IMPROVING THE ACCESSIBILITY AND AVAILABILITY OF KEY MARKET DATA

Note

Infrastructure Working Group Priority 1:
Developing an investable infrastructure pipeline

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Executive summary

This *Note on Improving the Accessibility and Availability of Key Market Data,* henceforth "Note", is a deliverable of the Group of Twenty (G20) Infrastructure Working Group (IWG) in 2025 under Priority 1: *Developing an Investable Infrastructure Pipeline*. The priority aims to provide a framework to improve the upstream project planning environment, midstream project structuring and preparation approaches, and downstream financing and other stages, with the goal of strengthening pipeline development to attract significant private sector participation in public infrastructure development.

The priority also aims to address the challenge of infrastructure data availability and accessibility through this Note and a *Practice Guide for Leveraging Project-Level Data and Digitalising the Pipeline*. Data is an enabler for mobilising greater private sector participation in public infrastructure development as it supports planning and preparation practices, enables benchmarking and the monitoring of asset performance and trends, and informs evidence-based decision-making.

Market data, specifically, improves the understanding of risk exposure and return potential in specific markets and sectors; supports the design of public policies; and enables regulatory analysis, among others.

However, there are market data availability challenges that hinder effective pipeline development and private sector participation. Even where high-quality data exists, it is often difficult to locate, integrate and analyse effectively. As a result, investors may hesitate to invest in markets lacking reliable and familiar data, inherently limiting capital flows. Similarly, policymakers may struggle to identify and replicate best practices that could enhance project preparation, pipeline development or access to alternative financing instruments. For financial regulators, the ability to perform regulatory analysis to inform risk-weighted capital requirements is limited, potentially leading to higher capital charges on infrastructure investments by banks and insurers.

This Note seeks to reduce these barriers by providing a structured mapping of key infrastructure market data to support informed decision-making at the national and international level. Mirroring the framework, the Note analyses eight data themes that address core economic conditions, regulatory environments, financial structures, project delivery efficiency and sustainability considerations. It draws extensively on the comprehensive data review and analysis conducted in the Infrastructure Monitor reports[1] – which includes years of engagement with leading infrastructure data providers and

[1] World Bank. 2025. Infrastructure Monitor 2024. © World Bank https://www.gihub.org/infrastructure-monitor/

consultations with public and private infrastructure policymakers and practitioners through previous IWG deliverables. It also incorporates insights from a new, targeted survey involving infrastructure practitioners, mostly from the private sector.

While not intended as an exhaustive inventory of country- or sector-specific datasets, the Note assesses the availability, accessibility and comparability of consolidated global infrastructure data, especially to strengthen infrastructure as an asset class and enable its regulatory treatment conducive to mobilising private capital. Despite the availability of data benchmarks differing across sub-sectors and solutions, this Note maintains a commitment to technology neutrality and acknowledges the challenges of comparing financial benchmarks across regions and sectors. Moreover, the Note does not intend to establish data standard requirements or endorse any specific metric or data provider; rather, it uses actual, specific datasets to illustrate the evolution of the infrastructure market. The gaps and opportunities identified in this report are optional, voluntary and non-binding.

Key Findings on Market Data Gaps

1. Lack of a common infrastructure taxonomy and reporting frameworks

The lack of an internationally agreed and consistent definition of "infrastructure" in the context of private investment is an underlying challenge that undermines market data comparability across countries and sectors. While definitions exist and numerous policy frameworks reference infrastructure, definitions and reporting frameworks are often inconsistent due to varying scopes and the absence of a universally agreed definition. This gap has been highlighted in various documents, such as the IWG report on Infrastructure Taxonomies[2] – noted in the October 2023 G20 communique – and the European Banking Authority report[3] on the application of the infrastructure supporting factor. While detailed taxonomies and/or standards will differ between countries, the lack of a common baseline creates obstacles for both investors and/or regulators trying to assess performance, categorise infrastructure as a distinct asset class and integrate it effectively into regulatory frameworks.

2. Fragmented data despite availability

The lack of standardised reporting, due to the lack of a common definition and reporting frameworks, does not mean data is unavailable – large volumes of financial market data

[2] https://www.gihub.org/news/definitions-and-classifications-of-infrastructure-hugely-influence-investment-decisions-and-the-ability-to-close-the-infrastructure-gap/

[3] https://www.eba.europa.eu/sites/default/files/document_library/Publications/Reports/2022/1042869/Report%20on%20the%20application%20of%20the%20Infrastructure%20Supporting%20Factor.pdf

exist, depending on the maturity and depth of national financial markets. However, there is currently no centralised mapping of infrastructure-related datasets to clarify their scope, limitations and how they relate to one another. This fragmentation hampers users' ability to leverage existing data insights effectively.

3. Evolving financing mechanisms increase analytical complexity

As infrastructure financing evolves – through the growing use of bonds and guarantees, and mechanisms such as blended finance – new challenges arise beyond definitional issues. Data granularity remains insufficient to effectively track and assess these instruments and approaches. For instance, infrastructure sectors such as energy and transport are often grouped together with unrelated sectors like manufacturing or extractives, making it difficult to isolate sector-specific trends in the use of guarantees for infrastructure financing. Moreover, critical details such as use-of-proceeds and concessionality parameters are reported inconsistently, limiting the ability to evaluate and replicate successful financing models across markets.

Opportunities for Action

1. Ensuring definitional gaps do not have a detrimental impact on finance

Developing an internationally agreed, consistent definition of infrastructure and establishing global frameworks for standardised data collection is a long-term undertaking. As infrastructure continues to evolve, any definition will need to remain flexible and enable each country to retain specific taxonomies or standards. However, there is a timely opportunity for the IWG to initiate a dialogue – to engage on data needs for the supervisory and regulatory treatment of infrastructure as an asset class. Collaboration between regulators, global standard-setters and representatives from the banking and insurance sectors could address this fundamental issue. This potential action was endorsed under the *Framework to Scale Up Private Investment in Sustainable Infrastructure*, developed during the Indonesian G20 Presidency. Such collaboration would also provide a platform to assess whether current data gaps are leading to unintended consequences for infrastructure finance, particularly in light of evolving regulatory reforms such as Basel IV.

2. Improving access, awareness and capacity

Improving the visibility and usability of existing datasets is essential to support better benchmarking and informed decision-making. There is an opportunity to expand the work beyond the themes selected for this Note to provide a mapping of key infrastructure global datasets and highlight their current scope, limitations and interlinkages, helping

practitioners navigate and utilise available data more effectively. This is one of the common proposals from the survey developed for this work. The IWG, with support from international organisations (IOs), could contribute to that effort by supporting initiatives to strengthen and create new partnerships with infrastructure stakeholders and key data providers. Better awareness and access to consistent and detailed metrics – including the required disaggregation – would improve the usefulness of existing data and clearly outline specific data gaps. In the future, making this mapping of global datasets available on a digital platform would create additional value, further improving access and enhancing transparency. Finally, to enhance the effectiveness of data collection and use, practitioners surveyed for this work emphasised the role governments can play in strengthening institutions and building capacity, including at the sub-national level.

3. Partnering for deeper infrastructure data insights

The G20 can play a pivotal role in encouraging partnerships between infrastructure stakeholders, starting with IOs, Multilateral Development Banks (MDBs) and other institutions leading data collection and analytics efforts to address critical data gaps. The group is uniquely positioned to convene stakeholders, align efforts and support the coordination of such partnerships. The ongoing collaboration with the Global Emerging Markets Risk Database (GEMs), which involves creating new infrastructure-specific datasets from existing data and making them publicly available, serves as a valuable example of how such partnerships can be effectively structured and scaled.

Partnerships between governments and private data providers can also be valuable in two areas where governments and regulators can bring unique insights, viz:

- Participating in efforts to assess enabling environments and reforms undertaken to strengthen them; and
- Sharing insights into market depth and performance – critical for helping investors evaluate opportunities in new and emerging markets with greater confidence.

1. Objectives

This Note complements the *Framework for Effective Planning and Preparation Practices* ("Framework") by presenting available market data critical for supporting the development of an investable pipeline capable of attracting substantial private sector investment and outlining key gaps and opportunities for enhancing data availability and accessibility. In this Note, 'market data' refers to datasets that offer global benchmarks, often as time series, spanning several countries and derived from either high volumes of transactions or country-wide assessments, providing stakeholders with insights into broader market trends. The benchmarks highlighted herein are typically based on thousands of transactions, companies, or assets, except in cases where this is explicitly noted.

The Note also documents and presents an overview of current global market data trends to illustrate the value of making this data available and accessible, leveraging the wealth of data trends in the Infrastructure Monitor 2024 report.[4] Drawing from this review, it provides a global perspective on existing market data gaps that hinder the establishment of infrastructure as a recognised asset class, investment decision-making and policy frameworks.

The Note intends to support the G20 IWG discussions while addressing the broader challenge of data availability and accessibility, particularly for investors and policymakers in emerging markets. Market data availability challenges continue to hinder effective pipeline development and private sector participation in public infrastructure development. Even when high-quality data exists, it remains complex to locate, integrate and analyse effectively. This Note aims to improve understanding of these barriers by providing a structured, comparative analysis of infrastructure market data, facilitating informed decision-making at the national and international level. While not an exhaustive catalogue of all country or sector-specific datasets, it evaluates the extent to which consolidated and comparable global infrastructure data is available and accessible, excluding accessibility in terms of the cost of data access.

2. Relevance and background

Insights from market data on private investment in infrastructure

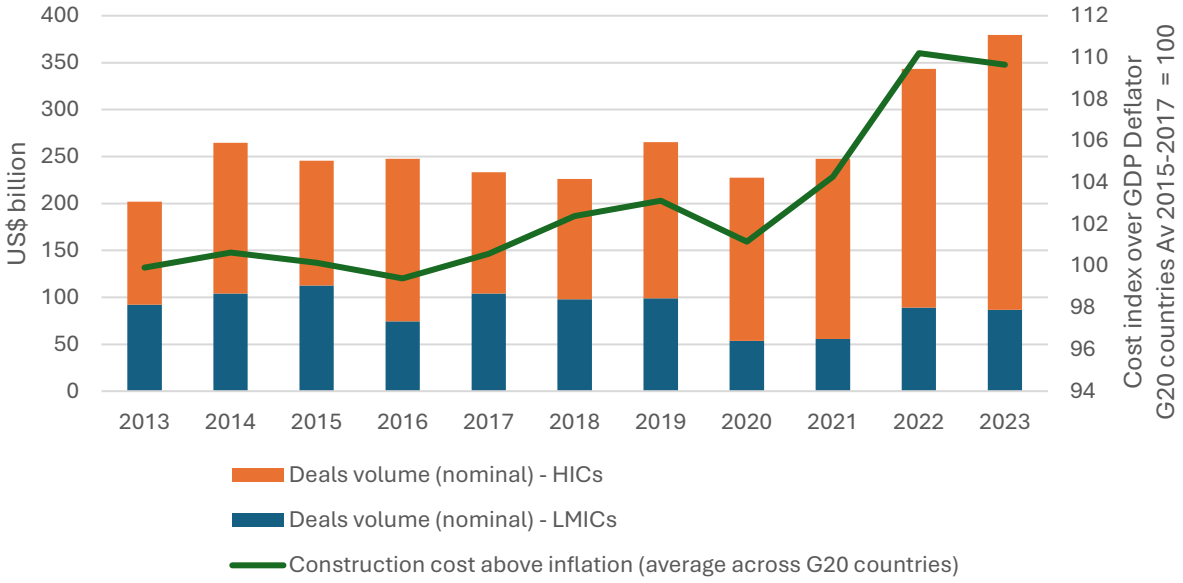
Infrastructure is a key driver of economic growth and prosperity. However, the infrastructure investment gap remains significant in both developed and emerging economies. Private capital can play a critical role in narrowing the financing gap, particularly when governments

[4] World Bank. 2025. Infrastructure Monitor 2024. © World Bank https://www.gihub.org/infrastructure-monitor/

effectively leverage public resources to mobilise private investment in infrastructure projects. In recent years, global private investment in infrastructure projects in primary markets rose, but most of this growth took place in high-income countries (HICs) while low- and middle-income countries (LMICs) experienced a slight decline. Nonetheless, the global private investment levels are significantly higher than the five-year average (2018-2022), signalling a strong post-COVID pandemic growth.

Meanwhile, infrastructure delivery costs have also increased significantly, with above-inflation increases observed in the construction cost index across G20 countries (see Theme 1 in this Note for more insights), necessitating cautious interpretation of the private investment trend.

Private investment in infrastructure projects in primary markets
(US$ billion, all countries)



Source: Global Infrastructure Monitor 2024. Authors' analysis based on Realfin and WB PPI data[5]

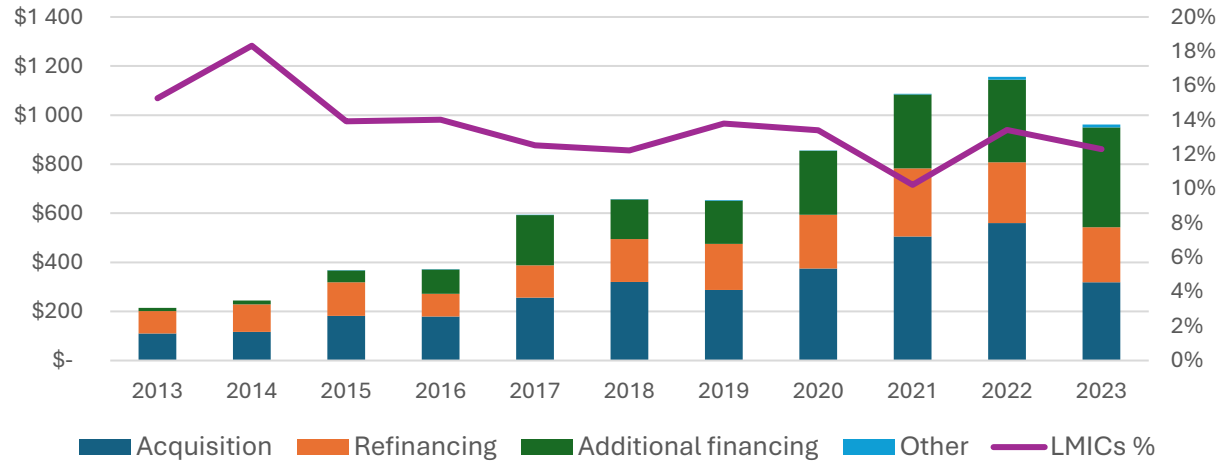
To boost private investment flows in emerging markets, strengthening regulatory frameworks is essential for attracting private capital. New data from the World Bank's Benchmarking Infrastructure Development (BID) study shows that there is a significant correlation between Public Private Partnership (PPP) regulatory reforms and PPP investments, with major regulatory PPP reforms associated with an almost US$488 million increase in infrastructure PPP investments. Several initiatives provide benchmarks or

[5] WB PPI: World Bank Private Participation in Infrastructure.

ratings to guide authorities in identifying key reforms – this is covered in themes 2, 3 and 7 of this Note.

As for the secondary market investments, these declined by 17% in 2023 due to reduced acquisition activity suppressed by higher interest rates on asset valuations. Rising rates can pressure asset values as the cost of financing increases. Similar to primary markets, the gap between LMICs and HICs continued to widen, resulting in the share of LMICs in secondary markets decreasing slightly. Preliminary data for 2024 indicates a significant rebound for secondary activities as many central banks globally initiated interest rate cuts, driven by declining inflationary pressures.

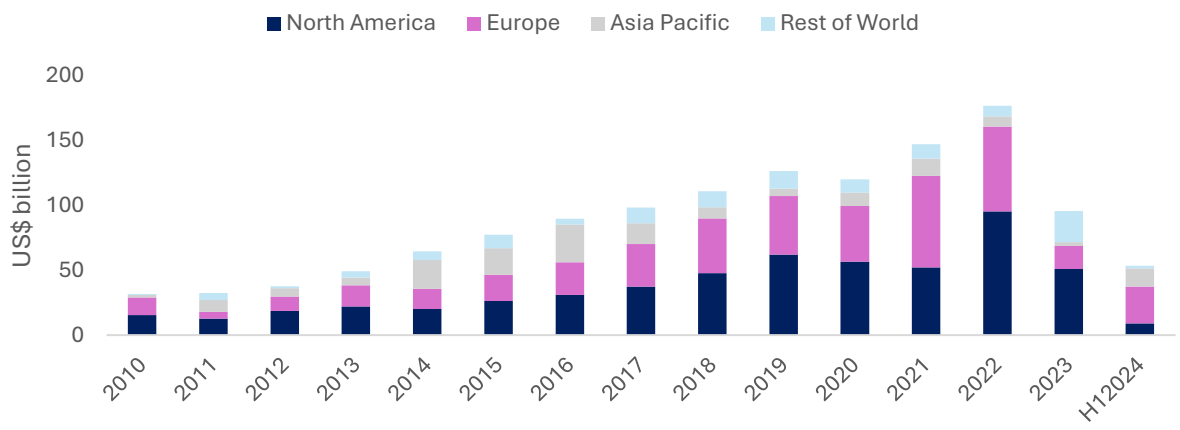
Private investment in infrastructure projects in secondary markets
(US$ billion, all countries)



Source: Global Infrastructure Monitor 2024. Authors' analysis based on Realfin and WB PPI data

Interest rates had a direct impact on the cost of capital (see Theme 4 for more insights) and fundraising globally. Annual capital raised by private infrastructure funds increased consistently from 2010 before falling sharply in 2023 and remaining subdued in 2024 (see Theme 6 for more insights). North America and Europe continue to dominate capital raised.

