



Long-term  
Infrastructure  
Investors  
Association



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## **Financing Infrastructure in Europe: a Changing Scenario**

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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 climate change and decarbonization, the substitution of stranded asset and the growth of international competition in a globalized economy.

In the emerging economies, demographic explosion, higher growth rates and raising standards of living will require great investment in urban and social infrastructure. In China in the next ten years over 600 million people are going to move from the country to mega-cities. Population in Africa by 2050 is going to double from 1 to 2 billion people. In the advanced economies, on the other hand, the challenges will not only be related to high tech, innovation and decarbonization, but also to aging society and the social integration of a large number of refugees and immigrants.

### **Investing in infrastructure: a key factor to boost growth**

All over the world, great investment in infrastructure are needed to achieve the objective of a strong, balanced and sustainable growth, as demanded by all G20 Summits, starting from

Pittsburgh in 2009. Economic theory shows that investment is crucial to stimulate growth, increase competitiveness and reduce imbalances.

Investment in infrastructure, innovation, R&D, technology and human capital has significant positive effects on potential GDP. If well-conceived, it increases output, in the short term by stimulating demand, in the long term by raising the productive capacity of the economy.

The multiplier is normally higher than the cost of the debt contracted to finance the investment. There are different opinions only on the size and shape of the phenomenon. According to IMF, in a sample of advanced economies, investing in infrastructures an additional 1% of GDP has a 0.4% effect on output in the first year and 1.5% in the following four years. Obviously, if an increase in GDP produced by investments is greater than the increase in debt, the ratio of debt to GDP falls. In other words, public infrastructure could pay for itself if done the right way.

### **The role of private long-term investors in financing infrastructures**

In Europe, however, with high public debts, the legal constraints of the Fiscal Compact, structural unemployment (especially in peripheral countries) and growing social expenditures to cope with an aging society, the use of public resources to finance infrastructure is allowed only within narrow limits. There is then a strong need to attract private long-term investment and financing.

As you know, in Europe the private financing of infrastructures was once assured almost exclusively by banks. But the European banking system, since the crisis, has been under pressure to repair balance sheets and is strongly restricted in its capacity to finance and invest in infrastructure, as a consequence mainly of low profits and the impact of new prudential and accounting regulations on long-term financing.

The EIB and national promotional banks and institutions have reinforced their role, stepping in supporting projects by providing guarantees, after the collapse of the mono-line industry, and co-investing with commercial banks providing longer duration and lower costs. But in any case, wide spaces are now open for institutional investors seeking for low risk inflation-linked long-term investment opportunities to match their long-term liabilities; both in economic and in social infrastructure, each with their own characteristics.

Economic infrastructures (energy, long distance transport, and TLC,) can largely repay their construction costs with the cash flow they produce. In the utility sector, in Europe, independent regulatory authorities guarantee stable returns and moderate risks.

Social infrastructure, which need a full or a partial payment by the public sector, will use public-private-partnerships based on availability payments or other innovative financial

schemes and instruments. According to Eurostat rules, PPP initiatives are recorded off-balance sheet if the risk of construction is entirely taken over by the private investor. The higher cost of PPP, with respect to more traditional public procurement, according to the “story-line”, is covered by the “value for money” created by the efficiency gains brought in by the private sector, especially if supported by good technical assistance. Moreover, blending, that includes combining interest rate subsidies, special loans, guarantees, risk capital, prizes, and grants coming from the European and/or national funds, may strongly reduce the cost of the availability payments that the public sector has to provide to finance PPPs projects in the social sectors.

### **The conditions needed to attract private finance in infrastructure**

As you know, there is now great liquidity in the market and strong demand for stable long term yields. Much of high quality sovereign bonds have been bought in by Central Banks and, anyway, their yields are at lowest level ever. I remember two years ago Angel Gurría, talking here in Paris of a 5 trillion gap in the demand for long-term investment by institutional investors. In the same occasion, however, he also pleaded for a much greater effort by regulators and Governments to create the right conditions for such match between infrastructure and long term investors, even with a much more granular analysis of prudential and accounting regulation. But, after a decade since it was first proposed, the “storyline” has simply not materialized as planned.

Why? In many countries we still lack the right conditions. There is a strong asynchrony between, on the one side, the need to boost investment in infrastructure and the willingness of the financial industry to have infrastructure financing as a fully-fledged “asset class” to invest in, and, on the other side, the time needed to build all the missing parts of the underlying framework, on the other side. Since we are under pressure to recover pre-crisis or even higher level of investments, this time asynchrony weights on our future and puts at risk a successful execution of the new model.

The main actions, which are still missing, are, in my view, the followings.

#### ***Lack of quality pipelines – the “infrastructure bottleneck” challenge.***

There are two types of “bottleneck” which need to be resolved to have good quality pipelines: one depends on public administration lack of skills and can be faced by providing good Technical Assistance (TA) services, especially for small and medium public works at the local level; the other depends on Governments reforms in a number of key sectors.

