen von Wertpapierankaufprogrammen und ihrer Eigenveranlagung stärker berücksichtigen.

Es gelang der Konferenz, ein breites Spektrum an Argumenten zu diesen drei Fragenkomplexen aus Sicht der akademischen Forschung, der Zentralbanken und Aufseher, des Finanzsektors und von NGOs zusammenzubringen. Das Konferenzprogramm mit den meisten Präsentationen findet sich unter: <https://www.suerf.org/greenfinance2018>. Ein ausführlicher Konferenzbericht ist unter https://www.suerf.org/docx/r_01daa090f0d5693d97c90755a54fa204_5397_suerf.pdf downloadbar. Nachstehend findet sich eine Kurzfassung der Hauptergebnisse in der Konferenzsprache Englisch.

Climate change is the result of market failures - central banks aim to foster sustainability

Governor Nowotny stated that climate change touches on the core mandate of central banks – to maintain price stability and financial stability. Climate science robustly confirms the human sources of rapidly rising greenhouse gas concentration amid industrial growth based on fossil fuels. Underlying problems are the lacking price for carbon and that future generations will feel the impact rather than current actors. The need for world-wide action has finally culminated in the Paris Agreement of 2015 signed by 195 parties, which aims to limit the global temperature rise in this century to less than 2 degrees Celsius above pre-industrial levels. The transition to a sustainable development model offers opportunities for the financial system given huge investment needs of an estimated 180 billion euro per year in Europe alone. The Governor

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announced that the OeNB has recently become member of a newly founded international Central Banks and Supervisors Network for Greening the Financial System (NGFS). He emphasized how much the OeNB appreciates the fruitful long-standing and close cooperation with SUERF. He also warmly welcomed the very useful cooperation with the Vienna University of Economics and Business in designing the conference scientifically.

Limiting temperature rise to 2°C requires huge effort: need for an integrated perspective

Prof. Sigrid Stagl, Head of the Institute for Ecological Economics at the Vienna University of Economics and Business emphasized that, while some steps towards a more sustainable society were taken in the past, scientific evidence suggests that these will not be enough to contain the rise in the level of global temperature to below 2°C. The respect of planetary boundaries should be combined with the flourishing of individuals and the satisfaction of their basic needs. The aim is thus to reach the ‘safe and just space for humanity’ that satisfies social objectives while respecting ecological constraints.

How to solve the gridlock between policy makers and the private sector?

Stefano Battiston, Professor of Banking at the University of Zurich, and director of the FINEXUS center on Financial Networks and Sustainability emphasized that the relation between climate policy and economic agents’ expectations is characterized by circularity. In the presence of scientific, technological, policy and political shocks, market players may not fully anticipate climate related price shocks, thus leading to price volatility and mispricing. We are confronted with a gridlock that awaits to be solved. Indeed, the EU has embraced a low-carbon transition path, but the investment challenge is well beyond the capacity of the public sector. Increasing financial disclosure would not be sufficient to move the market towards climate-risk aware investment decisions but market players need credible signals from policy-makers to calculate the expected cash-flows from investments.

Climate stress tests help create risk awareness

Battiston then presented the first climate stress test which provides a framework to assess portfolio exposure to climate risks and the impact of climate action. The climate stress test shows that financial actors are highly exposed to price changes that could affect large asset classes, in particular in the case of pension funds and investment funds. The portfolio gains and losses depend on the timing and magnitude of climate policies and range from capital reallocation, distributive effects, to aggregate and potentially systemic effects. Individual exposures to climate risks due to portfolio allocations on carbon-intense assets and sectors could be amplified by financial interconnectedness.

Climate change and the transition to a low-carbon economy: risks and opportunities for investors

The Paris Agreement is a signal for investors to avoid fossil lock-in investments, putting pressure on the profitability of fossil fuels-based industries. The transition to a low-carbon economy could introduce both risks and opportunities for investors. However, in order to mitigate risks and exploit opportunities, a paradigm shift for the energy system based on interconnected stocks and flows and systemic thinking are needed. Green finance is central in this paradigm shift. Nevertheless, it requires a regulatory framework to, first, mainstream climate information into investors’ decision making; second, identify climate risks and opportunities for investors within a systemic approach; and, third, implement a forward looking analysis of portfolios (i.e. aligned to the 2°C scenario).

