SUMMARY
Policy Dialogue to Develop Infrastructure as an Asset Class

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Introduction

On 18 October 2017, over 160 participants attended the LTIIA Fourth Annual Meeting and Joint Forum with the OECD on Developing Infrastructure as an Asset Class. The event brought together various private sector stakeholders, policy experts, academics and government officials, representing institutional investors, such as pension funds and insurance companies, governments, banks, advisory firms as well as industry associations and think tanks from around the world.

Even though efforts on developing infrastructure as an asset class have increased in recent years, institutional investment in infrastructure still remains relatively limited. The discussion therefore focused on enhancing public and private cooperation in infrastructure financing and shed light on current challenges as well as opportunities for public and private stakeholders in infrastructure investment. The discussions were centred around the following main topics:

- Infrastructure investment and international policy developments;
- benchmarking long-term financial performance and managing ESG efficiently;
- and crowding in private capital for infrastructure financing.

The LTIIA annual meeting was organized for the first time in collaboration with the OECD. The collaboration was established in the context of the OECD Project on Institutional Investors and Long-term Investment (www.oecd.org/finance/lth) and aims to increase collaboration among public stakeholders and private investors, bridging the need for future infrastructure investment.

This document includes a summary of the discussion for the three plenary panel sessions and speeches, as prepared for delivery. The day’s agenda is at the back of this document, followed by key references for further reading.
Key messages

Session I: Infrastructure investment and international policy developments

- **Increasing levels of political and regulatory risks** are reflected in higher discount rates applied by investors to infrastructure investments.
- Recent political developments, such as Brexit and the Catalan independence vote, have the potential to affect the financial performance of even mature infrastructure assets in Europe. In the US, there are uncertainties around the future creation of a pipeline of bankable projects.
- **Demographic trends affect investments:** new infrastructure projects as well as the upgrading of existing infrastructure have to be increasingly steered towards the needs of future generations.
- **Disruptive innovation or technological change** have an impact on investors and regulators, who need to adapt portfolios and regulations to new developments in the markets. These changes are also affecting the way that infrastructure is designed and ultimately financed, with recent examples in housing and education infrastructure.

Session II: Managing ESG efficiently: best practices and industry trends

- **ESG performance affects financial performance:** factors such as water stress, climate change, social inclusion and good governance principles can significantly affect the long-term financial performance of infrastructure.
- **ESG considerations are gaining influence in capital allocation decisions,** both among institutional investors as well as their beneficiaries, recognising that ESG performance criteria can influence the long-term financial performance of infrastructure assets.
- ESG performance standards and measuring methodologies have to be globally applicable, while being flexible enough to account for differences across sectors, countries and investors.

Session III: Crowding in private capital for infrastructure financing: global perspective on challenges and opportunities

- **Infrastructure investments in emerging economies are not yet attractive to institutional investors:** very few of the participants confirmed their active interest in markets such as Sub-Saharan Africa.
- This is largely attributed to high levels of political risks and the difficulty of establishing reliable debt and equity capital structures.
- **Investors seek diversification of portfolios,** with increasing interest in social and small-scale infrastructure investment.
A call for action: The role of the public sector and implications for the OECD

There was consensus among participants to increase collaboration among public and private stakeholders and to better understand the needs for infrastructure investment regulation.

Facing the changing nature of infrastructure investment, panellists argued that there is limited space for one-size-fits-all international infrastructure policy. While investors are adopting a global diversification of infrastructure portfolios, international infrastructure investment policy has to maintain its flexibility to account for different approaches to sustainable infrastructure development across countries. Infrastructure investment can over time help overcome regional disparities in growth and wellbeing and facilitate inclusive growth.

The OECD, through the Project on Long-term Investment and the G20/OECD Task Force on Long-term Investment Financing by Institutional Investors has been advising to broaden capital market channels for investment in infrastructure in order to mobilise higher levels of investment. The complexities of large-scale infrastructure projects can involve many stakeholders such as multi-lateral development banks, governments, and increasingly non-public sources, making the diversification of private sources for infrastructure, such as banks, institutional investors, and corporates, critical to designing an optimal blend of finance.

Participants agreed that the effect of policy events on the performance of infrastructure investments has to be better understood and monitored and that investors ultimately have to build portfolios that are to a certain extent resilient to policy shocks.

In a forthcoming OECD report, Breaking Silos: Actions to Develop Infrastructure as an Asset Class and Address the Information Gap, the OECD examined in detail the provision of data on infrastructure finance, where there is currently a lack of information supporting investment, proposing an agenda for the Argentinian presidency of the G20. Key identified policy actions include:

I. Mapping levels of investment and financing channels for infrastructure including financial instruments, sources of investment, and levels of public financial support;

II. promoting a definition of sustainable and quality infrastructure investment to facilitate data collection on sustainability and resilience factors in infrastructure investment;

III. promoting standardisation and harmonisation of project documentation and of approaches to infrastructure valuation and analysis; and

IV. advancing international infrastructure data collection, with the adoption of a template for a preferred set of information to be collected, including quantitative data on historical cash flows and performance at the project level and qualitative data covering project characteristics and sustainability issues.

In particular the OECD, in coordination with the Global Infrastructure Hub, the European Investment Bank and the Long Term Infrastructure Investors Association, is coordinating an Infrastructure Data Initiative in order to identify data gaps that hinder investment, and to improve on performance reporting, benchmarking, and analysing infrastructure projects. This work will help advance the description of infrastructure as an asset class, making it easier for investors to perform the necessary due diligence on infrastructure investments before committing capital. Additionally, accounting standards, pension and insurance regulation/supervision, solvency, and governance can all be improved with better access to information about the unique attributes of infrastructure investments.
There was a call amongst panellists to increase the efficiency of existing ESG standards and to bridge the gaps between them as well as to improve investors’ understanding of non-financial ESG factors.

Panellists highlighted the lack of data and adequate models to measure ESG performance of infrastructure projects and investments. Both were argued to be necessary to better understand ESG risks and to increasingly incorporate them into investment decisions.

The OECD was thus supported in its efforts to collect data, develop sound ESG performance measuring methodologies and moderate the harmonisation of existing ESG standards. The OECD was furthermore encouraged by the panellists to maintain its support towards better policies for sustainable and quality infrastructure investment in order to keep international ambitions high.

There was a call for international action to increase ambitions in the field of blended finance to support emerging market investments, to provide local authorities with more technical assistance and to step up international efforts on reducing transaction and delivery costs for infrastructure project development.

