MAPPING THE MOMENTUM: **KEY MESSAGES**

- *Over the past year, momentum towards a sustainable financial system has deepened, with a specific focus on green finance and climate risk.*

- *Clear pathways are bringing together three critical elements: market leadership by financial institutions; policy and regulatory innovation; and, over time, changes in governance, standards and norms. The precise blend and sequencing of these factors differs according to the issue at hand and country-level financial cultures.*

    - *Market leadership: individual and collective action has accelerated markedly in response to new market opportunities (such as green bonds), growing recognition of material risks and appreciation of rising social expectations.*

    - *Policy and regulatory measures: 2015 was a record year in terms of announcements of new measures taken by financial system policymakers to advance sustainable development, with the pace continuing strongly in the first half of 2016.*

    - *International standards: requiring longer time periods to develop, agree and implement, we see the first signs of how the environmental pillar of sustainable development can be addressed within core international financial standards, identifying a set of latent synergies.*

- *The result of these actions is the beginning of a new powerful dynamic between the financial system, the real economy and progress towards sustainable development:*

    - *first, sustainability challenges in the real economy are driving new demands on the financial system;*

    - *second, actions in the financial system are in turn shaping environmental and social outcomes back in the real economy.*

- *Looking across the range of policy and regulatory measures under way that are driving this dynamic, five priority areas stand out: capital reallocation; risk management; the responsibilities of financial institutions; reporting and disclosure; and national roadmaps for sustainable finance (the '5R's).*

- *Added to this, the role of public financial institutions in both market creation and setting market norms is becoming clearer. The linkages between monetary policy and environmental outcomes are also increasingly a focus of attention.*

1. MAPPING THE MOMENTUM

1.1. 2016 – THE YEAR OF GREEN FINANCE

Efforts to build a sustainable financial system have shifted to a new stage over the past year. What were once considered 'niche' applications are now becoming recognized as important – not just for the delivery of sustainable development, but also for the overall health of the financial system. In addition, market practice, policy and regulatory initiatives and public expectations are starting to combine at the national and international levels.

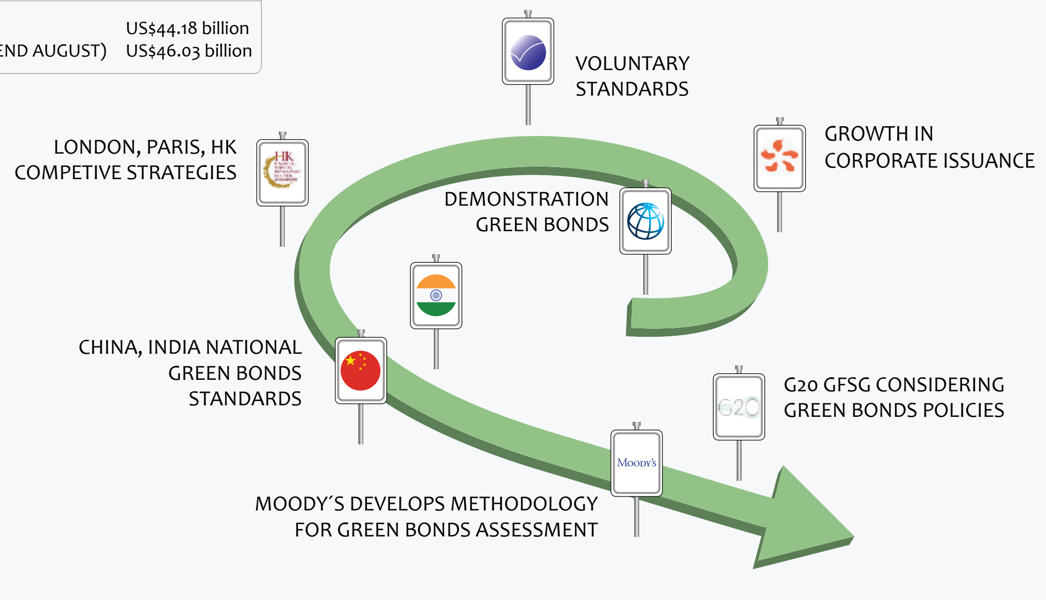
This section highlights some of the key developments over the past year, focusing not only on the 'what', but also on 'how' these actions are blending together to achieve better alignment between the financial system and sustainable development.

One expression of this dynamic is the increasing significance of green finance – robust financial practices that support the regeneration of the environment. Green bonds show how issuers in the real economy, financial institutions, policymakers and standard setters can create new markets (see Figure 3). Green bonds, taken alone, are a means of raising capital by quite conventional methods to use for financing or refinancing green projects, from railways to clean energy, and from green buildings to land remediation.

Yet, green bonds are also part of a broader ecology of change. For example, leading financial centres such as London,[70] Paris[71] and Hong Kong,[72] incentivized by the

FIGURE 3: GREEN BONDS: CO-EVOLUTION OF MARKETS AND POLICY

GREEN BOND ISSUANCE	
2015	US$44.18 billion
2016 (TO END AUGUST)	US$46.03 billion



immediate prospect of capturing a slice of the rapidly growing green bond market, have launched strategic initiatives to become hubs for the growing green finance market as part of their wider plans for growth and competitiveness. Announcing its recommendations in May 2016, Hong Kong's Financial Services Development Council stated, *"if it does not seize this opportunity, others will do so."* Financial policymakers and regulators have also explored their role in terms of introducing market guidelines, standards and incentives needed to secure a piece of the green bond market. Furthermore, green bonds were one of the topics discussed under China's presidency of the G20 in the Green Finance Study Group (see Box 4).[73]

The current surge of activity builds on many preceding initiatives and market activities. Ethical and social investing goes back many decades. Such innovations set the scene for multiple developments along seemingly unrelated pathways. Ethical screening inspired the Equator Principles, the voluntary guidelines for environmental and social risk analysis in project finance. These in turn triggered leadership in banking regulatory action at the national level, exemplified by the China Banking Regulatory Commission's Green Credit Guidelines.[74] Such leadership has catalysed international cooperation, through UNEP Finance Initiative's work with the banking sector and the IFC-hosted Sustainable Banking Network made up of regulators and associations in developing countries.

Green finance also brings specific concerns and opportunities for developing countries beyond the G20. UN Environment has specifically engaged with practitioners and regulators from Bangladesh, Colombia, Egypt, Honduras, Jordan, Kenya, Mauritius, Mongolia, Morocco,

BOX 4: THE G20'S GREEN FINANCE STUDY GROUP – MOBILIZING PRIVATE CAPITAL

The G20 brings together the world's leading economies to promote strong, sustainable and balanced growth and is a key forum for setting the rules that govern the global financial system. This year, green finance was incorporated for first time into the G20 agenda. As part of China's presidency in 2016, a Green Finance Study Group was established to "develop options on how to enhance the ability of the financial system to mobilize private capital for green investment."[75]

Co-chaired by China and the UK, and with the support of UN Environment as secretariat, the study group gathered experience from G20's member countries, key international institutions as well as observer nations, the private sector and a range of knowledge partners.[76]

To build a platform of common understanding on the opportunities and challenges facing green finance, the study group focused on five research areas: greening the banking system, greening the bond market, greening institutional investment, risk analysis and measuring progress. This process of dialogue and analysis was captured in a summary report welcomed by G20 Finance Ministers and Central Bank Governors, who concluded that *"in order to support environmentally sustainable growth globally, it is necessary to scale up green financing."*[77] The G20 Leaders have welcomed a set of voluntary options developed by the Green Finance Study Group[78] where particular efforts could be made to:

- provide clear strategic policy signals and frameworks,
- promote voluntary principles for green finance,
- expand learning networks for capacity building,
- support the development of local green bond markets,
- promote collaboration to facilitate cross-border investment in green bonds,
- encourage and facilitate knowledge sharing on environmental and financial risks, and
- improve the measurement of green finance activities and their impacts.[79]

Nigeria, the Philippines, Thailand and Vietnam.[80] From this experience, it is clear that green finance has to be advanced in conjunction with wider finance sector development priorities, such as capital market deepening and extending access to finance for SMEs and households. In addition, international approaches to green finance should reflect the needs of developing countries. Equally, there is a potential for 'leapfrogging' in green finance, learning from the lessons of other innovations such as mobile banking. Indeed, green finance could be a catalyst for wider sector development and the attraction of foreign capital.

