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Investing in Resilient, Future-oriented Growth

Boosting Infrastructure Investment and Balancing Financial Regulation

B20 TASKFORCE

FINANCING GROWTH & INFRASTRUCTURE

POLICY PAPER 2017

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Foreword by the Taskforce Chair Oliver Bäte

Mobilizing private investments

Global fertility peaked in the 1960s, but the population challenge lies in the long tail ahead as the number of people living on this planet steadily grows throughout this century. By 2050 the global population will rise from 7.3 billion to 9.7 billion and is expected to reach 11.2 billion by 2100.

Many countries will be hard pressed to meet the needs of their people. There are, for example, already considerable investment gaps in infrastructure, research, and development, as well as education. In infrastructure projects, no less than $3.3 trillion per annum – 3.8 percent of the global gross domestic product – would need to be invested worldwide by 2030 to keep pace with the population growth.

Yet, as governments pushed to restore stability and resilience in the wake of 2008 global financial crisis, infrastructure investment was neglected. What was overlooked is that infrastructure is a powerful lever for economic growth. In the short term, investments stimulate demand and create jobs. In the long term, as projects deliver the roads, bridges, hospitals, schools, airports, and utilities needed in a modern economy, investments drive productivity, deepen markets, and make economies more competitive.

There is increasing awareness that a more balanced policy mix is required to deliver a stronger path for growth and financial stability. The G20 has already taken actions to improve the environment for infrastructure investment, however, as this paper reports, more must be achieved so private investors can undertake the long-term, capital intensive investments such complex projects demand.

Improving investment conditions includes providing greater transparency and quality of information to the private sector on investible infrastructure projects. We also need better risk sharing and greater stability and certainty in the legal and tax environment for investors – for the entire duration of long-term infrastructure projects.

If we fail to make the necessary investment to improve the quality of life for an increasing world population, we will only further fuel existing public scepticism about our ability to deliver. We therefore welcome G20 Germany's prioritization of the need to improve conditions for investment, particularly in Africa, as one of the three guiding principles in the G20 finance tracks.

Sincerely,

Oliver Bäte
Chair of the B20-Taskforce on Financing Growth & Infrastructure
Chairman of the Board of Management of Allianz SE

Recommendations

Recommendation 1: Boosting Infrastructure Finance – G20 members should boost infrastructure finance by developing and promoting bankable and investment-ready infrastructure project pipelines, enhancing the role of Multilateral Development Banks (MDBs) as catalysts for private sector investment, and fostering green finance markets.

Policy Action 1.1: Developing and Promoting Bankable and Investment-Ready Infrastructure Project Pipelines – The G20 should ask the Global Infrastructure Hub (GIH), in conjunction with the World Bank and other MDBs, to develop and promote bankable and investment-ready infrastructure project pipelines through dedicated portals allowing access to project information, through the standardization of documentation, and by sharing and adopting best practices on private finance for public infrastructure.

Policy Action 1.2: Enhancing the Role of MDBs – The G20 should encourage MDBs to further expand their role as catalysts for private sector investment, for example, through extending guarantees and co-financing, with a clearer focus on the construction phase of infrastructure projects, and enhanced exchange with private stakeholders.

Policy Action 1.3: Fostering Green Finance – The G20 and G20 members should foster the growth of green finance markets through commonly accepted terminologies and concepts, improved publication of information, and the development of international standards for proportionate and consistent market regulation.

Recommendation 2: Designing Growth-Enhancing Financial Regulation – The G20 should reaffirm its support for international cooperation, while calling on international financial standard-setting bodies and national regulators to increase regulatory coherence, transparency in the development and implementation of regulation, and accountability to all G20 objectives, as well as facilitate the digitalization of finance.

Policy Action 2.1: Enhancing Evidence-Based Standard Setting – The G20 should prompt international financial standard-setting bodies to adhere to good regulatory practices and to more rigorously evaluate potential effects of new rules on the economy, to support and balance stability and economic growth.

Policy Action 2.2: Strengthening Financial Regulatory Coherence – The G20 should request the FSB to set up a more formal mechanism for continuous and systematic cross-border dialogue between national regulators to improve coherence in the implementation and interpretation of international standards.

Policy Action 2.3: Facilitating Digitalization of Finance – The G20 members should facilitate the digitalization of finance by creating an innovation-friendly environment that favours sustainable growth and digital financial inclusion, while at the same time carefully designing rules that address risks and guarantee a level playing field across all players and countries.

Recommendation 3: Establishing a Stable and Investment Friendly Environment – The G20 members should improve conditions for foreign direct investment by supporting a stable legal and regulatory environment – including greater tax certainty.

Policy Action 3.1: Improving Legal and Regulatory Frameworks – The G20 members should, in building on the G20 Guiding Principles for Global Investment Policymaking and the development of the G20 Investment Facilitation Package, put particular emphasis on the stability and certainty of legal and regulatory frameworks for foreign direct investors.

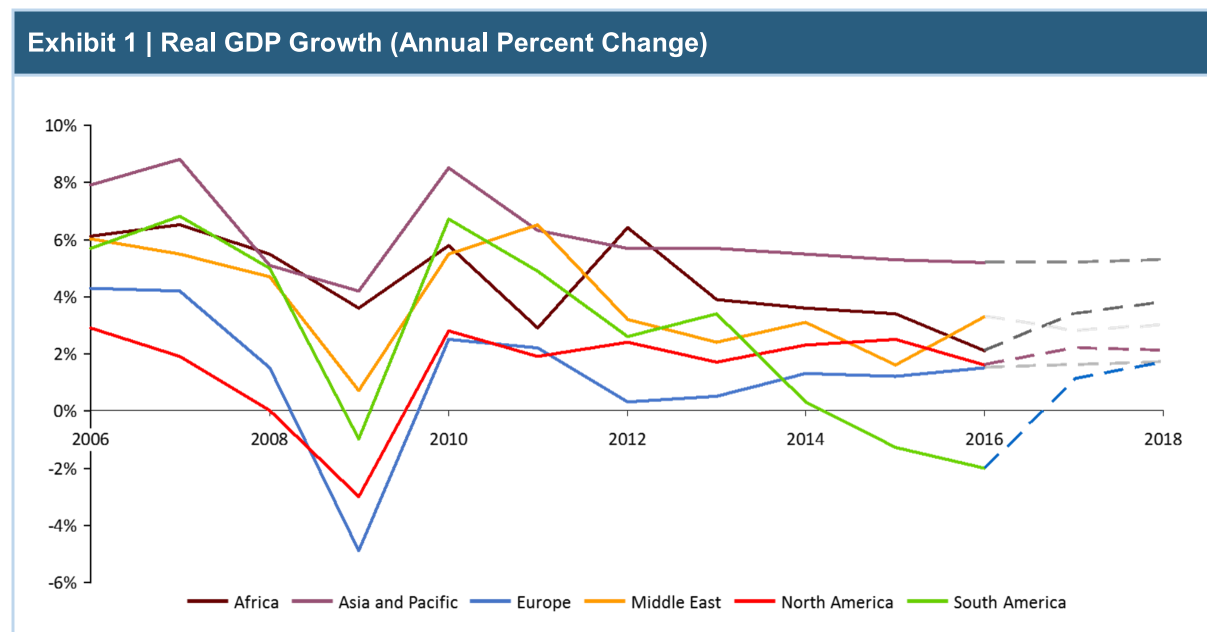
Policy Action 3.2: Ensuring Greater Certainty in Taxation – The G20 members should enhance the certainty of tax systems to support a stable international tax environment by prioritizing consistency, simplification, support for investment, and capacity building in tax authorities.

Introduction

While stability and resilience of financial markets has greatly improved since the recent economic and financial crisis, global economic growth remains subdued (see Exhibit 1). Many countries are still struggling with high unemployment rates (including high youth unemployment) and increasing socio-economic inequality, feeding into populist sentiment.

Economic growth and growth prospects in recent years have shown the limitations of monetary policy. Both, the International Monetary Fund (IMF) and the Organisation for Economic Co-operation and Development (OECD) have justifiably called for a more balanced policy mix to deliver a stronger path for sustainable growth and financial stability.[1] The private sector has a central role to play in such an approach as the main source of productivity growth, innovation, and employment. Governments therefore need to redouble their efforts to improve the business environment. This includes 1. facilitating private infrastructure investment, 2. implementing more coherent and growth-enhancing financial regulation, and 3. supporting foreign direct investment. For economies to prosper, political stability is indispensable; uncertainty is detrimental. The G20 has an important role to play in creating the right environment for business and economic growth that is future-oriented and benefits all.

Exhibit 1 | Real GDP Growth (Annual Percent Change)



Source: International Monetary Fund, *World Economic Outlook Database,* accessed February 18, 2017, https://www.imf.org/external/pubs/ft/weo/2016/02/weodata/index.aspx.

Infrastructure is a powerful lever for economic growth, with both a positive short- and long-term impact. In the short-term, investment in infrastructure stimulates economic demand and creates jobs. Over the medium- and longer-term, well-designed infrastructure projects drive productivity, by for example deepening markets and making economies more competitive. Roads, bridges, hospitals, schools, airports, ports, water, waste, electricity and telecommunications' infrastructure – are all the foundation of a modern economy and vital for socio-economic development. Productive infrastructure is also fundamental to achieving the United Nations Sustainable Development Goals (SDGs) of inclusivity, sustainability, and climate action. It also plays a vital role in reaching the COP21 Paris Agreement's goal to limit the global temperature increase to below 2°C.

[1] International Monetary Fund, *Global Financial Stability Report: Fostering Stability in a Low-Growth, Low-Rate Era* (Washington D.C.: 2016), VIII, https://www.imf.org/external/pubs/ft/gfsr/2016/02/pdf/text.pdf.

The G20 has already taken a number of actions to improve the environment for investment in infrastructure. The G20 Investment and Infrastructure Working Group (IIWG) was established under Russia's G20 Presidency in 2013. The Global Infrastructure Initiative and the Global Infrastructure Hub (GIH) were called into life under Australia's G20 Presidency in 2014 to grow the global pipeline of quality bankable and investment-ready[2] infrastructure projects. The Global Connectivity Alliance was established under China's G20 Presidency in 2016 to improve connectivity within, between and among countries. Yet, the financing gap remains considerable.

A number of factors differentiate investment in infrastructure from other types of investment: Infrastructure investment is long-term, capital intensive, and exposed to high levels of (economic and political) risk. Infrastructure projects are often complex and involve a large number of parties. The main financing challenge is often not the lack of available finance but rather the lack of a supporting regulatory framework. To mobilize private investment in infrastructure, G20 members need to address the following needs: 1) the need for structured and accessible information about projects; 2) the need for a broader spectrum of financial instruments and vehicles to crowd-in capital of different classes of investors, as recommended in the "G20/OECD Guidance Note on Diversification of Financial Instruments for Infrastructure and SMEs"[3], and 3) the need to improve the stability and reliability of the legal and regulatory environment.

The economic and financial crisis of 2007-2011 exposed many shortcomings in the financial system, its regulation and supervision. The G20 played an important role in managing the crisis, largely overcoming its direct consequences. Recent regulatory reforms, both domestic and international, have made markets more resilient. Banks have made significant progress in meeting increased capital requirements, building recovery and resolution planning, enhancing corporate governance standards and increasing liquidity buffers. Consultations around Insurance Capital Standards and a common framework for supervision of internationally active insurance groups (ComFrame) are moving ahead. Well-designed regulation and supervision are indispensable for well-functioning financial markets. However, not all regulations have had an undisputable positive effect.[4] The B20 has therefore repeatedly cautioned the G20 to optimize global financial regulations to support growth. As highlighted by the International Chamber of Commerce (ICC) in December 2016[5], the G20, however, has not paid enough attention to this.

In particular, regulatory coherence across countries has to be improved. International cooperation in the development and implementation of financial regulation is key. This is even more important with the continuous evolution of financial markets and the rapid digitalization of finance. Investment in FinTech[6] has grown from $1.7 billion in 2011 to $22.3bn in 2015.[7] The digitalization of finance offers opportunities, but also poses new risks to financial stability. The G20 needs to find a balanced approach to the regulation of new financial services, creating an environment that allows business to embrace new technologies, while at the same time mitigating risks and ensuring a level playing field for all market players across all countries.[8]

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[2] A project is bankable and investment-ready if lenders (including banks, capital market participants, or other financiers without any preference) are willing to provide project financing or if equity investors are willing to take exposure in the project.
[3] G20 and OECD, *G20/OECD Guidance Note on Diversification of Financial Instruments for Infrastructure and SMEs* (Paris: 2016), 3-5, https://www.oecd.org/g20/topics/financing-for-investment/G20-OECD-Guidance-Note-Diversification-Financial-Instruments.pdf.
[4] Caldera-Sánchez et al., *Strengthening Economic Resilience: Insights from the Post 1970 Record of Severe Recessions and Financial Crises* (Paris: OECD, 2016), 4, accessed March 2, 2017, https://www.oecd.org/eco/growth/Strengthening-economic-resilience-insights-from-the-post-1970-record-of-severe-recessions-and-financial-crises-policy-paper-december-2016.pdf.
[5] ICC, *ICC G20 Business Scorecard, Sixth Edition* (Paris: 2016), 32-35, accessed March 2, 2017, https://cdn.iccwbo.org/content/uploads/sites/3/2017/01/ICC-G20-Business-Scorecard-December-2016.pdf.
[6] Defined as economic industry composed of companies that use technology to make financial systems more efficient and offer new technologic driven solutions (e.g. P2P Lending, digital payment, robo-advisory, blockchain, etc.).
[7] Accenture, *Fintech and The Evolving Landscape: Landing Points for The Industry* (2016), 4-5, https://www.accenture.com/t20161011T031409__w__/us-en/_acnmedia/PDF-15/Accenture-Fintech-Evolving-Landscape.pdf#zoom=50.
[8] For financial inclusion, please refer to the B20 Germany Cross-thematic Group Small and Medium Enterprises.

Last but not least, the G20 should place foreign direct investment (FDI) firmly at the centre of its discussions. FDI not only means much needed capital investment for many countries, it also supports the transfer of technology, expertise, and organizational capital between countries. FDI is thus a powerful driver for future-oriented and sustainable growth. However, there are still many hurdles to cross-border investment such as the complexity and inconsistency of rules, the lack of adequate mechanisms to protect against tax related risks, legal, regulatory and political instability, as well as the lack of effective dispute resolution mechanisms. Tackling these hurdles will be fundamental to channel capital particularly to less developed countries. It is also central to the implementation of the Compact with Africa, which the German G20 Presidency has placed high on the agenda of the G20 finance track. Regarding taxation and tax certainty – another important issue on Germany's G20 finance agenda – B20 Germany believes that the "Base Erosion and Profit Shifting" (BEPS) Project should be implemented in a coherent and coordinated way to avoid the risk of double taxation, increased tax uncertainty, and negative impacts on global value chains.

