UNEP FINANCE INITIATIVE

Inquiry: Design of a Sustainable Financial System

UNIVERSITY OF CAMBRIDGE INSTITUTE FOR SUSTAINABILITY LEADERSHIP

Banking & Sustainability
Time for Convergence

A Policy Briefing on the links between Financial Stability and Environmental Sustainability

"Conflict related to social and environmental issues is one of the key drivers of systemic risk: socio-environmental conflicts cause externalities, which spread by contagion, affect third-parties and escalate to the macro-economic level."

Dr Schydlowsky,
Superintendent of banking, insurance and private pension fund administrators, Peru.

About this Briefing

In 2014, the UNEP Finance Initiative (UNEP FI) and the University of Cambridge Institute for Sustainability Leadership (CISL, working with and on behalf of the Banking Environment Initiative – BEI) commissioned a study entitled, "Stability and Sustainability in Banking Reform – Are Environmental Risks Missing in Basel III?" ('The CISL/UNEP FI Basel Report'[1]).

The study was conceived in recognition of the growing number of banking regulators around the world that have started to act on environmental and social issues, and aimed to assess the role that supranational banking regulation (i.e. Basel III) might play in this domain.

The resulting report pointed to the material links between financial stability and environmental (and social) risks, which are already being experienced, and that are likely to become more pronounced and complex in the future. It offered several recommendations for supranational and national banking regulators accordingly.

Since then, bilateral engagements with a number of banking regulators have taken place. In addition, an Expert Dialogue between the worlds of Science and Finance was convened jointly by UNEP FI, CISL and the UNEP Inquiry into the Design of a Sustainable Financial System ('the UNEP Inquiry') in April 2015, with a view to refining a common understanding of the stability-sustainability link and to exploring how this link might be addressed going forward.

This briefing provides a synthesis of the current state of thinking on the topic, based on the work above. It is intended as a means of sharing key findings with policy-makers and of engaging them on the matter.

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Acknowledgements

CISL, UNEP FI and the UNEP Inquiry would like to thank the individuals and institutions whose time and insights have greatly contributed to the preparation of this paper as well as the support of the banks of the BEI and UNEP FI Banking Commission. In particular, we would like to thank the participants in the Expert Dialogue between the worlds of Science and Finance convened jointly by UNEP FI, CISL and the UNEP Inquiry in April 2015 in Cambridge, UK, and Professor Kern Alexander, Faculty of Law, University of Zurich and CISL Fellow who was the principal investigator for the CISL/UNEP FI Basel Report.

[1] Available at www.cisl.cam.ac.uk/banking and www.unepfi.org/banking

I. The new convergence

In recent years two trends have emerged in parallel:

- **Managing environmental risk in banking:** A number of banking associations and banking regulators are starting to recognise the materiality of social and environmental factors for risk management at the transactional, institutional and, in some cases, systemic levels.

- **Mobilising private finance for sustainable development:** Decision-makers are increasingly interested in how banks and capital markets can best mobilise the capital required to achieve a number of sustainability goals, potentially some US$5-7 trillion per annum.

These trends can be observed at the country level, but also at international level, as reflected by the mandate given to the Financial Stability Board to examine the implications of climate change on financial stability and the call for the involvement of private finance in the context of the launch of the UN's Sustainable Development Goals.

As this briefing will suggest, the trends are here to stay. They constitute an early signal of what needs to rapidly become a much more widespread understanding of the need for greater convergence between two hitherto separate agendas: the preservation of banking stability and the pursuit of a more inclusive, greener, world economy.

"Banking regulators should not ignore the potential material risks to financial stability posed by environmentally unsustainable economic activity."

Professor Kern Alexander, Faculty of Law, University of Zurich and CISL Fellow

II. Banks, banking regulators and sustainability

"From a Central Bank perspective addressing environmental and social drivers of systemic risk is a matter of efficiency and soundness of the financial system."

Rodrigo Pereira Porto, Financial System Regulation Department, Brazilian Central Bank

The experience of banking practitioners and banking regulators (national and supranational) in addressing sustainability issues has so far been driven by concerns of risk management. While this practice remains fragmented and incomplete, it is nonetheless increasing in both volume and sophistication.

