# Social Infrastructure: from challenge to opportunity for investors

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LTI/A
Long-term Infrastructure Investors Association

Table of

# Contents

# Foreword

The recent years have seen a widening of the traditional economic approach of investment and capital formation, to better incorporate human and natural capital, as key drivers of resilience, economic output and productivity. Human capital in turn is largely underpinned by social infrastructure; the facilities, buildings and intangible assets that serve to generate key collective services in healthcare, education or affordable housing.

So, it should be a concern to everybody that overall, the stock of social infrastructure has not kept pace with the needs of populations, in advanced economies and emerging ones alike. Chronic public underinvestment has generated an investment gap over time, where available assets are no longer sufficient and fit for the kind of use needed, not to mention future needs linked to big demographic and societal trends at play. This was cruelly highlighted during the COVID-19 crisis, when healthcare and education infrastructure had to adapt to unprecedented circumstances.

This is where the private sector has a role to play: social infrastructure investments hold potential for further increased allocation by institutional investors seeking diversification into low-risk, regular income assets. Long term private investors have long started investing in those assets, but the potential - and the need - for more and better private investment remains huge. Drawing on the vast pool of experience and contributions of LTIIA members, this report analyses the current constraints and current challenges limiting institutional investors' share of the market. It then formulates recommendations to the various stakeholders - policy decision-makers, regulators and Development banks, as well as institutional investors - so as to better and further develop this market in what should be a win-win approach for society at large.

**T. Deau**
*Chair, LTIIA*

*Report established by and under the responsibility of Francois Bergere, Executive Director, LTIIA, with the support of the PwC Global Asset and Wealth Management (AWM) Market Research Centre.*

*We gratefully acknowledge the participation and contributions from LTIIA working group members:*

***Allianz GI :*** N.Nikolova & J. Atkins | ***Argo:*** J.Zibarras | ***Arpinge:*** B.Gillio | ***CALSTRS:*** P.Shantic | ***Campbell-Lutyens:*** J.Campbell | ***CDC:*** F.Calonne | ***D20-LTIC:***T.Haumer | ***EDHEC Infra:*** F.Blanc Brude | ***EIB:*** A.Canato | ***ELTI:*** H.von Glasenapp | ***GPIF:***K.Yuba | ***Guggenheim:*** J.Pass | ***Infranode:*** J.Medin | ***Infravia:*** A. de Tracy | ***Manulife-J. Hancock:*** J.Davis | ***Meridiam(FULCRUM):*** D.Mc Carthy & S. Beaumont-Smith | ***Palladio:*** B.Kreuter | ***PRO BTP:*** B.Causse & F.Cosnier | ***Skandia:*** H.Forssman | ***STOA:*** M-L. Mazaud | ***TIIC:*** J.d Almeida &C.Beauvois | ***G.Inderst, R.Timbs & R.Simpson*** members LTIIA Advisory Council

# Executive Summary

The significance of infrastructure in driving the economic and social outcomes of societies cannot be overstated, underpinning the welfare and development of local communities and being a key factor in improving quality of life over the long term. Traditionally, infrastructure is linked to projects producing economic or monetary value such as Mobility, Utilities, Communication and Energy. However, social infrastructure - covering sectors like educational facilities, health and senior care and Social, affordable housing - is lately gaining in prominence, with its importance being highlighted by recent events like the Global financial crisis (GFC) and the on-going COVID-19 crisis; prompting a closer look at the role of this asset class in supporting the development of local communities.

Over most of the 20th century and early 21st century, the 'public good' nature and positive externalities associated with social infrastructure have driven the public sector to be predominantly responsible for both its funding and financing. In Europe it accounted for 94.8% of total social infrastructure investments between 2015 and 2019. However, we have seen a stagnation in the scale of current public investments in recent times:

- Following the GFC, public financing institutions have focused on repairing their balance sheet and been faced with a restrictive lending environment.
- COVID-19 related fiscal challenges- such as lower tax revenues and increasing social transfers are putting a strain on advanced economies' budgets, causing public debt in Europe - for instance - to hit 102% of GDP as of 2020, and limiting the fiscal space available for public infrastructure investment.

## The infrastructure gap widens

These constraints, and the corresponding chronic public underinvestment have generated significant infrastructure backlog and adequacy gaps. With capital investment needs poised to soar especially in developing countries, the EIB estimates global infrastructure investment needs to reach between 3.9% and 9.7% of global GDP between 2015 and 2030[1]. The race to meet the ambitious SDG and Climate agenda is further increasing the infrastructure financing gap – now expected to reach EUR 12.5tn by 2040.

While all infrastructure sectors are impacted by this pressure on investments, social infrastructure, in particular, bears the brunt of the impact as it has often been given less priority within governments' policy agendas compared to its economic counterparts. In Europe, shifts from fixed capital formation towards current expenditures, fiscal consolidation measures, and soaring debt levels saw social infrastructure investments plummet by 11.4% from 2009 to 2016 – with an uptick from 2017 upwards, and Eurostat estimates that EUR 1.5tn in additional investment will be required to close the European social infrastructure gap by 2030[2]. In addition to the aforementioned fiscal and economic factors, the following social and demographic shifts have also aggravated the inadequacy of investments and threaten the adequacy of current social infrastructure for future use:

- **Ageing populations will bolster a huge shift in infrastructural needs:** Expected increases in the global population aged 60+ is set to intensify pressure on existing social infrastructure, particularly those related to elderly care and healthcare.
- **Rapid urbanisation to exacerbate need for urban infrastructure:** As urbanisation increases, the rising population density could test the resilience of healthcare systems in times of crises, underscoring the need for social infrastructure to ease pressure on existing facilities.
- **Digitisation is poised to reinvent the social infrastructure landscape:** The increasing digitalisation of social infrastructure has ramped up the demand for smart infrastructure, opening up new challenges as well as opportunities for institutional investors.

[1] Economic Investment Report, EIB (2018)

[2] EU Commission/ELTI HLTF report on Social infrastructure (2018)

## Private Investors are poised to bridge the gap

In view of the public fiscal constraints, the public sector cannot be solely relied on to bridge the ever-widening financing and adequacy gaps in social infrastructure. At the same time, failure to address these gaps would likely result in pent up demand and a chronic undersupply of infrastructure which would further hinder global economic growth and prosperity.

This underscores the importance of increased private sector investments within this segment, mostly in the form of equity or debt Project financing, to channel additional resources – both in terms of upfront capital and managerial expertise – to the unlisted social infrastructure sector. A key feature of social infrastructure though, is that its funding model (who eventually pays for the service, as opposed to who puts up the initial cash required for the investment) remains largely based on public payments in most developed countries. Depending on countries' political and legal frameworks, a varying dose of user-pay models can be introduced to reinforce the "investability" of projects and introduce more flexibility in the financing schemes for private investors.

Private investments, beyond complementing public sector financing, can bring added benefits such as managerial and technical expertise to the social infrastructure field. For long-term liability-driven institutional investors, such as pension funds and insurance companies, the need to generate regular incomes over time to match liabilities makes investing in government-pay, inflation-linked and low demand risk social infrastructure assets attractive. The case for investment is further reinforced by their inherent ESG dimension.

Accordingly, we are seeing increasing private investor allocations to social infrastructure projects from dedicated funds that target social infrastructure - whether partially or exclusively. These funds' total AuM constitute 31.9% of global Infrastructure Fund assets as of 2020. As this report, which draws on examples and contributions from LTIIA's mostly European membership base, makes clear, Europe especially makes a good case for this trend, with the region's social infrastructure fund assets (both in funds solely targeting social infrastructure and funds with some exposure to social infrastructure) accounting for 50.1% of total infrastructure funds' AuM.

We also saw the share of private participation tripling from 1.7% to 5.4% of yearly social infrastructure investment (the sum of PPP, public and private investment in social infrastructure) in Europe between 2015 and 2019, although this increase is largely attributable to the rise in secondary market (brownfield) activity, particularly, acquisitions, which accounted for more than 76% of European social infrastructure deal value in 2020.

This shift from primary to secondary markets is due as much to structural constraints such as the under-supply of well-prepared, investable social infrastructure projects as it is to the attractiveness of secondary markets in recent years. While this lack of investable new projects remains a key concern in most jurisdictions, secondary markets hold a number of merits for private investors:

- They provide a conduit ultimately leading to primary (greenfield) investments for investors that are not yet ready to assume design and construction risks or the risk of transitioning from construction to operation.
- They offer an opportunity to enhance the value potential of existing assets through reinvestment and retrofitting; which allows long-term investors to add significant value through secondary acquisitions.
- By fostering market liquidity, secondary markets facilitate investments into what are fundamentally unlisted, illiquid assets.

In Europe, privately owned and managed investments were also seen to outpace traditional Public-Private Partnerships (PPPs)*. The healthcare sector seemed to be the focus of most private investments, constituting 43.2% of private social infrastructure investments in 2020.

In spite of this, social-infrastructure-specific asset allocation remains minimal, as annual investment volumes through primary market transactions currently stand at approximately EUR 80bn - a mere drop in the EUR 12.5tn that is required to close the overall infrastructure gap. In addition, the overall decline in the number of private infrastructure investment transactions between 2010 and 2019 clearly indicates that the gap between private capital and social infrastructure investments has yet to be bridged.

* **Privately Funded Infrastructure** covers infrastructure projects that a) are funded and owned solely by private players, b) the end user is paying for using this infrastructure and c) upkeep and maintenance are performed using the payments from end-users. **Public Private Partnership** (PPP) on the other hand refer to contractual LT arrangements with a public procuring authority where the private party bears significant risks, having an overall responsibility in delivering performance over time, and provides part or all of the upfront financing.

## Sectoral analysis

Although social infrastructure broadly covers a wide range of segments that are key in supporting the livelihood, welfare and development of communities, this report focuses on the healthcare, education, and social housing sectors. In each case, the scope for private participation is focused on buildings and facility management, mostly excluding health- or educational services. Thus, while the report addresses the market perspectives from the standpoint of Infrastructure investors, many of the conclusions and recommendations would also be valid for Real estate investors, as the two asset classes sometimes overlap in this respect.

## The healthcare market presents a major sectoral opportunity

The healthcare sector represents the preferred sector for private investors' social infrastructure strategies. Total investment value for the top 10 investors in this subsector amounted to EUR 28.2bn between 2005 and 2020, demonstrating that private sector involvement in the sector is already underway. PPPs have also been prominent in the sector – with often mixed results. PPPs represented approximately 67% of all investment deals by the top 10 investors globally between 2005 and 2020, and projects under this structure have largely met their objectives, despite a decline observed from 2010 onwards, several operational failures and severe criticism from oversight bodies. Further, budgetary pressures arising from operating and maintenance costs have led to wide deficits and restricted further deals. That being said, the health sector benefits from strong fundamentals and presents the following opportunities to private investors:

- An increasing stock of obsolete healthcare facilities that are no longer fit for purpose – as highlighted by the COVID-19 crisis -, along with the expected increase in life expectancy is set to significantly raise demand for healthcare-related facilities in both cure and care markets
- Private investors can add value by fostering innovation and introducing more flexibility within the public health infrastructure segment.
- Increased asset-recycling and sales-and-lease-back opportunities could potentially increase the scope and definition of healthcare-related projects that private investors can partake in, especially as public authorities look to raise funds through the sale of healthcare infrastructure assets on their balance sheets

Challenges associated with the sector include:

- Potential technical issues and complications associated with the treatment of human lives, generating reputational risks (affordability, biosecurity) for investors.
- Limited deal flow of new (Greenfield) projects to invest in; this is compounded by the fact that many investors prefer secondary market transactions as a means of acquiring existing and already operating and, therefore, less risky assets
- Limited deal sizes, similar to other social infrastructure subsectors, which require institutional investors to rely on specialised funds and financial intermediaries to source and channel their investments.

## The education infrastructure market: a developing sectoral opportunity?

The education infrastructure segment covers a wide range of educational facilities, including kindergartens, higher learning institutions and student housing. At a global level, our analysis showed a total investment value of EUR 23.1bn by the top 10 bank lenders over the same period – with debt transactions making up 92.3% of overall investments.

While funding constraints are seeing government-funded school and academic facilities increasingly turning to the private sector, it is the student housing segment that is stirring the appetites of most institutional investors, bolstered by distinct characteristics such as the long average occupancy duration, low turnover and affordability concerns, and favourable long-term demographic trends. This is particularly the case in Europe where there is a massive undersupply of quality, affordable student accommodation in most of the region's popular university cities.

Similar to the healthcare sector, the limited quality of education coverage in many developing countries suggests that the existing market is largely supported by privately-owned and managed facilities operating a user-pay model. Thus, increased collaboration with the public sector could help private investors expand access to educational facilities significantly. Moreover, the sector boasts strong and dynamic fundamentals and little or no regulatory barriers in most jurisdictions, presenting the following opportunities:

- As public authorities within the EU and other jurisdictions consider plans for the expansion of digital infrastructure and sustainability in the education sector, private investors have an opportunity to complement government efforts and accelerate the rate of implementation through increased capital allocations.
- Lower reputational risk than for healthcare
- PPPs in the education sector could allow private investors not only to provide essential classrooms and related educational facilities, but also to propose, develop and manage alternative multipurpose uses for limited-use educational structures.
- Beyond capital allocation, private investors also have an opportunity to lend their technical and management expertise to these projects.

Still, the sector is not without challenges that would need to be addressed to increase the rate and scale of private investments.

- The lack of available stock to be purchased – while not as critical as in the healthcare sector – still remains a barrier to entry for those investors looking for secondary market opportunities to acquire existing and already operating, and hence less risky, Education infrastructure assets.
- The sector also faces an issue of critical size, and the need for aggregation platforms, specialised funds and financial intermediaries.

## The social housing market offers room for more private investments

Besides catering to specific demographics such as young workers, migrants and homeless people, or students, the social housing sector also covers an increasing part of the population - particularly the lower and lower-middle-class - who are being priced out of an increasingly expensive homeowners' and private rental market. Financial difficulties over the last two decades have, restricted opportunities for homeownership for many citizens, while many governments' expansive monetary policies have ended up reinforcing pent-up demand for affordable housing.

In Europe, rental housing affordability concerns are at an all-time high, with more than half of low-income renters spending up to 40% of income on rent, according to the IMF. At the same time, complex housing policies and limited investor control make it difficult to address rent affordability. That being said, the sector faces perhaps the most significant investment and adequacy gaps, with investment needs of approximately EUR 148bn per year in 2018 in Europe alone. Our analysis also showed total investments by the top 10 global investors to amount to EUR 11.8bn. This low figure is the least of the three subsectors and indicates further room for private investments. Several factors underpin the opportunities in this sector:

- The sector faces a consistent demand for affordable housing and enjoys significant public financial support.
- Longer average occupancy duration leads to lower turnover rates – typically around 1 to 2% in many European jurisdictions, increasing the likelihood of consistent rental income.
- The sector's supply/ demand imbalance and the long waiting lists are evidence of the sectors' relatively robust, higher-quality cash-flow fundamentals.
- The sector has also proven to be less prone to technological disruptions and to be resilient in times of crisis.
- The secondary market offers investors who can access some public co-financing tools the opportunity to buy and modernise/retrofit existing social housing assets.

At the same time, the sector faces some challenges:

- The high level of regulation, including accreditation before investments or access to land /building permits in many jurisdictions, limits the scope of potential private investments.
- Some regulatory frameworks limit the development of primary markets for institutional investors, placing them at a disadvantage with public investors or specialised agencies.
- The sector also faces a lack of critical size, forcing many institutional investors to invest through specialised funds or asset managers.
- Finally, not all institutional investors are equipped with the human resources and skills to actively manage their assets efficiently.

## Challenges and recommendations

Despite the widening financing gap and the proven benefits of social infrastructure investment, several constraints continue to deter heightened private sector participation.

- Insufficient project pipelines: The lack of comprehensive investment plans and poor integration into national agendas lead to a dearth of well-structured and investable projects, creating demand-supply imbalances and fierce competition for existing projects.
- Asset price bubble: Pressure to put vast amounts of dry powder to work has led to inflated project valuations in private markets and high acquisition prices. This, coupled with counterparty creditworthiness concerns, is deterring private investor participation in potentially overvalued investments.
- Reputational risks: Social infrastructure investments' long-term nature and direct impact potential make them prone to reputational risks.
- Supporting the social narrative: For investors who see social infrastructure investments as a way to boost their exposure to the 'S' component of ESG, data challenges associated with ESG investments make this impact difficult to quantify and assess.
- Size matters: The relatively smaller asset and project sizes associated with social infrastructure often places projects in this sector outside the scope of private investors.
- Regulatory issues: Infrastructure investments' close link to political agendas make them subject to heavy regulatory oversight, which are often considered burdensome for institutional investors and reduce the appeal of social infrastructure investments.
- Legitimacy roadblocks: Country-specific roadblocks such as cultural, political and regulatory impediments, as well as general investor scepticism, limit private investor participation in social infrastructure.

These constraints have been significant enough to offset the attractiveness of social infrastructure investments, minimising institutional investors' allocation towards the asset class. In this context, we propose the following recommendations as a way of fostering further investment into social infrastructure:

**For Policy Decision-makers/ public authorities,** the recommendations revolve mostly around the need to:

- Increase and improve the deal flow of bankable/ investable or asset recycling deals, while simultaneously establishing a better enabling and more investors-friendly environment for social infrastructure investments.
- Improve capacity building and technical support for public procuring authorities.
- Regroup/bundle similar projects through appropriate platforms.
- Enhance the role of NPDBs to crowd in private investments.
- Recalibrate accounting and prudential standards.
- Foster a securitisation framework to give private investors greater access to smaller size portfolios.

**For NPDBs**

- Assign private sector investment leveraging objectives in terms of multiplier ratios.
- Implement adapted co-financing conditions so as to crowd in more private money.
- Share and pool experiences and best practices in crowding in private investors.
- Set up - whenever possible- aggregation platforms.
- NPDBs could be instrumental in helping vital private infrastructure asset owners to secure liquidity in times of crisis or force majeure.
- NPDBs can leverage their influence on government spending policies and budgetary allocations to ramp up their investments in social infrastructure by providing valuable insights to governments and private institutional investors.
- They can also provide long-term financing options at competitive rates for investors looking to public markets to fund their investments in the social infrastructure projects.

**For Regulators**

National Regulators have to strike a delicate balancing act, ensuring that short-term affordability for consumers does not limit the investments needed to achieve long-term policy objectives, while maintaining light-touch regulation as much as possible. They would also have to reassess the financial regulatory framework (in the EU in particular) for long-term investors.

**As for Investors (Asset owners/LPs)**, they should

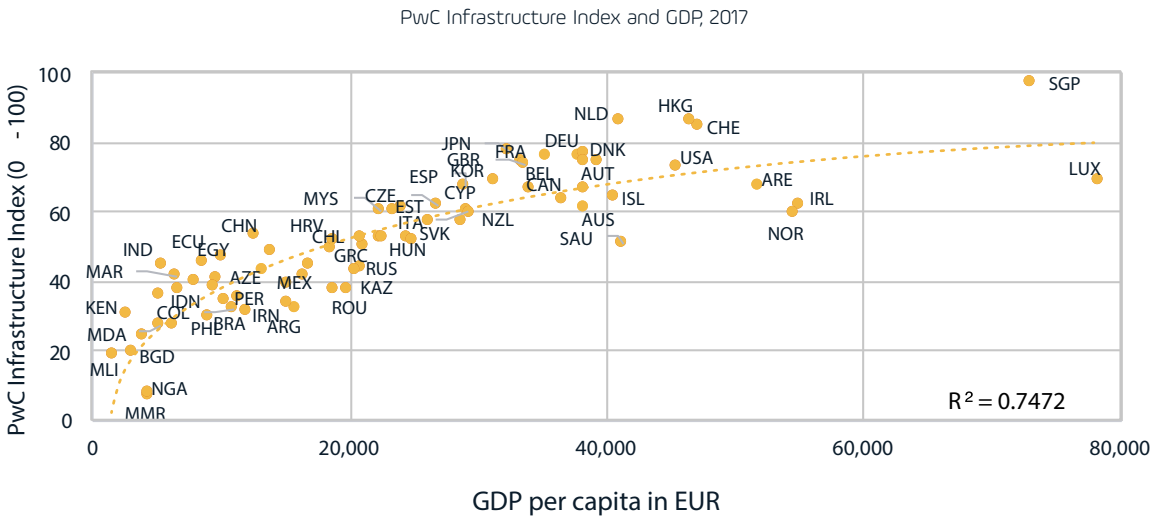
- Reinforce their in-house expertise to address better project origination and selection.
- Commit to active asset stewardship, either directly or through specialist Impact funds, in order to better manage reputational risk and reinforce their ESG credentials.
- Explore creative and innovative contractual schemes to better negotiate the specific constraints of each subsector within different jurisdictions.

# Introduction

# Build it and

Infrastructure plays a pivotal role in our lives. However, to frame the significance of adequate and accessible infrastructure merely within the context of its quality-of-life enhancing benefits is largely reductive. Whether it be the hospitals we use when we are sick or the schools in which we learn, infrastructure underpins our very ability to live long and prosper; ensuring our wellbeing and prosperity. In fact, PwC analysis of the economic importance of infrastructure shows a strong relationship between infrastructural adequacy and human capital, and thus underpins the capacity of a people or community to operate to the best of its abilities. It is also logically linked to individual income levels – with any infrastructural advances often leading to increases in GDP per capita and vice versa (c.f. exhibit 1). Estimates by Standard and Poor's further corroborate this, highlighting that a 1% increase in government spending on infrastructure could translate into a 2.5% GDP increase amid increased employment opportunities. In short, it can be said that ensuring access by the global population to adequate and readily available infrastructure is pivotal to our current and future wellbeing and is a major key to sustainable development.

**Exhibit 1: Economic Importance of infrastructure**




**Sources:** *PwC Asset and Wealth Management Research Centre*

[3] Preqin:(https://www.preqin.com/insights/research/blogs/global-social-infrastructure-deal-flow-november-2014)

[4] OECD (https://stats.oecd.org/OECDStat_Metadata/ShowMetadata.ashx?Dataset=TABLE5&Coords=%5BSECTOR%5D.%5B100%5D&ShowOnWeb=true&Lang=en)

[5] World Bank (https://documents1.worldbank.org/curated/en/902971468764409654/pdf/multi0page.pdf)

# they will come

With equal relevance and importance to achieving and maintaining prosperity, no single facet of infrastructure can be prioritised over the other. However, discourse surrounding the infrastructure landscape has historically been primarily centred around economic infrastructure – such as water, telecommunication, and energy – with comparatively less focus being attributed to social infrastructure. That being said, with the outbreak of the COVID-19 pandemic, the importance of social infrastructure has been highlighted more than ever.