"Leadership must come from the private sector, business community and NGOs, not only from the officials. We need a comprehensive and coherent framework supported by political will that enables market forces to move businesses from the traditional to the green economy."[81]

Mohammed Omran, Chairman, Egyptian Stock Exchange (EGX)

Ensuring consistency between the functioning of the financial system and the response to climate change has been another focus area. The Paris climate agreement has catalysed the convergence of previously separated drivers, actors, and financing sources, including international public finance commitments, strategic climate targets, rising public expectations about financial sector performance, and voluntary commitments from the financial community.[82] Connecting the dots, unusually, has been civil society action, notably the well-advocated technical arguments about the risks of stranded assets by the Carbon Tracker Initiative and others.[83] Such connections – combined with climate change's higher policy goals and broader public profile – has stimulated the engagement of national financial policymakers and regulators. These include the Bank of England's prudential review of climate impacts on the insurance sector[84] and France's requirement that institutional investors must disclose their management of climate-related risks and alignment with the global, regional and national low-carbon transition perspectives.[85] Once again, this mix of actions has stimulated international cooperation, notably through the FSB's pivot towards the consideration of environmental challenges.[86]

BOX 5: Green Bonds – Building New Pathways for Capital Mobilization[87]

The rapid growth of green bonds illustrates how public enterprise and market innovation can combine to mobilize capital for sustainable development. Launched almost 10 years ago by leading development finance organizations (such as the EIB, the IFC and the World Bank) working with pioneering investment banks, the green bond market has expanded rapidly on the back of market-based principles and standards, strong investor demand and the introduction of regulatory frameworks in countries such as China and India.[88] Total issuance of bonds with proceeds explicitly ring-fenced for green investment reached US$42.9 billion in 2015 – with a further US$34.6 billion issued in the first half of 2016.[89] Key recent developments include:

- **The rise of emerging economy issuance:** In May 2016, direct issuance of green bonds in emerging and developed countries became equivalent in size for the first time,[90] a trend closely linked to enabling regulatory frameworks launched in China and India. In December 2015, the People's Bank of China (PBoC) published its green bond guidelines, underpinning US$8 billion of issuance from China in the first half of 2016.[91] India's securities regulator then issued its own guidelines in January 2016.[92] In addition, state-owned development banks in Mexico and Costa Rica primed the marketed by issuing their country's first green bonds.
- **The growing use of market principles and standards:** A liquid green bond market relies on the use of common approaches for ensuring trust and accountability. Between 59-66% of green bonds now receive reviews or certifications from external parties, representing good practice in accordance with the voluntary Green Bond Principles.[93] In addition, sector-specific criteria for green bonds, such as for low-carbon transport, renewable energy and low-carbon buildings, were developed by the Climate Bonds Initiative as a way of reducing market friction.
- **The deepening of investor demand:** Investor demand for green investment to fit their strategic asset allocation has become increasingly structured. The new Green Infrastructure Investment Coalition brings together major investors with development banks, international organizations and issuers in key developing countries (such as Brazil, China, India, Kenya and Mexico) to develop a strategic pipeline that can both increase access to capital and drive down the cost of capital.[94]

Yet, at US$118 billion, the total stock of green bonds outstanding is still a tiny fraction of the US$100 trillion in the world's debt capital markets. Strategic action is needed to realize its full potential – and a range of options exist for public sector action:[95]

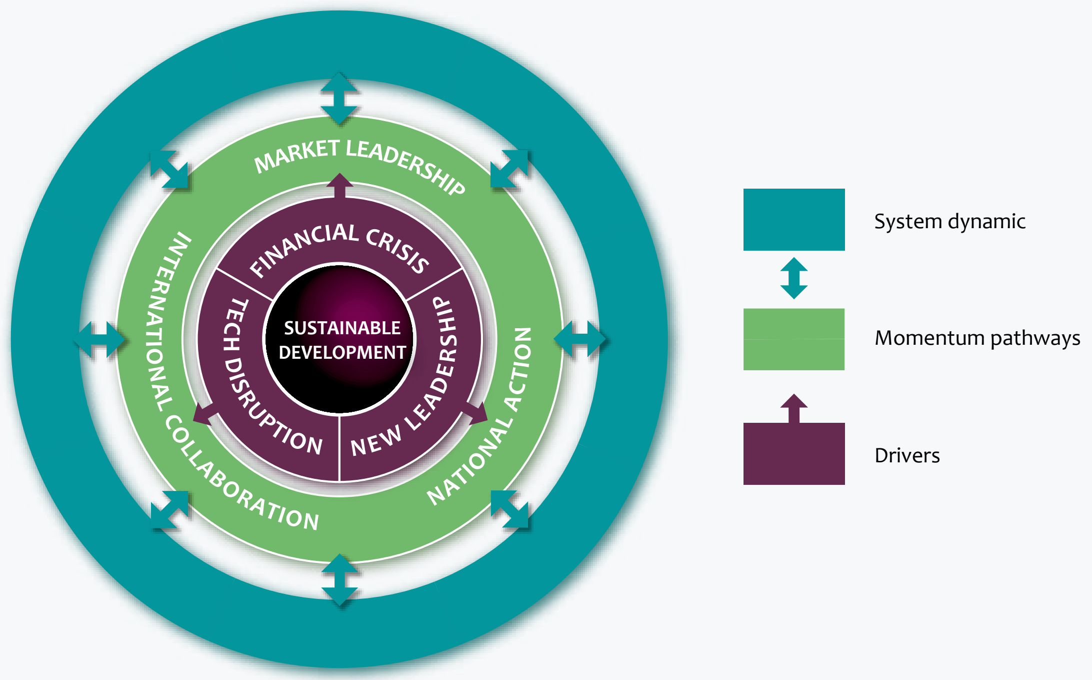
- **Market development:** To date, green bonds have largely developed organically. National green bond development strategies can help to bring together the actors across the system to identify barriers, build capacity, introduce incentives and attract capital. Importantly, the launch of green bond issuance is becoming a useful focal point in a number of countries – such as Kenya, Morocco and Nigeria – around which a comprehensive approach on green finance can cohere. Across markets, adopting common definitions of what is 'green' can help to improve market size, liquidity and efficiency.
- **Extending priorities**: Renewable energy accounts for 27.8% of the use of green bond proceeds, with only 2% raised for agriculture, a core priority for developing countries.[96] In addition to widening the sectoral scope, more could be done to explore other dimensions of sustainable development through principles and standards for positive impact and social impact bonds.[97]

1.2. FROM BUILDING BLOCKS TO PATHWAYS

Today's momentum is underpinned by the dynamic interaction of three building blocks: (a) market leadership including voluntary individual and collective action; (b) policy and regulatory innovations at the national level; and (c) the evolution of the global architecture of financial standards through international cooperation. The 'Year of Green Finance' illustrates how diverse actors and actions can combine to build pathways of system change. Often, such linkages are neither intentional nor expected.

The dynamics of these pathways can differ profoundly between contexts. How these building blocks combine to drive change can vary across countries. In many countries, the momentum in sustainable finance has been a bottom-up development, with citizens and financial institutions creating public pressure, which in turn has driven market innovations – eventually to a stage where policy and regulatory measures have been introduced to clarify market rules and level the playing field. Such bottom-up pathways have been most prominent in developed countries, particularly where citizen action has a historically central role in change processes.

FIGURE 4: BUILDING BLOCKS FOR MOMENTUM



	VOLUNTARY ACTIONS	INNOVATIVE MEASURES	ARCHITECTURAL CHANGE
	Individual and voluntary collective action by market players.	Financial policy and regulatory measures and coordination	Changes to mandates, supervisory structures and standards
NATIONAL	**CHINA:** ICBC publishes first environmental stress test	**FRANCE:** Investor reporting requirements	**NETHERLANDS:** Updated mandate of Central Bank
INTERNATIONAL	**GREEN BONDS:** Market growth	**SUSTAINABLE BANKING NETWORK**	TCFD **FSB:** Task Force on Climate-related Financial Disclosures

Illustrative examples

Top-down pathways, on the other hand, tend to start with policy or regulatory action, often with broader national priorities in mind. Such actions have also included a period of managed policy and regulatory experimentation, often directly involving feedback from market actors. China's Green Finance Task Force[98] and subsequent policy developments exemplify this approach, as does the history to date of Indonesia's Sustainable Finance Roadmap.[99]

International connectivity can create productive interactions between these two broad approaches. China's domestic development of a strategy for greening its financial system drew heavily on international experience, often learning from bottom-up experiences that have been translated into a Chinese context.[100] Countries such as the UK have taken inspiration from more policy-led developments elsewhere, such as China's ambitious green bond drive. Such positive synergies between what are often culturally and politically determined differences, of course, cannot be taken for granted.

To helpunderstand the nature of the current momentum, recent developments in each of the three building blocks are considered briefly below.