- Existing environmental and social risk focus and expertise **in banks** is by and large at the transactional level, where these risks are a potential source of credit or reputational risk, though banks are starting to seek a better understanding of their exposure to specific environmental risks - and the social shocks that these provoke - at a system-wide/portfolio level (e.g. water or energy availability).

- The coverage of environmental and social issues **by national banking regulators** is variable and responds to different, localised motivations based on the specific dependencies or exposures of their economies to particular drivers of risk and their existing governmental responses. Three approaches can be identified: understanding the implications of social and environmental factors through better research; promoting the integration of environmental

and social factors in risk management at the transactional level and as part of broader corporate governance through guidance and prudential regulation; stimulating finance/ investment into sectors and companies that help to address or solve the root causes of environmental or social risks by adjusting incentives and requirements. Fig. 1 (adapted from the CISL/UNEP FI Basel Report) below provides a snapshot of some of the most prominent current approaches.

Fig.1 Examples of regulatory coverage of environmental/social risks

Country	Date	Measures	Drivers
Brazil	2014	Mandatory regulation (Resolution N.4.327) issued by the Central Bank of Brazil (BACEN), requiring the establishment of social and environmental responsibility policies (including on the management of environmental risks).	Catering to the impact of socio-environmental risks on financial system efficiency and stability.
China	2007	Mandatory regulation (Green Credit Policy - GCP) issued by the China Banking Regulatory Commission (CBRC), covering: environmental & social risk management, internal management and management structures, information disclosure.	Addressing community concerns by limiting finance for high pollution, high resource use sectors.
Peru	2015	Mandatory regulation (Resolution 1928), released by the Superintendence of Banks, Insurance and Pension Funds (SBS), covering environmental & social risk management.	Avoiding spill-over effects linked to the externalities created by major projects.
UK	2014	Bank of England One Bank Research Programme, including climate change as a fundamental driver of change that could affect economic and financial stability, covering the physical impacts of changes in the environment as well as the impacts of public policy, technological and other drivers of innovation that could 'strand' carbon-intensive assets.	Better understanding of the potential consequences of climate change on the financial system.

- As regards the role of international regulation, Basel III's Pillars 2 and 3 provide some flexibility for national regulators to act on environmental and social issues (as indeed some already do), however this is limited to certain instances of credit and operational risk[2].

Some banks and bank regulators see a tension between banks' de facto public interest role, conferred on them by their systemic importance, and their nature as private entities. These opposing forces may be starting to align, however. As can be seen in Fig. 1 above, the drivers behind regulatory adjustments (be they locally or globally situated) often acknowledge a broader relationship between societal needs and expectations and the safety and soundness of the financial system than has previously been accepted. Moreover, the increasingly mainstream focus of banks and banking regulators on topics such as financial inclusion sets a precedent for greater involvement of financial institutions and their regulators in finding solutions to societal problems.

"Firms will face relatively higher risks in the future in industries with high energy consumption, high pollution and high resource consumption than in environmental-friendly ones."

Hong Yin, Urban Finance Research Institute of ICBC

[2] CISL & UNEP FI (2014) *Stability and Sustainability in Banking Reform: Are Environmental Risks Missing in Basel III?*

III. The need for a systemic response to sustainability issues

Experts in global sustainability issues, such as resource security, water, public health, ecosystems and climate change science suggest that there is a need to become aware of the complexity, interconnectivity and unpredictability of environmental risks, and the non-linearity of their impacts on the financial system and the real economy. These ultimately translate into an urgency to take action.

- Environmental drivers of risk, such as climate change and resource scarcity, are **growing in both number and intensity** and are therefore increasingly being seen to interact with other socio-economic trends and to impact financial and economic stability.

"I am particularly concerned about the impact of multiple environmental stressors on the quality and quantity of our food supply. Together with population growth, this can be an important driver of new migratory patterns. Alongside such potential dislocations, emerging infectious diseases pose real risks to the health of populations around the world. There are inevitable uncertainties, but much that can be done by implementing and evaluating policies that offer the prospect of improving health and reducing environmental damage."

