# MAKING WAVES



**APRIL 2018** 

## Aligning the Financial System with Sustainable Development

Inquiry: Design of a Sustainable Financial System

DEDICATION

KNOWLEDGE HUB

PARTNERS

THE INQUIRY TEAM

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#### The Inquiry into the Design of a Sustainable Financial System

The Inquiry into the Design of a Sustainable Financial System was initiated by the United Nations Environment Programme (UN Environment) to advance options to improve the financial system's effectiveness in mobilizing capital towards a green and inclusive economy—in other words, sustainable development. Established in January 2014, the Inquiry's work was extended for another two years in late 2015, and came to a close at the end of March 2018. It has published three editions of its global, landmark report: the first in October 2015, the second in October 2016, and the third in October 2017. This report, 'Making Waves: Aligning the Financial System with Sustainable Development', is its final, global report.

The Inquiry has worked in more than 20 countries and produced over 120 briefings and reports on sustainable finance in association with over 100 partners. Work streams initiated by the Inquiry will continue beyond the life of the initiative, including work led by the UN Environment such as the support to the G20's work on sustainable finance; and through the ongoing work of several partnerships founded by the Inquiry, including the Network for Financial Centres for Sustainable Development, the Sustainable Digital Finance Alliance and the Sustainable Insurance Forum.

More information on the Inquiry is at: *www.unepinquiry.org* or from its directors: Dr. Simon Zadek (*simon.zadek@un.org*), Mr. Nick Robins (*nick.robins@un.org*) and Ms. Mahenau Agha (*mahenau.agha@un.org*).

#### **UN Environment and Finance**

The United Nations Environment Programme's (UN Environment) mission is "to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations". Headquartered in Nairobi, Kenya, it is the leading United Nations entity responsible for environmental matters in the broader context of sustainable development.

More information on UN Environment is at: www.unep.org.

UN Environment has been promoting sustainable finance for other two decades. Notable has been the work of the UNEP Finance Initiative, a partnership between United Nations Environment and the global financial sector created in the wake of the 1992 Earth Summit with a mission to promote sustainable finance. More than 200 financial institutions, including banks, insurers, and investors, work with UN Environment to understand today's environmental, social and governance challenges, why they matter to finance, and how to actively participate in addressing them.

More information on the UNEP Finance Initiative is at: www.unepfi.org.

#### **Strategic Partners**

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#### **This Report**

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# MAKING WAVES

Aligning the Financial System with Sustainable Development

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Finally, a big thank you to our families for their support during these momentous years.

This report is dedicated to the Memory of

# **WALLACE TURBERVILLE** (1952-2017)

"Surely you cannot touch the financial system: it's sacred", exclaimed one seasoned climate finance negotiator when hearing of the goals of the UN Environment's planned Inquiry into the Design of a Sustainable Financial System.

> "Admirable, but a fool's errand to suppose that global finance as a system can be aligned with sustainable development" concluded some of our best friends, including those with many years invested in advancing the cause of social, ethical, climate and sustainable finance.

"At last!", commented one institutional investor who shared the view of growing numbers that reforming the financial system was key to making substantial environmental and social progress.

# A Moment in TIME

uch reactions coursed through the early days of the Inquiry – which was mandated to advance options to improve the financial system's effectiveness in mobilizing capital towards a green and inclusive economy. Established by UN Environment in January 2014, the Inquiry was set up for an initial twoyear period, with a small core team based in Switzerland, guided by an international Advisory Council.<sup>1</sup> Sustainable finance was not a new topic for UN

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Environment. It had worked for a quarter of a century at the nexus between finance and sustainability, particularly through its Finance Initiative. Yet, despite its engagement on many aspects of finance, it had not focused on finance as a system.

Our first visit to Asia in February 2014 met with similar observations and at times declarations. Emblematic was one financial regulator who suggested politely that we might be in the wrong building, offering directions to the environment ministry. Yet, we were also surprised by the willingness of many leading central bankers to discuss our topic of interest and approach. In developing countries in particular, we found more than willing ears, as those governing and working across the financial system pointed to ways in which they were already attuned to aspects of the sustainability agenda.

The evolution of ethical, green, socially responsible and sustainable finance is now decades old. Entrepreneurial efforts by many have catalysed market practice, but still by the exceptional banker, investor or insurer, and by even more unusual regulators, heads of stock exchanges, rating agencies and standards bodies.

Deeply engrained conventional wisdom viewed sustainable development largely as a consumer preference rather than as a core feature of system success.

Our starting hypothesis was that many of the solutions to mobilizing the trillions for sustainable development lay in the underlying workings of the global financial system itself. Our focus was on the 'rules of the game', which in turn informed the actions of individual financial players. Market innovation, we appreciated, was itself a change driver, but would struggle in our view to catalyse change at scale without triggering changes in the system's underlying architecture, and indeed rationale. Our initial task was to identify practices in advancing such changes, and to use them to weave a narrative that in turn stimulated ambitious action at the nexus of financial rules and sustainable development.

Less than two years later, on 8 October 2015, the Inquiry launched its first global report, "The Financial System We Need: Aligning the Financial System with Sustainable Development",<sup>2</sup> to a packed hall at the International Monetary Fund (IMF)/World Bank Annual Meetings in Lima, Peru.

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Our report highlighted a "quiet revolution" in market and policy innovations that was aligning finance with national development priorities and many of the needs of sustainable development. It pointed to the shared ambitions and practices across diverse contexts and aspirations. Exemplifying such common ground amid diversity was the breadth of concerns of the event's luminaries. Atiur Rahman, then Governor of the Bangladesh Bank, with his focus on financial inclusion; Yi Gang, the Deputy Governor of the People's Bank of China, responding both to China's challenges in addressing air, water and soil pollution, and the need to finance its ambition to develop an 'ecocivilization'; and Mark Carney, the Governor of the Bank of England, in extending the traditional focus of prudential policy to incorporate the threat of climate change.

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MARK CARNEY Governor Bank of England



The Inquiry was designed as a process of discovery and stimulation, not as a volume business or a long-term programme of work. Over its lifetime, it has engaged in sustainable finance work in dozens of countries, hosted and participated in hundreds of events, and published over 120 reports. With few exceptions, nothing has been done alone, and we have sought to foster a community of practice and contribute to the evolution of a body of knowledge on how best to align the financial system with sustainable development. This final global report offers a closing reflection of what has happened in the world of sustainable finance over the Inquiry's life, building on our activities, the body of work and the community of practice. In offering this short reflection, we hope also to point to what still needs to be done, and what lessons can be learned, even at this early stage, from our contribution.

The rest of the report is organized over four main sections:

We are proud to have worked with many of the actors who are today making the waves that make a difference.

The Inquiry's initial phase of work, summarized in its first global report, concluded that in fact, rather than in aspirational theory, sustainable development was already the business of many of those tasked to govern the global financial system. As a remarkable punctuation to that conclusion, Yi Gang announced to the assembled audience that China would take the topic of green finance to the G20 during its Presidency in 2016. This subsequently became the Green Finance Study Group (GFSG), and the Sustainable Finance Study Group under Argentina's G20 Presidency in 2018. This work stream would be co-chaired by the UK and China represented by the Bank of England and the People's Bank of China, with UN Environment as the secretariat. This was the first time that a United Nations (UN) entity, let alone its environment agency, had been given a structural role in the finance track since the creation of the G20. On the back of this announcement and significant demand for UN Environment to apply its first phase lessons, the Inquiry was extended for a further two years through 2016 and 2017.

At the outset of the Inquiry, it would have been a challenge to find a small handful of financial regulators or central bank governors willing to go on record that "sustainable development was part of their business". Today, four years later, it would be hard to find one who would go on record to say that their work had nothing to do with sustainable development, although there is much to be done in converting such developments into practice. Positively, a growing proportion of financial actors have made commitments to align their operations with climate change objectives and sustainable development. Citizens and civil society organizations have also moved into the financial system arena, stimulating incumbents to look afresh at their purpose and practice.

