



Inquiry: Design of a
Sustainable Financial System



New Rules for New Horizons

**Report of the High
Level Symposium on
Reshaping Finance
for Sustainability**

Paris, 3 July 2015

**UNEP Inquiry into the Design
of a Sustainable Financial
System and AXA**

redefining / standards



ABOUT THE EVENT AND THIS REPORT

On July 3rd 2015, the UNEP Inquiry into the Design of a Sustainable Financial System and AXA co-hosted a high-level symposium in Paris to explore the nexus between the long-term challenge of mobilizing finance for sustainable development, and impact of the post-2008 financial reforms. Two further drivers of major change to the financial system were also discussed: the innovative disruption being unleashed by new technologies and business models, and the growing importance of major developing countries in the shaping of the international financial system. Over two hundred participants, including officials from international institutions, central banks and financial regulators, and private sector representatives and academics, debated the current state of the financial system, its purpose for society and the potential and challenges for reshaping it towards sustainability.

→ Replay sessions and highlights on www.axa.com

This report highlights the themes of the debates and their main conclusions, as well as potential avenues for action.

SPEAKERS

Bertrand Badré, Managing Director and Chief Financial Officer, World Bank

Alexander Barkawi, Director, Council on Economic Policies

Mark Burrows, Managing Director and Vice Chair, Global Investment Banking, Credit Suisse

Henri de Castries, Chairman and Chief Executive Officer, AXA

Denis Duverne, Deputy Chief Executive Officer, AXA

Sylvie Goulard, Member of the European Parliament, ECON Committee

Levin Holle, Director General, Financial Policy, Ministry of Finance, Germany

Denis Kessler, Chairman & CEO, SCOR SE

Izabella Kaminska, Financial Times

Jean-Pierre Landau, Professor of Economics, Dean of the School of Public Affairs, Sciences Po

Michael Liebreich, Chairman of the Advisory Board and Founder of Bloomberg New Energy Finance

John Lipsky, Senior Fellow, School of International Studies, Johns Hopkins University

Matu Mugo, Assistant Director, Bank Supervision, Central Bank of Kenya

Ligia Noronha, Director, Division of Technology, Industry and Economics (DTIE), UNEP

Sophie Pedder, The Economist

Luiz Awazu Pereira da Silva, Deputy Governor in charge of Financial Regulation, Central Bank of Brazil

Nick Robins, co-Director, UNEP Inquiry

Rathin Roy, Director, National Institute of Public Finance and Policy, India

Mulya E. Siregar, Deputy Commissioner of Banking Supervision, Indonesia Financial Services Authority (IFSA)

Rintaro Tamaki, Deputy Secretary General, OECD

Christian Thimann, Member of the Executive Committee, AXA

Jean-Claude Trichet, Chairman, Group of Thirty, Former President, ECB; Honorary Governor, Banque de France

Wang Yao, Deputy Secretary General, China Green Finance Committee; Director General, Financial Research Center of Climate and Energy, Central University of Finance and Economics

Simon Zadek, co-Director, UNEP Inquiry

Jean-Pierre Zigrand, co-Director of the Systemic Risk Center, LSE

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The Inquiry into the Design of a Sustainable Financial System has been initiated by the United Nations Environment Programme to advance policy options to improve the financial system's effectiveness in mobilizing capital towards sustainable development.

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New Rules for New Horizons: Reshaping Finance for Sustainability

Finance is the means by which we channel accumulated wealth into productive new activities to generate more real wealth and wellbeing.

As such, finance is critical to sustainable development. But it cannot deliver real wealth without being responsive to the fundamental value of social, physical and environmental capital. As Henri de Castries argued in his opening remarks, “finance is like our blood, it serves a critical function in the body, but it is useless if you separate it from the human system”.

When the financial system works efficiently and effectively, it fosters dynamic, inclusive and sustainable economies that in turn reward the owners of capital. But when the system proves defective, economies and societies are weakened by the misallocation of capital across activities and over time, capital owners and savers suffer from low and uncertain returns. Today, the system has become the subject of intense public debate because it is not considered to be fully efficient or effective in either serving the owners of capital or financing inclusive, sustainable development.