A recent report, developed by the OECD coordinating with the Global Infrastructure Hub, the Asian Development Bank, and in cooperation with other IOs, titled Risk Mitigation and Allocation in Infrastructure, in APEC Economies: Selected Good Practices, describes the main types of risks in infrastructure and the tools available to policymakers and regulators to help effectively manage and allocate risks amongst the various stakeholders.

The OECD Development Assistance Committee is currently developing the OECD Blended Finance Principles. The OECD’s work on blended finance over the next two years will distil and promote best practice and develop guidance that will assist the development co-operation community in delivering development impact from emerging blended finance approaches, including the need for a measurable and verifiable demonstration of impact, particularly in poverty reduction.
Key OECD References

In the recent OECD report *Investing in Climate, Investing in Growth*, new OECD modelling demonstrates that combining economic reforms with ambitious climate policies in an integrated manner can spur economic growth while also mobilising investment: decisive climate action could boost long-run output by 2.8% on average across G20 countries. Chapter 7 of the report lays out the actions needed to mobilise finance for the low-carbon transition.

Emerging and innovative financing models and instruments such as investment platforms, equity and debt funds, syndicate lending, and project bonds are key areas of the infrastructure market, with policy actions for improving the infrastructure finance ecosystem presented most recently in the *G20/OECD Guidance Note on the Diversification of Financial Instruments for Infrastructure*, endorsed by the G20 during the 2016 Chinese presidency.

Institutional investors, in particular, have been a key source of finance for infrastructure. A forthcoming publication of the *OECD Annual Survey of Large Pension Funds*, tracks infrastructure allocations of some of the world’s largest pension funds. One of the major indicators coming out of the historical analysis of pension fund asset allocation in infrastructure is that growth in infrastructure allocation has been “low and slow” over the past few years.

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As highlighted by the OECD’s report on *Investment Governance and The Integration of ESG Factors* (2017), evidence suggests that ESG factors may have a material financial impact and therefore should be relevant to institutional investors as they build their portfolios. However, the lack of standardisation and ESG data on infrastructure assets limits the ability to explore the link between the ESG performance and the financial performance.

A forthcoming note from the OECD on infrastructure as an asset class will further elucidate the challenges to collecting data on infrastructure projects, providing insights into benchmark specification. The note will be prepared along with the launch of the data gathering initiative and presented to the steering group in the first half of 2018. The note will complement the OECD report *Breaking Silos: Actions to Develop Infrastructure as an Asset Class*.

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1 A report launched in May 2017 in the context of Germany’s G20 presidency.
Session Summaries

Session I: Infrastructure investment and international policy developments

Background

A radical shift in global infrastructure investment is needed to adhere to the goals set out in the Paris Agreement and to deliver on the Sustainable Development Goals. This shift needs to take place across all sectors of infrastructure, ranging from energy and mobility services to buildings and social services. In this regard, infrastructure needs to be socially, economically and environmentally sustainable and is as such a key foundation for long-term global socioeconomic stability.

While infrastructure undoubtedly serves as the backbone of our economic development and prosperity, current levels of investment especially in quality and low-carbon infrastructure have been insufficient since the economic crisis in 2008. Not only are advanced economies struggling with chronic underinvestment in their aging infrastructure stock, but in particular in lower and middle-income countries, ensuring affordable and reliable access to basic services remains a major challenge.

To address this issue and fill the widening investment gap, many governments therefore seek greater levels of private participation in infrastructure financing. Private investors and especially institutional investors, such as pension funds and insurances, have a growing appetite for infrastructure investments, as they are looking for new sources of long-term and inflation protected returns. Efforts from public and private actors are therefore currently underway to be more innovative in financing infrastructure projects. New financial instruments and techniques are being developed and risk allocation amongst the respective stakeholders needs to be reviewed.

The complex financial structure of infrastructure projects provides much scope for public and private cooperation. In particular depending on available revenues, infrastructure can be financed using different capital channels and involve different structures and instruments. Some, like listed stocks and bonds, are market-based instruments with well-established regulatory frameworks, while project finance structures are more complex and less standardised.

Banks, which have been the traditional providers of infrastructure funding, are therefore now increasingly joined by institutional investors. Among these institutional investors, asset allocation trends already show a gradual globalisation of their portfolios, with tentatively increasing interest in emerging markets and diversification into new asset classes. However, to really capitalise on higher return expectations from emerging market infrastructure investments and greenfield assets, investors have yet to gain confidence in these asset types. To this end, substantial public effort is still needed to increase the number of infrastructure projects that are suitable for capital market financing.

Issues for discussion

- Current trends in financing infrastructure and the role of different private and public sector investors.
- Increasing private sector participation in infrastructure investment and levels of foreign participation.
- Mobilising resources and mitigating risks - traditional investors and new sources of commercial financing for development.
• What are the risks in infrastructure investment and financing? Optimal allocation of risk and alignment of financial market policies.

Summary

The first plenary session, moderated by LTIIA’s Executive Director, Mr. Eugene Zhuchenko, provided an overview of recent market trends in infrastructure investment and developments in international infrastructure investment policy. In this session, panellists from diverse backgrounds, ranging from development banking and international trade, to urban infrastructure investment, advisory and associations, presented their opinions on current challenges and opportunities in infrastructure investment as well as on how policy frameworks can play an essential role in this context.

Recent trends in infrastructure investment and policy

In recent years, infrastructure investments as an asset class have become more approachable and investor friendly. Panellists agreed that many countries, such as Canada, the UK and the US, are putting long-term infrastructure plans and frameworks in place, which has helped to increase appetite from private investors. Nevertheless, it was also agreed that investors still struggle with a lack of concrete and commercially viable infrastructure projects, i.e. a pipeline of projects to which investors can direct their capital. Furthermore, infrastructure investors face high due diligence costs, a lack of historical data and empirical evidence for forward planning, and investment regulations that can sometimes be a barrier to investment.

The topic of political risk and insecurity about how to deal with uncertainty in infrastructure policy making was also a recurring theme in the discussion. Panellists argued that investor appetite in infrastructure is often reduced by uncertainty about the feasibility and reliability of infrastructure programs laid out by governments. For instance, US institutional investors and specifically US pension plans are increasingly interested in infrastructure investment, but face much uncertainty around whether the US government will actually commit to an extensive infrastructure programme with a sufficient number of bankable projects. Also the case of Britain was made, which currently brings much uncertainty to European markets. In this context, it was argued that clear ambitions towards more infrastructure investment in Britain are central to maintaining economic stability in light of Brexit. Eventually, participants agreed that the effect of policy events on the performance of infrastructure investments has to be better understood and monitored and that investors ultimately have to build portfolios that are to a certain extent resilient to policy shocks.