Public administration “bottlenecks” include:

- Lack of effectiveness;
- Low degree of digitalization;

- Inefficient administrative capacities in the multi-level government systems;
- Complexity and fragmentation between the layer of governance leading to inconsistencies in the decision making process.
- Excessive length in procedures;
- Legal framework fragmentation and political and regulatory uncertainties.

To overcome public administration “bottlenecks”, Technical Assistance should provide services such as for instance:

- Project identification;
- Project preparation;
- Financial structuring;
- Procurement and state aid;
- Project delivery;
- Capacity building;
- Communication and awareness raising;
- Advise on determining fiscal space;
- Advise on valuation as regards to Eurostat compliance in case on PPP and OFI schemes;
- Advise on use of European Structural Funds and on Blending;
- EU Rating to projects.

Structural bottleneck instead should be resolved by Governments and include items such as:

- Political and legislative stability;
- streamlined and fast administrative procedures;
- light regulatory and bureaucratic burdens;
- a fast and reliable judicial system;
- an efficient and technically prepared public administration;
- an efficient multi-level government system.

### ***Public guarantees and State Aid rules***

When a project has been included in public programs, considering its positive externalities for growth and/or social cohesion, and therefore its importance for public interest, EU and national Governments should decide to take more risk, both in tariff based and availability payment based projects.

Political and regulatory risk should find proper forms of public guarantees. In selected cases, public guarantees should cover also the risk related to the demand (such as traffic risk in the transport infrastructures).

The European rules on the prohibition of State Aid should be consequently reviewed. State aid rules have for long been well fit to drive smart investments: public resources can be allocated only to investment projects that would not be carried out by private operators. But the current economic challenges strongly indicate that, in the interpretation and application of competition and State aid rules, Authorities should consider that the European companies compete in global markets; consequently they should shift the focus towards a smart and well-targeted distinction between the ‘good aid’, essential to foster growth and competitiveness, without significantly altering the competition among European companies, which should be promoted, and, on the other side, the ‘bad aid’, not essential for growth and likely to distort the fair competition in the single market, which should be discouraged.

In principle, State aid rules are already there: State aid is compatible with the Treaties when it contributes to objectives of common interest, corrects market failures, has incentive effects, without or with negligible distortions of competition. But we must ensure that the EU competition rules are applied in a uniform and consistent manner by all the authorities (European and national) and without unjustified rigidities.

In the new context of global competition, moreover, authorities should carefully consider whether the relevant markets are national or, instead, European, and take into account that European companies compete on the global market in almost all sectors. Regulators and policy makers too often forget this or seem to ignore it, and thus they end up encouraging the national fragmentation and prevent the processes of concentration and cross-border consolidation which are needed to put European industry in condition to compete in global markets.

### ***Prudential and accounting framework.***

Post-crisis new regulations have favored financial stability but have negatively affected long-term investment. The Financial Stability Board (FSB) has focused on potential unintended consequences generated by regulatory reforms that may affect long-term financing investments, and above all on:

- (i) Possible negative effects of Basel III-CRD IV on long-term bank credit;
- (ii) Potential effects of Basel III liquidity framework on the provision of long-term finance investments;
- (iii) Lack of proper incentives for long term institutional investors;
- (iv) As regards the accounting standards, possible introduction of an additional category for financial assets, which does not fall within the definition of amortized cost or in that of fair value;

- (v) Asymmetries in the application, and consequently in the effects, of regulation on national and/or regional financial systems.

However, further efforts on a much more adapted and well-focused analysis of the regulation for the financing of infrastructure are needed. This means creating a new Infrastructure Asset Class Database, with project/asset-level long-term performance data.

An important step a-head has been made with the proposal by the EIB and the Long Term Investors Club (LTIC) to the G20 German Presidency to work on the creation of a global infrastructure database. The EIB has worked closely with the Global Infrastructure Hub, the OECD and the Long Term Infrastructure Investors Association (LTIIA) to further analyses the best way forward.

In particular, a new project, the “Infrastructure Data Initiative”, would be used in different interrelated areas of research:

- Financial Performance Benchmarks including new benchmarks on investment profitability metrics such as return on assets, return on equity and debt, analyzing also risk (i.e. default rates and recoveries) measured over project life-cycle.
- Economic and Financial Viability – Impact evaluation at project/asset level [including utilization performance (ex-post and ex-ante analysis) / construction costs and delivery performance (ex –post and ex-ante analysis)]
- ESG Performance: Sustainability and inclusive growth impacts and climate related risks (i.e. transition risk)

The “Infrastructure Data Initiative” should finally produce the data required by international regulators to better define the new “infrastructure asset class” and undertake the specific recalibrations of the global accounting and regulatory frameworks needed to overcome potential excessive penalization not justified by a correct and objective probabilistic analysis of risks underlying certain classes of long term investors.

In the EU an important step was made by the recent changes in Solvency II – thank to the effort made by EIOPA with the technical support of EDHEC. It includes the introduction of the new concept of “qualifying infrastructure investments” as distinct asset class. The capital absorption has been significantly lowered. More should be done in the future. But finally this an important first step in the right direction.

At the EU level we still need more brave action on CRR2 and the accounting rules for banks in financing infrastructure (especially on the level of liquidity and capital ratios).