The financial system is emerging from its worst crisis in two generations. Since 2008, national actors and the international community have established new rules and regulatory and supervisory institutions that have secured the international economy from what could have been a far worse collapse than the recession experienced across much of the developed world.

Sustainable development, at the same time, has increasingly become a lens through which to assess economic progress, and an organizing framework through which the role and effectiveness

“The end of the financial crisis is providing space for innovative thinking in how to shape finance to the long-term needs of an inclusive, sustainable economy.”

Ligia Noronha, Director, Division of Technology, Industry and Economics, UNEP





“ We have seen major changes, with the rise of complexity in the financial system, increasing short-termism and the intensification of climate-related risks. As insurers we are extremely conscious of the need to bring together the agendas of finance and sustainability. ”

Henri de Castries, Chairman and
Chief Executive Officer, AXA

of finance is considered. Across the world, a growing number of governments, regulators and market participants are starting to incorporate sustainability factors into the design of, and practice across, the financial system. While this shifting focus is to be welcomed, there is widespread recognition that, as John Lipsky highlighted, “reforming the financial system remains an unfinished business – we have a long way to go in designing a financial system that meets the needs of sustainable development”.

Key messages that emerged from the discussions in Paris on July 3rd:

- ▶ Post-2008 financial market reform remains an unfinished business, whilst having prevented a financial and associated economic collapse across much of the developed world.
- ▶ Such reforms have created unintended consequences, notably increasing short-termism that discourages much needed, longer-term, less-liquid lending and investments.
- ▶ The key role of the financial system in enabling societies to meet sustainable development goals remains largely implicit in most major financial and capital markets, whilst being more explicit in many developing countries.
- ▶ Today’s financial system governance is not ensuring effective alignment with sustainable development goals, with a need to broaden the treatment of risk to incorporate longer-term, social, economic and environmental factors that impact financial and policy outcomes.

In addition, two specific themes received focused attention:

- ▶ Low interest rates have not catalysed long-term investment because of macroeconomic and policy uncertainties, and adverse incentives across the corporate and financial community.
- ▶ Technological developments are shaping new financing approaches, opportunities and business models, including for long-term investment approaches.

“ While the established wisdom is that developed countries lead and developing countries lag, much of the discussion has revealed that it can be the other way around. Regulators from China, Brazil and India are overseeing the financial system with the national interest for sustainable development in mind. ”

Christian Thimann, Member of
the Executive Committee, AXA

The state of our financial system



“ Finance contributes to society, if it keeps savings safe and enables businesses to grow. Financial regulation is complex, but the principles are intuitive – responsibility and accountability, skin-in-the-game, measures to calm exuberance. To this we should now add increasingly common social and environmental rules for finance, which will make international allocation of capital more efficient. ”

Luiz Awazu Pereira da Silva, Deputy Governor in Charge of Financial Regulation, Central Bank of Brazil

Fragile stability and a return to growth

Participants reflected on the unfinished nature of the post-2008 financial reforms. It was explicitly acknowledged that much has been done to achieve stability through new rules for banking, shadow banking and hedge funds, systemic risk supervision and measures to ensure effective resolution of insolvency without recourse to public funding. Financial institutions are reportedly more stable, with strengthened supervision and better financial market transparency. A fragile confidence has returned to



“Regulatory changes, especially increased capital requirements, have succeeded in improving the stability of individual institutions. More generally, however, the approach to regulatory reform has been like a game of “whack-a-mole”; tackling problems one by one after they occur. We need a better view of what we want the financial system to do, and from there to establish the principles and regulations needed to ensure that it serves that purpose. ”

John Lipsky, Senior Fellow, School of International Studies, Johns Hopkins University

“Direct exposure to infrastructure can be an ideal investment for institutional investors, including insurance companies, given their long-term liabilities and the long life of infrastructure assets. Yet today only 1% of their assets go to direct infrastructure investments and only a small proportion of that into green infrastructure. ”

Rintaro Tamaki, Deputy Secretary General, OECD

the financial system, but remains weak across the real economies in many developed countries.