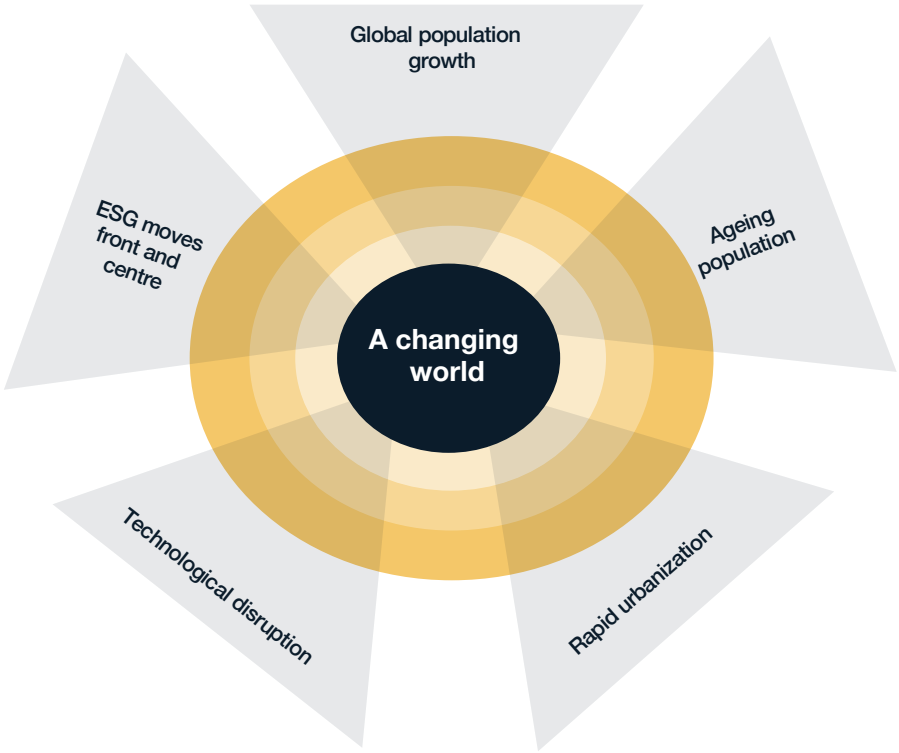
As an investment segment, social infrastructure has been broadly defined by various sources. Preqin[3], for instance, defines it as the "long-term physical assets that facilitate social services – typically covering schools, medical facilities, state or council housing and courthouses, among others." The OECD[4] also describes it as the "efforts to develop the human resource potential and ameliorate living conditions in aid recipient countries," encompassing but not limited to goods and services related to education, health and population, water supply, sanitation, and sewerage. For the World Bank[5], it broadly encompasses the "internal social and cultural coherence of society, the norms, values and networks that govern interactions among people and the institutions in which they are embedded…without which there can be no economic growth or human wellbeing," while EDHEC TICC classifies social infrastructure to cover defence services, education services, government services, health & social care services, recreational facilities.

In the finance realm, it is often defined – in contrast to economic infrastructure – as the assets and related services underpinning social life; typically provided by governments to citizens and consumers for free or at reduced prices, and corresponding to a government-pay business model (as opposed to user-pay). While social infrastructure assets are usually smaller in scale than their economic counterparts, their combined benefits cannot be understated – generally enabling society's systems to run smoothly and efficiently and directly sustaining human capital, while providing social capital and services of general interest (public goods/services) that ensure social cohesion and fundamental rights.

Its benefits notwithstanding, the COVID-19 pandemic revealed many structural weaknesses and inefficiencies in the current state of social infrastructure, with many communities around the globe lacking the facilities to support the sudden shift to remote education and increased demand for healthcare and affordable housing. Of the total infrastructure investments in Europe, North America and the MENA regions in 2020, our analysis showed that only 4.2%, 0.9%, and 0.9%, respectively, were allocated to social infrastructure, which translated into less than 1% of the total GDP for each region in the same year. By laying bare the wide financing gap that impacts the sector – in both developed and underdeveloped economies alike – the pandemic has revealed like never before the urgent need to maintain and upgrade social infrastructure through greater and better investment. Accordingly, social infrastructure has been selected as a thematic priority for the Italian 2021 G20 presidency as part of their BBB (Build Back Better) and the People dimension of their 3P (People/Prosperity/Planet) agenda for this year.

It is not enough to solely ensure that the global infrastructure offering is sufficient for the world of today; it must also be sufficient for the world of tomorrow. This means being prepared for a number of seismic social and demographic shifts poised to alter the world. Not only are demand-side shifts such as ageing populations and supply-side shifts such as technological disruptions urging a more forward-looking approach to ensure the readiness of future global infrastructure, but we have also seen socio-political shifts such as the increased demand and importance of ESG call for a primary rethink of what the infrastructure of tomorrow can and should resemble. As these trends accelerate, and the makeup of the world's population changes along with our way of living and working; our social infrastructural needs will change drastically in lockstep.

**5 MEGATRENDS**




Drawing from multiple data providers, the collective wealth of experience of LTIIA members that contributed to the working group, and previous studies on the subject matter[6], this comprehensive report shows that the combination of chronic under-investment over the last decade, long-term impacts of the COVID-19 pandemic and societal paradigm shifts calls for a sustained effort in upgrade and modernisation. It also acknowledges that this significant required investment may not be achievable without the active involvement of the private sector, financially and in terms of technical and managerial expertise. To this end, after taking stock of the current situation and mapping the main actors in the market, a number of lessons are drawn from the current body of experience and collective expertise of LTIIA members. These findings underpin the proposals for scaling up investments in social infrastructure, aimed at private sector infrastructure investors as well as public authorities.

[6] In order to complete this report, we have relied on the following data providers: IJ Global, Preqin, Refinitiv, Eurostat, OECD, EIB, IMF and GIH, as well as reports by the European Commission, ELTI, and Georg Inderst

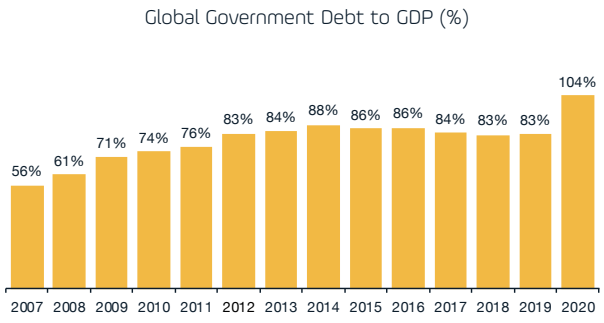
# Landscape

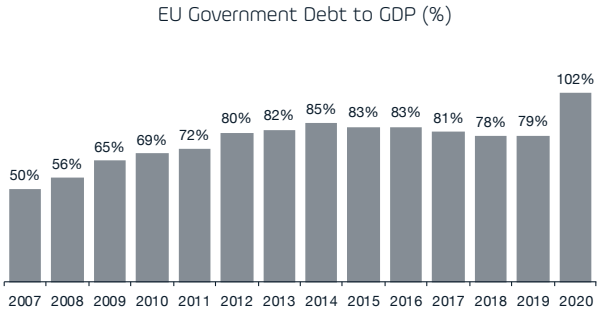
## 1.1 The infrastructure gap widens

Since the Great depression and World War II, the role of infrastructure financier has historically fallen to sovereign and public institutions, with the private sector only gradually re-entering the scene from the 90s on, as privatisation policies and the development of PPPs as a new tool within the public procurement toolbox advanced.

However, it is becoming increasingly clear that public investment alone is not sufficient to keep pace with the changes in the world's infrastructural needs. This came to the fore in the wake of the Global Financial Crisis (GFC), following which public institutions found themselves navigating an increasingly restrictive fiscal environment. Lower tax revenues, coupled with a surge in social security payments and massive fiscal stimulus packages, saw advanced economies' public debt skyrocket from 56% to 83% of GDP between 2007 and 2012. In Europe, the combined effects of the GFC and the sovereign debt crisis saw government debt increase from 50% in 2007 to 85% of GDP in 2014, and more recently, from about 79% to 102% post COVID-19 (cf. exhibit 2). The constrained financing capabilities of these players in the wake of these crises have resulted in a slowdown of public infrastructure investment, generating infrastructural adequacy gaps in many countries. Accordingly, the EIB estimates global infrastructure investment needs to reach between 3.9% to 9.7 % of global GDP allocations between 2015 and 2030, with the gap amplified mainly by capital investment needs in developing countries. Within the same period, the World Bank also estimates that developing countries, in particular, would require about 4.5% of GDP in investments in order to meet infrastructure-related Sustainable Development Goals (SDGs)[7].

**Exhibit 2: COVID-19 as a catalyst to the existing financing gap**



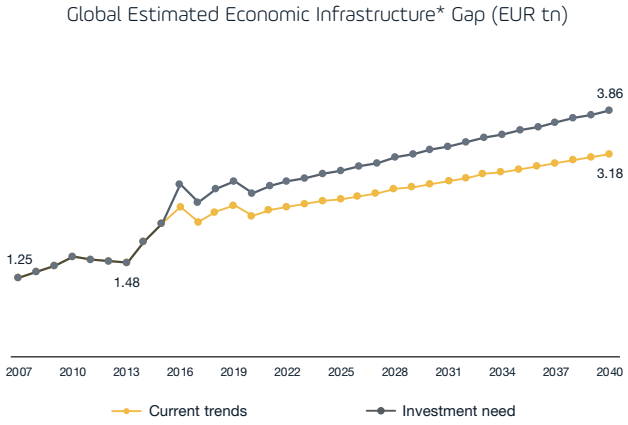

**Source:** *OECD*

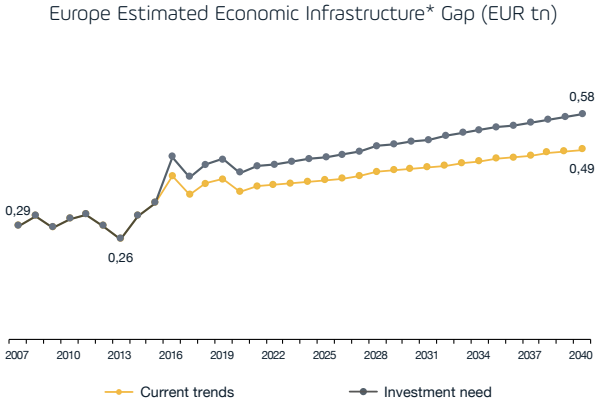
As a result, and in view of the ambitious SDG agenda, we have seen a rapidly increasing infrastructure financing gap. This gap is expected to reach EUR 12.5tn by 2040[8] (c.f. exhibit 3), with Europe expected to account for approximately EUR 1.7tn. Should it remain unaddressed, this gap is set to result in a chronic undersupply of infrastructure which would further hinder global economic growth and prosperity. As it stands, the current rate and scale of investment is vastly insufficient, and the mobilisation of further investment will prove instrumental in closing the gap.

[7] Beyond the Gap, World Bank Group (2019)

[8] Global Infrastructure Hub (https://outlook.gihub.org/)

**Exhibit 3: Global Economic infrastructure gap to reach EUR 12.5tn by 2040**



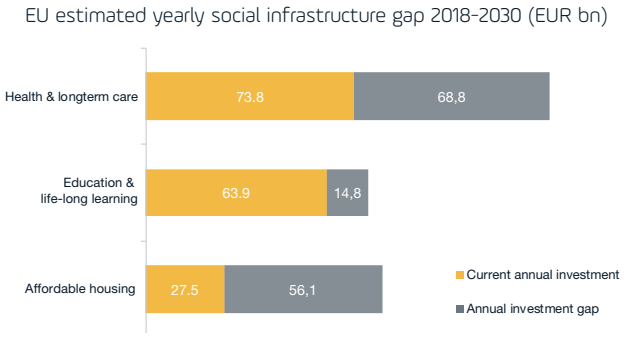



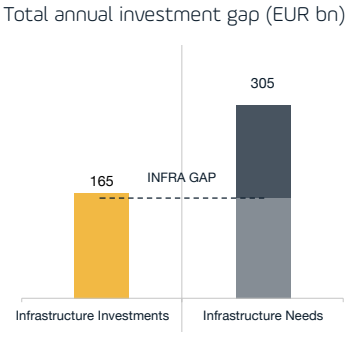

*Note: Economic Infrastructure includes: Energy, Telecom, Airport, Ports, Rails, Roads and Water sectors
Source: GIH

## 1.2 The financing gap is widening at an equal pace within the social infrastructure sphere

While the primacy of public sector funding cuts across all infrastructure segments, it is even stronger in the case of social infrastructure, with the 'public good' nature and positive externalities associated with their existence rendering them traditionally prone to public financing and funding[9]. In fact, public sector investment accounted for 94.8% of total European social infrastructure investment participation between 2015 and 2019. Also, particularly in Europe, the segment is characterised by a predominantly government-pay type funding business model in which the public authority - whether at a national or subnational level - pays for the service and provides it for free or at low price to the end-users. Accordingly, the impacts of the aforementioned retreat from lending were seen to be particularly pronounced within the social infrastructure segment, due to the wide held perception that economic infrastructure investments are more essential in promoting economic recovery. Shifts from fixed capital formation towards current expenditures (coupled with subsequent fiscal consolidation measures and mounting debt levels) saw European investments in social infrastructure plummet by 11.4% from EUR 202bn in 2009 to EUR 179bn in 2016. While economic infrastructure investments also decreased during this period, falling by 17% from a peak of EUR 442bn in 2010 to EUR 367bn in 2016, a further rebound mitigated the drop from 2017 onwards. Public spending on social infrastructure as a percentage of GDP fell by 0.6% in OECD countries between 2009 and 2019, with Europe, in particular, being of great concern. While the current investment in social infrastructure in the region stands at an approximated EUR 160bn[10] per annum and has not experienced a post-GFC rebound, this figure pales in comparison to the actual investment needs of the region. According to Eurostat data, the annual investment gap between current levels of investment and the necessary capital to meet social infrastructure needs amounts to an estimated EUR 140bn (cf. exhibit 4) - with the healthcare, education, and affordable housing sectors respectively constituting 49.3%, 10.6% and 40.2% of this needed investment. Overall, this equates to an approximate EUR 1.5tn in additional investment which will need to be mobilised in order to close the European social infrastructure gap by 2030. This presents an opportunity for owners of private capital to step up to meet this widescale pent up demand.

**Exhibit 4: Estimated European Social Infrastructure gap by 2030**

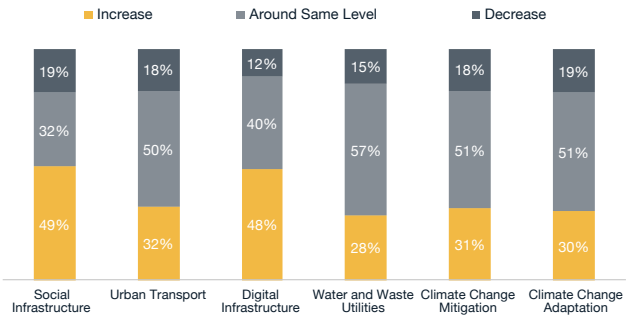



**Sources:** *European Commission, Eurostat, GIH*

Public authorities are increasingly acknowledging the need to step up investments[11], and we are already observing increasing commitment among sovereign entities to reallocate investments to their respective social infrastructure networks, spurred by COVID-19. It is therefore not surprising to see a renewed commitment by EU governments to re-prioritise social infrastructure investments and also retrofit existing social infrastructure assets, as shown in the 49% increased allocation envisioned in the social infrastructure investment plans of these governments (cf. exhibit 5). We have also seen an increase in plans by some OECD countries such as the recently rolled out Biden Infrastructure Plan (currently under US Congress deliberations) in the USA and the National Infrastructure Strategy in the UK - which are valued at approximately USD 1.3tn and GBP 27bn respectively. Among other things, both plans commonly aim at supporting the economic recovery from the COVID-19 pandemic, making progress towards decarbonising the economy, and creating new infrastructure or replacing existing ones. The EU's ambitious NextGen recovery instrument- with a total value of EUR 750bn - also seeks to not only accelerate post-COVID-19 economic recovery but also drive massive transformation in key social infrastructure sectors, including social and territorial cohesion, health and education. Further, as a consequence of the COVID-19 pandemic, close to 50% of European municipalities have already voiced plans to increase their asset allocation to social Infrastructure, according to an EIB survey. The materialisation of these proposals could galvanise further private investments in social infrastructure given that the government will provide both significant funding and lower-than-average risk for investors.

**Exhibit 5: Impact of COVID-19 on Investment Plans by Asset Type**




**Source:** *EIB*

Indeed, the increasing government capital expenditures required in order to navigate the post-pandemic environment have severely restricted the ability of public institutions to invest in social infrastructure. As it stands, these capital constraints combined with already low and decreasing social expenditure from public institutions primarily leave private investors as the only capable players to fill the social infrastructure financing gap.

***Biden Infrastructure ("Build back Better") Plan:*** In this yet-to-be voted[12] general strategy for an updated infrastructure in general, social infrastructure projects are mentioned several times throughout the details of the program.

For example, the plan aims at upgrading and retrofitting existing facilities that include veterans' hospitals, childcare facilities, schools, affordable dwellings and others. These projects will also take climate change into account, resulting in more energy efficient and environmentally friendly development.

The amounts tentatively allocated for these categories are USD 213bn for affordable housing targeted towards low- and middle-income buyers, USD 100bn for the upgrade of schools, USD 12bn for the needs of community colleges, USD 25bn for childcare facilities and USD 18bn for modernizing veterans' hospitals and other federal buildings. In addition, the plan outlines a provision of USD 20bn in regional innovation hubs and research facilities, as well as a "Community Revitalization Fund" that will boost community-led projects.

Biden Infrastructure Plan

National Infrastructure Strategy

EU NextGen

[9] Financing covers the process of mobilising of cash or upfront capital, whereas Funding refers to the party that ultimately pays for a project, i.e. the end users/consumers or citizens/taxpayers.

[10] Using the end-2020 exchange rate

[11] EU Commission/ELTI HLTF report on Social infrastructure, 2018

[12] As of September 2021, the plan is under US Congress deliberations and no concrete steps have been taken yet

***UK National Infrastructure Strategy:*** The strategy itself does not contain any specific provision or information regarding social infrastructure projects, as it is mainly focused on economic infrastructure. Nevertheless, it is clearly outlined that several reforms regarding the process of building infrastructure will benefit social infrastructure as well. These include a) an amendment to the Permitted Development Rights (PDRs), a legislation that will make it easier for expansion processes in schools and hospitals to take place, and b) a faster planning application process. Moreover, the UK Spending Review contains several provisions for social infrastructure investments, such as the launch of a 10-year school building program and the provision of GBP 1.5bn over the next six years in order to renovate existing college estates in the country that are currently in poor condition. Other provisions regarding social infrastructure include a) a total of GBP 5.4bn for the hospital building and upgrade program up to 2024-2025 and b) a budget of GBP 4bn over the next four years for the delivery of 18,000 prison places across England and Wales.

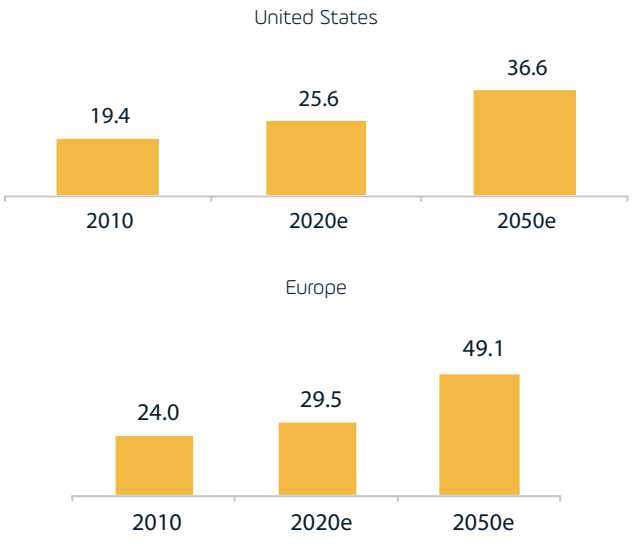
***EU NextGen:*** This recovery program does not explicitly mention anything about social infrastructure or any planned amount for investment. As it is common in the EU, many of these decisions fall under the authority of local governments, as they are the ones that choose which infrastructure projects they would prefer to finance. Despite this, the key objectives of the plan include a) health, economic, social and institutional resilience, b) policies for the next generation, including education and skills and c) social and territorial cohesion, among others. As a result, we could argue that social infrastructure projects such as schools, universities, social housing and hospitals could fall under these objectives, hence being able to capitalize on funds provided by the program. Nevertheless, whether or not such projects will be undertaken will ultimately be decided by each member state of the EU.

## 1.3 Societal and demographic shifts aggravate demand pressures

From the analysis above, it is clear that the current volume of investment in social infrastructure is already insufficient to ensure its adequacy and accessibility. This inadequate investment becomes all the more concerning when one takes into account the upcoming social and demographic shifts – affecting not only current social infrastructural demand and supply but the risk of the global social infrastructural network becoming unable to adapt and expand along with its population's changing needs.

**Ageing populations will bolster a huge shift in infrastructural needs:** Development and the advancement of healthcare systems have led to massive improvements in life expectancy rates. In fact, the proportion of the global population aged 60+ has almost doubled since 1980 – reaching 962 million in 2017 – and is projected to double further to 2.1 billion by 2050[13]. Two-thirds of this increase in the aged population comes from the developing nations, while at the same time, developed regions (excluding Japan) such as Europe and North America account for the highest old-age dependency ratios (c.f. exhibit 6).

**Exhibit 6: Old age dependency ratio for selected economies**




**Sources:** *European Commission, United Nations*

As the median age of the population increases, governments need to proactively implement policies to meet the needs and expectations of aged people, especially policies related to housing, employment, healthcare, and social protection. Europe, in particular, has one of the highest life expectancies and lowest fertility rates - factors which are poised to see the region's share of the aged population over 60 years increase from 25.7% in 2020 to 32.2% in 2050. Along with this increase in the proportion of older

citizens, there has been a raft of socio-economic and cultural challenges to individuals, public welfare systems, and societies – challenges that are closely linked to the inadequacy of appropriate infrastructure.

In this context, the need for the availability, accessibility, and affordability of elderly care and health infrastructure will ramp up significantly, while costs are also expected to soar. The European Commission, in fact, estimates that the total cost of public spending on pensions, health care, long-term care, education, and unemployment benefits - which mostly benefit older citizens - is projected to increase to 26.9% of GDP by 2070 in the EU[14].

**Rapid urbanisation to exacerbate need for urban infrastructure:** The United Nations estimates that 55% of the world's current population resides in urban areas[15]. This figure is expected to reach approximately 68% by 2050 as the global population continues to increase, with Europe, Latin America, and North America seeing close to a 90% rise in their respective total populations.

While the high population density resulting from this rapid urbanisation may have an overall positive influence on healthcare coverage compared to sparsely populated areas – given factors such as easier and faster access to healthcare facilities – these areas also tend to face higher transmission rates in the event of pandemics or other health crises, placing a burden on health-related infrastructure; a scenario that was demonstrated by the pressure on the ICU capacities of countries at the height of the COVID-19 pandemic. Social infrastructure therefore plays a crucial role in increasing the resilience of health systems in times of crises. It would also be vital in tackling other socio-economic disparities observed in some large cities such as homelessness.

**Digitisation is poised to reinvent the social infrastructure landscape:** Infrastructure assets are less and less being constrained to brick-and-mortar physical assets. In fact, it is Increasingly becoming common for infrastructure assets to be infused with a layer of usually IT based technology – from early-stage decision-making and remote provision of asset services through connectivity and digital solutions all the way to predictive maintenance. This shift represents a significant share of the cost and value of these assets, as well as their corresponding services. Further, as the transformational capabilities of technology increase, so too does the demand for technological infrastructure. This is also true for the social infrastructure segment, where current technology and data analytics stand to provide vast improvements to the world's existing social infrastructure offering. The accelerating rate of technological adoption during the COVID-19 pandemic demonstrated this, significantly benefiting the education and healthcare sectors as distance learning and tele-medicine became the norm.