Much has happened over those four years to trigger such unexpected developments. Crucial have been the Paris Agreement on climate change, the embrace of the Sustainable Development Goals (SDGs), and recognition that the large-scale deployment of private capital was essential to realizing these all-important commitments and goals. Three additional drivers have been particularly important. First was that the



Section 2: reviews the Inquiry's core analysis.

Section 3: summarizes progress made in aligning the financial system with sustainable development between 2014 and 2017.

Section 4: reflects on the lessons that can be learned from the Inquiry's approach; and

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Section 5: highlights what still needs to be done and what success could look like.

financial crisis created demands for fresh thinking about the role and shape of the financial system, and a greater willingness for policymakers to act. Second has been the growing importance of developing countries in breaking new ground in advancing practical ways in which changes to the financial system should support development. And third is the growing technological disruption to the financial system, offering new potentials (and perils) for achieving the global goals.

The Inquiry has been a catalyst, not a driver of change. As such, its role was to connect the dots in highlighting the pattern of change and possibilities exemplified by innovative initiatives created by extraordinary champions from around the world. And as the Inquiry progressed into its second phase, it became more active in contributing to some of these initiatives, both nationally and internationally.

Actions to build a sustainable financial system are multiplying and accelerating around the world. However, this impressive momentum remains insufficient to deliver the financing required for the 2030 Agenda or the Paris Agreement. Indeed, the vital signs of sustainable development give good reason for concern in terms of ecosystem decline, widening social fractures, and unrealized economic potential.

Finance is not the only factor at work, but is a keystone in shaping tomorrow's economy and its impacts. There is always a danger in confusing increasing activity with adequacy or impressive momentum with much-needed transformation. Transforming finance needs to build on our first generation of innovations, not depend on them.

> PATRICIA ESPINOSA Executive Secretary United Nations Framework Convention on Climate Change

# DRIVING SYSTEM Change

#### 2.1 The Need for System Change

inancing the SDGs and the Paris Agreement commitments on climate requires investments amounting to trillions of dollars per year for the coming decade and beyond. It is now widely accepted that much of the finance needed will have to come from private sources, given both the scarcity of public finance and the potential for some public goods to be financed profitably. Yet today, inadequate private capital is being deployed in ways that are aligned to these goals and commitments.

Much can, and is being done, to incentivize private finance. Notable are the wealth of innovative financing mechanisms that in diverse ways blend in public finance, variously to offset risks, and to subsidize and incentivize private lending, investment and insurance. Internationally, development finance institutions, working with other sources of development cooperation finance, are increasingly using their balance sheets to leverage private capital, alongside measures to de-risk investments by encouraging wide-ranging policy and institutional developments.

Such downstream financial innovations are vital, and are the subject of much research, experimentation and growing practice. However,



the rapid scaling of blended financing is constrained, not least by limits to the volume of public finance that can be redirected to this purpose. Reforms in the real economy complement such financing mechanisms, as policy, market and technological develop-

ments change the reprices, risks and retur sustainability-aligned ing, hopefully for the ber again, although some changes are visible and ic, such as the falling co energy systems, the sca ployment of private cap wholly inadequate.

The Inquiry's core pre outset was that change in how the global finand worked to deliver the f to transition to sustaina Such changes could in complement other app those alluded to above, a es may prove to be ef Rather than focusing on practice, of which there a we posited that there we the underlying architect system. Therefore, we cl 'rules of the game' gove capital markets, and so banks, financial regulato ters, stock exchanges and

The core purpose of th is to ensure that finance the long-term needs of fines in its own mission anced, sustained growth e to nc-Yet hese amatf clean of rede remair

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anced, sustained growth, or what might be termed inclusive, sustainable development that in turn has to be low-carbon and climate-resilient. Ample evidence exists that the financial system is out of step with such a purpose. Policy and market failures were spectacularly in evidence as drivers of the tragic effects on peoples' lives of the financial crisis in 2008.

Similarly, little has been done to mitigate the increased focus on short-term returns at the cost of long-term value creation, let alone the resulting marginalization of social and environmental effects that only become material over the longer term, notably climate and inequality. There is clear evidence of the sustained high cost of financial market transactions despite the magnive growth in volume

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zone chose whose interests might be disturbed by any interventions that went beyond subsidies; to those who agreed with us, but believed we had no chance of making a difference. Each view without doubt has its valid aspects, and so should not be ignored. Yet, taken together, they offered a recipe for inaction, in addressing what was needed to shape a financial system fit for the 21st century.

#### 2.2 Reasons for Intervening in the Financial System for Sustainable Development

Conventional wisdom tells us that if the problem concerns real economy externalities, such as environmental damage, then the 'firstbest' solution is to intervene in the real economy. Often, this is exactly right. Effective building codes and incentives for renewable energy, for example, all provide important signals to the financial system. Pricing the negative effects of greenhouse gas emissions into markets for products and services is without a doubt a key to addressing climate change.

Equally, there are legitimate reasons for providing what are effectively subsidies to private capital so that it provides finance for investments delivering public goods that the private owners of capital should not be asked to pay for. Bringing forward the deployment of renewable energy is a case in point, where improved returns to private capital have been secured through direct public subsidies, or by imposing surcharges on

> electricity consumer prices. In many instances, this is a matter of correcting policy failures. The IMF, for example, calls for an end to fossil fuel energy subsidies that it estimates at US\$5.3

trillion annually, or about 6.5% of global GDP. Such subsidies, the IMF argues, are made up of both policy and market failures – policy failures including continued direct fossil fuel subsidies, and market failures including the externalized societal costs of negative health effects of carbon-intensive energy production.

The Inquiry was established with a view that these two tracks needed to be supplemented by a third one that would address policy and market failures within the financial system itself. Our initial work highlighted in practice that such interventions were being justified by reference to four specific circumstances:

**RACHEL KYTE** CEO **Sustainable Energy for All** 

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- Pricing externalities: Action may be justified where financial markets systematically ignore the impact of pursuing financial returns on social and environmental externalities, thereby being party to creating negative spillover impacts on third parties or society in general.
- **2. Promoting innovation**: Action may be justified to stimulate 'missing markets', generating positive spillovers, for example, through common standards that improve liquidity in embryonic areas.
- **3. Ensuring financial stability**: Action may be justified where the stability of parts of the financial system may be affected by environmental impacts, or by associated policy, technological and social responses.
- **4. Ensuring policy coherence**: Action may be justified to ensure that the rules governing the financial system are consistent with wider government policies (for example, aligning the capital requirements for banks and insurers with environmental and social factors).

These four reasons are in the main 'first-best' policy solutions to mobilizing financing for sustainable development. The first three, in particular, which focus on ensuring markets effectively handle risk pricing, innovation and financial stability, are centrally the role of financial policymakers and regulators, as well as standard-setters. From this perspective, these reasons for intervening need not concern any direct, policy or principled interest in advancing an inclusive green economy.

#### BO FINANCIAL SYSTEM-LEVEL POLICY AND MARKET FAILURES –G20 AND GREEN FINANCE

Multiple barriers exist to mobilizing transformative levels of financing. These include weaknesses in project pipelines, significant incremental costs to 'greening' infrastructure, poor commercial opportunities for financing the realization of national development priorities, climate goals or the SDGs, scarcity or poor use of available public resources, and an inadequate enabling environment for private investment.

