

Marja Nykänen: Problems in embedding climate risks into the traditional financial risk framework

Speech by Ms Marja Nykänen, Deputy Governor of the Bank of Finland, at the Bank of Finland and the Finnish Ministry of Finance conference "Greener Finance for Sustainable Future", Helsinki, 31 October 2019.

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Ladies and Gentlemen,

Welcome to the second day of the conference. I am glad to see such a broad spectrum of expertise here. I am Marja Nykänen, Deputy Governor of the Bank of Finland.

In recent years, the Bank of Finland has become active in climate-related issues. For example, we participate in the work of the Network for Greening the Financial System's work streams and plenary.

The Intergovernmental Panel on Climate Change (IPCC) publishes reports on scenarios that will happen if we fail to lower our emissions. From the most recent special report, we learned that the Arctic and polar areas will experience considerable transformations as glaciers melt at an increasingly faster rate. The melting creates a massive amount of meltwater, which will have significant impact on rising sea levels. But the report shows that polar areas also face other consequences. Let's take, for example, the Arctic Ocean.

It provides a habitat for many species. By 2100, it will freeze later in the year with thinner ice and leave those species without a sufficient habitat. Also by 2100, up to 80% of Scandinavian and Central European mountain glaciers might have vanished.

For me, such future prospects are unsettling.

Even though the scenarios seem worrying, it is not too late to act. We, as finance professionals, play an important role in this fight against climate change.

As we heard yesterday, a significant amount of investment is required to transform our economies into sustainable ones. To facilitate investment, we need a well-functioning financial market with availability of green funding instruments. And, in order to ensure a well-functioning financial system, we must keep an eye on the system-level climate risks that might threaten the stable functioning of the financial system and smooth flows of funding for sustainable investments.

In the discussion of climate change risks to the financial sector, two types of systemic risks have been identified. Firstly, there are physical risks, namely damage caused by extreme weather events or climate-related natural disasters. These include hurricanes, floods, storms, heat waves etc. In addition to potential risks to life, such events generate great financial damage.

For example, such events may damage properties. If the property is insured, insurance companies will carry the loss. If the property is not insured, the owner of the property will have to pay for the damage. In the event that the property owner becomes insolvent or the collateral value of that property is lowered, credit institutions may also be at risk.

The extent of physical risks is difficult to estimate in advance, but in extreme cases the potential losses may be significant. In addition, as the risk horizon is long, the frequency and severity of extreme weather events will change over decades. This makes it even harder to model physical risks in the traditional financial risk framework.

The second recognised risk type is transition risk. Transition risk arises when carbon-intensive companies need to adjust their business models to become less carbon-intensive. The adjustments may be a consequence of changes in climate policy or consumer preferences, but they may result in rapid changes in company valuations. And, in extreme instances, in the valuations of entire industries. For companies that confront transition risk, the adjustment requires investments and the replacement of old technologies and production capacity. The big question is whether this transformation can be done smoothly or whether it becomes extremely costly and burdensome.

Transition risk may then manifest itself in investor portfolios, where such revaluations may force investors to book losses. Transition risk is an outcome of a complex process, which makes it even harder to estimate. Comparing physical and transition risks, it makes me wonder whether the actual climate or the climate policy is more difficult to predict. The more we delay effective climate policies, however, the quicker and the more powerful the policies will need to be in the future.

Every financial institution needs to assess these climate-based risks and incorporate them into their risk management frameworks.

A related question is how financial supervisors and regulators should approach climate-based financial risks. What should we expect from financial institutions and how can we help them figure out what to do?

Firstly, it is important to identify best practices and to share experiences between supervisors and within the whole financial industry. The Network for Greening the Financial System (NGFS) offers a platform for considering the best practices to fight climate change in the financial sector. The network is global and it was founded in December 2017. Nowadays, the NGFS has 46 members and 9 observers. The observers include, for example, the IMF, the World Bank and the OECD.

Last April, the network published its first comprehensive report: *A Call for Action*. The report contains four recommendations for central banks and supervisors and two additional recommendations for policymakers to facilitate the work of central banks and supervisors.

The recommendations for central banks and supervisors steer, for example, the assessment of climate-related financial risks in the financial system and the bridging of data gaps. The recommendations also encourage central bankers to lead by example in their own operations by integrating sustainability factors into own portfolio management.

After publishing the recommendations, the work of NGFS has continued to be active. The NGFS's work is divided into three different work streams, which are: Micro-prudential and supervision, Macro-financial, and Mainstreaming green finance. The work streams build analytical capacity within the member organisations and publish handbooks on best practices based on wide consultations of NGFS members and other relevant institutions.

Just a couple of weeks ago, in October 2019, the network published a report titled *A Sustainable and Responsible Investment Guide for Central Banks' Portfolio Management*. In this report, the NGFS provides further guidelines concerning the earlier published recommendation on integrating sustainability factors into own portfolio management and encourages central bankers to adopt Sustainable and Responsible Investment (SRI) practices into their own portfolio management.

The major challenges in analysing risks and designing optimal policies are the lack of comprehensive and comparable data as well as the, as yet, inadequate modelling methods. While we already have a high volume of climate-related data, it has significant limitations. One of the main concerns is that climate-based risks are hard to identify from the historical data, as the

impact of climate change may not yet show up in the data.

Though there might be a large number of data providers, there are many challenges associated with the data. Firstly, the data are expensive and data from different providers are not comparable. Secondly, company-level data vary due to different disclosure methods. Thirdly, the extent to which a business model is dependent on carbon-intensive suppliers hardly shows up in company-level reporting. Furthermore, it is difficult to relate the climate data to the financial data of the companies.

The lack of adequate data and models cannot be a reason to do nothing, however. It is each financial company's own responsibility to develop their risk assessment methods. Collaboration and common understanding are needed to ensure that the analysis is fit and relevant for the purpose.

Once we identify the best practices for risk assessment, we can then talk about which tools can be used to incentivise sustainable investing. Green Supporting Factors (GSF) and Brown Penalising Factors (BPF) have often been under discussion. In my opinion, unless we have a very good basis from a financial risk point of view for risk differentials between green and brown investments, we should not introduce changes to prudential rules just for the sake of incentivising certain types of investments.

But if we need to choose between these two, then it should rather be the Brown Penalising Factors than the Green Supporting Factors. The basis for this is that climate change and climate policies do not show up in past data and therefore the risks stemming from them are not necessarily reflected properly in the risk calculations.

Instead of supporting or penalising certain types of investments, supervisory expectations would be a convenient way of guidance. Some supervisors, the Bank of England for example, have set out supervisory expectations for financial institutions on how they should manage climate risks. The supervisory expectations of the Bank of England cover governance frameworks, risk management, the use of scenario analysis and appropriate disclosure.

In my opinion, risk management is the key element. To practise proper risk management, we need to figure out the best frameworks to identify and evaluate risks. We should also use some level of standardisation in the risk management framework for climate-based risks so that the outcomes are comparable between institutions. Adequate reporting and disclosure are also relevant. To achieve proper risk management, collaboration and discussion between institutions becomes important.

Everyone knows that climate-based financial risks are challenging and difficult to approach, as we haven't yet established a common framework. I hope we can lay a few building blocks for this framework today. I am very much looking forward to the panel on financial stability and the risks from climate change this afternoon.

I believe that by discussing and sharing experiences, we will be able to find the best approach to this challenging issue of fighting climate change without compromising financial stability. We just need to find the best practices and at the same time execute wise financial regulation to support the greening of the financial system.

Now, let's enjoy the second day of the conference; we have a very interesting keynote and two panels yet to come.

Thank you!