Professor Sir Andy Haines, London School of Hygiene and Tropical Medicine

- Not only can these impact the economy and the financial sector directly, but indirect impacts are created through society's responses to these drivers, for instance in the form of policy, legal or market reactions or shifting social norms. This potential for social unrest, legal action or disorderly financial market responses can amplify individual or relatively isolated incidents into more **systemic phenomena**, as emphasised by a number of experts. For example, might the decisions of individual but influential institutional investors to divest from the most carbon-intensive stocks in their portfolios at some point trigger a wider change in investor sentiment towards such stocks?
- The **complexity** of these risks is further compounded by:

  a) the growing **interconnections and correlations** between different environmental stresses and boundaries;

"When we scan the horizon over the next decade, one of the plausible scenarios that we see is, for example, a very strong El Nino cycle, itself perhaps aggravated by climate change. I don't think all decision-makers understand how this can drive inter-connected and highly damaging extremes across the planet, from large-scale droughts and wild fires to serious flooding, which would expose the systemic vulnerabilities in our inter-connected economies."

Dr Emily Shuckburgh, British Antarctic Survey, Cambridge

  b) the inherent **uncertainty in relation to the time horizons**, frequency and intensity with which specific risks are likely to materialise, which presents real challenges in the context of the highly structured and increasingly short-term horizons within which banking business and indeed regulation is performed (a market failure famously referred to as a "tragedy of horizons" by Bank of England Governor Mark Carney);

c) the **creeping nature** of some environmental risks, whereby dependencies and exposures grow over time. For instance, unsustainable farming methods had such cumulative impacts on soil quality in the United States farm belt that major 'dust bowl' episodes occurred from the late 1800s into the 1930s. The economic downturns during these periods resulted in substantial losses on bank loans and related financial market distress which spread, contagion-like, through the regional economy. An analogous risk is arguably the dependence of agrarian and industrialised economies alike on the availability of fresh water. Accumulating pressures of over-usage are now being compounded by changing weather patterns in regions right around the world. Yet it is only in the face of severe water shortages, and the threats to social and economic stability that they can create, that we tend to understand the extent of this dependency and the risk incurred in not actively managing this risk.

In summary, not only can environmental and social issues readily have system-wide impacts, they are susceptible of having impacts in unpredictable ways.

An illustration: the financial stability impacts of a plausible food system shock

In 2015, Lloyd's published a scenario of an acute but plausible disruption to global food production and its consequences to explore the implications for insurance and risk. The scenario – developed by experts in food security and sustainable development economics – was peer-reviewed by a diverse group of leading academics. The scenario is not a prediction; it is an exploration of what might happen based on past events and scientific, social and economic theory. It raises the question of whether other financial institutions and their regulators should be using such scenario-based approaches in their own stress-testing activities. To summarise the scenario:

- A combination of just three catastrophic weather events could undermine food production across the globe.
- These could lead to a 10 per cent drop in global maize production, an 11 per cent fall in soybean production, a 7 per cent fall in wheat production and a 7 per cent fall in rice production.
- Wheat, maize and soybean prices could increase to quadruple the average levels experienced during the 20 years prior to the global food price shock of 2007/8. Rice prices could increase by 500 per cent.
- The scenario indicates this series of events has the potential to lead to food riots breaking out in urban areas across the Middle East, North Africa and Latin America, leading to wider political instability and having knock-on effects for a wide range of businesses.
- While agriculture commodity stocks might benefit, the overall economic impact of high food prices, combined with rising political instability, could severely impact financial markets. The scenario indicates that the main European stock markets might lose 10 per cent of their value and US stock markets 5 per cent.

Further details are available at: http://www.lloyds.com/news-and-insight/risk-insight/library/society-and-security/food-system-shock.

IV. Recommendations for financial policy-makers

> *"Tipping points can be reached and rapid changes occur often via political action or consumer behaviour; previously creditworthy counterparts and profitable sectors deteriorate rapidly."*
>
> *Major global bank*

As noted above, while an increasing number of banks, banking regulators and other financial players around the world have developed some capacity to address sustainability issues, this is still a fragmented landscape, both in terms of the scope of risks accounted for, and the level of mainstreaming/uptake in the industry.