The G20 Green Finance Study Group highlighted a number of barriers within the financial system itself. The most important barrier by far is the continued failure to account for environmental and related impacts in financial decision-making. Information asymmetries explain this shortfall in part, as financial decision makers often lack the data to understand social and environmental factors. Short-termism can also deter financing from sustainable investments that tend to be more capital-intensive with associated lower operating costs. In addition, mispricing environmental risk can deter green financing and encourage investment in pollution-intensive assets.

Sources: G20 Green Finance Study Group (2016);<sup>4</sup> Caldecott, B. and McDaniels, J. (2014);<sup>5</sup> Zadek, S. and Robins, N. (2016)<sup>6</sup>

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MA JUN Director Center for Finance & Development, Tsinghua National Institute of Financial Research



The fourth, concerning policy coherence does, however, concern the broader policy landscape. Conventional wisdom rightly seeks to ensure the independence of financial authorities from shorter-term, political interests that could damage the financial system and, in turn, underlying economic prospects and performance. Regulatory coherence with longer-term policy objectives is, however, important and often critically so. The Bank of England's prudential review of the impact of climate change on the UK's insurance sector<sup>7</sup> was, for example, in direct response to the

UK's Climate Change Act.

Taken together, these four reasons aim to improve the working of the financial system, to make the achievement of sustainable development and combating climate change cheaper, faster and safer. There are, however, also times where 'second-best' actions may also be justified. In some countries, notably developing countries, the enforcement of environmental regulations has long been weak, resulting in pollution and broader environmental degradation. Improving environmental enforcement may be the first-best solution in theory, but might not be one practically available in the short to medium term for political economy reasons. In such circumstances, second-best solutions enacted through financial system interventions may help to bring environmental damage under control. Enhanced environmental lender liability<sup>®</sup> is a case in point, which places banks under threat of legal action for the consequences of their loans, thereby potentially stimulating environmental stewardship.

Developing countries have led the way in advancing such solutions, highlighted in our first global report. Brazil and South Africa pioneered sustainability-related listing requirements, Kenya took leadership in advancing digital approaches to financial inclusion, Indonesia delivered the world's first sustainable finance roadmap championed by its financial regulator, and China's banking regulator was the first to advance so-called 'green credit guidelines' that was formative in underpinning its subsequent, ambitious national and international action. Such leadership was in part undoubtedly triggered by the severity of the challenges faced in these country contexts, and also difficulties in implementing first-best solutions. Beyond this, however, were substantive differences in how financial regulators and central banks viewed their own roles, and the role of finance. Their OECD-based peers in the main saw their role as ensuring that finance as a sector of economic activity was stable and efficient. Developing country regulators, on the other hand, tended to view their task as being to ensure that finance played its role in advancing development, with securing stability and efficiency being an important, but by no means the only piece of the puzzle.

Alongside these first- and second-best reasons for intervening in the financial system is the need to consider potential negative impacts and unintended consequences of any actions. Such damaging outcomes can arise for a number of reasons, such as system complexities, conflicting objectives or political interference.

One case of conflicting objectives concerns moves to integrate physical climate risks into sovereign credit ratings. Positively, such integration would ensure that market understanding of bond default risks was sensitive to climate-related factors, and that countries were incentivized to manage these risks through mitigation and adaption activities. What could be problematic, however, is if this integration resulted in the downgrading of bonds from the poorest and most vulnerable developing countries, increasing their cost of capital. The simple integration of environmental factors does not lead necessarily sustainable to development.

> AMINA J. MOHAMMED Deputy Secretary-General United Nations

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#### 2.3 Inquiry-in-Action

It was on this basis that the Inquiry commenced its programme of research and engagement in 2014. Over the next four years, this has involved the following:

#### 2.3.1 COUNTRY-LEVEL ENGAGEMENT

The Inquiry worked in more than 20 countries both to evaluate progress towards a sustainable financial system and work with key partners to deliver national roadmaps. These included:

UK:

FRANCE:

Examining with

the Institute for

created France's

'ecosystem' of

(I4CE) the key

factors that

sustainable

finance.15

Climate Economics

Partnering with the City of London in the launch of its Green Finance Initiative.24

EU:

An observer on the High-Level Expert Group on Sustainable Finance that provided recommendations for a comprehensive EU strategy on sustainable finance.14

#### **ITALY:**

Partnering with Italy's Ministry of the Environment to deliver a comprehensive national dialogue on sustainable finance, launched jointly with the central bank and finance ministry.<sup>18</sup>

#### **ARGENTINA:**

Work with the Ministry of Finance on the development of a strategic stocktake on sustainable finance in Argentina.<sup>9</sup>

#### **COLOMBIA:**

Partnering with the International Finance Corporation (IFC) to explore the state of green finance in Colombia within the wider economic and financial sector context.13

**BRAZIL:** 

Collaborating

association

FEBRABAN

to assess the

alignment of

banking assets

with the green

economy.<sup>11</sup>

with the banking

#### **MOROCCO:**

Supporting the implementation of Morocco's Roadmap for Sustainable Finance – including the development of a sustainable insurance strategy with ACAPS.

#### **SOUTH AFRICA:**

With the Global Green Growth Institute, studying the impact of innovations that have aimed to encourage the integration of environmental, social and governance (ESG) factors into investment decisions.<sup>22</sup>

#### SWITZERLAND:

Collaboration with the Federal Office for the Environment, which established the Swiss Team<sup>23</sup> that later developed "Proposals for a Roadmap towards a Sustainable Financial System in Switzerland".

#### KAZAKHSTAN:

Part of the Advisory Group of the EBRDsupported project "Green Financial System for Kazakhstan".

#### MONGOLIA:

Work with a range of stakeholders, including the Mongolian Bankers Association, to develop a sustainable finance roadmap.

#### CHINA:

Co-chairing the Green Finance Task Force with the People's Bank of China which identified key recommendations for connecting finance and the environment.<sup>12</sup>

#### **NIGERIA:**

Partnership with the Climate Bonds Initiative to assist the government of Nigeria as it was preparing the launch of its sovereign green bond.<sup>20</sup>

#### **KENYA:**

With the central bank and banking association, examining the potential for scaling up green finance building on the country's innovations with mobile banking.<sup>19</sup>

#### INDIA:

Working with the Federation of Indian Chambers of Commerce and Industry (FICCI) to identify practical recommendations to scale up green finance for India's development goals.<sup>16</sup>

#### SINGAPORE: Collaboration

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with the Monetary Authority of Singapore and the Singapore Institute for International Affairs to advance a national dialogue on sustainable finance.<sup>21</sup>

#### **INDONESIA:**

Working with IFC and the Asia Responsible Investors Association (AsRIA) to developing a report on Indonesia's approach and potential for developing a sustainable financial system.<sup>17</sup>

**BANGLADESH:** 

Working with the central bank to evaluate progress on incorporating social and environmental factors in financial policy.<sup>10</sup>

#### 2.3.2 CRITICAL ISSUES

The Inquiry worked on a wide range of cross-cutting issues impacting the ability of the financial system to serve sustainable development, including:

Banking: delivering the first assessment of the state of 'green tagging' in Europe's banking sector.<sup>25</sup>

Credit Ratings: partnering with an alliance of investors to stimulate commitments from leading credit rating agencies to increase commitment to ESG analysis and transparency.