We expect that the proliferation of digital education will generate significant demand for access to rapid broadband connectivity by students and teachers, as the development of accessible cloud-based systems expands the range of educational tools. Similarly, the demand for faster, cheaper and easily accessible healthcare is expected to rise, a trend that is already being capitalised on by a number of small firms in the Health Tech sector. According to data from SVB, VC-backed Health Tech funding in the US is expected to reach approximately USD 13bn in 2020, indicating significant investor interest in the sector. The social housing segment also presents opportunities for the application of data analytics in analysing profits and costs, tenant selection and provision of rental-related services in a less costly and faster way.

Nevertheless, despite the large potential benefits of InfraTech, current adoption of technology in infrastructure is low relative to other sectors. Use of digital technologies in infrastructure – whether at planning construction or operational stages – is below that of comparable industries. That may be, in part, attributable to a traditionally slower rate for adoption of new technology by the public sector, which is where scaled up private sector involvement would greatly help. With the impacts of these fast-changing technological innovations on infrastructure, investors would need to think beyond the scope and criteria of their more traditional investments and focus on technology-based solutions.

Overall, despite the evident need for substantial investment increases prompted by evolving societal needs, factors such as mounting government debt, budget deficits, and the relatively 'low' priority of social infrastructure in the policy agenda have seen persistently low – and virtually stagnant – public investment in the area. In this context, it becomes clearer that governments alone are increasingly unable to address the widening social infrastructure gap. Now that the economy is on the road to recovery in the wake of the pandemic, a longer-term inclusive and sustainable growth and employment through scaled-up investment in social infrastructure. The mobilisation of private investment could hold the key to this.

[13] World Population Ageing Highlights 2017, United Nations

[14] This is the sum of the EU'S projected percentage increases in costs of public expenditure on social benefits between 2019 and 2070

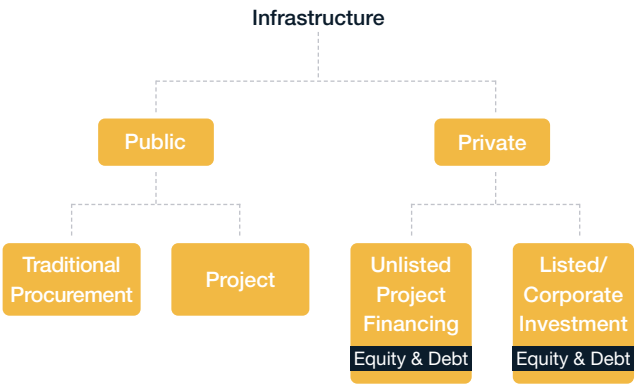
[15] United Nations, 2018 (https://www.un.org/development/desa/en/news/population/2018-revision-of-world-urbanization-prospects.html)

# Private investors are well positioned to fill the gap

## 2.1 Social Infrastructure is an attractive alternative for Private Investors...

Soaring government debt levels have led to decreasing public investment and widening social infrastructure gaps; calling for financing methods outside the traditional public scope. Private investors must step in to fill this gap. While public sector investment will likely remain the primary source of social infrastructure financing, increased investments from the private sector could significantly transform the sector. Institutional investors' vast assets pool, coupled with their strong appetite for longer-term, low-risk assets, render them particularly well-positioned to increase their asset allocation towards social infrastructure projects. At the moment, there are both listed and unlisted channels available to the private sector through which investors can provide financing for infrastructure projects (c.f. exhibit 7). This report will mainly focus on the unlisted project financing dimension, which is more closely aligned with the investment case for long-term institutional investors.

**Exhibit 7: Sources of social infrastructure financing**




**Source:** *EU Commision-ELTI (Boosting Social Infrastructure Report 2018)*

There are a number of characteristics inherent to social infrastructure which potentially aligns it with the interests of private investors:

**The Benefits of Private investments for Social infrastructure:** First and foremost, the private sector opens up a range of creative financing methods that could complement those seen in the public sector, which are often restricted by legal, regulatory, and other constraints. Increased private investments in social infrastructure could also see an improvement in facility management and maintenance due to the managerial and technical expertise that private investors typically bring to bear, just as the high level of innovation and rapid technological advancement that often characterises the private sector could help to accelerate the pace of social infrastructure development and delivery. Already we have seen attempts by some private investors to diversify their range of social infrastructure offerings by providing integrated services either linked to facility management or to meet a specific demographic or user need – including laundry and food delivery services, electricity, water, and community recreational facilities. There is also the dimension of better investor control, which is more permissible under investments in non-listed assets. An ownership or oversight logic is easier to implement through a dedicated fund or on a project financing special vehicle than via investments in (much bigger) listed corporates, and thus allows institutional investors to operationalise their sustainable development approach more quickly.

**The attractivity of Social infrastructure for Private investors:** Private, and more specifically long term institutional investors such as pension funds, retirement systems, and life insurance companies are keen to invest their money in inflation-linked, lower risk assets which generate regular income flows in order to match their long-term financial liabilities (like future pension payments, etc). Collectively, these institutional investors manage over EUR 89tn as of end-2019, according to OECD estimates[16] – about 125% of the GDP of OECD countries combined-, representing a significant amount of investable assets.

[16] OECD (2021)

There is, in fact, a wealth of evidence to suggest that social infrastructure investments have all the marks of a prudent and lucrative addition to an institutional investor's portfolio. First and foremost, social infrastructure, relying mostly on payments by public procuring authorities, ensures predictable and regular - if somewhat on the low side- returns, with risk levels comparable to those of sovereign bonds. Further, the public, key essential services nature and low demand elasticity of social infrastructure renders the asset class less correlated with the economic cycle and more resilient to market downturns, making it a powerful risk diversification tool. The COVID-19 pandemic attested to this resilience with respect to other infrastructure sectors, as evidenced by their returns throughout H1 2020. Health care and residential Real Estate Investment Trusts (REITS) provided respective returns of 10% and 18% in this period; while retail and office infrastructure performance stood at -52% and -19% YTD up until July 2020 On the average, the relatively smaller size of investments makes for better risk diversification, and default rates for infrastructure debts (particularly in PPP-type structures) tend to be lower than for other assets

The quid pro quo is, of course, due to their illiquid nature, which sees returns materialising through income flows over a long horizon and - in practice- limiting investment opportunities for investors with a long-term perspective; a phenomenon that is still pretty much the case despite the recent surge in secondary market transactions offering a way out to investors in search of liquidity. That being said, the opportunity for investors is not solely limited to quantitative aspects (market potential size and risk/return levels). Factors such as investing in non-listed infrastructure assets through a dedicated vehicle (Project company or Special purpose vehicle) also allow investors to better control the qualitative outcomes of their investments. In addition, as the name implies, social Infrastructure naturally generates positive social impacts. Under the current circumstances in which an increasing number of investors are looking to make positive contributions to local communities, such investments seem to be a good fit, enabling investors to generate long-term, stable returns while creating a positive impact in the communities in which they operate.

To illustrate that point, several indices have been created that aim to capture private market activity for each asset class and serve as a benchmark for managers. Among these are the Infra300® and Social Infra Index, both published by EDHEC. The Social Infra index has recorded the second-lowest volatility between all indices (second to the bond index), validating the fact that these investments are more resilient during economic downturns. In addition, the index also recorded the highest Sharpe Ratio (0.82), indicating higher risk-adjusted returns (c.f. exhibit 8). In addition, investment risk for the majority of investments in this segment is considerably lower, given that they typically involve governments, whose creditworthiness and ability to adjust spending serve to provide some level of security.

The increasing importance of sustainability and ESG also provides opportunities in this sector for investors. ESG investments have become a major topic in today's world, evolving from a "nice-to-have" to a "must-have" dimension, in what amounts to a paradigm shift in the investment landscape. In the Private Markets sphere, ESG investments have undergone impressive growth over the last 10 years, recording a 20% CAGR since 2010. Social infrastructure assets can be a promising option for ESG-conscious investors and managers, improving the sustainability rankings of their portfolios - with most projects scoring highly in ESG metrics. An IPE survey showing that two-thirds of infrastructure investors have an ESG policy/strategy that covers infrastructure aptly demonstrates this, lending credence to the fact that this growing popularity for ESG - and now Impact - investments is opening up opportunities in many markets. With investors looking to allocate capital into impact investments and the need for asset managers to meet this demand, social infrastructure is well-positioned to benefit from the ESG revolution that is gaining momentum, with Europe leading the way, bolstered by changing regulation, investor behaviour, and societal values. The positive social impacts being generated by these types of investments could attract capital towards the industry, creating an opportunity for private market actors to fill the social infrastructure gap. Already some institutional investors are reassessing their priorities, given the impact of the COVID-19 crisis, to focus more on making a social impact. In this context, 35% of infrastructure and 40% of real estate investors in an IPE survey are considering or planning to make social impact investment through their respective investment vehicles.

**Exhibit 8: Infrastructure Indices vs Others***

| | Return | Volatility | Sharpe Ratio |
|---|---|---|---|
| EDHEC Infra300® | 12.4% | 16.1% | 0.77 |
| EDHEC Social Infra Index | 13.2% | 13.9% | 0.82 |
| Russell 3000 (equity) | 11.7% | 16.5% | 0.71 |
| Bloomberg Barclays Bond Aggregate | 2.7% | 5.7% | 0.48 |

* Social Infra Index data since its inception; for the rest data from 2008 Q2 to 2019 Q4

**Source:** *EDHECInfra Report*

Some investors think of social infrastructure as a 'sub-class of' real estate. While the boundaries between real estate and infrastructure are still blurred and rife with investor uncertainties, this may not matter much in many cases since both funds are typically managed under the same fund oversight (head of alternative or real assets). But similarities in physical characteristics between social infrastructure facilities, on the one hand, and commercial or residential real estate, on the other, usually do not translate (with the part exception of social housing) into similar investment properties. Social infrastructure PPPs derive their income from long-term contracts with governments and have zero value at the concession end. Privately owned infrastructure also features a limited number of users/customers as off-takers, and usually incorporates a variety of ancillary services. On the other hand, real estate income often comes from a diverse and more volatile tenant base and shorter-term leases, and the terminal value makes a material impact on the investment case. Such differences in investment risk exposures also translate into different return expectations. Social infrastructure is generally associated with lower perceived risk and expected return than similar investments in real estate. There are other differentiating factors between traditional core real estate investors (specialist real estate investment trusts -REITS- or equivalents) and the Infrastructure investor approaches. Significant among them is the capacity to provide – in addition to the hard assets - a wide range of collective services by integrating ancillary services like Energy (and energy efficiency), fluids provision, IT and digital platforms and workspaces to enable working from the home.

## 2.2 Private Investors have begun to fill the gap

Unsurprisingly, the numerous benefits inherent to social infrastructure investments have stimulated a surge in global private investor demand for infrastructure assets in general, and social infrastructure assets in particular. As investors become more cognisant of the opportunities that they stand to gain, we are experiencing a newfound interest in social infrastructure investments among Europe's private investor segment which has materialised in the form of a pick-up in assets and a rise in deals. In this context, we have seen a rise in private investor participation in European social infrastructure, tripling from 1.7% to 5.4% of total European social infrastructure investments between 2015 and 2019. Secondary market activity, mainly through acquisitions, is largely to account for this increased private investor activity. In fact, acquisitions accounted for more than 76% of European social infrastructure deal value in 2020.

Furthermore, even though private actors still account for what may be considered only a marginal share of total social infrastructure investments in Europe, there has been a significant rebalancing, with private investments gaining more prominence when compared to the declining flow of public-private partnerships (PPPs). Between 2013 and 2020, the percentage of private investor participation in non-purely public social infrastructure investments stood at 57.0% - a significant increase from the 14.8% recorded between 2005 and 2012.

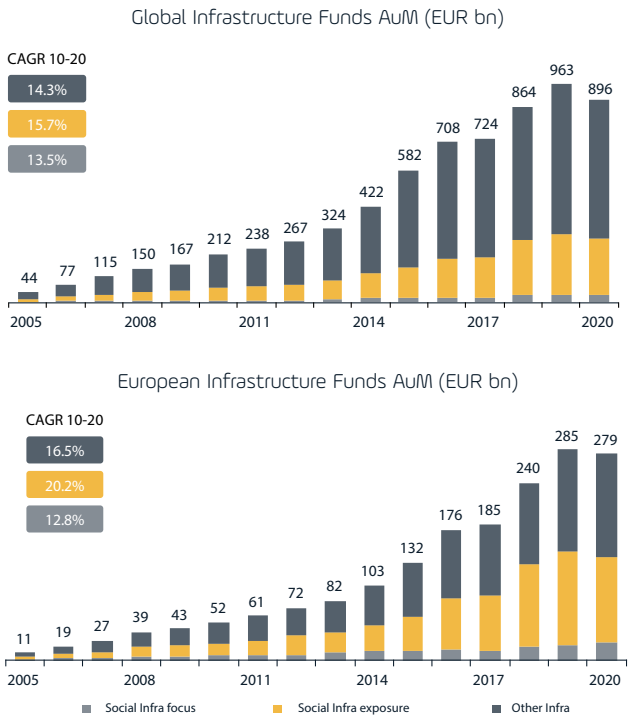
### 2.2.1 Social Infrastructure funds are growing at a rapid clip

The rise of infrastructure in the private investor sphere is fast materialising, as with other real assets, in the global asset and wealth management (AWM) landscape. While the asset class has historically been overlooked by investors, and is still low in terms of the total AuM of EUR 89tn held globally by institutional investors (overall, institutional asset allocation to infrastructure is estimated to be in the range of 2% at both EU and global levels), asset growth is beginning to point upwards. Recent years have seen a global increase in assets allocated to global Infrastructure Funds, as investors seek to reap the benefit provided by the asset class' strong performance, stable cash flows and resilient long-term returns. As a result, the industry has registered high levels of capital raised, reaching its fourth annual fundraising record of approximately EUR 88bn during the 2015-2019 period. These market conditions prompted infrastructure AuM to increase more than four-fold since 2010, growing at a 15.5% CAGR to reach EUR 896bn as of end-2020.

This dramatic rise was bolstered in part by the pickup in social infrastructure investment assets- both from funds with some level of exposure to social infrastructure (among other asset sub-classes) and those solely focused on social infrastructure. Together, these funds' AuM constitute 31.9% of Global Infrastructure Fund assets as of 2020, with a staggering 87.7% of this asset stock attributable to funds partly invested in social infrastructure, while strictly social infrastructure-focused funds account for only 12.3%. While this overall increase in social infrastructure investments as a share of global social infrastructure investments is already significant, it is once we narrow the scope to European Infrastructure Funds that the increasing role of private investment in social infrastructure financing- particularly through social infrastructure exposed funds - becomes apparent. In fact, our analysis shows that, of the EUR 279bn in assets managed in European Infrastructure Funds, over half (50.1%) are allocated towards funds with social infrastructure either as their investment objective or as an investment strategy.

In order to put this in perspective, one need look no further than the fact that while European-domiciled funds account for approximately one third of global infrastructure fund assets, they represent almost half of global social infrastructure assets. European fund assets that are either exposed to social infrastructure or are fully social-infrastructure focused almost tripled since 2014 alone to reach EUR 279bn as of end-2020. (cf. exhibit 9). Looking forward, we expect this considerable growth in assets to continue as infrastructure needs continue to ramp up across the world and the financing gap expands further.

**Exhibit 9: Global and European Infrastructure Funds AuM (EUR bn)**

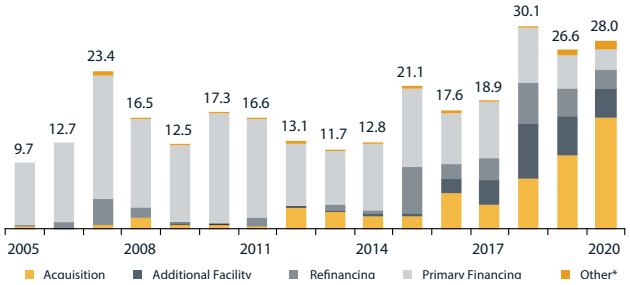



**Sources:** *IJ Global, IJ Investor*

## 2.2.2 Private investors are shifting towards secondary markets

Greenfield Investments in new projects do not represent the sole gateway to unlisted social infrastructure investments. Private investors have also been accessing these projects by way of deals such as acquisitions, financing of extensions/ additional facilities and refinancing. Following a considerable post-GFC decline in social infrastructure investment flows, deal activity for global social infrastructure funds began to pick up from 2014 and reached a historical peak of EUR 30.1bn in 2018– driven in a large proportion by acquisition deals, additional facilities, and refinancing (cf. exhibit 10).

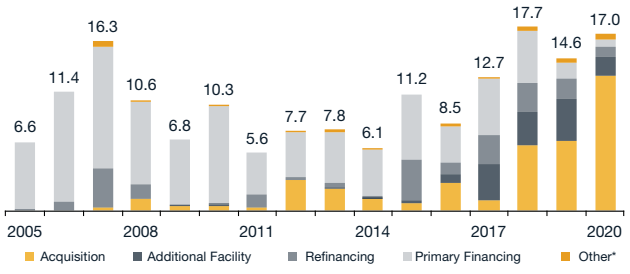
**Exhibit 10 : Global Social Infrastructure Deal Value (EUR bn)**




**Sources:** *IJ Global, IJ Investor*

Historically, primary financing – as would be expected in a new, developing market – has represented the lion's share of infrastructure deal activity, accounting for as much as 94.8% of global infrastructure deal value in 2010. However, the subsequent years have seen the reversal of this trend, witnessing an important shift away from primary financing; with this value falling to 10.0% as of end-2020. Europe was not exempt from this, with the value share of primary financing falling from 91.5% to 3.9% in the same period (cf. exhibit 11). In its stead, we have observed a widescale shift towards secondary market deals, namely acquisitions, refinancing schemes and project extensions.

**Exhibit 11 : Europe Social Infrastructure Deal Value (EUR bn)**




* Design Build, Portfolio Financing, Privatization, Securitization

**Sources:** *IJ Global, IJ Investor*

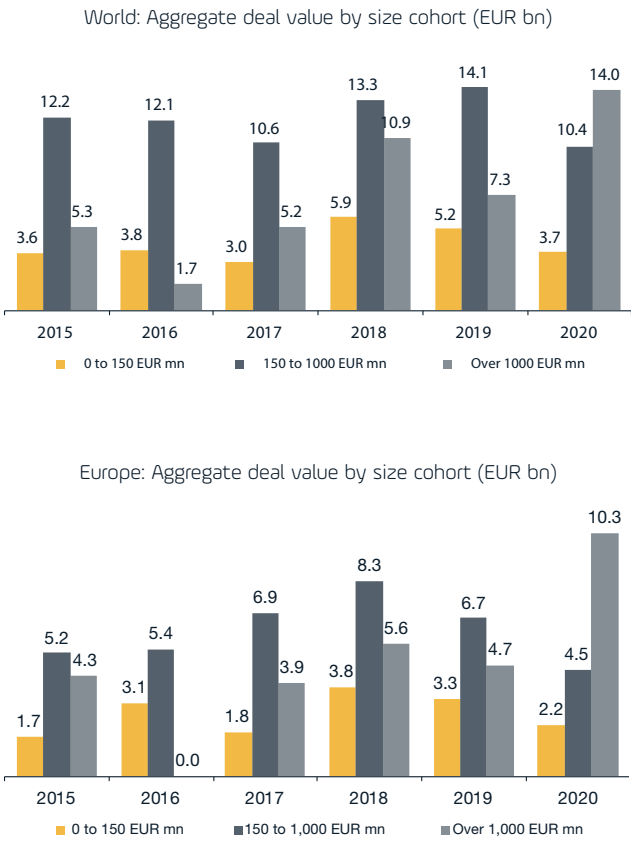
This constitutes a primordial restructuring of social infrastructure financing in the region. As primary market transactions are a more accurate representation of incremental investments in infrastructure in comparison to its secondary counterpart (where existing assets are traded),

this deceleration implies a substantial decrease in capital mobilisation within the social infrastructure realm. This shift is largely attributable to a number of structural constraints – namely the persistent under-supply of well-prepared, investable new social infrastructure projects – coupled with the secondary market's increased attractiveness in recent years. Within European secondary market activities, acquisitions have undergone the most dramatic increase in prominence, with their share of deal value skyrocketing from 5.0% in 2010 to 76.2% in 2020. Europe stands out as the global leader of acquisitions, accounting for 93.5% of global acquisition deal value. Apart from being primarily considered as a way to increase the supply of new assets, secondary investments in existing (Brownfield) assets have further merits for private investors:

- It can serve as an intermediate step and a conduit towards primary (greenfield) investments for those investors that are not yet ready to take design and construction risks or the risk of transitioning from construction to operation (this handover is too often only based on technical aspects of the asset whereas there are other aspects unique to Social Infrastructure investments that need to be taken into account, as they are embedded in the local community and have direct and immediate impacts on people once they are opened). The same applies to investors that are averse to future demand risk.
- It also offers the potential to enhance the potential of the existing asset through reinvestment and retrofit; allowing long-term investors to add significant value through secondary acquisitions. Already, many investors, such as Meridiam (see LIFT case study excerpts below), use the same tools (carbon measurement, SDG Roadmaps etc) on their secondary projects as they do on their greenfield projects. Thus, re-sales and secondary acquisitions can provide better outcomes and additional value in terms of carbon reduction and wider community benefits.
- Finally, by providing liquidity in the market to investors, it can facilitate the decision for some investors to invest in unlisted assets, thus improving market liquidity as well as providing additional financial performance benchmarks.

Apart from the shift in the type of deal transactions, Europe was also seen to be a key market participant across all deal sizes. The region accounted for 69% of small social infrastructure deals (those with value under EUR 150mn) in the period between 2015 and 2020 – bolstered mainly by acquisitions. 2018 in particular saw the region account for a staggering 70% of small global social infrastructure deals in that year alone. Meanwhile, medium-sized deals – those between EUR 150mn and EUR 1 bn – accounted for the largest share of aggregate deal value within the same period. Also, more than half of the 36 large social infrastructure deals (more than EUR 1bn) recorded worldwide between 2015 and 2020 took place in the region, leading to total large deal value of EUR 10.3bn in 2020 (c.f. exhibit 12) and resulting in an aggregate large deal value of EUR 28.8bn for the region, or 65% of the global large deal figure for the period.

**Exhibit 12: Global and Europe aggregate deal value by size cohort**



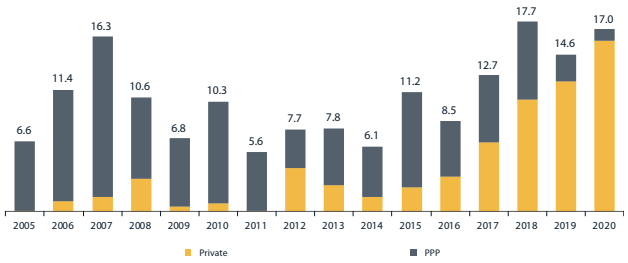

**Sources:** *IJ Global, IJ Investor*

Further evidence of the gradually increasing private participation within the social infrastructure investments landscape in Europe lies in the fact that, while private actors accounted for as little as 14.8% of non-purely public social infrastructure investments between 2005 and 2012, the period between 2013 and 2020 saw the figure jump to 57% - outpacing the contribution of PPPs. This increase in private investments as opposed to PPPs is a direct consequence of the growth of the secondary market in social infrastructure, which saw the number of purely private projects (not relying on a contract with a government party) jumping from 7 to 64 in the period

between 2007 and 2020. This, in addition to the increasing popularity of acquisition deals as the main source of financing, contributed to private investments accounting for over 90% of total investments in 2020 (cf. exhibit 13) – an indication of the significant potential there remains for further participation.