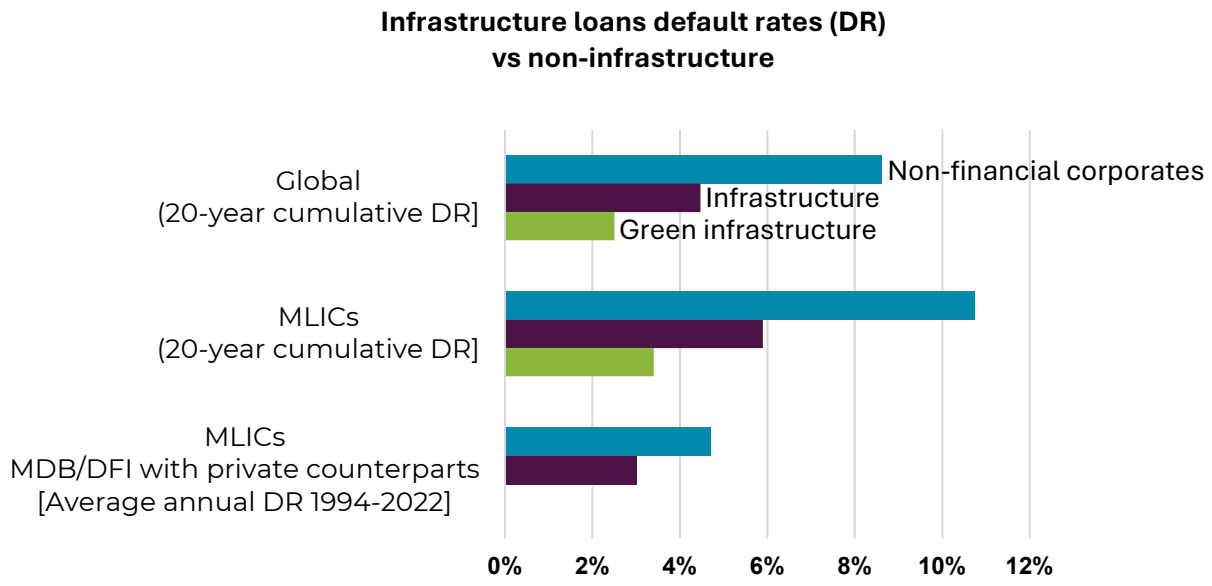
Annual capital raised by funds for the infrastructure asset class
By region (2010-2024)



Source: Global Infrastructure Monitor 2024. Based on Preqin Global Infrastructure Report 2025

Despite rising infrastructure delivery costs, higher capital costs and weak fundraising, investment from infrastructure funds – still stocked with significant dry powder [6] – is expected to remain relatively resilient compared to other asset classes. One of the primary reasons is that infrastructure remains attractive to investors due to its reliable cash flows and historically lower default rates – a trend consistent across countries of all income levels. Even in non-investment-grade categories, infrastructure debt demonstrates stronger credit performance and higher recovery rates upon default than non-infrastructure debt (see Theme 5 in this Note for more details).

[6] Dry powder: Capital committed by investors that is available to fund managers but has not yet been invested or allocated (capital committed is the sum of unallocated capital and portfolio returns, minus any disbursements to investors).



Source: Global Infrastructure Monitor 2024 based on GEMs, Moody's, and Standard & Poor's.

Note: The third metric differs slightly from the first two and cannot be compared directly.

The value of market data across stakeholders

Closing infrastructure market data gaps has the potential to strengthen and scale up public and private sector collaboration in developing an investable pipeline to close the persistent infrastructure deficits. A robust, credible and investable pipeline is key to mobilising private sector finance, especially in lower-income countries.

For private investors, market data improves the understanding of risk exposure, return potential and links with traditional financial markets, which can unlock participation in new markets and scale up investments with confidence. Deeper insights into risk measurement and investment performance can foster a more efficient and transparent infrastructure investment landscape. Additionally, a better understanding of the mix of finance types, such as project or corporate finance, and further data on the characteristics of funding for various transaction types could provide valuable insights into current trends that are representative of broader issues and opportunities in the market.

For public policy, market data is crucial for policy design, procurement strategies, economic regulation of infrastructure services and prudential regulation of investments. Quality data insights can inform the design of effective capital programmes and regulating network utilities, including airports, roads, energy and water infrastructure. For example, determining an accurate cost of capital is central to tariff setting, PPP negotiations and evaluating private sector returns in a way that balances profitability with societal impact.

Financial regulators can also leverage this data in regulatory analysis regarding investment in infrastructure, without compromising macro-financial and fiscal stability. The lack of standardised, high-quality data has necessitated conservative regulatory approaches, potentially leading to higher capital charges on infrastructure investments by banks and insurers. Improved data availability could help better inform risk-weighted capital requirements. This gap has been highlighted in the European Banking Authority report[7] on the application of the infrastructure supporting factor, which stated: "currently there is no definition of infrastructure lending commonly accepted within the EU" [...] the closest definition of 'infrastructure lending' are the exposures under Project Finance. [...] EBA COREP supervisory data does not segregate the infrastructure lending exposures, as these are reported in an aggregated way under specialized lending exposures, which is a wider category". Other stakeholders, such as donors and those providing concessional funding support, will also find this data valuable – as more transparent and measurable market data will enable further innovation in designing products that can increase projects' bankability.

Recognising that data benchmarks are not uniform across sub-sectors and solutions, this Note adheres to technology neutrality and accounts for the challenges of comparing financial benchmarks across regions and sectors.

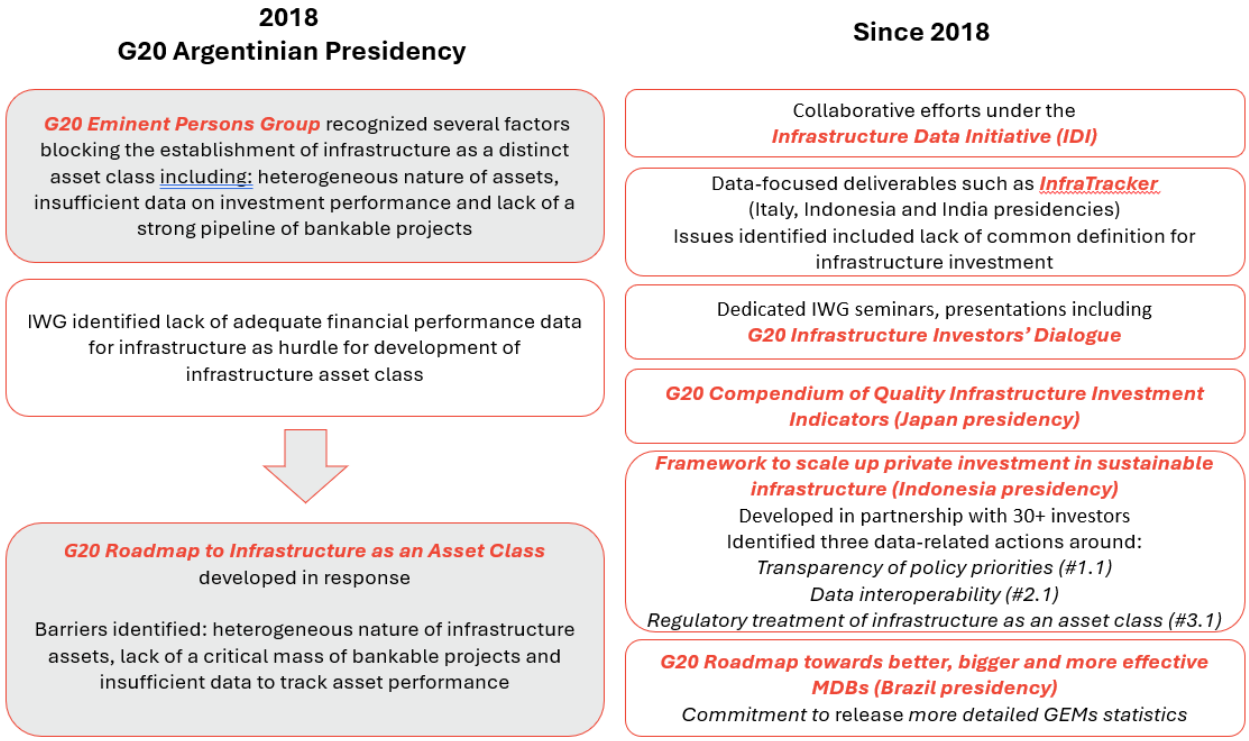
A stocktake of related G20 IWG work on infrastructure data

To address infrastructure data gaps and help close infrastructure deficits through private finance, the IWG has implemented a range of initiatives over the years. In 2018, the IWG, during the Argentinian Presidency, identified the lack of adequate data for the financial performance of infrastructure investments (the majority of which are unlisted) as a hurdle for the development of a full-fledged infrastructure asset class. The inadequate understanding and benchmarking of infrastructure investments were identified as a major impediment to channelling long-term savings into investments that could support future economic growth through quality infrastructure, including creating resilience against natural disasters and addressing social and environmental impacts. In response, the *G20 Roadmap to Infrastructure as an Asset Class* was developed to address common barriers to the emergence of infrastructure as an asset class, including the heterogeneous nature of infrastructure assets and the lack of a critical mass of investable projects and insufficient data to track asset performance.

Subsequently, the IWG has developed a set of initiatives to advance work on the topic of infrastructure market data. This included collaborative efforts under the Infrastructure Data Initiative and the endorsement of data-focused deliverables such as the InfraTracker during

[7] https://www.eba.europa.eu/sites/default/files/document_library/Publications/Reports/2022/1042869/Report%20on%20the%20application%20of%20the%20Infrastructure%20Supporting%20Factor.pdf

the Italian, Indonesian and Indian presidencies. A report exploring infrastructure taxonomies[8] was developed for the IWG alongside the InfraTracker tool and noted in the October 2023 G20 communique. That note – gathering inputs from G20 members and IOs – covered 58 infrastructure taxonomies, 35 of which are applicable globally. It highlighted that there are currently no internationally agreed definitions or classifications for infrastructure. These initiatives highlighted several gaps, many of which were endorsed in the *Framework to scale up private investment in sustainable infrastructure* developed during the Indonesian Presidency. This framework highlighted, in particular, the need for transparency in setting infrastructure development priorities (Action 1.1) to reduce market uncertainty, help limit the risk of stranded assets, and gather and share data on infrastructure investment trends (Action 1.2). It also emphasised the need for infrastructure data platforms to allow for interoperability (Action 2.1) and advance the collection of data evidence that would support the supervisory and regulatory treatment of infrastructure as an asset class (Action 3.1). The IWG also produced the G20 Compendium of Quality Infrastructure Investment (QII) Indicators, which help investors assess whether an investment contributes to social and environmental improvements. The figure below summarises these key initiatives.



[8] https://www.mof.go.jp/english/policy/international_policy/convention/g20/g20_20231013.pdf
https://www.gihub.org/news/definitions-and-classifications-of-infrastructure-hugely-influence-investment-decisions-and-the-ability-to-close-the-infrastructure-gap/

3. Key market data themes and approach

Global trends and data gaps are analysed for eight selected data themes, which collectively address core economic conditions, regulatory environments, financial structures, project delivery efficiency and sustainability considerations. The themes were selected to align with the priorities of the Framework based on decades of global infrastructure data aggregation by leading data providers, as well as surveys and consultations with leading public and private infrastructure policymakers and practitioners.

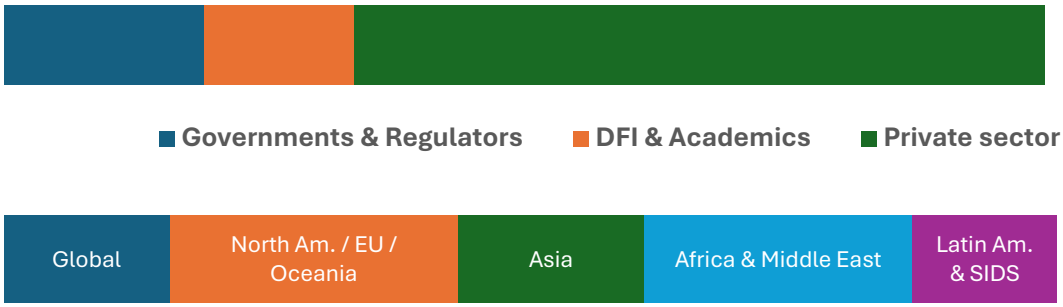
This Note does not intend to establish data standard requirements or endorse any specific metric or data provider, but uses actual datasets to illustrate the infrastructure market evolution.

Eight selected market data themes
Mapping and relevance to the Framework

Mapping	Relevance
1. Economic pre-conditions	
Data Theme 1: Cost of infrastructure delivery	Investors evaluate economic growth, fiscal health and market stability to assess project viability.
2. Infrastructure Enabling Framework	
Data Theme 2: Legal and regulatory framework	Investors can use legal and regulatory benchmarks as an initial indicator of a country's investment environment.
Data Theme 3: Institutional capacity, funding, and financing for pipeline development	Investors' interest in supporting a country's infrastructure project pipelines depends on the technical and financial support provided by the public sector.
3. Infrastructure Asset Lifecycle	
Data Theme 4: Financing costs benchmarks	Accurate benchmarks are essential for fair pricing, efficient structuring and attracting private investment.
Data Theme 5: Financial performance benchmarks	Infrastructure projects attract diverse financiers with varying risk-return preferences, making performance data crucial for optimal capital allocation, risk assessment and regulatory oversight.
Data Theme 6: Infrastructure market liquidity and depth	Infrastructure market liquidity and depth are vital to understanding funding availability and exit strategies.
Data Theme 7: Project delivery and management	Investors rely on project delivery and management benchmarks to assess risks, returns, market capacity and flexibility for re-negotiations.
Data Theme 8: Investors' development goals and climate risks	Investors – especially long-term and institutional ones – increasingly require impact and climate risk assessments.

This Note was prepared using a combination of research methods, including literature reviews, data analysis, expert consultations, stakeholder surveys, collaboration with leading data providers, and participation in key infrastructure finance events and forums.

Importantly, a new, targeted stakeholder survey was conducted among infrastructure practitioners to verify the relevance of global data benchmarks for investors and identify key data gaps. This survey captured the perspectives of private and public stakeholders on all eight data themes simultaneously. Participants were asked to identify the theme with the most critical data gaps and to evaluate both the relevance and the severity of data gaps for each theme. Approximately 70 responses were collected from both developed and emerging markets, yielding over 250 data points across all themes, including evaluations of each theme's relevance, data gap criticality, and review of the data source currently used. The additional data sources identified have been integrated into the Note.



Note: Sample Responses: Small Island Developing States

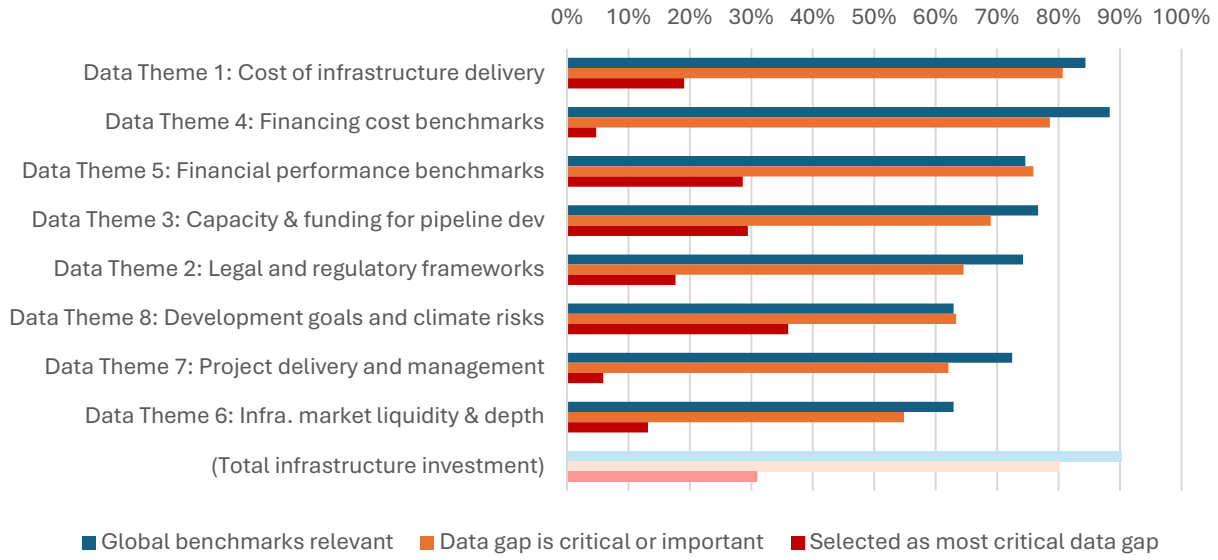
Cost of infrastructure delivery and financing cost benchmarks are the themes for which gaps were most ranked critical or important, and where global benchmarks are deemed most relevant. These themes were consistently identified as critical regardless of whether respondents operated in developed or emerging markets, or whether they were private or non-private sector. Theme 8 (related to development goals and climate risks) was the most frequently selected as having the most critical gaps. But it ranked lower overall because it is considered relevant to the work of only 60% of respondents.