Panellists agreed that global diversification of infrastructure portfolios is a way to overcome political risks, and that in fact, infrastructure investment can over time reduce political risks by overcoming regional disparities in growth and wellbeing and through facilitating inclusive growth.

One size does not fit all – the changing face of infrastructure investment

Policy frameworks supporting infrastructure investments from institutional investors, i.e. efforts to crowd in private capital, and long-term infrastructure programmes are currently being put in place at different speed and scale in various countries and markets. This not only depends on a country’s or market’s development stage but also on local politicians’ willingness to act. Panellists therefore argued that there is limited space for one-size-fits-all international infrastructure policy. Global infrastructure investment policy thus has to maintain its flexibility to account for different approaches to sustainable infrastructure development across countries. This also includes the fact that while developed economies are focusing primarily on upgrading existing infrastructure, developing
countries are faced with the need for investment in predominantly greenfield projects, which panellists argue is another hurdle of channelling private finance to emerging markets.

In this context, the session’s participants also pointed out that the face of infrastructure investment is currently changing, as rapid demographic and technological developments are coming into play. New infrastructure projects as well as the upgrading of existing infrastructure have to be increasingly steered towards the needs of future generations. For instance, while social infrastructure in developed economies, such as hospitals, is currently designed to serve rather young demographics, it will need to serve an on average much older population in the future. This means for example that hospitals that are currently designed to have adequate emergency (short-term) capacities will have to be capable to provide much more longer-term services, such as geriatric care, in the future. Such demographic and technological trends also affect the way housing and education infrastructure is designed and ultimately also financed. Policy reactions that account for these trends should therefore come early enough, in order not to be of surprise to private investors at a later stage. Private investors should be involved in this policymaking process as early as possible.

**Investors’ changing perception of regulatory risk**

Infrastructure investments in OECD countries were traditionally perceived as relatively low-risk assets and in particular as investments that were not exposed to the same political or regulatory risks as assets in emerging economies. This perception, however, has changed over recent years. Panellists pointed out that also in Europe, for example, investors had to acknowledge that regulatory changes and political risks can substantially affect the performance of infrastructure investments. Recent political developments, such as Brexit and the Catalan independence vote, among others, were the most frequently mentioned destabilising circumstances that have the potential to affect financial performance of even mature infrastructure assets in Europe. Investors therefore had to realise that even in OECD countries higher discount rates have to be applied for the valuation of investments in order to adequately factor in higher levels of political and regulatory risk.

Nevertheless, panellists also agreed that better ways to mitigate regulatory risks in both developed and developing countries need to be developed. Particular importance was attributed to the role of PPPs and the engagement of private stakeholders as early as possible from the public side. The early dialogue with end users of planned infrastructure projects to assure good performance was mentioned in this respect. There was further consent about the fact that private investors should also seek to better understand the drivers behind regulation. Regulators are equally taken by surprise by disruptive innovation or technological change as are private stakeholders. They therefore need time to adapt regulations to new developments in the markets. Nevertheless, while adequate regulations certainly have to be put in place to respond to disruptive developments and to assure economic stability, it was argued that policymakers must not overregulate certain areas. Regulations have to be flexible enough to allow for disruption, as they otherwise tend to distort markets themselves. Panellists mentioned asset-backed securities as an example of an overly regulated financial instrument, given that regulation in response to the 2008/2009 financial crisis has brought the use of these instruments ‘almost down to zero’.

In light of the above, and in the context of infrastructure investment, participants highlighted the need for investors to seek the dialogue with policymakers and legislators to explain the functionalities of private infrastructure investment. Investors should explain more comprehensively their needs to public stakeholders in order to make the infrastructure investment market work more efficient and to reduce regulatory and political risk exposure. In this regard, PPPs were again mentioned as a very suitable instrument to better align the interests of public and private stakeholders.
Session II: Managing ESG efficiently: best practices and industry trends

Background

In institutional investment and infrastructure investment, sustainability is becoming a theme of increasing importance. Given their usually large scale and long-term nature, as well as the involvement of many public and private stakeholders, infrastructure assets are exposed to a broad spectrum of environmental, social and regulatory risks. Investors are thus increasingly taking into account the importance of environmental, social and governance (ESG) criteria when assessing their investment decisions and risk management processes. While the definitions of “ESG” and “sustainable infrastructure” vary between investors and can include for example clean energy as well as social housing projects, the fact that social inclusiveness, sound governance practices and environmental stewardship can affect the long-term risk profile of infrastructure assets is today widely accepted.

The assessment of ESG performance of infrastructure assets is therefore essential, from both a policy as well as an investment perspective. Given the fundamental importance of infrastructure spending for long-term economic growth and social development, the global development agenda and most prominently the Sustainable Development Goals and the Paris Agreement, call for infrastructure investments that have sustainability at their core. The full integration of sustainability considerations in the infrastructure investment process, however, is still hindered by definition and standardisation issues. In fact, the evaluation of an infrastructure asset’s ESG performance and its influence on financial performance requires well-defined and holistic ESG standards and performance indicators.

The above ultimately also calls for a broader collection of ESG data. This data gathering is in particular necessary to (i) better assess the ESG benefits of infrastructure projects and the extent to which they meet and support broader policy objectives, (ii) better explore the link between ESG and financial performance of an asset with the potential to mobilise further financing for sustainable infrastructure, and (iii) better evaluate the impact of specific environmental factors such as climate change on infrastructure asset valuation and financial stability. In addition, ESG data collection is essential for the assessment of an infrastructure asset’s exposure to transition risk, i.e. the financial risk arising from the scale and speed, combined with the regulatory and technological response to a low-carbon economy. Eventually, the uncertainty over the nature and timing of transition-related policy intervention, the developments in low-carbon technologies and innovation, as well as rapidly changing energy market conditions all impact the valuation and financial performance of infrastructure assets.

