

Multilateral Development Banks and Development Finance Institutions

# DEFAULT STATISTICS

**PRIVATE AND  
SUB-SOVEREIGN LENDING  
1994-2022**

**VOLUME 1**



Multilateral Development Banks and Development Finance Institutions

# DEFAULT STATISTICS

**PRIVATE AND  
SUB-SOVEREIGN LENDING  
1994-2022**

VOLUME 1

# Multilateral Development Banks and Development Finance Institutions Default Statistics.

## Private and Sub-sovereign Lending 1994-2022

© European Investment Bank (the “Administrator”), as host and administrator for, and on behalf of, Global Emerging Markets Risk Database Consortium (“GEMs”), 2023. GEMs is a consortium of multilateral development banks and development finance institutions, including the African Development Bank (AfDB), Agence Française de Développement (AFD), Asian Development Bank (ADB), Asian Infrastructure Investment Bank (AIIB), Black Sea Trade and Development Bank (BSTDB), Banque Ouest Africaine de Développement (BOAD), British International Investment (BII), Council of Europe Development Bank (CEB), Central American Bank for Economic Integration (CABEL), European Bank for Reconstruction and Development (EBRD), European Investment Bank Group (EIB), GuarantCo, Inter-American Development Bank (IDB), Inter-American Investment Corporation (IIB Invest), International Finance Corporation (IFC), International Bank for Reconstruction and Development (IBRD), International Fund for Agricultural Development (IFAD), Islamic Development Bank (IsDB), Kreditanstalt für Wiederaufbau (KfW), Multilateral Investment Guarantee Agency (MIGA), Netherlands Development Finance Company (FMO), U.S. International Development Finance Corporation (DFC), New Development Bank (NDB).

The material in this work is copyrighted. Copying and/or transmitting portions or all of this work without permission may be a violation of applicable law.

Neither GEMs nor any of its members represents or warrants as to the accuracy, reliability or completeness of the content, conclusions or judgments of this work, and no responsibility or liability is accepted for such content, conclusions or judgments, or for any omissions or errors (including, without limitation, typographical and technical errors), or for reliance thereon. The findings, interpretations and conclusions expressed in this work do not necessarily reflect, and should not be taken as, the views of GEMs or any GEMs member or their respective constituents.

The contents of this work are intended for general informational purposes only. They do not constitute legal, securities, investment or any other type of advice, an opinion regarding the appropriateness of any investment, or a solicitation of any type. GEMs members may have an investment or other financial interest in, or provide advice or other services to, certain companies and parties identified in this work. The depiction and use of boundaries, geographic names and related data on maps and in lists, tables, documents and databases are not warranted to be error-free and do not imply official endorsement or acceptance by any of the GEMs members or their constituents.

All rights reserved.

All queries on rights and licences, including subsidiary rights, should be addressed to the Administrator ([publications@eib.org](mailto:publications@eib.org)). All names, logos and trademarks of GEMs and its members are their respective property. You may not use any such name, logo or trademark (including GEMs) for any purpose without the express written consent of GEMs or its members.

For further information on the EIB’s activities, please consult our website, [www.eib.org](http://www.eib.org). You can also contact our info Desk, [info@eib.org](mailto:info@eib.org).

Published by the European Investment Bank.

Printed on FSC® Paper.

pdf: QH-05-23-374-EN-N ISBN 978-92-861-5615-1 doi: 10.2867/143223



# Contents

- Foreword ..... 1
- GEMs at a glance..... 2
- From data to statistics ..... 4
  - Data processing and quality controls..... 4
- Highlights ..... 5
- Methodology..... 7
- Report dataset composition ..... 8
  - Dataset distribution by World Bank Group region ..... 8
  - Dataset distribution by income groups..... 10
  - Dataset distribution by sector ..... 13
- Default rate statistics ..... 15
- GEMs infrastructure sector dataset ..... 18
  - Overview of infrastructure dataset ..... 19
  - Overview of infrastructure sector default statistics ..... 22
- Glossary ..... 24



# Foreword

Global Emerging Markets Risk Database Consortium (GEMs) was established in 2009 as a joint initiative between the European Investment Bank Group and the World Bank Group to pool credit risk data. The GEMs database is a unique example of a tangible common good that helps to catalyse investments in emerging markets and support technical cooperation between international institutions. As of year-end 2022, the GEMs Consortium comprised 23 member institutions, all multilateral development banks (MDBs) and development finance institutions (DFIs), covering in particular emerging markets and developing economies.

This report is the third GEMs publication on default statistics for private and sub-sovereign lending. It provides statistics derived from pooled GEMs data going back to 1994, supplied by 19 member institutions, collaborating together under the GEMs framework. Future reports will aim to incorporate data from more GEMs members and further enhance the array of statistics presented.

Compiling the report required extensive collaboration and technical harmonisation between

MDBs and DFIs — representing a major achievement of GEMs. The presented outputs give unique insights into the default experiences of these institutions in emerging markets and developing economies. The report highlights the niche features and potential of this database, especially regarding sub-investment grade observations, and explains the methodological framework as well as the various applications of GEMs statistics.

Looking forward, GEMs will continue building and refining its methodology and processes to maximise the robustness and value of its statistics for member institutions and the wider community. This should allow the ongoing provision of enhanced reporting and new services with the ultimate aim of supporting the scaling up of investment where most needed.

GEMs is pleased to make this publication freely available as a public good, offering readers valuable and unique insights into the credit experiences of MDBs and DFIs. The consortium looks forward to gathering feedback and working with its stakeholders to maximise the value that it can bring to the wider community.