The results also revealed that data gaps across all themes were most acute for those working in low-income countries (LICs). While generally less severe for those in HICs, data gaps were considered a major issue by respondents across the board. The cost of infrastructure delivery was highlighted as a key gap, especially for government, regulators, academics and development finance institutions (DFIs), whereas the cost of capital and financial performance metrics were particularly critical across the board. In general, data gaps were greatest for those working in Africa and Small Island Developing States, and least

for those in Europe. Across sectors, gaps were most significant for those operating in the waste sector, and least in the transport sector.

Respondents were also asked to assess the criticality and availability of data on total investment volumes – both public and private – a theme related to previous IWG's priorities through InfraTracker. This theme ranked second among all themes, underscoring its continued importance.

Global data benchmarks survey responses



The table below summarises the responses to an open-ended question on key infrastructure data gaps. The most frequently cited issues include the lack of comprehensive data on private investment, fragmented and outdated datasets, the absence of standardised financial benchmarks for infrastructure and limited availability of project-level and PPP data. Respondents also emphasised the need for open-access, consolidated platforms and stronger global collaboration to improve data quality, consistency and usability.

Investment Data and Funding Gaps	Lack of comprehensive data on public and private capital allocation and financing sources, particularly in emerging markets and social infrastructure. Need to better capture private investment gaps and absorption capacity issues: e.g., large gaps between public budgets and actual expenditures.
Benchmarks and Financial Metrics	Strong demand for better financial benchmarks, including: • Return on investment (equity and debt)

	• Weighted average cost of capital (WACC) • Average gearing ratios Risk-related data is often incomplete or not regulatorily recognised. Benchmarks for value-for-money assessment, including public vs. private returns and project cost structures to improve PPP contract performance.
Project development capacity and Project-Level data	Challenges in understanding host countries' project development capacity, including project delivery and management metrics, and integration with public financial management. Lack of detailed data on PPP deals, project structures, financing terms, and contracts.
Data Quality, Access, and Usability	Need for consistent, standardised and disaggregated data formats globally. Consolidated global datasets for infrastructure investment pricing, cost structures and risk mitigation are lacking. Accessibility: Datasets are often fragmented, outdated, often behind paywalls, or not aligned across countries. Clear demand for open-access and timely data across all themes, and a centralised, user-friendly digital platform to consolidate and simplify access

These responses validate the themes selected for this report and are in line with past consultations undertaken for previous IWG deliverables (in particular, the year-long engagement carried out to develop the *Framework to scale up private investment in sustainable infrastructure* during the Indonesian Presidency). They also match data gaps encountered and discussed with infrastructure data providers and investors throughout World Bank initiatives.

The table below summarises responses to an open-ended question on practical steps that could be taken at the global level to address significant data gaps.

Global Standards	**Develop a globally accepted taxonomy for infrastructure financing and create standardised metrics and benchmarks, including for risk-mitigation instruments.**
Collaboration and Partnerships	Develop international cooperation and peer review mechanisms with emphasis on partnership and stakeholder engagement, including cooperation with private entities and DFIs to build reliable infrastructure statistics.

Data Transparency and Accessibility	Establish a global database across forms of infrastructure finance or data sharing platforms among DFIs and central repositories hosted by trusted institutions Encourage proactive disclosure of information using anonymised datasets.
Project-Level and Historical Data	Encourage the collection of historic data on capital, operational project performance and financial disclosure by programmes.
Institutional Strengthening and Capacity Building	Provide capacity development and support for civil servants and work at the country level to improve transparency in budgeting and reporting, including at sub-national levels.

These responses were used to develop the recommendations in Section 5. Recommendations on how to address data gaps at the project level can also be found in the *Practice Guide for Leveraging Project-Level Data and Digitalising the Pipeline*.

4. Key market data trends and gaps by data theme

For each data theme, the Note elaborates on the following aspects:

- **Overview and context:** The scope and criticality of the data theme in the infrastructure landscape.
- **Relevance to investment and policy:** Explanation of why this data theme matters, how it is currently used, and its potential applications for strengthening strategies and decisions of investors and policymakers.
- **Assessment of global data sources:** Identification of key data categories and indicators that are most relevant for investors and policymakers. Mapping of existing global datasets, their providers and their accessibility for market participants.
- **Illustration of key data trends and insights:** Examination of the key global infrastructure trends leveraging data from available data sources. Illustration of key data trends for the selected representative indicator to highlight key insights.
- **Key data gaps and opportunities for potential action:** Identification of limitations in data coverage, accessibility and quality, along with potential barriers to effective data utilisation, to indicate potential opportunities for action.

A useful and comparable global data platform of key infrastructure metrics across countries relevant for the private capital mobilisation discussion is currently not available. The IWG can play a pivotal role in enabling collaboration across relevant national entities,

particularly national statistical departments and financial regulators, to collectively advance the opportunities highlighted in this Note. It could be explored as the national data collection definitions and systems are revised to integrate the latest international System of National Accounts 2025 (update of the 2008 version).[9]

4.1 Economic pre-conditions

Infrastructure development takes place within broader country economic pre-conditions that impact countries' ability and approach to prepare projects to mobilise private investments. The Framework includes references to economic conditions influential for infrastructure investment, including macroeconomic, fiscal, political and financial factors.

Data Theme 1: Cost of infrastructure delivery

Overview and context

Data on economic pre-conditions that matter to investors include economic fundamentals such as economic growth and income per capita, population, government fiscal health (debt to income, sovereign credit rating, country risk premium), macroeconomic stability (inflation, currency, interest rates levels and volatility), and financial market development (savings rate, long-term yield curve, size and depth of credit markets, capital markets, stock exchange).

Relevance to investment and policy

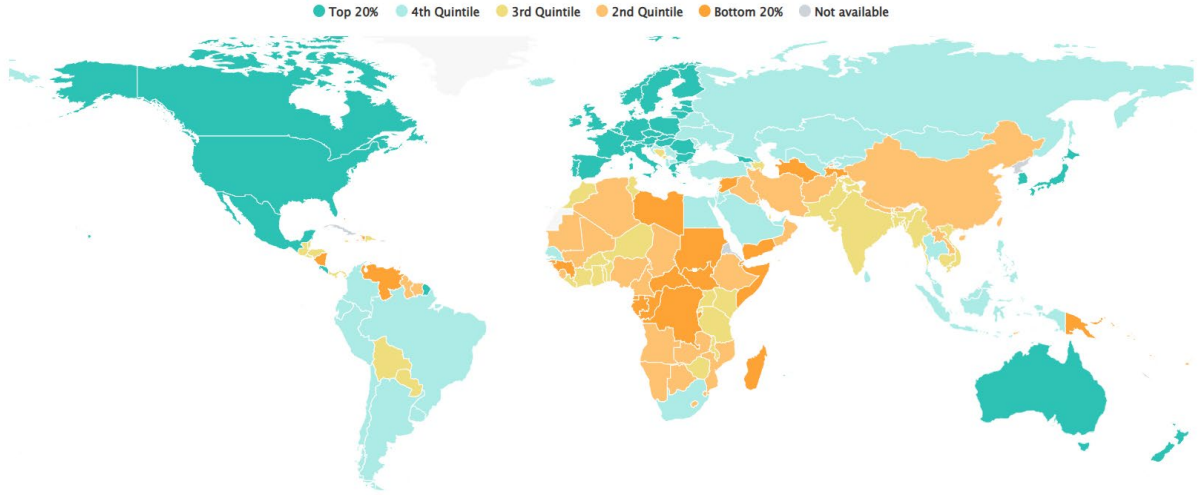
Country-specific economic conditions significantly influence the attractiveness of an infrastructure project for investors by driving the achievable levels of profitability. Fundamental economic pre-conditions directly or indirectly influence project costs and revenues, and by extension, expected profitability. Finally, certain investors are restricted to some markets or constrained in their level of participation based on these indicators.

Assessment of global data sources

Data availability is generally considered high. Publicly available datasets published by IOs, MDBs and others provide the relevant metrics by country. Many datasets are available for this data theme since it is not infrastructure-specific, including the International Monetary Fund (IMF), Organisation for Economic Co-operation and Development (OECD), MDBs, BIS Oxford Economics and credit rating agencies. However, the coverage of countries and time lag in data availability vary. The World Bank's Statistical Performance Indicator score summarises the performance of statistical systems and improvement efforts for 186 countries.[10] It assesses how well, how broadly and how frequently national statistical systems collect, produce and disseminate high-quality data in a publicly accessible manner.

[9] United Nations Statistics Division (2025). System of National Accounts 2025 – 2025 SNA. Access at LINK.
[10] World Bank Statistical Performance Indicators. Access at LINK.

Statistical Performance Indicator Overall Score (2023 Reference Year)



Accessibility of key information may be challenged by the dispersion of this data across several platforms and navigation difficulties. Given that the IWG members have consistently highlighted the importance of economic pre-conditions data for infrastructure financing, a centralised infrastructure data platform by country could be developed to provide a consolidated and comprehensive view of key indicators of interest for each country for mobilising private capital in infrastructure to simplify an assessment of strengths and weaknesses by national governments.

Illustration of key data trends and insights

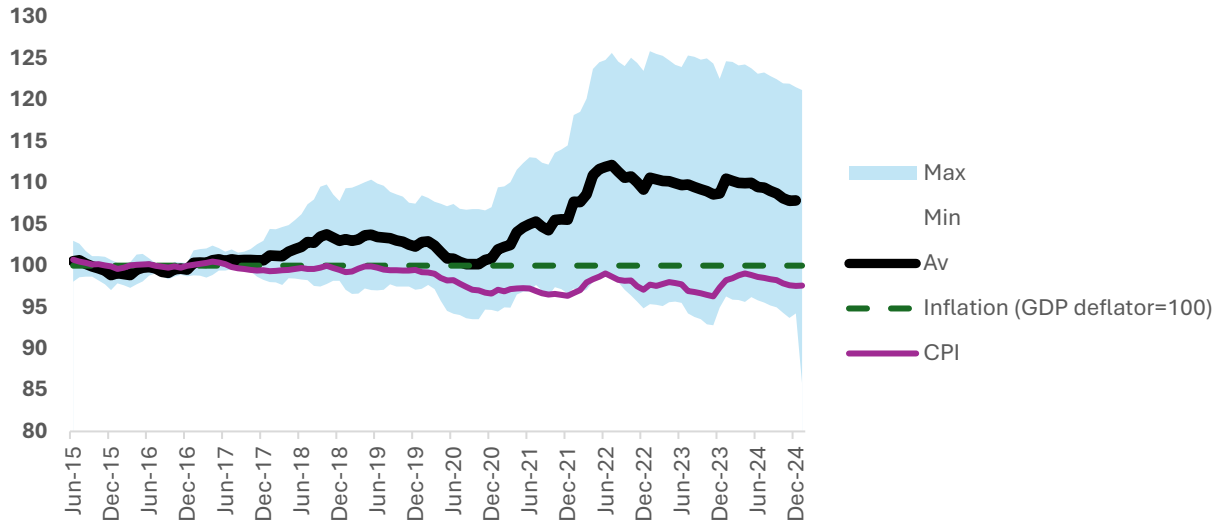
The infrastructure delivery cost inflation index was selected to illustrate how this data theme affects the attractiveness of infrastructure in markets. This was highlighted as a key trend of interest during discussions with IWG members during the Brazilian Presidency.

While broader inflation (including projections) is usually available by country, infrastructure delivery cost fluctuations over and above the consumer price index (CPI) create additional risk for investors, especially for greenfield projects.

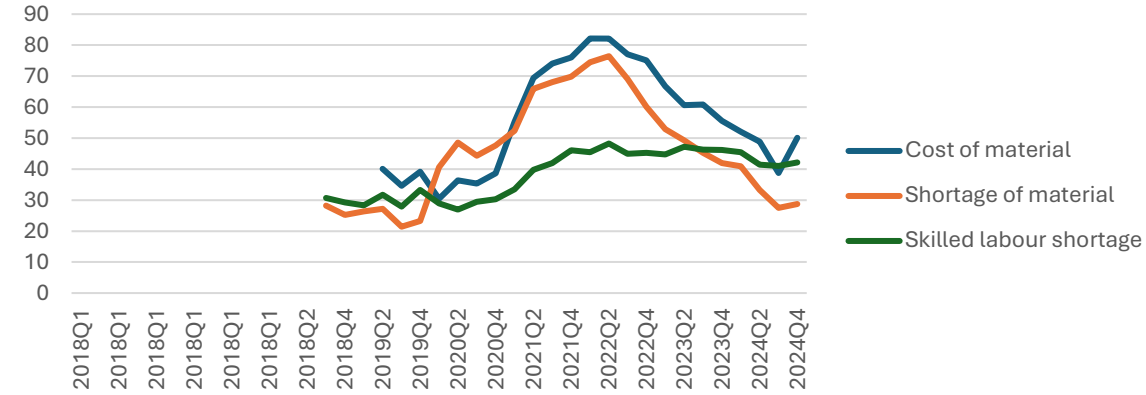
For this report, only government sources were considered. The private sector and other IOs collect data and publish annual reports, including the United Kingdom Building Cost Information Service, Arcadis International Construction Costs report, and Turner & Townsend International Construction Market, but the data underlying these reports is usually not publicly available. Regional and sector-specific sources also exist, such as Eurostat, the United States Bureau of Labor Statistics and regional MDBs.

Data from G20 countries show that infrastructure delivery costs have risen sharply since mid-2021, now averaging 10% above pre-COVID levels, even after adjusting for inflation, as measured by CPI. This marks a significant departure from historical trends, where construction price indices generally aligned with inflation rates. Country-specific and sectoral studies suggest that actual infrastructure delivery costs may be increasing at an even faster pace than CPI. As a result, the graph below primarily illustrates the post-COVID price shock based on available indices, rather than serving as an absolute measure of infrastructure delivery costs.

G20 construction cost indexes (adjusted for broader inflation)



Sentiment surveys - Global



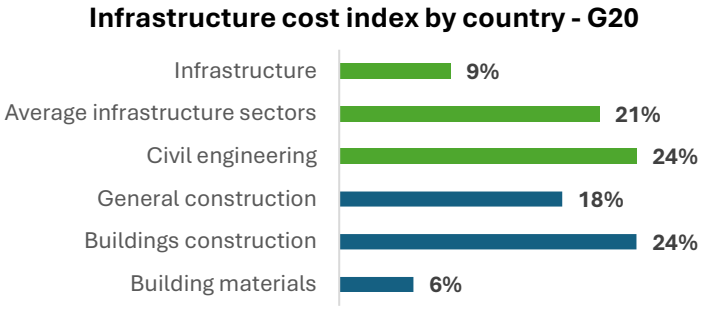
Source: Royal Institution of Chartered Surveyors

Global sentiment surveys highlight that rising costs were primarily driven by escalating material prices and shortages. Although these pressures have eased, a persistent shortage of skilled labour remains a significant challenge. Additionally, supply chain disruptions have contributed to cost increases, although shipping costs, while impactful in the short term, appear to have had a less enduring effect on overall infrastructure expenditure.

Key data gaps and opportunities for potential action

There is currently no global repository of the indices identified. Some private firms publish annual reports covering selected regions, but the underlying time series are usually not available. While national datasets (list available in Appendix) are freely available, the relevant metrics:

- Use different levels of granularity (only 30% of G20 countries provide an index directly referencing infrastructure sectors, and 50% reference a general construction cost index).
- Use different definitions, for example, an input-based or output-based cost index.



- Can be dispersed across different websites or sectors within the same country. This limits accessibility due to the technical complexity of navigating platforms and compiling relevant metrics.

Understanding these cost dynamics is crucial for both investors and policymakers. For investors, higher delivery costs affect project feasibility, financing structures, expected returns and having access to consolidated data across markets also improves understanding of risks. For governments, the availability of global benchmarks can impact public procurement strategies, the structuring and amendments to PPPs, and the affordability of long-term infrastructure investments.

As such, improving the definition of infrastructure and data collection would support the standardisation of reporting on infrastructure delivery costs and could enhance cost comparability across global markets. This effort could leverage the strong governance framework of the International Comparison Programme managed by the World Bank under the auspices of the United Nations Statistical Commission that collects comparative price data for the world's economies.[11]

[11] International Comparison Program. Access at LINK.

4.2 Infrastructure Enabling Framework

This sub-section highlights indicators that interested private investors seek in relation to the enabling environment before making investment decisions and commitments for a pipeline of infrastructure projects.

Data Theme 2: Legal and regulatory framework

Overview and context

Investors rely on legal and regulatory benchmarks as an initial indicator of a country's infrastructure investment environment, using it as a first step before deeper due diligence, particularly in emerging markets. Given the long-term investment horizons, legal and regulatory frameworks enable an effective response to changes in macroeconomic and project contexts, and conflicts during project delivery.