Issues for discussion

• Difficulties in defining “sustainable and quality infrastructure investment”.
• Data gaps in ESG data collection for the standardisation of ESG performance indicators.
• The importance of data to link ESG performance to financial performance.
• What are the environmental, social, and governance dimensions of infrastructure investment?
• What are some major performance-based standards, rating systems and benchmarking approaches for sustainability in infrastructure?
Summary

This second panel focused on the incorporation of environmental, social and governance (ESG) criteria into infrastructure investment decisions of private investors and was moderated by Ms. Mathilde Mesnard, Deputy Director of the Financial and Enterprise Affairs Directorate at the OECD. In particular, the discussion focused on recent trends in the investment industry’s uptake of ESG reporting standards, and measurement criteria as well as on the role of policy bodies, such as the OECD, in supporting and promoting international ESG accountability in infrastructure investment.

Industry trends in ESG

Most importantly, all participants of this panel acknowledged that ESG implications, such as water stress, climate change, social inclusion and good governance principles, can significantly affect the long-term financial performance on an investment asset. It was therefore also highlighted that the investment industry is increasingly interested in voluntarily disclosing the ESG performance of their investments. A high degree of transparency and adherence to responsible investment principles by private investors were therefore mentioned as prerequisites for assuring adequate ESG performance of assets and being able to better communicate ESG performance. Panellists agreed that the future will see an increasing alignment of investors’ behaviour with responsible investment principles (such as the UN PRI) as well as more ESG disclosure. This in turn makes the establishment of formal and coherent ESG measurement standards and transparency frameworks ever more relevant.

Measuring ESG performance

Generally speaking, the panel pointed out that the ESG performance of an infrastructure project can be measured in two dimensions:

1. Whether the infrastructure project has been built according to ESG standards and is complying with ESG criteria.
2. Whether the infrastructure project is contributing to the ESG performance of its surrounding environment, and to public commitments to meet, for example, country contributions to the Paris Agreement or the SDGs.

In this regard, it was also argued by some panellists that the measurement of ESG performance is relative to the development stage of a country in which the project is being realized and that international ESG standards should thus take development differences into account. For instance, while the ESG performance of an infrastructure project in a developing country might not reach the same standards as applied in developed economies, it might still outperform other projects in countries of the same development stage. Other panellists, however, added that ESG measurement standards have to be globally applicable, as ESG issues are of global scale and often of cross-border importance. The LTIIA presented the second edition of the *Environmental, Social and Governance Handbook for Long-Term Investors in Infrastructure*, which provides a descriptive summary of frameworks, standards and tools applied today to invest in infrastructure responsibly.

In the same discussion, further points were raised about the fact that many ESG considerations, as for instance social inclusion or environmental co-benefits like reduced air pollution, cannot always be quantified in financial terms. For infrastructure projects were certain ESG factors can in fact be measured quantitatively (e.g. tonnes of avoided GHG emissions), ESG reporting and accounting is more straightforward and investors find it easier to reflect this in their investment decisions.
Panellists also called for more tolerance from the investors’ side when it comes to understanding and considering the non-financial / non-quantitative elements of an infrastructure asset. For the effective management of ESG criteria it is therefore important to find common ground between investors and environmental regulators, who do not necessarily speak and value a project in purely financial terms. It was argued that holistic ESG valuation tools have to bridge this gap of understanding and focus on common denominators that are comprehensive to investors as well as to regulators and customers. In this regard, however, as it was highlighted during the discussion, one must also bear in mind that various ESG standards cater to different objectives. Some standards are used for reporting and valuation, while others may be used for “window dressing” purposes. It is therefore necessary to develop a set of ESG standards among which investors can reach broad agreement as to their relevance. Ultimately, this pragmatic approach will increase the efficiency of ESG assessments by simplifying procedures, avoiding redundant or overlapping documentation or reporting that is not relevant for a certain type of project or investment. Bridging the gaps and reducing the overlaps between existing ESG standards was thus seen as a top priority among panellists.

Lastly, the discussion also touched upon the need for investors and project developers to incorporate ESG considerations along the entire life cycle of an investment. ESG performance standards need to be recurrent and frequently updated. This will assure that projects and investments will be incentivised to maintain their standards and that deficiencies are detected and documented appropriately. Panellists further argued that the periodic assessment and in particular the periodic reporting of ESG criteria also supports the development of ESG performance benchmarks, as more data becomes available. This makes investments at the same life cycle stage better comparable.

**Takeaways for investors, policy makers and the OECD**

On the side of investors, panellists in particular called for better knowledge to understand the environmental and social impacts of their investments as well as to better understand the logic and relevance of ESG standards.

For intergovernmental organisations and regulatory bodies, panellists argued that not every organisation or body should aim to develop their own standards, but in fact collaborate to harmonise their approaches and elaborate a comprehensive ‘set of standards and performance indicators’. In this way investors should be able to find the ones most relevant to their own objectives rather than be obliged to adhere to standards that do not fit to their activities. The discussants also agreed that, in particular since COP21 and the Paris Agreement, the integration of ESG criteria in financial regulation is picking up speed and that investors will see a growing regulatory response, in particular regulators clarifying the treatment of ESG in the regulatory framework.

Panellists further argued for less of a top-down approach to ESG. Investors should not be simply forced to account for ESG criteria, but the process should rather be market- and investor-driven. Infrastructure is already quite heavily controlled in some aspects of ESG criteria (environmental, for instance), which could hamper its competitiveness, compared to other asset classes that face less regulation. Panellists therefore argued that increasing the efficiency of existing ESG regulation is a key aspect to channelling more private investment into infrastructure.

Lastly, as far as OECD’s work on the establishment of infrastructure as an asset class was concerned, panellists highlighted the lack of data and adequate models to measure ESG performance of infrastructure projects and investments. Both were argued to be necessary to better understand ESG risks and to increasingly incorporate them into investment decisions. The OECD was thus supported in its efforts to collect data, develop sound ESG performance measuring methodologies and moderate
the harmonisation of existing ESG standards. The OECD was furthermore encouraged by the panellists to maintain its support towards better policies for sustainable and quality infrastructure investment in order to keep international ambitions high. This will allow for contributions to commitments under the Paris Agreement and to assure that promising initiatives are not abandoned after an initial phase of euphoria.

Session III: Crowding in private capital for infrastructure financing: global perspective on challenges and opportunities

Background

Together, the Paris Agreement and the Sustainable Development Goals (SDGs) set out ambitious targets for the global development agenda and will require largescale investment in sustainable and low-carbon infrastructure. Reaching these goals will not only require the deployment of innovative technologies and a reallocation of investment away from carbon-intensive to low-carbon assets, but also demands closer collaboration between the public sector and private investors in financing future infrastructure projects.