### GEMs member institutions participating in this publication





## GEMs at a glance

GEMs collects de-identified data from MDBs and DFIs on their performing and non-performing exposures. In return, these member institutions gain access to GEMs output statistics on the default rates by geography, sector and time period. Detailed GEMs statistics allow members to calibrate and benchmark internal models, set pricing and capital requirements, and make more informed investment decisions. The GEMs Consortium also helps to build technical alignment and to share best practices among member institutions, including through working-level meetings. The compilation of GEMs risk statistics relies on a sound, shared methodological framework. Bringing together data and expertise from over 20 public development finance institutions, GEMs offers a...

- ✓ **Harmonised dataset** reflecting three decades of experience investing in emerging markets.
- ✓ **Framework for MDB and DFI collaboration** among 23 member institutions to improve risk management practices across the industry.
- ✓ **Trusted data collection and processing platform** hosting a scalable data model, which can be expanded to cover other contract-level data related to investment projects.
- ✓ **Statistics resource for member MDBs and DFIs** — GEMs outputs, default rates, recovery rates, and rating migrations enable better-informed investment decisions for emerging market investments.
- ✓ **Public good data source for aggregated statistics** — the reported default rates for *Private and Sub-Sovereign Lending* and for *Sovereign and Sovereign-guaranteed Lending* serve to anchor risk perceptions.
- ✓ **Risk data hub of contract-level information** for private and sub-sovereign lending and for sovereign and sovereign-guaranteed lending. The GEMs dataset for emerging markets and developing economies is among the largest of its kind.

To maximise efforts towards tackling climate change and achieving the Sustainable Development Goals, levels of private investment need to be much higher. This requires institutions to work together on addressing some of the current impediments to investment. Key priorities include supporting the preparation of well-designed projects, facilitating the use of public resources to mitigate risks, promoting an enabling legal and contractual environment, and ensuring a greater level of standardisation, transparency and data availability. Given the scarcity of high-quality data and the strictness of regulatory requirements for more sophisticated risk management practices, reliable metrics are needed.

Through GEMs, member MDBs and DFIs are committed to addressing the investment gap by sharing their experience and market knowledge among themselves and with investors. Currently, 23 MDBs and DFIs collaborate to pool and harmonise their data, thereby generating superior statistics to those available to any individual market participant. Thus, GEMs is a unique and complementary data source for current and potential investors in emerging markets, helping to refine their risk perceptions and facilitating better-informed decisions. Members work together to build a joined-up “system” delivering more than the sum of its parts — as highlighted by the G20 Eminent Persons Group on Global Financial Governance. This holds, however, not only for MDBs and DFIs but also for private investors and other stakeholders constrained by the same persistent data gap.

With little readily available, standardised, transparent and high-quality data on investment projects in emerging markets, risk perceptions can be skewed, leading to suboptimal investment decisions. Institutions with little or no experience in such markets have to rely on risk assumptions based on limited data. Also, many investors are required by regulations to invest only in assets with certain risk profiles. By anchoring risk perceptions with actual data, GEMs aims to help unlock capital to fill investment gaps.

The statistics produced by GEMs from members’ input data enable the calibration and benchmarking of internal models, and better estimate provisioning, leading to greater accuracy in setting capital requirements and better-informed decisions. GEMs statistics serve as an objective, reliable and statistically significant base for discussing regulatory compliance, capital adequacy and risk management practices with auditors, rating agencies and supervisors. GEMs statistics can be a powerful tool for transparent assessment of portfolio risks when third parties engage in risk-transfer or co-financing operations with MDBs/DFIs, or any other balance sheet optimisation initiative — thereby supporting crowding-in of additional funding to emerging markets.

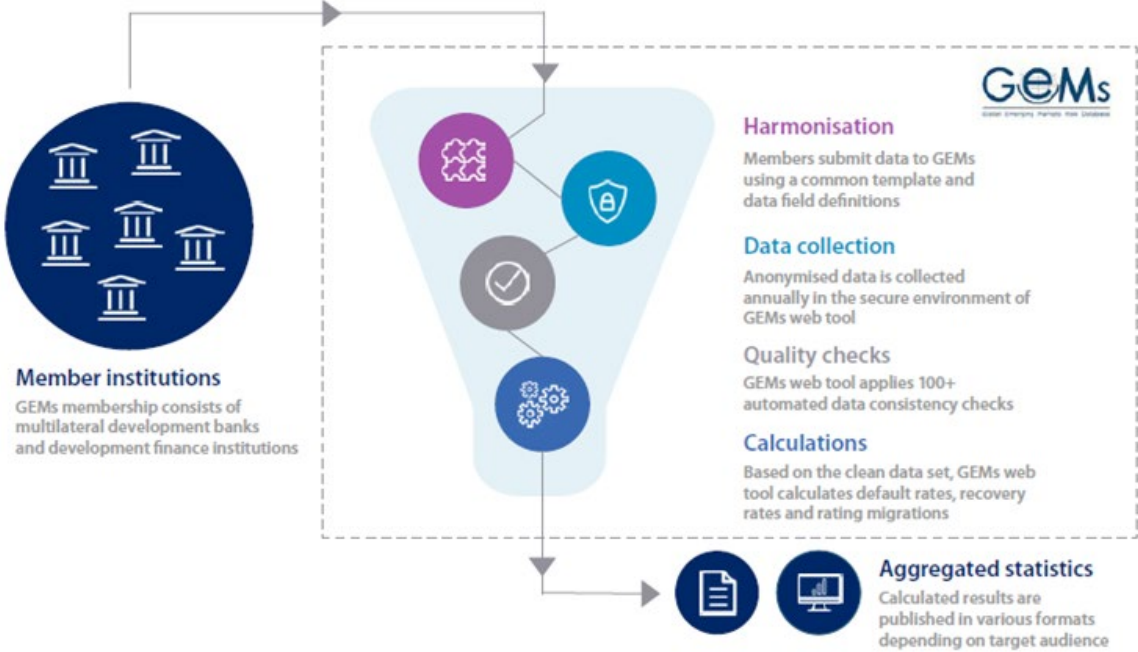
Up to 2021, only GEMs Consortium members had access to GEMs statistics. However, GEMs has started to share aggregated statistics outside the closed circle, recognising their significant value to a diverse group of stakeholders ranging from academics to regulators and commercial entities. The specific application of GEMs statistics may vary across different institutions. GEMs therefore looks forward to receiving feedback from readers of this report and working with stakeholders to improve the focus and content of future publications, the ultimate goal being support for new and sustainable investments where most needed.