Digital Finance: publishing the first analysis of how fintech could support the shift to sustainable development.<sup>26</sup>

Foreign Direct Investment: pinpointing the key factors to improve the environmental performance of foreign direct investment flows into developing countries.<sup>27</sup>

Fiduciary Duty: partnering in a landmark report on how the fiduciary duties of investors needed to be interpreted in light of 21st century challenges.<sup>28</sup>

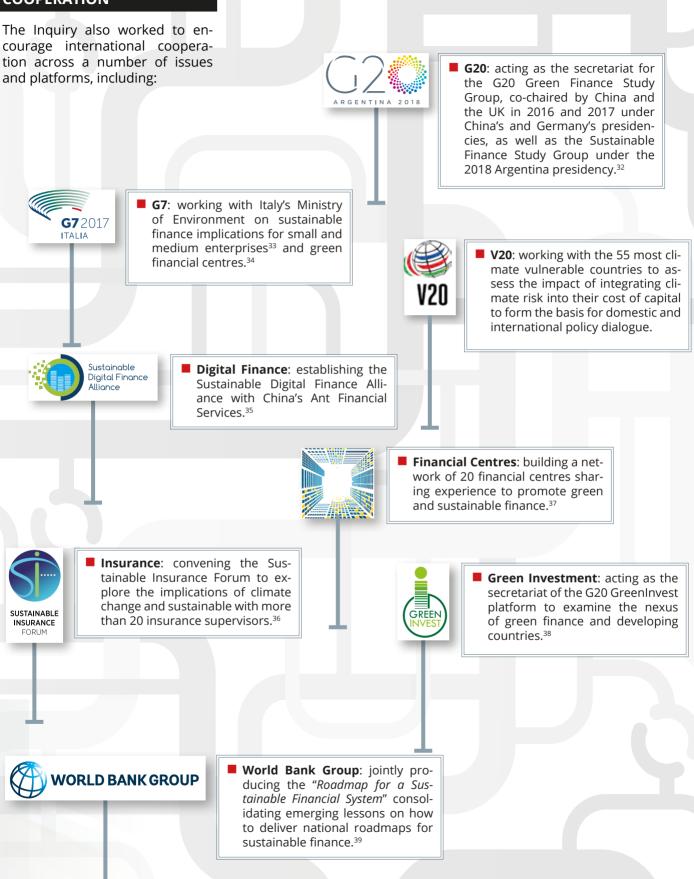
Green Bonds: producing a joint report with the Climate Bonds Initiative on how the public sector can support the growth of the green bond market.<sup>29</sup>

Insurance: identifying the key steps that need to be taken to align insurance with the Sustainable Development Goals.<sup>30</sup>

 Liability: examining the strengths and weaknesses of liability frameworks to encourage environmental stewardship by financial institutions.

Performance Framework: setting out a comprehensive framework for evaluating the performance of the financial system in terms of sustainable development.<sup>31</sup>

### 2.3.3 INTERNATIONAL COOPERATION



# **EVIDENCE** OF HANG the

**3.1** A New Understanding

Back in 2014, the understanding of what a sustainable financial system meant was strongly focused on resilience to financial crisis rather than capital allocation aligned to wider environmental, social and economic goals. Over the last four years, a significant change has occurred - as financial institutions, public authorities, intergovernmental system and civil society have recognized the fundamental importance of finance for the success of efforts to deliver a low-carbon, inclusive, and climate-resilient economy. Now, a 'sustainable financial system' has a more profound meaning – that of a financial system that serves the transition to sustainable development.

More than anything, the Inquiry has helped to shape this shift in understanding, which in turn has contributed to stimulating real-world action. This narrative, while expressed in many forms, has six essential parts:

- The first is about the gap that needs to be closed to finance sustainable development.
- The second is an identification of the barriers that prevent this financing.
- The third is the recognition of an emergent pattern of powerful, innovative change.

Drawing on these three,

The fourth is that the realignment of the financial system is entirely feasible, extending the mandates of key institutions to incorporate new and emerging risks and opportunities.

The narrative closes by focusing on broader system conditions:

- The fifth is the urgency to secure this realignment at scale, and
- The sixth emphasizes the specific drivers of change present in the current historical moment as providing the catalytic context for advancing the changes needed.

**3.2** Measuring Progress

Such a narrative is a precondition for ambitious action, as it serves to engage important actors, and to crowd in innovations and resources. But it does not guarantee that such action will happen, either at all, or over a timescale that makes the required difference. It is too early to judge with any certainty as to whether there has been success over this period in catalysing ambitious and timely action in aligning the financial system with sustainable development. However, it would be remiss not to review, and perhaps to speculate somewhat, as to whether there are at least early signs of such action in practice.

Measuring progress is no simple matter, especially when the focus is on the complex and dynamic, global financial system. Measurable outcomes are of course the final arbiter of success. Through this lens, there is reason for concern. Looking through the narrower green and climate lens, the evidence points to more than 25 million people around the globe being displaced from their homes by natural disasters every year since 2008 – equivalent to one person every second.<sup>40</sup> Similarly, 6.5 million people die prematurely each year as a result of air pollution linked to the energy system.<sup>41</sup>

Such measures of the outcomes that count reinforce the urgency to act. However, they do not offer insights into causal links to finance, or possible barriers to overcome in deploying finance in ways that reverse these negative outcomes. To bridge this gap, the supply side of the equation needs to be considered, which detaches the analysis from such outcome measures, but does provide us with some evidence on progress.

Considering market practice, for example, we know that there has been a fourteen-fold increase in labelled green bond issuance from just US\$11 billion in issuance in 2013 to US\$155 billion in 2017.<sup>42</sup> Key to this growth has been the market-creating role of public authorities, including key development banks such as the European Investment Bank (EIB) and IFC as well as growing sovereign bond issuance, from Indonesia, Fiji, France, Nigeria and Poland. Yet such progress needs to be set against the scale of the global bond market of around US\$100 trillion.<sup>43</sup>

We can also point to increases in the divestments in carbon-intensive assets to an estimated US\$5 trillion in 2016,<sup>44</sup> but equally need to set this against investments in coal, oil and gas over the same period of around US\$710 billion.<sup>45</sup> The creation of the Climate Action 100+ of institutional investors, which aim to act together in encouraging the decarbonization of the world's most carbon-intensive listed companies, sends a strong signal along the investment chain. In the same way, the increase of the membership of the Principles for Responsible Investment to over 1,900 signatories, with combined assets under management of US\$70 trillion, is a welcome development.<sup>46</sup>

**PATRICK NJOROGE** Governor Central Bank of Kenya

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National action is critical, and there are a growing number of examples of ambitious roadmaps in development and implementation (such as Indonesia,<sup>47</sup> Mongolia, Morocco<sup>48</sup> and Switzerland<sup>49</sup>). Each is important in its own right, but some catalyse, broader international action:

**\* CHINA:** Agreed by China's State Council in August 2016, the "Guidelines for Establishing a Green Financial System" are the world's most comprehensive set of national commitments, covering a range of priorities across banking, capital markets and insurance. This built on the work of the China Green Finance Task Force co-convened by the People's Bank of China and the Inquiry on behalf of the UN Environment,<sup>50</sup> as well as the China Banking Regulatory Commission's Green Credit Guidelines launched in 2012.

EUROPEAN UNION: Building on developments across a number of member states, in 2016, the European Union set up the High-Level Expert Group on Sustainable Finance (HLEG) to map out options for community-wide action. This has laid the foundations for a comprehensive action plan on sustainable finance proposed by the European Commission released in early 2018 with the intention to present legislative proposals in May 2018.<sup>51</sup>

Over its life, the Inquiry has tracked the global number and range of policy measures to advance aspects of sustainable finance. At the end of 2013, 139 subnational, national-level and international policy and regulatory measures were in place across 44 jurisdictions.<sup>52</sup> Most of these were first-generation efforts to improve disclosure in securities markets and by pension funds. Four years on, the number of measures has not only doubled – to 300 in 54 jurisdictions – but the pattern of activity has changed fundamentally, with a substantial rise in system-level initiatives, which now account for a quarter of the total (see Figure 1). These include the growth in national level roadmaps for green and sustainable finance in countries, including Italy,<sup>53</sup> Indonesia and Morocco.<sup>54</sup> Specialized sustainable finance regulations and guidelines have also been developed. Bangladesh, China, Vietnam, Pakistan have developed guidance for banks to include environmental and social factors into risk management.