What is a “green” investment? The need for disclosure, taxonomies and metrics

Scenario analysis and stress testing for climate-risk disclosure would allow governments to set targets to decarbonize the economy, and investors to identify portfolio strategies to manage the potential mispricing of long-term risks related to the low-carbon energy transition. Current obstacles to disclosure are a lack of shared evidence on short-term material impacts for regulators, missing standards on metrics for investors, and the absence of reference scenarios for issuers. A novel approach for disclosure based on climate stress tests and scenario analysis, using physical asset-level data that links economic activity to financial instruments, reduces the costs and time needed for disclosure and ensure the comparability of results.

The introduction of a harmonized taxonomy for green investments is fundamental to inform divesting strategies. In the case of green bonds, institutions and mechanisms of certification decrease investor uncertainty on the environmental benefits of green bonds and avoid “green-washing”. It is still unclear to what extent green bonds provide a hedge against environmental risks that investors are expected to price in their portfolios’ strategies. Research shows that on average, green bonds are more, not less exposed to environmentally related risks than traditional bonds.

To assess the carbon intensity of companies and portfolios, several carbon-intensive companies have already taken initial steps for disclosure, such as recognizing climate change as significant and material risk, disclosing operational and some value-chain emissions, and setting initial energy emission targets. However, advanced steps, such as setting long-term emissions targets or assigning boardroom responsibility for climate change, are embraced only by a minority of firms. Investors and other stakeholders could play a role in portfolio de-carbonization, by getting companies to set long-term corporate targets, and holding them accountable for delivery of announced targets.

Three promising areas for collaboration were identified: first, the development of climate stress tests of central banks’ and financial actors’ portfolios; second, research on green labelling and standards; third, research on the pricing in of carbon risks into financial market prices.

Huge funding needs - greening the financial system requires a comprehensive strategy

Christian Thimann, Senior Advisor to the Chairman at AXA and Chairman of the High-Level Expert Group (HLEG) on Sustainable Finance stressed the relevance of the financial system in supporting the achievement of sustainable prosperity. The main question will be how to mobilise the required funding. This is more important than the exposure of the financial system to climate-related risks. Neither of these questions are currently included in a systematic way into regulatory frameworks. The High-Level Expert Group on Sustainable Finance has concluded that a complete restructuring of the rules governing the financial system is not necessary. However, no single simple switch is available to make the financial system sustainable. It is necessary to go through every piece of regulation and identify necessary change. This has been the aim of the HLEG, which formulated four broad areas of recommendation to the European Commission.

How to align financial regulation with climate-friendly incentives?

The European Commission, first with the report of the High-Level Expert Group on Sustainable Finance and later with its Sustainable Finance Action Plan, plans to explore the option of introducing ‘green-supporting’ or ‘brown-penalising’ capital adjustment factors. The strengths and weaknesses of these policy proposals are currently being debated.

The potential financial risks from climate change relate to climate change impacts (physical risks) and the risks associated with the transition to a 2°C-compatible economic system (transition risks). Both risks should be included into prudential regulatory frameworks, if solid evidence of the systemic relevance of climate-related financial risks were to be produced. However, despite ongoing research on the topic, this evidence is currently unavailable.

In the event that systemic climate-related risk were identified, it is still controversial whether differentiated capital requirements would be the best instrument to use. There seems to be agreement among many experts that, if capital requirements were implemented, a brown-penalising factor would be more appropriate than a green-supporting factor, since low-carbon sectors also feature risk. Reducing capital requirements on loans to low-carbon activities could therefore get into conflict with regulators' prudential objectives by facilitating a 'green bubble'. However, the green-supporting factor currently seems to have more support by both European policy-makers and private financial institutions.

Climate change and low-carbon adjustment imply shocks and volatility – early preparation is key

In the future, more volatile temperatures may change seasonal patterns in output and prices and make food and biofuel prices more volatile. As a result, economic data might become more noisy and it may become harder to identify underlying inflationary pressure. Weather-related catastrophes may become more frequent. The resulting negative output shock is likely to be larger and more persistent if losses are uninsured. Depending on the supply/demand side components of such shocks, monetary policy may need to respond accordingly. In the medium to long-run, higher temperature may reduce labour productivity, reduce capital accumulation through long-term damage to capital and land, and reduce TFP growth by diverting resources towards adaptation to climate change. Thus, the Phillips curve might shift. Overall, climate change will likely increase uncertainty facing both economic agents and economic policy makers, rendering private agents' and policy makers' decisions more difficult and prone to errors. To avoid any unnecessary turbulence, transition to a low-carbon economy should be prepared early, be planned well in advance and be communicated transparently. Several central banks, including the Bank of England and De Nederlandsche Bank, are currently working actively to incorporate climate-related risks, energy transition and climate policies into forecasting and stress-testing economic models.