Meanwhile, the decrease in PPP volumes over the past decade can be attributed to a plethora of issues, ranging all the way from long and complex procurement processes to high transaction costs and rigid risk allocation in a quickly evolving environment. Others contributing factors include the introduction of detailed guidelines on the off-balance (or off-budget/off-public debt) treatment of PPP operations by international accounting standards bodies (IPSAS Board) and Eurostat[17], as well as the abrogation of the Private Finance Initiative (PFI) in the UK, which had been historically focused on delivering social infrastructure assets for the British public sector. The latter particularly, marked a turning point in this respect, as it sent a strong negative signal to other markets, in as much as the British market had been a pioneer in resorting to social infrastructure PPPs. Collectively, these constraints saw the number of social infrastructure public-private projects plummeting from a peak of 105 in 2007 to 20 in 2020 – the equivalent of an 81% decrease.

**Exhibit 13: Social Infrastructure Investment in Europe: Private vs PPP (EUR bn)**



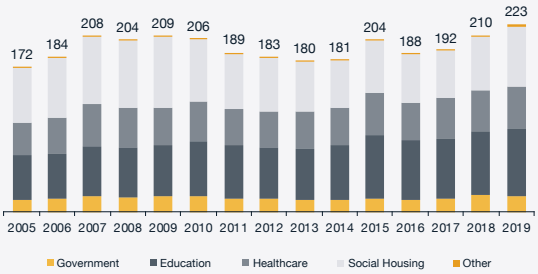

**Sources:** *IJ Global, IJ Investor, Infrastructure Investor*

## European private investors favour the healthcare sector

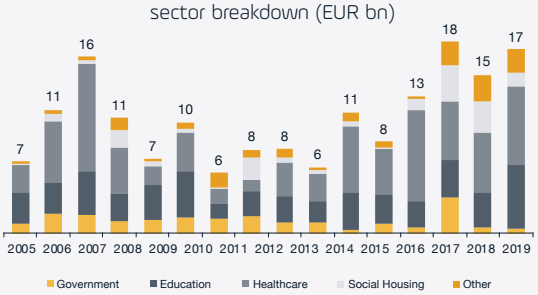
In sectoral terms, our analysis showed that overall (Public and private) European social infrastructure investments have been mainly concentrated in social housing (c.f. exhibit 14), closely followed by the education sector.

**Exhibit 14: Social infrastructure investments in Europe: Sector breakdown (EUR bn)**

Social infrastructure overall investment in Europe*: sector breakdown (EUR bn)




Social infrastructure private investment in Europe*: sector breakdown (EUR bn)




*Note: For public figures, 'Europe' is defined as the 31 Europe-an countries for which data was available in Eurostat
Sources: Eurostat, IJ Global, IJ Investor, OECD

A look at the private sector alone, however, shows a prioritisation of healthcare related investments – which constituted 43.2% of private social infrastructure investments as of 2020. This preference of private investors in Europe for healthcare infrastructure can probably be linked to the fact that the PPP or Government pay nature of many of these investments makes them less risky. With local governments as partners, investors can be assured of lower investment risk as well as returns that are usually disconnected from the overall economic cycle – which are important factors attracting greater private participation. This also accounts for the investment focus of private investors on education, which after healthcare, has been seen to attract significant private capitals - making up 34.8% of investments as of 2020, whereas social housing relies more on user-fees (tenants' rents) and thus carries therefore more demand risk.

[17] Eurostat is the EU statistics watchdog authority, and is in charge of checking compliance with the Maastricht convergence

## 2.2.3 Mapping Private Actors in Social Infrastructure Investments

In order to provide further context for understanding the direction and evolution of social infrastructure investments and financing methods, we analysed key investors within the private sector - with a specific focus on banking institutions, non-banking institutions, and asset management companies. The analysis not only shows asset allocation among the key investor segments but also how these investments improve the social and economic outcomes of project beneficiaries by helping to provide essential heath, educational and housing facilities.

### Banking Institutions

Between 2005 and 2020, direct investment value for the top 10 bank lenders in global social infrastructure reached EUR 68.7bn, with debt transactions accounting for approximately 97% of this amount (c.f. exhibit 15). Public-private partnerships were instrumental in furthering private social infrastructure investments within the review period, making up 69.5% of total transaction value for the top ten investors.

**Exhibit 15: Top 10 Bank Lenders: Global**

| | Player | Total Debt Value (EUR/bn) | Total Equity Value (EUR/bn) | Transaction Value (EUR/bn) | % of investment in PPPs |
|---|---|---|---|---|---|
| 1 | Lloyds Banking Group | 7.4 | 0.8 | **8.2** | 75.2% |
| 2 | Sumitomo Mitsui Financial Group | 8.1 | 0.1 | **8.2** | 71.7% |
| 3 | Royal Bank of Canada | 7.9 | - | **7.9** | 72.8% |
| 4 | Barclays | 7.5 | 0.2 | **7.7** | 63.5% |
| 5 | European Investment Bank | 7.4 | - | **7.4** | 86.8% |
| 6 | Royal Bank of Scotland | 6.6 | 0.3 | **6.9** | 67.4% |
| 7 | BNP Paribas | 6.1 | 0.1 | **6.2** | 68.5% |
| 8 | HSBC | 5.3 | 0.4 | **5.6** | 56.0% |
| 9 | Mitsubishi UFJ Financial Group | 5.4 | 0.1 | **5.4** | 70.3% |
| 10 | Groupe BPCE | 4.7 | 0.1 | **4.8** | 62.3% |

**Sources:** *IJ Global, IJ Investor*

In Europe, a similar situation can be observed. Of the EUR 52.9bn invested by the top ten private actors between 2005 and 2020, debt accounted for 97.0% while equity transactions made up only 3% (c.f. exhibit 16). PPPs also constituted averagely 68.8% of total transaction value.

**Exhibit 16: Top 10 Bank Lenders: Europe**

| | Player | Total Debt Value (EUR/bn) | Total Equity Value (EUR/bn) | Transaction Value (EUR/bn) | % of investment in PPPs |
|---|---|---|---|---|---|
| 1 | Lloyds Banking Group | 7.2 | 0.7 | **7.9** | 74.3% |
| 2 | Barclays | 7.3 | - | **7.3** | 87.6% |
| 3 | BNP Paribas | 5.6 | 0.2 | **5.8** | 64.8% |
| 4 | European Investment Bank | 5.7 | 0.1 | **5.8** | 69.2% |
| 5 | Royal Bank of Scotland | 5.1 | 0.2 | **5.3** | 71.4% |
| 6 | Sumitomo Mitsui Financial Group | 5.2 | 0.1 | **5.2** | 66.4% |
| 7 | Aviva | 4.2 | - | **4.2** | 52.4% |
| 8 | Credit Agricole Group | 3.8 | 0.1 | **3.9** | 97.2% |
| 9 | NordLB | 3.7 | 0.1 | **3.7** | 52.8% |
| 10 | Groupe BPCE | 3.6 | 0.1 | **3.7** | 52.3% |

**Sources:** *IJ Global, IJ Investor*

At both the global and European levels, Public-private partnerships were instrumental in raising funds for social infrastructure investments in the early part of the period; their share declining strongly after 2010. For instance, the Lloyds Banking Group and HSBC provided a total of EUR 355mn towards financing the New Royal Adelaide Hospital PPP project. With a total transaction value of EUR 2.36bn, this project delivers an 800-bed facility and includes a new emergency department to serve around 24,000 patients each year. In Europe, the Royal Bank of Scotland and the European Investment Bank were the major entities responsible for providing primary financing for the Birmingham Hospital PFI, a healthcare project undertaken in 2006. Of the project's total transaction value of EUR 985mn, these banks provided EUR 592mn and EUR 314mn respectively.

**Non-Banking institutions only**

Among non-banking institutions, the top 10 global investors contributed a total of EUR 10.9bn in social infrastructure projects in the period between 2005 and 2020 (c.f. exhibit 17), of which debt and equity transactions constituted 60.9% and 39.1% respectively. Insurance companies constitute the major investor type within this segment, followed by an equal proportion of pension funds and sovereign wealth funds. In fact, our analysis shows Aviva to be one of the most active institutional debt investors in the sector, with a total transaction value of EUR 3.6bn invested in 63 social infrastructure projects, ranging from hospitals and care centers to schools, student residences, and campuses. Large projects such as the Flemish Schools PPP attracted significant interest from non-bank investors, with KBC Group and Ageas contributing EUR 203mn in the first round of financing of the project in 2010, and EUR 202mn in its subsequent refinancing in 2015.

**Exhibit 17: Top 10 Investors Global – Non-Bank Institutional Investors only**

| | Players | Total Debt Value (EUR/mn) | Total Equity Value (EUR/mn) | Transaction Value (EUR/mn) | Investor Type |
|---|---|---|---|---|---|
| 1 | Aviva | 3,526.2 | 25.1 | **3,551.3** | Insurance Company |
| 2 | PGGM | 5.3 | 1,494.7 | **1,499.9** | Pension Fund |
| 3 | Prudential Financial | 439.6 | 810.5 | **1,250.0** | Insurance Company |
| 4 | KBC Group NV | 976.3 | 5.4 | **981.7** | Insurance Company |
| 5 | Government of Singapore Investment Corporation | - | 924.5 | **924.5** | SWF |
| 6 | Canada Pension Plan Investment Board | - | 807.7 | **807.7** | Pension Fund |
| 7 | Mubadala Investment Company | 444.6 | 182.0 | **626.6** | SWF |
| 8 | Ageas | 428.2 | - | **428.2** | Insurance Company |
| 9 | Allianz | 421.2 | - | **421.2** | Insurance Company |
| 10 | Canada Life | 369.6 | - | **369.6** | Insurance Company |

**Sources:** *IJ Global, IJ Investor*

Europe's non-bank segment, which consists mostly of insurance companies, contributed a total of EUR 8.8bn in social infrastructure direct investments (c.f. exhibit 18). Of this amount, debt transactions accounted for 71.2% while equity transactions made up 28.2%.

**Exhibit 18: Top 10 Investors Europe – Non-Bank Institutional Investors only**

| | Player | Total Debt Value (EUR/mn) | Total Equity Value (EUR/mn) | Transaction Value (EUR/mn) | Investor Type |
|---|---|---|---|---|---|
| 1 | Aviva | 3,526.2 | 25.1 | **3,551.3** | Insurance Company |
| 2 | PGGM | 5.3 | 1,494.7 | **1,499.9** | Pension Fund |
| 3 | Prudential Financial | 439.6 | 810.5 | **1,250.0** | Insurance Company |
| 4 | KBC Group NV | 851.3 | 5.4 | **856.8** | Insurance Company |
| 5 | Ageas | 428.2 | - | **428.2** | Insurance Company |
| 6 | Pension Insurance Corporation | 388.0 | - | **388.0** | Insurance Company |
| 7 | Allianz | 376.9 | - | **376.9** | Insurance Company |
| 8 | Khazanah Nasional Berhad | - | 182.5 | **182.5** | SWF |
| 9 | Teachers Insurance and Annuity Association of America | 141.9 | - | **141.9** | Pension/Insurance |
| 10 | ERGO Insurance Group | 78.8 | - | **78.8** | Insurance Company |

**Sources:** *IJ Global, IJ Investor*

As previously mentioned, we have seen a rise in secondary market activity, with acquisitions, in particular, being a preferred financing method among private investors in Europe. A typical example of such a transaction is the acquisition of Vita Group's UK Student Housing Portfolio by Aviva and Deutsche Bank for a total transaction value of EUR 650mn. Aviva provided a 10-year fixed-rate loan facility for the acquisition of the portfolio, which consists of approximately 3,198 beds across Glasgow, Newcastle, Edinburgh, Leeds, Birmingham, and Manchester.

**Asset Management Companies**

Compared to their banking and non-banking counterparts' direct investments, our data indicates that asset managers' participation in social infrastructure investments has been limited over the review period, with the majority of the investments typically being in small-scale projects that cover the full spectrum of social infrastructure investments. For example, HICL Infrastructure was involved in 44 social infrastructure projects during our sample period, followed by Tetragon (34 projects) and Meridiam (11 projects). For some asset managers, the approach involved slightly larger investments in few projects. A typical example is QIC Global - the leading investor in this segment, which our data shows to have invested in only a single project during our sample period, providing nearly EUR 1.4bn of financing for a 75% stake acquisition in Nexus Day Hospitals (c.f. exhibit 19).

**Exhibit 19: Top 10 Investors Global – Asset Managers***

| | Players | Total Debt Value (EUR/mn) | Total Equity Value (EUR/mn) | Transaction Value (EUR/mn) |
|---|---|---|---|---|
| 1 | QIC Global | - | 1,421.2 | 1,421.2 |
| 2 | Nordic Capital | - | 1,359.8 | 1,359.8 |
| 3 | Antin Infrastructure Partners | - | 856.8 | 856.8 |
| 4 | HICL Infrastructure | 15.5 | 812.8 | 828.3 |
| 5 | Tetragon Financial Group | 2.8 | 812.1 | 814.8 |
| 6 | Gingko Tree Investment | 5.3 | 642.3 | 647.5 |
| 7 | Meridiam | - | 618.8 | 618.8 |
| 8 | Terra Firma Special Opportunities Fund I | - | 549.3 | 549.3 |
| 9 | TradeRisks | 537.6 | - | 537.6 |
| 10 | Novo A/S | - | 513.3 | 513.3 |

*Includes pure asset management companies, i.e. not part of a bank

**Sources:** *IJ Global, IJ Investor*

The same pattern applies to the social infrastructure activity of asset managers in Europe, compared to other players (c.f. exhibit 21). For example, the leading investor in this segment, Antin Infrastructure Partners, was involved in only two projects during our sample period - one of them in healthcare and the other in district heating.

**Exhibit 20: Top 10 Investors Europe – Asset Managers***

| | Player | Total Debt Value (EUR/mn) | Total Equity Value (EUR/mn) | Transaction Value (EUR/mn) |
|---|---|---|---|---|
| 1 | Antin Infrastructure Partners | - | 856.8 | 856.8 |
| 2 | HICL Infrastructure | 15.5 | 773.7 | 789.2 |
| 3 | Tetragon Financial Group | 2.8 | 812.1 | 814.8 |
| 4 | Gingko Tree Investment | 5.3 | 642.3 | 647.5 |
| 5 | Terra Firma Special Opportunities Fund I | - | 549.3 | 549.3 |
| 6 | Meridiam | - | 444.4 | 444.4 |
| 7 | InfraVia Capital Partners | - | 402.1 | 402.1 |
| 8 | Aberdeen Standard Investments | 152.6 | 256.2 | 408.8 |
| 9 | Dalmore Capital | 26.9 | 355.8 | 382.7 |
| 10 | Legal & General Group | 296.4 | 2.4 | 298.8 |

*Includes pure asset management companies, i.e. not part of a bank

**Sources:** *IJ Global, IJ Investor*

As most of these asset managers involved in social infrastructure investments are equity funds, equity accounted for 93.1% of the total transaction value of EUR 8.1bn at the global level. Meanwhile in Europe, it made up 91.1% of the EUR 5.6bn in total transaction value for the top ten asset managers in social infrastructure.

## 2.3 ...but further private investor uptake is needed to meet the infrastructure needs of tomorrow

Altogether, evidence suggests that private actor participation in infrastructure initiatives remains relatively marginal. According to Preqin, median asset allocation to overall unlisted infrastructure stood at a respective 2% and 1% globally for pension funds and insurance companies as of 2020. Given that social infrastructure is only a subset of the broader infrastructure space - accounting for 10 to 15% of that segment- the actual figure for social-infrastructure-specific asset allocation verges on macro-economic insignificance. Not only this, but the last decade has actually seen a marked decline in private infrastructure investment - with annual investment volumes through primary market transactions currently standing at approximately EUR 80bn - a mere drop in the EUR 12.5tn ocean. Europe has also seen the largest decline in the number of private infrastructure investment transactions between 2010 and 2019 (8% compared to 1% in North America and 5% in Asia Pacific). Therefore, greater attempts to bridge the gap between private capital and social infrastructure investments need to be made, in addition to the provision of more attractive investment proposals and projects necessary to enhance private actors' access to social infrastructure investments and boost their willingness to invest.

# Sectoral Analysis

Not all aspects of social infrastructure rank equally in terms of priority - given the differences in nations' needs. Thus, social infrastructure is primarily used in many contexts to refer to the healthcare, education and social housing sectors. This report focuses accordingly on the three main social infrastructure sub-sectors identified, with a deep dive into specific drivers, challenges and opportunities within each sector, as well as performance indicators. While these projects usually involve real estate, we attempt to assess their value primarily as social infrastructure investments.

## 3.1 The healthcare market presents a major sectoral opportunity

The healthcare sector ranks at the top in most private actors' strategies around social infrastructure investments. Between 2005 and 2020, total investment value for the top 10 investors in this subsector amounted to EUR 28.2bn, of which debt transactions constituted a whopping 98.1%. In Europe this figure stood at EUR 21.4bn, making up 75.9% of the global total investments (c.f. exhibit 21).

**Exhibit 21: Top 10 Bank Lenders in Healthcare**

| | Player | Total Debt Value (EUR/bn) | Total Equity Value (EUR/bn) | Transaction Value (EUR/bn) | % of investment in PPPs |
|---|---|---|---|---|---|
| 1 | European Investment Bank | 4.4 | - | **4.4** | 94.6% |
| 2 | Royal Bank of Canada | 3.9 | - | **3.9** | 100.0% |
| 3 | Lloyds Banking Group | 3.5 | 0.2 | **3.7** | 89.1% |
| 4 | Deutsche Bank | 2.8 | - | **2.8** | 49.6% |
| 5 | Royal Bank of Scotland | 2.5 | 0.2 | **2.7** | 87.5% |
| 6 | HSBC | 2.6 | 0.1 | **2.7** | 67.4% |
| 7 | Credit Agricole Group | 2.4 | - | **2.4** | 49.3% |
| 8 | Groupe BPCE | 2.3 | - | **2.3** | 36.1% |
| 9 | Barclays | 1.7 | - | **1.7** | 54.1% |
| 10 | Societe Generale | 1.6 | - | **1.6** | 44.5% |

**Sources:** *IJ Global, IJ Investor*

Almost all countries count with the private sector providing health-related services and facilities in addition to government-funded ones, with the size and business model (government pay or user-pay) of these facilities depending on the specific country's history level of development, and legal and social policy frameworks. PPPs also continue to play a key role in pooling public and private resources together for the purpose of extending and modernising healthcare facilities.

If there is a sector with an urgent need for rapid investment by the private sector, it is healthcare. Obsolete hospital buildings and facilities - amid changing health and safety standards highlighted by the COVID-19 pandemic - and rapidly changing health priorities have widened the investment gap. In view of the increasingly aging population in many regions - particularly in Europe -, an increasing stock of healthcare facilities are no longer fit for purpose. Collectively, these factors have intensified the need for new forms of contracting and investing by the private sector.

### Hospitals

Dilapidated and obsolete hospital buildings and facilities combined with new health and safety standards and the need for investment in priority areas (A&E, perinatal care and cancer) means that there was a lot of catching-up to do in many countries. While in Europe, most private sector investment through was done through PPPs a decade ago, private investments in hospital infrastructure are now primarily channelled through privately-owned hospital franchises, and typically include medical services on top of facility-management services.

### Nursing homes

Residential care facilities for the dependent elderly occupy a space where healthcare and social services overlap. As these facilities are less sophisticated than hospitals, they are usually less prone to the constant need to upgrade in

line with their changing needs - an argument often used together with the excessive complexity of hospital PPPs to make a case for nursing homes. Further, the need to replace existing facilities in public-sector nursing homes often present reconstruction and facility enhancement needs which can be better met by involving the private sector.

### Others

Apart from these, other types of non-building investment in the healthcare sector are rare and mostly limited to energy and logistics (laundry, waste management, parking) facilities. Although hospital information systems were originally perceived as possible targets for PPP contracts, few projects have actually been initiated.

The sector has already significantly opened to private investors: Today, public financing accounts just for between one-third (for older EU 15 members) and a half (for new EU 13 members) of all funding in the healthcare sector in Europe, with central governments (or National Social Security systems) accounting for as much as 64% and local and state/provincial governments accounting for 36%[18].

With the fallout from COVID-19 and the expected increase in the number of senior assisted living and elderly care homes in the coming years, pressure on governments' ability to invest in the needed healthcare facilities is likely to even ramp up, creating further demand for impact-focused capital and widening the window of opportunity for private investors.

## 3.1.1 Real estate or social infrastructure?

While traditional definitions of social infrastructure cover the buildings that house key social and collective community services, it extends beyond physical infrastructure. In fact - although most private sector investments in the healthcare sector to date have involved building projects - many Public-Private partnership (PPPs) contracts have included related processes and facility management services such as energy and logistic. The same goes for fully private facilities, with the added dimension of medical/ health treatments– care, and increasingly, cure.

This clearly presents an opportunity for investors to differentiate their allocation strategies. With healthcare assets still being considered by many investors to be real estate assets, investors whose approach incorporates dimensions such as facility management and/or health services are probably best approached through a Social Infrastructure lens. Increasingly, institutional investors seeking exposure to this sector look beyond the real estate to the entire industry spectrum, often, buying operating businesses along with the buildings from which they run their operations. This is in particular the case for hospitals/clinics, less so for residential care facilities for the dependent elderly (nursing homes), which occupy an intermediate space where healthcare and social services overlap.

- Macquarie Infrastructure Partners V, Macquarie Asset Management's latest Americas infrastructure fund, just acquired a 50% stake in a USD 1.8bn portfolio of eight Massachusetts-based general acute care hospitals, operated by Steward Health Care System. The long-term performance of this portfolio is ensured through a 20-year lease with Steward.
- **A more real estate-oriented approach:** on behalf of its funds, Primonial REIM has invested EUR 252mn to buy seven healthcare facilities in France in a sale and leaseback deal for a 12-year fixed term with private hospital operator Elsan. The acquired assets include two medical and surgical clinics, three medical-surgical and obstetrics clinics and two follow-up care and physiotherapy clinics, representing a total surface area of more than 80,000 sqm and more than 1,000 beds.

## 3.1.2 PPPs vs other channels of investment

Our analysis shows that PPPs represented approximately 67.2% of all investment deals by the top 10 investors globally between 2005 and 2020 but started declining from 2010 onwards.

In many jurisdictions – such as in the UK or France – where public healthcare systems are built around the National Social Security system; PPP funded hospitals often have a mixed track record. In the absence of any quantifiable impacts which makes it difficult to assess the socioeconomic benefits

[18] EU Commission/ELTI HLTF report on Social infrastructure, 2018

of such projects, the costs of financing PPPs have generally been seen to be higher than that of public project contracting, while long-term budgetary cost deferrals have also led some to consider this as an incentive for public authorities to go for "gold-plated" projects, featuring unneeded bells and whistles.

Although the objectives of past Hospital PPP Programmes have been broadly met, the model has weathered some spectacular failures and a flurry of severe criticism from oversight bodies. Moreover, soaring operating and maintenance costs arising from increased capacity have weighed on hospital budgets and led to widening operating deficits - curtailing the prospect of new deals.