In fact, recent shifts towards greater involvement of the private sector in the delivery of infrastructure finance have already become apparent.² Driven by growing fiscal constraints to fund infrastructure as well as by the desire to introduce more competitive and efficient market structures, public authorities are currently looking for new pathways of enhancing private sector infrastructure financing. Financial markets can support the infrastructure sector through a variety of investors, such as utilities, banks or institutional investors, and asset classes, like debt, equity or mezzanine. Using different types of financing allows establishing more efficient capital structures for infrastructure projects, optimising equity and debt financing mixes, thereby reducing the cost of capital, and improving the allocation of risks between involved public and private stakeholders.

Despite these benefits and recuperating global capital markets, access to private long-term finance remains constrained for infrastructure projects, particularly in developing countries. Reaching a sound understanding of the changing roles of actors and sources of finance, and the differences between traditional actors, such as utilities and commercial banks, and non-traditional ones, such as institutional investors, is therefore vital to scaling up private investment in infrastructure. This also includes understanding the appetites and needs of these different investors in terms of risk and liquidity as well as their physical capacity to finance potentially complex and large-scale infrastructure assets.

Thus, in order to eventually mobilise large pools of available capital from private long-term investors, government decisions on financing infrastructure should aim to minimise project costs and ensure the affordability, robustness and sustainability of financing structures. This is particularly important in developing economies where (foreign) private investment is often further constrained by weak policy frameworks and governance.

² The OECD’s annual Large Pension Fund Survey, found that, although infrastructure investment currently represents only 1.1% of total assets under management, there is strong evidence of growing interest in infrastructure investments by institutional investors. (http://www.oecd.org/finance/private-pensions/survey-large-pension-funds.htm)
Issues for Discussion

- How to crowd-in private sector financing ensuring additionality and value for money?
- Government instruments and techniques to attract private sector financing in infrastructure.
- What are the needs, appetites and constraints of private long-term investors?
- Ways to enhance collaboration among public and private stakeholders and the public sector’s role in attracting private sector financing for public objectives.

Summary

Moderated by Mr. Raffaele Della Croce, Lead Manager of the OECD Long-term Investment and Institutional Investor Project, the third and last panel discussion focused on the challenges as well as opportunities of increasing the involvement of private investors in financing infrastructure development. The panel mainly comprised private investor representatives and therefore gave an in-depth insight into the needs and interests of institutional investors when it comes to infrastructure investment.

Responsibilities and appetites of institutional investors

Institutional investors, such as pension funds or insurance companies, have a long-term investment horizon, which is in-line with the often long-term liability profile for pension and life insurance beneficiaries. The participants of this third panel pointed out that for institutional investors to engage in infrastructure financing, investments have to be not only commercially viable, but also toned to have a suitable risk-return profile. In this regard, panellists acknowledged the effectiveness of PPPs to help increase the commercial viability and bankability of infrastructure projects as well as to better allocate risks among public and private stakeholders. Also a clear increase in the use of PPPs to finance infrastructure projects was confirmed by the panellists.

Considering their responsibilities, the participating investors shed further light on the fact that infrastructure investments in emerging economies are not yet attractive to institutional investors. The strong appetite for infrastructure investment in the US and Canada has led to an increase in available private capital on those markets; however, some emerging markets still struggle to attract private investors. This is largely attributed to high levels of political risks and the difficulty of establishing reliable debt and equity capital structures. Overcoming these obstacles to attract more third-party, private investment in infrastructure in developing countries were thus considered essential to achieving the global development agenda and the ambitions set forth by the Paris Agreement.

In addition and similar to what has already been argued by the panellists of the first session, the participants of the third panel also raised concerns about growing instability and political risk in Europe. Brexit, quantitative easing by the European Central Bank, and the threat of inflation as well as political instability in Spain and upcoming elections in Italy were mentioned as the main developments of concern. As a response, investors are looking for more diversification in their portfolios also including in new sectors, such as social and small-scale infrastructure projects like schools. In the case of social infrastructure, the use of PPPs and the bundling of small infrastructure projects were considered to have great potential in attracting private investors financing. On the other hand, panellists were concerned with the lack of competency among local authorities to implement social and small-scale infrastructure, although they are the main implementers at this level. Despite increasing appetite for these types of projects, it was mentioned that this development is again restricted to developed economies and to projects in local proximity to investors, where they possess good knowledge of the local market conditions and regulations. Nevertheless, panellists generally
argued that small-scale infrastructure investments open up completely new financing structures also for emerging country projects.

**Emerging market infrastructure investment**

Panellists highlighted the issue of questionable ESG performance of investments in developing countries. Investors are more frequently avoiding investments in diesel, nuclear and coal assets as well as demanding that asset operators collect necessary permits and technical surveys. This, however, proves even more difficult in emerging markets than in developed countries and therefore further diverts investors’ interest in emerging market investments. Very few of the participants confirmed their active interest in markets such as Sub-Saharan Africa. On the other hand, the majority acknowledged that potentially high returns could be expected from such investments and that explicit debt (risk) ratings for emerging market investments would help to increase knowledge about these markets and potential project opportunities.

**The role of the public sector**

The role of the public sector in supporting private capital engagement in infrastructure investment was seen by the panellists mainly as a facilitating, leveraging and risk mitigating role. In the context of emerging markets, the discussants called for more ambitious policy collaboration among developed and developing countries as well as among governments and DFIs in order to provide better leverage for private capital and to establish commercially viable cross-border project pipelines. It was confirmed that without such a supportive framework, investors do not see enough incentives to go abroad and invest in foreign infrastructure assets. Governments and DFIs may, for instance, provide investment enhancements, such as interest subsidies and first-loss guarantees, to optimise risk allocation amongst stakeholders and to increase a project’s credit rating. This consequently reduces its cost of capital and increases its attractiveness to third-party investors. In addition, panellists called for intensified international collaboration to reduce transaction and delivery costs for global infrastructure development.

In developed economies, public authorities were also encouraged to provide more technical assistance to local authorities to improve their competencies in implementing infrastructure projects on the ground. This, as it was argued by the panel, will improve the long-term performance of projects and in particular of smaller-scale infrastructure assets. Furthermore, governments should increasingly seek the support of private investors for social and small-scale infrastructure projects and engage necessary private sector stakeholders as early as possible. The development of new blended finance approaches and instruments to leverage private financing for infrastructure investments were endorsed by the panellists.
Ladies and gentlemen,

Major global fora such as the G20, G7 and APEC stress the importance of promoting sustainable, innovative and inclusive growth, fostering job creation, and strengthening economic integration and competitiveness – an agenda which the OECD strongly supports.

