Deutsche Bank
Chief Investment Office

CIO Special

December 15, 2022

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Future European infrastructure: investing in change and resilience

Key takeaways

- Sustainability and security considerations, enhanced policy support and technological development are making European infrastructure an investment focus.
- Large amounts of investment are needed to meet environmental goals. NextGenEU financing will complement and potentially reinvigorate other EU initiatives.
- Larger-scale traditional investment will be accompanied by a growing emphasis on smaller and medium-sized projects, with implications for portfolio management.

01 Introduction

Everyone needs infrastructure to live and operate – whether this infrastructure is physical, social or digital. In most developed economies, much physical infrastructure is old and there is a long-standing belief that it needs replacement or upgrading. But three other factors are now making European infrastructure investment particularly dynamic.

First, sustainability/security. As in other regions, populations and policymakers are increasingly worried about impact of climate change and other environmental concerns, with energy transition (towards sustainable sources) now a major theme. Europe also faces an immediate energy security threat from the Russia/Ukraine war. Achieving security and resilience will likely require greater decentralization and diversification of energy infrastructure, making it easier to adapt to future change.

Second, policy support. Measures originally intended to support European recovery from the coronavirus pandemic – notably the massive NextGenEU (NGEU) fund – have a major infrastructure component and now complement a range of other initiatives.

Third, technology. Innovation is making it possible to reconsider many aspects of infrastructure – not just digital communications. In some areas, for example, renewable energy, Europe is a market leader in applied technology. Partly as a result, it is the most important regional for private infrastructure fund raising. One emphasis will be on making existing processes more efficient, via scaling up or adding flexibility.

Meeting climate change mitigation and other commitments will involve very large amounts of investment, globally and at a European level. The ability of governments to provide this is not infinite – particularly given existing pandemic-related fiscal pressures. Private investment will play a major role – across multiple infrastructure areas. This will be done via a range of channels, including private markets.

The traditional focus of infrastructure investment has been on large projects, offering income flows from facilities construction or operation. But much future infrastructure investment is likely to be in smaller, innovative projects, where the main investment appeal may instead be capital appreciation. The changing nature of infrastructure investment will require different approaches to managing infrastructure investment in a portfolio.

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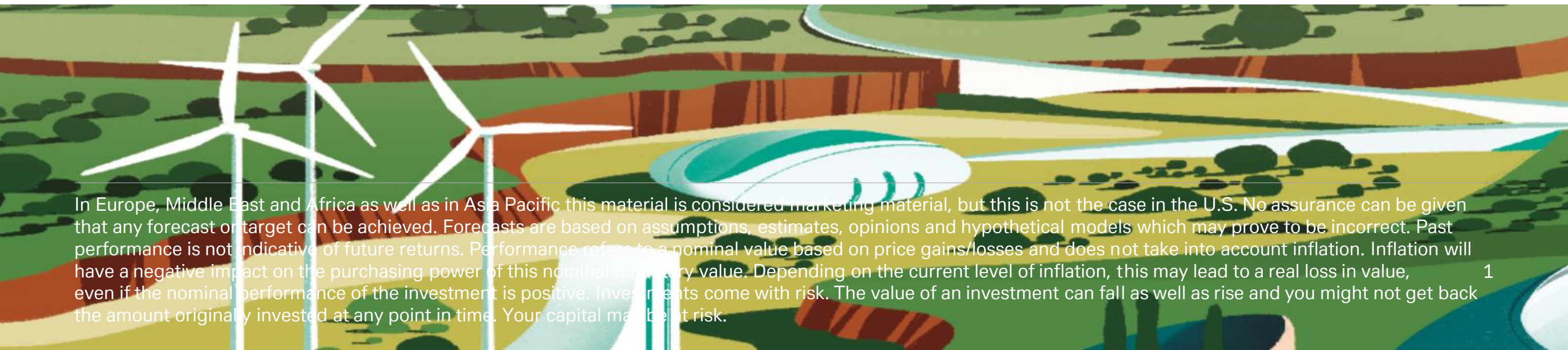


02 Factors driving European infrastructure investment

Infrastructure has a crucial role to play in combating climate change. Key areas will include energy, transport, resource stewardship (e.g. recycling) and water. But we also need to consider the "infrastructure squared" (the infrastructure for infrastructure): digitalisation, social infrastructure and, finally, business services to support infrastructure development.

Europe might not appear to be the region most at risk from climate change but it is already causing economic disruption here – e.g. through changes in river water levels and flooding. European policymakers' views increasingly acknowledge this, with domestic and regional funding commitments and strong EU support for global initiatives. We believe that environmental sustainability concerns are likely to increase, with the current focus on reducing carbon emissions increasingly broadening out to issues such as resource management and biodiversity.