In the UK, for instance, the provision of new or extended healthcare facilities to the NHS through PPPs ceased altogether with the withdrawal of the Private Finance Initiative (PFI 2) in 2021. Subsequently, while the vast majority of private investors/ sponsors may have recouped their initial investments, some have been severely affected by the reputational impact of public controversies, prompting a search for other contractual investment channels.

A similar scenario can be observed in France, where the public-sector context for PPP investment in Hospitals is complex and involves several levels of responsibility and decision-taking. Even though France has successfully implemented over 50 PPP projects in healthcare, with value size between EUR 1 million and EUR 350 million, the aforementioned impediments have all but stopped private investment in hospitals through PPPs.

A recurring issue has been that stable requirement in terms of capacity, functions and techniques, at least during the design and construction phases, are a very important condition for PPP projects. As such, any changes that have been made during either of these phases, often as a result of technological progress, have typically disturbed the complex long-term contractual arrangements and generated substantial extra costs.

The situation is different in most developing countries. The absence of universal health coverage in these regions, coupled with the low creditworthiness of many social administrations, implies that the market is limited to privately managed facilities that cater mainly to the emerging urban middle class on a user-pay basis, underpinned by the benefits of private insurance. This could still translate into considerable increases in market scale in these countries, given the expected population growth and the emerging urban middle class. Still, there are opportunities linked to availability-payment type PPPs in some of those markets that should not be downplayed either, as evidenced by the success of the Turkish Health PPP program.

## Investing in Hospital PPPs in Emerging Markets (EMDEs)

As a major investor in infrastructure, Meridiam has a record of successful community engagement in various social infrastructure segments. The examples below illustrate how private investors' involvement can effectively help to achieve better outcomes in healthcare.

### A. Meridiam and the Turkish hospitals

1. Private investment as an accelerator to bridge the gap: By the early 2000s, the Turkish health system was chronically undersized and inadequate. Public health KPI scores were significantly below the OECD average, and the procurement of new health facilities saw chronic delays with recurrent cost overruns. Reforming the country's public health system was therefore a top priority for the government. In 2002, an ambitious reform program - the Health Transformation Program (HTP) - was designed to improve, modernise and expand health services throughout Turkey. It also aimed to achieve universal access to health care services through a single universal public health system. The magnitude of the HTP's investment program exceeded the government's capacity to finance it solely by means of its fiscal resources, especially as it was conducting a fiscal consolidation policy under the IMF program. The government's ability to raise capital in the domestic capital market or to issue sovereign debt, was limited, with a small pool of investors interested in Turkish sovereign debt. In this context, the Healthcare PPP Program was drafted to streamline PPPs as the government's primary procurement tool to deliver and finance public health services delivery. The plan earmarked up to 32 new hospitals with over 42,000 hospital beds to be procured through PPPs via competitive bidding (15 to 20 billion euros overall envelope). International lenders, together with investing sponsors/developers were tapped to design, finance, construct, and operate and maintain greenfield health campuses and public hospitals in Turkey, while the provision of core medical services remained the responsibility of the MoH.

Among such PPPs is the Elazig Hospital PPP, a 1038-bed integrated health facility serving a population of 1.6 million in Eastern Anatolia. The total financing for the project – structured as a 28-year availability payment PPP – was estimated at EUR 360 million. Meridiam acts as the principal investor (equity) and asset manager for this project, in addition to 3 other major hospital projects in Adana, Yozgat, Elazig, and Bursa provinces. Collectively, the four projects aim to deliver a total of 4,400 beds, representing an investment of more than EUR 1.5 billion. All of the projects boast high ESG/SDG scores, and include – in particular – the first earthquake resilient healthcare facilities in Turkey, setting the standard for future healthcare projects in the country.


**2. Navigating macro-financial risks through innovative financial structuring:** To fund the Elazig project, a bond issuance was placed privately with major international financial institutions (including foreign commercial banks, Multilaterals, and DFIs) in Dec 2016, and was facilitated via an innovative credit enhancement solution together with the EBRD and MIGA, resulting in a "Baa2" Moody's rating (i.e. above the sovereign debt rating) for the bond. The Elazig project bond was also certified as a 'green and social' bond. The project financing process proved to be resilient, despite significant depreciation of the Turkish lira in 2020 and 2021 and further downgrading of the Turkish government's debt ratings and could serve as a benchmark for future capital markets solutions to finance Turkish infrastructure. Beyond Elazig, and since launching the PPP sub-program of the HTP in 2009, the Ministry of Health has effectively seen the financial closure of 20 PPP projects. 11 of these are already fully operational and commissioned as of end-2020, with all PPP hospitals overall being very instrumental in the Turkish authorities' efforts to address and cope with the COVID-19 crisis since February 2020.This translates into EUR 7 billion of ESG-compliant investment, a significant proportion of which was financed by international banks, investors, and financial institutions.

### B. Felix Bulnes Hospital, Chile

Meridiam is also involved in other Hospital PPPs such as the Félix Bulnes Hospital in Chile. The Project, located in one of the most densely populated and poorest municipalities of Santiago and intended to serve a population of 400,000, covers the design, construction, finance, operation and maintenance of the Hospital. It also includes the provision, maintenance and replacement of medical equipment, IT systems and furniture. Operations include basic services (e.g. hard/soft facilities maintenance, food services, laundry) and special obligatory services (e.g. acquisition and replacement of medical equipment, basic IT services), but will exclude medical and/or clinical-related services. The USD 333mn project covers an area of 123,000 m2, has a 523-bed capacity and includes 11 surgical halls. The contractual scheme is a 20-years PPP agreement with public payments based on availability. The Ministry of Public Works ("MOP") serves as the contracting authority while payments will be made by the Ministry of Health ("MINSAL"). The hospital was completed in 2020 and is now fully operational.

## 3.1.3 The case for healthcare investment

**Opportunities:** The sub-sector benefits from strong fundamentals. In line with increased life expectancy across the EU, demand for healthcare related facilities is increasing, both in the cure and care markets. With this increasing demand for hospitals, medical offices and care facilities has been seen a rise in investment volumes over the years, with dual implications. First, the market appears to be shifting from the niche segment and becoming more institutionalised. As European age cohorts above 80 years continue to swell in the coming years, demand for care homes, in particular, is poised for growth. And while the healthcare sector weathered the COVID-19 storm relatively well compared to other social infrastructure and real estate sectors, the crisis also shed critical light on the subpar level of the physical and operational infrastructure in many old-age care homes, with many deemed unfit for use. As of 2020, for instance, estimated annual

investments in senior living properties in Europe exceeded EUR 5.3bn - an increase of about a 100% from EUR 2.7bn before 2015. Actual transactional volumes could even be higher, given the relatively small deal size that characterises the social infrastructure segment and the large number of unrecorded transactions. With the increasing constraints on public financing, institutional private investors can realistically expect to service a larger proportion of the investment needs in the coming years.

## Investing in nursing homes

### A. Scaling up an operator network of homes, Ireland

Acquired in 2017 by InfraVia, CareChoice is one of the largest private operators of nursing homes in Ireland. As of December 31, 2020, CareChoice has a capacity of approximately 1,200 beds across twelve nursing homes and employs about 1,300 staff to provide nursing and care services to aged residents requiring permanent care.

Investment Rationale:

- Stable financing scheme with majority of revenues generated from Government subsidies
- Real estate ownership
- Undersupplied market with a portion of the existing stock being not fit for purpose provides significant opportunity for private operators to create capacity vs. public and not-for-profit operators
- Barriers to entry provided in particular by increasing regulation requirements and significant capex requirements for new capacity creation
- First mover advantage and significant opportunity for consolidation in a highly fragmented market

Investors Value-Add

- Adapt CareChoice' organisation and processes to a growing company: Strengthening of the management team and hiring of high profile and experienced non-executive directors at the board level
- Buy and build experience: Under the ownership of InfraVia, CareChoice more than doubled in size through construction of new homes, extension of existing homes and acquisition of independent homes
- Implement strong Governance around quality of care: InfraVia has set up strong quality of care governance by setting up dedicated quality of care reporting and a quality and safety board sub-committee

### B. Investing by bundling private owners, Spain

Franklin Templeton Social Infrastructure Fund has added a nursing home in Las Rozas, Madrid to its social infrastructure portfolio, seeking to enhance both impact and financial returns. This opportunity for investment was created by consolidating ownership from a number of private owners .The Fund then brought in an aligned nursing home operator on a new long-term lease, aiming to support quality healthcare services within an undersupplied market, and ensure that capacity is available to meet the growing demand from Spain's ageing population.

Also, the increased liquidity in the market linked to a growing secondary deal flow has made the asset class more attractive to investors Going forward, investors – and impact investors in particular- are expected to increase their allocations for European healthcare infrastructure, and this presents the sector with a veritable opportunity for further investment.

**Adding value and flexibility through private management:** In addition to capital allocations, private investors can also drive innovation and introduce more flexibility within the health infrastructure segment. Public Investment in health continues to be concentrated around large scale hospitals, sometimes at the expense of local/community facilities and short-term care: this is where Private investors can promote a more flexible managerial approach to healthcare, as well as innovation in terms of energy efficiency, digital platforms, data collection and interoperability Fulcrum - a private UK investor - is a case in point (see box below). The group has managed to deliver over 40 healthcare facilities across the country, creating flexible spaces that are adaptable to the changing needs of the NHS and the communities they serve. This proved to be of utmost benefit during the COVID-19 pandemic as it allowed Fulcrum to quickly mobilise several facilities in London and the North West to support the NHS

and the Emergency Departments of nearby hospitals. A dozen Fulcrum sites were also designated as COVID-19 testing centres, while other facilities served as vaccination centres for NHS staff and residents, as well as patient recovery and rehabilitation centres.

In France, the Meridiam group that owns and manages the National Velodrome, a sport facility in St-Quentin-en Yvelines, also agreed to convert it into a mass vaccination center during the COVID-19 crisis in 2021, delivering more than 300 000 shots by summer 2021.

## The case of the UK: LIFT (Local Improvement Finance Trust) program, a PPP with Community Health Partnerships, channels private sector financing and expertise to the NHS

The "LIFT" programme was launched in 2000 by the UK government with the aim of regenerating and maintaining primary care and community health services buildings through partnerships between the public and private sectors. The LIFT model involves the building of new facilities from either new or refurbished buildings to be then managed and maintained by a LIFT company. These buildings are then to be leased by the company to the NHS (National Health Service) over a fixed term - typically 25 years.

**Revenue mechanism:**

- Revenues are based on a mix of standardised "Lease Plus Agreements" (LPAs) and "Land Retained Agreements" (LRAs) structured as availability payments.
- Payments are made by Community Health Partnerships (CHP) which are funded by the UK Department of Health.

**Value-Added Partnerships**

- Fulcrum (Meridiam Group) is the private sector partner in four LIFT Companies. Fulcrum's LIFT portfolio includes 42 primary and community healthcare facilities, all operational.
- In terms of value added, partnerships with private sector players such as Fulcrum have seen increased comprehensive capabilities across the value chain and high customer satisfaction.
- Private investors can also add value by way of end-to-end conducting of development activities.

**A Partnership, not a Private Finance Initiative**

- **Shared ownership:** The private sector holds a 60% stake and the public sector, 40%. This leads to joint management and shared benefits, with 40% of any returns flowing back into the public sector.
- **Flexibility:** The LIFT model attracts experienced investors who can be more flexible than under PFI. For example, Fulcrum's public sector building leases include break clauses – which is not possible under the PFI.
- **Transparency:** All financial and operational information is shared, with joint decision making allowing the Public sector to shape its own operational and financial outcomes.

**Health and well-being, not bricks and mortar**

- LIFT rents are "full service" and include the provision of critical services such as building maintenance and the "lifecycle" repair and replacement of equipment.
- With the burden of building upkeep removed, the LIFT model allows the NHS and health practitioners to focus on what matters most.

**Benefits**

- Reduced costs, shared returns and customer satisfaction.
- Drives construction costs down as well as lease costs (mutualisation of structuring costs, portfolio effect, etc).
- Returns shared between public sector and Fulcrum.
- 50% increase in customer satisfaction with the management and quality of buildings.

Over the last 20 years, £2.5bn in investment and over 350 high-quality, flexible primary and community care facilities have been delivered through the programme. Besides, the locally embedded expertise of the 49 LIFT companies across the country provides a reservoir of support that the NHS can draw upon to meet its biggest challenges. Alongside tackling the £10bn estate maintenance backlog, LIFTCos are working with the public sector to support the National Health Service in moving towards net zero and creating a greener future. As the 25-yr program is coming to an end, a refresh of the Health Infrastructure Plan (HIP) has been scheduled.

**Global market perspectives:** In terms of the scope and definition of projects, one can also expect to see an increase in asset-recycling and sales-and-lease-back opportunities, especially as cash-strapped municipalities and sub-national governments look to raise funds through the sale of healthcare infrastructure assets on their balance sheets. At the same time, the ongoing concentration of operators is also fostering an environment with more solid counterparts/operators and opportunities for healthcare funds.

Opportunities for further investments are not limited to Europe alone. Many Asian markets, including India and China, have registered a large gap in the demand and supply of hospital beds. This not only underscores the sheer dearth of quality healthcare facilities but also the limited ability of the public sector – which mostly funds supply - to meet demand in these regions. Studies by IPE show that only 20% of hospital beds in China are funded by the private sector, with healthcare funding largely remaining in the public domain.

This aforementioned demand-supply gap points to emerging opportunities for global private capital within developing markets, including China. Many Real Estate and Infrastructure funds are converging towards healthcare asset funds. Moreover, the influx of infrastructure funds has helped to sharpen pricing, amid fierce competition for the limited stream of assets entering the market.

- In 2019, TPG and Shanghai Fosun Pharmaceutical Group sold their China portfolio of private hospitals, outpatient clinics and medical centres to New Frontier Health for EUR 1.4bn.
- India's National Infrastructure Investment Fund (NIIF), which counts AustralianSuper, CPP Investments, Ontario Teachers' and Abu Dhabi Investment Authority among its investors, invested approximately EUR 237mn in 2021 in Manipal Hospitals, one of the country's leading multi-specialty medical providers.
- In Australia, QIC bought a 70% stake in Nexus Hospitals – the country's second-largest platform of day-and-short-stay hospitals - for its QIC Global Infrastructure Fund in 2019. Last year, global infrastructure manager Morrison & Co also took over QScan, Australia's leading diagnostic imaging company, for AUD 734mn, making it the largest healthcare deal in Australia in 2020.

**Challenges:** Owing to potential technical issues and complications associated with the treatment of human lives, the health sector is often deemed to be riskier for private investors, compared to other social infrastructure sectors. This is the case even when medical care services are not included in the scope of services provided by the private sector and can lead to high reputational risks. A recent example is linked with bouts of COVID-19 infections in senior care homes that resulted in clusters.

Apart from this, the lack of investment opportunities remains an issue. The limited available stock for purchase constitutes a significant barrier to entry for investors who would prefer to break in through the secondary market- due to their interest in acquiring existing and already operating and, hence less risky assets. There is also the barrier presented by limited deal size, similar to other social infrastructure subsectors. While the value of a comprehensive new hospital facility could exceed EUR 100mn, most investment projects in this segment are much smaller, with just one in 100 social infrastructure projects estimated to be more than EUR 30mn. This explains the specific role of specialised funds and financial intermediaries.

In terms of outlook, the health care sector is expected to be particularly disrupted by technological advancements. Telemedicine could significantly transform the how medical consultations are conducted, with impacts on primary- care real estate. It could also make homecare more accessible for elderly patients and thereby affect demand for nursing homes. Currently, existing care home operators are not only faced with staff shortages -which could potentially affect wages and profitability over time -but also COVID-19 related impacts which have made it difficult to operate old homes and manage infection control. This has heightened the need to prioritise investments in modern and purpose-built facilities. The impacts of technology are even expected to reflect in the construction techniques for health facilities. As an example, the Elazig Health Campus in Turkey is designed and built with seismic isolators under 872 columns. This feature not only allowed the building to survive a 40-second earthquake in Elazığ with a magnitude of 6.8 in January 2020, but also made it the safest building in the city - serving both patients and victims of the earthquake. Besides, the technological facilities in the building made it possible to manage water, electricity and gas cuts that could have disrupted the health services provided during and after the earthquake.

### 3.1.4 The roles of National Promotion and Development banks to leverage private investment

National Promotion and Development Banks (NPDBs) are public financial institutions tasked with providing long term capital for productive investment. Well represented in the EU, where almost

every country has set up one, they are used as a mechanism to complement financial instruments, often in combination with EU funding, and their role has grown with recent crises. This model is now being increasingly adopted in emerging economies, both at the national and regional/state levels. Infrastructure is traditionally one of their priorities in view of its long-term and strategic nature. By leveraging the intermediary role of these banks in connecting public funds to various developmental needs, governments have a unique opportunity to direct capital towards social infrastructure investments in the sector. It can in particular be a useful tool to governments by providing blended finance for strengthening and expanding healthcare provision.

NPDBs can prove instrumental in helping vital private infrastructure asset owners to secure liquidity in times of crisis or force majeure, as has been the case for private clinics in the NRW.BANK's promotional programmes. At the beginning of the pandemic, NRW.BANK had adjusted its promotional portfolio to mitigate the economic impact of the coronavirus crisis. In this way, the NRW Bank under the "NRW.BANK. Infrastruktur Corona" programme, is granting low-interest loans for short-term working capital needs related to the coronavirus crisis.

### A. Insurers – Caisse des Dépôts Sustainable Recovery France Investment programme

French insurers and Caisse des Dépôts have set up an investment programme called the "Assureurs – Caisse des Dépôts Relance Durable France", predominantly invested in equities. The EUR 2.2 billion programme, launched in September 2021, is specifically targeted at SMEs. The Healthcare tranche totals EUR 780 mn financed by 19 insurers and 3 institutional investors and aims to strengthen health sovereignty in France by investing in healthcare infrastructure (not limited solely to hospital building facilities), research, logistics and services. Subsequently, three funds dedicated to the healthcare sector have been set up: An Unlisted Equity Fund, an Unlisted Debt Fund and a Healthcare Listed Equity Fund. The goal of these funds is primarily to provide funding for the development of healthcare-related services such as home care and telemedicine, the relocation of research laboratories or drug production units, and R&D in technology and healthcare devices.

### B. Ireland's Primary Care Centres

The PPP-based scheme comprises the design, building, financing, maintenance and facilities management of 14 Primary Care Centres (PCCs) on greenfield and brownfield locations owned by the government. It will support the shift from hospital-based healthcare to community-based care that is closer to patients. 49.5% financed through a European Investment Bank's long-term loan, the project is also the first in Ireland to be backed by a guarantee under the European Fund for Strategic Investments initiative (EFSI), the rest represents 50.5% of the total investment cost, and is co-funded by commercial lenders Talanx Asset Management on behalf of its private and Institutional clients, and the Bank of Tokyo-Mitsubishi. As the first project in the healthcare sector to be undertaken as a PPP in Ireland, the Project is likely to have a strong demonstration effect on future healthcare PPP projects in the country, and also potentially on primary care PPP projects across Europe.

## 3.2 The education Infrastructure Market: a developing sectoral opportunity?

The education infrastructure segment is very broad; spanning the whole scope from kindergartens to higher education institutions and student housing. In Europe (EU), the market has been traditionally funded by the public sector, while the landscape has been more contrasted in English-speaking jurisdictions; and more recently, in emerging markets. Between 2005 and 2020, our analysis showed that the top 10 investors in the EU education sector had contributed a total of EUR 20.2bn, mostly in equity transactions – which constituted 91.2% of overall investments. On the global front however, debt transactions were seen to be preferred, accounting for 92.3% of total investments by the top 10 global investors, which stood at EUR 23.1bn (c.f. exhibit 22).

**Exhibit 22: Top 10 Bank Lenders in Education**

| | Player | Total Debt Value (EUR/bn) | Total Equity Value (EUR/bn) | Transaction Value (EUR/bn) | % of investment in PPPs |
|---|---|---|---|---|---|
| 1 | BNP Paribas | 3.4 | 0.1 | **3.5** | 100% |
| 2 | Barclays | 3.3 | 0.1 | **3.3** | 72.9% |
| 3 | European Investment Bank | 2.9 | - | **2.9** | 74.6% |
| 4 | Sumitomo Mitsui Financial Group | 2.6 | - | **2.6** | 93.5% |
| 5 | NordLB | 2.2 | 0.1 | **2.3** | 94.5% |
| 6 | Aviva | 2.1 | - | **2.1** | 87.7% |
| 7 | Royal Bank of Canada | 2.0 | - | **2.0** | 82.6% |
| 8 | Lloyds Banking Group | 1.5 | 0.1 | **1.6** | 90.9% |
| 9 | Royal Bank of Scotland | 1.5 | - | **1.5** | 83.6% |
| 10 | PGGM | - | 1.4 | **1.4** | 9.1% |

**Sources:** *IJ Global, IJ Investor*

### 3.2.1 Schools and Academic Facilities

For the most part, the responsibility for schools; whether they be kindergarten, primary or secondary, lies with local governments, even when teaching services are performed and managed at a national level. Due to the funding constraints faced by these local authorities, school buildings are often found in a state of disrepair, hazardous for users and with high energy consumption levels. Apart from this, there are discrepancies in efforts to modernise or computerise these schools. Required upgrades in compliance with standards are implemented as and when needed; typically, on a school-by-school basis or when conditions became too unsatisfactory. This has made it difficult to upgrade the entire stock at the same time, resulting in an unequal footing in terms of resources such as logistics for IT or energy conservation.

Faced with these constraints, local authorities in many jurisdictions have started to turn towards the private sector in search of fresh investments and facility-management expertise that would enable them to drive better value for money. It is now widely acknowledged that the quality of schools – including the presence of new and up-to-standard or refurbished buildings with the necessary logistics and sports facilities – is a key factor both for student success and in the attractiveness that local authorities have to establish to attract and retain populations, particularly in the middle and upper socio-professional bracket. In this context, the use of PPPs and other innovative private financing and facility management services would seem to provide a suitable answer to both quantitative and qualitative requirements. This is typically done by spreading budget burdens evenly over the duration of the projects and setting contractual performance targets in terms of quality and availability of services delivered by the facilities. However, the ultimate funding of the investment rests with the public procuring party in availability-payment type contractual investment schemes.

#### Nursery/Kindergarten market:

Infravia completed in September 2021, the acquisition of Grandir - a leading childcare and early education player, operating approximately 630 centres and 32,000 seats for children aged 0 to 6 in France, the UK, Canada, the US and Germany. Grandir is the number one operator in France by number of nurseries and a pioneer of the development of the French private nursery market. Investment rationale revolves around structural undersupply of essential services with growing long term trends , a funding model shared between Government (via direct subsidies and tax incentives to corporates and families), corporates and families; limiting affordability issues for parents, barriers to entry provided by the network of B2B clients, and supportive regulations, as well as a diversified portfolio across countries. Impact on investor image is also positive, as development of private nurseries contributes to gender equality by helping women stay on the job market, and Provision of quality childcare solution contributes to social inclusion and equality in education before entering school.

The central governments' responsibility and role as an off-taker of private investment is more prominent when it comes to universities or higher educational institutions. In many jurisdictions, such as in the EU, most universities are public and tend to be wholly dependent on budgetary allocations with little or no ancillary revenues. Over time, this has led to chronic underinvestment and a perpetual lack of maintenance that would seem to pave the path for private involvement. This notwithstanding, the inadequacy of the budget resources earmarked by central governments for the upkeep and maintenance of academic buildings is not the only reason for this situation. The choices made by many public universities and the management and contracting methods for property operations over recent decades, marked by a systematic preference for new fabric and an inability to recognise the need for maintenance and renewal of the existing stock, are also responsible.