Relevance to investment and policy

Stable, consistent, predictable and transparent legal and regulatory frameworks are key indicators of a strong enabling environment for infrastructure investment. Such frameworks not only enhance competition and support the efficient delivery of infrastructure but also reduce uncertainty, which is particularly important for long-term investments. The Framework provides examples of the impact of regulatory changes on private capital mobilisation.

More accessible data for this theme can inform policymakers on key gaps in the existing frameworks and adopt relevant best practices. While these indicators are informative for investors, they also depend on local knowledge and partners to inform their decisions. Ratings for the quality of the enabling environment typically serve as an initial filter but are only the first step in a more detailed and rigorous due diligence process.

Assessment of global data sources

Data availability is considered relatively high. IOs publish publicly available global datasets by country with indicators measuring the quality of legal and regulatory frameworks in detail and direct users to best practices and technical support to close gaps. Data for both developed and developing countries are available.

Key global datasets include:

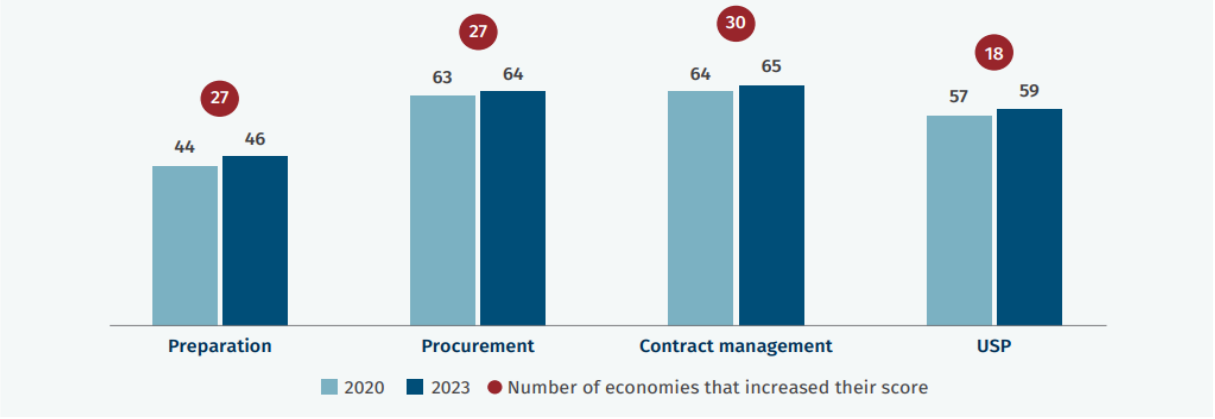
- The BID: Provides data on the quality of regulatory frameworks of 140 economies to develop large infrastructure projects, benchmarking them against internationally recognised good practices. It provides scores for good regulatory practices across the infrastructure lifecycle: preparation, procurement and contract management.
- InfraScope (Economist Impact and Inter-American Development Bank (IDB)): Assesses the capacity of countries to carry out sustainable, impact-driven and efficient PPPs in infrastructure. This benchmarking index focuses on Emerging Markets and Developing Economies (EMDEs) and is typically published annually, with each edition focusing on a single region. The latest edition, InfraScope 2023/24, assesses 26 countries in Latin America and the Caribbean (the most commonly examined region). The index covers five categories, with the most relevant being 'regulations and institutions'.

Other datasets (not infrastructure-specific) also publish relevant data on the regulatory environment, including the World Bank's Worldwide Governance Indicators (WGI) and Business Ready (B-Ready) reports, the OECD's Product Market Regulation (PMR) indicators, and the World Economic Forum's Global Competitiveness Index. Additionally, reports may provide investors with assessments of regional markets, such as the report of the Eurasian Economic Commission's *On the State of the Business and Investment Climate in the Member States of the Eurasian Economic Union*.

Illustration of key data trends and Insights

The selected indicator is the average PPP score published in the World Bank's BID report, which measures the PPP regulatory quality across four thematic areas: preparation, procurement, contract management and unsolicited proposals (USPs).

Figure ES3: Average PPP Score by Thematic Area in 2020 and 2023 (score 1-100, N=140)



Though some countries have embarked on reforms that have increased their PPP scores significantly, overall global progress on PPP regulatory quality has been modest. Data show that while scores have increased in all four thematic areas since 2020, the average improvement was only two out of 100 points. Preparation and USP increased their global scores by two points, while procurement and contract management only increased by one.

Contract management stands out as the area for which the largest number of economies (30) passed reforms that increased their score. Meanwhile, PPP preparation remains the thematic area with the most room for improvement, particularly in LICs and Western and Central Africa (AFW) economies.

Reforms tend to be concentrated in certain areas with already widely established good practices, leaving many relatively simple and useful reforms systematically left on the table across the world. For example, in PPP preparation, market sounding for technology and innovations is only required by 5% of the economies, showing a 1% increase since BID 2020.

Improvements in regulatory quality are important, as the BID 2023 report also showed that there is a significant correlation between PPP regulatory reforms and PPP investments, with major regulatory PPP reforms associated with an almost US$488 million increase in infrastructure PPP investments.

Key data gaps and opportunities for potential action

- Procurement of PPPs can be carried out at sub-national levels, while data typically covers only procuring authorities at the national or federal level.
- Regulatory frameworks to procure PPPs can differ across infrastructure sectors. However, data on a sectoral basis is not typically available.
- Data on the strength of legal and regulatory frameworks for attracting private investment in sustainable infrastructure is limited.

G20 members are encouraged to continue contributing data and engaging in existing initiatives to support their progress.

Data Theme 3: Institutional capacity, funding and financing for pipeline development

Overview and context

Infrastructure project preparation is complex and costly, requiring considerable technical capacity as well as financial and time resources.

The capacity to prepare infrastructure projects is weak across most regions, especially in LICs, and although it is better in HICs, there is still room for improvement.

Relevance to investment and policy

The private sector can co-develop or finance an infrastructure project pipeline more effectively if their public sector counterparts have stronger technical capacity. Also, project preparation is usually funded through government budgets, especially because the risk of project cancellation remains until they are approved for execution.

Moreover, the upfront project preparation costs are significant and have increased in recent years because of new requirements related to sustainability, regulation, inclusion and technology, among others. The burden is even higher considering that these costs are not usually included within the estimated investment amount and need additional funding. It is further compounded by the rising cost and complexity of integrating resilience into infrastructure, as climate-induced disasters increasingly damage assets and drive up project preparation needs – often without being factored into initial investment estimates. Despite these challenges, project preparation should be regarded as an investment to avoid future inefficiencies, reduce vulnerability to climate and disaster risks and better achieve the intended goals of infrastructure projects.

Assessment of global data sources

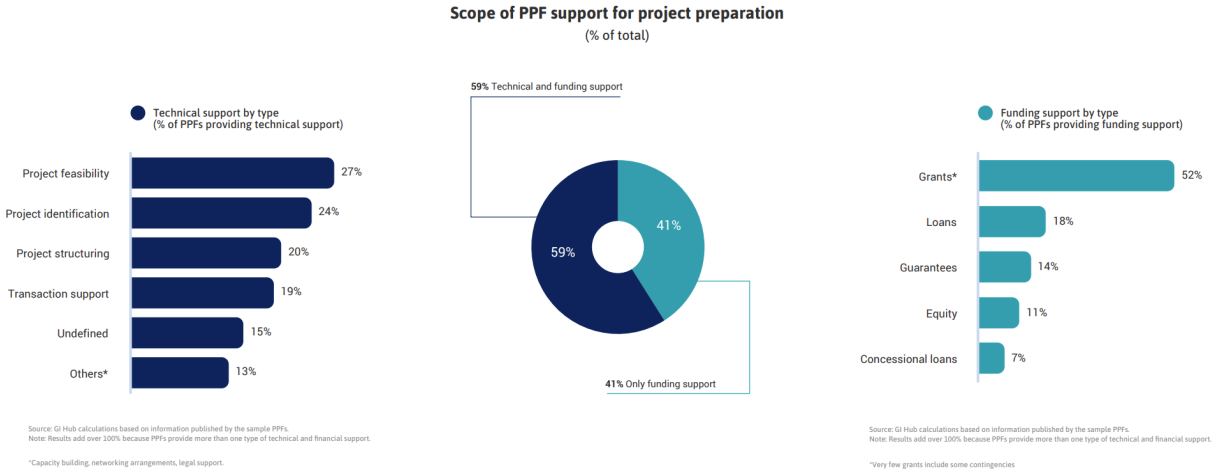
While the list of project preparation facilities (PPFs) is available, transparent data reporting on the number of projects and support provided is generally low. Some ad-hoc studies provide country-level scores or other metrics to gauge the status of institutional capacity, funding and financing for the development of infrastructure projects. The Framework provides examples of the impact of project preparation facilities on private capital mobilisation.

The Global Infrastructure Monitor 2021 analysed 130 global infrastructure PPFs – potentially covering the majority of those at the time of the study. The data was developed by aggregating fragmented lists of PPFs captured in credible globally available studies published by the Overseas Development Institute, Cities Climate Finance Leadership Alliance and Sustainable Development Investment Partnership. Each PPF was reviewed and validated by the Global Infrastructure Hub (GIH) to confirm their infrastructure mandate, scope of support and regional and sectoral coverage. Also, outputs metrics like the number and value of projects supported were compiled, where this data was publicly available. While reporting on output data had gaps, like it was often not disaggregated by year, data on outcomes and impact metrics were largely missing. Some ad-hoc studies show the benefits of project readiness in attracting private capital and improving delivery efficiencies.

Other reports, including the World Bank's BID, InfraScope, and InfraCompass, also provide some relevant metrics. Source[12] PPF finder also provides a mapping of resources available to project proponents.

Illustration of key data trends and insights

Very few PPF initiatives were in place before 2000. Since 2000, their creation has grown exponentially. The scope of technical and funding support provided by infrastructure PPFs was selected to illustrate this theme. PPFs are increasingly being used as a tool to provide technical support and funding for this important pre-investment stage.



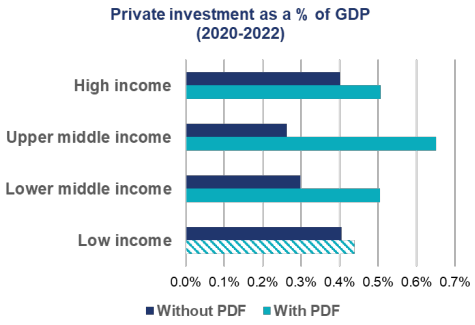
The GIH Infrastructure Monitor 2021 examines the channelling of technical support and funds to improve project preparation through the lenses of PPFs. Of the 130 PPFs studied, 59% were engaged in providing technical and funding support, including capacity building and networking arrangements, while 41% were focused on providing funding and financing support for project preparation. However, the technical and financial support was not comprehensive. The type of support required for infrastructure project preparation was fragmented across the facilities. Moreover, their support is limited by their capacity. A higher number of PPFs operating in a region or a sector does not necessarily translate into a higher volume or value of projects supported.

[12] Source is a multilateral digital platform designed to enhance the preparation and management of sustainable infrastructure projects, supporting both traditional procurement and PPPs. It is made available free of charge to developing countries.

When it comes to the effectiveness of these supporting facilities, the data is scant. However, the availability of project development funds is positively correlated with the volume of private investment.

Recent years have seen significant innovation in the way PPFs are providing support, with increasing cooperation and co-funding of project preparation. This is true especially for larger projects, which often need to resort to collaboration and co-funding to cover project preparation support costs.

Source: World Bank – BID



https://bpp.worldbank.org/en/home

Key data gaps and opportunities for potential action

There is currently a lack of clear, consolidated data on funds allocated through national budgets or PPFs for the development of infrastructure projects. In addition, limited and inconsistent data reporting by many PPFs hampers the ability to identify, assess and replicate best practices across countries and regions. The Global Infrastructure Monitor 2021 study on PPFs could be updated. The expanded list of PPFs could be brought together to align and standardise data collection metrics between PPFs, and the platform could be used to share lessons learnt and best practices.

IWG members could play a key role by encouraging the continuous mapping of PPFs and project development funds and supporting the development of standardised performance metrics. These efforts would contribute to scaling up effective practices and enhancing the overall efficiency and impact of project preparation processes.

4.3 Infrastructure Asset Lifecycle

This sub-section highlights the data required by the private sector to make investment decisions during the infrastructure asset lifecycle, including project preparation, delivery, management, refinancing and exit.

Data Theme 4: Financing costs benchmarks

Overview and context

Financing costs, a key determinant of project profitability, are driven by interest rates and risk premia. Countries often have publicly available and widely disseminated data on national central bank policy rates. As infrastructure assets have long durations, the presence of a well-defined yield curve that indicates interest rates for long time horizons helps in accurately charging term spreads, and the presence of credit ratings helps in accurately charging credit spreads. Markets charge risk premia to provide compensation to investors for taking additional risks in financing infrastructure projects, such as country and counterparty risk, asset construction risk, liquidity risk, sector risk, operations risk, etc. Infrastructure equity providers expect to earn risk premia on their investments as compensation for taking on these risks.

Relevance to investment and policy

Accurate benchmarks for financing costs are central to tariff setting, PPP negotiations and evaluating private sector returns in a way that balances profitability with societal impact. They can enable optimal financial structuring of projects at the lowest possible cost by providing more accurate benchmarks/reference points to finance providers and project teams. They help drive policy interventions to lower financing costs, for example, by addressing key risks identified by investors, such as political, currency, and regulatory risks. Lower financing costs enhance profitability – the key driver of private capital mobilisation – and can also enhance affordability by reducing the funding required from governments and users.

Assessment of global data sources

Across all sectors, École des Hautes Etudes Commerciales du Nord (EDHEC) Infra provides estimates for the cost of debt, cost of equity and WACC based on the ratio of debt-to-equity for infrastructure. It is available for 27 countries with large and measurable market activity for power, utilities, transport and social infrastructure sectors, but it is not freely accessible.[13] While data is available for emerging markets, the coverage mainly includes high- and middle-income countries.

While the Note maintains a commitment to technology neutrality, it has been found that more detailed data is available for renewable energy projects. Country-level benchmarks are freely accessible through the International Energy Agency (IEA) Cost of Capital Observatory[14] and the International Renewable Energy Agency (IRENA) Renewable Power Generation costs study[15]. IEA provides the data by subsector, mainly for solar photovoltaic (PV), gas power and utility-scale batteries projects in five countries – Brazil, India, Indonesia, Mexico and South Africa – and some data for offshore wind projects and other countries: Kenya, Senegal and Vietnam. IRENA has the

[13] EDHECInfra InfraMetrics. Access at LINK.
[14] IEA (2023), *Cost of Capital Observatory*, IEA, Paris https://www.iea.org/reports/cost-of-capital-observatory, Licence: CC BY 4.0. Access at LINK.
[15] IRENA (2024). Renewable power generation costs in 2023, International Renewable Energy Agency, Abu Dhabi. Access at LINK.

most comprehensive country coverage for real-after-tax WACC estimates by technology, with data for 100 countries for solar PV and onshore wind, and 15 countries for offshore wind[16]. Some survey respondents also cited IJGlobal since the platform provides financing terms for some deals.

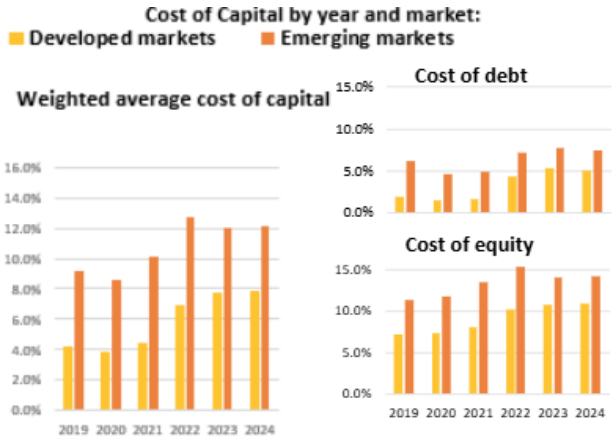
These datasets rely on modelling techniques to estimate financing costs based on relevant infrastructure datasets supplemented with expert surveys, interviews and reviews to refine the estimates, and integrating other databases that provide key metrics that influence the infrastructure cost of capital. However, they do not provide WACC specifically for infrastructure. Financial market data on risk-free lending rates, country risk premiums, lenders' margins and equity risk premiums are used in models to develop currently available country-specific WACC benchmarks for infrastructure.

While not infrastructure-specific, country default spread estimates for all countries are available based on the work of Prof A. Damodaran at the New York University Stern School of Business. They were derived from (depending on data availability) either credit ratings of sovereign bonds or the existing spreads between the 10-year US treasury bond and a country-specific sovereign bond of similar duration that is denominated and traded in US dollars or euros.

Illustration of key data trends and insights

The WACC depends on the cost of debt, the cost of equity and the ratio of debt to equity. For infrastructure, it doubled from nearly 4% in 2019 to 8% in 2024 in developed markets, and from nearly 9% to 12% in emerging markets. This was driven by the increase in debt cost in developed markets from 1.9% in 2019 and 1.6% in 2021 to 5.0% in 2024, much sharper than that in emerging markets from 6.1% in 2019 to 7.4% in 2024.