1.3. MARKET LEADERSHIP[101]

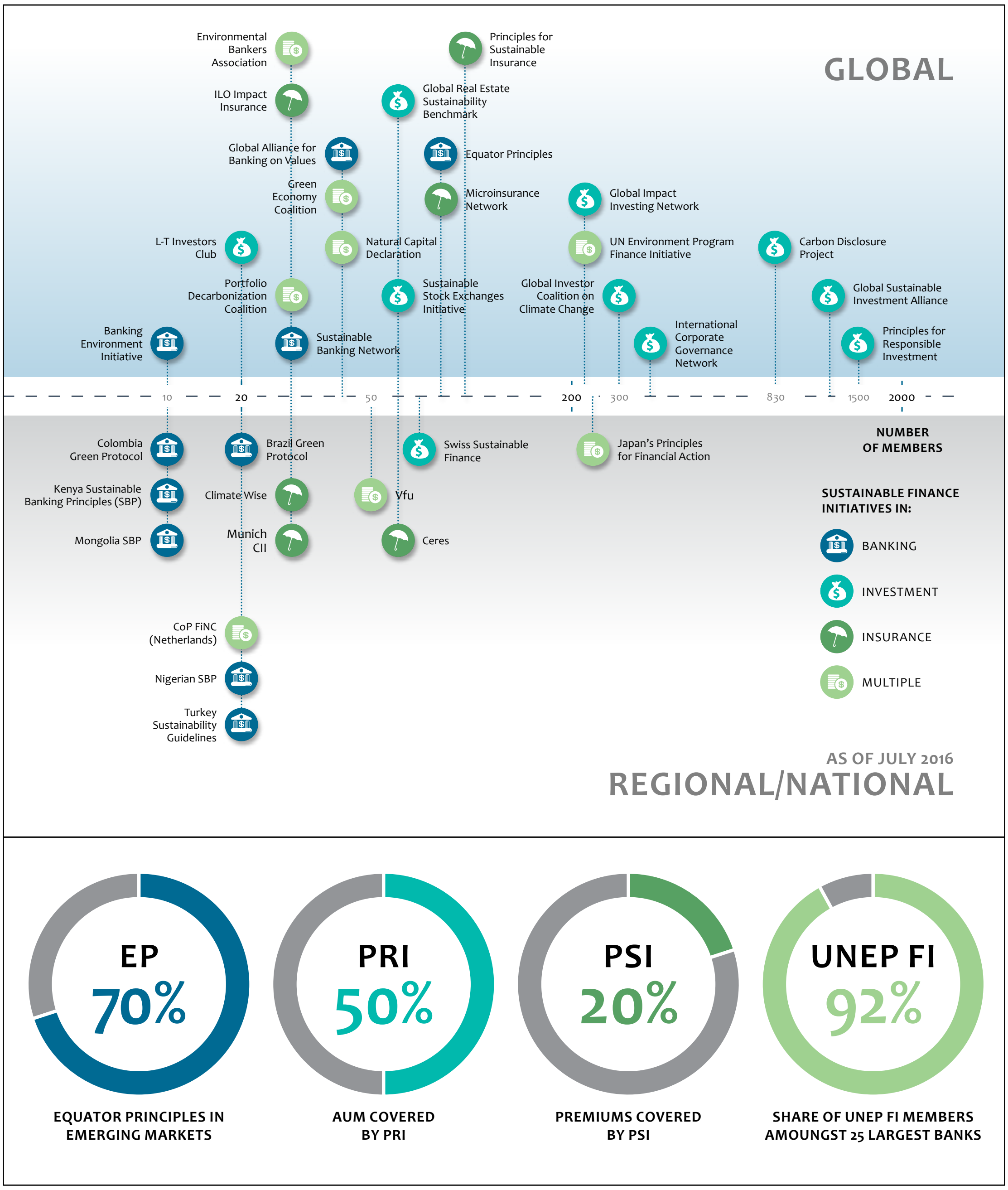
For the financial system to support the transition to sustainable development, the suppliers of financial services across banking, capital markets, investment and insurance will need to reset their business models to match the world's economic, social and environmental imperatives. Increasingly, leading financial institutions are recognizing that sustainable development is key to their future success. Collective action can set new market norms and, in the last decade, an extensive set of national and international initiatives has emerged, illustrated in Figure 5.

Market leadership on sustainable finance plays an important signalling role that goes beyond the direct value chain impacts. Crucially, market leadership sends signals to policymakers and regulators that the needed behavioural and managerial changes are, in principle, feasible. Furthermore, it shows that market actors are prepared to make and foster such changes. In the political economy of sustainable development, such signalling – especially if it originates from mainstream sector leaders – can give policymakers the confidence to address difficult social and environmental issues like climate change. Increasingly, market leadership is also an expression of a new maturity among financial institutions that sustainable development cannot be delivered through voluntary action alone – but often needs changes in prevailing financial system rules. In turn, strong policy signals can create new market expectations across the financial industry. This mutually reinforcing interplay came together not just in the run-up to the Paris Agreement, but also responding to priority environmental issues at the national level. This has resulted in new leadership steps taken by individual financial institutions, the extension of collective initiatives and new blended finance partnerships with the public sector.

- **Banking:** A signal of a growing area of future activity came with the decision by a group of 12 banks, including Société Générale in France, ING in the Netherlands, First Rand in South African and BMCE in Morocco, to develop a 'positive impact' framework to help structure financial products focused on sustainable development. Working together with UNEP FI, the 'positive impact' framework goes beyond just the environmental dimension and was exemplified by the issuance of the first ever 'positive impact' bond by Société Générale in 2015. Another sign of leadership came in March 2016, when the Industrial and Commercial Bank of China published the world's first environmental 'stress test' by a bank. This study explored the implications for its loan book of chronic air pollution and made a definitive connection between environmental factors and credit risk.[102]

- **Capital Markets:** The Sustainable Stock Exchanges (SSE) initiative now partners with 58 stock exchanges across the world, representing over 70% of listed equity markets. As of July 2016, 16 stock markets had provided sustainability disclosure guidance to companies, starting with Johannesburg in 2004. A further 23 stock exchanges – including the Bolsa Mexicana de Valores and seven Nasdaq exchanges in Europe – have publicly committed to provide sustainability guidance by the end of 2016.[103] Beyond disclosure, stock exchanges are also supporting capital reallocation, not just in terms of listing green bonds, but also introducing green equity products.[104]

FIGURE 5: MARKET INITIATIVES AND PARTNERSHIPS ON SUSTAINABLE FINANCE[105]



Source: UNEP FI (2016). A Changing Sustainable Finance Landscape: From Leadership Actions to Market Transformation (forthcoming).

> *"Sustainable development is an economic necessity. The Sustainable Development Goals both address risks (such as climate change) that threaten our ability to meet our liabilities as pension funds. But they also present the opportunity to build the returns that will pay the pensions for ordinary working people for whom we hold these assets in trust."*[106]
>
> **Anne Simpson,** Investment Director, Sustainability, CalPERS

- **Institutional Investment:** Investors were particularly vocal in their collective contribution to the Paris climate negotiations, with 400 signatories with US$24 trillion of AUM, signing the *Global Investor Statement on Climate Change*, which called for a robust climate agreement and clear market signals on climate policy.[107] Policy engagement has also been backed by action. In June 2016, the Swedish pension fund, AP4, allocated 21.8% (US$3.2 billion as per 1 June 2016) of its global equity portfolio to low-carbon strategies; AP4 aims to decarbonize its entire global equity portfolio by 2020. This step is part of the Portfolio Decarbonization Coalition, bringing together institutions committed to cutting carbon in over US$600 billion in assets.[108] Other investors, such as AXA and the Norwegian Government

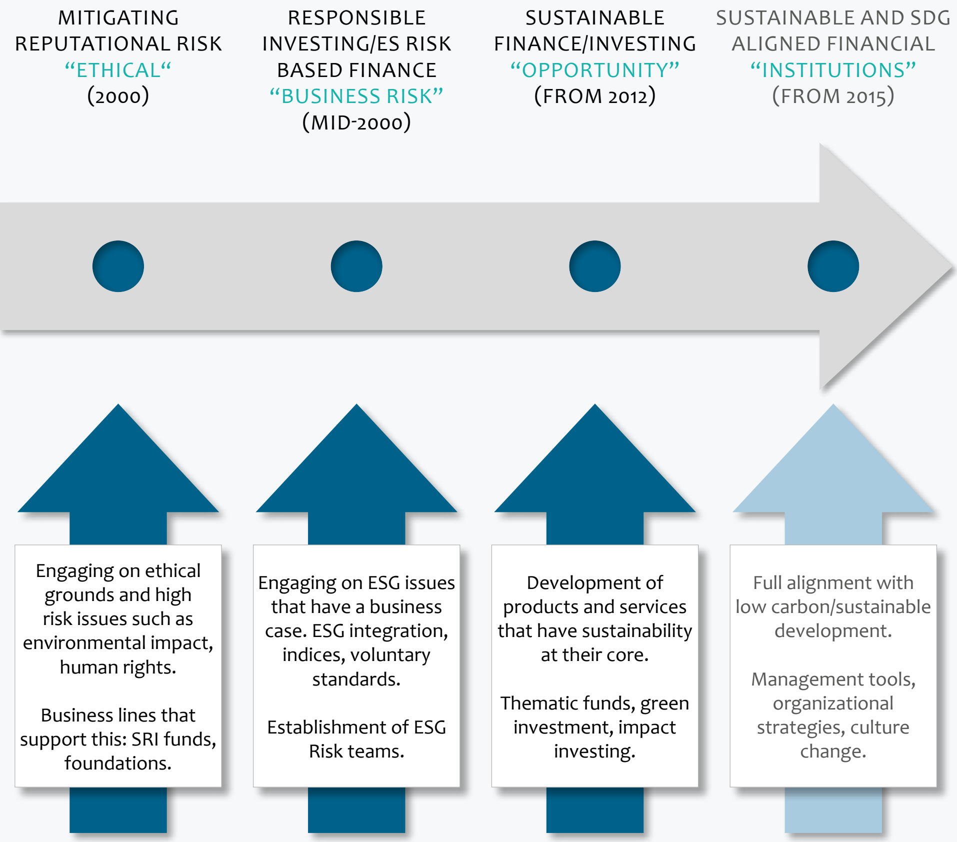
Pension Fund – the world's largest sovereign wealth fund – have introduced strategies to exclude assets with high carbon risks, such as coal.[109]

- **Insurance:** Beyond its role as a long-term investor, insurance is also being harnessed to deliver disaster risk reduction and resilience to climate shocks. Both Munich Re and AXA provided re-insurance to African Risk Capacity, a specialized agency of the African Union that helps countries improve their capacities to plan, prepare and respond to extreme weather events and natural disasters. Based on experience like this, finance ministers from the Vulnerable 20 (V20) group of developing countries have agreed to create a Climate Risk Pooling mechanism drawing on insurance sector expertise.[110] The need is clear: half the population of the V20 lacks access to external pooling mechanisms to manage disaster risks. The insurance sector itself is also developing sustainability principles for underwriting infrastructure projects.