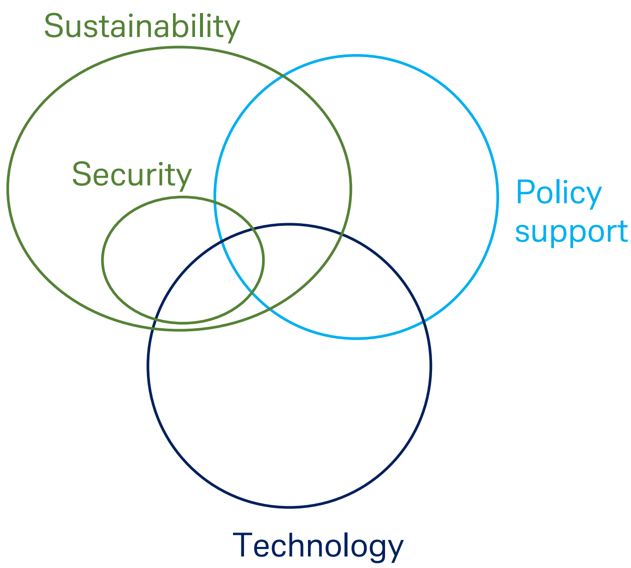
The amounts of investment required globally to achieve the 1.5º celsius climate change target will be vast. At a European level, consider, for example, the sub-theme of energy efficiency. According to the IEA Sustainable Development Scenario,[1] this could deliver more than 40% of the emissions abatement needed. The European Commission estimated in 2020 that there was an investment gap in residential, business and industry energy efficiency of over USD200bn annually to meet the EU's own climate and energy targets by 2030 (which may themselves be too low).[2] Public funding will not be sufficient to achieve near-zero emissions in European building – private capital will have to play a major role. The same will be true for water: the OECD in 2016 gave a range of estimates for the cost of upgrading water infrastructure – from a low of USD6.7tn in the period to 2030, to USD22.6tn by 2050.[3]

European energy worries have been given a further impetus by the Russia/Ukraine war and the associated limitations on the supply of gas and oil. This showed that if you don't anticipate future change – and adopt new technologies and sources accordingly – then you can find yourself in a trap. Energy security (from immediate disruption) is also now linked with energy sustainability – both requiring major changes to the energy infrastructure in terms of production, distribution and consumption. Future security concerns will not be limited to energy, either, or negated by any future resolution of the Russia/Ukraine war. Europe economies will remain vulnerable to future global disruption here or in other areas, keeping up the pressure for infrastructure reconfiguration and improvement to make the most of domestic resources. Recent security concerns also come on the back of supply chain concerns due to COVID-19 and greater interest in localisation of supply generally. The U.S. Inflation Reduction Act of 2022, which includes major spending on climate and energy measures, will also have implications for international trade, including European "green" technology and renewable energy.

Infrastructure sustainability should also be seen in the context of the UN's Sustainability Development Goals (SDGs). These SDGs, rather than being abstract goals, are increasingly providing a framework for policymaking and capital allocation. Many forms of infrastructure (and not just energy) contribute to achieving the socially-focused SDGs – e.g. good health and wellbeing (SDG 3), decent work and economic growth (SDG 8) and sustainable cities and communities (SDG 11).

Infrastructure is one of our investment issues for 2023 (see our CIO Insights: Outlook 2023 - Resilience versus recession) and features in many of our separate longer-term investment themes.

Figure 1: Key infrastructure drivers



Source: Deutsche Bank AG. Data as of 2022.

03 Policy support

Concerns about infrastructure are of course not new – and predate recent increased sustainability and security concerns. However, the greatest infrastructure policy impetus in Europe was prompted by an unrelated event – the global coronavirus pandemic. Faced with an unprecedented economic contraction due to the pandemic, in 2020 the EU launched its Next Generation EU plan, with a current national value of over EUR800bn (factoring in inflation). This support is to be distributed amongst member states via a roughly even balance of grants and loans over 2021-2026.

Next Generation EU (often shortened to NextGenEU, NGEU or, more formally the European Recovery Instrument) has been rightly lauded as a breakthrough in terms of EU collective financial action. But it is also interesting in that it requires individual member states to provide detailed plans for exactly how the money is going to be spent. This provides (in theory) a degree of transparency around planned individual infrastructure projects. Overall, around 40% is due to be spent on climate-related measures, 26% on digital measures.