Recommendation 1: Boosting Infrastructure Finance

G20 members should boost infrastructure finance by developing and promoting bankable and investment-ready infrastructure project pipelines, enhancing the role of Multilateral Development Banks (MDBs) as catalysts for private sector investment, and fostering green finance markets.

Policy Actions	
1.1 **Developing and Promoting Bankable and Investment-Ready Infrastructure Project Pipelines** – The G20 should ask the Global Infrastructure Hub (GIH), in conjunction with the World Bank and other MDBs, to develop and promote bankable and investment-ready infrastructure project pipelines through dedicated portals allowing access to project information, through the standardization of documentation, and by sharing and adopting best practices on private finance for public infrastructure. • The G20 should mandate the GIH in close cooperation with MDBs to define a common template for the publication of project feasibility information. The template should include all the relevant criteria to assess whether a project is bankable and investment-ready, including risk and performance information. • The G20 should ask the GIH and the World Bank, in close cooperation with other relevant MDBs, to actively promote the use of local, regional and global portals that provide relevant information about infrastructure projects. • The G20 should mandate the GIH, in conjunction with the World Bank, to jointly develop a methodology for comparative economic efficiency analyses between conventional infrastructure provision and PPPs both at construction and post-construction stages. • The G20 should support the work of the OECD, in close cooperation with the GIH and the World Bank on the implementation of the G20/OECD Guidance Note on Diversification of Financial Instruments for Infrastructure and SMEs.	
Owner: G20, GIH, World Bank, MDBs	**Timing** 2017-2019
1.2 **Enhancing the Role of MDBs –** The G20 should encourage MDBs to further expand their role as catalysts for private sector investment, for example, through extending guarantees and co-financing, with a clearer focus on the construction phase of infrastructure projects, and enhanced exchange with private stakeholders. • The G20 should encourage MDBs to develop and rigorously apply evaluation guidelines to ensure that MDBs act as catalysts for private sector investment. • The G20 should support the GIH recommendations to require MDBs to set and report against multi-year goals around crowding-in private sector capital, as well as developing related resources and skills. • The G20 should request MDBs to make the Global Emerging Markets ("GEMs") Risk Database available for private stakeholders to increase transparency on risks and confidence in emerging markets.	
Owner: G20, MDBs	**Timing** 2017-2018
1.3 **Fostering Green Finance –** The G20 and G20 members should foster the growth of green finance markets through commonly accepted terminologies and concepts, improved publication of information, and the development of international standards for proportionate and consistent market regulation. • The G20 should reiterate the importance of developing Green Finance markets to achieve the SDGs and encourage coordination between existing green finance initiatives to develop a standardization framework that would facilitate the creation of a global green asset class across loans, bonds, equities, and funds.	

- To better evaluate performance and risk as well as to promote liquidity, the G20 should commission the International Organization of Securities Commissions (IOSCO) and the OECD to assess and endorse commonly accepted benchmarks and indices.
- G20 members should build on the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) and work towards its implementation, in particular through harmonized metrics endorsed by relevant industries and associations. This would enable investors to better assess and price climate related risk.
- The G20 should encourage the FSB to work with all relevant global policy-makers and standard setters to make sure the regulatory framework is calibrated to achieve balanced results in light of all G20 goals, addressing any inappropriate disincentives to long-term green investment.

Owner: G20, G20 members, MDBs, IOSCO, FSB **Timing** 2017-2020

Context

Long-term investment, such as in infrastructure, is a critical lever for economic growth and development. Yet, there is a huge investment gap. The McKinsey Global Institute estimates that the infrastructure investment needed to support currently expected rates of economic growth averages $3.3 trillion per annum through 2030 (see Exhibit 2) – a total of $49.1 trillion or 3.8 percent of global GDP. Emerging economies account for the biggest part of the investment required – 60 percent – due to increased urbanization as well as population and economic growth. The largest aggregated need is in power infrastructure ($14.7 trillion, 2016-2030), followed by roads ($11.4 trillion), water ($8.3 trillion), telecommunications ($7.5 trillion), and rail ($5.1 trillion).

Despite the great need, investment in infrastructure has declined as a share of GDP in eleven of the G20 economies since the financial and economic crisis.[9] Investment in infrastructure can provide economic stimulus, while the infrastructure itself can drive productivity and competitiveness, as well as improve the quality of life. It is a foundation for economic and social development and an important stepping-stone to fulfilling the SDGs. It also has a vital role in reaching the COP21 Paris Agreement's goal to limit the global temperature increase to below 2°C, compared to pre-industrial levels.[10] Infrastructure usually has a long lifespan, often across several decades. Approximately 75 percent of the infrastructure that will be in place in 2050 does not exist today.[11] Thus, there is not just a great need to bridge the infrastructure gap but also to channel investment to future-oriented, sustainable and resilient infrastructure projects.

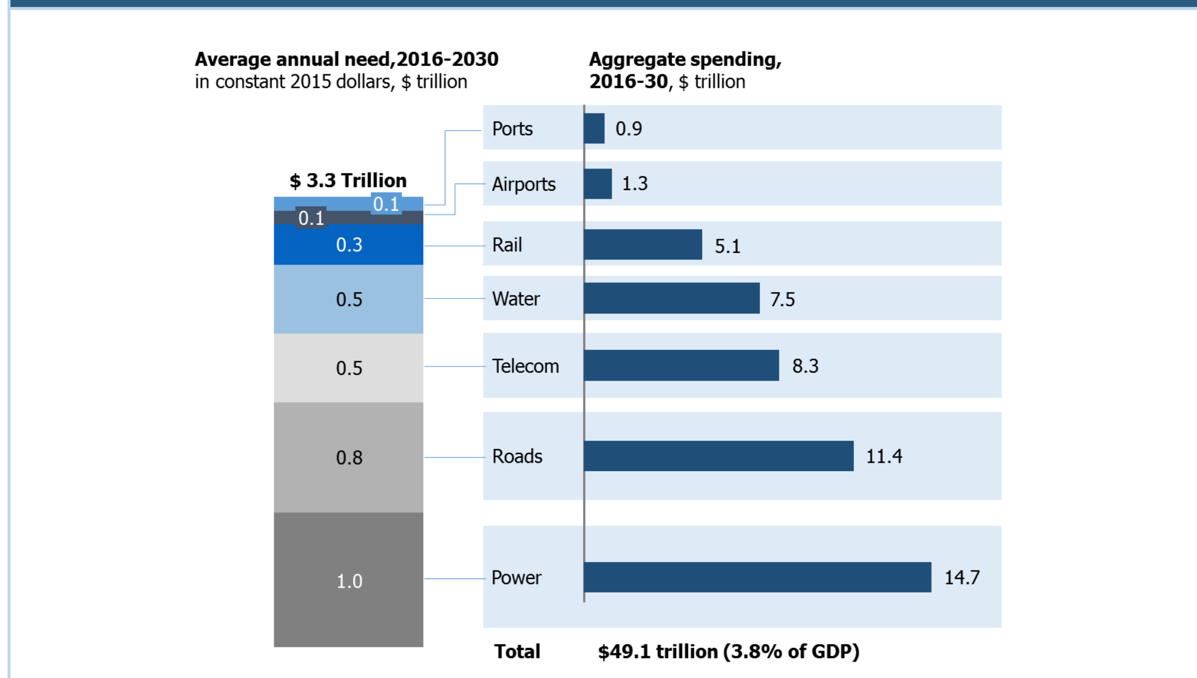
Historically, governments have funded most infrastructure development. However, given rising debt, governments' ability to close the infrastructure gap is limited. Investment by the public sector will remain key, but the involvement of the private sector can maximize available resources and bring expertise and innovation to infrastructure development.

[9] Woetzel et al., *Bridging Global Infrastructure Gaps* (McKinsey Global Institute: 2016), 1-2, http://www.mckinsey.com/~/media/McKinsey/Industries/Capital%20Projects%20and%20Infrastructure/Our%20Insights/Bridging%20global%20infrastructure%20gaps/Bridging-Global-Infrastructure-Gaps-Full-report-June-2016.ashx.

[10] Please, refer to the B20's Energy, Climate & Resource Efficiency Taskforce for specific recommendations related to climate change.

[11] Egler, Hans-Peter and Raul Frazao, *Sustainable Infrastructure and Finance. How to Contribute to a Sustainable Future*, Inquiry Working Paper 16/09 (2016), 4, http://unepinquiry.org/wp-content/uploads/2016/06/Sustainable_Infrastructure_and_Finance.pdf.

Exhibit 2 | Infrastructure Investment Need Until 2030



Source: Woetzel et al., *Bridging Global Infrastructure Gaps* (McKinsey Global Institute: 2016), 5, op. cit.

The investment gap in infrastructure is not the result of a shortage of capital. Real long-term interest rates are low, there is ample supply of long-term finance, interest by the private sector is high, and the benefits are obvious. So what holds back investment? Infrastructure investment faces several impediments both on the financing and funding side.

The main challenge is to find bankable and investment-ready projects.[12] Furthermore, due to the long-term nature of infrastructure projects, legal and political certainty is paramount.

Infrastructure has been an important item on the G20 agenda since 2011. Under the Chinese Presidency, the G20 Investment and Infrastructure Working Group had the following focal areas: 1) encouraging Multilateral Development Banks (MDBs) to advance infrastructure investment by taking joint actions, 2) promoting global infrastructure connectivity, and 3) exploring diversified financing approaches and fostering private financing. The B20 supports the efforts of the G20. G20 China has delivered useful guidance to help improve the pipeline of high-quality bankable and investment-ready projects and promote the creation of financial instruments to facilitate infrastructure investment, as highlighted in the ICC G20 Scorecard.[13] However, some critical aspects still need to be addressed. While challenges vary at different stages of a project – planning, construction, and operation –, in general, greater attention should be given to the following issues:

- *Lack of transparency*: In many jurisdictions, the private sector lacks insight on the pipeline of infrastructure projects. Reasons for this include a lack of accessible data from relevant procurement authorities, inconsistent disclosure and documentation requirements, fragmented project planning, and lack of understanding of best practices among planning authorities.

[12] Thorsten Ehlers, *Understanding the Challenges for Infrastructure Finance*, BIS Working Papers No 454, (BIS: 2014), 1-2, http://www.bis.org/publ/work454.pdf.
[13] ICC, *G20 Business Scorecard, Sixth Edition* (Paris: 2016), 9-10, op. cit; B20 China, *B20 Infrastructure Taskforce Policy Paper* (Beijing: 2016), accessed February 18, 2017, http://upload.b20-china.org/upload/file/20160810/1470798976425048023.pdf.

- *Lack of consistency*: The lack of a commonly accepted terminology, as well as regulatory and prudential hurdles, hamper the expansion of green finance and progress towards a low-carbon society.
- *Liquidity constraints*: The absence of an active secondary market prevents the development of infrastructure as an asset class. Promoting benchmarks, developing domestic capital markets (including local currency bond markets), and providing suitable hedging for foreign investors, would be concrete steps to improve the liquidity of infrastructure assets and help expand the availability of private resources.
- *Lack of balance sheet turnover*: Enabling MDBs and banks to have a broader range of financial instruments (e.g. funds, securitization, etc.) to transfer risks to other interested investors, when the infrastructure facility moves into the operational phase, would increase the turnover of their balance sheet and make room for new investment opportunities.
- *Policy and regulatory uncertainty*: Uncertainty around legal frameworks governing infrastructure projects, changing government priorities and regulation i.e. political risk, and project contract issues, have a severely negative impact on infrastructure finance.[14]

Access to information is key. Investors often do not have the necessary information to assess an infrastructure project properly. Not just across countries, but also within countries, infrastructure projects often have very different contractual structures. Regulatory frameworks differ. Thus, initiatives such as the GIH, which increase the visibility on government-initiated projects that are being considered or are under development, should be strengthened.

Policy Action 1.1: Developing and Promoting Bankable and Investment-Ready Infrastructure Project Pipelines

The G20 should ask the Global Infrastructure Hub (GIH), in conjunction with the World Bank, and other MDBs, to develop and promote bankable and investment-ready infrastructure project pipelines through dedicated portals allowing access to project information, through the standardization of documentation, and by sharing and adopting best practices on private finance for public infrastructure.

A key impediment to private sector investment in infrastructure projects is the lack of transparency. The B20 recognizes the important steps taken during the G20 Chinese Presidency, with the endorsement of the Global Infrastructure Connectivity Alliance Initiative[15] and the G20/OECD Guidance Note on Diversification of Financial Instruments for Infrastructure and SMEs.[16] Nevertheless, in order to maximize market participation and accelerate the development of infrastructure as an asset class, there is still a great need to improve information as well as standardization and harmonization in the infrastructure capital market.

For this reason, the G20 should mandate the GIH to design a common template for the publication of project feasibility information that each jurisdiction could use, while maintaining the flexibility to include

[14] B20 China further pointed out: a lack of rigorous national infrastructure planning, simplistic or subjective project evaluation, suboptimal project preparation, and insufficient revenue streams. B20 China, *B20 Infrastructure Taskforce Policy Paper* (Beijing: 2016), op. cit.

[15] The Global Infrastructure Connectivity Alliance Initiative aims to enhance cooperation and synergies at global level of existing and future global infrastructure and trade facilitation programs and improve connectivity within, between, and among countries. G20, *Global Infrastructure Connectivity Alliance Initiative*, accessed on March 26, http://www.g20.utoronto.ca/2016/global-infrastructure-connectivity-alliance.pdf.

[16] G20, OECD, *G20/OECD Guidance Note on Diversification of Financial Instruments for Infrastructure and SMEs*, (August 2016),https://www.oecd.org/g20/topics/financing-for-investment/G20-OECD-Guidance-Note-Diversification-Financial-Instruments.pdf.

other requirements and information on a project basis. This template should contain all the relevant risk and performance criteria (e.g. financial, economic, social, and environmental) that make a project bankable and investment-ready. This effort would be complementary to the International Infrastructure Support System (IISS) template, developed by the Sustainable Infrastructure Foundation in collaboration with the Asian Development Bank.[17] As also highlighted by the European Financial Services' Roundtable (EFR),[18] such a template should contain four key elements:

1. *Disclosure and reporting requirements*: An overview of disclosure and reporting requirements on an initial and periodical basis, as well as for event-based disclosure, when such events impact the economic value of the project.
2. *Debt terms and documentation*: Disclosure requirements for infrastructure debt obligations, while taking into account that some aspects of processes/bids may need to remain confidential.
3. *Administration and arbitration*: Information requirements on administrative responsibilities, e.g. creditor decision-making, cash flow and collateral management, as well as information on any international arbitration court and potential compensation payments related to unforeseen events.
4. *Third party advisors*: Common standards for engagement, liability, and disclosure requirements for third party advisors, such as technical advisors, consultants, and auditors.