# From data to statistics

## Data processing and quality controls

GEMs members have jointly developed a data submission process and risk methodology that aim to protect data confidentiality, ensure high-quality data, and enable the compilation of various types of output statistics.

### GEMs data aggregation process



The entire GEMs historical dataset is submitted by Consortium members annually, leading to updates of previous data and additions of new data. Thus, data quality continuously improves over time. Following the independent audit of the GEMs data submission process in 2017, the necessary action points have been addressed to ensure consistency and adherence to GEMs guidelines by all submitting institutions. All information provided by the institutions is de-identified and held in confidence.

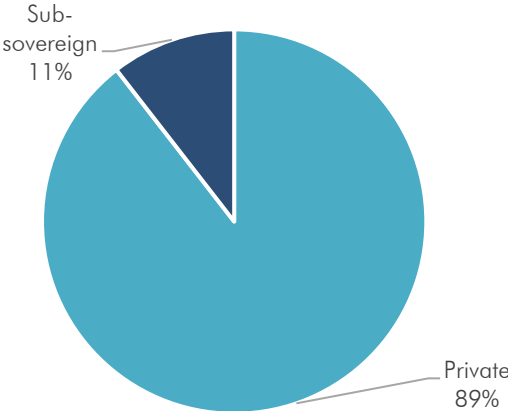
The dataset analysed and discussed in this report contains data from 19 GEMs members.

# Highlights

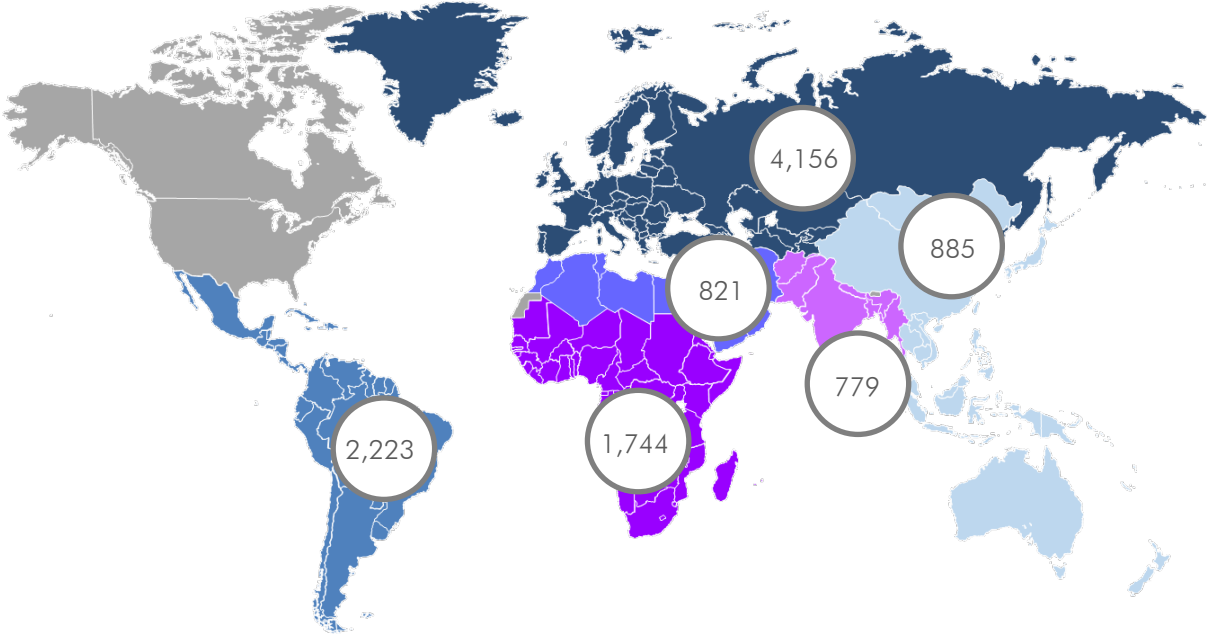
The 19 consortium members contributing to this report all have a mandate to support development in a wide range of economies, including emerging markets and low-income countries.

Of the counterparts registered in the dataset<sup>1</sup> underlying this report, 89% are private sector entities. The other 11% are sub-sovereign counterparts, comprising 1,115 entities distributed across all geographic regions. Sub-sovereign counterparts are defined as being at least 50% state-owned.