Commitments to sustainable finance have certainly grown – and evolved profoundly – over the past two decades. Figure 6 shows the four key waves in sustainable finance – from an early focus on values and reputational risk, to a shift towards viewing environmental and social factors as a business risk, and on to the more recent recognition of environmental factors as a market opportunity. The fourth wave is now building – in essence, to steer financial institutions so that they are fully aligned with sustainable development and the 2-degree economy.

Measuring this alignment remains difficult given current levels of data and disclosure. One recent survey of leading asset owners identified US$138 billion in low-carbon investments – a very small share of the US$100 trillion in investment assets.[111] Although the banking sector is the largest source of green finance, comparable figures do not exist. In some cases, market incentives still do not provide sufficient risk-adjusted returns for the financial community to allocate capital. The combination of a lack of common definitions and low levels of reporting from financial institutions is

FIGURE 6: THE EVOLUTION OF SUSTAINABLE FINANCE



Source: UNEP FI (2016). A Changing Sustainable Finance Landscape: From Leadership Actions to Market Transformation (forthcoming).

another factor: much greater disclosure is needed not just for green assets, but also for pollution-intensive investments to arrive at the state of net-positive impact across banking, investment and capital markets.

Ultimately, this means that there is still limited information on how close – or how far – financial institutions are from serving sustainable development. Promising product level innovations, such as green bonds, are often not matched by shifts at the institutional level in terms of both governance and financial culture, including key competencies and incentives. Isolated examples of leadership innovation, along with purely procedural efforts at mainstreaming, will not achieve the required changes in underlying behaviour. A more strategic focus on core incentives will be needed.

> *"If we wish to move from 'Do No Harm' to 'Doing Good' in the financial system, then regulation and disclosure alone will not be enough and we will need to do more on positive incentives, especially changes in relative prices in favour of environmentally friendly goods and services."*[112]
>
> **Murilo Portugal,** President, Brazilian Bankers Federation (FEBRABAN)

1.4. POLICY AND REGULATORY MEASURES

Deploying capital at the scale and speed required to achieve sustainable development calls for a number of interlocking policy and regulatory elements:

- first, *policy action is needed in the real economy* to remove market failures such as mispriced pollution and resources. Some progress has been made to internalize externalities into market prices and better match macro-economic and sectoral policies with the need to regenerate natural capital. But serious market failures remain worldwide – and without effective pricing of scarce natural capital, the risk-adjusted returns for sustainable finance will likely be unable to attract sufficient capital.

- second, *the effective deployment of public finance is needed* to provide public goods and stimulate private action. Public finance is essential to deliver collective goods that the market cannot provide – and to stimulate private action through incentives and subsidies. Public finance is important both domestically and internationally to assist the sustainable development transition process in developing countries. In the majority of countries, public finance is scarce – and particular attention is needed to identify cost-effective options with high-leverage impacts.

- third, *action is also needed **within** the financial system* to remove market and institutional barriers that can prevent the efficient allocation of capital to sustainable development. These can include information asymmetries, misaligned incentives, short-termism, as well as inadequate capabilities and ill-defined responsibilities.

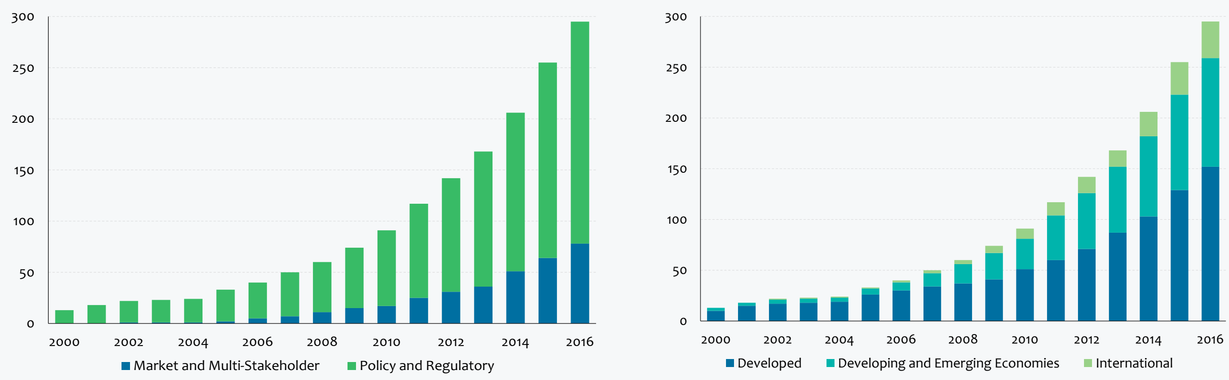
Financial policy and regulatory measures can complement both real economy actions and market

BOX 6: CREDIT RATINGS – WHY INTEGRATION IS ONLY THE START

Credit ratings have a profound influence on the allocation of capital in global bond markets and beyond. In May 2016, six of the world's leading credit rating agencies – S&P Global Ratings, Moody's, Dagong, Scope, RAM Ratings and Liberum – made a public commitment to collaborative action on sustainability in a joint initiative with institutional investors worth US$16 trillion in assets under management.[113] Integrating material environmental, social and governance factors is clearly critical to deliver more accurate risk pricing.

While integration is necessary, there is also a need to understand and mitigate potentially negative market reactions, particularly for developing countries. Environmental shocks could result in downgrades of sovereign bond ratings of vulnerable developing countries. This could bring serious financial and associated economic implications – including a higher cost of capital for government borrowing – unless preventive action is taken to invest in measures to strengthen resilience to threats such as climate change and food price spikes.[114] What could be needed are additional measures to anticipate these shocks, which both mobilize public and private investment in the underlying resilience of vulnerable countries and also ensure that these adaptation measures are rewarded by rating agencies and investors.

FIGURE 7: THE GLOBAL EVOLUTION IN MEASURES FOR SUSTAINABLE FINANCE, 2000-2016



UNEP Inquiry (2016). Measure to Measure: The Global Progress of Measures to Align Financial Systems with Sustainable Development (forthcoming).

leadership. Since its inception, UNEP's Inquiry has been tracking such measures and has developed an extensive repository of their number, function and characteristics. Included are actions by public sector bodies, such as governments, central banks, financial regulators, and public financial institutions that influence the overall architecture of financial system rules.

Our focus has been on actions explicitly taken to address the environmental dimension as part of wider sustainable development efforts. At this stage, a wide net has been cast to include relevant legislation, sectoral and system level regulations, supervisory frameworks, fiscal incentives deployed within the financial system, guidance and guidelines, regulatory assessments, and formally established task forces. Measures are included from all major parts of the financial system, including banking, insurance, investment, debt and equity markets, as well as system-level actions. Most measures are taking place at the national level, but sub-national (i.e. state-level) measures are also considered, alongside regional actions (such as in the EU). International measures – including actions from standard setting bodies, such as the FSB – are collected in a separate category.

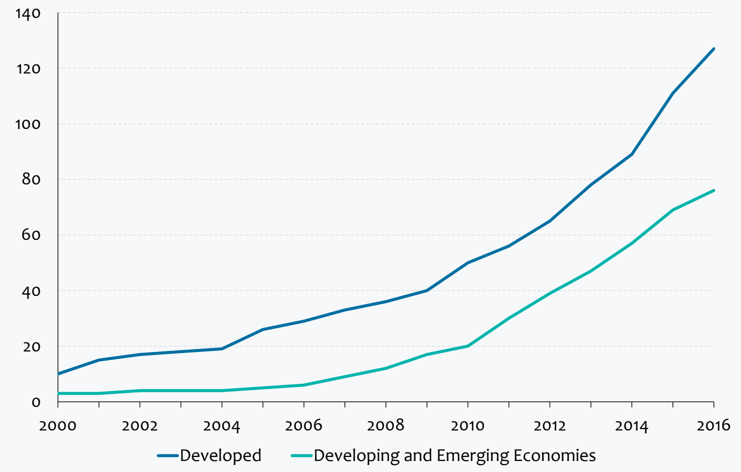
Current momentum is reflected by the steadily rising number of policy and regulatory measures explicitly focused on encouraging sustainable finance. By the end of June 2016, we had identified some 217 policy and regulatory measures covering nearly 60 countries.[115] Most of these are at the national level, with an increasing number of international policy initiatives. Separately, we have identified 78 collective initiatives originating from market institutions (such as financial institutions and stock exchanges), as well as multi-stakeholder initiatives (Figure 7). Policy and regulatory measures comprise 74% of total measures.