### A. California State University, Fresno Campus, US/ Meridiam

In early 2021, Meridiam secured a contract to modernise and maintain the central utility plant at the Fresno Campus of the California State University. The plant provides heating and cooling services to 80 buildings spread across over 3.1 million square feet of building space and over 1,000 acres. Following a 3-year period of design and construction, the developer will then have a 30-year period to maintain the upgraded system and help the university increase its energy savings while taking on some demand risk.

### B. University of Iowa utility management concession

In a similar vein, Meridiam has partnered with ENGIE to invest in a 50-year Utility Management Concession with the University of Iowa toward a zero-carbon transition. The project comprises the operation, maintenance and improvement of the university's utility systems which serve over 90 buildings on the campus. The University of Iowa is the second largest university in the State – spanning over 1700 acres - with over 35,000 students and 1,200 Professors. It also has more than 13,000 employees, students and volunteers in one of the nation's largest teaching hospitals, which annually admits about 37,000 in-patients. With this project, the university hopes to become a 100% coal-free campus before 2025 It also intends to install energy optimisation smart systems and reduce carbon footprint with multiple initiatives such as local energy pellet production, boiler conversion to CHP, and diverse renewable energy options. The transaction, valued at USD 1,165m, is arranged as a 50-year PPP with a revenue structure based on availability payments by the university. As of March 2020, 94 full-time employees and 33 part-time student employees had transitioned to the Concessionaire's Operator.

### C. Welsh Education Partnership, UK

WEPCo is a platform set up for the efficient planning, designing, procurement, building, financing and maintenance of schools and other community-based facilities in Wales. The project will allow local authorities (the Participants) to develop and deliver schools projects through a Welsh variation of Private Finance Initiatives known as Mutual Investment Model schemes (MIM), which focus mainly on community benefits. -Following a tender process, Meridiam has been selected to set up WEPCo in collaboration with the Development Bank of Wales and will invest in all MIM projects with an 80% shareholding.

In September 2020, WEPCo signed a Strategic Partnering Agreement (SPA) with a group of Participants, called the 21st Century Schools Welsh Education Partnership, to deliver MIM projects across Wales over a 10-year exclusivity period, with the option of a 5-year extension. Each MIM project is expected to have a 25-year operational term, with a transaction size of GBP 474mn and a revenue structure based on availability payments. The Partnership is part of efforts by the Welsh Governments to improve educational attainment in Wales (lower than in other regions of the United Kingdom). In addition, all new buildings under WEPCo are expected to have net zero carbon targets, in line with the Welsh government's policy objective to hit carbon neutrality by 2050. Further, WEPCo and Project Co both expect benefits from the projects to accrue to the communities in the form of enhanced student engagements, increased job opportunities and opportunities for local SMEs.

## 3.2.2 The specific case of student housing

Sometimes lumped together with the broader social housing market, specific accommodation facilities for students constitutes one of the more dynamic sub-segments of the Education sector. For one, it does not share all the main characteristics of the social housing sector, such as the long average occupancy duration, low turnover and affordability concerns, and benefits from some favourable long-term demographic trends. The global student population is expected to double to more than 500mn over the next twenty years. Likewise, higher education enrolment rates are forecast to grow by 56% between 2015 and 2030, with the number of international students requiring accommodation estimated to increase by 51% - compared to a 16% growth forecast in the overall global population in the same period. The impact of this

estimated growth is already significant in countries like the UK and Australia, which have managed to capture a large proportion of the emerging international students' market, fuelling immense growth in the domestic market for purpose-built student accommodation.

There are also some inherent risks associated with this expected boom in international students' demand, such as political risks linked with the influx of Chinese students especially, within key education markets: Chinese students account for almost a third of all international students in the US, the UK, Australia, and Canada. In more recent times, COVID-19-induced international border closures had severe volatility impacts on markets highly dependent on international students like the UK or Australia. Conversely, countries where demand is dominated by domestic students - such as the US or continental Europe - saw student housing portfolios weathering the crisis better, with stable-to-improving performance in occupancy rates and rent growth. This not only demonstrated their resilience to economic downturns but also reinforced the view that education – and by extension student housing – is recession-proof.

As continental Europe braces itself for significant growth in purpose-built student accommodation - spurred by the increasing number of English-taught courses and degrees available across the continent and lower tuition fees, making cross-border studying easier - many of its most popular university cities are still undersupplied with quality, affordable student accommodation. This is stirring the appetite for more of such assets from institutional capital providers. Already, some countries like France have implemented student-targeted schemes that allow students to partially fund their housing expenses through public allocations, thus supporting the creditworthiness of domestic demand.

### A. University of Hertfordshire Student Accommodation, UK/ Meridiam

Situated 30km north of London, this 50-year accommodation project undertaken by Meridiam delivered 21 residential buildings with a total of 3000 rooms on campus for University of Hertfordshire students. The project has been in operation since 2016 and has been rated "Outstanding" by the Building Research Establishment's BREEAM method of scoring environmental credentials.

Overall, the layout of the complex has been planned to optimise quality of living for residents. Apart from the high amounts of natural light and ventilation that residents have access to, buildings are also designed with excellent energy performance features which translates into significant savings on operations running costs. In the first year of occupancy, electricity consumption amounted to 1,086kWh per bed space, approximately 15-30% less compared to 1300-1600kWh for other accommodation sites. Water consumption also stood at 42.3 cubic metres per year, almost 20% less than the 51 cubic metres that is typically expected for similar modern buildings.

Meridiam is the principal investor, partner and shareholder for the project- whose total value amounted to GBP 215mn, while Uliving@ Hertfordshire is responsible for the design, construction, financing and maintenance of the complex for a concession period of 50 years.

### B. Student Housing-London

In a joint venture between GIC - a Singaporean Wealth fund - and Unite Students, the London Student Accommodation (LSAV) acquired two student housing properties in Wembley and Whitechapel, raising the total value of LSAV's portfolio to approximately GBP 1.7bn. The project was financed with a JV equity contribution of GBP 208mn from Unite and GIC and a GBP 140mn loan from asset manager Barings, on behalf of two unnamed institutional investors – on an 8-year fixed rate basis. Both buildings collectively deliver 1,358 bed spaces, with several of them being offered to students on a direct-letting basis.

Another inherent risk is the potential disruptions caused by technological advancements. The rapid adoption of new technologies in light of the COVID-19 crisis did not exempt the education sector, and while long-term impacts of the shift to online learning on campus accommodation needs remain unclear, students are now - more than ever - looking for accommodation that promotes connectivity, security, and value for money. That being said, the student housing sector features some of the most attractive opportunities within the education and social housing sectors (strong and growing demand for accommodation, stable income streams) without some of the common challenges of social housing (yield constraints stemming from caps on rents and regulatory barriers to entry).

### 3.2.3 PPPs vs other channels of investment

Despite some earlier successes, like the implementation of the Plan Campus in France or the Building Schools for the Future (BSF) scheme - introduced for improving the infrastructure of British schools and predominantly covered by PFI credits - education PPPs were often controversial from the beginning in the jurisdictions that resorted to this approach. The GFC proved to be a turning point in many EU jurisdictions, as securing financing from banks became more difficult, more expensive, and more time-consuming, with political willingness to implement the upgrade and extension of public schools through PPPs receding accordingly. The introduction in the 2010s of lending arrangements for PPP contract projects for academic properties by National Promotion

and Development Banks (NPDBs) like Caisse des dépôts et consignations (CDC) in France and the European Investment Bank (EIB) was due to improve the financial competitiveness of these contractual schemes but has not fundamentally changed this landscape.

The same can be said about recently-appeared specialised infrastructure funds. In fact, opportunities in this space, whether through PPPs or in privately-owned and managed education facilities, remain rare, discrete, often small in size, and difficult to access for Institutional investors. But interesting trends have started to emerge, particularly the targeting of higher institutions of teaching for their energy/utility dimensions, rather than for the building dimension- a less sensitive dimension, with additional benefits of creating more budgetary space for public off-takers through the savings generated.

*The case of Emerging markets*

Similar to the healthcare sector, the absence - or low quality - of universal Education coverage beyond Primary/Secondary enrolment in most developing countries suggests that the market is largely backed by privately-owned and managed facilities that cater to the emerging urban middle class on a user-pay basis. This represents a sizeable market opportunity for private capital providers, in view of the prospective increase in population and the resources of the urban middle class in many emerging countries.

Apart from furthering the reach of government financing in the educational sector, increased private investments in education, whether through PPPs or not, could lead to fast project completions, accelerate the rate of innovation, enhance the capacity and performance of physical facilities and extend access to educational services for a given population.

In addition, the expertise that private investors also bring to bear on the day-to-day management of both physical facilities and service delivery give governments and school management boards more room to focus on other key strategic and regulatory matters. Schools under the US Knowledge is Power Program (KIPP), which is the largest charter education management organisation in the USA - are a typical example of this. The schools under this program operate a flexible pedagogical system that allows greater innovation and pedagogical changes to ensure consistent quality service delivery.

### The European Fund for Strategic Investment (EFSI)

The European Fund for Strategic Investment (EFSI) was launched as part of the EU's 2014 Investment Plan for Europe, as a means of facilitating private financing of specific projects that might otherwise not be viable. The initiative aimed at raising EUR 500bn by 2020 to support projects through a variety of debt financing, equity and guarantees – in addition to other funding sources such as the EU Social Fund. Under the EFSI, public-private partnerships for upgrading existing educational infrastructure can be developed. These cover projects aimed at equipping schools with innovative technology and ICT equipment as well as building of educational infrastructure such as school campuses and research laboratories.

## 3.2.4 The case for investments in Education

**Opportunities:** The sub-sector benefits from strong and dynamic fundamentals and little or no regulatory barriers in most jurisdictions. As part of the Next Generation EU Plan introduced in 2020, the EU Commission launched the Education Area - intended to strengthen the educational sector's role in the region's recovery from the COVID-19 crisis and facilitate its green and digital transitions. The achievement of this plan would witness a bloc-wide and more inclusive environment for quality education and training within the Euro area for students, teachers, and educational institutions by 2025.

In line with this, the EU has laid out plans to increase capital allocations into educational infrastructure over the next 7 years using a variety of instruments such as the Recovery and Resilience Facility. Private investments from institutional investors will be sought to complement government efforts in this respect in order to accelerate the rate of implementation. Already, in June 2021 the EIB approved a EUR 30mn financing plan in two EUR 15mn tranches for the IE University in Spain to enhance educational digitalisation, infrastructure and sustainability. With the increased focus on greening education infrastructure, impact investors, in particular, have an opportunity to fund the improvement of energy efficiency and promote the use of alternative power sources within educational institutions.

Further, the outsourcing of public education services in countries across Europe present further opportunities for PPPs in the educational sector that investors can take advantage of. In Luxembourg, for instance, there are opportunities for private

investors to collaborate with the government to finance or subsidise after-school activities for primary school students. Another good case in point is the prospect of developing multipurpose buildings, as many education facilities are only used for a limited period of time - either daily, weekly, or yearly - due to specific school hours and calendars. Investors could draw on their innovation and management resources to devise and propose multipurpose alternative uses of buildings, through community-learning centres for instance.

Outside of Europe, some investors are also turning their attention to developing countries where opportunities for PPPs are increasing. Colombia, for instance, is trying to implement its National Infrastructure Plan for Education (NEIP) and is faced with a 51,000-classroom deficit, which the National Planning Department of Colombia hopes to absorb by 2030 using a USD 2.4bn investment plan. In line with this, the Colombian Ministry of Education rolled out a plan to construct 51,134 new classrooms in 2018, under a PPP arrangement. 22,802 of them were completed or under construction as of 2020.

In Uruguay, the International Development bank has provided a USD 25mn loan in a PPP between the National Administration of Public Education of Uruguay (ANEP) and the PPP Infrastructure Education II S.A. Consortium. The project aims to build, furnish, operate and maintain 23 schools, 9 ICT centres and 10 sports centres in 16 out of the country's 19 departments, as part of the government's plan to upgrade the country's educational infrastructure. Private investors have an opportunity not only to extend capital allocations in these developing regions but also to lend their technical and management expertise to these projects. Already, UK-based Aberdeen Standard investments, for example, has identified a growing pipeline of educational infrastructure projects in the Andean region of Latin America and in 2017, subsequently launched its USD 250mn Andean Social Infrastructure Fund to explore opportunities in the region.

## A. ESPOO Schools and Day Care Centers, Finland

Situated in the second largest city in Finland, this project is part of an investment initiative by the city of Espoo called "Schools in Shape" that seeks to contribute to close identified gaps in the provision of healthy and functional school premises and day care centres in the city and enhance the learning environment for students and staff of these schools. The EUR 176m project is a 22-year contract to design, build, finance and maintain 5 schools and 3 day-care centres for over 4,000 pupils and will be commissioned in Jan 2024. The revenue structure is based on Availability payments by the public authority. The project is also expected to contribute to UN SDGs aimed at enhancing access to quality healthcare, improving the energy efficiency of buildings as well as the resilience of infrastructure.

## B. Maximising social impact with a gender-based dimension – The case of Kindergarten RIBICA by Zadar Croatia/HBOR

The Croatian Bank for Reconstruction and Development (HBOR) encourages both private and public investment in social infrastructure, with loan terms and conditions such as favourable interest rates and repayment periods of up to 15 years depending on the type of project. Lending is implemented directly or via commercial banks and based on a risk sharing model with commercial banks. Local government units also play a significant role in the development of social infrastructure: private investors and entrepreneurs can use interest rate subsidies on HBOR loans from the funds of municipalities, cities or counties. About forty such agreements have been signed so far, and in some areas, lending at zero percent interest rate is possible under these agreements. HBOR approved two such loans to Kindergarten RIBICA under the Female Entrepreneurship programme for the purchase of premises that are currently in the repayment stage. The program demonstrates a strong gender impact dimension on top of the Healthcare goal.

**Challenges:** The lack of available stock to be purchased, here again, constitutes a veritable barrier to entry for those investors that would rather break in through the secondary market, acquiring existing and already operating, and hence less risky, Education infrastructure assets.

Similarly, there's an issue of critical size, and the need for aggregation platforms to enable deals by large institutional investors, while the specific role of specialised funds and financial intermediaries will remain key.

In terms of outlook, technology is expected to disrupt education facilities – a trend which is already underway with the widespread popularity of on-line classes through digital platforms and video channels. These represent viable target markets for private investments in innovative education technology. The EU's Digital Education Action plan-implemented in 2021 - is also expected to create a highly efficient digital education ecosystem, with improved digital teaching and learning methods and the necessary infrastructure to foster resilient home-based or remote learning.

### 3.2.5 The roles of National Promotion and Development banks to leverage private investment

The role of NPDBs is not limited to channelling co-financing flows from government to private investors, as illustrated by some of the abovementioned examples. As government agencies, NPDBs are favourably positioned to actively influence government spending policies and budgetary allocations. In this context, they could provide valuable insights to help governments and private institutional investors ramp up their investments in educational infrastructure. The Council for Europe Development Bank, for example, has recently proposed a framework to help guide greater educational infrastructure investments, leveraging their extensive experience in financing the education sector. They suggest that both public and private investors can contribute to more effective teaching and learning environments by going beyond merely financing projects to being more actively involved in the use of funds process.

## 3.3 The social housing market offers room for more private investments

The market for social and affordable housing is another sector of social infrastructure that holds attractive prospects for private investments. Besides catering to specific demographics such as young workers, migrants, and homeless people, or students, it also covers an increasing part of the population - particularly the lower and lower-middle-class - who are being priced out of an increasingly expensive homeowners' market.

The significant financial hurdles that limit access to homeownership for many citizens globally have been aggravated over the last two decades by the real estate bubble, spurred by an expansive monetary policy. This has reinforced pent-up demand for affordable housing. In Europe alone, corresponding investment needs in the social housing market stood at approximately EUR 148bn per year in 2018, indicating the large room for further private investments. This insufficiency of investment is further corroborated by our analysis which showed that investments in social housing by the top 10 global investors amounted to EUR 11.8bn, the least of the three subsectors. Of this figure, debt transactions constituted 89.6% while equity transactions made up 10.4% (c.f. exhibit 23).

**Exhibit 23 : Top 10 Bank Lenders in Social Housing**

| | Player | Total Debt Value (EUR/bn) | Total Equity Value (EUR/bn) | Transaction Value (EUR/bn) | % of investment in PPPs |
|---|---|---|---|---|---|
| 1 | Sumitomo Mitsui Financial Group | 2.0 | - | **2.0** | 24.6% |
| 2 | Royal Bank of Canada | 1.8 | - | **1.8** | 0.0% |
| 3 | Lloyds Banking Group | 1.2 | 0.5 | **1.7** | 14.9% |
| 4 | Royal Bank of Scotland | 1.3 | - | **1.3** | 13.7% |
| 5 | Barclays | 1.0 | - | **1.0** | 23.0% |
| 6 | Mitsubishi UFJ Financial Group | 0.8 | - | **0.8** | 6.0% |
| 7 | HSBC | 0.8 | - | **0.8** | 0.0% |
| 8 | Bank of America | 0.8 | - | **0.8** | 100.0% |
| 9 | NordLB | 0.6 | - | **0.6** | 100.0% |
| 10 | Santander | 0.6 | - | **0.6** | 6.2% |

**Sources:** *IJ Global, IJ Investor*

More than education or healthcare, social housing often relies on a mixed funding model that combines a significant flow of end-user revenues (rental income) and public payment. Even if this rental income can be partly financed through public grants, allocations or subsidies in some jurisdictions, it also makes for a more diversified revenue structure, helping to repay the initial investment as well as ongoing related housing services.

### 3.3.1 European Housing market: Households face rent affordability pressures

Rental housing has become less and less affordable across many European economies in recent decades. A 2018 study by the IMF showed that in 17 advanced European economies, rent comprised about 25% of a typical household's income, while young families spent nearly a third of their earnings on rent. For households in the lowest income distribution quintile, the share of income allocated to rent stood at 40%, which is the threshold for a household to be considered overburdened by rent payments. In most European countries analysed, more than half of low-income renters were overburdened in 2018, with rates particularly high among the 16-29-year-olds and residents in capitals or major cities. Accordingly, overcrowding and homelessness are growing in many cities.

Complex housing policies and limited investor control make it difficult to address rent affordability issues. On one hand, investors have no control over factors such as the availability of adequately priced land rights, NIMBY reactions and constantly evolving technicalities and requirements. On the other hand, the public authorities who have oversight over these factors find themselves often pursuing multiple goals, failing to address affordability concerns and attempting to influence both demand (through housing allowances) and supply of social affordable housing - often with mixed results.

In the long run, it is clear that increasing the supply of affordable housing is the only way to alleviate demand pressures more permanently. Whether governments choose to invest directly, via specialised public agencies, or try to attract more long-term private capital is of course a matter of national decision-making. But overall, public funding has been on a stagnating path in most EU countries. In the European Union, funding from the Next Generation EU package provides an interesting opportunity to foster investment in social housing and public infrastructure by making it an integral part of the pandemic recovery strategy. Greater housing investment would support inclusive growth by creating employment, providing more affordable rental housing, and facilitating access to jobs across locations while offering a welcome diversification outlet to institutional investors.

#### A. UK social housing: Investment case stacks up for institutional investors

The UK social and affordable-rented housing sector makes up about 20% of the total housing stock, while the private-rented housing and owner-occupied housing sectors account for 15% and 65% respectively. The high level of regulation that characterises the social and affordable housing sector typically requires operators to be registered providers (RPs) and to meet certain criteria set by the Regulator of Social Housing. Moreover, to fund the supply of new housing units, investors must allocate funds to an existing RP and/or a new for-profit RP.

Currently, RPs account for about 20% of annual housing unit completions in both the social and private sectors, and about 70% of capital for these projects is sourced from private financing, up from 30-40% in the 2000s. This suggests that private capital plays a key role in addressing the social the housing supply gap in the UK. The sector's cash-flow characteristics and other attributes also make a strong case for its inclusion in a diversified portfolio that seeks strong and stable risk-adjusted returns.

Given that rent rates for regulated social and affordable are driven by government-approved rent-setting regimes instead of market forces, they are often less correlated with economic conditions than other real estate market segments (retail, office or industrial) and are closer to infrastructure risk profiles. That being said, the reference to inflation in the rent-setting regime implies that rents are still positively correlated with long-term inflation trends.

#### B. BBGI Global Infrastructure acquires assets in the London Borough of Tower Hamlets

As part of its strategy to invest in ESG-aligned availability-based social infrastructure assets- which are deemed to be lower-risk than other infrastructure asset classes - the FTSE 250 global infrastructure investment company entered into a social infrastructure investment agreement in the UK. This saw the firm acquiring two recreation facilities and 100 affordable residential units in the London Borough of Tower Hamlets.

Outside the EU, investment in social and affordable housing in other markets – whether it is labelled social infrastructure or private equity – is growing at a steady pace. A number of unlisted funds have been launched by asset managers, mostly under the real estate label.

While a range of operating models exist, we can expect further innovation and differentiation in preferred operating models as the sector matures. In order to optimise their investments, social infrastructure investors should look into the provision of multipurpose, affordable housing units, enabling the efficient provision of key collective services.

Moreover, although private investment in social housing assets is still in its nascent stage, it has the potential to become increasingly significant for infrastructure investors. This is even more so for investors who prioritise diversified and stable cash flows underpinned by good credit fundamentals and lower correlation to other sectors.

### 3.3.2 The case for investments in social housing

**Opportunities:** Demand for affordable housing is consistently growing, underpinned by public financial support. Longer average occupancy duration also translates into lower turnover rates and fewer vacancies – typically around 1 to 2% in many European jurisdictions – suggesting a higher likelihood of consistent rental income.

The sector's supply-and-demand imbalance and the long waiting lists of households searching for social housing units also translates into an attractive occupation profile for investors. These characteristics support the view that the sector has relatively robust, higher-quality cash-flow fundamentals that should be attractive to both equity and debt investors.

Further, the sector has also proven to be resilient in times of crisis – evidenced by the fact that, compared to real estate or even other social infrastructure sectors (cultural and sports centres, etc), it was able to weather the COVID-19 storm significantly better. Also, Social housing is probably the sector currently less likely to be disrupted by Technical/Digital healthcare infrastructure (contrary to healthcare or Education infrastructure).

In light of the aforementioned characteristics, investors who attempt to bridge the existing investment gap in this sector stand to benefit. In this context, approaching the market through the secondary market – i.e. buying and modernising/retrofitting an existing portfolio of social housing assets or buying privately owned dwellings, or office or commercial space no longer adapted to market evolutions, and transforming them into social housing – may be an interesting option for some investors, provided they can access at least some public co-financing tools.

Apart from optimising design and construction costs through the use of new technologies (such as 3D printing), a promising way for investors to achieve both economic gain and social impact is through active management of their housing stock by improving facility maintenance through regular refurbishment and renovation, and through energy efficiency/low carbon programmes. This would not only alleviate the cost for residents, but also for public finances – often called upon to subsidise energy costs for poorer households. Provision of care and digital services (facilitating tele-work from home, for instance) for social housing residents also holds potential for increased ESG impact, as integrated housing services are now seen as the best way to address structural issues for poor residents.