The importance of long-term investment in sustainable infrastructure

Yet realising these goals requires the provision of modern and resilient infrastructure. According to the McKinsey Global Institute, the world invests USD 2.5 trillion in infrastructure annually, yet needs to invest USD 3.3 trillion per year in infrastructure just to support current growth expectations; emerging economies will account for approximately 60 percent of that need.

But simply delivering more infrastructures is not enough. It also needs to be high-quality and sustainable, as societies seek growth and development in the face of significant challenges. Global social and environmental pressures have led to the emergence of a web of new complex systemic risks that threaten social mobility, food production, clean water, and global stability. Failure to act would undermine the sustainability of growth and curtail human well-being across all countries; and more markedly in less-developed, less-resilient societies.

Much of the existing infrastructure that underpins economic activity and well-being will be at risk or will need to be upgraded.

Much of the infrastructure that remains to be created will have to be conceived differently.

A unique opportunity presents itself: to reinvigorate global growth by investing in the infrastructure needed to support continued prosperity while minimising adverse environmental and social impacts – that is, supporting sustainable and quality infrastructure investment. In the recent OECD report Investing in Climate, Investing in Growth, new OECD modelling demonstrates that combining economic reforms with ambitious climate policies in an integrated manner can spur economic growth while also mobilising investment: decisive climate action could boost long-run output by 2.8% on average across G20 countries.

4 A report launched in May 2017 in the context of Germany’s G20 presidency.
Financing sustainable infrastructure

Scaling up private financing in sustainable infrastructure is at the core of realising this opportunity, especially in developing countries that may face more limited public finance options.

The OECD, through the Project on Long-term Investment and the G20/OECD Task Force on Long-term Investment Financing by Institutional Investors has been advising to broaden capital markets channels for investment in infrastructure in order to mobilise higher levels of investment. The complexities of large-scale infrastructure projects can involve many stakeholders such as multi-lateral development banks, governments, and increasingly non-public sources -- making the diversification of private sources for infrastructure — banks, institutional investors, and corporates — critical to designing an optimal blend of finance.

Emerging and innovative financing models and instruments such as investment platforms, equity and debt funds, syndicate lending, and project bonds are key areas of the infrastructure market, with policy actions for improving the infrastructure finance ecosystem presented most recently in the G20/OECD Guidance Note on the Diversification of Financial Instruments for Infrastructure, endorsed by the G20 during the 2016 Chinese presidency.

Institutional investors, in particular, have been a key source of finance for infrastructure. A forthcoming publication of the OECD Annual Survey of Large Pension Funds (which we will see more of in a later presentation), tracks infrastructure allocations of some of the world’s largest pension funds. One of the major indicators coming out of the historical analysis of pension fund asset allocation in infrastructure is that growth in infrastructure allocations has been “low and slow” over the past few years. Some funds also reported a significant home-market bias for their infrastructure investments, and relatively few reported significant allocations to infrastructure in emerging markets.

Scaling-up investment through effective risk mitigation

Much needs to be done in order to mobilise investment, particularly in those economies perceived as higher risk by investors - a key element to improve the financing environment for sustainable infrastructure is to optimise the risk management and risk profile of infrastructure projects for the private sector, which can also include enhanced PPP contracts.

A forthcoming report, developed by the OECD coordinating with the Global Infrastructure Hub, the Asian Development Bank, and in cooperation with other IOs, titled Risk Mitigation and Allocation in Infrastructure, Including in Public-Private Partnerships in APEC Economies: Selected Good Practices, describes the main types of risks in infrastructure and the tools available to policymakers and regulators to help effectively manage and allocate risks amongst the various stakeholders.

For example, the report presents actions that can be taken such as the use of credit enhancement tools for PPP projects, which may enable the use of bonds in the primary stage of project finance, and also the importance of contractual arrangements as a risk management strategy. Risk mitigation instruments such as guarantees, derivative contracts and insurance provided by either DFIs, export credit agencies (ECAs), commercial banks, private insurance contracts, project development facilities and technical assistance, all contribute to risk management in infrastructure.

Attracting institutional investor’s capital to finance infrastructure projects is about intelligently using and orchestrating the previously mentioned risk mitigation instruments in order to:
(i) enhance the credit quality of the projects and entities seeking financing in order to meet investors’ risk requirements;

(ii) structure innovative vehicles and financial instruments that match investors’ appetite.

Instruments can successfully mitigate the main infrastructure financing risks, helping to achieve an investment grade rating and potentially attracting international institutional investors. It is a way to broaden the financing sources for an infrastructure project, to develop local capital markets, and mobilise investors that do not usually invest in infrastructure.

In addition, many of these risk mitigation techniques are supported by ‘blended finance’ i.e. the strategic use of public or donor capital - either concessional or non-concessional - to mobilise additional investment from the private sector. For example, in some credit enhancement strategies, transactions can be structured where public capital can be deployed in subordinate positions in a project finance structure, providing credit support for more senior issues. The OECD Development Assistance Committee is currently developing OECD Blended Finance Principles. The OECD’s work on blended finance over the next two years will distil and promote best practice and develop guidance that will assist the development co-operation community in delivering development impact from emerging blended finance approaches, including the need for a measurable and verifiable demonstration of impact, particularly in poverty reduction.

In this way, development finance can be viewed as a catalytic element, mobilising higher amounts of capital for development finance, helping also to meet the United Nations Sustainable Development Goals and the Addis Ababa Action Agenda.

**Developing infrastructure as an asset class and the infrastructure data initiative**

Another key area of work involves the provision of data on infrastructure finance, where there is currently a lack of information supporting investment. The OECD, in coordination with the Global Infrastructure Hub, the European Investment Bank and the Long Term Infrastructure Investors Association, is organising an **Infrastructure Data Initiative** in order to identify data gaps that hinder investment, and to improve on performance reporting, benchmarking, and analysing infrastructure projects. This work will help advance the description of **infrastructure as an asset class**, making it easier for investors to perform the necessary due diligence on infrastructure investments before committing capital. Additionally, accounting standards, pension and insurance regulation/supervision, solvency, and governance can all be improved with better access to information about the unique attributes of infrastructure investments.