The cost of equity depends on the risk-free rate (which also determines the cost of debt) and risk premia. Risk premia increased more for emerging markets, while the cost of debt increased more for developed markets. Thus, the cost of equity increased from 7.2% in 2019 to 10.9% in 2024 in developed markets, and from 11.3% to 14.2% in emerging markets during the same period. In emerging markets, more equity than debt was likely used due to their higher risk, further contributing to an increase in the cost of capital as equity is more costly.



Source: EDHECInfra (2024). Data as of 31 Oct 2024

Note: EDHECInfra data is based on 9,000+ companies and a representative sample of 27 countries that exhibit sizable level of activity that could be measured including Australia, Austria, Belgium, Canada, Denmark, Germany, Spain, Finland, France, United Kingdom, Hungary, Ireland, Italy, Netherlands, Norway, New Zealand, Poland, Portugal, Russia, Singapore, Slovakia, Sweden, United States of America, Brazil, Chile, Malaysia, Philippines.

[16] IRENA (2021). The cost of financing for renewable energy: Data appendix. Access data at LINK.

Key data gaps and opportunities for potential action

Current datasets lack the granularity needed to inform the development of investable project pipelines – for example, data on financing costs for senior (secured/unsecured) and junior debt, credit spreads and term spreads is often missing. This is especially the case in emerging markets and sectors with lower volumes. The IWG can encourage data reporting by project teams, which is available through the usual project development process, especially to enhance coverage in these markets and sectors. The data can be compiled and reported by leading public data providers, IOs and MDBs. First, country- and sector-level benchmarks need to be developed, followed by strengthening the sub-national benchmarks, where needed.

One important element in establishing the cost of financing is the ability to leverage domestic financial markets, particularly in local currency. Improving data on key market fundamentals can help reduce the cost and volatility of infrastructure financing. The absence of a reliable long-term yield curve hampers investors' ability to price infrastructure assets and constrains the development of interest rate swap markets, limiting liquidity along the curve. Approaches to address this challenge could benefit from discussions proposed under Theme 5.

Data Theme 5: Financial performance benchmarks

Overview and context

Infrastructure investments have a high debt-to-equity ratio (~80:20). Backed by large physical assets and stable revenue streams, infrastructure investments leverage more debt to finance projects, but higher risk calls for more equity. While policies and regulations work towards preventing investors from earning monopoly profits and limiting return potential, investors seek guarantees to reduce risk to an acceptable level.

Relevance to investment and policy

Financial performance benchmarks for expected return and risk inform policy decisions of governments and regulators, and capital allocation decisions of investors, especially credit risk (default and recovery) data for debt providers and competitiveness of risk-return profile relative to other market opportunities for equity investors. This data enables effective collaboration between the public and private sectors in developing an investable infrastructure project pipeline. It also enables effective collaboration within different segments of the public and private sectors. Different private investors finance infrastructure – including commercial banks, insurance companies, pension funds and corporates – that have varying risk-return preferences. They use financial products in listed or unlisted debt or equity markets, as well as insurance and fund structures, which operate in different regulatory regimes. This data can empower financial regulators to set prudent, precise and conducive regulations and track compliance.

Assessment of global data sources

- For infrastructure debt, investors widely use credit risk data in allocating capital, especially asset managers and banks. Leading credit rating agencies, Moody's and Standard & Poor's (S&P), are the main source of this data, followed by publicly available economic and financial data (e.g., the IMF and International Bank for Reconstruction and Development), among

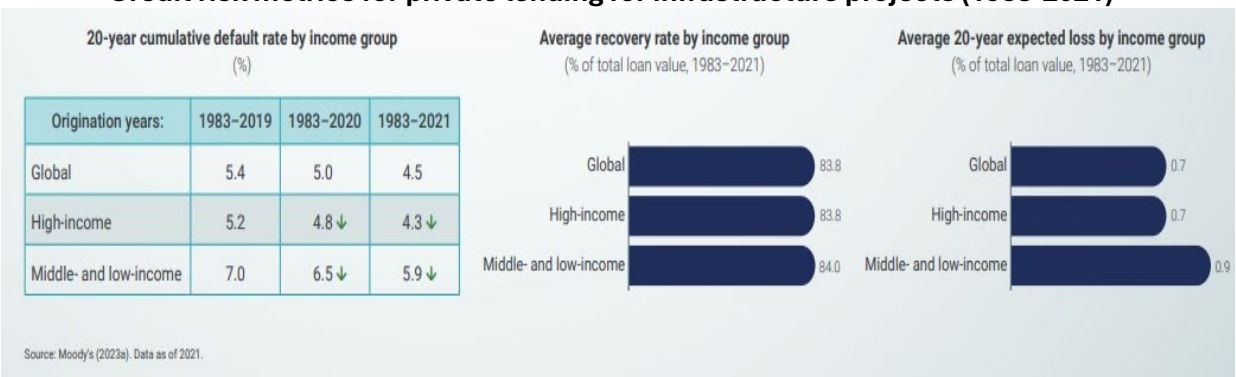
others.[17] Moody's and S&P publish this data for rated and unrated, corporate and project finance infrastructure debt.

- GEMs publishes credit risk data benchmarks from 27 MDBs/DFIs to inform risk assessment and investment decisions.[18] Although the GEMs statistics reflect the unique experience of MDBs and DFIs, these results provide valuable information on the investment risk in EMDEs, an area characterised by a lack of available credit risk data. These increasingly granular statistical publications by the GEMs Consortium address the call by the G20 and other stakeholders to provide investors greater insights into credit risks in emerging markets, thereby allowing them to better guide their asset allocations. The latest publications provide statistics at the country and sector level, as well as a range of newly-introduced metrics and will include infrastructure-specific metrics soon.
- For listed infrastructure equities, risk and return metrics are provided by infrastructure indices tracking 100-150 global infrastructure companies listed in stock markets. Some widely used indices are published by Morgan Stanley Capital International (MSCI), S&P and Global Listed Infrastructure Organisation (GLIO).
- For unlisted infrastructure equities, EDHECInfra's Infra300equity index tracks 300 representative unlisted infrastructure companies, noting sufficient data availability only in 25 markets. Also, Preqin estimates the return earned by investors in infrastructure funds.

Illustration of key data trends and insights

Available data show that credit risk metrics for infrastructure loans were consistently better than those for non-infrastructure loans across country income groups over time. They are even better for PPPs and in the presence of strong contractual and regulatory provisions. For MDBs and DFIs' infrastructure operations with private counterparts, GEMs data suggests that risk was on par with other global benchmarks despite a much larger share of EMDEs. It also shows that the risks of investing in EMDEs are lower than commonly perceived and lower than implied by sovereign risk rating, especially alongside MDBs and DFIs.

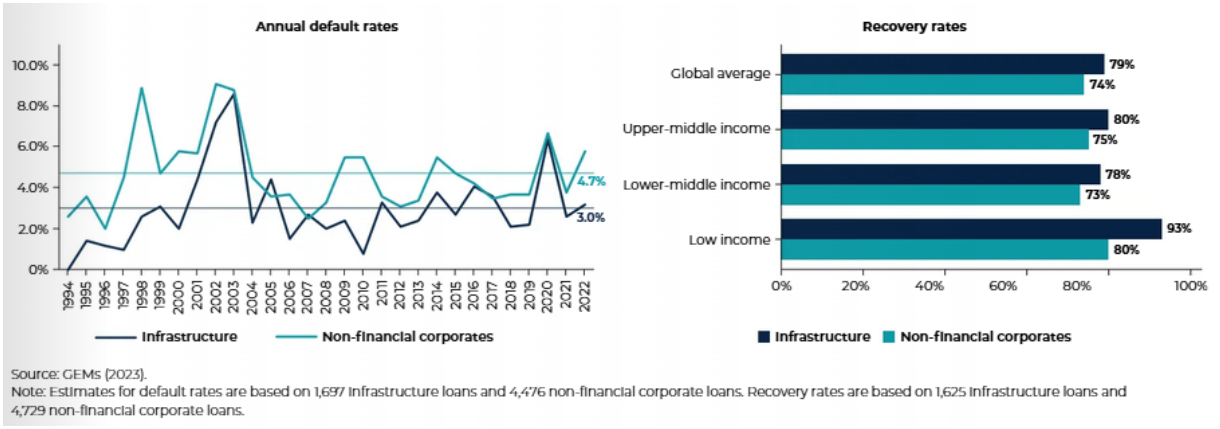
Credit risk metrics for private lending for infrastructure projects (1983-2021)



[17] GEMs (2024). Global Emerging Markets Risk Database (GEMs): Analysis of Investor Perceptions and Market Demand. October 2024.
[18] Global Emerging Markets Risk Database (GEMs). Access at LINK.

Averages

Credit risk metrics for MDB/DFI contracts with private counterparts by asset class (%, 1994-2022)



Source: GEMs (2023).
Note: Estimates for default rates are based on 1,697 infrastructure loans and 4,476 non-financial corporate loans. Recovery rates are based on 1,625 infrastructure loans and 4,729 non-financial corporate loans.

Note: Moody's Analytics Data Alliance Project Finance Consortium has a sample size of 8,340 infrastructure loans originating between 1981 and 2021, aggregating credit risk metrics from more than 80 global institutions. For MDB/DFI lending, GEMs provide the largest sample of 1,697 infrastructure loans for LMICs.

For private investors in infrastructure equities, lower risk through a more reliable income stream of the infrastructure asset class is its most attractive feature. For over a decade, at least 60% of global private capital invested in infrastructure assets has targeted opportunities with stable long-term cash flows. The risk aversion has increased in recent crisis years. Driven by the essential nature and strong public support for continued operations, infrastructure is especially resilient during crisis times. During 2022-28, the expected average return on infrastructure funds is nearly stable (~11%) but sharply declines for private equity and venture capital funds by ~3 percentage points.

Key data gaps and opportunities for potential action

Reliable aggregate data is published by reputed entities to track key indicators by infrastructure investment type. Only some data is freely accessible. Data coverage and availability are the most frequently cited concerns, with almost no investors rating highly what they already use. Investors seek more granularity with estimates for a country-by-sector matrix, and reporting on additional metrics – collateral and guarantees, credit ratings and local currency lending, in order of priority.[19]

For regulators, the key challenge is the lack of a commonly accepted definition of infrastructure lending. The closest definition of infrastructure lending are the exposures under project finance. Supervisory data does not segregate the infrastructure lending exposures, as these are reported in an aggregated way under specialised lending exposures, which is a wider category.

Existing data lacks granularity to meaningfully inform decisions due to limited sample size, especially in emerging markets. Stakeholder consultations reveal that private investors are reluctant to share their data due to confidentiality concerns, while markets and policymakers find existing data less reliable because they are collected by private entities and lack credible visibility and sufficient public disclosure. GEMs addressed similar concerns among its MDB and DFI

[19] GEMs (2024). Global Emerging Markets Risk Database (GEMs): Analysis of Investor Perceptions and Market Demand. October 2024. Access at LINK.

members by administering guaranteed anonymity and aggregation. First, country- and sector-level benchmarks need to be developed, followed by the strengthening of sub-national benchmarks, where needed.

Given the high share of debt in infrastructure financing structures, benchmarks on credit risk metrics with greater granularity and dimensions can significantly improve the precision in recalibrating risk weights and financing costs for an investable pipeline of infrastructure projects.

Opportunities for potential actions to close infrastructure data gaps include:

- *Granular GEMs data for infrastructure*: In 2022, the G20 recommended the use of relevant granular data for risk weighting from the GEMs database [Recommendation 5d G20 CAF report][20]. Initial discussions to develop annual infrastructure-specific metrics from the GEMs database disaggregated by key dimensions have commenced between GEMs and Public-Private Infrastructure Advisory Facility – GIH.
- Establishment of a collaborative forum, including regulators, global standard-setters, other G20 working groups and the banking and insurance sectors to discuss data requirements for the supervisory and regulatory treatment of infrastructure as an asset class [*The G20 2022 Framework on How to Best Leverage Private Sector Participation to Scale Up Sustainable Infrastructure Investment* endorsed Action 3.1][21]. This forum would also provide a platform to assess whether current data gaps are leading to unintended consequences for infrastructure finance, particularly in light of evolving regulatory reforms such as Basel IV.

Data Theme 6: Infrastructure market liquidity and depth

Overview and context

Infrastructure market liquidity refers to the ease with which infrastructure assets and financial instruments, such as bonds, loans or equity, can be bought or sold without significantly affecting their price. Market depth in the context of infrastructure indicates the availability of a broad and diverse investor base, a range of financial instruments, and sufficient transaction volume to support large-scale, long-term infrastructure financing.

Relevance to investment and policy

Infrastructure market liquidity and depth are crucial to infrastructure finance, especially in emerging markets, as they determine the availability and cost of long-term funding for infrastructure projects and provide exit strategies for investors. A deep and liquid financial market ensures that governments and private investors can raise funds efficiently through debt instruments such as bonds. Beyond depth, the availability of local currency markets can also help reduce reliance on foreign currency borrowing and mitigate risks like exchange rate volatility. In turn, this can also help in enhancing investment by institutional investors.

[20] Boosting MDBs' investing capacity. (2022). An Independent Review of Multilateral Development Banks' Capital Adequacy Frameworks. Access at LINK.

[21] G20/GI Hub (2022). G20/GI Hub framework on how to best leverage private sector participation to scale up sustainable infrastructure investment. G20 Indonesia 2022 Infrastructure Working Group. October 2022.

Data on bonds can also be useful to understand corporate investment in infrastructure. These bonds often combine refinancing with new investment and are not systematically reported, except for green bonds. Corporations play a significant role in funding infrastructure, particularly for maintenance, operations and upgrades, but estimating the scale of this investment remains challenging.

Assessment of global data sources

Data sources mostly cover general market liquidity rather than sector-specific (infrastructure) financing.

Key global datasets on financial market development (non-infrastructure specific) are:

- IMF Financial Development Index: Summarises how developed financial institutions and financial markets are in terms of their depth, access and efficiency, for 180 countries.
- World Bank's Global Financial Development database: Provides financial system characteristics for 214 economies across 108 indicators measuring the depth, access, efficiency and stability of financial systems.
- World Bank's Local Currency Bond Market Development Indicators: Provides data on local currency bond markets, including size, liquidity, investor base and regulatory frameworks.

Key global datasets for green/blue/sustainability bonds:

- Climate Bonds Initiative
- Refinitiv-Eikon (requires subscription)
- Bloomberg/BNEF (requires subscription)
- S&P Capital IQ Pro (requires subscription)
- Financial Times Data (requires subscription)
- Thomson-Reuters (requires subscription)
- Macrobond (requires subscription)
- Environment Finance Data (requires subscription)

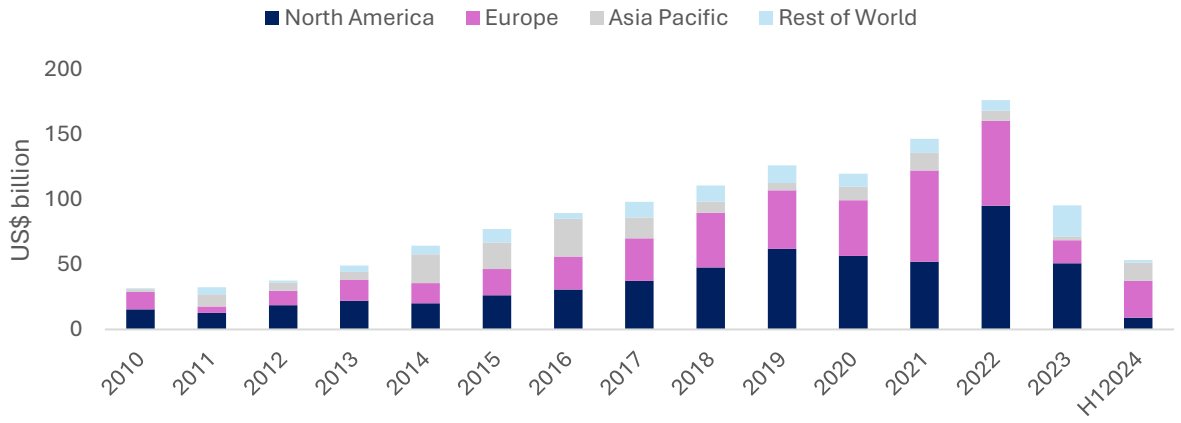
Some data is also available through infrastructure deals data providers such as RealFin, IJGlobal or Preqin (all fee-based), but the volumes captured are usually lower as some corporate financing is not captured. The World Bank PPI database provides data on primary market data in Emerging Markets for free and is validated in collaboration with World Bank country teams.

The survey results confirm that data gaps are not critical for this theme given the number of platforms providing statistics. However, the data is available mostly through subscription, limiting accessibility and usually does not provide clear infrastructure-specific insights.

Illustration of key data trends and insights

Two indicators were selected to illustrate trends for this topic. The first one illustrates mostly equity availability through fundraising for infrastructure.