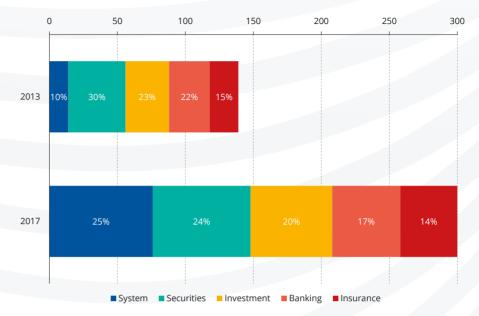
Global finance is governed by a series of interlocking systems of soft-law rules, made up in the main of national regulators, standard-setters and policymakers. Ambitious national action can and has led to sustainable development becoming a more common feature of debate. Over the past five years, there has been a striking growth in international initiatives to share experience, stimulate action and promote cooperation on key rules and standards, such as the recent formation of a network of some of the world's leading central banks to explore ways in which they can contribute to fighting climate change. Other structurally significant initiatives include:

> MURILO PORTUGAL President Brazilian Banking Federation

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FIGURE 1: THE DOUBLING IN POLICY AND REGULATORY MEASURES, 2013-2017



Source: McDaniels, J. and Robins, N. (2018)

G20: During its G20 presidency in 2016, China launched the G20 Green Finance Study Group, co-chaired by China and the UK, with UN Environment serving as its Secretariat. The GFSG continued under the German G20 Presidency in 2017 and is operating as the Sustainable Finance Study Group under the Argentinian G20 Presidency in 2018.

In the first year, the GFSG identified barriers to advancing green finance, extensive cases of good practice in overcoming such barriers, and set out options for action at the national and international level combining policy and market practice. In the second year under Germany's G20 Presidency, the GFSG focused on technical work on risk management and harnessing publicly available environment data, and in its third year the work has extended to consider securitization of green lending, private equity and digital finance.

CLIMATE RISK AND FINANCIAL STABILITY: A major barrier to effective management of the systemic risks of climate change is the lack of consistent, decision-useful information. So, in November 2015, the Financial Stability Board established a private sector-led Task Force on Climate-related Financial Disclosures (TCFD) as an industry-led initiative to draw up voluntary guidance on reporting by business and financial institutions.<sup>55</sup> These, and other intergovernmental and collaborative initiatives, are designed to have both a substantive and a signalling effect. Substantively, they both build up technical expertise among financial decision makers and can stimulate policy action, both directly and through their inclusion in key international policy documents such as G20 and G7 communiqués. Just as important has been the signalling effect – highlighting both to public authorities and the financial sector that sustainable development is now a strategic issue.

## **3.3** Beyond Momentum

Early-stage evidence points to a momentum towards aligning parts of the financial system with aspects of sustainable development. Sustainability is becoming part of the routine debate within financial institutions and regulatory bodies. A growing number of commitments to action are being made, matched by the beginnings of the urgently needed reallocation of capital. Some take-off has happened in areas such as such as investment in renewable energy, green bonds as well as fiduciary duty and risk-based disclosure. But substantial lags remain in large parts of the system, for example, in housing finance, often the largest asset class in banking portfolios; and of course more broadly infrastructure investments.

In short, flows of capital across the sustainable development agenda are increasing but remain insufficient.

The evidence also indicates the potential for a strong next wave of action. The engagement of increasingly influential players, the growth of ambitious, powerful coalitions of actors that can support collaborative action, and the shifting focus towards pivotal areas such as the potential of digital finance, the roles of rating agencies, China's Belt and Road Initiative and engagement of key policy platforms such as the G20 all point in this direction.

Measures of progress themselves can be a change driver, reinforcing the shift in the qualitative narrative, and beginning to offer a more integrated, quantitative view of both absolute and relative progress. Underpinning this is the development of metrics that shed light on the nexus between financial market developments and sustainable finance. Such metrics can, and are, informing a next generation of indexes and benchmarks and broader performance frameworks, from listing requirements to system-level assessments of financial market health.

Our work with the World Bank Group in producing the "*Roadmap for a Sustainable Financial System*"<sup>56</sup> enabled us to identify some of the developments needed to accelerate the flow of sustainable finance. Summarized in Figure 2 below, while certainly not exhaustive, they highlight the need to advance changes to the design and functioning of the financial system itself. Some actions can be taken by market actors, such as disclosure, but even these may need policy or regulatory interventions to advance at scale and speed in order to achieve measurable impact. Other measures definitely require policy interventions in the broadest sense, which would include a combination of policy, regulatory, standard-setting, judicial and fiscal actions, often working in concert with, and supportive of, market innovations and broader developments.

ATIUR RAHMAN Former Governor Bangladesh Bank

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#### FIGURE 2: TRANSITIONING TOWARDS SUSTAINABLE FINANCE

CHARACTERISTIC	BUSINESS AS USUAL	TRANSITION RISKS	NEW SUSTAINABLE MODEL
Policy alignment	<ul> <li>The climate and sustainability agenda is primarily driven by ministries of environment, health, and education.</li> <li>Financial sector authorities are not involved in developing and executing climate and sustainability policies.</li> </ul>	• In response to the drive toward sustainability, multiple policies arising from different parts of the financial sector may be developed with limited coordination and within policy silos.	an integral part of the develop- ment and execution of sustain- ability and climate policies.
Financial stability	• In the best of cases, only short- term environmental and so- cial risks associated with spe- cific projects are considered as having an impact on sector stability.	<ul> <li>Increased risk-aversion may occur as the broader long-term sustainability risks begin to be considered, measured, and managed.</li> </ul>	• Both short- and long-term sus- tainability risks are measured, priced, and managed with re- spect to specific financial trans- actions and systemically.
Public finance effectiveness	<ul> <li>Interventions are ad-hoc and short-term, with limited mea- surement of costs/benefits, scale up viability and long term perspective.</li> </ul>	• Momentum may be lost be- hind innovative approaches as a result of increased selective- ness of interventions.	• Integrated interventions are fo- cused on removing barriers to sustainable finance.
Principles, cultures, and beliefs aligned to sustainability	• Climate and Sustainability con- siderations are absent or lim- ited to niche subsectors in the financial system and executed by sustainability branches of Fls only.	• As the understanding of the concept behind sustainability increases, stakeholders may focus excessively on risks, not opportunities.	<ul> <li>Incentives across all stakehold- ers of the financial system will be aligned toward long-term sustainability.</li> </ul>
Market integrity	<ul> <li>Sustainability impact is not disclosed and/or integrated into prices.</li> <li>Disclosure initiatives are undertaken on certain segments only.</li> </ul>	• Multiple disclosure initiatives lacking common standards may damage the credibility of emerging initiatives.	• Disclosure standards are implemented and incorporated as part of standard financial markets' integrity practices.
Innovation and dynamism	• Financial innovation is limited and focused on sustainability.	• At times of change and experi- mentation, many initiatives are bound to fail before successful ones are identified, tested, and rolled out.	• Financial technology (fintech) and other mechanisms of fi- nancial innovation redefine the relationship among financial sector stakeholders with a fo- cus on sustainable finance.
Time horizon	• Focus on short-term sustain- ability risks.	• Inherent uncertainty of long- term sustainability risks may discourage risk-taking.	<ul> <li>Standards to measure and manage long-term sustainabil- ity risks and opportunities are adopted.</li> </ul>
New information and capabilities	• Know-how on sustainability and its implication to the op- eration of the financial system is limited within the financial sector. Limited market-rele- vant sustainability information is integrated into the financial system.	<ul> <li>Disjointed efforts to develop sustainability information and capabilities lead to a mismatch of practices across the financial system.</li> </ul>	• Common information metrics are used broadly across the fi- nancial system and stakehold- ers have the know-how to in- corporate such information into day-to-day operations and long-term strategy formulation.