In a forthcoming OECD report, **Breaking Silos: Actions to Develop Infrastructure as an Asset Class and Address the Information Gap**, key policy actions include:

I. Mapping levels of investment and financing channels for infrastructure including financial instruments, sources of investment, and levels of public financial support;

II. promoting a definition of sustainable and quality infrastructure investment to facilitate data collection on sustainability and resilience factors in infrastructure investment;

III. promoting standardisation and harmonisation of project documentation and of approaches to infrastructure valuation and analysis;

IV. and advancing international infrastructure data collection, with the adoption of a template for a preferred set of information to be collected, including quantitative data on historical cash
flows and performance at the project level and qualitative data covering project characteristics and sustainability issues.

**Conclusions**

Let me conclude by reiterating that encouraging higher levels of investment in sustainable infrastructure is needed in order to meet future growth expectations; this is also an opportunity to tackle some of the major challenges facing humanity, and to build a sustainable future for everybody. I have outlined a number of policy levers that could be used to facilitate investment for a more prosperous, fair, and environmentally responsible future.

Now, before me is a diverse community of professionals – we have much that can be shared and learned from one another on the success of meeting sustainable infrastructure investment needs. I encourage you all to call on the OECD and other IOs to further analyse good practices and approaches to the financing of sustainable infrastructure, which can guide and support the voluntary implementation of these policy messages by governments.

In opening the plenary sessions, I encourage you to speak your minds!

Thank you.
Financing infrastructure in Europe: a changing scenario – Excerpt

Franco Bassanini
President, Open Fiber
and Special Advisor to the Italian Prime Minister

Ladies and Gentlemen,

Over the coming years, the global demand for investment in infrastructure will continue to be very high. The G20 in Hamburg 2017 estimates that 3.8 per cent of global GDP is needed in general infrastructure by 2030 at the global level. This represents 3.3 trillion dollars per year.

In general, massive investment will be needed to face structural changes required by the technological disruption and the new industrial revolution (AI, Industry 4.0), the replacement of old technologies, the challenges of post COP21 on decarbonisation, the substitution of stranded asset and the growth of international competition in a globalised economy.

(…)

Disruptive changes in the TLC infrastructure market: three lessons

Like other utilities, even European telecommunications come from a past where companies where vertically integrated and publicly owned. Today while most telecom operators have been partially or fully privatised, vertical integration of network and services remains the norm. Incumbent operators are still cumulating lots of different tasks, requiring completely different skills. This feature is exacerbated by the convergence between content production and telecommunications services delivery. This convergence is leading to vertical integration within the EU telecom incumbent of both activities. This integration on its turn, accentuates the internal conflict of interests between investment in content and in delivery platforms and increases the need of interventions by government and regulators.

Vertical integration and the risks of discriminatory behaviour arising from it, have been the nightmare of regulators and of competition authorities throughout Europe. In 2009 the European directives enacted specific provisions aiming at guaranteeing a legal framework for voluntary or mandatory separation among network and services. These provisions are currently being applied in the process of separation of British telecom network (Open Reach) from British Telecom and have been applied in the Czech Republic where the network operator (CETIN) was separated from O2 CR.

Outside Europe, Australia, New Zealand and Singapore experienced a similar separation of the network company from the service company.

The lesson learned from these separations is that they favour a better allocation of risks among investors and therefore generate value for the owners of both companies. The decision to split Telefonica/O2 in the Czech Republic seems a win-win solution to address the dilemma of vertically integrated telecom operators. Since the implementation of the separation of Telefonica/O2 into a NETCO – branded Cetin – and a service operator, the stock price of the latter, O2 CR, constantly increased, reaching a market cap of EUR 3.3bn as of 25th September 2017. This market cap is similar to the market cap of the vertically integrated company Telefonica/O2, before the separation process was initiated.
After company separation, network companies provide their services to all market players on an equal basis without engaging in any retail activity (wholesale-only companies), while service companies gain more flexibility because of reduced regulation and can pursue their objective of horizontal integration in other industries without regulatory obstacles (as well as the OTT). On the investors’ side, long-term investors can concentrate on network telecommunication companies, whose investment requires a longer time for its remuneration but involves less risk; while other investors concentrate on service companies, where they can earn their rewards in a lesser time but bear more risk.

The second lesson is that, in the telecommunications industry, innovation and in particular the usage of fibre optics has a disruptive effect. While the ‘sunk investment’ in copper networks remains substantial in the balance sheet of telecommunication operators, the transition is under way to fibre based networks. Today, only networks entirely made of fibre can provide the kind of speed required by the gigabit society. But it is not only a question of speed.

Not less important is the higher effectiveness and reliability of fibre networks compared to copper ones. Reduced latency and higher reliability make fibre networks, together with 5G connectivity, essential for the development and widespread usage of the most relevant applications expected in the next years: new IoT applications, telemedicine, assisted driving and self-driving cars, artificial intelligence, Industry 4.0… All these developments can take place only if the networks work perfectly every single second without interruption.

However, incumbent telecom operators have a financial interest to delay investment in fibre and to deploy, instead, interim technical solutions such as hybrid fibre-copper networks. Extending the lifetime of the copper networks guarantee a high return to their owners, since the current regulation remunerates assets on the basis of their substitution cost. While this provides a correct price signal to encourage market entry, at the same time, the regulated price guarantees an “over-remuneration” of copper that incumbents are not willing to loose.

If we look at European markets, incumbents have invested in end-to-end fibre networks (also known as fibre to the home or FTTH) only where they were threatened by the competition arising from cable operators or from new FTTH networks. As a consequence, FTTH in Europe is deployed only in a subset of areas, rendering the fulfilment of the EU Gigabit objective set for 2025, very problematic.

To address this issue, the EU should modify incentives to invest in order to make the remuneration of investors in new fibre assets at least equal, and preferably higher, than the remuneration that can be earned on depreciated and technologically obsolete assets.

The third and final take-away, is the incidence of the sharing economy on the telecommunications sector. Today, the largest e-commerce platform of the world has no warehouses. Tomorrow, telecom companies will no longer own distinct physical networks, but software defined networks, making use of elements leased from subcontractors, combined and managed by the telecom operators to provide their services to their end-users.

The European Commission is updating its telecommunications framework to make it futureproof in this regard. First, the definition of operator will be amended to include operators of virtual networks. Second, the European Commission acknowledges the future role of wholesale-only operators...
of the Code). These are the operators that will deploy the fibre networks for the TLC service providers – the ‘network’s network’. Such operators, not involved in retail activities, are today only present in Italy (Open Fiber), in Sweden (Stokab), in Ireland (Siro) and in a few other European countries. But in the future, such operators will likely operate in all member states.