Standardization will help investors to prioritize projects on the basis of their readiness and expected returns.

In addition, a key impediment to private sector investment is the lack of structured information about projects with financing needs. Only half of the G20 countries publish upcoming infrastructure project pipelines,[19] and often the information is not shared across countries.

Portals and platforms[20] are effective information tools to provide transparency around projects, to ensure consistency of information, and to enable qualified investors to identify investible projects. Examples of such platforms include the IISS[21], the GIH Project Pipeline Platform, and the European Investment Project Portal (EIPP). While the first two aim to improve the quality and transparency of project preparation, the latter aims to increase the visibility of investible projects (see Exhibit 3).

However, more needs to be done. For example, often the regional dimension is missing. For this reason, the G20 should ask the GIH and the World Bank to actively promote the use of local, regional and global portals, which provide information related to the different phases and aspects of a project, e.g. technical, economic, financial, environmental, and social governance.

[17] Sustainable Infrastructure Foundation, *International Infrastructure Support System*, accessed on March 26, http://www.public.sif-iiss.org.
[18] EFR, *Facilitating European Infrastructure Investment* (Brussels: 2015), 3, accessed on January 6, 2017, http://www.efr.be/documents/news/EFR%20Strategic%20paper%20on%20Infrastructure.pdf.
[19] B20 Turkey, *Infrastructure & Investment Taskforce Policy Paper,* (Antalya: 2015), 20, accessed on January 6, 2017, http://b20turkey.org/policy-papers/b20turkey_infra.pdf.
[20] Platforms refer to the project preparation activities and the improvement of the quality of projects. Portals of projects refer to tools aiming to facilitate visibility and knowledge sharing.
[21] Developed by the Sustainable Infrastructure Foundation, in collaboration with the Asian Development Bank, AfDb, EBRD, IADB, Islamic Development Bank, World Bank Group (PPIAF), CAF, BNDES, and DBSA.

Exhibit 3 | GIH Platform, Infrastructure Information Support System, and European Investment Project Portal

GIH Project Pipeline[1]

In 2016, the GIH launched its Project Pipeline, an online platform to provide the private sector with free information about government infrastructure projects across the world. The portal provides early stage visibility of potential projects and then tracks projects as they progress through their lifecycle from conception to operation. Australia, China, Colombia, Korea, Mexico, New Zealand, and Uruguay are participating in the GIH Project Pipeline, with some of their major infrastructure projects already on the online database.

Infrastructure Information Support System[2]

The IISS is an online cloud-based management tool that helps public sector agencies to improve their project preparation. Launched in January 2016, by the end of 2016, more than 100 projects were available on the platform. IISS offers several advantages to the private sector:

- visibility on public sponsors during the development phase and projects requiring finance;
- a view on the timetables of the projects;
- the ability to follow developments in different markets and to compare investment alternatives.

The European Investment Project Portal[3]

The EIPP is an online portal established by the European Commission under the Investment Plan for Europe. The EIPP enables EU-based private and public project promoters to provide information about their investment projects and increase their visibility to investors. The EIPP also facilitates knowledge sharing and showcases the interdependence between the public and private sectors.

Source: 1. GIH, *GI Hub Launches Project Pipeline*, accessed February 17, 2017, http://globalinfrastructurehub.org/gi-hub-launches-project-pipeline; 2. Sustainable Infrastructure Foundation, *About IISS*, accessed February 17, 2017, http://www.public.sif-iiss.org/#about-iiss; 3. European Commission, *About EIPP,* accessed February 17, 2017, https://ec.europa.eu/eipp/desktop/en/about.html.

Finally, the conditions for fostering successful Public Private Partnerships (PPP) need to be improved. Even in economies where PPPs are more common, they only account for around 10-15 percent of investments in economic infrastructure.[22] PPPs, while not the only solution for infrastructure financing, can play an important role where the right conditions exist:

- there is economic value for the project;
- there is clear transfer of risk between the public and private partner;
- there is a revenue stream that would provide the private partner with an economic return.

The G20 should mandate the GIH and the World Bank to develop a joint-G20 methodology for comparative economic efficiency analyses for conventional infrastructure provision and PPPs. The B20 welcomes the work done by the OECD and the World Bank on the topic e.g. WBG PPP Guidelines[23], OECD/WBG PPP Project Checklist[24], the World Bank's Benchmarking PPPs Procurement, and WBG framework for disclosure[25]. However, more work is required to develop international guidelines that go beyond country-level PPPs to fully enable cross-border PPPs, including harmonized standards and a common platform for the publication of PPP project documentation, procurement, and contracting.

[22] Woetzel et al., *Bridging Global Infrastructure Gaps* (McKinsey Global Institute: 2016), 19, op. cit.
[23] World Bank Group, *Guidelines for Successful Public-Private Partnerships*, (16.2.2015), https://ppp.worldbank.org/public-private-partnership/library/guidelines-successful-public-private-partnerships.
[24] OECD, *Project Checklist for Public-Private Partnerships*, (August 8, 2015), https://www.oecd.org/g20/topics/development/WBG-OECD-Checklist-for-PPP-Projects.pdf.
[25] World Bank Group, *A Framework for Disclosure in Public-Private Partnership Projects*, http://pubdocs.worldbank.org/en/773541448296707678/Disclosure-in-PPPs-Framework.pdf.

Policy Action 1.2: Enhancing the Role of MDBs

The G20 should encourage MDBs to further expand their role as catalysts for private sector investment, for example, through extending guarantees and co-financing, with a clearer focus on the construction phase of infrastructure projects, and enhanced exchange with private stakeholders.

Under China's G20 Presidency, the G20 Finance Ministers and Central Bank Governors encouraged MDBs to take joint action to scale up investment in infrastructure in emerging markets.[26] MDBs are uniquely positioned to mobilize private capital for infrastructure projects, particularly where private infrastructure markets are underdeveloped, including by providing guarantees, first loss tranches, viability gap funding and mezzanine finance arrangements (see Exhibit 4). They help lower transaction costs, risk, and risk perception and encourage the institutional and legislative reforms required to provide political certainty.[27]

Exhibit 4 | IFC's Managed Co-Lending Portfolio Program

The aim of the Managed Co-Lending Portfolio Program (MCPP) of the International Finance Corporation (IFC) is to mobilize new sources of loan financing for power, transport, water and telecommunications projects. It provides an entry-point for institutional investors to increase their exposure to emerging market infrastructure projects with managed risk.

One of the major barriers to institutional investors allocating assets to infrastructure is their preference for investment-grade risk/return profiles. IFC addresses this through MCPP by providing a first-loss tranche of up to ten percent of each partner's portfolio.

For example, AllianzGI has established an infrastructure debt fund that will co-invest with IFC in a portfolio of loans, which IFC has granted to infrastructure projects in emerging economies and fulfil a defined set of eligibility criteria. The IFC will provide a first loss protection in order to reflect the risk/reward profile of an institutional investor.

Source: Allianz, *Allianz and IFC Sign Partnership to Invest in Emerging Markets Infrastructure Project*, accessed November 23, 2016, https://www.allianz.com/en/press/news/financials/stakes_investments/161005_allianz-and-ifc-sign-partnership/.

MDBs can be important catalysts for private sector engagement by:

- developing and systemizing the availability of infrastructure projects preparation facilities;
- increasing the visibility of planned projects to private investors;
- facilitating investment in higher-risk projects by co-investing;
- providing guarantees and risk insurance to the private sector in cases of political instability;
- creating new instruments to attract large institutional investors (see Exhibit 5)[28] and facilitating the transfer of brownfields investments to the private sector to free up public sector capacity for new investments.

[26] G20 China, *MDBs Joint Delcaration of Aspirations on Actions to Support Infrastructure Investment* (Beijing: 2016), 1, accessed on November 21, 2016, http://www.g20chn.org/English/Documents/Current/201608/P020160815360318908738.pdf.
[27] ICC, *ICC G20 Business Scorecard, sixth edition* (Paris: 2016), op. cit.
[28] Wang, Eva, *Multilateral Development Banks Bring Finance into Emerging Markets*, Clean Energy Finance Forum, (March 11, 2016) http://www.cleanenergyfinanceforum.com/2016/03/11/multilateral-development-banks-bring-finance-into-emerging-markets.

Exhibit 5 | An Innovative Risk Mitigation Support for the Turkish Elazig Hospital PPP

The European Bank for Reconstruction and Development (EBRD) and the World Bank's Multilateral Investment Guarantee Agency (MIGA) have developed an innovative risk-mitigation instrument to attract investment in emerging market infrastructure. It was first used for the Elazig Hospital PPP – a state-of-the-art hospital campus in the Turkish city of Elazig, in Eastern Anatolia –, in December 2016, when the two IFIs worked together to create a complementary product to mitigate risk and challenges faced by bond investors. EBRD committed to providing interim liquidity to mitigate the risks of construction and operation and MIGA provided a guarantee. Crucially, Moody's gave the Elazig project bond a rating, classified as a green and social bond and the first greenfield project bond in Turkey, two notches above the sovereign rating. The product has great potential to be replicated across many markets and sectors for PPPs and particularly in countries with an investment grade rating of BB or BA, where there is a history of PPPs.

Source: MIGA, *Innovative Application of MIGA Guarantees Attracts Long-Term Investors to Elazig Hospital PPP in Turkey*, accessed March 3, 2017, https://www.miga.org/Lists/Press%20Releases/CustomDisp.aspx?ID=523&pv=s&pv=s&pv=s&pv=s.

The B20 appreciates the important role MDBs play as catalyst for private capital and welcomes their efforts to scale up collective actions to enhance the quality of project preparation in emerging markets and developing countries. Following the request of G20 Finance Ministers, the MDBs announced joint actions to stimulate infrastructure investment, including the delivery of the MDB Response to the G20 MDB Balance Sheet Optimization Action Plan and the Joint Declaration of Aspirations on Actions to Support Infrastructure Investment in 2016. However, the positive role of MDBs could be further enhanced. The B20 welcomes the G20 Finance Ministers and Central Bank Governors Communiqué[29] of March 2017 calling on MDBs "to finalise Joint Principles by [their] next meeting and develop ambitions on crowding-in private finance by the Leaders' Summit in July 2017"[30].

The G20 should encourage MDBs to develop common evaluation guidelines so that they can be true enablers of added value projects, i.e. addressing market failures by expanding equitable risk-sharing mechanisms. The MDB Task Force on Measuring Private Investment Catalyzation (the MDB Task Force) has presented an initial set of proposals to harmonize definitions and metrics for MDBs' core financing activities. As the GIH points out, there has been good progress to date, including a commitment to jointly report on these measures. However, the MDBs have not yet committed to adopting these metrics to measure their own performance.[31]

It is crucial that existing principles are rigorously applied. MDBs should adhere to their own best practice frameworks, where they exist, and adapt official lending policies where required.

[29] G20 Germany, *Communiqué Finance Ministers and Central Bank Governors*, (Baden-Baden: 2017), 2, accessed on March 20, 2017, http://www.bundesfinanzministerium.de/Content/EN/Standardartikel/Topics/Featured/G20/g20-communique.pdf?__blob=publicationFile&v=3.
[30] Ibid.
[31] Global Infrastructure Hub, *Report to G20 Deputy Finance Ministers and Deputy Central Bank Governors on MDB Internal Incentives for Crowding-in Private Investment in Infrastructure*, (2016), VII, http://www.bundesfinanzministerium.de/Content/EN/Standardartikel/Topics/Featured/G20/G20-Documents/2017-Germany-GIH-report-to-G20.pdf?__blob=publicationFile&v=4.

Exhibit 6 | Global Infrastructure Forum

The Global Infrastructure Forum, established in April 2016, aims to enhance coordination among MDBs and their development partners. The focus lies on financing economically, financially and socially sustainable infrastructure. The forum is jointly organized by the following MDBs: African Development Bank, Asian Development Bank, Asian Infrastructure Investment Bank, European Bank for Reconstruction and Development, European Investment Bank, Inter-American Development Bank, Islamic Development Bank, New Development Bank BRICS, and the World Bank Group, in close partnership with the United Nations (UN).

Source: PPP Knowledge Lab, *Global Infrastructure Forum 2016*, accessed February 23, 2016, https://pppknowledge-lab.org/global-infrastructure-forum-2016.

At the G20 meeting in Chengdu, China in July 2016, the G20 Finance Ministers and Central Bank Governors asked the GIH to "work with the MDBs to assess internal incentives with regard to crowding-in private finance and to report to our deputies in December 2016".[32] In December 2016, the GIH presented its findings. The G20 should acknowledge the GIH recommendations for MDBs to set multi-year goals to support the mobilization of private capital, to report on their progress, and to develop the related resources and skill sets required. The EBRD, for example, monitors progress through: 1) Annual Mobilized Investment (AMI) for measuring and monitoring the direct mobilization of private investment on its projects; and 2) the "Transition Impact", measuring the degree to which an individual project either involves direct private sector participation in any given project or creates conditions that facilitate future investments by the private sector in a specific country.

Finally, an increased information exchange between MDBs and the private sector is required to support the establishment of infrastructure as a specific and distinct asset class. For example, MDBs should provide the private sector with access to the Global Emerging Markets Risk Database (GEMs), which pools data on the credit performance of emerging markets (see Exhibit 7). This would build transparency and confidence in emerging markets amongst all stakeholders, including rating agencies, and help private investors to better assess infrastructure risk and calibrate internal risk models.

Exhibit 7 | Global Emerging Markets Risk Database (GEMs)

GEMs is the largest default and loss database for the emerging markets. It was created by the European Investment Bank (EIB) and the International Finance Cooperation (IFC), a member of the World Bank Group, in 2009. Its objectives are to foster cooperation among International Financial Institutions (IFIs) and MDBs, to contribute to the development of financial markets in emerging countries and to promote industry best practices in the field of risk management.

The database is accessible only to the member MDBs. In 2015, it included approximately 7,700 counterparts, 1,600 default events, and 1,750 resolved contracts. The information in the database is gathered through standardized data collection processes, with the counterparts' identities anonymous and data confidentiality preserved. The data gathered are used to calculate and report default rates and rating migrations of the members' counterparties and the recovery rates of defaulted projects.

The risk database and common methodology adopted by EIB and IFC have been reviewed over time. Standard & Poor's validated the GEMs methodology and its data quality in 2009, Moody's conducted another independent examination of the GEMs operations in 2013, and another Data Review Exercise was conducted in 2016.

Source: GEMs, *About GEMs*, accessed February 17, 2017, http://www.gems-riskdatabase.org/gems-database/index.htm.

[32] Ibid, 1.

Policy Action 1.3: Fostering Green Finance

The G20 and G20 members should foster the growth of green finance markets through commonly accepted terminologies and concepts, improved publication of information, and the development of international standards for proportionate and consistent market regulation.