NextGenEU complements and potentially reinvigorates a range of other existing and new EU initiatives. These include the REPower EU plan to accelerate the green transition and the “Fit for 55” package of policy measures, designed to ensure the EU meet its target of reducing carbon emissions by 2030. A range of regional bodies and programmes supports financing of sustainable projects – e.g. the InvestEU programme, the European Investment Bank and the European Investment Fund, which leverages up private investment through guarantee and equity risk sharing instruments. The EIF, for example, runs thematic strategies across clean energy transition and climate, sustainable transport, environment and resources, digital connectivity and data infrastructure, and social infrastructure. Within the complex EU system, initiatives also exist at other levels – note the European parliament’s recent vote for an alternative fuels infrastructure.

It is also worth remembering that Europe is already a leader in environmental regulation (e.g. through disclosure requirements, taxonomy, and emissions trading).

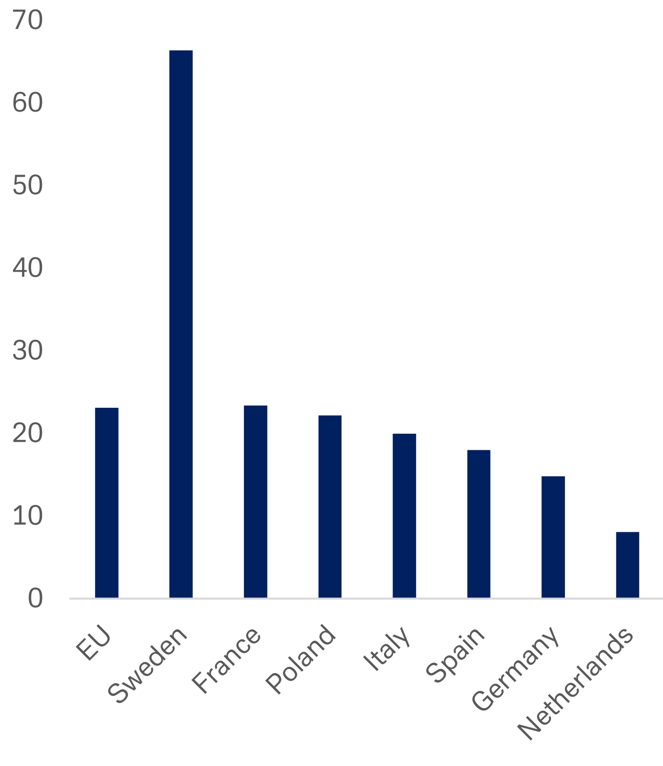
04 Technology, knowledge and innovation

European applied technology solutions are emerging in many infrastructure fields e.g. renewables, logistics, water, and energy. These solutions may drive both new projects and ways to improve the sustainability of existing infrastructure assets.

Technology is likely to change the nature of infrastructure development too, and not just within digital infrastructure. In energy infrastructure, for example, if we view the last decade as characterised by a shift from thermal power generation to renewables, the coming decade may instead be characterised by a) **the growing importance of distributed generation and smaller scale renewables** and b) **decarbonisation objectives increasingly accompanied by social aims** (e.g. in developing smart cities). Europe is a global leader in terms of renewable energy projects, but some countries make more use of renewable energy than others (Figure 2).

The ability of technology to deliver change across many different sorts of operation could also encourage the broadening out of the pipeline of possible infrastructure projects to include many new areas, including social as well as physical infrastructure. With public finances under great pressure in most European economies, private capital will be needed for these projects. There are some infrastructure assets which are outside the traditional areas of public investment (e.g. battery storage, green hydrogen, alternative fuels) but are likely to increase in importance due to technological innovation and changing regulatory frameworks.

Figure 2: Share of energy from renewable sources for heating and cooling in 2020



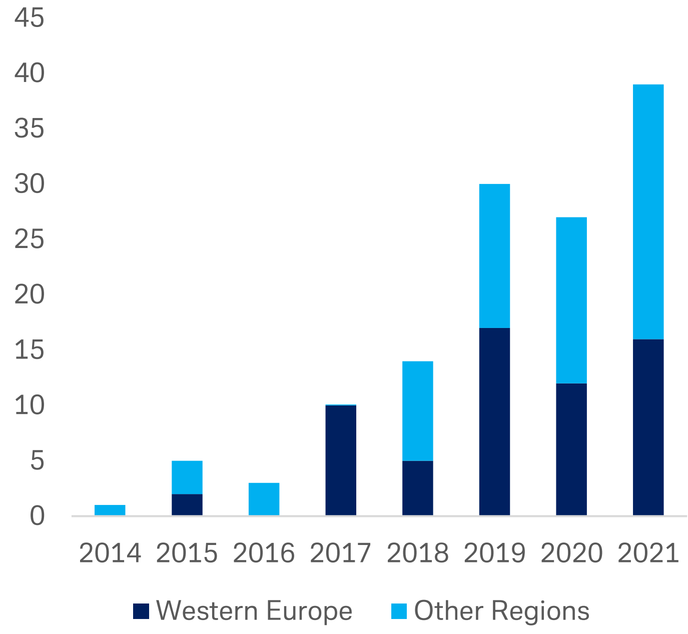
Source: Eurostat, Deutsche Bank AG. Data as of 2020.