Despite all the regularity improvements, the panellists all noted in different ways that financial stability remains vulnerable, with pockets of under-regulated activity and risk remaining, and new areas of ‘shadow’ financial activity developing. At the same time, the approach that has been taken to stabilize the financial system - based on voluminous detailed regulations and administrative complexity - is difficult to scale or to change in response to on-going innovation, and future disruptions to the financial system. Financial reforms that have driven greater risk aversion, liquidity preference and uniformity in investment have created the unintended impacts of short-termism and continuous sense of fragility in the financial system. Additionally, the continued uncertainty about the permanent enlargement of the regulatory scope is seen as a barrier to long-term investment, despite low interest rates.



Disruptors and warning signs

While regulation has been the primary force for change in the financial system over recent years, participants highlighted other sets of disruptive forces coming to the fore:

- ▶ Technological and business model changes in both the real economy (such as energy and transport) and in the financial system itself - disrupting incumbent business models, institutions and markets, in mature and emerging economies. These disruptions could revolutionise the relationship between the citizen and finance, and yet also introduce new risks and associated governance and accountability issues that require attention.
- ▶ Leadership changes largely due to the rise of major emerging markets and their growing importance in financial and investment terms, which may lead to a strengthened development and sustainability agenda at the heart of future financial market reform.

“ The traditional financial system discriminates against green investment – the way people interpret fiduciary duty, the capital requirements and credit weightings of Basel III - all of this will need to change to enable green investment to reach its potential. ”

Michael Liebreich, Chairman of the Advisory Board and Founder of Bloomberg New Energy Finance

- ▶ Expectation changes regarding the purpose and functioning of financial markets, with recognition of the need for greater alignment between finance and sustainable development to ensure that:
 - Finance serves the needs of the real economy over the long term;
 - It supports a more inclusive and stable growth model;
 - And it can cope with the disruptive impacts of historic patterns of unsustainable development, including climate change.

To this were added other disruptors – urbanization and the role of cities as hubs for investment and environmental impacts, the nature and role of cross border conflict, illicit flows and associated anti-money laundering controls.

“ There is a relationship between financial stability and growth. As well as financial stability, sound public finance and structural reforms are critical as a foundation for economic growth. But there can also be a trade-off between growth and stability focused regulation. There are policy choices to be made. How much safety or how much dynamism and risk taking do we want? ”

Levin Holle, Director General, Financial Policy, Ministry of Finance, Germany



Christian Thimann, Member of AXA's Executive Committee, reflected on five 'warning signals', issues that are still unresolved in the financial system:

- ▶ A sense of fragile financial stability, stemming from the continuous creation of unchecked pockets of risks despite progress in regulation and supervision in the different markets and jurisdictions;
- ▶ A perceived lack of control, as illustrated by a growing complexity of financial regulation, despite numerous new standards and behaviours aimed at increasing the reporting and transparency of financial actors;
- ▶ Inefficient liquidity, as ultra-abundant liquidity on all financial markets and extremely low interest rates are not boosting public and private investment;
- ▶ Cornered emerging economies, with less access to global capital flows and attractive funding sources, while benefiting in turn from lower risks of sudden stops and boom-and-bust cycles;
- ▶ Time inconsistency, with greater collective needs for long-term and very diverse investment, and yet financial regulation giving the advantage to liquid, short-term and homogeneous investments.

These warning signals are mirrored by growing concerns in the real economy and the natural environment, on which the activities and economies of societies depend. Some examples are the challenges triggered by climate change, water scarcity and land contamination, as well as unemployment, inequality and the intergenerational issues related to rapidly ageing societies.

These environmental, social and economic warning signals reinforce the importance of ensuring that the financial system is effective in serving its purpose in financing an inclusive, sustainable economy, while also highlighting the fact that such effectiveness is a precondition, but not a sufficient condition for such a positive outcome. A financial system fit for purpose needs to complement and be complemented by appropriate policies and market conditions in the real economy.

“ Ships are safe in their harbor, but staying there is not what ships are for. ”

*John Lipsky, Senior Fellow,
School of International Studies,
Johns Hopkins University*

“ If we go back eight years, the financial system was characterized by distress, disruption and discontinuities. Stability then became the key word. Regulation was driven by very high risk aversion. Now growth is a major concern again. The regulatory framework is good but we have to adapt the parameters in order not to prevent economic recovery. ”

*Denis Kessler,
Chairman & CEO, SCOR SE*

A conclusion from this stock-taking is that a shift is warranted in the conception of risk in finance to better take into account the new and expanding nature of the major challenges societies and economies face today, including climate change. Such a reflection would aim at incorporating social, environmental and long-term sustainability questions into regulatory and prudential frameworks and to guide decision-making of large financial institutions with revised pricing methods of risk.