In November 2016, the COP21 Paris Agreement entered into force. To fulfil the agreed "well below 2 degrees" goal, substantial investment in renewable energy and energy efficiency is necessary. In 2009, the international community had committed itself to mobilizing $100 billion a year by 2020, from public and private sources, to support climate action in developing countries.[33] Based on pledges in September 2016, developed countries are projected to increase the levels of public climate finance to around $67 billion by 2020 compared to $44 billion in 2014.[34] Despite the promising increase, the $100 billion goal is still far from reach.

Green Finance can play a crucial role not only in helping to meet the climate goals, but also to fulfil the SDGs. For the financial sector, Green Finance can be captured as "financial products and services, under the consideration of environmental factors throughout the lending decision-making, ex-post monitoring, and risk management processes".[35] In a broader sense, the G20 Green Finance Study Group, (GFSG), established in early 2016 under the Chinese G20 Presidency, defines Green Finance as "financing of investments that provide environmental benefits in the broader context of environmentally sustainable development".[36] While prevention and mitigation of climate change feature prominently among the goals of Green Finance, other goals include reductions in air, water and land pollution, as well as improved energy efficiency, while utilizing existing natural resources.[37]

One of the prominent instruments of Green Finance are green bonds. A green bond is differentiated from a regular bond by its label: the funds raised are to be used exclusively to finance or re-finance green projects, assets, or business activities.[38] Green Finance is still in its infancy.[39] The OECD estimated that labelled green bonds issued globally in 2015 represented less than one percent of total U.S. bond issuance alone and less than 0.2 percent of debt securities issued globally.[40] However, it is gaining traction. The value of labelled Green Bonds issuance rose from $12bn in 2013 to $91bn in 2016 (see Exhibit 8).[41]

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[33] Goals defined by developed country Parties in 2009 in Copenhagen, during the United Nations Framework Convention on Climate Change (UNFCCC).

[34] OECD, *2020 Projections of Climate Finance towards the USD 100 Billion Goal* (Paris: 2016), 6, https://www.oecd.org/environment/cc/Projecting%20Climate%20Change%202020%20WEB.pdf.

[35] Nannette Lindenberg, *Definition of Green Finance*, (2014), 1, https://www.die-gdi.de/uploads/media/Lindenberg_Definition_green_finance.pdf.

[36] Green Finance Study Group, *G20 Green Finance Synthesis Report*, (2016), http://unepinquiry.org/wp-content/uploads/2016/09/Synthesis_Report_Full_EN.pdf.

[37] The World Bank's IFC conducted a survey across financial institutions on the sectors/activities they include in their Green Finance definitions. The categories prioritized by the respondents were: adaptation (conservation, bio-system adaptation etc.), carbon capture and storage, energy efficiency (cogeneration, smart grid etc.), environmental protection (pollution control, prevention and treatment etc.), green buildings, green products and materials, renewable energy (solar, wind, hydro etc.), sustainable land management, (sustainable agriculture, forestry etc.) transport (urban rail/metro, electric, hybrid etc.), waste management (recycling, waste management etc.), and water (water efficiency, waste-water treatment etc.). Maheshwari, Aditi, Francisco Avendano and Peer Stein, *Measuring Progress on Green Finance - Findings from a Survey* (IFC, 2016), 10-11, http://unepinquiry.org/wp-content/uploads/2016/09/5_Outline_Framework_for_Measuring_Progress_on_Green_Finance.pdf.

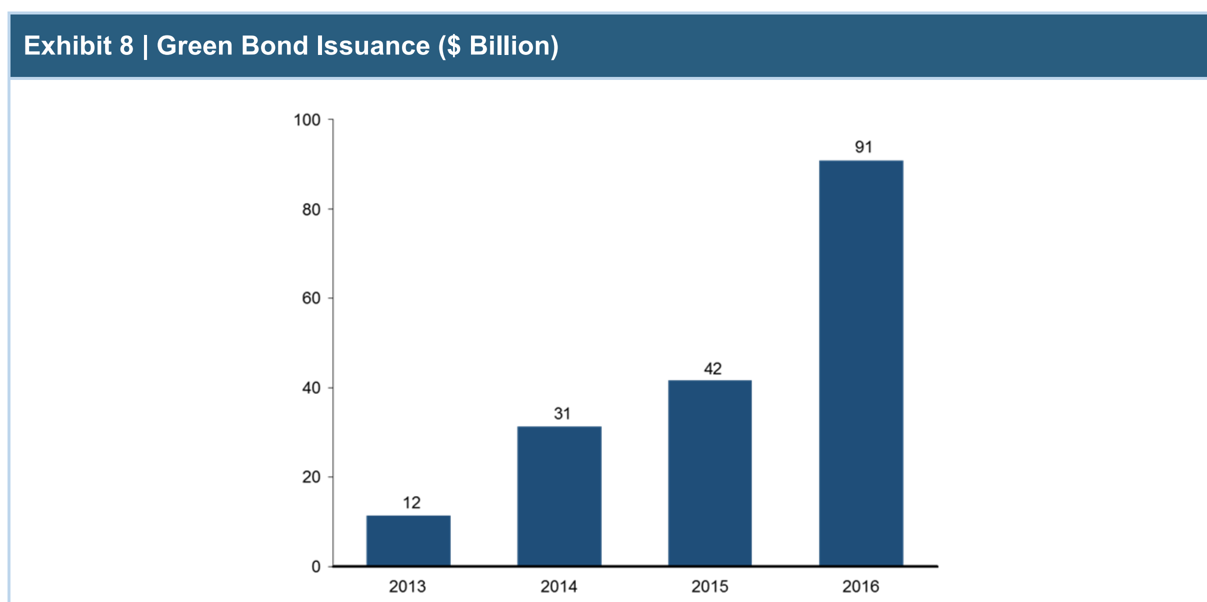
[38] OECD, *Mobilizing the Debt Capital Markets for Low-Carbon Transitions* (Paris: 2016), https://www.oecd.org/environment/cc/Green%20bonds%20PP%20[f3]%20[lr].pdf.

[39] IFC, *Greening the Banking System - Experiences from the Sustainable Banking Network* (2016), 1-4, http://www.ifc.org/wps/wcm/connect/712ae885-5985-4fa4-9c27-a089f84f4ab7/SBN_PAPER_G20_3rd+draft_updated.pdf?MOD=AJPERES.

[40] Munro, Peter, *The Rise of Green Bonds and The Green Bond Principles*, (November 8, 2016), https://www.environmental-finance.com/content/the-green-bond-hub/what-is-a-green-bond.html.

[41] Stallings et al., *Green Finance: Gaining Traction* (Washington D.C.: IIF, 2017), 3, https://www.iif.com/publication/research-note/green-finance-gaining-traction (access for IIF members only).

Exhibit 8 | Green Bond Issuance ($ Billion)



Source: Stallings et al., *Green Finance: Gaining Traction* (Washington D.C.: IIF, 2017), 3, op. cit.

Green Finance, as with other infrastructure projects, is impacted by the lack of bankable and investment-ready infrastructure project pipelines and therefore the recommendations provided under policy action 1.1. are also relevant here. However, developing the Green Finance market requires additional actions from the G20 due to the specificities of this market and its unexploited potential.

The B20 welcomes the G20's prioritization of Green Finance. Under the Chinese Presidency, the G20 recognized the need to scale up green financing. The Chinese Presidency also marked the launch of the GFSG. The German G20 Presidency confirmed its intention to continue the work on green finance. The B20 also welcomes the Green Finance Synthesis Report of the GFSG.[42] However, the B20 is disappointed that the G20 Finance Ministers and Central Bank Governors Communiqué of March 2017 pays no regard to green finance. Building on the B20 China recommendations[43], B20 Germany would like to see: 1) more coherence of green finance concepts, 2) more coherence of green finance disclosure, and 3) removal of regulatory hurdles.

The GFSG identified several impediments to the development of Green Finance (see Exhibit 9). Among others, it finds a lack of consistency in market terms and standards.[44] The IFC also points at incoherent data, finding that some areas of green finance are still difficult to document and quantify. Few countries systematically measure green financial flows or stocks.[45]

[42] Green Finance Study Group, *G20 Green Finance Synthesis Report* (2016), op. cit.
[43] B20 China, *B20 Infrastructure Taskforce Policy Paper* (Beijing: 2016), op. cit.
[44] Green Finance Study Group, *G20 Green Finance Synthesis Report* (2016), 14, op. cit.
[45] Maheshwari, Aditi, Francisco Avendano and Peer Stein, *Measuring Progress on Green Finance* (2016), 27, http://unepinquiry.org/wp-content/uploads/2016/09/5_Outline_Framework_for_Measuring_Progress_on_Green_Finance.pdf.

Exhibit 9 | Green Finance Challenges and Practices to Address Them

	Challenges			Practices
	Banking	Bond Markets	Institutional Investors	Country/Market practices to address challenges
Externalities	Inadequate compensation for positive externalities of green projects; inadequate penalties for negative externalities of polluting projects; inadequate price signals			In addition to fiscal and environmental policies: guarantees, concessional loans, PPP, demo projects, adoption of risk management principles and methods, green labelling, etc.
Maturity mismatch	Lack of appropriate financing instruments for long-term green projects			Green bonds, yieldcos, collateralized lending
Lack of clarity of definition	Lack of green loan definition	Lack of green bond definition	Lack of green asset definition	Development of green definitions and indicators
Information asymmetry	Lack of info on borrowers; excessive risk aversion	Lack of info and monitoring on use of proceeds	Lack of info on assets (environmental impacts and risks)	Voluntary disclosure guidelines for environmental impact and related financial risks, green bond verification, risk mitigation, policy signals, demo projects, anchor investments
Lack of analytical capabilities	Lack of capacity to assess impact on credit risk	Lack of capacity to assess impact on credit risk	Lack of capacity to assess impact on asset evaluation	Risk modelling, training, ratings, indices

Source: Green Finance Study Group, *G20 Green Finance Synthesis Report* (2016), op. cit.

A good starting point for further discussion are the Green Bond Principles. The Equator Principles and the Common Principles for Tracking Climate Mitigation Finance and Climate Change Adaptation Finance are other examples of frameworks providing some clarity on definitions (see Exhibit 10).

Exhibit 10 | Initiatives to More Systematically Define and Capture Green Finance

Green Bond Principles (GBP)[1]: The GBP are voluntary process guidelines. Their goal is to increase transparency and disclosure, thus promoting integrity in the development of the Green Bond market. They are to provide issuers guidance on the key components involved in launching a credible Green Bond. Furthermore, they are to help investors by ensuring availability of information necessary to evaluate the environmental impact of their Green Bond investments. Lastly, they are to support underwriters by moving the market towards standard disclosures which will facilitate transactions.

The Equator Principles (EPs)[2]: The EPs is a risk management framework, adopted by financial institutions, for determining, assessing and managing environmental and social risk. Its goal is to provide a minimum standard for due diligence to support responsible risk decision-making. Currently 89 Equator Principles Financial Institutions (EPFIs) in 37 countries have officially adopted the EPs, covering over 70 percent of international project finance debt in emerging markets.

Common Principles for Tracking Climate Mitigation Finance and Climate Change Adaptation Finance[3]: In 2015, the group of Multilateral Development Banks (MDBs), who jointly report on Climate Finance (The African Development Bank (AfDB); the Asian Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD); the European Investment Bank (EIB); the Inter-American Development Bank (IDB); and the International Finance Corporation (IFC) and World Bank from the World Bank Group (WBG)) and the International Development Finance Club (IDFC) agreed to work jointly towards improved understanding of definitions of the different approaches and principles for climate change adaptation finance tracking.

Source: 1. International Capital Market Association, *Green Bond Principles* (2016), http://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/green-bonds/green-bond-principles/. 2. Equator Principles, *The Equator Principles* (2013), accessed January 29, 2017, http://www.equator-principles.com; http://www.equator-principles.com/resources/equator_principles_III.pdf. 3. EIB, *Common Principles for Tracking Climate Mitigation Finance and Climate Change Adaptation Finance* (2015), http://www.eib.org/attachments/documents/mdb_idfc_adaptation_common_principles_en.pdf.

Avoiding a “one size fits all approach” is key since a single definition cannot adequately reflect contexts

and priorities in different countries or markets. However, too many definitions (e.g. each financial firm or jurisdiction defines green assets by itself) greatly increase the costs of assessing and comparing green finance across institutions, markets, and countries. Thus, the G20 should encourage the coordination between existing green finance initiatives to work on a standardization framework. This would facilitate the development of a global green asset class across loans, bonds, equities, funds, benchmarks, and indices.

The liquidity of green products could also be increased if the market was better equipped to measure risk and return profiles of green instruments. For this reason, the G20 should commission the International Organization of Securities Commissions (IOSCO) to evaluate and endorse commonly accepted benchmarks and indices characterizing risk and return profiles of green investments to evaluate the relative performance of these assets.

The recommendations published in December 2016 by the FSB Taskforce for Climate-related Financial Disclosure (TCFD)[46] aim to provide a voluntary disclosure framework that improves the ease of both producing and using climate-related financial disclosures (see Exhibit 11). The B20 welcomes the TCFD's work in this field and sees it as a first step towards an internationally accepted standard in climate-related financial disclosure. The G20 should encourage its members to build on the TCFD recommendations and work towards their implementation, in particular through harmonized metrics endorsed by relevant industries and business associations.

Exhibit 11 | FSB-TCFD Recommendations and Supporting Recommended Disclosures

Governance	Strategy	Risk Management	Metrics and Targets
Recommendations			
Disclose the organization's governance around climate-related risks and opportunities	Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	Disclose how the organization identifies, assesses, and manages climate-related risks.	Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities.
Recommended Disclosures			
• Describe the board's oversight of climate-related risks and opportunities • Describe management's role in assessing and managing climate related risks and opportunities.	• Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term • Describe the impact of climate related risks and opportunities on the organization's businesses, strategy, and financial planning • Describe the potential impact of different scenarios, including a 2° c scenario, on the organization's businesses, strategy, and financial planning.	• Describe the organization's processes for identifying and assessing climate-related risks. • Describe the organization's processes for managing climate related risks. • Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	• Disclose the metrics used by the organization to assess climate related risks and opportunities in line with its strategy and risk management process. • Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks. • Describe the targets used by the organization to manage climate related risks and opportunities and performance against targets

Source: Taskforce on Climate-related Financial Disclosure, *Recommendations of the Task Force on Climate-related Financial Disclosures*, op. cit.

A recent report by the Swiss Finance Institute[47] is one of many that identifies regulation as one of the barriers to increasing the share of sustainable finance, with the classification of certain types of sustainable investments as illiquid or otherwise alternative investments, leading to higher capital requirements. For this reason, the G20 should encourage global policy-makers to calibrate regulatory and prudential

[46] Taskforce on Climate-related Financial Disclosure, *Recommendations of the Task Force on Climate-related Financial Disclosures* (FSB, 2016), accessed January 8, 2017, https://www.fsb-tcfd.org/wp-content/uploads/2016/12/16_1221_TCFD_Report_Letter.pdf.