**Graph 1: Distribution of counterparts by counterpart type**



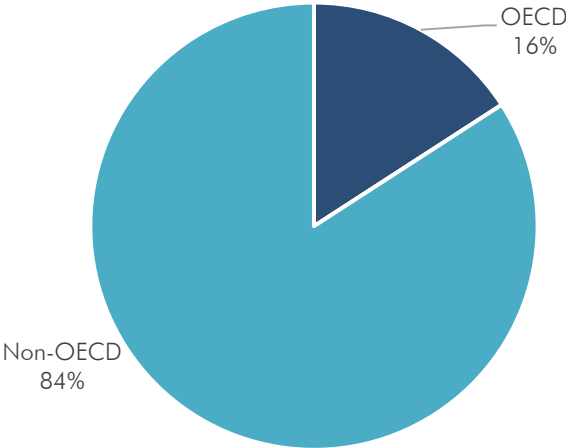
**Graph 2: Distribution of counterparts by World Bank Group region**



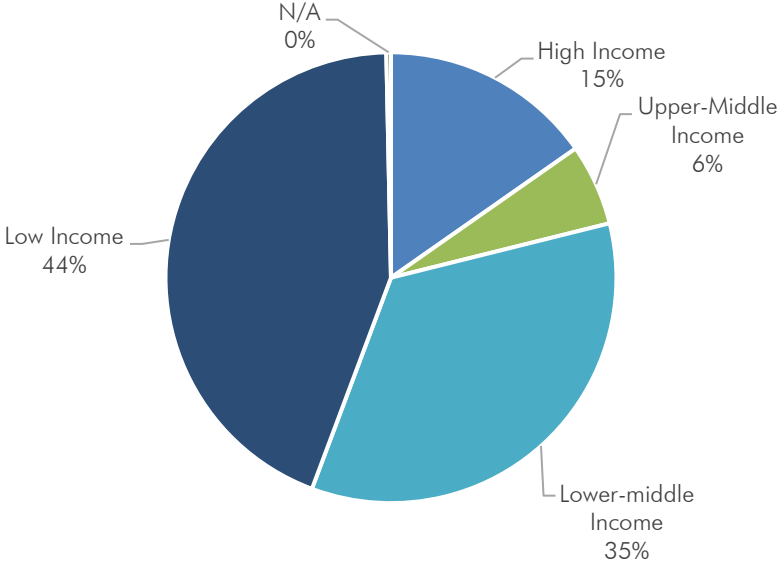
<sup>1</sup> For ease of reporting, observations from outside the World Bank Group regional classification system, as well as regional projects that cannot be assigned to a single country, are not included in the report dataset. Also, counterparts in North America are not covered in this report, due to its focus on emerging markets. See the Methodology section for more insights on dataset coverage.

The counterpart- and contract-level observations collected by GEMs are aggregated by country and then grouped according to political or economic criteria: The GEMs private and sub-sovereign dataset covers a wide variety of counterparts operating in OECD member and non-member countries.

**Graph 3: Share of counterparts by 2022 OECD membership**



**Graph 4: Share of counterparts by 2022 country income group**



# Methodology

The GEMs Risk Database includes credit data of standard debt products. The database structure enables analysis of default and loss statistics along various relevant dimensions, providing quantitative facts to underpin discussions around specific segments of lending, such as emerging markets and developing economies, as well as the infrastructure sector.

For reporting on private and sub-sovereign lending, the reference data are organised by counterpart and contract level and include, for example, counterpart type (private or sub-sovereign), sector classification and country information. This report may capture counterparts, such as municipalities and state-owned enterprises, with loan contracts which may benefit from a sovereign government guarantee. The report dataset comprises debt contracts and thus excludes equity and non-standard lending products.

For ease of reporting, observations from countries outside the World Bank Group regional classification system, as well as regional projects not assignable to a single country, are excluded from the report dataset. Additionally, special operations whose risk is not representative of the overall portfolio, or whose financing is provided on behalf of third parties, may have been excluded.

As GEMs collects data at counterpart and contract level, the data can be grouped across various geographic and economic classifications. Sectorial classification follows the widely recognised Global Industry Classification Standard (GICS) system, facilitating comparative analysis across widely available data sources.

To distinguish between investment grade and sub-investment grade counterpart ratings, individual institutions map their internal ratings to a common GEMs rating scale for private and sub-sovereign counterparts. The scale is composed of 20 performing grades and one default grade. Members complete the mapping exercise when submitting their relevant lending data to the GEMs Risk Database.

## Definition of default

According to the methodology applied by GEMs, a default event can occur in six ways:

- Non-payment within 90 days of being due
- Specific provision raised against a loan
- Write-off of an outstanding loan (either full or partial)
- Agreement to distressed restructuring
- Client enters bankruptcy
- Realisation of loan security

# Report dataset composition

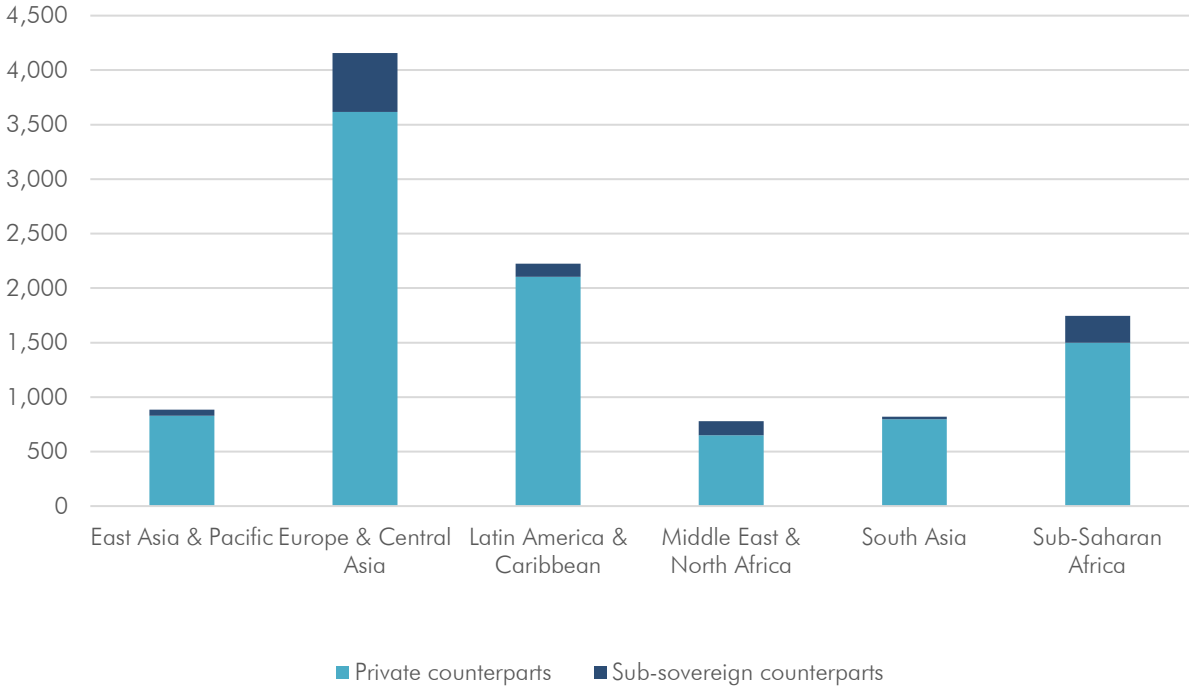
## Dataset distribution by World Bank Group region