05 Portfolio implications

Traditional (or "core") infrastructure investment has in the past been perceived as having some fundamental theoretical attractions. Such investment in a large physical asset (e.g. an airport) with a long-life span and often some barriers to entry (i.e. protection against immediate competition). Future revenues tied to such an asset may also be adjustable for inflation, of particular interest in the current environment. "Pure play" infrastructure has therefore been seen as a way to generate resilient, consistent predictable long-term cash flows.

In the past, investment reality has often matched these perceptions. European infrastructure debt has usually offered yield premia over equivalent corporate debt and default rates have been lower. According to the latest G20 Global Infrastructure Monitor 2022,[4] sustainable financing of private infrastructure financing strengthened again in 2021 (Figure 3), with Europe still the largest region.

Figure 3: Sustainable financing of private investment in infrastructure projects by region (in USD bn)



Source: Global Infrastructure Hub, Deutsche Bank AG. Data as of December 2022.

As the coronavirus pandemic has demonstrated, however, infrastructure is not immune to external events. Pandemic shutdowns temporarily limited use of much non-digital digital physical infrastructure and high fuel prices have had a continuing impact on transport infrastructure. Recovery rates from shutdowns have varied between sectors – and now infrastructure will also be affected by slowing economic growth and monetary policy tightening. Refinancing in EMEA private debt, for example, has slowed due to rising interest rates. Increased funding costs may have an impact on mergers and acquisition (M&A) activity.

Looking ahead, technology and other macroeconomic factors are likely to have a long-term impact on the composition and nature of infrastructure investment, and this will have important implications for portfolio management. Traditional core infrastructure, as noted above, has often been focused on income streams from large projects. By contrast, technological change may (as noted above) put a greater emphasis on smaller and medium-sized projects – which are often at a much earlier stage of their business lifecycle. These projects may mainly instead deliver returns through capital appreciation, as innovative technologies and approaches are scaled up through mergers and acquisitions or platform technologies. Potentially higher returns may be accompanied, however, by higher volatility and risk.

If, as we expect, global inflation rates do not return to ultra-low pre-pandemic levels, then this will also have an impact on core infrastructure (i.e. large) projects. These may continue to offer explicit or implicit protection against future inflation through renegotiation of income flows. But high inflation will also have an effect on these projects' valuations, with rising interest rates increasing the valuation discount on future income flows.

Financial returns also may not be only measure of infrastructure investment performance. Investors may increasingly also focus on environmental and social key performance indicators – something that will be important for investors, even if they do not have a specific and immediate ESG focus. Investments will be at risk if they do not meet acceptable environmental and social standards. Other longer-term risks include policy reversals due to fiscal concerns and/or political stresses in the Eurozone (as depressed investment in the early 2010s). Individual existing infrastructure deals may be renegotiated and investing in a specific new technology carries the risk that the technology cannot be developed further or is superseded by a different approach.

All this argues for a more differentiated approach to assessing future investment in this very complex and dynamic sector. At an asset class level, effective selection of infrastructure investments remains key. At a portfolio level, asset allocation and risk management approaches may need to be reconsidered.

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The European Investment Bank (EIB) uses financing to further EU policy goals; its shareholders are the EU member states.

The European Investment Fund (EIF) is a provider of risk finance to small and medium-sized enterprises in Europe. Its shareholders include public and private institutions.

The Global Infrastructure Hub was set up by the G20 to promote the delivery of sustainable infrastructure.

The International Energy Agency (IEA) is an intergovernmental agency studying energy-related issues

InvestEU is a programme intended to promote sustainable investment, innovation and job development in Europe. It is part of the NextGenEU package.

Next Generation EU (NextGenEU, NGEU) is a major EU recovery plan, based around grants and loans, running from 2021-2023.

The Organisation for Economic Co-operation and Development (OECD) has 35 member countries and has the objective of encouraging economic progress and world trade.

The REPowerEU is a European Commission plan for saving energy, producing clean energy and diversifying energy sources.

The United Nations Sustainable Development Goals (SDGs), finalised in 2015, comprise 17 sustainable development goals and 169 targets.

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