A clear acceleration in the number of such measures can be observed, particularly in emerging and developing countries. Some 75% of global measures identified to date were put in place in the period 2009-2016. The single year of greatest growth was 2015, with 49 new measures implemented. So far, 2016 is following a similar trend, with an additional 40 measures being implemented over the first half of the year. Most measures have been taken at national level. There may be some measurement bias due to the greater challenges in collecting data in some developing countries, and the numbers of initiatives per country may be greater in developing countries despite a smaller count being recorded. With that in mind, developed countries[116] are recorded as having adopted the largest number of measures, with a cumulative total of 127 identified as of June 2016. The growth in recorded action within emerging and developing countries[117] has been significant, rising from 29% of the total in 2010 to 38% by the end of 2015 (Figure 8).

Across the different segments of the financial system, developed and developing countries take a strikingly different focus, based on the underlying structure of their financial systems. Developed countries have targeted their efforts on institutional investment, whereas for emerging and developing countries, the banking sector has been the main area of activity, with increasing interest in securities (Figure 9).

From this growing pool of actions, key highlights at the national level from 2015-2016 include:

FIGURE 8: POLICY AND REGULATORY MEASURES BY DEVELOPED AND DEVELOPING COUNTRIES, 2000-2016

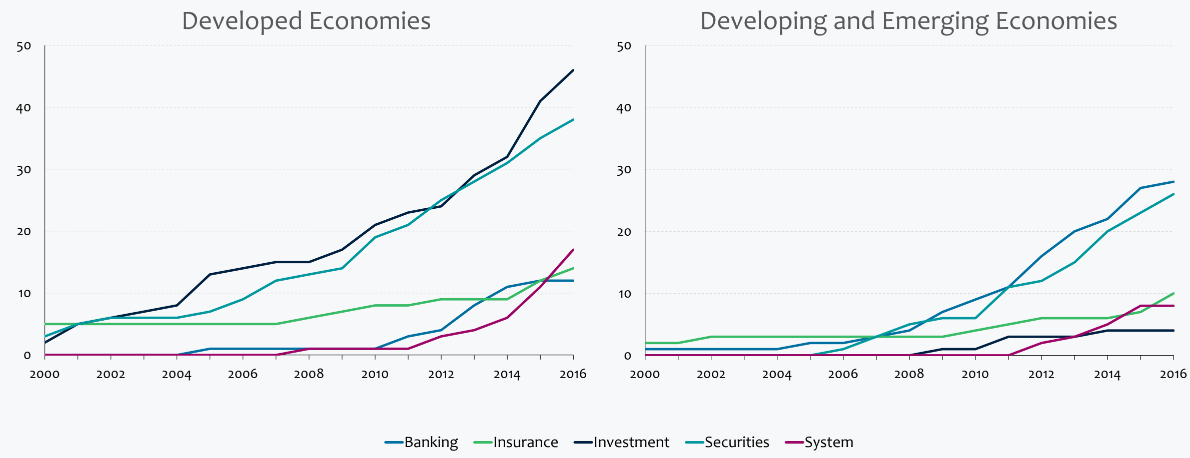


Source: UNEP Inquiry (2016). Measure to Measure: The Global Progress of Measures to Align Financial Systems with Sustainable Development (forthcoming).

- *China:* Introduction of a set of policy guidelines for the establishment of a green financial system by the central bank and six other regulators.
- *France:* Release of implementing measures for new investor reporting requirements and development of its approach to stress testing climate factors in the banking sectors.
- *India:* New green bond disclosure criteria issued by the securities regulator, SEBI.
- *Italy:* Launch of a national dialogue on sustainable finance by the Ministry of the Environment.
- *Morocco:* Development of green finance roadmaps for banking, capital markets and insurance.
- *Philippines:* New catastrophe risk pooling facility introduced for local governments.
- *UK:* Building on its prudential assessment of insurance and climate change, the Bank of England has undertaken further research on the implications for central banking.

Important dynamics are at work between these polcies and measures and market leadership. Policy and regulation can promote good practice and consistent approaches in way that competition alone typically cannot. Most often, real examples of market leadership are needed to demonstrate that practical application is feasible: disclosure and reporting requirements are

FIGURE 9: POLICY AND REGULATORY MEASURES BY ASSET CLASS, 2000-2016



Source: UNEP Inquiry (2016). Measure to Measure: The Global Progress of Measures to Align Financial Systems with Sustainable Development (forthcoming).

BOX 7: CHINA – GREENING THE FINANCIAL SYSTEM – FROM ASSESSMENT TO STRATEGIC ACTION

In August 2016, the State Council adopted a comprehensive set of 'Guidelines for Establishing the Green Financial System'[118] developed by the People's Bank of China along with six other Chinese financial regulators. Back in 2014, the PBC had established a task force, co-convened with UN Environment, to assess how to mobilize the US$600 billion in capital needed each year to invest in green industries. The result was a set of 14 recommendations across four broad themes: information flows, legal frameworks, fiscal incentives and institutional design.[119] A number of specific follow-up actions were taken – for example, to introduce new requirements in the green bond market.

The Guidelines are designed to deliver the country's strategic goal of developing an 'ecological civilization' by incentivizing more private capital to invest in green industries and to control investments in polluting projects. Building a range of existing measures, the guidelines cover 35 specific actions covering banking, securities, public-private partnerships, insurance, emission trading, local finance, risk management and international cooperation.[120]

a case in point. Equally, policy and regulatory actions can act to stimulate innovation in the marketplace – highlighting a need for financial institutions to work through and come forward with effective responses. France's effort to link stress testing in the banking sector and climate-related risk assessment is a case in point. A key bridge between policy actions in different countries is the development of common approaches through international processes.

"There is a growing trend to create and institutionalize partnerships where countries can share knowledge and experience. One example is the mutual exchange forum on inclusive insurance (MEFIN) in Asia. Another is the new sustainable insurance forum at the global level."[121]

Emmanuel Dooc, Insurance Commissioner of the Philippines

1.5. COMMON APPROACHES, NORMS AND STANDARDS[122]

Standards are the third building block of dynamic pathways that drive change in the financial system. Standards are the framing bedrock of the global financial system, involving a number of key components including policy mandates, supervisory structures, specific standards and then translation into national practice, as illustrated in Figure 10. Evolving standards at the international level is a long process. Before new formal standards are released, many steps are taken to understand market practice and potential gaps, as well as the intended and unintended consequences. Standards are often agreed far more quickly in times of broadly acknowledged crisis, as witnessed in the aftermath of the 2008 financial crisis.[123]

The norms, methods, tools and standards that provide a governing framework for the global financial system may impact the pursuit of sustainable development, but this relationship remains largely unacknowledged and underexamined. International norms, methods, tools and standards guide financial institutions directly, such as central banks, regulators and supervisors at the national level. They also enable cross-country assessment of performance to form the basis for plans and actions for continuous improvement. Most of these international approaches are negotiated between nations and adopted at a national level, despite being non-binding.

A common theme, once policymakers and regulators have started to explore the sustainability dimension of their mandates, is to seek to learn lessons from their peers in other countries – and also to develop common approaches to ensure consistency and accelerate the implementation process. The Sustainable Banking Network is one example – bringing together banking regulators and associations from developing countries.[124] A similar initiative for insurance supervisors is also under way – the Sustainable Insurance Forum – growing out of the work of the Principles for Sustainable Insurance with the private sector.[125] But perhaps the most significant step forward in the past year has been the launch of the FSB's Task Force on Climate-related Financial Disclosure (see Box 8).