These operators have in common that they invested in FTTH networks from scratch. They have no legacies nor guaranteed return on their investments. But given that their costs are lower than those of operators with complex, upgraded hybrid fibre-copper or fibre-coax networks, the latter operators will eventually acquire capacity from the wholesale-only operators to cut their costs and limit their debt. In the longer run, more incumbent operators are likely to follow the Czech approach and separate the retail business from the management of the network.

This evolution could lead to a re-monopolisation of the distribution networks, through mergers between the NETCOs of former incumbents and new fibre network investors. Such a move would reduce the risk of having duplication of investment in most dense areas and no investment at all in less dense and rural areas. A single operator serving the whole market of retailers has all the incentives necessary to extend coverage and guarantee a geographically averaged access price, favouring the development of a strong service competition among retailers that can make the whole society benefit from the higher diffusion of services. By moving in this direction, society will not bear the costs of duplicated assets and will benefit from the higher coverage of networks and services.

Furthermore, we have to consider that in the same time frame also investment in 5G mobile communications networks is expected to take place. 5G networks intensely use fibre networks, because of the capillarity of their deployment and the high number of small base station that need a fibre connection. Given the cost of deploying the future 5G networks, and in particular the fibre optic backhaul to the very dense network of antennas – nearly one per street -, full infrastructure competition in mobile (which developed among the leading service providers in the GSM area) would be inefficient and perhaps even unsustainable, except for the largest mobile operators. In addition, the classical scenario of competing and interconnected networks, managed by different operators, will soon be unable to guarantee the performances in terms of latency required by 5G applications. On the contrary, the “wholesale only” model will naturally support the evolution of the 5G networks towards a “sliced structure”, managed by a single operator and optimized to satisfy the service needs of each vertical application (e-health, automotive, power systems).

Infrastructure competition would also lead to less consumer choice because smaller operators would not have the means to deploy networks throughout the countries concerned. In Italy, several OLOs have started discussions with us on the 5G infrastructure (they would own the spectrum, not the fibre network). They have understood that it makes no sense for each operator to deploy its own network to all households of the regions in which they are present, with the risk of the service not being taken up.

At the same time, the possible integration of fixed and mobile infrastructures into a single, double face network infrastructure eliminates risk of future demand split between fixed and mobile service provision, as well as the risk connected to the potential competition between these two ways to access the network.

(…)
Annex: Agenda

LTIIA Fourth Annual Meeting and a Joint Forum with OECD

Policy Dialogue to Develop Infrastructure as an Asset Class

18 October 2017

OECD Conference Centre - Paris

Special Sessions on Innovation in Infrastructure Investment, chaired by OECD Secretariat Conference Centre, room CC7

8.15am Registrations and coffee

8.30am Masterclass on Infrastructure Equity Investment: advanced techniques for asset owners and managers
   Aurelie Chreng, Head of Portfolio Construction, EDHECinfra
   Majid Hasan, Head of Asset Pricing, EDHECinfra

10.30am Coffee Break

10.45am Developing Contractual Standards for Infrastructure as an Asset Class: a case of Sustainable Cities, roundtable led by Norton Rose Fulbright
   session chair: Andrew Davies, Senior Counsellor, OECD

11.30am New Wave Infrastructure Managers: a discussion on innovative structuring models and policy role
   John Campbell, Chairman, Campbell Lutyens
   David Smith, Managing Director, Capital Dynamics
   session chair: Haje Schutte, Head of Division, OECD

Members-only Session

12.15pm LTIIA General Assembly

Main program opening

1.15pm Lunch at Salle Roger Ockrent in conversation with Franco Bassanini, President of Open Fiber and Advisor to the Prime Minister of Italy

Conference Centre, room CC7

2.00pm Welcome by Thierry Déau, Chairman LTIIA and CEO Meridiam Infrastructure

2.10pm Keynote address by Douglas Frantz, Deputy Secretary-General, Organisation for Economic Co-operation and Development
   Breaking Silos: Actions to Develop Infrastructure as An Asset Class and Address the Information Gap
2.25pm  Panel discussion moderated by Eugene Zhuchenko, Executive Director, LTIIA 
Infrastructure Investment and International Policy Developments
Helmut von Glasenapp, Secretary General, ELTI
Shigefumi Kuroki, Head of Global Infrastructure Investments, DBJ
Petya Nikolova, Head of Infrastructure Investments, NYC Comptroller’s Office
Nick Merritt, Partner, Global Head of Infrastructure, Norton Rose Fulbright
Richard Price, Chief Economist, UK Department for International Trade

3.15pm  Updates on infrastructure data and benchmarking
Launch of the OECD Annual Survey on Large Pension Funds and
Update on Long Term Investment Project, Raffaele Della Croce
and Joel Paula, OECD
Presentation of the joint Infrastructure Data Initiative by EIB, GIH, LTIIA and OECD
Guido Bichisao, Director, Institutional Strategy Department, EIB
EDHEC Infrastructure Benchmarks: First Indices, First Reflections,
Sarah Tame, Associate Director and Chief Communications Officer, EDHECinfra

3.55pm  Coffee Break

4.10pm  Keynote address by Chris Heathcote, Chief Executive, Global Infrastructure Hub
Challenges and Opportunities in Attracting Private Financing for Global Infrastructure

4.25pm  Panel discussion moderated by Mathilde Mesnard, Deputy Director, Financial
and Enterprise Directorate, OECD
Managing ESG efficiently: best practices and industry trends
Archie Beeching, Head of Real Assets, UN-PRI
Rodolphe Bocquet, CEO and co-founder, Beyond Ratings
Vincent Cassagne, Senior Investment Officer Infrastructure, Mirova
Emmy Labovitch, Principal Administrator, Financial and Enterprise Directorate, OECD
Barbara Weber, Founding Partner, B Capital Partners

5.15pm  Panel discussion moderated by Raffaele Della Croce, Lead Manager, OECD
Crowding in private capital for infrastructure financing: global perspective on
challenges and opportunities
Pradeep Killamsetty, Managing Director, John Hancock
Alessandro Merlo, Executive Director, UBS Asset Management
Laurence Monnier, Head of Strategy, Alternative Income, Aviva Investors
Edoardo Reviglio, Chief Economist, Cassa Depositi e Prestiti
Tom Sumpster, Head of Infrastructure, Legal & General Investment Management

6.05pm  Concluding remarks by Juan Yermo, Deputy Chief of Staff, OECD
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Insurance Europe response to EIOPA’s consultation on review of infrastructure in Solvency II.

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Paula, J. (forthcoming), "Infrastructure as an Asset Class”.