**Challenges:** Social Housing remains a highly regulated sector. In many jurisdictions, accreditation or certification is required from investors before they are in a position to invest in Social Housing or access land rights and corresponding building permitting, as well as low-interest public co-financing, limiting the scope of potential private investments for mainstream institutional investors. Depending on national regulatory frameworks, that may limit the development of a primary market for institutional investors, placing them at a disadvantage with public investors or specialised agencies.

Also, just like Education or Healthcare, social Housing is characterised by a critical size issue (average size of the typical program investment ticket is too limited) which poses a challenge for many institutional investors, spurring them to invest through specialised funds or asset managers.

Finally, not all institutional investors are equipped with the human resources and skills to actively manage their assets in a way that generates savings and added efficiency. As a result, they may be required to channel those investment through specialist funds which are better placed to provide the facility management and corresponding integrated services (social/care services)

### 3.3.3 The Role of National and Development Promotion Banks in leveraging private investments

As in the healthcare sector, NDPBs, through their skilled HR resources and large balance sheets can enhance opportunities to crowd in private investments in social housing by providing long-term financing options at competitive rates for investors looking to public markets to fund their investments in the social housing sector. Examples below list some of the recent schemes used to that end by regional or national Development Banks.

## A. Creating Affordable Housing in NRW, Germany

NRW.BANK supports the NRW Ministry for Building in creating affordable housing and upgrading neighbourhoods by providing public subsidies to programs that can then attract private financing. One example is Platanenhof in Münster. This multi-generational housing project comprises publicly subsidised and privately financed rental and owner-occupied flats that serves multiple demographics, from single people to families, students and senior citizens, with particular attention paid to elderly care

The project integrates a neighbourhood support centre of Ambulante Dienste e.V that has a care station, which allows tenants to access care services solely on a user-pay basis. Further, the flats are designed to be barrier-free and wheelchair accessible, with shared accommodation spaces.

The construction was supported, among others, by the Mietwohnraumförderung – Neuschaffung" promotional programme for the creation of new rental housing. Its high redemption discounts, long maturities and low interest rates it an attractive investment while ensuring the creation of affordable housing for all.

## B. EIB and Poland Bank Gospodarstwa Krajowego undertake 4000-unit affordable housing project

This project involves the granting of a EUR 133mn facility by the EIB to Bank Gospodarstwa Krajowego (BGK), Poland's national promotional bank.

The amount is meant to facilitate the development of 4000 affordable housing units built according to the country's affordable housing regulations -which includes income limits a main eligibility criterion. The units would be rented out but would have the option for tenants to purchase the housing unit

## C. CDP/FIA Smart housing Investment Platform

The project was launched in 2017 and involved a EUR 100mn equity contribution by the EIB to the Fondo Investimenti per l'Abitare 2 (FIA-2), a reserved closed-end alternative investment fund structure set up by the Cassa Depositi e Prestiti S.p.A. (CDP), Italy's promotional bank, and managed by CDP Investimenti Società di Gestione del Risparmio (CDPI Sgr), one of CDP's holding companies. The fund invested in the provision of new affordable housing units for low income households and households with higher incomes but not sufficient to afford market rental rates. Investments were to be made directly and residually through sub-funds (with a fund-of-funds structure).

In terms of environmental impact, the fund's investments were expected to have positive environmental and social impacts, such as the redevelopment of urban brownfields to promote more efficient use of built space in high value areas.

## D. EIB & affordable housing in the Netherlands

The European Investment Bank (EIB) and Vesteda, a Dutch residential real estate company as well as the largest institutional residential fund in the Netherlands, signed a EUR 150 mn financing agreement in 2020. The funds will accelerate the supply of rented social and affordable housing ('midden huur') for low- and moderate-income households in the urban centres with very tense residential markets (the Randstad region , comprising the cities of Amsterdam, Rotterdam, The Hague and Utrecht, with 7 million inhabitants ). It is the first EIB operation financing affordable housing in the Netherlands and it builds on the EIB's good experience with operations in the Dutch social housing sector.

A key focus of Vesteda concerns the energy performance of its existing assets. By 2024 the company aims to have 99% of its portfolio with green labels (energy performance level A-C). The EIB investments will contribute mainly to new build rented housing at NZEB (Nearly Zero-Energy Buildings) standard, and therefore support the accelerated adoption of the NZEB standard in the EU. Parts of the operation will also contribute to the retrofitting of existing housing, and therefore help Vesteda meet its green labels target. In addition, the operation will incorporate circular economy features as recycled buildings materials will be used where feasible. Hence, it is expected that the operation will result in a significant number of positive social and environmental benefits.

Vesteda operates in a strong and competitive environment and its portfolio is underpinned by rising property values in the four largest cities in the country. The EIB loan will have a positive contribution in extending the company's debt maturity profile by providing an overall tenor longer than existing bond issuances, and its unsecured structure (hence effectively subordinated debt) gives further planning stability. It will also allow a larger loan amount that can be drawn down with substantial flexibility and support Vesteda's desired funding diversification. These features are needed to support the implementation of the company's substantial investment programme. The loan will also provide an additional quality stamp in its continued pursuit of market leading green credentials in its housing portfolio. The company anticipates that its green bonds and EIB loan will form the basis of its green funding strategy.

## 3.4 Additional Insights

### 3.4.1 Financial and Risk features of social infrastructure assets

– Broadly speaking, social infrastructure shares similar financial characteristics with other infrastructure investments, such as stable and steady cashflows associated with the long-term nature of infrastructure projects.

**Exhibit 24: Financial Characteristics of Social Infrastructure**

Attracting Private Capital: Financial Characteristics of SI

| | |
|---|---|
| **Pivotal role of PA** | • **Public Procurement** is the most widely used contractual arrangement<br>• The **public sector** is the one dealing with the **majority of risks** |
| **Low volatility of returns** | • **Availability payments** represent **predictable and steady real returns** |
| **Small size** | • Most capital investments <**€30 mln**<br>• **Financial intermediaries** are key to channel **institutional investors'** money toward SI<br>• Unlike economic infrastructure, SI entail great opportuinities for **portfolio diversification** |
| **Regulatory and political risks** | • **Public policies might change** over the extended time that defines an infrastructure asset |
| **Low correlation with other assets** | • The "public" nature of SI often makes the latter **less exposed to market risk** |

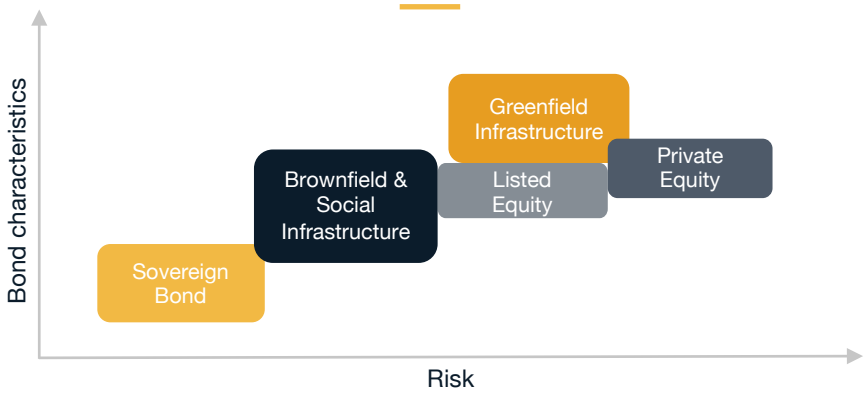
**Source:** *EU Commission-ELTI (Boosting Social Infrastructure Report 2018)*

– The same can be said about the risk-return characteristics. Apart from the political, regulatory, credit, and ESG risks that are commonly found among other types of infrastructure investments, certain risk characteristics make social infrastructure distinct as a sub-sector.

– For instance, social infrastructure, similar to brownfield infrastructure, is perceived to be at the lower end of the risk-return spectrum. Not only does the "public" nature of social infrastructure projects reduce their market risk exposure, but with factors such as demand, regulatory oversight, and market dynamics being more predictable, social infrastructure is generally expected to have a lower risk-return profile.

– Being less correlated with economic infrastructure and other assets, social infrastructure tends to have less concentration risk – a characteristic that holds portfolio diversification benefits for investors.

**Exhibit 25: Risk-return profile of Social Infrastructure**




**Source:** *EU Commission-ELTI (Boosting Social Infrastructure Report 2018)*

## 3.4.2 Secondary no longer: Primary vs. Secondary Deals

– As secondary market deals increase in popularity in recent years, we are seeing an increasing number of large-scale deals taking place in this market segment.

– Data on the average deal value between 2005 and 2020 indicates that secondary financing deals tend to be higher in value compared to the primary ones across all the social infrastructure subsectors.

**Exhibit 26: Average deal value 2005-2020 (in EUR mn)**

| | | APAC | Europe | LATAM | MEA | North America | Global |
|---|---|---|---|---|---|---|---|
| Primary | Education | 66.1 | 97.0 | 30.7 | 225.2 | 219.2 | 102.3 |
| | Government | 152.7 | 86.7 | 152.4 | 306.5 | 191.7 | 119.5 |
| | Healthcare | 246.4 | 164.0 | 145.3 | 225.5 | 201.0 | 179.4 |
| | Social Housing | 206.1 | 140.9 | 32.1 | 223.3 | 476.2 | 152.6 |
| Secondary | Education | 112.7 | 152.9 | 50.6 | 7.6 | 241.4 | 147.9 |
| | Government | 172.4 | 64.5 | 256.6 | - | 205.7 | 108.6 |
| | Healthcare | 398.6 | 226.0 | 206.3 | 96.8 | 345.4 | 254.9 |
| | Social Housing | 236.5 | 190.5 | 325.2 | - | 961.5 | 233.9 |

**Sources:** *IJ Global*

– A more recent snapshot of the average deal size further proves this, and we can still observe a significant difference between the average deal size for the primary and secondary markets at the global level, especially for the Healthcare and Education sectors.

**Exhibit 27: Average deal value 2018-2020 (in EUR mn)**

| | | APAC | Europe | LATAM | MEA | North America | Global |
|---|---|---|---|---|---|---|---|
| Primary | Education | 39.5 | 117.5 | - | 124.9 | 159.7 | 121.5 |
| | Government | 252.9 | 53.2 | 18.5 | - | 251.5 | 172.6 |
| | Healthcare | 125.1 | 171.0 | 232.4 | 641.0 | 197.1 | 209.8 |
| | Social Housing | 179.3 | 158.7 | 32.5 | - | - | 156.8 |
| Secondary | Education | 147.2 | 102.3 | 78.9 | - | 154.9 | 121.6 |
| | Government | 160.6 | 71.3 | 353.9 | - | - | 123.4 |
| | Healthcare | 552.7 | 271.7 | - | 124.8 | 2.8 | 322.9 |
| | Social Housing | - | 88.6 | 325.2 | - | 961.5 | 199.5 |

**Source:** *IJ Global*

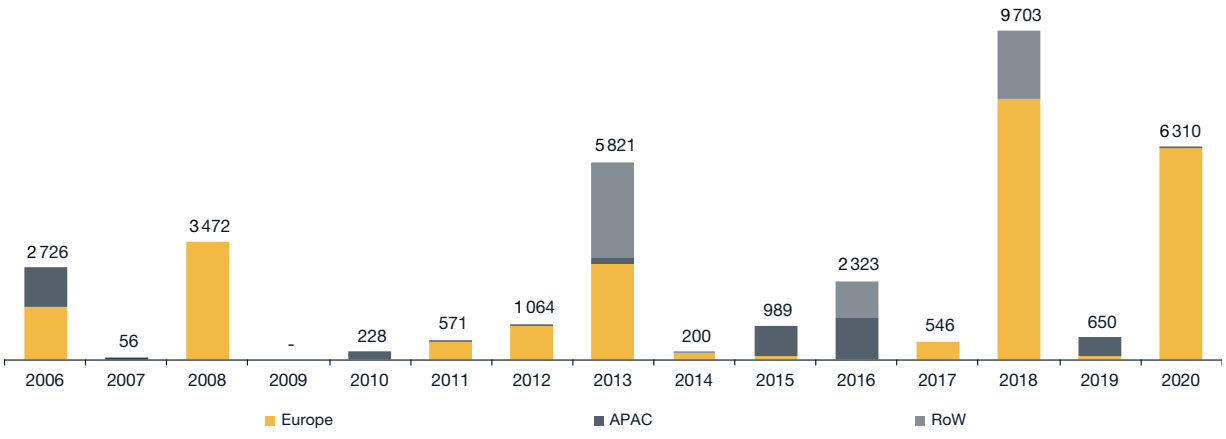
## 3.4.3 Fundraising by dedicated social infrastructure funds: a mostly European affair

– Fundraising for social infrastructure-specific funds has undergone many fluctuations in the past 15 years that are, to an extent, justified by the niche nature of the market.

– The total AuM held in these funds surpassed EUR 35bn as of end-2020, with a large proportion - approximately EUR 24.8bn (or 71% of the total) - managed by European domiciled funds.

– It is therefore not surprising that funds domiciled in the region will likely attract the lion's share of investors looking to allocate their investments towards social infrastructure vehicles. The industry's historical fundraising strong attest to this observation.

**Exhibit 28: Fundraising of social infrastructure-focused funds (in EUR mn)**




**Source:** *IJ Investor*

– 2018 was a record-breaking year in terms of fundraising, with over EUR 9.5bn raised by funds focused on social infrastructure. Nevertheless, the majority of these funds are seen to be concentrated in Europe, with no clear indication as to which other region can offer funds dedicated to social infrastructure

### 3.4.4 Investors assessment of the market

To better understand investors' definitions, strategic positioning, and expectations concerning the social infrastructure market (see annex), LTIIA conducted an internal survey among its members. The responses received, while on the low side (12), still represent a cross-section of our membership (for both asset owners and managers) and provide some interesting insights:

**Survey Insights (Qualitative)**

– Generally, investors classify transactions as either real estate or infrastructure based on the underlying cash flows and collateral; for instance, a collateral based deal with Loan to Value covenants is more likely to be accounted for in the real estate portfolio rather than infrastructure. Furthermore, depending on the intention, a project may also fall into the Impact investment bucket.

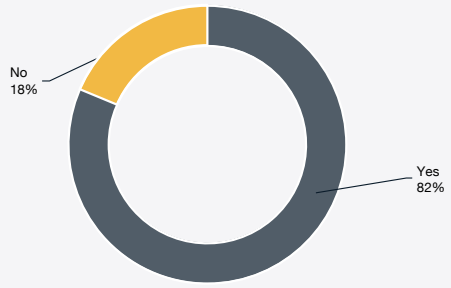
– More than 80% of investors target social infrastructure assets as part of their investment strategy (Healthcare, Education and Social housing being systemically included in that scope). Among those, the share of social infrastructure investments within total infrastructure investment remains under 10%.

– For 3 out of 4 respondents, the COVID-19 crisis has not modified their asset allocation strategy

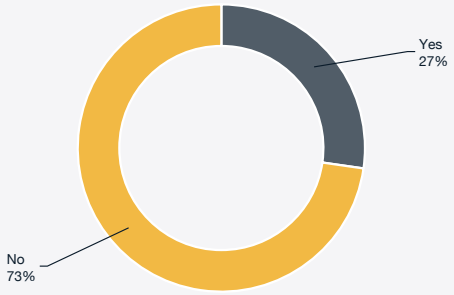
– Social infrastructure investors typically prefer the following economic models for investments: a contracted (PPP/PFI) type with government mostly paying for the services, a mix of government pay and user-pay, and user-pay if in a Regulated sector.

– Merchant infrastructure based solely on user-pay or

Do you currently target social infrastructure as part of your investment strategy?

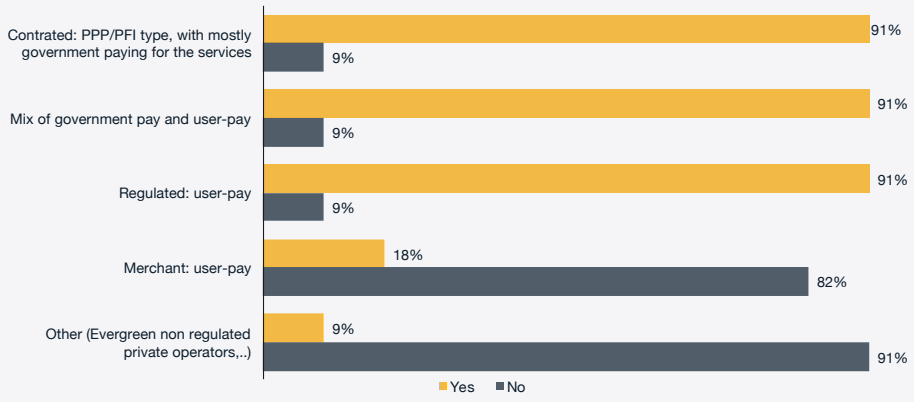



Asset allocation: Has the COVID-19 crisis modified your asset allocation strategy with regard to social infrastructure?




**Source:** *LTIIA*

Business model-which economic model would you feel comfortable with for Social infra investment?




**Source:** *LTIIA*

other (non-regulated private operators) is not considered to be consistent with the Social infrastructure business model, as full or majority payment by the government or public authority is viewed as a key criterion for defining Social Infrastructure.

– Asset owners typically prefer to make their social infrastructure investments via discretionary funds (typically closed-ended funds managed by a third-party manager), with little or no direct investment. As for Fund managers, they resort to a mix of schemes, including both direct investment and partnership structures.

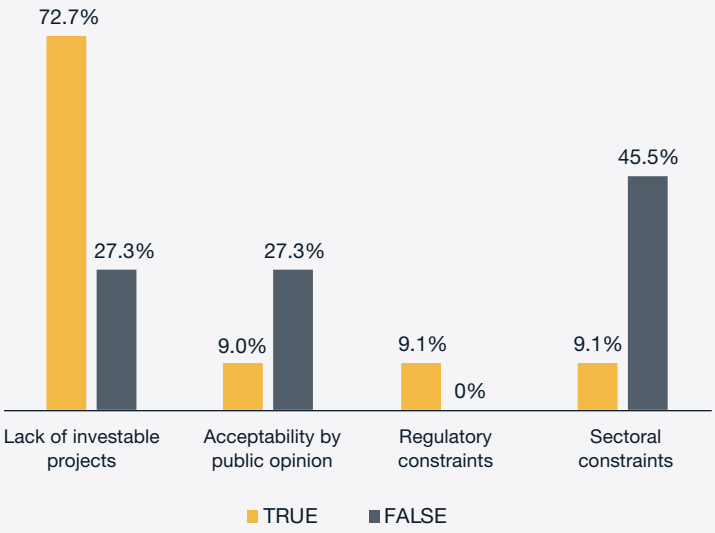
– Concerning their risk/return expectations, most of the respondents concur that they are generally lower in Social Infrastructure -particularly for PPP and fully government-contracted assets- compared to other asset types such as economic infrastructure.

– When asked about the main obstacles to increasing their investment in Social Infrastructure, 73% stated the lack of investable projects; far above other factors such as the level of public acceptability and general or sectoral regulatory constraints.

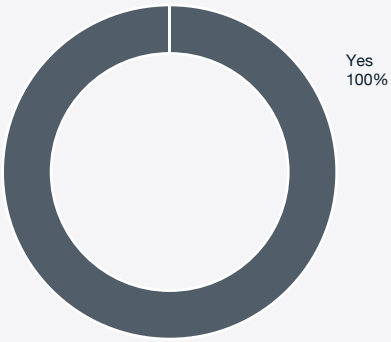
– Finally, all our respondents (100%) consider social infrastructure assets to be, by their very nature, well adapted to the pursuit of investors' ESG/SDG or Impact objectives. Nonetheless, reputational risk is not perceived as a more acute issue in Social infrastructure for half of the respondents.

Based on other qualitative feedback from our working

What would be the main obstacles to your increasing your investment in soc. Infra?




ESG Alignment: Would you consider social infra assets are, by their very nature, well adapted to the pursuit of ESG/SDG or Impact objectives by an investor?




**Source:** *LTIIA*

group members, we also endeavoured to assess the relative attractivity of the 3 main subsectors, with the following results:

- Overall, the healthcare sector is deemed to be more suitable and hence attractive to institutional investors due to its strong market dynamics and high impact potential, while Social housing appears to have the least fit for these investors.
- Essentially, the sector boasts strong market potential and an acceptable level of return potential, which makes up for the relatively high performance and reputational risks associated with investments in this sector.

**Exhibit 29: Qualitative synthetic comparative inter-sectoral analysis**

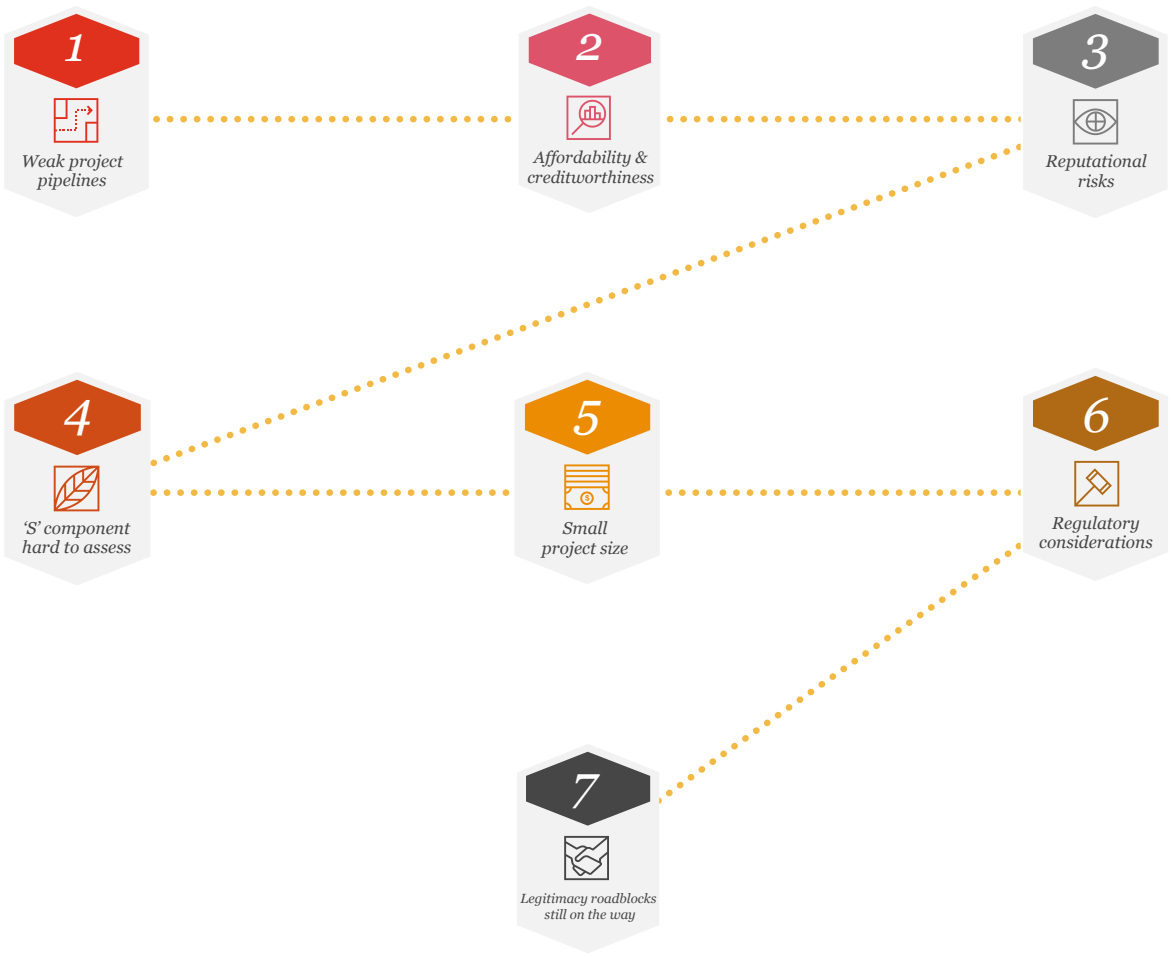
| Assessment Criteria/sector | Healthcare | Education | Housing |
|---|---|---|---|
| Average size of Investment | Medium | Low | Low |
| Market development trend | Strong | Medium | Medium |
| Need to invest through specialized AM | Yes | Medium | No |
| Return potential | Medium | Medium | Low |
| Technical performance risk | High | Medium | Low |
| Potential for Impact | High | Low | Medium |
| Tech disruption risk | High | Medium | Low |
| Reputational risk | High | Low | Low |
| Blended finance potential & Leverage by NPD Banks | Yes | Limited | Yes |
| **Overall fit for Infrastructure Institutional Investors** | **High** | **Medium** | **Medium** |

**Source:** *LTIIA*

# Challenges and Recommendations

## 4.1 Private investors continue to face several structural constraints

Despite the widening financing gap and the proven benefits of social infrastructure investment, several constraints continue to deter heightened private sector participation. Roadblocks such as insufficient project pipelines and affordability concerns, among others, are largely behind those modest figures. To this day, these constraints have been significant enough to offset the attractiveness of social infrastructure investments, effectively minimising institutional investors' allocation towards the asset class. In Europe, as in many other jurisdictions, the proportion of social infrastructure that is publicly financed still hovers around 90%, due to the following constraints:



1 **Insufficient project pipelines:** Lack of comprehensive social infrastructure investment plans and weak integration of those plans into national policy agendas often lead to a shortage of investable, well-prepared, open-to-investment projects to which investors can commit their assets and resources. This weak pipeline, in turn, translates to significant demand-supply imbalances, leading to fierce competition for social infrastructure assets – and feeding a "Bubble"– as well as sustaining significant infrastructure gaps.