Table 1: Dataset composition by World Bank Group region

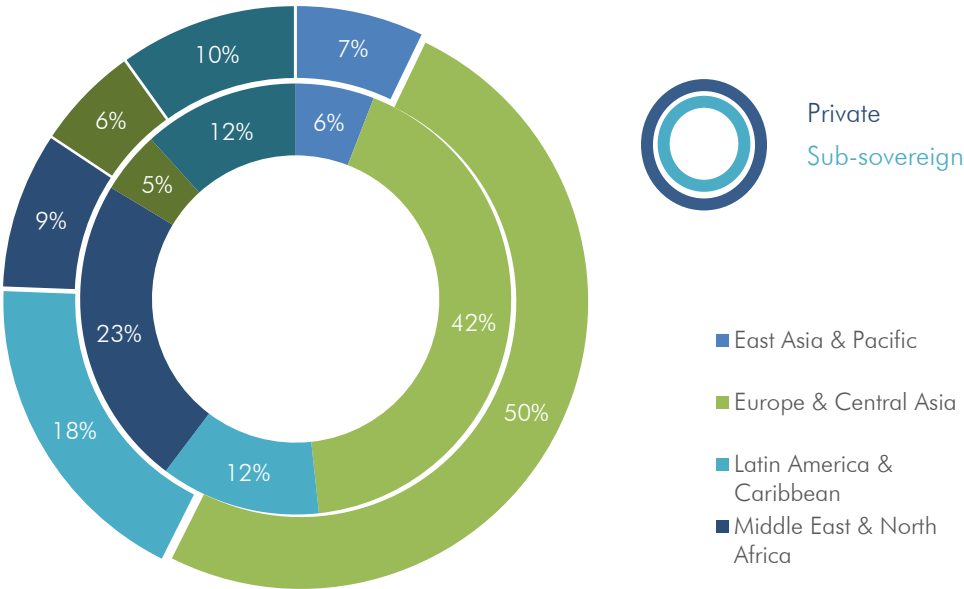
Geographic region	# Counterparts	Total exposure in billions (€) <sup>2</sup>
<b>Private counterparts</b>		
East Asia & Pacific	829	20.29
Europe & Central Asia	3,615	142.79
Latin America & Caribbean	2,105	51.68
Middle East & North Africa	649	24.83
South Asia	797	16.37
Sub-Saharan Africa	1,498	28.11
<b>Total:</b>	<b>9,493</b>	<b>284.07</b>
<b>Sub-sovereign counterparts</b>		
East Asia & Pacific	56	7.81
Europe & Central Asia	541	56.06
Latin America & Caribbean	118	15.91
Middle East & North Africa	130	30.89
South Asia	24	6.15
Sub-Saharan Africa	246	15.50
<b>Total:</b>	<b>1,115</b>	<b>132.32</b>

<sup>2</sup> The signed amount of the loan as of signature date, denominated in EUR.