#### 4.1 Finance and Beyond

The Inquiry offers two sets of insights. The first is focused on sustainable finance and its development as it escalated in volume, diversity and ambition, and broke through some aspects of its constraining glass ceiling. Most of the Inquiry's publications and outreach have focused on this. The second set of insights, however, addresses the process of change more broadly and may provoke thoughts on how other development challenges might be ambitiously addressed. This latter topic has not really been addressed in our writings to date, although it has been the topic of intensive, informal discussion.

This section focuses on the second set of insights drawing on the Inquiry's approach to advancing sustainable finance.

# Lessons from the

#### 4.2 Thinking about Change

Changing the financial system is not like designing a car. The financial system is a complex, dynamic system that evolves, often at breakneck speed, in response to fluid markets, technologies and the effects of innovation and herding. Top-down directives are at times possible and necessary, as the post-financial crisis period has demonstrated. Yet, the same period illustrates that such approaches can deliver unintended consequences. Strengthened capital requirements, for example, might lead to more resilient financial institutions, but might also dis-incentivize long-term financing. Nudges, on the other hand, might edge the system in the right direction with fewer risks, but may only deliver incremental benefits or larger benefits over unacceptably long time periods. Climate-related risk assessment and disclosure, for example, is clearly needed, but might, if voluntarily pursued, take an unacceptably long time to have the desired effect. At the same time, forcefully integrating climate factors into financial decision-making on its own could crystallize risks in some of the world's most vulnerable and poorest. countries.

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In setting out with a substantive view of the purpose of the financial system, the Inquiry's work set some alarm bells ringing. It defied cherished conventions extolling the virtues of separating policy from financial market development. As one very senior ex-central bank governor argued, if climate policy is a factor in financial market development plans, why not any other policy issue? Indeed, the SDGs and the Paris Agreement provided an obvious, universally embraced reference point, but it was clear from the outset that no single set of recommendations could guide the financial system in all of its diversity of contexts across geographies, communities and priorities. Some countries might prioritize financial inclusion, others investment in pollution control, and others infrastructure investment or lending to small businesses.

With such concerns in mind, it became clear that approaching change with the view that national priorities could provide a starting point for a wider wave of changes would be more effective than blueprinting change in a more formulaic manner. For example, building a digital infrastructure for greater financial inclusion in Kenya has also enabled the more effective deployment of clean energy and improved access to health services. Similarly, issuing a green bond in Nigeria in turn led to capital markets' increased interest in climate risks and associated upside investment opportunities. More open-ended roadmaps were therefore needed – rather than blueprints – that encouraged coherence and ambition on the one hand, while allowing for flexibility, learning and contingent planning.

We paid close attention to the dynamic retional and sometimes regional interests. Our strategy in part focused on countries with larger, evolving financial systems, especially emerging markets, because of their desire to influence traditional international rule-setting institutions in pursuit of national development priorities. Yet we embraced the view that countries with only modest financial systems, both developing and developed, could be influential by virtue of their willingness to innovate beyond the norm. Through this lens, we understood the route to action internationally as requiring such national champions, and progressed this more forcefully in the second phase of our work.

ANNE SIMPSON Investment Director, Sustainability CalPERS

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f course, fascinating dynamics are at play between the markets and the rule-setters. Our focus on rule-setting required a continuous engagement with market players, including banks, institutional investors and also market-based rule-setting bodies, such as stock exchanges and rating agencies. The networks and capabilities of the UN Environment Finance Initiative were very helpful in this regard, as were a number of other international coalitions of exchanges, banks, institutional investors and insurance companies. Our engagement with both markets and rule-setters broadened and accelerated in 2016 with our emerging focus on the systemic effects of market disruptions, notably the effects of the digitalization of finance.

FIGURE3: MIND THE GAP

• Seeking consensus among key stakeholders either inside or outside of the UN system.

#### • Adopting the specific conclusions and recom-

**mendations** of commissioned papers, or indeed even requiring consistency between papers published.

• Overreliance on 'best practice' from the world's

most matured financial markets and associated market actors and experts.

• **Picking 'winners',** i.e. specific innovations that should be widely adopted, or making definitive recommendations on what 'has' to be done.

• Setting out a 'blueprint' description of a 'sustainable financial system' at anything but a broad, envisioned level, thereby evading any distracting debate about 'end-game' state.

## WHAT WE CHOSE NOT TO DO

• Sustainability: although framed as about sustainable development, the Inquiry in the main focused on environmental and climate aspects, and within that principally on energy and carbon.

• Country: despite widespread and balanced engagement with developed and developing countries, notable gaps included weak coverage of small island states and also fragile and war-torn states.

WHAT WE DID NOT GET AROUND TO • Finance: with a clear decision to focus on private finance, the important intersections between public and private finance,

both domestically and internationally, became clearer over time.

• Integrity: while recognizing the importance of the oft-ignored nexus between sustainable finance and market integrity issues such as corruption and illicit financial flows, this area remained largely unexplored.

## THE INQUIRY'S **THEORY OF CHANGE** HAD THE FOLLOWING ELEMENTS:

- **1.** A historic window to advance changes in the financial system.
- **2.** A pronounced sensitivity to, and respect for, existing innovations, especially by developing countries, focused on specific national priorities and contexts.
- **3.** The linking together of these innovations across countries to understand patterns in the evolution of sustainable finance and build a community of interest between practitioners in different parts of the world.
- **4.** Highlighting the broader systemic relevance of such innovations in anchoring the entire overall narrative. This required demonstrating and also catalysing the strong network effects of specific innovations, which in turn required constant refinement through ongoing engagement, publication, critique and amplification.
- **5.** Work with a growing number of 'policy entrepreneurs' who saw the value of the system approach and were open to explore the case for action and, on the basis of fresh insights, to extend the coverage of financial policy and regulation to include sustainability factors.
- **6.** Engagement at the country level to systematize needs and innovations into roadmaps for aligning domestic financial systems with broader sustainability interests and national priorities, rapidly cross-fertilizing between collaborations, and feeding the results into international dialogue and debate.
- **7.** Promote active collaboration between public and private actors, recognizing that smart policy interventions would depend on sound advice from, and support by, the market, and that effective roadmaps would rely on rapid feedback to allow for learning and the evolution of approaches in as near to real time as possible.
- **8.** Crowd in an armada of policy and market analysis, innovations and recommendations, connecting to international agendas such as the SDGs and the Paris Agreement, and seeking unexpected synergies from literally hundreds of actors, rather than working to identify singular, 'best' options.
- **9.** Engage with a small number of ambitious actors who wished to influence the system as a whole, both in their home markets and on the international stage, opening up important avenues for informing and influencing key public and private actors.
- **10.** Work with others to establish a limited number of new forums for sustainable finance dialogue and decision, notably in the G20,<sup>57</sup> around insurance supervision,<sup>58</sup> with financial centres<sup>59</sup> and in the area of digital finance.<sup>60</sup>

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#### The following observations seek to highlight the most salient aspects of our approach:

1. Narrative: We aimed to shape a narrative that demonstrated the need for system change in finance in pursuit of sustainable development, echoing the experience coming from many countries, market actors and collaborative platforms.

2. Practicality: A continuous focus on practicality strengthened by being the 'messenger' of the existing practice of others, rather than the purveyors of what might have seemed to us or others as right in principle.

**3. Crowding in**: Narratives are successful in what they trigger, and there is widespread evidence of substantial crowding in of independently championed innovations seeking to achieve the underlying purpose of aligning aspects of the financial system with sustainable development.