There are unrealized synergies between financial standards and sustainable development. As the FSB example shows, existing mandates provide a clear

BOX 8: FSB Task Force on Climate-related Financial Disclosures – Building Consistency

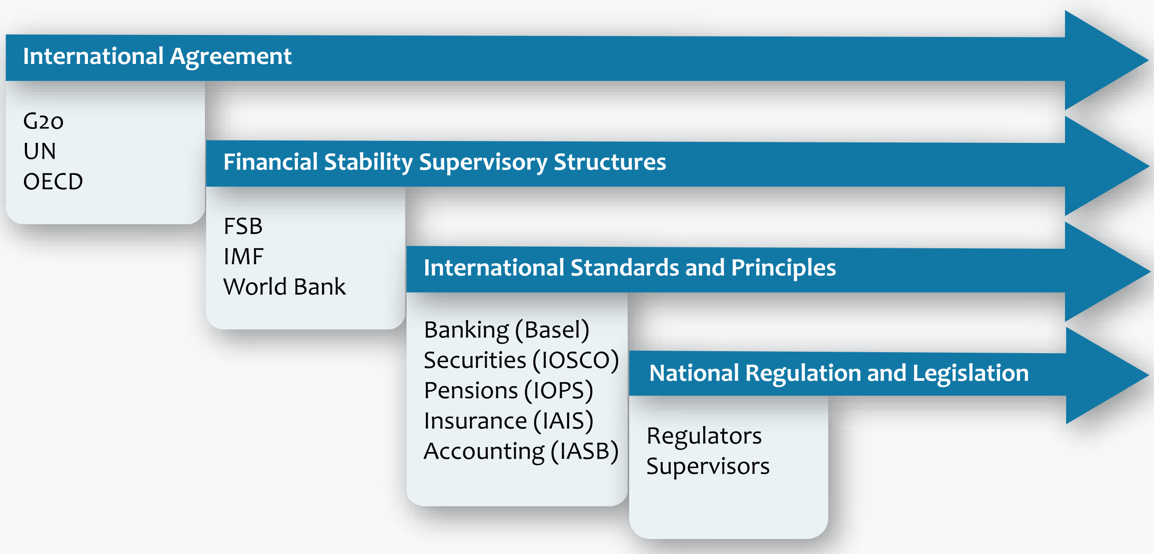
The Task Force marks a new departure for the FSB – its first dedicated focus on the financial implications of an environmental issue. Building on nearly 20 years of climate disclosure and growing mainstream recognition of the importance of improved transparency, the Task Force combines the authority of a leading international financial policy institution with a composition of private sector experts with a mandate to develop "voluntary, consistent climate-related financial risk disclosures for use by companies in providing information to investors, lenders, insurers, and other stakeholders."[126]

Launched in December 2015, the Task Force moved quickly to produce a first report that set out its scope and objectives. This made clear that "enhanced disclosures on climate-related risks that are used by investors, creditors, and underwriters can improve market pricing and transparency and thereby reduce the potential of large, abrupt corrections in asset values that can destabilize financial markets."[127] The Task Force outlined a set of fundamental principles for effective disclosure – that it is relevant, specific, complete, clear, balanced, consistent over time, comparable, reliable and timely. Importantly, the scope of disclosure should include both quantitative and qualitative information, as well as historical and forward-looking statements. The back-loaded nature of many climate impacts means that a focus on future risks is key, and one striking result from the consultation undertaken by the Task Force on its first report was that "96% of respondents see scenario analysis as a key component of disclosure."[128] Over 200 responses were submitted, highlighting a range of technical (e.g. comparability), policy (e.g. inconsistency of standards) and behavioural (e.g. short-termism) barriers to disclosure.

The Task Force is scheduled to deliver its Phase 2 report to the FSB and for public consultation in December 2016. Its recommendations will be voluntary, but could have profound implications for financial and other regulations.

basis for international financial institutions to examine the relevance of new and emerging environmental threats. The International Monetary Fund (IMF), for example, is undertaking work to more fully integrate climate change and energy issues in its surveillance activities. This includes exploring the role of the IMF in strengthening the resilience of small states to natural disasters and climate change.[129] It is also exploring the

FIGURE 10: THE GLOBAL FINANCIAL REGULATION PROCESS



Source: Adapted from Davis, K. (2011). Regulatory Reform Post the Global Financial Crisis: An Overview.

FIGURE 11: INTERNATIONAL FINANCIAL STANDARDS AND SUSTAINABLE DEVELOPMENT

FINANCIAL STABILITY	
Financial Stability Board (FSB)[130]	No formal mention of environmental factors, but the potential systemic risk posed by climate change prompted the new Task Force on Climate-related Financial Disclosure. Expected to report on voluntary disclosure standards in December 2016.
IMF/World Bank - Financial Sector Assessment Program (FSAP)[131]	Financial inclusion is considered as an explicit part of the FSAP process for developing countries; environmental factors emerging on a bottom-up basis but not a formal part of the process.
IMF - Report on Observance of Standards and Codes[132]	The G20/OECD corporate governance standards are one of the 12 recognized areas for assessment within the ROSC assessment.
CORPORATE GOVERNANCE	
G20/OECD Principles of Corporate Governance[133]	References to environmental, human rights and ethical factors, notably in terms of the role of stakeholders, disclosure and responsibilities of the board.
BANKING	
Basel III[134]	Pillar 1 refers to environmental risks that might arise at the transaction level. Potential synergies with Pillar 2 (Supervisory Review) and Pillar 3 (Market Discipline).[135]
BCBS - Corporate Governance Principles[136]	The Principles refer to culture and values including the promotion of responsible and ethical behaviour. But no explicit reference to social and environmental issues.
BCBS - Core Principles for Effective Supervision[137]	BCBS has been active on financial inclusion since 2010. Potential wider synergies with principles on corporate governance, risk management and disclosure/transparency.
SECURITIES	
IOSCO - Principles of Securities Regulation[138]	No formal mention of environmental or social issues. Clear synergies with principles on systemic risk, integrity and ethical behaviour as well as disclosure and certification (e.g. green bonds).
IOSCO - Code of Conduct for Credit Rating Agencies[139]	The focus on improving the quality and integrity of the credit rating process, promoting independence, reducing conflicts of interest and improving transparency and disclosure are all relevant to the integration of sustainable development factors.
INSURANCE	
IAIS – Insurance Core Principles[140]	Major partnership on financial inclusion (Access to Insurance Initiative – A2ii). Clear synergies with sustainable development in corporate culture, assessment of materiality, internal risk management controls and systemic risk.
INVESTMENT	
Investor Duties	In the context of the follow up to COP21, France requested the OECD to launch work on the governance of investments by institutional investors in relation to ESG factors and risks, in particular those associated with climate change. Scheduled to publish in December 2016.
IOPS - Principles for Private Pension Supervision[141]	No formal guidance on environmental and social factors. Clear synergies with principles of integrity, risk management, governance, alignment of interests, disclosure and transparency.
OECD Core Principles of Occupational Pension	Reference is made to the need for good governance and to the G20/OECD High-level Principles of Long-Term Investment Financing.
ACCOUNTING AND FINANCIAL REPORTING	
IASB - International Financial Reporting Standards[142]	Reference to impairment test for intangible assets, such as carbon allowances. Clear synergies with the principles of transparency, accountability and efficiency.
IAASB - International Standards on Auditing[143]	International Federation of Accountants (IFAC) has been active in exploring the role of the accounting profession in delivering the Sustainable Development Goals.

Source: UNEP Inquiry and Corporate Knights (2016). A Review of International Financial Standards as They Relate to Sustainable Development (forthcoming).

possible effects of green finance on macro-economic developments, such as economic growth and financial stability.

With this in mind, the UNEP Inquiry has examined 15 of the major financial standards and supervisory structures. The results suggest that the standards are predominantly focused on the economic pillar of sustainable development – yet with powerful latent synergies with the social and environmental dimensions. Their overarching frameworks offer potentially strong synergies, particularly in terms of risk at the institutional and systemic levels, corporate governance, transparency and disclosure, as well as financial culture. The key findings are presented in Figure 11.

The lack of explicit incorporation of material, social or environmental factors does not prevent national regulators from taking action, but could result in a fragmented response. A lack of standardization across jurisdictions could have the unintended consequence of increasing the costs associated with price discovery. It also increases the risk that the links between fostering sustainable development and enhancing the stability of the financial system might be missed, particularly in relation to systemic issues such as climate change and global inequality.

Financial inclusion offers a useful model for how other sustainable development factors could be embedded within international financial standards. Over the past decade, financial inclusion has moved from outside the world of international standards to becoming politically recognized and increasingly incorporated into key aspects of relevant international standards. G20 finance ministers and central bank governors established the Global Partnership for Financial Inclusion in 2010,[144] followed by the Financial Inclusion Action Plan in 2014. This sets out a number of priorities and actions to facilitate financial inclusion.[145] International financial standards have evolved to reflect this growing commitment, notably in work undertaken by the Basel Committee on Banking Standards and the International Association of Insurance Supervisors, as well as the incorporation of financial inclusion into the Financial Sector Assessment Program. This shift from the margins to increasingly mainstream consideration offers a potential model for other social and environmental aspects of sustainable development.[146]

The adoption of the Sustainable Development Goals provides a strategic opportunity to consider how relevant environmental and social factors can become embedded in financial standards. In the first edition of the Inquiry's report, '*The Financial System We Need*', the UNEP Inquiry proposed a new set of principles for a sustainable financial system that would provide a framework for how sustainable development could be advanced through key international standards. Our subsequent review of standards has confirmed the potential role for a cross-cutting principle that recognizes the wider purpose of financial activity. It also highlighted the potential for further work to explore the implications of sustainable development for key aspects of the standards' landscape, such as systemic risk, governance, disclosure, materiality and culture.