Annual capital raised by funds for the infrastructure asset class
By region (2010-2024)

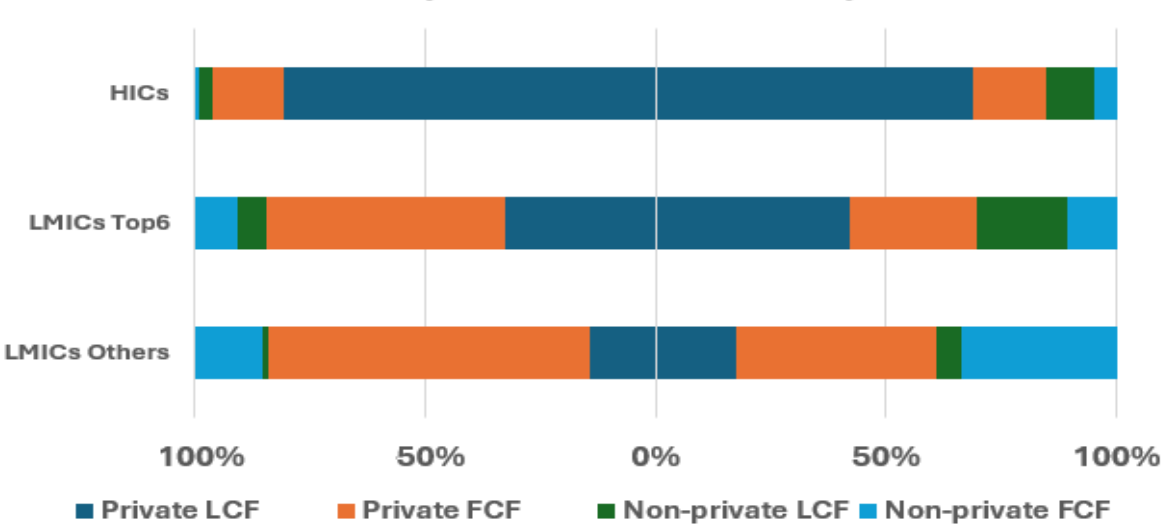


Source: Global Infrastructure Monitor 2024. Based on Preqin Global Infrastructure Report 2025

In 2023 and 2024, infrastructure fundraising faced significant challenges – in particular, interest rate hikes – with total capital raised dropping to US$94.9-billion, nearly half of 2022 levels. While the decline stabilised in 2024, fundraising remained subdued, reaching US$70.5-billion by Q3. Despite these challenges, investment from infrastructure funds – still stocked with significant dry powder – is expected to remain relatively resilient compared to other asset classes.

The second indicator illustrates debt markets and the depth of local currency markets.

Local currency financing of private investment in infrastructure projects in primary markets by financier source
(% of total private investment, 2019-2023 average, LMICs)



The top six LMICs – Brazil, China, India, Indonesia, Mexico and Türkiye – have a much greater proportion of local currency financing when measured against other LMICs and are closer to HIC

ratios, from both private and non-private[22] financing sources – 62% of total private investment, compared to 23%. Local currency financing for private participants increased from 45% to 60% in primary markets – highlighting the potential to develop local currency financing.

Bond markets are increasingly being used to finance infrastructure (25% in high-income economies but only 10% in EMDEs). Data on sustainability-related bond issuance is available; however, data on use-of-proceeds is usually limited to high-level sectors such as transport or energy, but even this combines core infrastructure sectors with manufacturing or extractives.

Key data gaps and opportunities for potential action

Understanding infrastructure market liquidity and depth remains limited due to several challenges. This is because the bond market data – besides green bonds – is hard to capture and is not available specifically for infrastructure, and when it is available, the use-of-proceeds is not clear. Even for green bonds, the data publicly available does not offer granular trends (by type of issuer and use-of-proceeds). Secondary market trading for infrastructure bonds, particularly in emerging markets, also lacks transparency and is poorly tracked. Most available data come from periodic reports, making real-time assessments difficult. Non-public infrastructure financing, such as private placements and off-balance-sheet funding, is also complex to monitor.

The IWG could explore the opportunity to work with bond data providers to understand how infrastructure investments through capital markets could be better tracked, in particular, use-of-proceeds and issuers.

Data Theme 7: Project delivery and management

Overview and context

Infrastructure project delivery and management often face challenges such as cost overruns, delays and poor planning. A strong capacity for effective and efficient project delivery and contract management can help create a credible pipeline of infrastructure projects and more attractive investment opportunities. The lack of a credible pipeline of infrastructure projects is widely recognised as one of the major bottlenecks in attracting private capital to infrastructure.

Relevance to investment and policy

Investors rely on precedents and benchmarks related to infrastructure project delivery and management to evaluate the viability, risks, returns and long-term sustainability of potential investments. Access to data that demonstrates strong market capacity to prepare, implement and adapt projects throughout their lifecycle – including through contract renegotiations when necessary – can significantly enhance investor confidence and help attract private capital.

While frameworks and standards are important, local knowledge and partners remain essential for investors. Ratings and data consultations often serve as an initial filter, but they are typically just the starting point for more detailed due diligence processes.

[22] Non-private includes government agencies, state-owned entities and banks, national development banks, export credit agencies, MDBs/DFIs, and philanthropies.

Assessment of global data sources

Currently available data is primarily focused on the quality of infrastructure project planning and procurement processes at a country level. Data on other indicators of effective project delivery and management (such as cost overruns and delays) remain scarce, particularly on a global basis and in EMDEs. Relevant data is dispersed across national and sub-national government reports, industry and company disclosures and academic studies, making comprehensive analysis challenging.

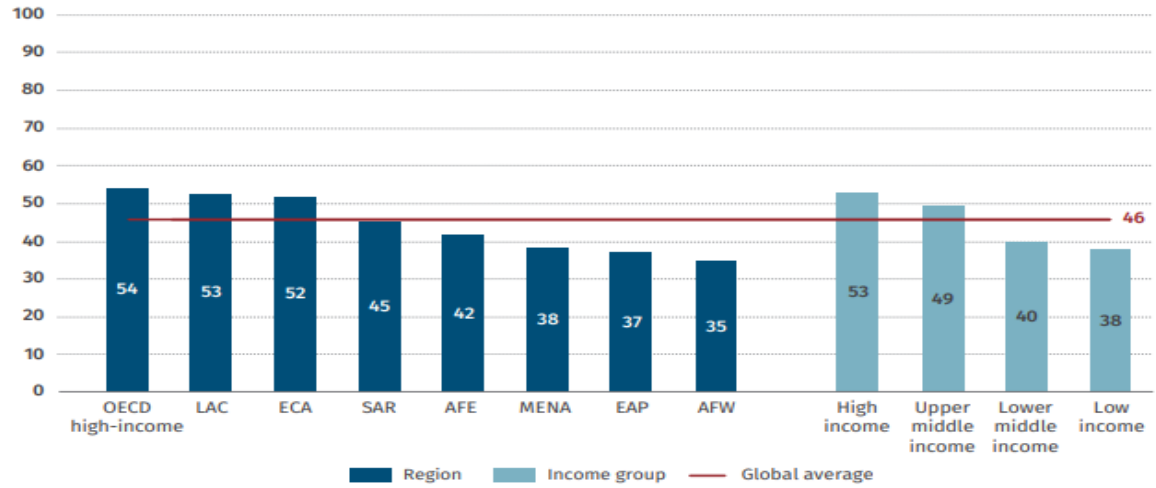
Key global datasets include:

- The World Bank's BID: Assesses the quality of regulatory practices to develop large infrastructure for 140 economies across the infrastructure lifecycle – preparation, procurement and contract management – benchmarking them against internationally recognised good practices.
- InfraScope (Economist Impact and IDB): Assesses the capacity of countries to carry out sustainable, impact-driven and efficient PPPs in infrastructure, with a focus on EMDEs. Each edition focuses on a single region with the latest edition, InfraScope 2023/24, assessing 26 countries in Latin America and the Caribbean. The index covers five categories, with the most relevant being project preparation and sustainability (with indicators such as project selection, project preparation facilities, efficiency of project preparation), risk management and contract monitoring (with indicators such as contract management and contract termination), and performance evaluation and impact (with indicators such as project mortality rate).
- The Pacific Region Infrastructure Facility's Pacific Infrastructure Performance Indicators: Outcome indicators measuring access, quality, affordability, safety and efficiency.

Illustration of key data trends and insights

The selected indicator is the preparation of PPPs score from the BID 2023 database.

Figure 8: Preparation of PPPs, Average Score by Region and Income Group (score 1–100, N=140)



Source: Benchmarking Infrastructure Development 2023.
Note: AFE = Eastern and Southern Africa; AFW = Western and Central Africa; EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; MENA = Middle East and North Africa; OECD = Organisation for Economic Co-operation and Development; SAR = South Asia.

PPP preparation is the thematic area with the most room for improvement. However, data show regional variation and income group differences in the average score for the preparation phase. The OECD and high-income economies continue to outperform all other regions and income groups. Disaggregating the data by income level reveals that the lower an economy's income level, the lower its average score for the project preparation phase. On a regional basis, AFW economies have the most room for improvement.

The environmental impact assessment is the most commonly required evaluation during the PPP preparation phase (98% of economies), and market sounding for technology and innovations is the least (5%).

Key data gaps and opportunities for potential action

- Despite the high prevalence and persistence of cost overruns in infrastructure projects, a global dataset for such data is currently not available. Data is scattered across national and sub-national government reports, industry and company reports and academic literature. Moreover, they tend to focus on a single country and/or sector.
- Data is also difficult to obtain for the counterfactual scenario, making value-for-money analysis when assessing infrastructure projects extremely challenging. Often, it is not clear what the government benchmarks are for 'on time' and 'on budget'.

G20 members and invited countries are recommended to continue contributing qualitative data to initiatives such as InfraScope or the World Bank's BID. Collecting data throughout project development and delivery – potentially via digital platforms like Source – can help countries gather and share aggregated insights.

Data Theme 8: Investors' sustainable development goals and climate risks

Overview and context

Infrastructure is widely recognised as a fundamental catalyst for economic growth and job creation, playing a crucial role in advancing development objectives. It directly or indirectly supports the achievement of many Sustainable Development Goals (SDGs). These elements were also recognised by the G20 in the QII principles. In addition, climate change and disasters are increasingly disrupting infrastructure systems, and investing in climate and disaster-resilient infrastructure is a cost-effective strategy to reduce long-term losses.

There is currently a range of initiatives that are working towards developing a global set of data indicators that assess physical climate risk. Physical climate risk data can help countries and investors better understand their exposure and manage their risk, which in turn improves resilience.

As most of this data is recent or emerging, there is also a limited understanding of how investors may use this data and incorporate the data into their decision-making processes. This issue is likely to compound over time, as the public and private sectors continue to develop a multitude of definitions and data standards for sustainable infrastructure.

Relevance to investment and policy

Investors – especially long-term and institutional investors – are increasingly recognising the importance of building resilience to climate-related impacts to protect their investments. These elements were also recognised by the G20 in the QII principles and indicators. Having access to reliable data is essential for infrastructure planning to be aligned with the QII indicators.

It is, however, acknowledged that while many investors include climate-related impacts in their decision-making, others may prioritise other aspects that align more closely with their own development goals and strategies.

Interoperable frameworks and indicators for physical climate risk assessment can help interested investors (especially secondary markets investors) better understand their exposure and manage their risk without necessarily having to do a detailed technical due diligence. Such frameworks and indicators should also account for country-specific circumstances, which are highly relevant to addressing climate change impacts.

Data in this theme can also be used by governments and regulators to track progress on global development goals, such as the SDGs – particularly on adaptation.

Assessment of global data sources

There is a lack of consolidated, standardised, global data on physical climate risk indicators specific to infrastructure assets.

Currently, many initiatives focus on a regionalised or sector-specific approach – likely because stakeholders often have unique needs that are specific to their context. This can often make it difficult to compare and compile different data frameworks and data sets relating to climate.

Some global datasets include:

- Global Real Estate Sustainability Benchmark (GRESB) provides infrastructure asset Environmental, Social, and Governance (ESG) scores, reflecting the extent to which assets have ESG policies in place, manage risk, report transparently on their most material issues and have current and future targets. It also tracks whether transition risks and physical climate risks are being identified and whether the financial impact of these risks is being assessed.
- EDHEC provides insights on infrastructure asset resilience, transition risks, physical risks and climate risk assessment to help private and public decision-makers manage climate-related financial risks.
- Coalition for Disaster Resilient Infrastructure (CDRI) has developed a Global Infrastructure Risk Model and Resilience Index (GIRI), a probabilistic global risk assessment model to estimate risk for infrastructure assets with respect to major geological and climate-related hazards. This enables governments to identify and understand the contingent liabilities internalised in their infrastructure systems and provides a basis for incorporating resilience in the project lifecycle.
- In addition to GIRI, CDRI has also developed an asset-level tool that provides actionable insights on resilience interventions and their dividends across the infrastructure lifecycle. This tool has been piloted on select infrastructure projects in India's National Infrastructure

Pipeline, demonstrating a compelling economic case for investing in disaster-resilient infrastructure.

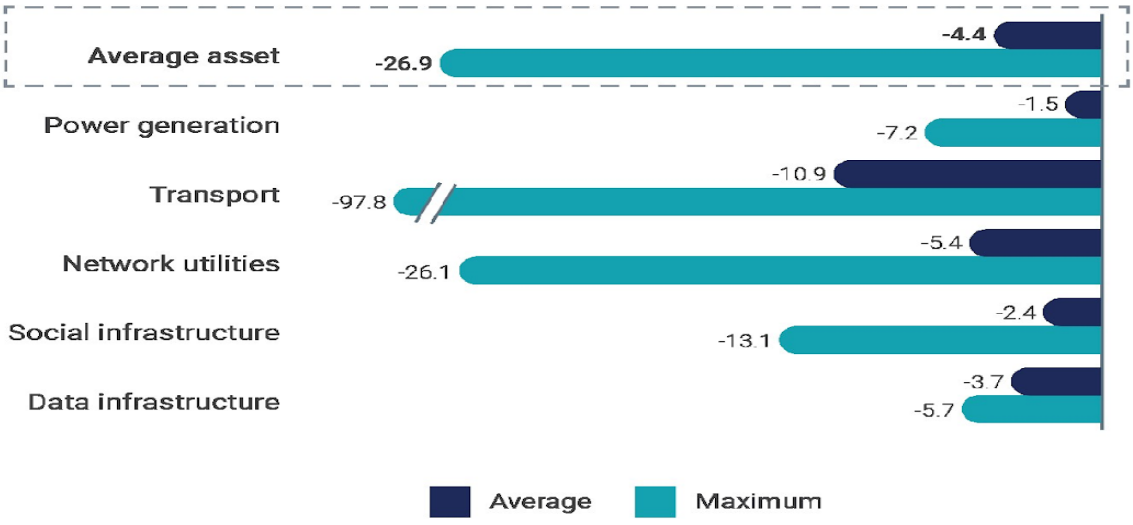
- The INFORM Risk Index, developed by the Inter-Agency Standing Committee Reference Group on Risk, Early Warning and Preparedness and the European Union, is a global, open-source risk assessment for humanitarian crises and disasters that seeks to support decisions about prevention, preparedness and response.
- Investors and DFIs are also developing infrastructure standards that could ultimately provide global metrics to investors across those objectives. Examples of such standards/ labels/principles include: G20 QII principles, MDBs' Common Set of Aligned Sustainable Infrastructure Indicators, BlueDot, Green Investment Principles for the Belt and Road, FAST-Infra, among others. To become viable market benchmarks for investors, these will need to cover high volumes of transactions globally.

Illustration of key data trends and insights

Climate change poses a significant threat to infrastructure. Rising sea levels, extreme weather events and increased temperatures can all contribute to the deterioration of assets. The selected indicator is data on the potential impact of climate events. By 2050, the net value of infrastructure assets is expected to decline by an average of 4.4%, and – in a worst-case scenario – by 26.7%.

Potential infrastructure losses due to physical risks of climate events by 2050

(% of net asset value loss by type of infrastructure asset)



Source: EDHEC Infra

Key data gaps and opportunities for potential action

A key limitation of existing infrastructure data sets is the lack of coverage and standardised metrics on potential climate change impact. Most available indicators focus on ESG transparency and reporting, rather than physical impacts, and are typically limited to corporate-level disclosures. For example, while GRESB provides one of the most comprehensive datasets at the asset level, its global coverage remains limited. In 2024, nearly 90% of GRESB participants were

from HICs, with 80% located in Europe and the Americas and no participation from Africa. Furthermore, publicly available data is aggregated only at the regional or sector level, with no access to asset-level granularity.

In addition to limited coverage, there are potential risks related to interoperability between various global climate-related data sources. Disparate standards and reporting requirements would complicate project preparation, reduce transparency, and ultimately make infrastructure projects harder to finance.

While recognising that investors should retain the flexibility to integrate climate and development goals in ways that align with their mandates, the G20 has a clear opportunity to underline the importance of interoperable and comparable data systems. Infrastructure data platforms should be designed to enable alignment and consistency across climate- and development-related definitions and metrics.

This aligns with Action 2.1 of the *Framework to Scale Up Private Investment in Sustainable Infrastructure*, endorsed under the Indonesian G20 Presidency. The G20 urges MDBs, national development banks, G20 governments, infrastructure asset rating providers, IOs, networks and investors to voluntarily collaborate – where appropriate and subject to country circumstances – towards achieving comparability and interoperability of their sustainable infrastructure definitions and data disclosure practices. This action explicitly avoids the creation of new standards or indicators, instead focusing on real assets and complementing parallel work under the G20 Sustainable Finance Working Group on corporate ESG and climate disclosure frameworks.