Moreover, a reorientation of financial regulation towards the long-term is needed, which should also foster investments in new technologies, private sector activities and lessen the focus on government bonds and real estate that are contributing to bubbles in these areas.

→ www.axa.com/en/newsstand/op-ed/warning_finance.aspx

Aligning the Financial System with Sustainable Development

Emerging Findings from the UNEP Inquiry

The UNEP Inquiry began in January 2014 and will launch its Global Report of findings, insights and recommendations in October 2015 at the IMF/World Bank Annual Meetings in Lima. It is guided by an Advisory Council including financial experts and regulators from around the world and from international institutions.

Over the past 18 months the Inquiry has explored innovative practices in a growing number of countries, including Bangladesh, Brazil, China, Colombia, the European Union, France, India, Indonesia, Kenya, the Netherlands, South Africa, Switzerland, the United Kingdom and the United States. Emerging findings are that a 'quiet revolution' is taking place with policy makers and regulators, as well as financial sector actors in growing numbers of countries developing approaches to better align their financial systems to the needs of the real economy.

The Symposium included presentations from practitioners involved in these



“ China was the last country to industrialise through fossil fuels. From India onwards, all developing countries will have to do this without recourse to growing fossil fuel consumption. No western country has done this. It is a first. Innovations are needed in every kind of financial market. ”

Rathin Roy, Director, National Institute of Public Finance and Policy, India



“ One of the most exciting things we are seeing is the emergence of new leadership from developing and emerging economies, with new ways of thinking about the role of financial and capital markets in the process of development, and seeking to embed sustainability from the outset. ”

Simon Zadek, co-Director, UNEP Inquiry

innovations in practice including Indonesia's Sustainable Financial System Roadmap; China's policies on green credit, green securities and green insurance; and Brazil's requirements for banks to undertake socio-environmental assessments of prospective loans. Despite the early stages of many practices and the lack of robust performance data or clarity of adoption pathways, a set of approaches is emerging targeting banking, equities and bonds, institutional investment and insurance.

Key mechanisms include:

- ▶ Enhanced information flows on sustainability-related risks such as through the adoption of full value chain impact accounting and reporting, and its incorporation into listing requirements, key benchmarks, indices, credit ratings and accounting standards.
- ▶ Prudential management of sustainability-related risks, including balance sheet and portfolio stress testing, as well as extended macroprudential reviews to account for longer-term, secular systemic risks.

“ We have to talk about the foundations of the financial system. We are still in repair mode, and in particular we need to connect with the climate change agenda. ”

Bertrand Badré, Managing Director and Chief Financial Officer, World Bank

- ▶ Policy-directed lending and investing, through state-owned and guided financing vehicles; and through use of instruments such as refinancing, capital weightings, mandated lending requirements, fiscal and other incentives.
- ▶ Extended environmental liability for lenders and investors incorporating safe harbour where adequate due diligence and oversight can be demonstrated.
- ▶ Approaches to ensuring adequate mandates and capabilities within financial institutions through the adoption of principles and guidance, including the development of professional skills.

Aligning the financial system with sustainable development aims at improving the real economy and broader social and environmental outcomes. Such developments however, are also seen as a means of improving the efficiency, effectiveness and resilience of the financial system itself. Needed is a sustainability-focused performance framework and associated metrics that will allow progress and comparative developments to be planned, managed and assessed.

The UNEP Inquiry's findings indicate that there are practice-based approaches across all of the major asset pools to internalize social, environmental and economic risks, opportunities and policy goals. Furthermore, the experience of developing national pathways based on collaborative action provides inspiration and guidance to draw from. Finally, there is a need to build stronger international cooperation in advancing a sustainable financial system, and once again there are early, positive signs of such cooperation in development.

→ www.unep.org/inquiry

Leadership and innovation in practice

Developing countries are often described as having less sophisticated financial markets, particularly capital ones, and have generally been assumed to be largely ‘followers’ of developed country practices.