1.6. FINANCIAL SYSTEM REFORM AND THE REAL ECONOMY: A NEW DYNAMIC

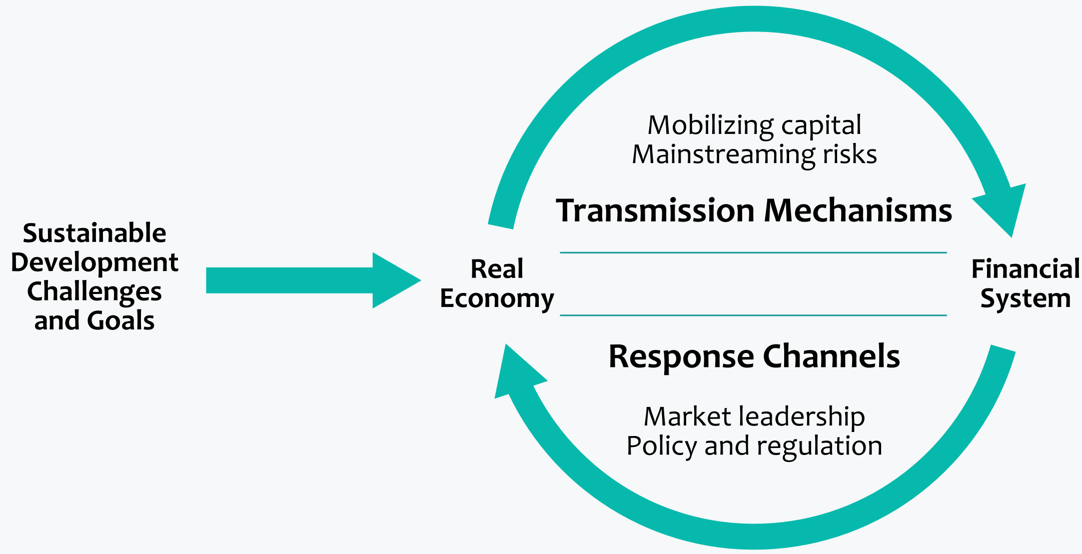
The actions signal the beginning of a new powerful dynamic between the financial system, the real economy and progress towards sustainable development. The core purpose of the financial system is to serve the real economy – providing a range of core services for households, enterprises and public authorities. The transition to sustainable development reframes this historic relationship, inserting new parameters around inclusive prosperity, poverty elimination and respect for planetary boundaries. Simply put, a two-way relationship can be identified (Figure 12):

- first, sustainability challenges in the real economy are driving new demands on the financial system, expressed through a set of transmission mechanisms that call for large-scale capital mobilization, as well as the mainstreaming of social and environmental factors;
- second, actions in the financial system in turn are also shaping environmental and social outcomes in the real economy, through a set of response channels, notably market leadership, along with policy and regulatory measures and international cooperation.

Ideally, these response measures should ensure that the system is as effective, efficient and resilient as possible to deliver the transition to sustainable development.

Set against this growing number of policy and regulatory measures, a key question is: *what measures are most needed to deliver efficiency, effectiveness and resilience in*

FIGURE 12: THE NEW DYNAMIC BETWEEN THE REAL ECONOMY AND THE FINANCIAL SYSTEM



Source: UNEP Inquiry (forthcoming). Financing the Transition: How Financial System Reform Can Serve Sustainable Development.

ways that the financial system can contribute to specific sustainability priorities in the real economy?

To answer this question, we have examined a sub-set of actions in 10 countries that are focused on three interlocking challenges of energy, climate change and land-use. Some of these measures seek to have a direct impact on the real economy – for example, actions to channel capital to sustainable development priorities, such as renewable energy, or reroute capital away from deforestation. Others are more focused on managing the implications of new sustainability risks in the real economy for the financial system; these measures then send important signals back to capital allocation in the real economy.

Looking across the range of policy and regulatory measures being used, five priority areas stand out. Overall, five common themes have emerged from the growing number of policies and measures, cutting across the key sectors of the financial system (the '5R's): capital reallocation; risk management; the responsibilities of financial institutions; reporting and disclosure; and the development of strategic roadmaps. Key examples of the measures being deployed include:

- **Capital Reallocation:** Financing a sustainable economy will require the efficient reallocation of capital. Market dynamics alone may not be enough to mobilize capital for critical priorities at scale or limit flows of capital to unsustainable assets. For example, the European Union is bringing sustainability factors into plans for its Capital Markets Union and is exploring an EU-wide strategic review of sustainable finance.[147]

In Brazil, starting in 2008, the central bank has introduced requirements limiting landowner access to subsidized rural credit to those who can demonstrate compliance with environmental legislation. From December 2017, financial institutions in Brazil will only be able to provide agricultural credit to landowners whose property is registered in the Rural Environmental Registry (CAR). This builds on a successful measure by the central bank to link rural credit to environmental compliance in the Amazon region. FEBRABAN, the Brazilian Banker's association, is working with the Ministry of Environment to improve the registry using satellite imagery.[148]

"India has a huge opportunity to discuss the policy intervention required to drive the flow of sustainable financing and to align the financial system towards a sustainable development agenda. Several goalposts - including creating awareness of the financial sector, developing common definitions of green finance indicators, developing green products, measuring progress and framework for assessing financial risks - are critical for achieving this."[149]

R. Gandhi, Deputy Governor, Reserve Bank of India

Box 9: India – Financial Innovations to Mobilize Capital for Sustainable Energy

India has among the most ambitious renewable energy targets in the world – designed to deliver economic development, energy access and environmental objectives.[150] To complement traditional clean energy policies,[151] India has taken three innovative measures to mobilize private capital:

- **Voluntary financing pledges**: The Ministry of New and Renewable Energy agreed financing pledges with India's banks amounting to 76.5GW of renewable energy.[152]
- **Extending Priority Sector Lending (PSL)**: The Reserve Bank of India has included decentralized renewables within its set of priority sectors for bank lending.[153] Early indications suggest that financing for renewable energy assets under PSL have steadily increased.
- **Introducing Green Bond requirements**: The Securities and Exchange Board of India introduced green bond requirements in January 2016 to help fulfil India's commitment under the Paris Agreement by developing new financing channels that could reduce the cost of capital and establish uniform disclosure thereby facilitating green investment.[154]

Initiatives such as the International Solar Alliance, which India launched in 2015, could also be a mechanism for sharing experience on new ways of raising capital for clean energy.

- **Risk Management:** The degradation of the environment can also generate risks for financial assets and institutions – and potentially for the financial system as a whole. Here the primary focus of financial policy and regulation has been on understanding the scale of these risks and then putting in place measures that strengthen the 'safety and soundness' of financial institutions against these shocks. The linkages to the real economy are therefore *indirect* as a result of changes to risk appetite and risk pricing. In developing and emerging economies such as Bangladesh, Brazil, China and Peru, financial authorities have introduced guidelines and requirements to make the assessment of socio-environmental factors a routine part of financial risk management, particularly in the banking sector. This year, a number of European central banks and regulators in France, the Netherlands, Sweden and the UK have taken steps to evaluate the implications of climate change for their financial systems.[155,156,157,158] Beyond risk assessment lies the critical task of strengthening financial system resilience, a core focus of the Sendai Framework for Disaster Risk Reduction, which specifically highlights the role of financial institutions and financial regulators.[159]
- **Responsibilities of Financial Institutions:** Sustainable development can also have potentially profound implications for the core duties of financial institutions to their clients and other stakeholders.[160] Growing numbers of financial institutions are adopting principles that guide the integration of material environmental and social factors – but market forces alone can be insufficient to ensure sufficient breadth or depth of implementation. Policymakers have supported this process by clarifying how core responsibilities link to sustainability factors, such as the fiduciary duty of pension funds to their beneficiaries. In October 2015, the US Department of Labor became the latest investment regulator to acknowledge that "environmental, social and governance factors may have a direct relationship to the value of an investment" and that when they do "these factors are proper components of the fiduciary's analysis."[161] In another example of the mutual signalling

Box 10: Assessing the Risks of an Abrupt Climate Shock

The advisory scientific committee of the European Systemic Risk Board published in March 2016 an assessment of carbon risks to the financial system – concluding that a late and abrupt transition could have adverse financial implications.[162] In the short-term, improved disclosure and incorporating climate into stress tests could help. If stress tests find risks to be material, then actions could include building capital buffers, capital surcharges based on carbon intensity and large exposure limits.

between the market and policy, a new statement was launched in June 2016 by leading institutional investors making clear that investors must "take account of environmental, social and governance (ESG) issues and support the stability and resilience of the financial system" – and asking for policy clarity at the national and international levels.[163]

Again, the primary focus here is on relationships within the financial system – between pension funds and their clients - with *indirect linkages* back to the real economy as greater recognition of ESG factors changes capital allocation and stewardship decision-making. In a recent global investor survey, over 65% of respondents agreed that acting on the Sustainable Development Goals was aligned with their fiduciary duties.[164]

"Environmental, social and governance factors may have a direct relationship to the value of an investment" and when they do "these factors are proper components of the fiduciary's analysis."[165]

US Department of Labor, October 2015

- **Reporting and Disclosure:** Enhanced reporting from both non-financial actors and financial institutions is a foundational element for the establishment of sustainable financial systems – enabling consumers to pick the right financial products, investors to make informed choices and regulators to assess the threat to the resilience of the financial system from sustainability-related disruption.[166] Reporting is also the area where the most has been done to develop market-based standards and regulatory frameworks: 38% of the identified measures focus on disclosure. Enhanced reporting can be considered a *bridging* action focused on improving information flows between the real economy and financial system actors. Disclosure is not just needed from corporations in the real economy to the financial system – but also from financial institutions themselves. It is here that particular innovation has been made in the past year. In January 2016, the California Department of Insurance launched its Climate Risk Carbon Initiative (CRCI)[167] setting out mandatory requirements for financial disclosure of insurance companies' investments in fossil fuel enterprises (including coal, oil, gas, and electricity generation). The purpose was to strengthen the prudential oversight of the insurance sector. Further, this action was supplemented by a request to all insurance companies licensed in California to divest their coal assets.[168]

"I do not want to sit by and then discover in the near future that insurance companies' books are filled with stranded assets that have lost their value because of a shift away from the carbon-based economy, jeopardizing their financial stability and ability to meet their obligations, including paying claims to policyholders."[169]

Commissioner Dave Jones, California Department of Insurance

- **Roadmaps:** A growing number of countries have elements of a sustainable financial system in place – but these are often not joined up or focused in a strategic way. Furthermore, action to deliver the Sustainable Development Goals and the Paris Agreement will involve a systemic approach to the financing challenge. For example, Agenda 2030 identifies the need for 'integrated national financing frameworks.'[170] As part of the implementation of the Paris Agreement, the Intended Nationally Determined Contributions (INDCs) submitted in 2015 will need to be translated into more granular 'climate investment plans' or 'green finance strategies'.