[47] Krauss, Annette, Philipp Krüger and Julia Meyer, *Sustainable Finance in Switzerland: Where Do We Stand?* (Zürich: Swiss Finance Institute, 2016), 26, https://www.unige.ch/gsem/files/1414/7574/1085/WP_SustainableFinance_WEB.pdf.

market-based frameworks to address disincentives for long-term green investment. The FSB should work with all relevant global standard-setters to make sure the regulatory framework is calibrated to achieve balanced results in light of all G20 goals.

Finally, the G20 should encourage MDBs to increase collaboration with the private sector to advance learning for Green Finance good practices, building on existing initiatives. A valuable example is the initiative undertaken in 2015 by the European Investment Bank (EIB) in collaboration with public and private financial institutions from both developing and developed countries: Five voluntary Climate Mainstreaming Principles[48] were signed to support the integration of climate considerations into their investments and advisory functions (see Exhibit 12).

Exhibit 12 | Principles to Mainstream Climate Action within Financial Institutions

On December 2015, following the COP21 climate talks in Paris, the EIB and other leading financial institutions signed five voluntary principles to further integrate climate considerations into their investment and advisory functions, to increase efforts to address climate change. The principles were developed based on practices implemented by financial institutions worldwide and outline how financial institution can:

- commit to climate strategies,
- manage climate risks,
- promote climate smart objectives,
- improve climate performance,
- account for climate action.

Source: EIB, *EIB and Global Banks Join Forces to Strengthen Climate*, accessed on January 19 2017, http://www.eib.org/infocentre/press/releases/all/2015/2015-293-eib-and-global-banks-join-forces-to-climate-action.htm.

[48] EIB, *EIB and Global Banks Join Forces to Strengthen Climate* (7 December 2015), accessed February 7, 2017, http://www.eib.org/infocentre/press/releases/all/2015/2015-293-eib-and-global-banks-join-forces-to-climate-action.htm.

Recommendation 2: Designing Growth-Enhancing Financial Regulation

The G20 should reaffirm its support for international cooperation, while calling on international financial standard-setting bodies and national regulators to increase regulatory coherence, transparency in the development and implementation of regulation, and accountability to G20 growth objectives, as well as facilitate the digitalization of finance.

Policy Actions

2.1 **Enhancing Evidence-Based Standard Setting –** The G20 should prompt international financial standard-setting bodies to adhere to good regulatory practices and to more rigorously evaluate potential effects of new rules on the economy, to support and balance stability and economic growth.

- The G20 should call on international financial standard-setting bodies to adhere to good regulatory practices. Regulation should be coherent, proportionate, evidence based, developed and implemented in a transparent manner, and supportive of economic growth.
- The G20 should remind international financial standard-setting bodies that new standards and regulation should not have unintended negative impacts on the achievement of other G20 goals, beyond financial stability.
- Quantitative Impact Studies on proposed and current standards should be conducted by international financial standard-setting bodies in full transparency.

Owner: G20, International Standard-Setting Bodies **Timing** 2017

2.2 **Strengthening Financial Regulatory Coherence –** The G20 should request the FSB to set up a more formal mechanism for continuous and systematic cross-border dialogue between national regulators to improve coherence in the implementation and interpretation of international standards.

- The new dialogue mechanism established by the FSB should formalize the current ad hoc approach to consultation and discussion around the design and calibration of international financial standards between national regulators, addressing upfront possible unintended consequences of conflicting objectives across regulations.

Owner: G20, FSB, National Regulators **Timing** 2017

2.3 **Facilitating Digitalization of Finance –** The G20 members should facilitate the digitalization of finance by creating an innovation-friendly environment that favours sustainable growth and digital financial inclusion, while at the same time carefully designing rules that address risks and guarantee a level playing field across all players and borders.

- The G20 should task the FSB with the coordination of regulatory capacity building in Fintech, including by undertaking a comprehensive assessment of Fintech regulatory regimes in G20 countries, identifying best practices, with the objective of ensuring coherence in regulation.
- The G20 should mandate the FSB to facilitate a dialogue on RegTech between financial institutions, regulators, and business stakeholders in order to appropriately address compliance requirements, tackle challenges, and agree on possible solutions.

Owner: G20, FSB, **Timing** 2017-2018

Context

The recent financial and economic crisis revealed many shortcomings in financial regulation and supervision. Financial stability has been at the top of the G20 agenda, since the G20 of finance ministers and central bank governors became the Leaders' 20 in 2008. The G20 has come a long way in building a stronger, safer, and more resilient international financial system.

However, as the ICC highlights in its 2016 G20 Scorecard, G20 commitments have not produced harmonization of financial regulation as had been hoped.[49] The FSB regularly evaluates progress by FSB jurisdictions in the implementation of regulatory reforms. In its second report to the G20, "Implementation and Effects of the G20 Financial Regulatory Reforms", the FSB found that the impact of reforms implemented to date has generally been positive. However, progress in actual implementation has been uneven.[50] The Basel Committee also found uneven implementation of the Basel III regulatory reforms in its report to G20 Leaders in 2016.[51]

Not all reforms have been uncontested. While, for example, the FSB (in 2010 and 2015) identified the increase in capital requirements having a limited or even positive effect on GDP, other studies have identified unintended consequences, including limiting lending capacity and increasing funding costs. A 2016 Oliver Wyman report, for example, highlighted that several studies had shown unintended consequences of Basel III, leading to limitations on loan volume (in OECD countries, 1 percent increase in required capital ratios leads to, on average, a loan volume decline of around 2.6 percent) and increased funding costs (84 basis point in United States, 60 in Europe and 66 in Japan).[52]

The Basel Committee on Banking Supervision (BCBS) has proceeded with the finalization of the remaining elements of the Basel III accord. Its goal is to further strengthen the regulation, supervision, and risk management of the banking sector. However, the business community is concerned that changes could lead to asymmetrical outcomes across countries, depending on balance sheet structure and composition, and consequently undermine a global level playing field. These issues include the revision of the standardised approach for defining risk weights of bank assets and the internal ratings based approach (IRB), changes to the assessment of operational risk, and the adoption of an output floor based on the standardised approach for banks using IRB models.

The B20 has repeatedly highlighted inconsistencies in the interpretation and/or implementation of new regulatory standards on the national level. B20 China recommended to the G20 to "optimize global financial regulation to support growth", improving the coherence of financial regulation, as inconsistencies can have a negative impact on global growth prospects. B20 Germany builds on these recommendations. Regulations require adaptation over time to address changes in the market. At the same time, the B20 calls on international financial standard-setting bodies and regulators to take stock of the cumulative effects of regulation and to assess whether unintended, undesirable consequences may require a recalibration of regulatory reform. Trade Finance is a case in point, on which regulatory reforms had unintended consequences, dampening trade flow and economic growth (see Exhibit 13).[53]

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[49] ICC, *ICC G20 Business Scorecard, sixth edition* (Paris: 2016), 32, op. cit.
[50] FSB, *Implementation and Effects of the G20 Financial Regulatory Reforms* (2016), 6, http://www.fsb.org/2016/08/implementation-and-effects-of-the-g20-financial-regulatory-reforms-2/.
[51] Bank for International Settlements, *Implementation of Basel Standards. A Report to G20 Leaders on Implementation of the Basel III Regulatory Reforms* (2016), http://www.bis.org/bcbs/publ/d377.pdf.
[52] Elliott et al., *Interaction, Coherence and Overall Calibration of Post Crisis Basel Reforms* (Oliver Wyman, 2016), x, 34, http://www.oliverwyman.com/content/dam/oliver-wyman/global/en/2016/aug/post-crisis-basel-reforms.pdf.
[53] For recommendations on trade finance, please refer to the policy paper of the German B20 Cross-thematic Group SME.

Exhibit 13 | Revised Regulatory Capital Treatment for Trade Finance to Support Global Trade

Trade Finance has been a key catalyst for the expansion of international trade over the last century. According to the ICC, bank-intermediated transactions represent more than a third of world trade. However, trade finance tends to be a low margin business for banks, reflecting the fact that it is low risk, short tenor and often secured on the goods being shipped. And yet the regulatory treatment is more in line with higher risk, unsecured lending (as evidenced by the ICC which has built up a comprehensive database of loss history through its Trade Register). The ICC's 2016 Global Survey on Trade Finance found evidence of a global shortage of trade finance, particularly in Africa.

The low margin nature of Trade Finance means that any increase in the regulatory capital requirements for such exposures arising from the finalization of Basel III is likely to have a further dampening effect on its availability and pricing for corporate and SME customers. As advocated by ICC, trade finance products would require specific regulatory capital treatment which better reflect their low default and low loss nature.

Source: International Chamber of Commerce, *ICC Trade Register Report* (2016), 16-20, accessed March 20, 2017. https://iccwbo.org/publication/icc-trade-register-2016. See also recommendation of the German B20 SME Cross Thematic Group.

The financial system is continuously evolving. Digitalization is not only significantly changing the real economy, it is also changing the financial services industry. Digital finance can be broadly defined as financial services delivered over digital infrastructure – including mobile and internet. Digital finance has great potential. It can lead to significant efficiency gains, create competition within the financial system, and increase the contestability of financial markets. It can provide customers with more information about available financial products and services. Digital finance facilitates access to financial services, making financial services more inclusive, and provides small businesses with much needed access to credit and insurance. It can thus transform the economic prospects of billions of people. According to the McKinsey Global Institute, digital finance could increase the GDP of all emerging economies by 6 percent, or a total of $3.7 trillion, by 2025. It also has the potential to provide 1.6 billion people in emerging economies with access to financial services, more than half of them women.[54] However, the digitalization of finance also poses risks. For example, automation could entail herding behavior, exacerbating financial volatility and pro-cyclicality. Building on the recommendations of B20 China, B20 Germany calls upon the G20 to find a better regulatory balance, which reduces risk while at the same time creating an environment that allows business to embrace the digitalization of finance. [55]

Future-oriented, sustainable economic growth will only be possible with resilient, well-functioning financial markets. International cooperation is key to ensuring a level playing field for business. While there are shortcomings in international financial standard setting, pulling out is not the answer. Rather, G20 should restate its commitment to international financial regulatory cooperation, stepping up its efforts in creating a future-oriented international financial system.

[54] Bughin, Jacques, James Manyika and Jonathan Woetzel, *Digital Finance for All. Empowering Inclusive Growth in Emerging Economies* (McKinsey Global Institute, 2016), 8, http://www.mckinsey.com/~/media/McKinsey/Global%20Themes/Employment%20and%20Growth/How%20digital%20finance%20could%20boost%20growth%20in%20emerging%20economies/MG-Digital-Finance-For-All-Full-report-September-2016.ashx.

[55] Please see B20 Germany Cross-thematic Group SME on Financial Inclusion. Please also refer to the work of Business-at-OECD (BIAC) on SME and Digital Finance.

Policy Action 2.1: Enhancing Evidence-Based Standard Setting

The G20 should prompt international financial standard-setting bodies to adhere to good regulatory practices and to more rigorously evaluate potential effects of new rules on the economy, to support and balance stability and economic growth.

The B20 believes in the importance of a well-functioning global financial system. International financial standard-setting bodies such as the Basel Committee on Banking Supervision (Basel Committee), the FSB, the International Organization of Securities Commissions (IOSCO), the Financial Action Task Force (FATF), the International Organisation of Pension Supervisors (IOPS), and the International Association of Insurance Supervisors (IAIS) are important to ensure resilient financial markets. At the same time, the B20 encourages the G20 to examine the governance of these institutions to allow for greater transparency, international coherence, and efficiency. The G20 needs to address shortcomings in the international financial system, which negatively impact business activities, economic growth, and job creation. International financial standard-setting needs to adhere to the following good regulatory practices:

- *Balanced*: All international financial standards should be adopted based on an explicit cost/benefit analysis, taking into account both financial stability and growth objectives.
- *Accountable*: International financial standard-setting bodies must be held accountable against the G20's goals of "strong, sustainable, balanced and inclusive growth, while enhancing economic and financial resilience." Accountability includes reporting to the G20 as contemplated by the 2017 Finance Ministers' and Central Bank Governors' Communiqué, but also includes post-implementation evaluation of the effects of the G20 reforms as being conducted by the FSB. Such accountability would contribute to enhancing the legitimacy of international regulation and give greater assurances that the G20 reforms are achieving the G20's overall goals.
- *Proportionate*: International financial standards need to be applicable in a wide range of jurisdictions and by a wide range of financial institutions, in a flexible way to calibrate parameters to local specificities, complemented by an option to use approved internal models, under the strict control of supervisors.
- *Transparent*: The standard-setting process needs to be transparent. Regulators should establish well-defined timetables and provide reasonable time for market participants to respond to regulatory proposals.
- *Coherent*: International standard-setting bodies should identify cross-border issues early in the drafting of new standards. Regulations need to be coherent, both between different financial sectors, as well as between the international and the national level.
- *Outcomes-based*: The mutual recognition of other regimes is an important component of coordinated regulation across borders. Detailed standards for comparability assessments, as well as mechanisms for the assessment of regimes, are necessary to avoid the risk of inconsistent regulatory effects.
- *Evidence-based*: The economic consequences of proposed standards, across and within various jurisdictions, should be evaluated based on Quantitative Impact Studies (QIS), carried out in full transparency with the private sector.
- *Holistic:* The B20 welcomes the FSB's review of the reform program. Review of this type should be part of any regulatory program. To be fully effective, such a review should include QIS by product, taking a comprehensive view of all regulations affecting each product, in conjunction with a broad review across all strands of regulation as they affect delivery of financial products and services. This is required to ensure a full understanding of the combined effects of reforms,

to detect duplicative or contradictory measures, and to understand their overall effect on the global financial system and the real economy.

The B20 endorses the views expressed by the Finance Ministers and Central Bank Governors in March 2017, whereby they confirmed their support for the BCBS work to "finalize the Basel III framework without further significantly increasing overall capital requirements across the banking sector, while promoting a level playing field"[56]. The B20 nonetheless remains concerned that the finalization of Basel III could have unintended consequences on already subdued economic growth and supports the G20's mandate to the BCBS in that spirit. To ensure that the proposals are workable in terms of their impact on market liquidity, breadth, and depth, the FSB should carry out a QIS. This would enable the final accord to appropriately address any unintended consequences and lead to a more effective framework globally. The B20 welcomes the FSB work to develop a structured framework for the post-implementation evaluation of the effects of the G20 financial regulatory reforms. The framework is to be presented after an early public consultation of its main elements at the Leaders Summit in July 2017. However, we note that the consultation period is too short and risks a loss of transparency and accountability. The B20 requests the FSB to incorporate the B20 and other industry stakeholders into the proposed public consultation process.