**Graph 6: Number of counterparts by region**



**Graph 7: Exposure by region**



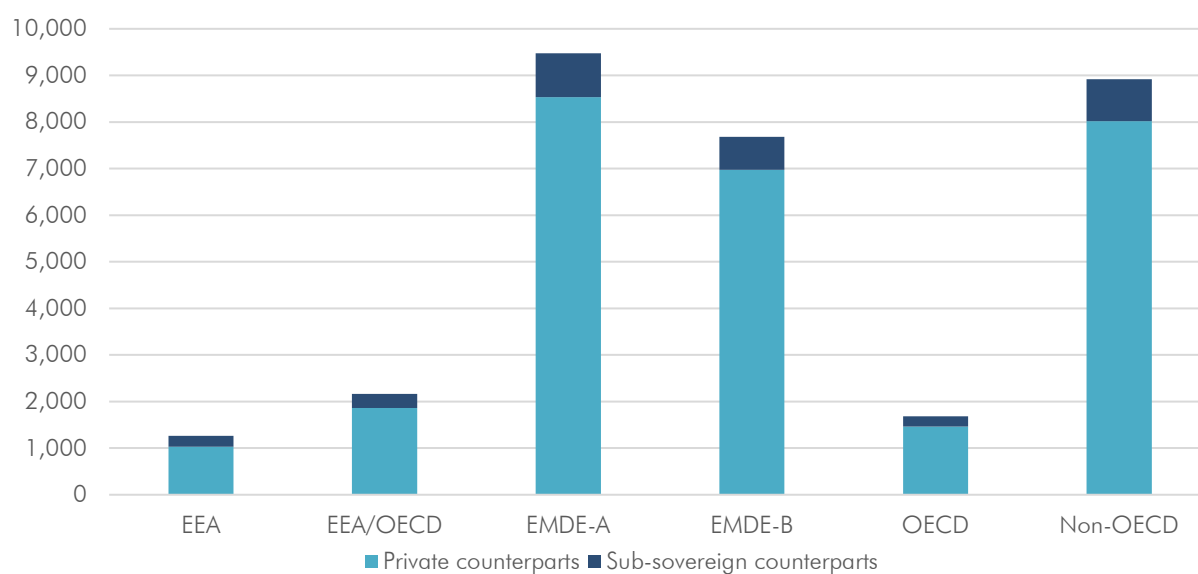


## Dataset distribution by income groups

Table 2: Dataset composition by country-specific income group<sup>3</sup>

Country group	# Counterparts	Total exposure in billions (€)
<b>Private counterparts</b>		
EEA <sup>4</sup>	1,030	38.89
EEA/OECD <sup>5</sup>	1,862	80.32
EMDE-A <sup>6</sup>	8,534	239.89
EMDE-B <sup>7</sup>	6,971	175.18
OECD	1,464	69.37
Non-OECD	8,020	214.52
<b>Sub-sovereign counterparts</b>		
EEA	236	18.45
EEA/OECD	305	38.44
EMDE-A	938	112.92
EMDE-B	711	85.28
OECD	217	39.15
Non-OECD	896	93.16

Graph 8: Number of counterparts by country-specific income group



<sup>3</sup> As applied by Moody's Investors Service and Jobst, Andreas A. 2018. Credit Risk Dynamics of Infrastructure Investment: Considerations for Financial Regulators. World Bank, Washington, DC. © World Bank. <https://openknowledge.worldbank.org/handle/10986/29540> License: CC BY 3.0 IGO. Please see glossary for detailed list of countries.

<sup>4</sup> European Economic Area

<sup>5</sup> European Economic Area or OECD

<sup>6</sup> Emerging market and developing economies A: non-high income

<sup>7</sup> Emerging market and developing economies B: non-high income, non-EEA, non-OECD

Graph 9: Exposure by country-specific income group (€ billion)

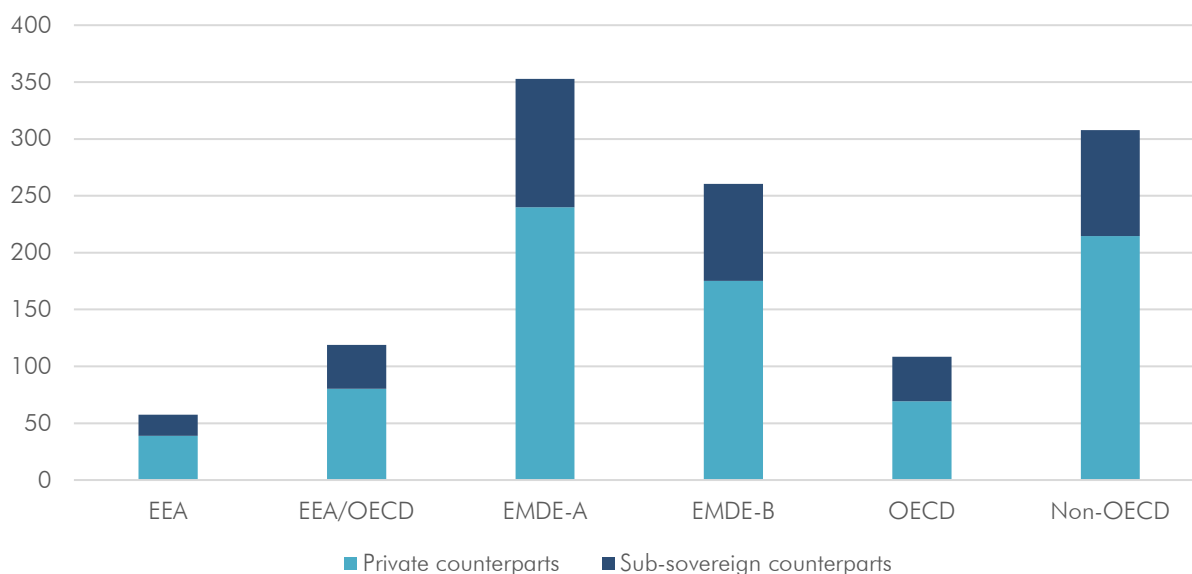
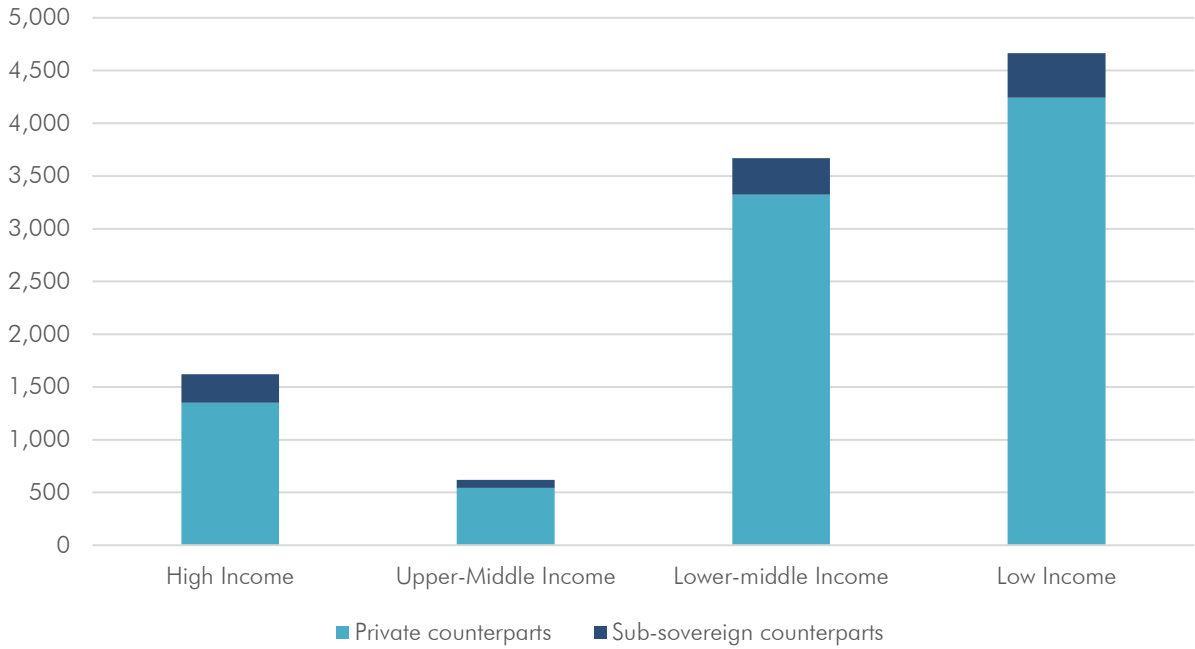