“ The financial crisis was caused by short-termism. We have to build our financial system for resilience and competitiveness. In Indonesia we developed a Sustainable Finance Roadmap together with industry, we asked them to develop a common definition of objectives to create a sense of belonging, commitment and purpose together with government. ”

Mulya E. Siregar, Deputy Commissioner of Banking Supervision, Indonesia Financial Services Authority (IFSA)

“ China is developing a green financial system as a market-based institutional arrangement - with regulations on green credit, green securities and green insurance. It guides financial sector to invest in green area. The system should include rules but also incentives, for example interest discounts, and risk ratio incentives sensitized to sustainability objectives. ”

Wang Yao, Deputy Secretary General, China Green Finance Committee; Director General, Financial Research Center of Climate and Energy, Central University of Finance and Economics

But the discussions highlighted how underlying differences in overall approaches are emerging. All the more so in the context of a post-2008 world, and increasingly in relation to the broader sustainable development agenda. In particular, central banks and financial regulators with mandates aligning financial system functioning with sustainable development expectations, such as in the case of China and Indonesia are implementing ambitious and embedded approaches to financial regulation, oversight and incentives with sustainability at its heart.

As presented by Mulya E. Siregar, Deputy Commissioner of Banking Supervision, Indonesia Financial Services Authority, Indonesia started for instance to develop a Sustainable Finance Roadmap, jointly between the government and financial sector to align it towards the governments’ national development priorities (the 4Ps - pro-growth, pro-jobs, pro-poor

and pro-environment). Wang Yao, Deputy Secretary General, China Green Finance Committee, highlighted China’s approach to establishing a green financial system, whilst questioning whether post-2008 policy and regulatory measures such as Basel III and Solvency II are appropriate for developing countries and sustainability needs.

Bertrand Badré, Managing Director and Chief Financial Officer, World Bank highlighted key innovations ranging from the Egyptian government’s initiative to crowd-fund the new Suez Canal, to catastrophe insurance in Vanuatu. He highlighted the role of the Global Infrastructure Facility in bringing governments together with institutional investors to develop an investable pipeline of projects, and avoid the mistakes of previous public private partnerships.

China's approach to greening its financial system

China is committed to transitioning toward a green and sustainable growth model. Estimates indicate the need for at least US\$320 billion annually to achieve national environmental targets during the Thirteenth Five-Year Plan – for energy efficiency and renewables, environmental remediation pollution control, water and sewage, green transport and forestry. The People's Bank of China estimates that 80-85% of this finance will need to come from private financial and capital markets.

China has been developing green finance regulations, particularly focused on banking for a number of years. In 2014, The People's Bank of China together with the UNEP Inquiry established a Green Finance Task Force to consider how to establish a systematic green finance system. The proposals of the green finance task force include developing specialized financial institutions, fiscal and financial policy support, finance infrastructure (such as carbon markets, green rankings and information on environmental costs) and a legal infrastructure on green insurance, lender liability and compulsory disclosure). This is envisaged as a comprehensive system of institutions, rules and incentives such as discounted green loans and tax incentives to invest in green bonds.

→ http://greenfinance.org.cn/bit.ly/GreenChina_Main_Report



“ We may be the first to advance a green finance policy framework. ”

Wang Yao, Deputy Secretary General,
China Green Finance Committee

Indonesia's approach to greening its financial system

In December 2014, the Indonesian Financial Services Authority (OJK) and the Ministry of Environment and Forestry launched a "Roadmap for Sustainable Finance in Indonesia". The goal of the Roadmap is to determine which measures need to be taken to improve the sustainability of finance in Indonesia, and to have these implemented by 2024.

It contains a detailed work plan for the period of 2015-2019, which will apply to all institutions that fall under the authority of the OJK, including the banking, capital market and non bank financial services sector. The Roadmap is part of the Master Plan for Indonesia's Financial Service Sector which is due to be published by the end of 2015.

The activities set forth in the work plan are divided in 3 focus areas:

- ▶ Increase the supply of sustainable financing through regulatory support and incentives (both fiscal and non-fiscal) to encourage innovation in the development of environmentally friendly products and investments in priority sectors. This will include instruments like targeted loans and guarantee schemes, green lending models, green bonds, a green index and a special focus on supporting the national energy security plan.
- ▶ Increase the demand for sustainable financing products through targeted outreach campaigns to increase awareness amongst market players regarding the importance of environmental risks, risk management and mitigation practices, as well as the financing potential for environmentally friendly projects.
- ▶ Increase the oversight and coordination of sustainable finance implementation: Financial institutions will be required to adopt risk management policies governing the social and environmental aspects of their activities, and they will have to publish an annual sustainability report.