B20 is also concerned about the finalization of the IAIS Risk-based Global Insurance Capital Standard (ICS). While recognizing the efforts of the IAIS to develop the ICS within its Common Framework for the Supervision of Internationally Active Insurance Groups (ComFrame), the B20 calls for a globally applicable valuation framework for the insurance sectors, which adequately reflects the long-term nature of the insurance business model. Greater coherence in outcomes needs to be ensured, while avoiding over-regulation that could reduce risk appetite and negatively affect future investment strategies.

Policy Action 2.2: Strengthening Financial Regulatory Coherence

The G20 should request the FSB to set up a more formal mechanism for continuous and systematic cross-border dialogue between national regulators to improve coherence in the implementation and interpretation of international standards.

The FSB and the Basel Committee have made progress on regulatory coherence, but the implementation of international financial standards varies at the regional and national level. National regulators often pay too little attention to the cross-border effects of specific rules. While there are certain mechanisms for enhancing regulatory coherence in national implementation, there are limited processes in cross-border financial regulation to systematically manage divergences. As the B20 had already pointed out under the Chinese Presidency, inconsistency comes at a price. Direct consequences of ineffective and/or differing approaches to regulatory requirements are market fragmentation, increased barriers to entry, and a reduction in the products available to end users, as well as reduced market liquidity, efficiency, and viability.

To increase coherence between the international and national level, the G20 should request the FSB to set up a more formal mechanism for continuous and systematic cross-border dialogue between national regulators, addressing upfront possible unintended consequences of conflicting objectives across regulations. This would be an important step forward compared with existing ad-hoc frameworks.

As B20 China had recommended, the dialogue could be based on a Memorandum of Understanding (MOU) focusing on the consistent implementation of the regulation both cross-border and with other policies, to minimise unintended consequences where two policies may offset each other`s impacts.

[56] G20 Germany, *Communiqué G20 Finance Ministers and Central Bank Governors Meeting* (Baden-Baden: 2017), 3, op. cit.

The dialogue should aim to:

- develop closer coordination between regulatory authorities through a principles-based approach to the interpretation and implementation of international standards, including more timely and comprehensive information sharing,
- agree on how to determine the desired consistency of rules including, where relevant, for legal purposes, a definition of equivalence of rules, by developing common processes and criteria for measuring compatibility to allow mutual recognition of rules between jurisdictions;
- establish mechanisms for carrying out reviews of rules and their effect on cross-border business, addressing end-to-end the impacts of the regulation in scope, rather than limited to assessing the intended impacts.

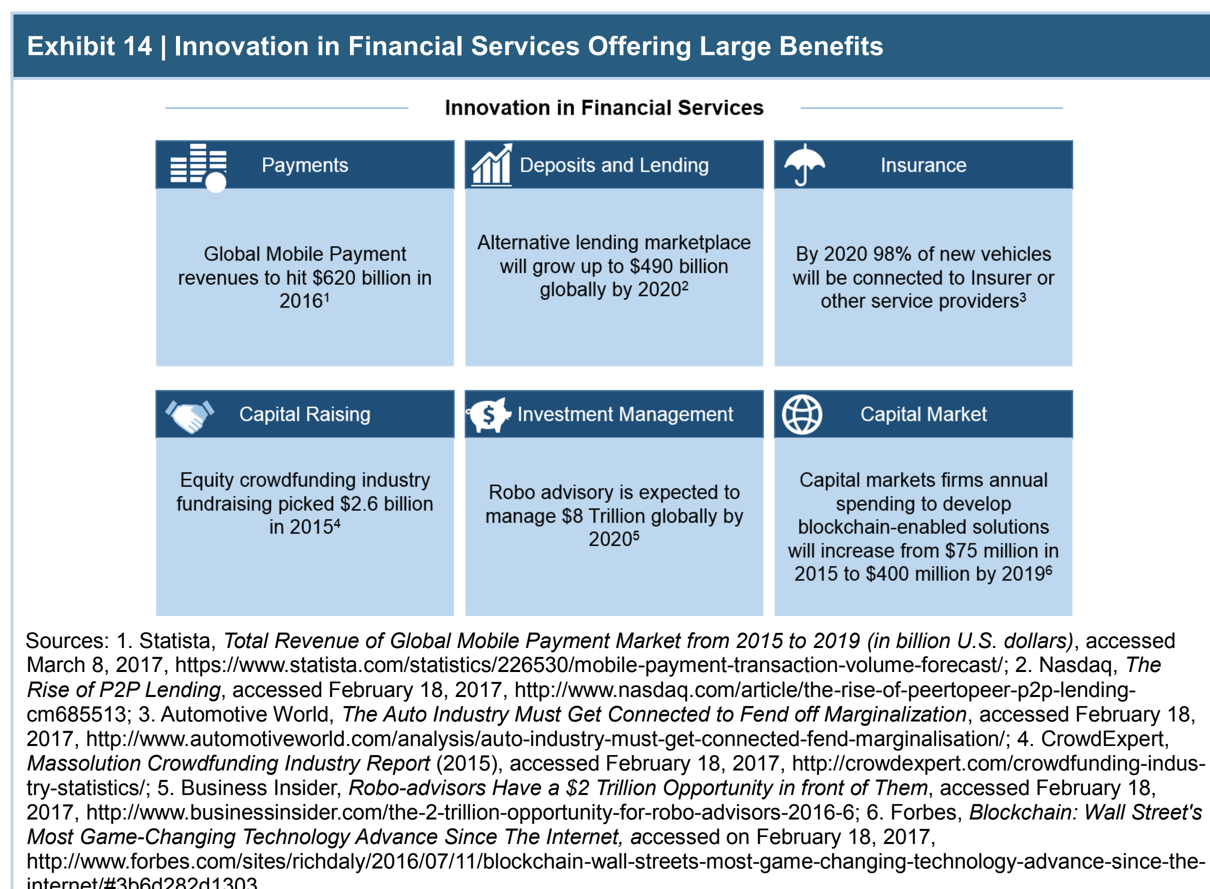
Well-coordinated financial regulation will help to establish a level playing field, ensure a resilient financial system, and allow for future-oriented sustainable economic growth.

Policy Action 2.3: Facilitating Digitalization of Finance

The G20 members should facilitate the digitalization of finance by creating an innovation-friendly environment that favors sustainable growth and digital financial inclusion, while at the same time carefully designing rules that address risks and guarantee a level playing field across all players and countries.

The digitalization of finance offers many benefits to business and costumers, including lower operation costs and improved services and products (see Exhibit 14).

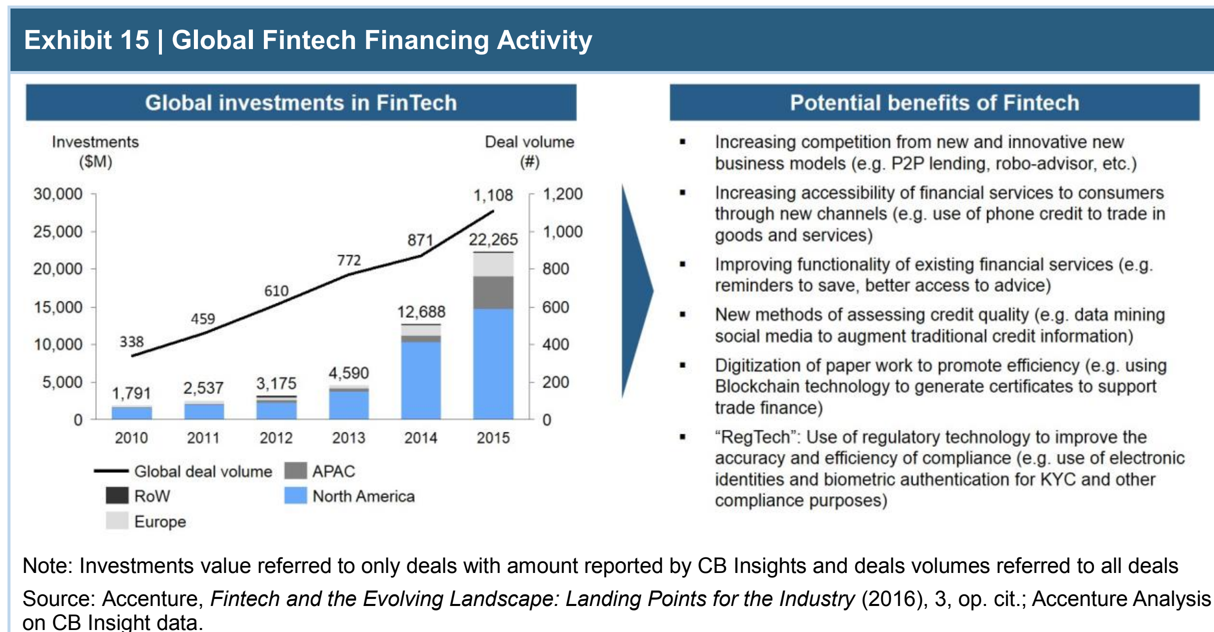
Exhibit 14 | Innovation in Financial Services Offering Large Benefits



Sources: 1. Statista, *Total Revenue of Global Mobile Payment Market from 2015 to 2019 (in billion U.S. dollars)*, accessed March 8, 2017, https://www.statista.com/statistics/226530/mobile-payment-transaction-volume-forecast/; 2. Nasdaq, *The Rise of P2P Lending*, accessed February 18, 2017, http://www.nasdaq.com/article/the-rise-of-peertopeer-p2p-lending-cm685513; 3. Automotive World, *The Auto Industry Must Get Connected to Fend off Marginalization*, accessed February 18, 2017, http://www.automotiveworld.com/analysis/auto-industry-must-get-connected-fend-marginalisation/; 4. CrowdExpert, *Massolution Crowdfunding Industry Report* (2015), accessed February 18, 2017, http://crowdexpert.com/crowdfunding-industry-statistics/; 5. Business Insider, *Robo-advisors Have a $2 Trillion Opportunity in front of Them*, accessed February 18, 2017, http://www.businessinsider.com/the-2-trillion-opportunity-for-robo-advisors-2016-6; 6. Forbes, *Blockchain: Wall Street's Most Game-Changing Technology Advance Since The Internet,* accessed on February 18, 2017, http://www.forbes.com/sites/richdaly/2016/07/11/blockchain-wall-streets-most-game-changing-technology-advance-since-the-internet/#3b6d282d1303.

Two prominent financial innovations are Fintech and Distributed Ledgers technology. Fintech start-ups are companies leveraging computer programs and other technology used to support or enable banking and financial services. Global financing activity in Fintech start-ups has surged. A recent study shows that global investments in 2015 grew by 75 percent, or $9.6 billion to $22.3 billion (see Exhibit 15).

Exhibit 15 | Global Fintech Financing Activity



Note: Investments value referred to only deals with amount reported by CB Insights and deals volumes referred to all deals

Source: Accenture, *Fintech and the Evolving Landscape: Landing Points for the Industry* (2016), 3, op. cit.; Accenture Analysis on CB Insight data.

Distributed Ledgers is a technology that uses a distributed messaging protocol to create a shared ledger between trading counterparties to validate transactions. The data on the ledger is pervasive and persistent and creates a reliable 'transaction cloud' so that transaction data cannot be lost or can only be technically corrupted by any of the participants at very high costs (see Exhibit 16).

Exhibit 16 | Blockchain and Distributed Ledgers – Benefits and Challenges

Distributed ledger and blockchain technology fundamentally changes how data is managed, moving from a scenario where each organization maintains its own copy of a data-set, to one where everyone has controlled access to a shared copy. Blockchain technologies could, and likely will, cause great transformation in many areas and industries beyond financial services.

Looking at financial services, the development of blockchain technology has the potential to redefine the industry:

- It creates a viable, decentralized record of transactions – the distributed ledger – which allows the substitution of a single, inviolable master database for large numbers of proprietary ones. This could lead to significant simplification and cost reduction, while making it more secure and reliable.
- It allows for the creation of digital or virtual currency with the attributes of non-counterfeitability and transportability, providing a mechanism for the direct and unambiguous transfer of value, while keeping the advantages of digital networks.
- By providing unique, non-forgeable, cryptographically sealed pseudonyms, blockchain provides a far better means of establishing and using identity.
- It allows the transfer of theoretically any value directly, digitally, with safety and confirmation, potentially making not only financial transactions, but all sorts of asset ownership transfers quicker, safer and cheaper.

However, like any new technology, blockchain poses challenges:

- Privacy: Balancing the confidentiality and traceability of transactional activity;

- Security: Protecting against reorganization by one or more participants;
- Scalability and latency: Finding solutions that can handle the required volume;
- Implementation: Establishing standard tools or administration interfaces;
- Governance: Redefining the “new normal” threat matrix for shared ledgers among banks;
- Regulation: Cutting across the responsibilities of different regulatory agencies and operation on a global scale, for example, of digital currencies.

Source: Dong He et al., *Virtual Currencies and Beyond: Initial Considerations* (IMF, 2016) https://www.imf.org/external/pubs/ft/sdn/2016/sdn1603.pdf.

The digitalization of finance has had a positive impact on sustainable and balanced economic growth but does not come without challenges. Any future regulatory framework needs to encourage the digitalization of finance, while ensuring investor and consumer protection (see Exhibit 17). In its 2016 report on ‘The Future of Financial Infrastructure’, the World Economic Forum found significant barriers to large-scale implementation of blockchain related technology, including an uncertain and inconsistent regulatory environment.[57]

Exhibit 17 | Software Investments and Digital Talent in the European Banking Industry

Banks that want to digitally transform their business need to invest in enhancing and replacing their software and attract digital talent. However, today’s prudential frameworks, above all in the EU, pose restrictions in both areas, limiting investment in digital innovation and overall customer protection.

- Investment in software: In the EU, investments in software are accounted as intangible assets and therefore are fully deducted from the Common Equity Tier 1 (CET1) capital. This is considered by European banks as a disincentive to innovate. It also creates an unlevel playing field vis-á-vis providers in other jurisdictions, where capitalized computer software is accounted within the “other assets”, which are subject to regular risk rating and not deducted from capital requirements.
- Engaging and retaining talent: EU banking rules (CRD IV) constrain variable remuneration for employees, including digital specialists who do not perform risk (including operational risk) activities. The industry is competing with other industries for digital talent required for digital transformation, where these restrictions, such as equity participation, do not apply.

Source: European Banking Federation, *Innovate. Collaborate. Deploy. The EBF Vision for Banking in the Digital Single Market* (2016), 10-11, http://www.ebf-fbe.eu/wp-content/uploads/2016/11/EBF-vision-for-banking-in-the-Digital-Single-Market-October-2016.pdf.

The FSB recently recognized the need to further investigate the “issues for authorities relating to FinTech”. Its members agreed on a work plan to identify supervisory and regulatory issues from a financial stability perspective.[58] However, so far, regulators in G20 countries have taken different approaches to balancing support for innovative business models and the regulation of market participants (“old” and “new”), leading to a varying regulatory environment across countries.