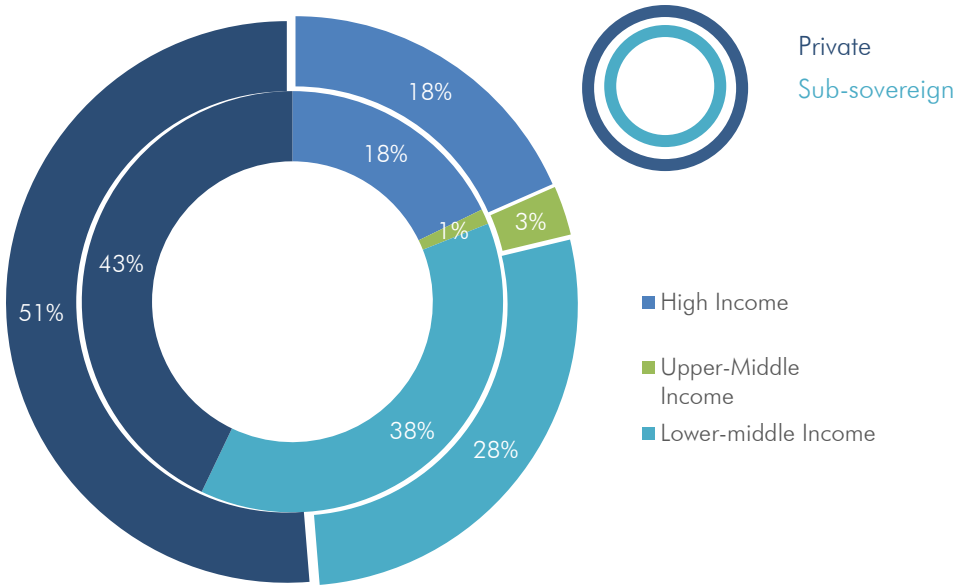
Table 3: Dataset composition by 2022 World Bank Group country income groups

Country income groups	# Counterparts	Total exposure in billions (€)
<b>Private counterparts</b>		
High Income	1,352	52.24
Upper-Middle Income	544	8.06
Lower-middle Income	3,322	77.89
Low income	4,243	145.51
N/A	32	0.37
<b>Total:</b>	<b>9,493</b>	<b>284.07</b>
<b>Sub-sovereign counterparts</b>		
High Income	269	23.54
Upper-Middle Income	75	1.55
Lower-middle Income	347	50.45
Low income	421	56.78
N/A	3	0.00
<b>Total:</b>	<b>1,115</b>	<b>132.32</b>

Graph 10: Dataset composition by 2022 World Bank Group country income groups



Graph 11: Exposure by 2022 World Bank Group country income group (€ billion)