5. Conclusion and way forward

Closing infrastructure market data gaps has the potential to strengthen and scale up public and private sector collaboration in developing an investable pipeline to close the persistent infrastructure deficits. Mirroring the Framework, the Note identifies market data, categorised into eight themes, as an important enabler.

To assess the availability of global market data across these themes, this Note was developed using a blend of research methods, including literature review, data analysis, expert consultations, stakeholder surveys, collaboration with leading data providers and engagement at key infrastructure finance events and forums.

Besides the new consultations undertaken to support Priority 1 of the IWG under the South African G20 Presidency, the Note draws extensively on the comprehensive data review and analysis conducted in the Infrastructure Monitor reports [23] – which includes years of engagement with leading infrastructure data providers. The recommendations also draw from the *Framework to Scale Up Private Investment in Sustainable Infrastructure*, endorsed

[23] World Bank. 2025. Infrastructure Monitor 2024. © World Bank https://www.gihub.org/infrastructure-monitor/

during the Indonesian G20 Presidency, the report exploring Infrastructure taxonomies[24] developed under the India G20 Presidency and the dedicated "Global trends" sessions organised by the Brazilian G20 Presidency. Altogether, these consultations were the basis of the non-binding opportunities for action highlighted in this report.

To support IWG discussions and address the challenge of limited accessibility, this Note also offers a structured mapping of available market data across the selected key themes. It provides a snapshot of global trends across the mapped themes, drawn from the identified data sources. This aims to ease the challenges practitioners face when attempting to locate, integrate, and analyse global infrastructure datasets.

Gaps and opportunities identified through this work can be organised broadly into three gaps and opportunity categories – the order of presentation does not imply any hierarchy of importance or potential impact:

[24] https://www.mof.go.jp/english/policy/international_policy/convention/g20/g20_20231013.pdf https://www.gihub.org/news/definitions-and-classifications-of-infrastructure-hugely-influence-investment-decisions-and-the-ability-to-close-the-infrastructure-gap/

 **Gap: Definition** Lack of a common infrastructure taxonomy and reporting frameworks	The lack of an internationally agreed baseline definition of infrastructure in the context of private investment is a fundamental challenge that undermines data comparability across countries and sectors. While definitions and reporting frameworks exist, and many policy frameworks reference infrastructure, they are often inconsistent. While definitions need to be flexible and each country able to retain specific taxonomies or standards, the lack of a baseline creates obstacles for both investors and regulators trying to assess performance, categorise infrastructure as a distinct asset class, and integrate it effectively into regulatory frameworks.
 **Opportunity: Forum** Mobilise stakeholders to define the asset class, promote policy objectives and mitigate regulatory challenges	Developing an international, consensus-based, consistent definition of infrastructure and establishing global frameworks for standardised data collection is a long-term undertaking. However, there is a timely opportunity to discuss how to address this foundational issue based on collaboration between regulators, global standard-setters and representatives from the banking and insurance sectors to discuss data needs for the supervisory and regulatory treatment of infrastructure as an asset class. This potential action was endorsed under the *Framework to Scale Up Private Investment in Sustainable Infrastructure*, developed during the Indonesian G20 Presidency. Such a collaborative effort would also provide a platform to assess whether current data gaps are leading to unintended consequences for infrastructure finance, particularly considering evolving regulatory reforms such as Basel IV.
 **Gap: Fragmentation** Fragmented Data Despite Availability	The lack of standardised reporting does not mean data is unavailable – large volumes of financial market data do exist. However, there is currently no centralised mapping of infrastructure-related datasets to clarify their scope, limitations and how they relate to one another. This fragmentation hampers users' ability to leverage existing data insights effectively.
 **Opportunity: Mapping** Improving Access Awareness and Capacity	Improving the visibility and usability of existing datasets is essential to support better benchmarking and informed decision-making. The G20 IWG contribute to that effort by mapping key global datasets and highlighting their current limitations, scope, and interlinkages, helping practitioners navigate and utilise available data more effectively. Finally, to enhance the effectiveness of data collection and use, institutional strengthening and capacity building will be essential.
 **Gap: Complexity** Evolving Financing Mechanisms Increase Analytical Complexity	As infrastructure financing evolves – through the growing use of bonds and guarantees, mechanisms such as blended finance – new challenges arise beyond definitional issues. Data granularity remains insufficient to assess the effectiveness of these approaches. For example, infrastructure sectors like energy and transport are often combined with unrelated sectors such as manufacturing or extractives, making it hard to track trends in the use of guarantees specifically for

	infrastructure. In addition, key details like use-of-proceeds and concessionality are reported inconsistently, making it difficult to assess and replicate successful financing models across markets.
 **Opportunity: Partnerships** Partnering for Deeper Infrastructure Data Insights	The G20 can play a pivotal role in encouraging partnerships with IOs leading data collection and analytics efforts. Partnering with existing data providers and initiatives can be a practical first step to address critical data gaps. The G20 is uniquely positioned to convene stakeholders, align efforts and support the coordination of such partnerships. The ongoing collaboration with the GEMs provides a valuable example of how these partnerships can be effectively structured and scaled. This can also be important in two areas for which governments and regulators can bring unique insights: a) assessment and reforms to strengthen enabling environments; and b) insights into market depth and performance – critical for helping investors evaluate opportunities in new and emerging markets with greater confidence.

The table below summarises a more granular assessment and recommendations across the selected eight themes.

Theme	Gaps and Opportunities
	 Definition  Fragmentation  Complexity  Forum  Mapping  Partnership
Economic Pre-conditions	
Data Theme 1: Cost of infrastructure delivery	Definitions of infrastructure cost indices vary across markets, and relevant sources can be challenging to locate. **IWG members are encouraged to continue collecting and contributing cost data/indexes as well as developing specific metrics for infrastructure.**
Infrastructure Enabling Framework	
Data Theme 2: Legal and regulatory framework	Data on the strength of legal and regulatory frameworks by sector or sub-national entities is hard to find. **IWG members are recommended to continue contributing data to IOs' initiatives and tracking reforms that enable further private participation in infrastructure.**
Data Theme 3: Institutional capacity, funding, and financing for pipeline development	Lack of clear, consolidated mapping and performance data for preparation facilities and project development funds. **The IWG encourages the ongoing mapping of such facilities, along with the development and dissemination of standardised performance metrics, to help scale up effective practices.**
Infrastructure Asset Lifecycle	
Data Theme 4: Financing costs benchmarks	The lack of benchmarks limits the development of investable pipelines, particularly in EMDEs. **The IWG, recognising confidentiality challenges, encourages sharing and improved coverage of aggregated benchmarks from financiers.** In particular, strengthening local market data, such as yield curves, can reduce financing costs and volatility. This could be explored through the collaborative forum proposed under Theme 5.
Data Theme 5: Financial performance benchmarks	Existing data lacks granularity to meaningfully inform decisions and regulations due to limited sample size, especially in emerging markets. **The IWG welcomes the development of a**

	more granular GEMs dataset for infrastructure and supports further collaboration between the public sector and regulators, global standard-setters and the banking/insurance sectors to discuss data requirements and the impact of regulatory changes on infrastructure finance.
Data Theme 6: Infrastructure market liquidity and depth	Understanding infrastructure market liquidity and depth is limited by gaps in corporate finance and bond market data. Data rarely specifies infrastructure use and lacks detail on use-of-proceeds. **The IWG supports engagement with bond data providers to develop infrastructure-specific benchmarks that improve the tracking of infrastructure investments and provide a better assessment of the depth of local markets, especially in local currency.**
Data Theme 7: Project delivery and management	Despite the widespread and persistent occurrence of cost overruns and delays in infrastructure projects, global evidence remains difficult to consolidate. Relevant data is dispersed across national and sub-national government reports, industry and company disclosures and academic studies, making comprehensive analysis challenging. Additional data would greatly benefit value-for-money assessments. In contrast, assessments of the enabling environment for project delivery and management are comparatively more accessible. **IWG members are encouraged to collect and share data on project delivery outcomes and to actively participate in initiatives that aim to strengthen this evidence base.**
Data Theme 8: Investors' development goals and climate risks	A key limitation of existing infrastructure data sets is the lack of coverage and standardised metrics on impact, as well as risks related to interoperability. **The IWG reiterates the importance of comparability and interoperability with other global standards for stakeholders that intend to develop standards to voluntarily work, where appropriate and subject to country circumstances.**

By fostering collaboration between public and private sector entities, this report delivers a unique aggregation of data sources, offering valuable insights into global infrastructure investment trends, financial performance and financial costs, and the capacity of markets, institutions and practitioners for developing and managing a pipeline of infrastructure

projects. While not an exhaustive catalogue of all country or sector-specific datasets, it evaluates the extent to which consolidated and comparable global infrastructure data is available and accessible.

This Note will constructively inform the deliberations of the G20 IWG and potentially contribute to the development of future work plans in this domain.

Appendix

Analytical approach

This Note was developed through a combination of analytical approaches:

- Desktop literature review;
- Data analytics;
- Expert interviews;
- Surveys;
- Collaborations and partnerships with leading infrastructure data providers; and
- Presentations and focused discussions at premier infrastructure finance events and forums.

The Note was developed through a phased approach:

Phase 1: Selection of key market data themes aligned with the Framework

A comprehensive review of available infrastructure data was undertaken relative to the data needs of investors and government officials when developing an investable infrastructure pipeline. A long list of data themes was assessed relative to the proposed scope in the Framework to select eight key market data themes. The data themes were shared with the IWG members and presented at the second IWG meeting to finalise these focus areas for analysis in this Note.

Phase 2: Deep dives on each selected data theme

For each data theme, a literature review and expert interviews helped in developing a comprehensive understanding of available datasets. Hence, the best available data was gathered and analysed to draw key market data trends within each data theme. It also developed a deep understanding of the coverage and quality limitations of the datasets.

Despite notable progress, significant infrastructure data gaps remain – particularly in coverage, consistency and quality disparities across countries by region and income groups, and sectors – and hence the availability of specific insights of interest.

Phase 3: Partnership approach and stakeholder consultations

Detailed review and discussion sessions with globally leading infrastructure data providers for each theme helped in further enhancing the understanding. The presence of private-sector-funded data providers underscores the critical nature of these insights for investors. Leveraging aggregated datasets and partnerships with leading infrastructure data providers,

the Note is informed by years of work by specialist entities on key infrastructure data themes and gaps.

Data requests were sent to G20 IWG members and private investors. Public surveys were launched on social platforms to incorporate stakeholder input into the analysis and drafting of the Note (with 80 responses received from infrastructure practitioners, including investors, governments, consultants, and academics). As highlighted earlier, this report focuses primarily on identifying and analysing the best available global datasets for infrastructure investment and regulation. However, relevant, regional or national datasets endorsed by the IWG may also be included to provide additional insights into specific market conditions. By consolidating fragmented datasets and improving accessibility, this Note seeks to strengthen global monitoring of infrastructure investment trends and performance metrics.

The findings were refined through presentations and discussions at premier infrastructure finance data forums and events, including the IWG meetings, the World Bank-IMF Spring Meetings Knowledge Café and the World Bank's Infra4Dev conference.

By fostering collaboration between public and private sector entities, this report delivers a unique aggregation of data sources, offering valuable insights into global infrastructure investment trends, financial performance, financial costs and ESG factors, and the capacity of markets, institutions and practitioners for developing and managing a pipeline of infrastructure projects. This Note was informed by collaborations and discussions with organisations including CDRI, Convergence, EDHECInfra, GEMs GLIO, GRESB, Moody's, S&P, Preqin, and Realfin.

Phase 4: Identification of key data trends, gaps and opportunities

The input gathered from key data providers, decision-makers and practitioners in public and private sectors helped in selecting and prioritising key data trends, gaps, and opportunities. Acknowledging the limitations in current data collection and reporting practices enabled the identification of potential opportunities to close data gaps. Even when high-quality data exists, it remains complex to locate, integrate and analyse effectively. This Note mitigates these barriers by providing a structured, comparative analysis of infrastructure market data, facilitating informed decision-making at both national and international levels.

IAIS ICS infrastructure definition

The International Association of Insurance Supervisors (IAIS) adopted the Insurance Capital Standard (ICS) in December 2024, which defined specific risk weights for infrastructure as an asset class.

Infrastructure was defined by IAIS in the ICS as follows[25]:

L2-452. Infrastructure (and by extension, infrastructure assets) means the physical structures, facilities, systems and networks that provide or support essential public services, for example:

- Water and waste, including water supply and distribution systems, and wastewater collection and treatment systems;
- Energy, including electricity generation, transmission, distribution and storage, oil and gas pipelines, production, distribution and storage of gas (incl. hydrogen);
- Transportation assets, including roads, bridges, tunnels, railroads, rapid transit links, seaports, airports, rolling stock (train or bus fleets or other means of transportation if they are used to service public transportation), ground transportation equipment, and facilities for alternative transportation (eg charging and refuelling stations);
- Digital assets, including telecommunication towers, cable systems, satellite networks, and data centres; and
- Social infrastructure assets, including schools, hospitals, courthouses, other government buildings, social housing, and privately run social infrastructure assets serving a public purpose.

[25] IAIS (2024). Insurance Capital Standard (ICS). ICS Level 1 and Level 2 texts. Annex 3 (1) Infrastructure Investments, 5 December 2024. Access at this link.

L2-453. Table 35 below provides an illustrative view of the different classes of infrastructure assets:

General title	What is infrastructure	What is not infrastructure	What typically makes the infrastructure investment safer
Water utilities	Water supply/distribution, Wastewater collection/treatment	Fixing water pipe leakages (unless as part of the maintenance and repair of water supply/distribution systems)	Regulation relating to long-term concessions or pricing or return-on-assets, or profit margin
Waste management utilities	Facilities dedicated to waste management, treatment and recycling	Using spare parts from scrapped vehicles for other vehicles	Long-term concessions usually with the involvement of a local government or council
Energy (including electricity and gas utilities)	Generation/transmission/ distribution/storage/district heating	Batteries used in electric cars and insulation of houses	Regulation relating to long-term concessions, pricing, or return-on-assets or profit margin
Transportation	Airports/ports/roadways/railway network, rolling stock used to service public transportation, ground transportation equipment, facilities for alternative transportation (charging and refuelling stations)	Car, aircraft, boat manufacturing, spare parts for aircrafts, repairs, etc.	Long-term concessions or agreements usually with the involvement of a local government or council. Demand for such services

Digital assets (including Telecom)	Core digital and telecom infrastructure such as broadband equipment, optical fibres, telecommunication towers, and data centres	Production and selling of telephones Internet service provider	Long-term contracts, mostly business-to-business
Social infrastructure	Infrastructure that provides a service for the public that is regulated or governed by a government or a similar authority (e.g., courts, prisons, juvenile facilities, schools, universities, libraries, refugee camps, subsidised/social housing, hospitals, etc.); or privately run social welfare institutions serving a public purpose		The infrastructure facility is consistent with the social policies of the relevant government or the needs of society

L2-454. Infrastructure investments are debt or equity investments in entities that own, finance, develop or operate infrastructure assets. L2-455. Infrastructure investments can be segmented according to different criteria.

The type of investment (look-through should be applied to investment funds to identify underlying infrastructure investments that are eligible, unless it can be shown that the fund meets all the definitions and criteria):

- Equity
- Debt, provided that it is classified into the corporate category specified in L2-247 prior to the application of the definition and criteria:
  - Bonds (rated or unrated)
  - Loans

The type of issuer:

- Corporate: An infrastructure corporate is an entity or a group that derives most of its revenue from owning, financing, developing or operating infrastructure assets.

- Project: An infrastructure project entity is an entity which was created specifically to support, own, finance, develop or operate one or several infrastructure assets.

Note: With regard to debt financing, loans to infrastructure corporates are usually unsecured, while loans to infrastructure projects are generally collateralised.

The involvement of the public sector (for instance, through a PPP) or absence thereof.

The location of the infrastructure:

- Developed markets
- EMDEs identified based on the World Bank classification of countries: All countries not classified as high income should be considered as EMDEs.