New models and instrument of partnership engaging private sector investors can help in dealing with the current low interest rates environment and providing a predictable (inflation adjusted) cash flow with a low correlation to existing investment returns.

The rationale is that financial markets, the so-called “real economy” and society form a holistic system. Each in turn depends on the other. None of the three is inherently stable, unless the relative interdependencies are managed. In the interplay of the economy, society and financial markets, infrastructure provide a key catalyst for employment, money and interest. This is why we believe that both economic and social infrastructure are a desirable option for long-term investors and an underutilized resource for public and social service providers.

Ladies and Gentlemen,

Let me end my speech with some considerations on infrastructure investment in two areas - energy networks and telecommunications networks - where new technological and industrial scenarios open, in my view, extraordinary opportunities for long-term investors at least in Europe.

### **Towards the European Single Energy Market**

The global energy scenario is evolving rapidly toward a deep transition, leading the energy system to a significant paradigm shift. Incisive penetration of intermittent renewable sources, fragmentation and distribution of the generation and production points, diffusion of efficient and innovative technologies and a shift of value from the energy production to the supply of services are new trends and challenges to face with in the next decade. In this context, enlarging and increasing the interconnectivity of European power systems, together with the adequate reinforcement of national transmission networks, is a key point to enable this trend and, at the same time, to foster a higher penetration of RES generation.

Developing cross-border electricity and gas infrastructure is required to create a single energy market and reach Europe’s decarbonization goals. In the power sector alone, a total of €150 billion of network investments is foreseen until 2030<sup>1</sup>, mainly to support the integration of renewable energy sources and increase security of supply in the EU power system. However, the benefits of realizing these infrastructure projects are expected to be up to 2.5 times higher than costs<sup>2</sup>.

At EU level, dedicated electricity interconnection targets and financing mechanisms support the development of cross-border energy infrastructure. The Connecting Europe Facility (CEF) program offers co-funding with a total budget of €5.35 billion until 2020, specifically for infrastructure projects having cross-border relevance, while the European Fund for

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<sup>1</sup> See the ENTSO-E [TYNDP 2016 projects data report](#): about €80 billion of investments foreseen by 2020 and about €70 billion of investments foreseen by 2030.

<sup>2</sup> Reduction of up to 5 €/MWh in electricity prices compared to an increase of up to 2 €/MWh in grid fees.

Strategic Investments (EFSI) is aimed at closing the investment financing gap by mobilizing private financing for strategic investments, including energy infrastructure.

So-called EU projects of common interest (PCIs) are eligible for co-funding from the CEF. Selected by the European Commission every two years, PCIs represent key infrastructure projects that are considered as essential for completing the single energy market. So far, only 64 grant agreements have been signed compared to 195 projects currently on the PCI list for electricity, indicating that many PCIs have either not applied for co-funding or been rejected, possibly due to the limited budget of CEF and the complex scheme provided for possible applicants.

Regulation of PCI selection could be further streamlined to speed up their implementation. Currently, all projects are required to reapply every two years for the PCI status whereas this obligation should be waived for those projects that had already been selected as PCIs and where a final investment decision has already been taken or construction has already started. The requirements for PCI eligibility for grants in future CEF calls could also be simplified, for instance by removing the Cross-Border Cost Allocation (CBCA) prerequisite.

### **Disruptive changes in the TLC infrastructure market: three lessons**

Like other utilities, even European Telecommunications come from a past where companies were 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 (and investors).

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. Moreover, it further extends the chain of vertically integrated activities, which already for many incumbents include the provision of telecommunications services and the ownership and management of infrastructures (often still in a state of substantial natural monopoly). Consequently, it increases the need of interventions by government and regulators.

### ***Vertical integration vs structural separation***

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 disruptive effects of fiber optics and 5G***

The second lesson is that, in the telecommunications industry, innovation and in particular the usage of fiber 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 fiber 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 fiber networks compared to copper ones. Reduced latency and higher reliability make fiber 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 fiber networks (also known as fiber 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 will be obliged to 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 risk of an inefficient duplication/multiplication of investments in NGN: towards a TLC sharing economy?***

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 (art.77 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. But given that their costs are lower than those of operators with complex, upgraded hybrid fiber-copper or fiber-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 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, the 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 fiber 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 fiber 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 the 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.

Ladies and Gentlemen,

To sum up, if we want to have pervasive, ultrafast broadband coverage, we must make optimal use of economies of scale and scope. In parallel, regulators and governments need to address the conflict of interest of the incumbent operators. A split of incumbents into, on the one hand, a netco and, on the other, a service company, is often the best means to ensure that the right investments incentives are present.

Europe could therefore boost investment in both fixed and mobile network by supporting and speeding up the evolution towards the wholesale only model. This is, at the same time, the best way to include investments in ultra-broadband networks in the asset class of infrastructure, alongside highways, railways, ports, airports, electrical networks, gas networks.

That is the reason why I think that, in the next years, wholesale only TLC network, both for FTTH and 5G, will be one of the most interesting opportunities for long-term investors, willing to invest their money in a class of assets coherent with their risk profile.

Thank you for your attention!