BOX 11: France – Reporting Requirements Can Stimulate Strategic Thinking

One of the most ambitious examples of reporting requirements for financial institutions is contained in Article 173 of the French Energy Transition law, which came into effect in 2016. Existing measures for investors to disclose their approach to managing ESG factors were extended to require an explanation of how the physical and transition challenges of climate change are taken into account, and what role they are playing in contributing to energy transition goals. Within the overall reporting framework, investors have considerable flexibility in how they address these issues – in large part to encourage innovation and stimulate strategic thinking. After two annual reporting cycles, a review will be conducted in 2019 to take stock of emerging practices and the usefulness of the reporting for consumers, investors and policymakers.

These roadmaps are perhaps the least developed dimension of the 5R's – but are critical to achieve a *systemic* approach that connects financial practice with real economy needs. Crucially, these cannot be abstract plans – but need to drive actual changes in financial practice. In Indonesia, the country's financial regulator, OJK, launched a Roadmap for Sustainable Finance in 2014, setting out key steps in the banking and capital markets sectors through to 2019.[171] One year later in November 2015, eight of Indonesia's largest banks made new commitments to the financial regulator, OJK, with a focus on building their competencies and developing a framework for environmental and social risks, starting with a pilot programme focused on palm oil.[172] Sweden has also committed to ensuring that the financial sector serves sustainable development through its recent budget bill, a statement of strategic intent that is driving a set of assessments by the financial regulator, actions by Swedish pension funds and the review of the labelling of financial products.

> *"De Nederlandsche Bank believes it can – and must – contribute to sustainable development. It follows from our legal mandate. And it follows from our mission, which is to contribute to the sustainable prosperity of the Netherlands by safeguarding the financial stability."*[173]
>
> **Klaas Knot,** Governor, DNB

This emerging practice indicates an increasing focus on how financial system reform can support the sustainability transition in the real economy. Whether it is Brazil's focus on rural credit and deforestation, India's efforts to scale-up renewable energy investment or France's new reporting requirements, countries are starting to make explicit links between action in the financial system and the realization of broader national goals for sustainable development and climate change. What began as a series of tactical steps in response to specific environmental problems is starting to become more strategic. Traditionally, sectoral policies to deliver sustainability (for example in agriculture and energy) have largely ignored the need to review financial system rules. These examples point to the complementary role that financial reform can play to deliver effectiveness. The national financing frameworks that are needed to help deliver the Sustainable Development Goals and the Paris Agreement provide an opportunity to develop and launch roadmaps for harnessing the financial system.

Equally, efforts to understand the implications of sustainability challenges from a prudential perspective on the financial system are also gathering pace. So far, the common conclusion of assessments conducted by central banks and regulators has been two-fold: first, that that climate change does not pose an immediate risk to system resilience, but, second, that it is clearly material and requires early action to prevent destabilizing impacts. Improved disclosure is an obvious first response – followed by the development of stress testing and other tools to better understand risks to both business models and portfolios. Forward-looking judgments by supervisors are now becoming possible. In addition, an emerging lesson from many of these examples is the importance of placing specific financial measures within the wider context of a system-wide strategy at the country level through national finance task forces, roadmaps and platforms.

The strategic roles of public finance and monetary policy in the deployment of private capital have also emerged as areas for further exploration. The Inquiry's primary focus has been on measures to harness private capital within the financial system. But our experience at the

BOX 12: The Netherlands – From Risk Assessment to Creating a Platform for Action

Following the financial crisis, the mandate of the Dutch central bank, DNB, was updated to "safeguard financial stability and thus contribute to sustainable prosperity in the Netherlands". As a pension regulator, DNB has explored how pension funds are managing the integration of ESG factors. It has also published an in-depth assessment of the strategic implications of climate change and the energy transition, concluding that it one of the greatest challenges that the economy faces in the long term. More broadly, DNB is acting as a catalyst for discussions on sustainability in the financial sector and has established a new Platform on Sustainable Finance in 2016. These actions formed the basis for the first ever discussion of how to finance the transition to a sustainable economy by EU finance ministers as part of the Netherlands' presidency in the first half of 2016.[174]

BOX 13: How Financial System Reform Could Support Energy Efficiency

Within the energy system, more attention is needed to unlock financing for efficiency improvements. According to the Sustainable Energy for All initiative, US$560 billion a year is needed to double the global rate of energy efficiency improvements – but only US$130 billion is currently being deployed. Awareness of the need to close this gap is growing in the financial system: for example, 115 banks and 40 investors managing close to US$4 trillion of assets have committed to increase their consideration of energy efficiency across their operations.[175] At the G20 level, the Energy Efficiency Finance Task Group has developed the *Voluntary Energy Efficiency Investment Principles* that suggest a supportive policy framework to scale up energy efficiency investments in participating countries.[176]

One option to overcome the lack of data on energy efficiency financing could be to tag loans in the building sector to prevailing energy performance standards: 20 countries now have energy performance standards for buildings (including the EU as one unit). Tagging these loans and then reporting aggregate results would not only give visibility on the flows of energy efficiency finance, but would also provide a sense of the prospective pipeline of asset-backed securities with high energy efficiency standards as well as the data to enable the evaluation of how building performance is linked to credit risk.[177]

country level has shown that it is hard to separate the strategic role of public finance as a lever of change. Equally, the growing application of unconventional monetary policy has raised questions about the linkages with social and environmental outcomes.

Public finance is increasingly understood as having more diverse and complex roles in shaping the broader finance system than its direct spending impacts. The financial crisis has exacerbated fiscal constraints, including pressures on international development assistance. While clearly of concern, such challenges can also generate innovations to ensure that existing flows of public finance are more effectively aligned to sustainable development.

- At a time of increased fiscal stringency, it also makes sense to review the fiscal incentives that flow through the financial system – for example, for savings and pensions - are aligned with sustainable development. A preliminary exploration of these links conducted for the Inquiry has identified a baseline quantum of potential subsidies, but also highlighted considerable data gaps.[178]
- Sustainable development-related criteria are already a rising trend in public procurement,[179,180] but could also be applied to the public procurement of financial services, such as banking, insurance and debt issuance. For example, South Africa has drawn on this instrument in its financial sector charter and code to encourage the sector to do more in empowering the previously disadvantaged, black majority.[181]
- Beyond fiscal measures, the use of public financial institutions to 'crowd-in' private capital is now widely accepted as an effective approach to using scarce resources.[182] The emergence of the green bond market has also revealed the market creation role of public financial institutions through both strategic issuance and purchase programmes.[183]
- A growing number of public financing vehicles, such as pension funds, national security funds, and sovereign wealth funds, are introducing ESG criteria to align investments with sustainable development.[184] This operational rule-setting can also have important spillover effects for private financial institutions. The Equator Principles are a case in point – along with the more recent launch of the Principles for Mainstreaming Climate Action in December 2015 by a coalition of development banks and private institutions.[185]

Central banks are clearly starting to address the prudential dimensions of sustainable development, but the monetary policy linkages are less developed. Work is just beginning to set out the policy and analytical linkages between environmental sustainability and monetary policy.[186] In some cases, the mandates of central banks could enable such exploration. For example, in the case of the European System of Central Banks, the primary goal is to maintain price stability, with a secondary objective of supporting the European Union's economic policies in order to contribute to the EU's objectives, which include sustainable development and environmental protection. In this context, as long as price stability is not at risk, the ECB could take into account these wider objectives.[187] One area where this could be relevant is the integration of sustainability criteria into refinancing and asset purchase programmes (such as quantitative easing).[188] As part of China's new guidelines for establishing a green financial system, a set of policy incentives have been introduced including linking green finance with the People's Bank of China's re-lending operations.[189]

This dynamic between the financial system, the real economy and sustainable development is at an early stage and in Section 3 we provide the first effort to deliver a framework for understanding performance in terms of efficiency, effectiveness and resilience. In addition, this dynamic needs to be understood in terms of other fundamental changes in the financial system, not least technological disruption through fintech.