The implementation of the Roadmap will be a joint effort of the OJK, together with at least 7 ministries, the Indonesia Stock Exchange and Law Enforcement Agencies and will be coordinated by a regular Forum on Sustainable Finance.

→ www.ojk.go.id/keuangan-berkelanjutan



“ The most important thing is that the initiative comes from the Financial Regulator OJK together with the Ministry of Environment. It also needs the Ministry of Finance, leadership from the top and strong collaboration across the government. ”

MulyE. Siregar, Deputy Commissioner
of Banking Supervision, Indonesia
Financial Services Authority (IFSA)



How do Systems change?

Much of the focus of the most recent round of financial regulations have concerned systemic risk. The IMF, Bank for International Settlements and Financial Stability Board (under the mandate of the G-20) define a systemic event as a disruption to the flow of financial services that is caused by an impairment of all or parts of the financial system; and has the potential to have serious negative consequences for the real economy. However this definition does not help to understand the difference between a systemic event and simply a widespread, aggregate or systematic one.

Systems (immune systems, transport systems, legal systems, climate systems etc.) are differentiated from aggregates (groups of cells, a line of buses, a selection of laws, atmospheric gasses) in that they are more than the sum of their parts. The interrelationships matter. In complex systems feedback loops reinforce one another and result in emergent properties such as natural selection, social organization and economic growth and, but also riots, stock market crashes and ecosystem collapses.

Jean Pierre Zigrand of the Systemic Risk Centre at LSE gave the example of London's Millennium Bridge, which surprised its engineers by wobbling violently whenever more than 156 people walked across it. With fewer people, the individual steps of diverse pedestrians cancelled each other out, but every time the critical load was

reached small trigger such as gusts of wind became amplified as individuals shifted their own weight to steady themselves setting of wobbles and uniform response. The engineering models used in constructing the bridge did not predict the way that the micro-actions of so many people would become synchronized.

Similar examples are found in finance. For example the carry trade involves borrowing at low interest rates in one country and investing in high interest rate in another. These loops reinforce each other in the good times and the bad. When losses appear all market actors try to sell at the same time, creating a vicious cycle of losses and contagion. Some rules and regulations can lower the possibility of crisis happening, but once it has happened, these same rules may deepen the crisis impact – forcing everyone to divest of the same assets at the same time for example, further reducing prices.

The presence of diverse actors within the financial system such as those with longer or shorter term investment horizons ought to reduce herding behaviour. Nonetheless, common rules can force diverse actors to act in a uniform way – such as mark-to-market accounting rules which translate short term volatility to balance sheets. The structure of networks also matter – for example whether banks are loosely or closely linked. For small shocks, tight connections can facilitate dissipation and stability, but if shocks are large,

loose connections which allow small sections of the system to fail without contagion may be better.

Interestingly, not all financial actors are as part of a proper system, beyond the wider financial system itself: while banks have clear networks relationships and common values underlying their activities, thus creating a “banking system” with very specific characteristics and exposures to endogenous and exogenous shocks, insurance companies cannot be described as being part to a proper “insurance system”, most of the companies being standing-alone agents. This has also implications for the transmission of systemic risk.

As a conclusion, thinking of finance as a complex system allows us to consider the causes rather than just the outcomes of crises, and to design systems that are less susceptible to shocks rather seeking to forecast and respond to them individually. What is needed are two sorts of measures, measures that prevent build-up of systemic fragility and measures that cut through the propagating feedback loops once the systemic event has been realised.

Zigrand, J.P. 2014. *Systems and Systemic Risk in Finance and Economics*. SRC Special Paper No 1. London: LSE.

→ <https://www.youtube.com/watch?v=UzW195qWHYg>

The great compression: What do low interest rates mean for sustainability?