Despite the fact that we know that we are poor at expecting the unexpected ('black swan' events) and that we even ignore known large-scale risks ('black elephants'), societies are generally demonstrating an absence of effective governance and policy mechanisms to deal with these threats, or worse, support existing policies that fuel the risks, thus increasing economies' exposure to them.

Policy-makers, and in particular financial policy-makers, can play a critical role in bringing about more holistic and decisive action. In particular they might:

1. **Acknowledge the materiality** of sustainability issues to economic and financial soundness and stability.
2. **Advocate for supranational financial authorities**, such as the Basel Committee for Banking Supervision, to pool and build on the expertise gained by a number of national regulators and banking institutions to better understand and manage environmental and social drivers of risk.
3. **Encourage financial institutions and regulators**, especially in the banking sector, to pursue their efforts to integrate sustainability issues in their regular procedures and supervisory practices (for instance stress-testing).
4. **Encourage financial institutions and the broader corporate sector** to work together to explore new business models that might substantially reduce negative environmental/social impacts and increase positive environmental/social impacts.

V. Our next steps

Specific actions which UNEP FI, CISL and the UNEP Inquiry will be delivering to promote the journey described above, include:

- The release of the findings of the UNEP Inquiry, including consolidated policy recommendations for the financial sector and its policy-makers at large (October 2015).
- An empirical documentation of current approaches to environmental and social risk management in banks and their regulatory bodies around the world to reveal how these align with the diversity/scope of the risks at hand (transactional, portfolio, systemic) and the scope for international coordination (report release by UNEP FI & CISL in 2016).
- Further work is also envisaged to develop specific tools such as scenario-building for stress-testing, and to deepen understanding around the role that financing of sustainable economic activities can play in enhancing financial stability.

"The drivers of innovation and growth are key. It will prove more fruitful to design the future than to predict it."

Dimitri Zenghelis, London School of Economics

The UNEP Finance Initiative

UNEP FI is a partnership between UNEP and the global financial sector created in the wake of the 1992 Earth Summit with a mission to promote sustainable finance. Over 200 financial institutions, including banks, insurers and fund managers, work with UNEP to understand today's environmental challenges, why they matter to finance, and how to actively participate in addressing them.

UNEP FI has produced extensive research to reveal and explain the intersection between finance and the environment. It has also produced practical tools to raise awareness and to build capacity among practitioners. In recent years UNEP FI's work has also included a strong focus on policy – by fomenting country-level dialogues between finance practitioners and their policy-makers, and, at the international level, by promoting financial sector involvement in processes such as the global climate negotiations.

The UNEP Inquiry

The Inquiry into the Design of a Sustainable Financial System has been initiated by the United Nations Environment Programme to advance policy options to deliver a step change in the financial system's effectiveness in mobilizing capital towards a green and inclusive economy - in other words, sustainable development. Established in January 2014, it will publish its final report in October 2015.

University of Cambridge Institute for Sustainability Leadership and the Banking Environment Initiative

For 800 years, the University of Cambridge has fostered leadership, ideas and innovations that have benefited and transformed societies. The University now has a critical role to play to help the world respond to a singular challenge: how to provide for as many as nine billion people by 2050 within a finite envelope of land, water and natural resources, whilst adapting to a warmer, less predictable climate.

The University of Cambridge Institute for Sustainability Leadership (CISL) empowers business and policy leaders to make the necessary adjustments to their organisations, industries and economic systems in light of this challenge. By bringing together multidisciplinary researchers with influential business and policy practitioners across the globe, we foster an exchange of ideas across traditional boundaries to generate new, solutions-oriented thinking. His Royal Highness The Prince of Wales is the Patron of CISL and plays an active role in its work.

A particular strength of CISL is its ability to engage actors across business, finance and government that are focused on building a sustainable financial system. Our role convening the Banking Environment Initiative (BEI), which has supported this work from its inception, means that we are well-placed to support leadership in the banking industry.

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