Data sources by theme

ECONOMIC PRE-CONDITIONS

Data Theme 1: Cost of infrastructure delivery		
G20 member	**Data type**	**Link to source**
Argentina	General construction	El Instituto Nacional de Estadística y Censos de la República Argentina (Indec): Costo de la construcción (ICC) (Construction cost index in Greater Buenos Aires) https://www.indec.gob.ar/indec/web/Nivel4-Tema-3-5-33
Australia	Average infrastructure sectors	Australian Bureau of Statistics (ABS): Output of the Construction industries, subdivision and class index numbers (Average producer price index for roads and bridges, and heavy and civil engineering construction) https://www.abs.gov.au/statistics/economy/price-indexes-and-inflation/producer-price-indexes-australia/latest-release#data-downloads
Brazil	Civil engineering	Instituto Brasileiro de Geografia e Estatística: Sistema Nacional de Pesquisa de Custos e Índices da Construção Civil (National System for Research on Construction Costs and Indices), Average cost per square meter (Reais) https://www.ibge.gov.br/estatisticas/economicas/precos-e-custos/9270-sistema-nacional-de-pesquisa-de-custos-e-indices-da-construcao-civil.html?=&t=series-historicas

Canada	Buildings construction	Statistics Canada: Building construction price indexes, by type of building and division, non-residential buildings, Fifteen census metropolitan area composite https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1810028901
China	Building materials	National Bureau of Statistics of China (NBS): Purchasing Price Index for Industrial Producers, building materials https://data.stats.gov.cn/english/easyquery.htm?cn=A01
France	Civil engineering	Institut national de la statistique et des études économiques: Civil engineering indices - TP01 - All works General index - Base 2010 https://www.insee.fr/en/statistiques/serie/001711007
Germany	Average infrastructure sectors	Statistisches Bundesamt: Construction price indices for civil engineering and maintenance (average of roads, road bridges and sewers) https://www.destatis.de/EN/Themes/Economy/Short-Term-Indicators/Prices/bpr210.html#241666
India	General construction	Central Public Works Department (CPWD) of India provides a comprehensive and authoritative source of infrastructure cost data https://cpwd.gov.in/Documents/cpwd_publication.aspx
Indonesia	Relevant, up-to-date data could not be identified	
Italy	Buildings construction	Eurostat: Construction producer prices or costs, new residential buildings https://ec.europa.eu/eurostat/databrowser/explore/all/icts?lang=en&subtheme=sts.sts_cons&display=list&sort=
Japan	Civil engineering	Official Statistics of Japan e-Stat Portal: Construction cost deflator, General construction – General Civil Engineering https://www.e-stat.go.jp/stat-search/files?page=1&toukei=00600270&tstat=000001013583
Mexico	General construction	Instituto Nacional de Estadística y Geografía (INEGI) Sistema de Cuentas Nacionales de México. Índice Nacional de Precios Productor/Mercancías y servicios finales – Actividades secundarias con petróleo, Construcción https://en.www.inegi.org.mx/app/tabulados/default.aspx?nc=ca82_2019&idrt=138&opc=t

Russia	General construction	Ministry of Construction. Recommended value of indices for changing estimates https://www.minstroyrf.gov.ru/trades/tsenoobrazovanie/indeksy-izmeneniya-smetnoy-stoimosti/
South Africa	Civil engineering	Statistics South Africa: Construction Materials Price Indices – Civil engineering https://www.statssa.gov.za/?page_id=1854&PPN=P0151.1
South Korea	Average infrastructure sectors	Korean Statistical Information Service (KOSIS) Construction Cost Index (average of non-residential building, road facilities, port facilities and urban civil engineering) https://kosis.kr/statisticsList/statisticsListIndex.do?vwcd=MT_ZTITLE&menuId=M_01_01#content-group
Spain	Buildings construction	Eurostat: Construction producer prices or costs, new residential buildings https://ec.europa.eu/eurostat/databrowser/explore/all/icts?lang=en&subtheme=sts.sts_cons&display=list&sort=
Switzerland	Average infrastructure sectors	Federal Statistical Office: Indice suisse des prix de la construction - Evolution des prix de la construction (Average of roads and tunnels, and heavy and civil engineering construction) https://www.bfs.admin.ch/bfs/fr/home/statistiques/prix/prix-construction/indice-prix-construction.assetdetail.33369508.html
Turkey	General construction	Turkish Statistical Institute: Sektörlere ve maliyet gruplarına göre inşaat maliyet endeksi (Construction cost index by industries and cost groups) – construction https://data.tuik.gov.tr/Bulten/Index?p=Insaat-Maliyet-Endeksi-Ocak-2024-53671
United Kingdom	Infrastructure	Office for National Statistics (ONS): Construction Output Price Indices, Table 2: New work output prices, infrastructure index https://www.ons.gov.uk/businessindustryandtrade/constructionindustry/datasets/interimconstructionoutputpriceindices
United States	Buildings construction	Federal Reserve Bank of St. Louis: Producer Price Index by Commodity: Construction (Partial): New Non-residential Building Construction https://fred.stlouisfed.org/series/WPU801
CPI and GDP Deflator		IMF World Economic Outlook World Economic Outlook

OTHER ECONOMIC PRE-CONDITIONS DATA THEMES

Data theme	Investor focus	Data needs	Data availability/ accessibility	Data gaps
Strength of domestic markets	Attractiveness of pre-conditions	Overall: Credit rating, country risk premium Macroeconomics: Economic growth, GDP per capita, inflation, currency volatility, policy interest rate Fiscal: Government debt to GDP ratio, fiscal deficits Political: Political risk Financial markets: Savings rate, financial development index, long-term yield curve, currency volatility	Several global indicators spread across a wide range of mostly public datasets	Aggregated data dashboard with indicators relevant for infrastructure

INFRASTRUCTURE ENABLING ENVIRONMENT

Data theme 2: Legal and regulatory frameworks		
BID	Scores for good regulatory practices for 140 economies across the infrastructure lifecycle for PPPs – preparation, procurement, and contract management	https://bpp.worldbank.org/en/home
InfraScope (Economist Impact and IDB)	Scores for 'regulations and institutions' and others – project preparation, financing, risk management and evaluations, with each edition focusing on a single region	https://impact.economist.com/new-globalisation/infrascope-2024/en/ (InfraScope 2023/24, assesses 26 countries in Latin America)
WGI	Aggregate indicators for six dimensions of governance for over 200 economies over the period 1996–2023	https://www.worldbank.org/en/publication/worldwide-governance-indicators
World Bank B-Ready reports	Indicators for 10 topics, including dispute resolution, market competition, business insolvency and taxation and each reporting on	https://www.worldbank.org/en/businessready

	three pillars, including the regulatory framework	
OECD's PMR indicators	Indicators assess the alignment of a country's regulatory framework with international best practices, measuring both economy-wide and sector-specific regulatory barriers to entry and competition for 47 economies	https://www.oecd.org/en/topics/sub-issues/product-market-regulation.html
Data theme 3: Institutional capacity, funding, and financing for pipeline development		
GIH Infrastructure Monitor 2021	Scope of support, sectoral and regional coverage, and projects delivered by 130 project preparation facilities focused on infrastructure	https://cdn.gihub.org/umbraco/media/4740/gihub_v10.pdf

OTHER INFRASTRUCTURE ENABLING ENVIRONMENT DATA THEMES

Data theme	Investor focus	Data needs	Data availability/ accessibility	Data gaps
Infrastructure projects pipeline planning and prioritisation	Commitment and predictability Government future strategy Private investment scope, growth, and focus areas	Long-term plans, pipelines, and budget allocation by theme Infrastructure deals market size by type, PPP deals size	InfraTracker - government budgets Transition pathways – long-term plans BOOST Realfin/PPI – Infrastructure transactions database, PPP deals	Summary reporting with consistent taxonomy
Institutional arrangements/ readiness	Transparency and accountability Capacity	Institutional arrangements and independence from political influence	Consolidated publicly available Benchmarking Infrastructure Development indicators dataset Other ad-hoc governance indicators	
Project preparation capacity	Public and private sectors' capabilities to structure	Government capacity assessment Market (banks, developers)	Proxy – market size Benchmarking Infrastructure Development –	Concentrated in some familiar large markets

		quality projects	capacity assessment	project development facilities/PPP units	
Decision to involve the private sector	Funding capacity	Project's repayment ability	Public sector creditworthiness Project revenues resilience	Debt-to-GDP Economic regulations for tariffs	 Ad-hoc tracking
	Financing capacity	Financial support for project preparation and structuring	Project preparation/development funds size and capacity Guarantees portfolio/contingent liabilities Blended finance	Climate Bond Initiative – green bond issuance by sector	Detailed data collection on financing type used in an infrastructure project

INFRASTRUCTURE ASSET LIFECYCLE

Data theme 4: Financing costs benchmarks		
EDHECInfra InfraMetrics	Covers 27 countries with large and measurable market activity for power, utilities, transport, and social infrastructure sectors, but it is not freely accessible	https://app.sipametrics.com/launcher
IEA Cost of Capital Observatory	Energy sector – solar PV, gas power, utility-scale batteries projects for Brazil, India, Indonesia, Mexico and South Africa. Offshore wind projects and Kenya, Senegal and Vietnam, partially covered	https://www.iea.org/reports/cost-of-capital-observatory
IRENA Renewable Power Generation costs study	Estimates by technology, with data for 100 countries for solar PV and onshore wind, and 15 countries for offshore wind	https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2023/May/IRENA_Cost_of_financing_renewable_power_Appendix_2023.pdf
Data theme 5: Financial performance benchmarks		
GEMs for MDBs/DFI lending	Output statistics encompass default and recovery rates categorised by various dimensions	https://www.gemsriskdatabase.org/#Recovery%20Statistics%20Publication
Moody's Analytics Data Alliance Project Finance Consortium	Collaborative effort of over 100 leading financial institutions and Moody's Analytics to create the world's largest collection of private credit risk data	https://dataalliance.moodysanalytics.com/#/

S&P Global Ratings' infrastructure assessment	S&P Global Ratings analysed the rating histories of corporate infrastructure and project finance credits first rated between Dec. 31, 1980, and Dec. 31, 2023. The total number of ratings peaked to 1,488 in 2018	https://www.spglobal.com/ratings/en/research/articles/240911-default-transition-and-recovery-2023-annual-infrastructure-default-and-rating-transition-study-13239970
FT Wilshire GLIO Listed Infrastructure Index Series MSCI All Country World Index Infrastructure Capped Index	Tracks 210 global listed infrastructure companies on financial performance metrics MSCI, S&P, and other financial institutions also track the performance of listed infrastructure companies	https://www.glio.org/
EDHECInfra InfraMetrics	Track financial performance metrics for unlisted equity and debt infrastructure investments	https://app.sipametrics.com/launcher
Preqin	Compiles and aggregates data on investment by private investors, especially in infrastructure funds, with metrics for risk-return	https://www.preqin.com/
Data Theme 6: Infrastructure market liquidity		
IMF Financial Development Index	Summarises how developed financial institutions and financial markets are in terms of their depth, access and efficiency for 180 countries	https://data.imf.org/?sk=f8032e80-b36c-43b1-ac26-493c5b1cd33b&sid=1480712464593
World Bank's Global Financial Development database	Provides financial system characteristics for 214 economies across 108 indicators measuring the depth, access, efficiency and stability of financial systems	https://www.worldbank.org/en/publication/gfdr/data/global-financial-development-database
World Bank's Local Currency Bond Market Development Indicators	Provides data on local currency bond markets, including size, liquidity, investor base and regulatory frameworks	Source used: IJ Global (commercial)
Climate Bonds Initiative	Key global datasets for green/blue/sustainability bonds	https://www.climatebonds.net/
Refinitiv-Eikon	Key global datasets for green/blue/sustainability bonds	https://eikon.refinitiv.com/
Bloomberg	Key global datasets for green/blue/sustainability bonds	https://www.bloomberg.com/
Environmental Finance Data	Covers all sustainable bonds issued since 2007 and boasts 95%+ market coverage	https://efdata.org/

RealFin	Some data is available for infrastructure deals, but the volumes captured are usually lower, as some corporate financing is not captured	https://www.realfin.com/
IJGlobal	Some data is available for infrastructure deals, but the volumes captured are usually lower, as some corporate financing is not captured	https://www.ijglobal.com/
Preqin	Some data is available for infrastructure deals, but the volumes captured are usually lower, as some corporate financing is not captured	https://www.preqin.com/
Data Theme 7: Project delivery and management		
World Bank's BID	Assesses the quality of regulatory practices to develop large infrastructure for 140 economies across the infrastructure lifecycle – preparation, procurement and contract management	https://bpp.worldbank.org/en/home
InfraScope (Economist Impact and IDB)	Scores for project preparation and others, with each edition focusing on a single region	https://impact.economist.com/new-globalisation/infrascope-2024/en/ (InfraScope 2023/24, assesses 26 countries in Latin America)
Data Theme 8: Investors' development goals and climate risks		
GRESB Infrastructure Asset Assessment	Provides infrastructure asset ESG scores, which reflect the extent to which assets have ESG policies in place, manage risk, report transparently on their most material issues, and have current and future targets	https://www.gresb.com/nl-en/infrastructure-asset-assessment/
EDHEC	Provides insights on infrastructure asset resilience, transition risks, physical risks and climate risk assessment to help private and public decision-makers manage climate-related financial risks	https://climateimpact.edhec.edu/
CDRI GIRI	A probabilistic global risk assessment model to estimate risk for infrastructure assets with respect to major geological and climate-related hazards. This enables governments to identify	https://giri.unepgrid.ch/

	and understand the contingent liabilities internalised in their infrastructure systems and provides a basis for incorporating resilience in the project lifecycle	
INFORM Risk Index	A global, open-source risk assessment for humanitarian crises and disasters that seeks to support decisions about prevention, preparedness and response	https://drmkc.jrc.ec.europa.eu/inform-index/INFORM-Risk
MDBs' Sustainable Infrastructure Indicators	The report presents 16 key sustainable infrastructure indicators which provide the common denominators of three mapped sustainable infrastructure frameworks and two initiatives of MDBs	https://publications.iadb.org/en/mdb-infrastructure-cooperation-platform-common-set-aligned-sustainable-infrastructure-indicators
FAST-Infra	The FAST-Infra Label is a globally applicable label for projects demonstrating significant positive sustainability performance. It has been developed by a multi-stakeholder working group led by the Global Infrastructure Facility and Macquarie	https://www.fastinfralabel.org/
Green Investment Principles for the Belt and Road	GIP is a collaborative initiative aiming to promote sustainable investment practices across the Belt and Road Initiative by embedding environmental, ESG considerations into the investment process	https://www.gipbr.net/
QII	The G20 QII Principles are guidelines (six principles) endorsed by G20 members to promote infrastructure that is sustainable, resilient, inclusive, and efficient	https://www.worldbank.org/en/programs/quality-infrastructure-investment-partnership
BlueDot Network	Hosted by the OECD, BlueDot is a voluntary, private-sector-focused and government-supported certification scheme for infrastructure projects	https://www.bluedot-network.org/

OTHER INFRASTRUCTURE ASSET LIFECYCLE DATA THEMES

Data theme	Investor focus	Data needs	Data availability/ accessibility	Data gaps
Asset valuations	Updated views of investment value	Frequently updated metrics based on a standard methodology	Historical benchmarks for some projects Aggregate model-based indicators: EDHECInfra	Ad-hoc, infrequent/ dated, inconsistent estimates
Insurance/ guarantees	Insurability and premiums for risk management	Insurance availability Risk premia benchmarks	High-level model-based benchmarks: EDHECInfra Country risk premia	Infrastructure risk premia estimates by type of risk/insurance/ guarantees

Abbreviations and glossary

AFW	Western and Central Africa
BID	Benchmarking Infrastructure Development
CDRI	Coalition for Disaster Resilient Infrastructure
CPI	Consumer Price Index
DFI	Development Finance Institution
EDHEC	École des Hautes Etudes Commerciales du Nord
EMDE	Emerging Markets and Developing Economies
ESG	Environmental, Social and Governance
G20	Group of Twenty
GEMs	Global Emerging Markets Risk Database
GIH	Global Infrastructure Hub
GIRI	Global Infrastructure Risk Model and Resilience Index
GLIO	Global Listed Infrastructure Organisation
GRESB	Global Real Estate Sustainability Benchmark
HIC	High-Income Country
IAIS	International Association of Insurance Supervisors
ICS	Insurance Capital Standard
IDB	Inter-American Development Bank
IEA	International Energy Agency
IMF	International Monetary Fund
IO	International Organisation
IRENA	International Renewable Energy Agency
IWG	Infrastructure Working Group
LIC	Low-Income Country
LMIC	Low- and Middle-Income Country
MSCI	Morgan Stanley Capital International
MDB	Multilateral Development Bank
OECD	Organisation for Economic Co-operation and Development
PMR	Product Market Regulation
PPF	Project Preparation Facility
PPP	Public-Private Partnership
PV	Photovoltaic
QII	Quality Infrastructure Investment
S&P	Standard & Poor's
SDG	Sustainable Development Goal
USP	Unsolicited Proposal
WACC	Weighted Average Cost of Capital
WGI	Worldwide Governance Indicators

Dry powder	Capital committed by investors that is available to fund managers but has not yet been invested or allocated (capital committed is the sum of unallocated capital and portfolio returns, minus any disbursements to investors).
Market data	Market data in this document refers to datasets that offer global benchmarks – often as time series – spanning a majority of countries and derived from either high volumes of transactions or country-wide assessments, providing stakeholders with insights into broader market trends. The benchmarks highlighted in this Note are typically based on thousands of transactions, companies, or assets – except in cases where this is explicitly noted.
Primary markets	Infrastructure primary markets refer to the initial phase where capital is raised to finance new infrastructure projects. This is where investors, lenders, or public entities provide funding directly for the development or construction of infrastructure assets – such as roads, power plants, water systems or ports.
Project preparation/ development funds	Funds created to identify and prepare a pipeline of infrastructure projects.
Use-of-proceeds	In the context of bond financing, "use of proceeds" refers to the specific purposes for which the funds raised from a bond issue are earmarked. It clarifies how the issuer plans to spend the money received from investors. Essentially, it provides transparency about where the bond proceeds will be directed.
Weighted average cost of capital	It represents the average cost paid to finance assets. It measures the average cost of a company's sources of capital (debt and equity) weighted by the proportion of each source in the total capital.