#### 4.3 Strategic Enablers

There were three specific enablers of the Inquiry's approach that supported the execution of our theory of change:

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- INSTITUTIONAL HOME: UN Environment provided an effective institutional home for the Inquiry. It is not so close to financial market policy and practice to be constrained by conventional wisdoms, but close enough to be influential through its environmental and sustainable development mandate as well as its historic work on finance through its Finance Initiative.
- LEADERSHIP: The Inquiry greatly benefitted from the leadership of UN Environment throughout its operation. The decision to advance a more ambitious approach to green and sustainable finance was taken first at a UN Environment retreat in Abu Dhabi in 2012, and subsequently in a senior management retreat that highlighted the dangers of the plateauing of current efforts globally. Such perspectives and ambition created the possibility of risk-taking innovations not always common to international organizations, building on previous, similarly ambitious breakthrough initiatives such as UN Environment's Green Economy programme.

VISIONARY FUNDERS: The availability of flexible capital to fund the process of innovation was also critical. In the first instance, this came largely from UN Environment resources and was subsequently followed by strategic support from a small number of official funders and foundations that accepted and chose to support the underlying approach.

**4. New financial actors**: Critical for that narrative's success was its embrace by a set of actors who accepted that sustainable development was also their business, notably those governing the financial sector including policymakers, regulators and standard-setters. This was validated in particular through the topic's location in the G20 finance track.

**5.Universalism:** Equally important was for the agenda not to be limited by past views of development, and there was real progress in both making this a domestic topic for developed and developing countries alike, and in driving learning from the latter to the former.

Without all three of these enablers in place working together, the Inquiry almost certainly would not have been created, and if it had, would not have achieved as much as it has.

# **4.4** Completing the Inquiry's Mandate

The Inquiry was always conceived of as a temporary, or 'pop-up', initiative, initially conceived for two years, and subsequent-ly extended to four years. As such, it was built for acceleration and the leverage of specific historical conditions and opportunities set out above. Its team, financing, and approach to its work were all designed with a sprint in mind, not a long-distance marathon.

With the completion of the Inquiry's mandate, considerable effort has been deployed to ensure that the work it has undertaken is picked up. The growing portfolio of G20-related activities on sustainable finance will be continued under the UN Environment banner. Similarly, country-specific work will increasingly involve other parts of the UN system, partly catalysed by the support provided by the Inquiry to the UN Secretary-General's leadership in championing sustainable finance.

While the Inquiry as a platform is being brought to its planned-for close, key aspects of its work will continue, as set out in Box 3:

#### **CONTINUING WORK**

The UN Environment Inquiry is coming to a close, but a number of strands of its work, with others, will continue through and with other platforms. These strands, in continuing our underlying approach, will focus on leveraging major trends across the financial system, rather than either piloting or building large volumes of activities.

**Sustainable Finance at the G20**: UN Environment will continue to advance sustainable finance under the Argentinian G20 Presidency, covering:

→ G20 Sustainable Finance Study Group (*http:// unepinquiry.org/g20greenfinancerepositoryeng/*).

→ G20 Climate and Sustainability Working Group (*https://www.g20.org/en/g20-argentina/work-streams/climate-sustainability*).

→ T20 Task Force on the 2030 Agenda (*https://t20argentina. org/task-forces/*).

G20 Eminent Persons Group on Global Financial Governance (http://www.iai.it/sites/default/files/g20-epg-terms-of-reference. pdf).

G20-related Infrastructure Futures initiative (with the OECD and the World Bank).

**Coalitions for Action**: three coalitions have been established, each involving UN Environment, to advance aspects of our work:

Network of Financial Centres for Sustainability: Launched in Casablanca in September 2017,<sup>61</sup> the network gathers financial centres committed to harness their financial expertise to drive action on climate change and sustainable development (http://unepinquiry. org/publication/accelerating-financial-centre-action-on-sustainabledevelopment/).

Sustainable Digital Finance Alliance: Co-founded by UN Environment and Ant Financial Services,<sup>62</sup> and established as a Swiss-based, nonprofit, public-private partnership, its goal is to catalyse the more effective harnessing of the digitalization of finance in meeting the financing needs of sustainable development (https://www.sustainabledigitalfinance.org/).

Sustainable Insurance Forum: A network of leading insurance supervisors and regulators seeking to strengthen their understanding of and responses to sustainability issues for the business of insurance, it is a global platform for knowledge-sharing, research and collective action (*http://unepinquiry.* org/sif/).

Roadmaps for Sustainable Finance: a growing number of organizations are now stepping in to support countries and regions in developing roadmaps. Further development work is, however, still required, in the development of tools, ways to link these roadmaps to other planning processes such as green economy planning and climate-related National Development Contributions.

# Epilogue Getting Financial System We Need

Imagine a resilient financial system that serves the long-term needs of a healthy real economy, an economy that provides decent, productive and rewarding livelihoods for all, and ensures that the natural environment remains intact and so able to support the needs of this and future generations.

Source: Zadek, S. and Robins, N. (2015)

# **5.1** Looking Back from 2028 – a Scenario

Looking back over the last decade, it is hard to believe how far we have come since 2018, let alone since the dark years preceding the grand transition. Few people back then would have imagined, let alone hoped, that the great crisis in 2008 would tip us away from the catastrophic pathway we were going down. Of course, it was not just the great crisis. Many factors combined to enable us to throw off the conventional wisdoms and practices that were leading us, seemingly inexorably, towards the precipice. Yet today, we can look back with the benefit of hindsight, and see the central importance of successfully resetting the place of finance in the greater order of things.

By the end of 2020, the painful paradox had become clear. Sustainability was in our sights, we knew what had to be done. It was in our sights, and maybe in many of our hearts. But the rules, conventions and traditions that steered our massive, interconnected, global financial system continued to allocate capital that undermined our collective futures.

Today, as we move to replacing the 2030 Agenda with its successor, the 2050 Vision, the broader purpose of the financial system has become conventional wisdom. Much effort has been made to ensure that regulators remain shielded from short-term political pressures, although given the transformation of money itself through digitalization, traditional monetary policy is in any case a thing of the past. Nowadays, those who govern the financial system are under no illusions as to the terms of their mandates.

The Fundamental Principles of Sustainable Finance were finally adopted at the UN Summit on Global Financial Governance in 2025. This had been egged on by a Swedish billionaire's competition to invent the best financial governance approach for the 21st century. Since then, and despite some last resistance from a few jurisdictions, most financial regulators and standard-setters have now updated their mandates and practices behind the core principle that the purpose of the finance system is to serve the needs of sustainable development.

Yet, you should not get the impression that success was won by top-down technocratic approaches. What had once been called the 'peer-to-peer' investment market was now an established fact, providing steady cross-border flows of capital for the roll-out of essentials such as sustainable energy, affordable housing, clean water as well as access to finance itself, across the developing world. A worldwide 'clean air' campaign spurred the mass deployment of electric vehicles, with cooperation across Asia creating a combined electric vehicle market catering for over three billion people. This was financed by blockchain-assured green bonds, which helped to reduce the cost of roll-out and provide safe assets for pension savers. It must have been so odd for those buying or selling bonds that were not green – somehow a declaration of destructiveness, like using a form of mobility that emitted poisonous fumes.

Progress did not come, however, simply by making the best of emerging opportunities. Climate change became a fearful catalyst for action. The first downgrade of a sovereign bond as a result of a natural disaster exacerbated by climate change prompted governments, investors and credit rating agencies to introduce a trillion-dollar programme that invested upfront in real resilience, thereby avoiding further shocks in the future to both countries and assets. A seemingly endless series of legal cases followed to determine the liability of carbon-intensive companies, their investors and insurers. When the main index providers reweighted their core benchmarks to remove stocks and bonds that exceeded the UN's Climate Consistency Threshold, markets finally realized that sustainability was no longer an optional extra. The resulting 'transition tantrum' revealed who had been taking sustainability seriously.