The regulation of marketplace lending platforms in G20 countries is a case in point. The UK, the United States, and China recognize lending marketplaces as a dedicated platform, with requirements for specific approvals. In France, Germany, and Italy, lending marketplaces are subject to banking regulation, while in Brazil and South Korea they remain exempted from banking regulation or are of undefined status.

A more harmonized approach to regulation based on best practices would support the development of

[57] World Economic Forum, *The Future of Financial Infrastructure. An Ambitious Look at How Blockchain Can Reshape Financial Services* (2016), http://www3.weforum.org/docs/WEF_The_future_of_financial_infrastructure.pdf.
[58] FSB*, Financial Stability Board Agrees 2017 Workplan* (17 November 2016), 3, accessed February 17, 2017, http://www.fsb.org/wp-content/uploads/Financial-Stability-Board-agrees-2017-workplan.pdf.

digital finance and the digital transformation of financial services globally. The G20 should task the FSB with the coordination of regulatory capacity building in Fintech, including by undertaking a comprehensive assessment of Fintech regulatory regimes in G20 countries, identifying best practices and reporting back to the G20, with the objective of ensuring consistency across regulatory frameworks.

Cryptocurrencies pose particular challenges, as their decentralized nature does not fit easily within traditional regulatory models. As proposed in an IMF staff discussion paper [59], more could be done at the international level to support national policies, including international standards and best practices that can provide guidance on appropriate regulatory responses and facilitate harmonization across jurisdictions.

Some regulators and governments have setup so-called “regulatory sandboxes”, which can be an effective approach to testing Fintech services, as part of a broader approach. The Sandboxes are “separated environments” with special regulatory treatment, offering a framework for testing innovative solutions with real customers (see Exhibit 18).

Exhibit 18 | Examples for Regulatory Sandboxes

- The British Financial Conduct Authority (FCA) UK Regulatory Sandbox[1] allows businesses to test innovative products, services, business models and delivery mechanisms in a live environment. Firms were able to apply for two cohorts, in July and November 2016 respectively.
- The Monetary Authority of Singapore (MAS) released a Consultation Paper[2] on Fintech Regulatory Sandboxes Guidelines on 6 June 2016, which has similar characteristics to the UK. MAS has also asked larger financial firms to provide “problem statements”, which could then be tackled by start-ups.
- Since 15 December 2016, the Australian Securities and Investments Commission allows eligible Fintech companies to test certain products and services through its “Regulatory sandbox licensing exemption”[3], without the need to hold a financial services or credit license.
- In November 2016, the Hong Kong Monetary Authority announced the launch of a “Fintech Supervisory Sandbox”[4] to allow banks test innovative Fintech products and initiatives within a live, controlled environment, before they are fully compliant.

Source: 1. FCA, *Regulatory Sandbox* (May 11, 2015), https://www.fca.org.uk/firms/project-innovate-innovation-hub/regulatory-sandbox; 2. MAS, *Fintech Regulatory Sandbox Guidelines* (2016), http://www.mas.gov.sg/~/media/MAS/News%20and%20Publications/Consultation%20Papers/Consultation%20Paper%20on%20FinTech%20Regulatory%20Sandbox%20Guidelines.pdf; 3. ASIC, *Testing Fintech Products and Services without Holding an AFS or Credit Licence* (2017), http://download.asic.gov.au/media/4160999/rg257-published-24-february-2017.pdf; 4. Hong Kong Monetary Authority, *Fintech Supervisory Sandbox* (2016), http://www.hkma.gov.hk/media/eng/doc/key-information/guidelines-and-circular/2016/20160906e1.pdf.

The establishment of regulatory sandboxes should follow basic principles to support innovation, while ensuring an adequate level of consumer protection:

- The sandbox should be temporary and exceptional in nature and seek to address an identifiable regulatory barrier to innovative services.
- The criteria for projects to enter the sandbox must be clearly defined and made publicly available to avoid arbitrary decisions.
- The scale of the activities carried out within the sandbox should avoid risks to the financial system.
- The sandbox must be accompanied by appropriate mechanisms to protect consumers and to avoid any negative impact on consumers in the concrete application of these services in the market.

[59] He et al., *Virtual Currencies and Beyond: Initial Considerations* (IMF, 2016), op. cit.

- A level playing field must be assured by giving the possibility to both incumbents and new entrants to enter the regulatory sandbox.

Regulators should also be aware that technology is continually evolving. Premature regulation, particularly where no harm has been established, could have a negative impact on innovation.

Finally, as the world becomes increasingly digitalized, regulators have the opportunity to embrace digitization to more effectively carry out their role. The UK's Financial Conduct Authority (FCA) has called this "RegTech".[60] Underpinning this technological advance is the growing availability of large pools of data, which, by leveraging Artificial Intelligence and machine learning, can help facilitate a more efficient response to increasingly complex compliance requirements across several potential applications, if the implementation challenges are appropriately addressed (see Exhibit 19).

Exhibit 19 | RegTech

RegTech

Characteristics	Potential Applications	Implementation Challenges
• **Cloud based**: RegTech solutions are mainly cloud based, meaning that data is remotely maintained, managed and backed up. This brings advantage in term of costs, flexibility, performance and security.	Risk data aggregation	Restriction to use of data and Tech
• **Analytic based:** RegTech uses analytic tools to mine existing "big data" sets and use for multiple regulatory purposes.	monitoring payments transactions	Not standardized data
• **Fast:** Results can be generated in short time, even in real-time	Identification of clients and legal persons	Regulatory deadline to implement new IT solutions
• **Integrated**: short time needed to have RegTech solution in place for compliant needs	Monitoring a financial institution's internal culture and behavior	Out-of-date reporting portals and method used by regulators
	Trading in financial markets	Limited skills in data analytics and new technologies for regulators
	Identifying new regulations	
	Risk data aggregation	

Source: Lieberge et al., *Regtech in Financial Services: Technology Solutions for Compliance and Reporting* (Washington DC: IIF, 2016), https://www.iif.com/publication/research-note/regtech-financial-services-solutions-compliance-and-reporting. Accenture analysis.

For the benefits of RegTech to be realised, regulators need to recognize its use within the financial services industry and more proactively exchange best practices while engaging with the private sector. The European Commission's Task Force on Financial Technology, set-up in November 2016, is an example of such a dialogue. The Task Force brings together services responsible for financial regulation and for the Digital Single Market, along with outside experts and stakeholders with the aim to formulate recommendations and propose measures, including in RegTech, in 2017.[61]

The B20 calls upon the G20 to mandate the FSB to facilitate a dialogue on RegTech between financial institutions, regulators, and software developers, to appropriately address compliance requirements, tackle challenges and agree on possible solutions.

[60] FCA, *Project Innovate: RegTech* (4 May 2016) accessed January 18, 2017, https://www.fca.org.uk/firms/project-innovate-innovation-hub/regtech.
[61] Roberto Viola, *European Commission Sets up an Internal Task Force on Financial Technology* (14 November 2016), accessed February 17, 2017, https://ec.europa.eu/digital-single-market/en/blog/european-commission-sets-internal-task-force-financial-technology.

Recommendation 3: Establishing a Stable and Investment Friendly Environment

The G20 members should improve conditions for foreign direct investment by supporting stable legal and regulatory frameworks conductive to long-term investment – including greater tax certainty.

Policy Actions	
3.1	**Improving Regulatory Certainty –** The G20 members should, in building on the G20 Guiding Principles for Global Investment Policymaking and the development of the G20 Investment Facilitation Package, put particular emphasis on the stability and certainty of legal and regulatory frameworks for foreign direct investors. • The G20 members should – where not already the case – ensure that binding rules apply, and where required provide for grandfathering clauses, to provide a stable framework for investment. • The G20 should encourage project sponsors to have clear, sound and reliable dispute resolution mechanisms in place, subject in principle to national legal processes.
Owner: G20, G20 members, OECD	**Timing**: 2017-2020
3.2	**Ensuring Greater Certainty in Taxation** – The G20 members should enhance the certainty of tax systems to support a stable international tax environment by prioritizing consistency, simplification, support for investment, and capacity building in tax authorities. • The G20 members should – where not already in place – issue binding tax rulings, facilitate Advance Pricing Agreements (APAs) and where required grandfathering clauses that cover the duration of long-term projects to provide a stable framework for investment. • The G20 members should establish detailed implementation guidance, timelines and appropriate resources for tax authorities for BEPS implementation, limiting risks of double taxation, and facilitating dispute resolution and arbitration (to make arbitration clauses under BEPS 14 mandatory, expanding national tax authorities' negotiation teams, etc.). • The G20 members should increase capacity building and technical expertise within tax administrations, particularly in developing and emerging economies.
Owner: G20, G20 members, OECD	**Timing:** 2017-2018

Context

Political, policy, tax, legal and regulatory uncertainty increase investment risk and consequently negatively impact business appetite to invest in longer-term projects. Uncertainty has thus a knock-on effect on economic growth and job creation.[62]

In January 2017, the Global Economic Policy Uncertainty Index exceeded 300 for the first time. The index tracks economic policy uncertainty in 17 countries that account for two thirds of global GDP. This figure was approximately three times the average figure over the past 20 years.[63] Brexit, geopolitical risks, terrorism, rising protectionism, and growing populist sentiment make 2016-2017 the most uncertain period in decades.

[62] Nick Bloom, "The Impact of Uncertainty Shocks", *Econometrica Society*, Vol. 77, No. 3 (May, 2009), 623-685.
[63] Economic Policy Uncertainty, *Economic Policy Uncertainty Index,* accessed March 15, 2017, http://www.policyuncertainty.com.

The B20 is greatly concerned about the impact of this more uncertain geo-political environment on long-term investment trends (domestic investment as well as foreign direct investment). It is more important than ever that the G20 works together to create a stable and predictable political, regulatory, legal, and tax environment.

The German G20 Presidency made Africa one of its focus areas. Through so called 'Compacts with Africa', the G20 aims to take concrete steps to improve people's living conditions in the long-term and to put in place a stable environment for investment in Africa. While some countries have made great progress, political instability on the continent remains a significant concern. For the Compacts with Africa to be successful, the G20 needs to put the spotlight on legal and regulatory uncertainty in partner countries (see Exhibit 20).

Policy Action 3.1: Improving Regulatory Certainty

The G20 members should, in building on the G20 Guiding Principles for Global Investment Policymaking and the development of the G20 Investment Facilitation Package, put particular emphasis on the stability and certainty of legal and regulatory frameworks for foreign direct investors.

FDI is essential for a country's economic development, in particular if domestic savings are low. It is a driving force for sustainable growth, prosperity, and jobs.[64] According to the UNCTAD Investment Policy Monitor[65], the majority of new investment measures between October 2016 and February 2017 were investment enhancing. Most measures improved entry conditions, reduced restrictions, or facilitated investment. However, this does not mean that investing abroad has become easier in general. In addition to many remaining restrictions to FDI, political uncertainty dampens investment flows.

The B20 recognizes the G20's efforts to facilitate FDI. Under the Chinese G20 Presidency, G20 Trade Ministers endorsed the G20 Guiding Principles for Global Investment Policymaking (see Exhibit 20).[66] Their objectives are 1) fostering an open and transparent global policy environment conducive for investment, 2) promoting coherence in national and international investment policy-making, and 3) promoting inclusive economic growth and sustainable development.[67]

[64] Brad Carr, Matthew Ekberg, *International Regulatory Standards: Vital for Economic Growth* (IIF, 2017), 2, accessed March 15, 2017, https://www.iif.com/publication/regulatory-report/international-regulatory-standards-vital-economic-growth.
[65] UNCTAD, *Investment Policy Monitor, Issue 17* (2017), accessed March 15, 2017, http://unctad.org/en/PublicationsLibrary/webdiaepcb2017d1_en.pdf.
[66] G20, *G20 Guiding Principles for Global Investment Policymaking* (2016), 1-5, accessed March 15, 2017, http://www.oecd.org/daf/inv/investment-policy/G20-Guiding-Principles-for-Global-Investment-Policymaking.pdf.
[67] For recommendations on how to facilitate investment, please refer to B20 Germany Taskforce on Trade and Investment.

Exhibit 20 | G20 Guiding Principles for Global Investment Policymaking

I. Recognizing the critical role of investment as an engine of economic growth in the global economy, governments should avoid protectionism in relation to cross-border investment.

II. Investment policies should establish open, non-discriminatory, transparent, and predictable conditions for investment.

III. Investment policies should provide legal certainty and strong protection to investors and investments, both tangible and intangible, including access to effective mechanisms for the prevention and settlement of disputes, as well as to enforcement procedures. Dispute settlement procedures should be fair, open and transparent, with appropriate safeguards to prevent abuse.

IV. Regulation relating to investment should be developed in a transparent manner with the opportunity for all stakeholders to participate and embedded in an institutional framework based on the rule of law.

V. Investment policies and other policies that impact investment should be coherent at both the national and the international level and aimed at fostering investment, consistent with the objectives of sustainable development and inclusive growth.

VI. Governments reaffirm the right to regulate investment for legitimate public policy purposes.

VII. Policies for investment promotion should, to maximize economic benefit, be effective and efficient, aimed at attracting and retaining investment, and matched by facilitation efforts that promote transparency and are conducive for investors to establish, conduct, and expand their businesses.

VIII. Investment policies should promote and facilitate the observance by investors of international best practices and applicable instruments of responsible business conduct and corporate governance.

Source: G20, *G20 Guiding Principles for Global Investment Policymaking* (2016), 1-5, op. cit.

As stated by the B20 Germany Trade and Investment Taskforce, these principles should be considered only as a starting point for further action and policy initiatives by G20 members. As such, more emphasis should be placed on creating certainty in legal and regulatory frameworks. This would help secure more investment in general, not only FDI.

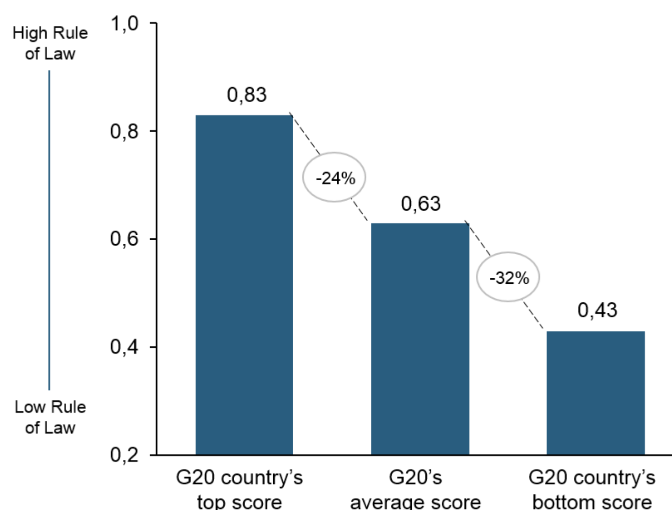
Short-term political decision-making such as budgetary re-prioritisation can negatively impact investment. For example, changes in tariffs for renewable energy, cancellation of procurement processes due to changes in government, and rerouting of planned transport infrastructure can have unintended consequences by reducing the confidence of investors. For this reason, the G20 members should improve the consistency and transparency in policy-making. They should also commit to avoiding retroactive changes in the legal and regulatory framework for long-term investment. They should – where not already in place – issue binding rules, and where required, grandfathering clauses that cover long-term projects, to provide a stable framework for investment.