The current global monetary equilibrium is one of low interest rates and ultra-abundant liquidity, while some markets are experiencing visible liquidity shortages and nil capital returns – and often negative real returns. A world with low or zero interest rates and abundant liquidity should be one perfectly suited to financing sustainable development, but the evidence suggests otherwise. In particular, long-term investments in energy and infrastructure remain subdued, in a context where incentives to invest in riskier, less liquid and long-term projects have declined in recent years. As Levin Holle said "there is such a high premium on liquidity in regulation today, especially in banking, that less and less funding is going into equities and other parts of the real economy".

“ Emerging economies are working – We need savings that yield low returns in Europe and the US to move to economies that give high returns. But global financial markets view investment outside the West as ‘an adventure’; short-term financial flows come in and go out. Institutional barriers are impacting long-term real investment. ”

Rathin Roy, Director, National Institute of Public Finance and Policy, India

To better understand the reason behind such protected levels of long-term investments, there is room to first understand why interest rates are so low: are they a sign of too much debt or one of too weak demand. The answer is indeed critical to see if actions to be taken to resume investments are to reduce debt or to invest more?

The super-cycle debt hypothesis is that the priority should be to repair balance sheets by reducing debt, avoiding prolonging imbalances and resource misallocation which allow ‘zombie’ enterprises to live on. The alternative view of ‘secular stagnation’ is that low interest



rates reflect an equilibrium of low growth, low demand, low investment and personal anxiety. Jean Pierre Landau argued that this hypothesis is attractive, supported by the fact that corporates are not investing and innovating for the future but hoarding cash and using debt to buy back shares. In this case, the practical prescription should be to maintain accommodative monetary policies and engage in public investment in sustainable infrastructure to drive growth and take the opportunity improve cities, healthcare, transport and energy systems.

Rathin Roy argued that emerging economies such as India do not have this problem, they are growing and need investment, but the major barrier to long-term and stable external funding are the numerous institutional barriers which persist. Emerging economies face an unprecedented challenge in that every country that will industrialise must now

“ From a business perspective investment opportunities must be NPV positive. It is impossible to create value through the financing on the right hand side of the balance sheet if the underlying asset is not profitable. For green investment to take off we need a predictable price on carbon. ”

Mark Burrows, Managing Director and Vice Chair, Global Investment Banking, Credit Suisse

“ We have low interest rates but it is not feeding through into real investment. Instead corporates are piling up debt to buy-back shares - one trillion dollars worth in 2015. They are doing that because they don't find attractive reasons to invest whilst benefiting from inflated share prices. ”

Jean-Pierre Landau, Professor of Economics, Dean of the School of Public Affairs, Sciences Po

do it without recourse to growing use of fossil fuel. Technological opportunities exist to replacing dirty old capital stock and processes with more efficient new capital stock will generate economic growth, productivity improvements and environmental efficiencies. But funding to make this transition materialize still lack because of, notably, political uncertainty and institutional volatility.

To further develop long-term investment in a low-interest rate environment, Mark Burrows agreed with the importance of financial measures, for example highlighting that changes in US pension fund regulations, which have allowed pension funds to increase their exposure to venture capital, were a large part of what enabled the growth of Silicon Valley. But he emphasized the need for complementary real economy measures, in particular, in relation to climate change starting with a price on carbon and an end to fossil fuel subsidies.



Technology and business innovation: bottom-up financial system redesign

While long-term infrastructure is often conceived of in terms of major projects such as roads and ports financed through traditional means, technological disruption is reshaping both the physical world and the financial system, through business innovations that use information technology to reduce costs, collect real time data and automate decision-making. This in turn recasts the role of financial sector players in intermediation, risk pricing, resource mobilisation and risk mutualisation. Such changes are transforming the opportunities for new ways to align the

“ If you want cheap clean energy you need technology, low cost of capital and scale. The cost of capital really matters for technologies with high up-front and low fuel costs, but the traditional financial system continues to be biased against green. Technology means you can do things differently; the financing deals for distributed energy systems can be quite different from anything a bank or a utility might imagine. ”

Michael Liebreich, Chairman of the Advisory Board and Founder of Bloomberg New Energy Finance

financial system to sustainable development as well as creating new challenges to develop and deploy the right financial policies, regulations and standards.