2 **Affordability and creditworthiness:** In recent years, strong fundraising levels by asset managers have amplified pressure to put dry powder to work – hence inflating valuations in private markets and boosting acquisition prices. Overpriced assets, together with concerns around public counterparts' creditworthiness may have deterred investors from engaging in potentially overvalued investments. While the financing dimension (I.e. mobilising the upfront cash required for the investment) by the private sector is now well understood and addressed, the funding crunch (i.e. who will eventually repay the initial investment) remains a nagging problem at the public counterpart level, just as the appetite and willingness of end-users to pay for the services rendered. As it stands, there is little to moderate price elasticity for social infrastructure products across many European markets, particularly in the social housing market, and the final bearer of any increase in costs is usually dependent on the extent of government interventions and the relationship between price and occupancy rate. Accordingly, demand and the willingness of end-users to pay for these facilities are only marginally impacted by price elasticity considerations. Public authorities' creditworthiness is thus a key consideration of any government-pay scheme; however, this does not tend to be a gating consideration for the vast majority of opportunities in developed markets.

3 **Reputational risks:** Social infrastructure investments' long-term nature and direct impact on local communities make them particularly vulnerable to reputational risks. This is the flipside of the potential for significant impact. These risks might arise from a wide spectrum of considerations, ranging all the way from environmental issues to societal pressures. Difficulties associated with managing these risks – as well as the long-lasting and potentially irreversible nature of reputational damage[19] – could push private investors away from social infrastructure investments towards those with lower risk of reputational damage.

4 **'S' component hard to assess:** While social infrastructure investments can be an interesting opportunity for investors willing to increase their exposure to the 'S' component of ESG, the precise societal impact of those investments remains challenging to assess. This difficulty is directly associated with the inherent data-related challenges surrounding the overall ESG universe. Lack of unanimity regarding what KPIs are best suited to address social issues, coupled with a lack of standardised frameworks and poor data transparency, render the measurement of the 'S' component a particularly challenging task – reliant on specific expertise that investors usually lack. A 2019 Global ESG Survey by BNP Paribas provides evidence for this, showing that 46% of investors surveyed (covering 347 institutions) found the 'S' to be the most difficult to analyse and embed in investment strategies. This is mostly attributable to the absence of a single standard or accepted set of standards for measuring the social impact of firms' actions. Instead, the existing assessment includes a wide variety of metrics – such as workplace conditions, equal opportunity customer satisfaction, community engagement, and human rights, introducing a high level of subjectivity and complexity in measuring the S aspect of a firm's ESG efforts.

5 **Small project size:** Social infrastructure projects, usually undertaken at a local or municipal level, are generally smaller in magnitude – both in terms of asset pool and average project size – when compared to the broader infrastructure realm. Large projects, while very visible, constitute only a tiny fraction of the societal development needs, and a tiny fraction of private capital deployment opportunity.

In Europe, for example, the average size of social infrastructure projects stood at approximately EUR 130mn – less than a quarter of the same figure for economic infrastructure. According to EDHEC, as much as 99% of European social infrastructure projects involve total capital investments below the billion-dollar threshold – with the majority of them being under USD 35mn. This places projects outside the scope of many institutional investors, for which transaction and management costs are seen as excessively high in comparison to the magnitude of the initial investment. Involvement of private capital in smaller social infrastructure projects in North America is even more modest than in Europe, hence policy and market developments that

[19] A case in point is the Karolinska hospital PPP in Sweden, whose problems left lasting scars in the investing community

facilitate bundling of the smaller projects are even more critical there. In real estate, smaller facilities are often bundled together to enable participation of large-scale financiers such as providers of institutional capital. Although small project size could be overcome through project bundling, this practice is not common within social infrastructure. This is because social infrastructure concessions are generally managed through separate contracts between governments and operators, making the bundling process particularly burdensome.

6 **Regulatory considerations:** Regulation with respect to institutional investors' approach towards infrastructure investments is largely country specific. While some countries have no restrictions in place, others have requirements regarding the quantity, quality and liquidity of investments – often limiting the extent to which institutional investors can effectively engage in infrastructure initiatives. Infrastructure investments' close connection with national political contexts make them particularly susceptible to regulatory and social consensus considerations. On a national plan, regulatory uncertainties – involving, for example, renegotiations of existing agreements and modifications in stipulated prices – as well as inefficient regulatory settings often hinder institutional investors' propensity to engage in infrastructure investments. Even more than restrictive provisions, instability and unpredictability are the first concerns of long-term investors. International regulatory frameworks, particularly in financial (Basel3, Solvency 2, EIOPA, etc) or accounting standards are also at work, and can have unintended negative consequences on the willingness to invest.

7 **Legitimacy roadblocks still in the way:** Although largely country-specific, there are considerable barriers impairing private actor participation in social infrastructure. Those barriers vary in nature, ranging all the way from cultural roadblocks to actual legal impediments. In certain countries, the provision of infrastructure – and social infrastructure in particular – is traditionally attributed to the public sector. This, in turn, results in an environment where private participation is regarded with considerable skepticism, keeping private actors away from engaging in infrastructure initiatives. As political will can be a deciding factor in the successful completion of an infrastructure project, the turnover of political leaders constitutes a disincentive to some investors who base their decision of whether to invest in a project on the time remaining until the next election.

## 4.2 Proposals and Recommendations

Admittedly, the aforementioned constraints of social infrastructure have significantly hampered the attractiveness of social infrastructure investments - keeping institutional investors' allocation towards the asset class minimal. Given the importance of social infrastructure in driving social progress, this section looks at a number of ways in which both private investors and governments can drive investments and foster innovation within this asset class. Also, due its mostly European focus, the section builds and expands on a previous set of recommendations issued by the High-Level Task Force (HLTF) on Investing in social infrastructure commissioned by the EU Commission and ELTI in 2017-18. Some recommendations, however, are universal in their scope and applicability. For greater clarity of decision-making responsibility, they have been classified in 4 categories:

### 4.2.1 For Policy Decision-makers/ public authorities:

The recommendations revolve mostly around the need to increase and improve deal flow, while simultaneously establishing a better enabling and more investor-friendly environment for social infrastructure. In this context, there is the need to:

- Address the Infrastructure bottlenecks by working to **increase the deal flow of bankable/investable deals** for both primary and secondary Greenfield projects (via Asset recycling, etc) through a systematic review of potential private involvement and expected corresponding fiscal, economic and social benefits.
- **Improve capacity building** and technical support correspondingly by making centrally managed expertise and skilled resources available at national, regional, and EU levels. This would enable and prepare public procuring authorities for fruitful dialogue with private investors/partners. The role of **local governments is essential** as most of the projects will continue to be launched under the responsibility of local/ municipal authorities.
- Accordingly **encourage the bundling of projects** through appropriate platforms in order to reach the critical scale needed to attract direct financing by large institutional investors.
- Promote and **disseminate evidence-based standard** settings for impact investing, and support labelling and certification schemes that would facilitate the take- up of social investments; while also developing output-based performance contracts and other contractual schemes in which public payments are linked to results.
- **Blend finance tools** such as grants, subsidies, partial payments, guarantees, and financial instruments to help mitigate risks that are not manageable by private investors. Given that affordability issues for end-users are key to the impact of social investments, these tools should

be further developed and used whenever possible and suitable to leverage needed private sector participation.

- Ensure, as much as possible, **predictability in policy and regulatory environments**. Infrastructure assets have a long-life span - making corresponding investments long-term by nature - and thus unanticipated, or worse, ex post retroactive changes can wreak havoc in any institutional portfolio.
- **Enhance the role of NPDBs** (such as EIB, Council of Europe Development Bank (CEB), or EBRD in Europe) to incentivise private investors to scale up. These banks crowd in private investments by offering guarantees and mitigating some risks that are not manageable by private investors (Blending). The rationale for blending - by reducing the risk exposure of potential financiers - is to attract investors to projects considered to be of strategic importance (as is the case for social infrastructure). At the same time, blending can significantly lower the amount of resources that public authorities need to pay to private counterparts in terms of availability fees, thus improving project affordability.
- Recalibrate accounting and prudential standards to improve the attractiveness of social infrastructure to institutional long-term investors and banks.
- **Foster a securitsation framework** at national and multinational levels to give private investors greater access to portfolios of smaller size projects, while advancing infrastructure as an asset class.

### 4.2.2 For National Promotion and Development Banks (NPDBs)

By leveraging the intermediary role of (NPDBs) in connecting public funds to various developmental needs, governments have a unique opportunity to direct more capital towards social infrastructure investments. Doing this effectively requires them to:

- Harness the EU Next Gen investment plan to identify specific social infrastructure targets, and assign private sector investments, **leveraging objectives** in terms of multiplier ratios.
- Implement **adapted long-term co-financing conditions** at competitive rates so as to crowd in more private capital.
- Make the most of professional associations like ELTI (in Europe) or D20-LTIC (globally) to share and pool experiences and best practices for crowding in private investors.
- Set up, whenever possible, aggregation platforms to better foster private capital mobilisation.
- NPDBs could also be instrumental in helping vital private infrastructure asset owners to secure liquidity in times of crisis or force majeure.
- Finally, some NPDBs can leverage their influence on government spending policies and budgetary allocations to ramp up their investments in social infrastructure by providing valuable insights to governments and private institutional investors.

### 4.2.3 For Regulators

National Regulators undertake economic regulation of providers of social infrastructure, focusing on governance, financial viability and value for money – all of which that maintain lender confidence and protect the end-user and taxpayer. They ensure that private investors/providers are financially viable and properly managed so as to perform their functions efficiently, effectively and economically.

However, there is a perception[20] among many investors that over the years, some regulators may have become overly focused on their policing role rather than enabling the success of the sectors they are a part of, increasingly focusing on short term affordability for consumers at the expense of investment needed to achieve long-term policy objectives. In the process, there has been a trend towards more regulation, both in volume and complexity.

While Investors certainly need to commit to sustainable investment and responsible asset stewardship, they would benefit from a lighter- touch regulation. They would also have to reassess the financial regulatory framework (in the EU in particular) for long-term investors.

[20] Cf 2020 GIIA report on the Future of Regulation

### European and international Regulators

The Financial Stability Board, set up after the GFC in 2009, has strived to avoid the occurrence of new financial crises through regulatory reforms and stricter processes which may have had unintended and negative consequences when it comes to long term investors. There seems to be a growing awareness recently of the need to reconcile both objectives.

Regulated financial investors such as banks or insurers invest into infrastructure assets for various reasons such as diversification, stable cashflows or excess returns through illiquidity premiums. At the same time, these investor groups are subject to extensive and dynamic regulatory frameworks. Insurance companies in the European Economic Area (EEA) are regulated by frameworks such as Solvency II or CRR I/II, while Pension Funds are subject, in Europe, to the EIOPA regulation. As for Basel 3, it has disproportionately and negatively affected the European infrastructure debt market, as it remains mostly dependent on banks' financing, unlike the more capital market-based approach of debt raiding in the North American market.

The recent direction of travel is more encouraging. Already basic equity charges of 39% to 49% for Infrastructure equity investments have been reduced for qualifying infrastructure projects (QI) and/or qualifying infrastructure corporates (QIC) to respectively 30% and 36%, but the process remains burdensome for the investors (Limited partners) as they usually do not have sufficient access to all relevant data of the portfolio companies for the funds. As for Banks and credit institutions, they are now to be regulated by CRR II under the Basel 3.5 version as from mid-2021. This should make them eligible to capital charge reductions for qualifying infrastructure projects, based on qualifying infrastructure criteria aligned and consistent with those under Solvency II .While this should increase the attractiveness of infrastructure products for banks and insurers (at least in the OECD/EEA area), there are more steps to be taken to ensure a better adjustment of prudential standards to the specificities of long term investment in infrastructure, as advocated by the Infrastructure as an asset class initiative, but dependent on progress in collecting and processing the relevant data. Social infrastructure, as a relatively safer asset class, should then be considered for more favourable treatment.

## 4.2.4 For Investors (Asset owners/LPs)

For investors, there is the need to:

- Reinforce their in-house expertise to address better project origination and selection; or seek investments through specialist funds if the former measure is not economically viable.
- Commit to active and responsible asset stewardship - either directly when feasible or through specialist Impact funds - to better manage reputational risks and reinforce their ESG credentials and social license to operate.

Explore creative and innovative contractual schemes to better negotiate the specific constraints of each subsector in different jurisdictions.

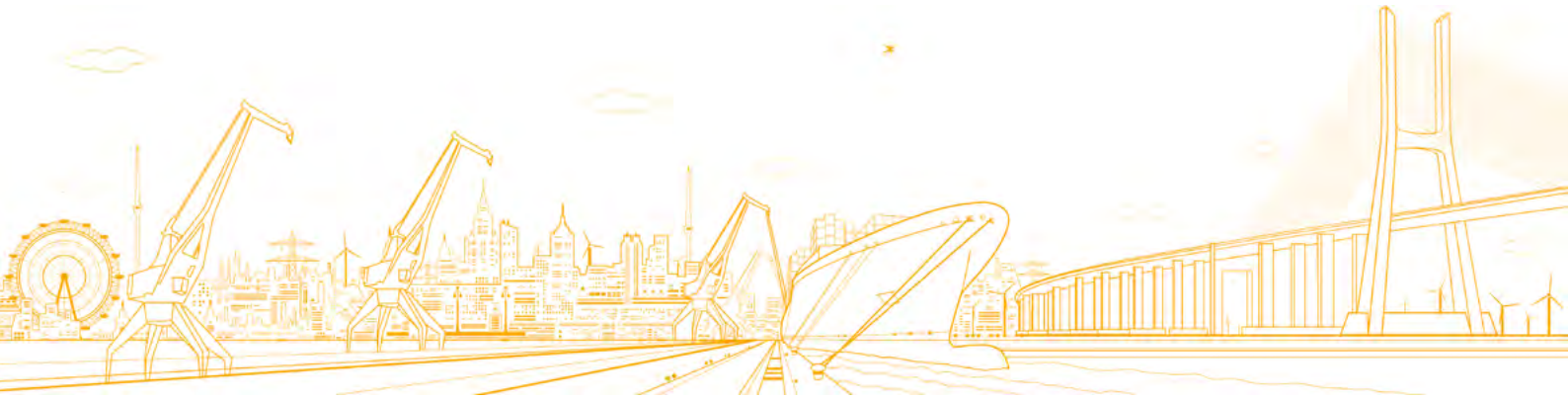
# Conclusion

While the instrumentality of infrastructure in enabling the smooth and efficient running of society's economic and social systems is globally recognized, the current rate and scale of investments are not sufficient to ensure current and future access to these essential goods and services. Extensive fiscal constraints, as well as social and demographic trends, threaten to widen the already huge infrastructure investment and adequacy gaps. And while all sectors of infrastructure stand to be significantly affected by the materialisation of this scenario, this may be particularly the case for social infrastructure – with the COVID-19 pandemic, exposing many structural weaknesses and inefficiencies in current assets.

In this context, ensuring the continuous provision of the necessary social infrastructure to support society's development requires a rapid and drastic uptick in investments beyond the overwhelming direct public investment model. Currently, private investor participation remains marginal in most countries and governments have to build and ensure an enabling environment, not only for more extensive mobilisation of private capital but also for greater private investor involvement in managing and improving social infrastructure outcomes. Together, Institutional investors and specialist funds and asset managers have the resources, managerial and technical competencies needed to contribute significantly to bridging the gap.

To achieve this, public authorities need to address various concerns associated with inadequate project pipelines, small project bundling, affordability, and regulatory and social impediments. At the same time, private institutional investors would also need to be more proactive in exploring the opportunities presented by the various sub-sectors in this asset class to add value while securing relatively steady returns. In addition, NPDBs should also play a key role in bridging the gap between private capital and social infrastructure, leveraging their position as intermediary institutions.

The goal is thus clearly set; the good news is that the low starting baseline and the huge amount of assets managed by institutional investors make any relative reallocation of these assets to Social infrastructure projects potentially very significant at the sectoral and national levels.



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In addition to the external sources cited, additional case studies were contributed by the members of the LTIIA working group (see p.4)

# Glossary

| | |
|---|---|
| **AUD** | Australian Dollar |
| **AWM** | Asset and Wealth Management |
| **BGK** | Bank Gospodarstwa Krajowego (National Development Bank-Poland) |
| **BREEAM** | Building Research Establishment Environmental Assessment Method |
| **CAGR** | Compound Annual Growth Rate |
| **CDC** | Caisse des dépôts et consignations |
| **CDP** | Cassa Depositi e Prestiti |
| **CDPI Sgr** | CDP Investimenti Società di Gestione del Risparmio |
| **CEB** | Council of Europe Development Bank |
| **D20-LTIC** | D20-Long-Term Investors Club |
| **DFE** | Department for Education (UK) |
| **DFI** | Development Financial Institution |
| **EBRD** | European Bank for Reconstruction and Development |
| **EFSI** | European Fund for Strategic Investments |
| **EIB** | European Investment Bank |
| **ELTI** | European Long-Term Investors Association |
| **ESFA** | Education & Skills Funding Agency |
| **ESG** | Environmental,Social and Governance |
| **EU** | European Union |
| **FIA** | Fondo Investimenti per l'Abitare |
| **FTSE** | Financial Times Stock Exchange |
| **GDP** | Gross Domestic Product |
| **GFC** | Great Financial Crisis |
| **GNP** | Gross National Product |
| **HBOR** | Hrvatska banka za obnovu i razvitak(Croatian Bank for Reconstruction and Development) |
| **HIP** | Health Infrastructure Plan (UK) |
| **HTP** | Health Transformation Program (Turkey) |
| **ICU** | Intensive Care Unit |
| **IMF** | International Monetary Fund |
| **INPP** | International Public Partnerships |
| **IPE** | Investment & Pensions Europe |
| **IPSAS** | International Public Sector Accounting Standards |
| **JV** | Joint Venture |
| **KIPP** | Knowledge is Power Program (USA) |
| **KPI** | Key Performance Indicators |
| **LIFT** | Local Improvement Finance Trust |
| **LIFTCo** | LIFT Company |
| **LPA** | Lease Plus Agreements |
| **LRA** | Land Retained Agreements |
| **LSAV** | London Student Accommodation Joint Venture |
| **LTIIA** | Long Term Infrastructure Investors Association |
| **MENA** | Middle East and North Africa |
| **MIGA** | Multilateral Investment Guarantee Agency |
| **MIM** | Mutual Investment Model |
| **MINSAL** | Ministerio de Salud (Ministry of Health-Chile) |

# Glossary

| | |
|---|---|
| **MOP** | Ministerio de Obras Públicas (Ministry of Public Works-Chile) |
| **NEIP** | National Infrastructure Plan for Education |
| **NHS** | National Health Service |
| **NIIF** | National Infrastructure Investment Fund |
| **NPDB** | National Promotion and Development Banks |
| **OECD** | Organisation for Economic Co-operation and Development |
| **PCC** | Primary Care Centres |
| **PDR** | Permitted Development Rights |
| **PF2** | Private Finance 2 |
| **PFI** | Private Finance Initiative |
| **PPP** | Public Private Partnership |
| **PSBP** | Priority Schools Building Programme |
| **REITS** | Real Estate Investment Trusts |
| **RP** | Registered Providers |
| **SDG** | Sustainable Development Goals |
| **SME** | Small and Medium Enterprise |
| **SPA** | Strategic Partnering Agreement |
| **SVB** | Silicon Valley Bank |
| **TICC** | The Infrastructure Company Classification |
| **UN** | United Nations |
| **VC** | Venture Capital |
| **WEPCo** | Welsh Education Partnership |

# Definitions of Terms

**Deal value:** measures the total transaction value recorded on a specific year. Transactions may include acquisitions, primary financing, additional facility, refinancing… Data gathered from IJ Global.

**Infrastructure funds AuM:** all assets managed by Infrastructure funds, excluding Private Equity and Private Debt. Please note that funds with exposure to student housing or senior homes would be included as Infrastructure funds. Data gathered from IJ Investor.

**Social Infrastructure vs Economic Infrastructure:** Health and Care, Education, Affordable Housing, Civic, Corrections and Justice are included as part of Social Infrastructure. All other sectors would be included as part of Economic Infrastructure.

**Core Social Infrastructure:** all infrastructure assets included in the following categories: Health and Care, Education and Affordable housing.

**Non-Core Social Infrastructure:** all infrastructure assets included in the following categories: Civic, Corrections and Justice.

**Privately Funded Infrastructure:** infrastructure projects that a) are funded and owned solely by private players, b) the end user is paying for using this infrastructure and c) upkeep and maintenance are performed using the payments from end-users.

**Publicly Funded Infrastructure:** infrastructure projects that a) are funded and owned by governments and b) upkeep and maintenance is performed by government payments (instead of end-user payments).

**Public Private Partnership (PPP):** contractual LT arrangements with a public procuring authority where the private party provides part or all of the upfront financing , bears significant risks, having an overall management responsibility in delivering the outputs, and where remuneration is linked with performance over time.

**Social Infrastructure Exposure:** all infrastructure funds which invest in social infrastructure as part of their portfolio strategy. Social infrastructure assets may represent a minor part of their total portfolio assets.

**Social Infrastructure Focus:** all infrastructure funds whose portfolio strategy is focused on social infrastructure assets. Social infrastructure represents a major part of their total portfolio assets.

LTI/A Long-term Infrastructure Investors Association

4, place de l'Opéra
75002 Paris, France

**info@ltiia.org**
**+33 183653661**