G20 members should also reaffirm their strong commitment to the rule of law. According to the 2016 Rule of Law Index[68], there is a great discrepancy among G20 members on the level of adherence to rule of law practice[69] and a modest average score for G20 members as whole (see Exhibit 21). Recognizing that disputes may arise on occasion between investors and states, the G20 should encourage the establishment of clear, sound and reliable dispute mechanisms, subject in principle to national legal processes. In certain cases, international methods of settlement may be appropriate, for example, where bilateral, regional or international investment treaties are relevant.

[68] Source: World Justice Project, *WJP Rule of Law Index 2016* (Washington D.C.: WJP, 2016), 5, accessed March 17, 2017, http://worldjusticeproject.org/rule-of-law-index.

[69] The World Justice Project's definition of the rule of law is a system in which the following four universal principles are upheld: 1) The government and its officials and agents as well as individuals and private entities are accountable under the law. 2) The laws are clear, publicized, stable, and just; are applied evenly; and protect fundamental rights, including the security of persons and property and certain core human rights. 3) The process by which the laws are enacted, administered, and enforced is accessible, fair, and efficient. 4) Justice is delivered timely by competent, ethical, and independent representatives and neutrals who are of sufficient number, have adequate resources, and reflect the makeup of the communities they serve.

Exhibit 21 | Rule of Law Index 2016 (from 0 to 1)



Source: World Justice Project, *WJP Rule of Law Index 2016* (Washington D.C.: WJP, 2016), 5, op. cit.

Examples of internationally recognized dispute settlements mechanisms include the World Bank's International Centre for Settlement of Investment Disputes and the London Court of International Arbitration. At the regional level, provisions for dispute settlement such as in the North American Free Trade Agreement (NAFTA) have helped foster the environment of confidence and stability required for long-term investment.[70]

Exhibit 22 | Compact with Africa

The African continent remained the second fastest growing economic region, after East Asia. According to the African Economic Outlook 2016[1], the continent's average growth is expected to be 3.7 percent in 2016 and pick up to 4.5 percent in 2017, provided the world economy strengthens and commodity prices gradually recover. Yet, two-thirds of the investment required in urban infrastructure until 2050 has not yet been made. In order to seize existing opportunities, business needs an adequate environment for investment[2].

The African Union (AU) defined a collective roadmap in its Agenda 2063, in which investment occupies a central role to eradicate poverty, increase productivity, and improve innovation, education, and health. The B20 welcomes that the German G20 Presidency wants to tackle the existing investment gap in Africa through Compacts with interested African States. These are intended to improve framework conditions to foster both domestic and foreign private sector investment in African countries.

From a B20 Financing Growth & Infrastructure Taskforce perspective the Compacts should cover the following:

- measures that improve PPP and support transparent tendering processes;
- better use or establishment of local, regional, and global portals that provide information of specific aspects / demand of projects in a specific country;
- the expansion of existing insurance mechanisms to mitigate political and other risks: especially an enhanced role for MDBs and regional development banks to mitigate investment risks, e.g. by MIGA guarantees;
- increased financial inclusion via the promotion of digital technologies in the area of financial services;
- improved foreign investor protection, fiscal dispute resolution schemes;
- capacity building in (tax) administrations;

[70] Please also refer to B20 Germany Taskforce on Financing Growth and Infrastructure.

- fostering international investment flows by using innovative financial instruments (such as Blended Finance, Social Credits[3], Asset Based Finance that follows Islamic financial markets principles[4], concessional credit grant, also jointly, by foreign countries[5], etc.).

Sources: 1. African Economic Outlook 2016, accessed 20 February, 2017, https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/AEO_2016_Report_Full_English.pdf; 2. Ibid.; 3. WEF, *Could this be the answer to the growing infrastructure gap?* (March 23, 2016), accessed April 6, 2017, https://www.weforum.org/agenda/2016/03/could-this-be-the-answer-to-the-growing-infrastructure-gap/; 4. Gelbard et al., *Islamic Finance in Sub-Saharan Africa: Status and Prospects* (International Monetary Fund, 2014), accessed March 23, 2017, https://www.imf.org/~/media/Websites/IMF/imported-full-text-pdf/external/pubs/ft/wp/2014/_wp14149.ashx; 5. As, for instance, done by Japanese and Indian governments. Source: Atul Ranjan, *JETRO to Push Japan-India Business Collaboration in Africa* (February 5, 2017), accessed March 23, 2017, http://www.japantimes.co.jp/news/2017/02/05/national/jetro-push-japan-india-business-collaboration-africa/#.WNOqE_krJPY.

Policy Action 3.2: Ensuring Greater Certainty in Taxation

The G20 members should enhance the certainty of tax systems to support a stable international tax environment by prioritizing consistency, simplification, support for investment, and capacity building in tax authorities.

The changes in the global economy and business models have led to increased uncertainty around international tax rules[71], which have not kept pace with developments in the global economy. The consistent implementation of the G20/OECD Base Erosion and Profit Shifting (BEPS) measures is key to addressing this uncertainty (see Exhibit 23). Participating countries should avoid national “gold-plating”, to minimize compliance burden and any negative impact on global value chains.

Exhibit 23 | Impact of Uncoordinated BEPS Implementation on Tax Certainty

It is essential for G20 countries to ensure coordinated and consistent BEPS implementation, to avoid any negative impact on global investment and economic growth, as well as potential double taxation or double non-taxation.

- BEPS Action 1: Address the tax challenges of the digital economy: There is a risk of unilateral approaches on the taxation of profits derived through digital transactions causing double or even multiple-taxation. The open-ended nature of non-consensus proposals made in the final 2015 Action 1 report mean coordination is essential.
- BEPS Action 2: Neutralizing the effects of hybrid mismatch arrangements: Issues compounding the need for coordination include a lack of clarity as to which countries intend to implement any or all of the recommendations, potential for substantial complexity, and substantial financial sector implications.
- BEPS Action 4: Limiting base erosion via interest deductions & other financial payments: A lack of clarity as to the timing and extent of the implementation of recommendations made under Action 4 creates uncertainty around potential impacts for groups’ economic activity and ability to obtain deduction for funding costs, and therefore investment and economic growth.
- BEPS Action 6: Prevent treaty abuse: Significant uncertainty remains as to whether treaty relief is available in ordinary commercial circumstances, undermining the usefulness of treaty networks in facilitating trade and promoting economic growth.
- BEPS Action 7: Preventing the artificial avoidance of PE status: National and multilateral implementation of changes required to the OECD Model Treaty, OECD Guidance has become disjointed, causing considerable uncertainty and the risk of double taxation.
- BEPS Action 13: Country-by-country reporting: Multiple concurrent national and international approaches to country-by-country reporting are emerging, including amendments and additions to the OECD BEPS proposals. Different concurrent regimes threaten a substantially increased administrative burden for multi-national businesses and undermine the effectiveness and coherence of country-by-

[71] OECD & Slovak Presidency, *Towards a More Certain Tax Environment: Fighting BEPS, Improving Certainty and Fighting Tax Crime and Terrorism* (2016), 2, http://www.eu2016.sk/data/documents/supplementary-note-oecd-sk-pres-taxes.pdf.

country reporting from the perspective of tax authorities.

Source: *BEPS Position Paper* (2016) http://biac.org/wp-content/uploads/2016/01/2015-12-BIAC-BEPS-Position-Paper1.pdf.

In their July 2016 Tax Policy Symposium, the G20 finance ministers reiterated the importance of tax certainty in promoting investment and trade. It is therefore timely to address sources of tax uncertainty, their effect on business operations, and potential solutions. The B20 welcomes the efforts by the G20 to take up this strategic issue and reaffirms the Finance Ministers and Central Bank Governors encouragement to "consider voluntarily the practical tools for enhanced tax certainty as proposed [in OECD/IMF report on Tax certainty], including with respect to dispute prevention and dispute resolution to be implemented within domestic legal frameworks and international tax treaties."[72] The B20 urges G20 members to:

- provide clear laws and guidance, issue binding tax rulings, facilitate Advance Pricing Agreements (APAs) and where required grandfathering clauses that cover the duration of long-term projects to provide a stable financial framework for investment;
- provide for a properly resourced and effective dispute resolution mechanism, for example mandatory and binding Mutual Agreement Procedure (MAP) arbitration;
- assess and adjust international tax frameworks to ensure a level playing field for companies operating in multiple jurisdictions and potential costs that exceed benefits;
- set up detailed implementation guidance, timelines and appropriate resources for tax authorities for BEPS implementation, limiting risks of double taxation and facilitating dispute resolutions and arbitration (to make arbitration clauses under BEPS 14 mandatory, expanding national tax authorities' negotiation teams, etc.);
- increase capacity building and technical expertise within tax administrations, particularly in developing countries.

[72] G20 Germany, *Communiqué G20 Finance Ministers and Central Bank Governors Meeting* (Baden-Baden: 2017), 5, op. cit.

Annex

Acronyms

ADB	Asian Development Bank
AfDB	African Development Bank
AMI	Annual Mobilized Investment
APAs	Advance Pricing Agreements
BCBS	Basel Committee on Banking Supervision
BEPS	Base Erosion and Profit Sharing
CRR	Capital Regulatory Requirements
DEEP	De-risking Energy Efficiency Platform
EBRD	European Bank for Reconstruction and Development
EFR	European Financial Services' Roundtable
EIB	European Investment Bank
EIPP	European Investment Project Portal
Eps	Equator Principles
ESG	Environmental, Social and Governance
FATF	Financial Action Task Force
FCA	Financial Conduct Authority
FDI	Foreign Direct Investment
FSB	Financial Stability Board
GBPs	Green Bond Principles
GDP	Gross Domestic Product
GEMs	Global Emerging Markets
GFSG	Green Finance Study Group
GIH	Global Infrastructure Hub
IAIS	International Association of Insurance Supervisors
ICC	International Chamber of Commerce
ICS	International Capital Standard
IDB	Inter-American Development Bank
IDFC	International Development Finance Club
IFC	International Finance Corporation
IISS	Infrastructure Information Support System platform
IIWG	Investment and Infrastructure Working Group
IMF	International Monetary Fund
IOPS	International Organization of Pension Supervisors
IOSCO	International Organization of Securities Commissions
IRB	Internal rating models
MAS	Monetary Authority of Singapore
MCPP	Managed Co-Lending Portfolio Program
MDBs	Multilateral Development Banks
MIGA	Multilateral Investment Guarantee Agency
MoU	Memorandum of Understanding
NDBs	National Development Banks
OECD	Organisation for Economic Co-operation and Development
PPPs	Public-Private partnerships
QIS	Quantitative impact study
SDGs	Sustainable Development Goals
SMEs	Small-Medium Enterprises

TCFD	Taskforce for climate-related financial disclosure
WBG	World Bank Group

Schedule of Taskforce Exchanges

#	Date	Location	Theme
1	26 October 2016	Conference Call	Discussion of taskforce focus topics
2	2 December 2016	Berlin	Discussion of taskforce recommendations in first policy paper draft and exchange with G20 presidency representatives
3	24 January 2017	Conference Call	Refinement of taskforce policy proposals in second policy paper draft
4	27 February 2017	Conference Call	Refinement of taskforce policy proposals in third policy paper draft
5	20 March 2017	Conference Call	Refinement of taskforce policy proposals in fourth policy paper draft
6	22 March 2017	Paris	Discussion of final policy paper draft with OECD and G20 Sherpas
7	2-3 May 2017	Berlin	B20 Summit with Chancellor Merkel

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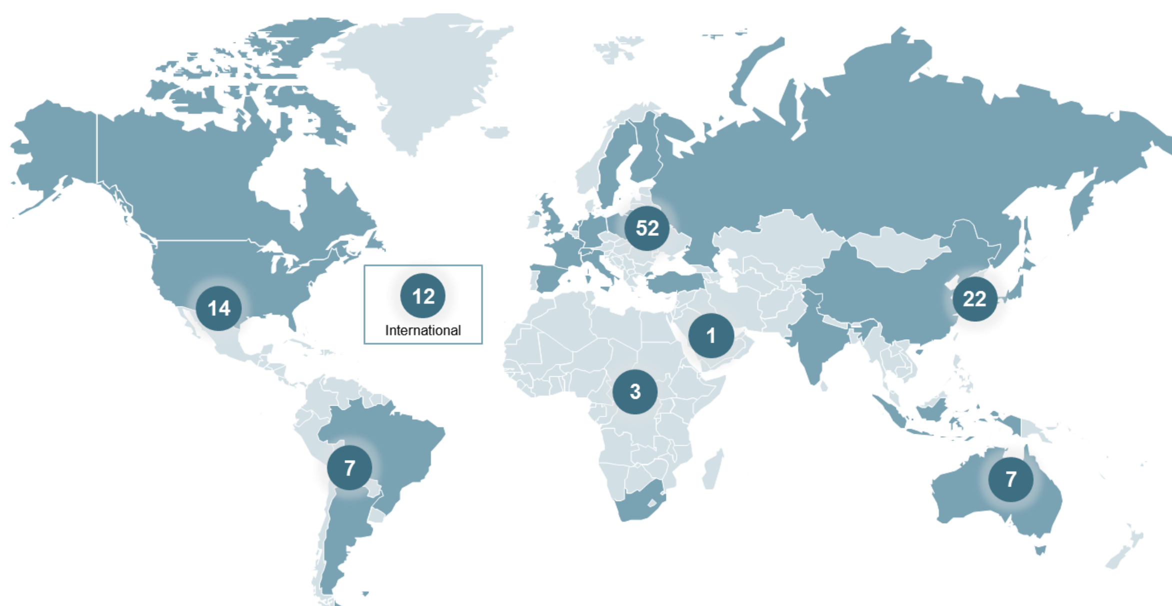
Country	#	Country	#	Country	#	Country	
Argentina	2	Germany	7	Poland	1	UK	9
Australia	7	India	4	Russia	7	US	12
Bahrein	1	Indonesia	1	Singapore	1	European Union	3
Brazil	5	Italy	4	South Africa	3	International	12
Canada	2	Japan	3	Spain	8	Total	118
China	10	Korea	3	Switzerland	4		
France	6	Luxemburg	1	Turkey	2		



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