Perhaps the biggest surprise was the rise of earth finance, focused on investing in the health of soils, oceans and species. The convergence of rapid dietary change on the demand side and increasing examples of stranded assets in the world's support of fish and agricultural produce led to a new generation of longterm funds that live-streamed evidence of positive social and environmental impact to investors.

Financial theory finally caught up with practice, with a series of Nobel Prizes for Sustainable Economics being awarded for mainstreaming the many decades of preceding work theorizing an ecological, institutional and evolutionary approach to the topic.

Sustainable finance has now become the norm, but in ways that are almost unrecognizable. Just as the so-called real economy has changed, so too has finance. Centrally, it has become far more entwined with the moment-to-moment actions and experiences of every individual citizen. The digitalization of finance has meant that citizens have become financial market actors as investors, lenders and insurers, as well as users of finance not just as consumers, but as direct, part-owners of major portions of the infrastructure that makes our global economy tick. Finance is no longer in another place, watching where to place its bets – it has truly become part of the economy that it serves.

#### 5.2 Looking Forward from 2018

Looking back from one possible future provides the confidence to appreciate what is can be done.

Our challenge is that time is not on our side. This is true whether one considers the state of our ecosystem, including the extent and already occurring effects of climate change, or the understandable concerns of a growing portion of the population that feel they are being left behind, and so unlikely to prosper in tomorrow's world. These factors risk making the limited progress we are making irrelevant if critical ecosystems tip before they are secured and regenerated, or if the politics of anxiety and fear slow down or reverse gains made.

Finance is a keystone in the transition to sustainable development. As such, it can catalyse or impede much-needed change. Today, it is both. Clearly, some capital is flowing to the new economy that we need. But far more is continuing to support the old economy, through an inability or unwillingness on the part of owners and intermediaries to redeploy it.

Sustainable finance is certainly starting to get contagious. It is rare to find a major financial institution without a sustainability policy. Most of the G20 countries are incorporating environmental sustainability into the rules that govern their financial systems, as are the world's leading standard-setters. Yet, we know that we are still largely at the acknowledgement phase of change. Recognizing that something previously regarded as marginal is now material is a vital step forward. But that is not the same as alignment – where the daily workings of the financial system result in the delivery of sustainable development.

The next phase in sustainable finance will be all about making the shift from acknowledgement to alignment. It will be multidimensional and non-linear. It will involve unforeseen surprises along with well-planned deliverables. It will be spurred on by major setbacks as well as significant achievements. It will involve mainstreaming as well as the replacement of the mainstream by new, better ways of doing finance. It will encompass a sense of purpose for the financial system matched by a decentralized model of delivery.

All this will mean new performance metrics for the financial system, ones that measure the extent to which sustainability is really part of the process of finance as well as its outcomes. And, critically, it will not be a self-referential process limited to financial insiders, but one that better connects finance to the changing needs of individuals, enterprises and governments as they make the transition to sustainable development.

> The Inquiry has been part of a wave of change that has started to link the financial system with sustainable development. Many more waves lie ahead.



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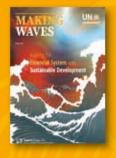
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Overseas Development Institute; Paris EUROPLACE; Paulson Institute; PayTM; PensionDanmark; People's Bank of China; Philippines Insurance Commission; Planetary Skin Institute; Politico; Porvenir; Pricewaterhouse Coopers; Principles for Responsible Investment; Principles for Sustainable Insurance; Prudential plc; PUBLICA; Re-Define; REN21; Renmin University; Research Institute of Finance, Development Research Center of the State Council (China); Reserve Bank of India; Retirements Benefit Authority; RobecoSAM; Rock Creek Global Advisors; Rockefeller Brothers Fund; Rockefeller Foundation; Rocky Mountain Institute; Rothschild; School of Advanced International Studies, Johns Hopkins University; SCOR SE; Securities and Exchange Board of India; Securities Industry and Financial Markets Association; Seguros Bolivar; SEI Stockholm; Seoul Metropolitan Government; Shakti Sustainable Energy; SHARE; Singapore Institute of International Affairs; Singapore Management University; SIX Group; Skoll Foundation; Small Industries Development Bank of India; Smith School of Enterprise and the Environment, University of Oxford; SNS Center for Business and Policy Studies; SOAS; Société Générale; SOMO; South African Institute of International Affairs; South African National Treasury; Staff Planète; Standard & Poor's; Standard Chartered Bank; State Secretariat for Economic Affairs (Switzerland); State Secretariat for International Financial Matters (Switzerland); Stockholm Green Digital Finance; Stockholm Sustainable Finance Centre; SulAmerica; SunEdison; Superintendencia de Bancos y Seguros de Peru; Superintendencia de Seguros de la Nación (Argentina); Superintendência de Seguros Privados (Brazil); Superintendencia Financiera (Colombia); Sustainable Development Solutions Network; Sustainable Digital Finance Alliance; Sustainable Energy for All; Sustainable Finance Geneva; Sustainable Insurance Forum; Sustainable Nation Ireland; Sustainable Stock Exchanges Initiative; Sustainalytics Colombia; Swedish National Pension Fund; Swiss Bankers Association; Swiss Re; Swiss Sustainable Finance; Swisscanto; Syntao Green Finance; Tellus Institute; The Cooperators; The Energy and Resources Institute; The Geneva Association; The Shift Project; Thomson Reuters; Toronto Financial Services Alliance; Toulouse School of Economics; Trapeza; Tribeca Asset Management; Triodos N.V.; TRUST; TV2 Danmark; UN Department of Economic and Social Affairs; UN Economic Commission for Africa; UN Economic Commission for Asia and the Pacific; UN Economic Commission for Europe; UN Economic Commission for Latin America and the Caribbean; UN Environment Finance Initiative; UN Global Compact; UN Women; UNDP Global Centre for Public Service Excellence (Singapore); UNEP DTU Partnership; Unilever Pension Fund; United Nations Conference on Trade and Development; United Nations Development Programme; United Nations Environment Programme; United Nations Framework Convention on Climate Change; Università Commerciale Luigi Bocconi; Universitas Gadjah Mada; Universitas Indonesia; Universitas Surya; Universitas Trisakti; University of Chicago Harris School of Public Policy; University of Edinburgh; University of Geneva; University of Gothenburg; University of Leipzig; University of New South Wales; University of Pretoria; University of Surrey; University of Washington; University of Zurich; Uppsala University; Utrecht Sustainable Finance Lab; Utrecht University; Vittoria Assicurazioni; VoxEU; Walden Green Energy; Washington State Office of the Insurance Commissioner; Welspun Energy; Willis Research Network, Willis Group; World Bank Group; World Business Council on Sustainable Development; World Economic Forum; World Energy Council; World Federation of Exchanges: World Resources Institute: World Wide Fund for Nature: YES Bank: York University: Zurich Insurance Group.

The broader Inquiry team over the four years has included Agnes Atsiaya, Fiona Bayat-Renoux, Chad Carpenter, Juan Chebly, Peter Cruickshank, Davide Dal Maso, Saaya Dirlewanger, Maya Forstater, Mark Halle, Iain Henderson, Cheryl Hicks, Nozipho January-Bardill, Biljana Kuzmanovic, Olivier Lavagne d'Ortigue, Andrea Liesen, Michael Logan, Marc Lopatin, Marcos Mancini, Jeremy McDaniels, Darius Nassiry, Nana-Ofori Okyere, Felicity Perry, Nader Rahman, Sandra Rojas, Tobias Sommer, Elizabeth Warui, Shereen Wiseman, Brandon Yeh, Kelly Yu, Sarah Zaidi and Naurin Nuohan Zhang.

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UN ENVIRONMENT INQUIRY



The Inquiry has been part of a wave of change that has started to link the financial system with sustainable development. Many more waves lie ahead."

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