Do current central bank operations favour “brown” sectors?

Empirical work documents that the ECB's and Bank of England's corporate bond purchase programs are skewed towards high-carbon sectors, such as electricity and gas, manufacturing and transport. This results basically from central banks' constraint to buy only investment grade assets and from lack of available green bonds. Furthermore, studies finding such brown bias for the ECB neglect the impact of the far more substantial purchases of supranational development banks by the ECB, which may overcompensate the bias introduced by the CSPP. Finally, to what extent do central bank operations actually put low-carbon sectors at a disadvantage? For example, the announcement of the Bank of England's corporate bonds purchase scheme (CBPS) sharply reduced all investment grade corporate bond spreads, both eligible and ineligible. The CBPS reduced spreads of eligible over ineligible investment grade corporate bonds by a mere 2-5 basis points. So, any unintended effect of favouring high-carbon sectors in terms of financing costs differentiation was likely small.

Practical limitations to correcting for brown biases in central banks' operations

For now, there is simply not enough volume of green bonds available to satisfy central banks' required volumes. Excluding high-carbon assets would, at prevailing conditions, curtail the range of eligible assets, and thus unduly limit central banks' ability to stimulate aggregate demand. However, it is not clear which comes first: available supply of bonds or demand from central banks. For example, the ECB with its ABS purchase program explicitly aimed at developing issuance activity in this market segment, by creating a constant stream of demand by the central bank. While in the case of the ABSPP this aim was ultimately not achieved, similar considerations could nevertheless be applied to green assets.

Practical steps towards greening central banks' monetary policy operations

Central banks importantly influence the cost of funding through interest rates. With their current possible bias towards brown finance, central banks cement existing financial market misalignments. A promising avenue to widen eligibility for green assets is to separately and explicitly consider climate-related financial risks, if climate-related risks were to be substantial and not fully reflected in credit ratings. In practice, central banks might include climate risk considerations in their monetary policy operations by, first, a re-evaluation of risk-return profiles (use of external credit ratings that account for climate risk, integration of climate risk in internal risk assessments); second, by higher haircuts for climate-risky assets as well as eligibility criteria that account for climate risk; and, third, by using sustainability indices for asset purchase allocations. By doing so, central banks would send a strong signal to financial markets the effects of which might go far beyond the mere portfolio flow effects.

Are green policies covered by central bank mandates?

There are quite diverse views on this question: A first is that, in order to correct for financial markets' current distortions which hamper the transition to a low-carbon economy, central banks should support climate goals, as long as this does not conflict with price stability. According to Article 3 of the EU Treaty the Eurosystem, without prejudice to price stability, should support the EU's general economic policies, including environmental sustainability.

A counterargument is that incorporating environmental and sustainability considerations in central banks' objective function would dilute their focus on consumer price and financial stability. The secondary objectives in Article 3 of the EU Treaty are so broad and diverse that it would be impossible for the central bank to decide on which among these many goals to support in practice, all the more so since there might be trade-offs between the various secondary goals. Embarking on such an approach would open a Pandora's box. The difficult choices and potentially strong distributional effects of "green" monetary policy operations would overstretch the scope of an independent technocratic institution, whose democratic accountability requires a clear and narrow mandate. Overextending the mandate would ultimately risk central bank independence. Furthermore, the Tinbergen principle reminds us that with one instrument, central banks cannot and should not pursue several objectives. The role of monetary policy in supporting a smooth transition to a low-carbon economy will require further study. Normally, the focus of monetary policy is on business cycle frequencies of 2-3 years. Even regarding the incorporation of financial cycles, which are far longer, in monetary policy considerations there is no consensus. Monetary policy is usually not geared towards addressing long-term structural issues.

Current practical limits to central banks' green own investment policies

Including green investments in their own account portfolio might be the area where central banks could most easily implement green policies quickly. However, such policies currently

quickly find their limits in the lack of supply of suitable issues, both in terms of overall volumes and more specifically in maturities offered. Again, the question of which should come first – supply by issuers or demand by central banks – may be raised.