Micheal Liebreich stressed that renewable energy is not just a cleaner and cheaper version of old energy systems, but through localization and distributed solutions lends itself to different models of ownership, finance and control. Technology links together energy efficiency with consumer trends such as home controls, which allow people to control their fridge, their solar power and their blinds. New business models shift the roles of producer, consumer, employee and entrepreneur. Further integration of transport and energy systems, with personalized identification, data and micro payments are not only a means through which consumers can pay for and control things, but by which they can be paid (for example for energy), and where aspects of behaviour and risk can be monitored (such as with ‘black box’ telematics car insurance).

A relevant example is the one of pre-paid solar start-ups, SolarCity, which provides an integrated technology and finance solution to makes solar electricity home systems affordable for customers in Africa. Individuals pay a small installation fee and then must send a pre-pay passcode using their mobile phones to unlock the energy. This is not just an innovative means to make solar power affordable, but is also a first step to build up a credit history and a set of financial system relationships.

“ In Kenya the majority of the population was not able to access the financial system at all. Incumbent banks did not see the need to find ways to meet their needs. The telecommunication companies came in to provide a platform for money transfer, which has now evolved to facilitate savings, insurance and other financial services. ”

Matu Mugo, Assistant Director, Bank Supervision at the Central Bank of Kenya

Matu Mugo, Assistant Director, Bank Supervision at the Central Bank of Kenya highlighted the approach that Kenya’s central bank had played in enabling the development of mobile money by Safaricom and others. It is a completely new way to use technology to build credit history and to give financial institutions comfort to increase credit distribution. The disruptive innovation depends on technology and a new business model, but also on the willingness of Kenya’s regulators to develop policies and regulations on a learn-as-you-go basis in response to the bottom up innovation in the financial system.

Such innovations are at an early stage but are likely to reshape possibilities for and challenges for financial system regulation.

Conclusion – Mutualising the Future

The final session summarized some key perspectives on the actions taken to date in the stabilizing the financial system, and focused in particular on the questions of ‘who decides?’ and ‘who can lead?’ in harnessing financial system disruption for sustainable development.

“How can we now make the system work for longer term financing? We have stabilised the system, but need to make it work with inclusiveness, and to foster long term growth.”

Luiz Awazu Pereira da Silva, Deputy Governor in charge of Financial Regulation, Central Bank of Brazil

Luiz Awazu Pereira da Silva reinforced the need to focus on the broader purpose of the financial system in supporting progress towards sustainable development, a point reinforced by Sylvie Goulard in her comment, “we cannot afford to waste so much human capital”. She further highlighted the growing concerns over the disconnects between the impacts of financial market develop-



“We have no institution for finance. The G20 is not a treaty institution. So we proceed by consensus. Can we go for a global system and a handling of global finance by a new institution that would take decisions and impose them? I don’t think we are ready for that. Institutions need to remain independent. This is an argument for sticking with the consensus approach.”

Jean-Claude Trichet, Chairman, Group of Thirty, Former President, ECB; Honorary Governor, Banque de France



“To make financial regulation more adaptable to the greater economic and social challenges we face, we need it to be more agile, to better integrate the micro and macro perspectives and to ensure a higher accountability of all actors involved, including supervisors.”

Denis Duverne,
Deputy Chief Executive Officer, AXA

ments on people’s lives and the real economy – including the basis on which decisions are made regarding such developments. Whilst recognizing the need for some measure of independence of such decisions from the political domain, there was equally a need to clarify and strengthen the basis of accountability for actions that had such wide-ranging effects.

After his opening reflections, Jean-Claude Trichet stated that it was important - first and foremost - to recognise what had been achieved, “...the financial crisis could have been the worst in modern times - but it wasn’t, which is a testimony to the effectiveness of our

collective actions”. Accepting that there is still unfinished business, he agreed that an open question remains as to what changes would take place given that the full urgency of the crisis had passed, and who would lead such changes. Recognizing that many of the institutions with mandates to oversee the development of the financial system are not focused on longer-term, fundamental needs, there was doubt expressed by the panellists that such institutions, particularly at the international level, were ready and able to embrace a broader mandate.

“We need technical expertise, but we cannot just leave it to the technocrats. Elected representatives have the interests of the whole in mind, and legitimize the way we make the rules, but discretionary power has to remain independent.”

Sylvie Goulard, Member of the European Parliament, ECON Committee



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