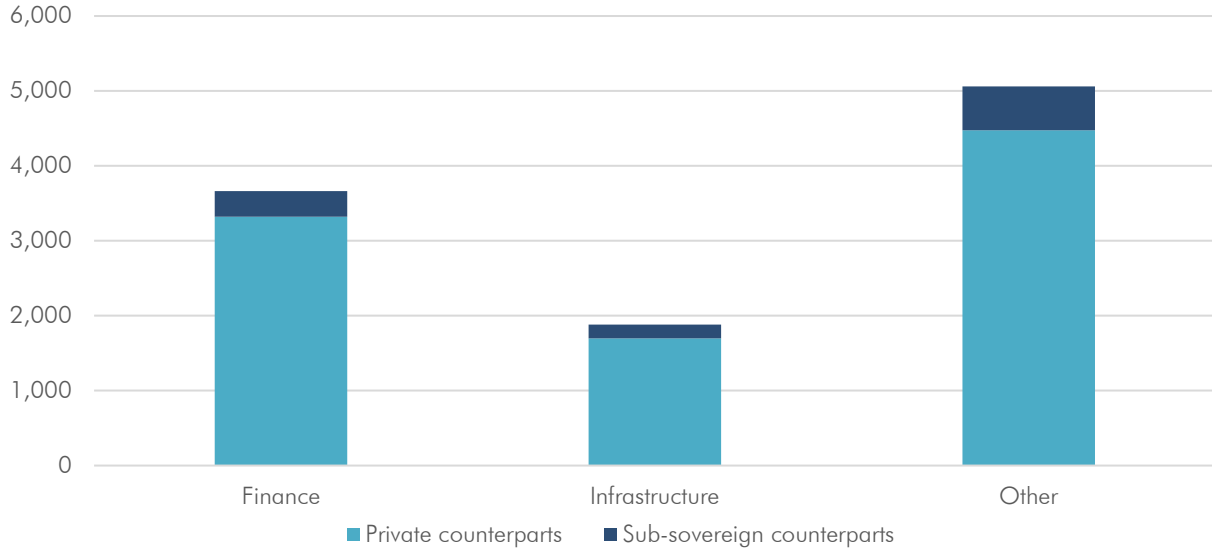


# Dataset distribution by sector

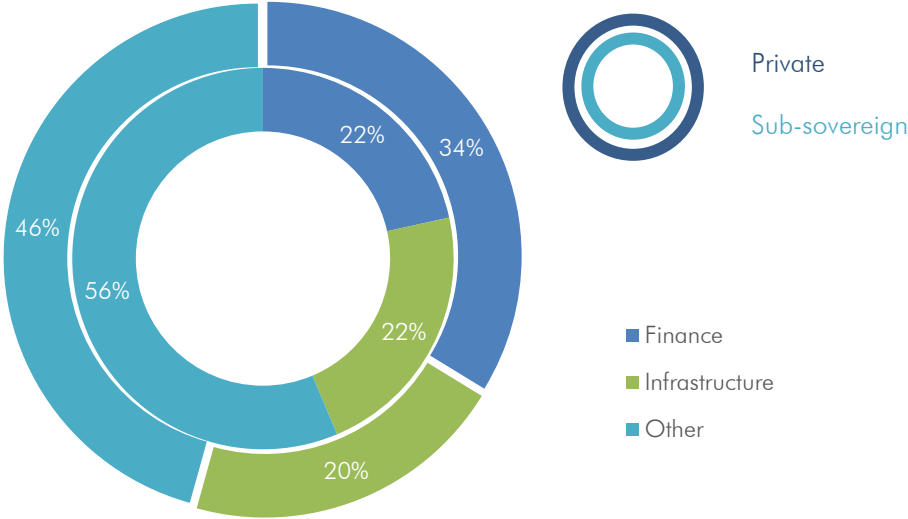
Table 4: Dataset composition by sector group

Sector group	# Counterparts	Total exposure in billions (€)
<b>Private counterparts</b>		
Finance	3,320	95.83
Infrastructure	1,697	58.48
Other	4,476	129.77
<b>Total:</b>	<b>9,493</b>	<b>284.07</b>
<b>Sub-sovereign counterparts</b>		
Finance	345	28.51
Infrastructure	184	29.23
Other	586	74.57
<b>Total:</b>	<b>1,115</b>	<b>132.32</b>

Graph 12: Number of counterparts by sector



Graph 13: Exposure by sector group (€ billion)



## Default rate statistics

The GEMs default rate calculation is counterpart-based and follows the cohort approach used by rating agencies. Statistics derived from GEMs members' data are presented at an aggregated level to maintain database integrity and ensure data are not identifiable.

Table 5: Annual default rate by counterpart type, 1994-2022

Year	Private	Sub-sovereign
1994	2.2%	4.4%
1995	2.7%	2.8%
1996	1.8%	0.0%
1997	2.9%	4.1%
1998	7.2%	1.6%
1999	4.2%	6.5%
2000	4.1%	4.0%
2001	4.5%	3.8%
2002	7.3%	4.1%
2003	5.8%	3.8%
2004	4.1%	2.3%
2005	2.5%	1.1%
2006	3.0%	3.9%
2007	2.5%	1.7%
2008	2.9%	1.9%
2009	3.9%	2.2%
2010	3.7%	3.1%
2011	2.8%	0.9%
2012	2.5%	1.6%
2013	2.1%	2.1%
2014	3.4%	0.9%
2015	2.7%	0.5%
2016	3.1%	1.9%
2017	2.6%	0.8%
2018	2.5%	1.1%
2019	2.8%	1.1%
2020	4.9%	2.0%
2021	2.3%	1.2%
2022	3.5%	2.7%
<b>Average:</b>	<b>3.5%</b>	<b>2.4%</b>

Table 6: Annual default rate by sector for private counterparts, 1994-2022

Year	Financials <sup>8</sup>	Infrastructure <sup>9</sup>	Other
1994	0.9%	0.0%	2.6%
1995	0.7%	1.4%	3.6%
1996	0.0%	1.2%	2.0%
1997	0.5%	1.0%	4.5%
1998	6.0%	2.6%	8.9%
1999	3.1%	3.1%	4.7%
2000	2.8%	2.0%	5.8%
2001	2.6%	4.4%	5.7%
2002	5.6%	7.2%	9.1%
2003	2.4%	8.6%	8.8%
2004	4.0%	2.3%	4.5%
2005	1.7%	4.4%	3.6%
2006	2.6%	1.5%	3.7%
2007	2.6%	2.7%	2.5%
2008	2.2%	2.0%	3.3%
2009	2.8%	2.4%	5.5%
2010	2.1%	0.8%	5.5%
2011	1.5%	3.3%	3.6%
2012	1.5%	2.1%	3.1%
2013	0.6%	2.4%	3.4%
2014	1.2%	3.8%	5.5%
2015	1.3%	2.7%	4.7%
2016	1.9%	4.1%	4.2%
2017	1.6%	3.6%	3.5%
2018	1.4%	2.1%	3.7%
2019	2.5%	2.2%	3.7%
2020	3.1%	6.4%	6.7%
2021	1.4%	2.6%	3.8%
2022	1.9%	3.2%	5.8%
<b>Average:</b>	<b>2.2%</b>	<b>3.0%</b>	<b>4.7%</b>

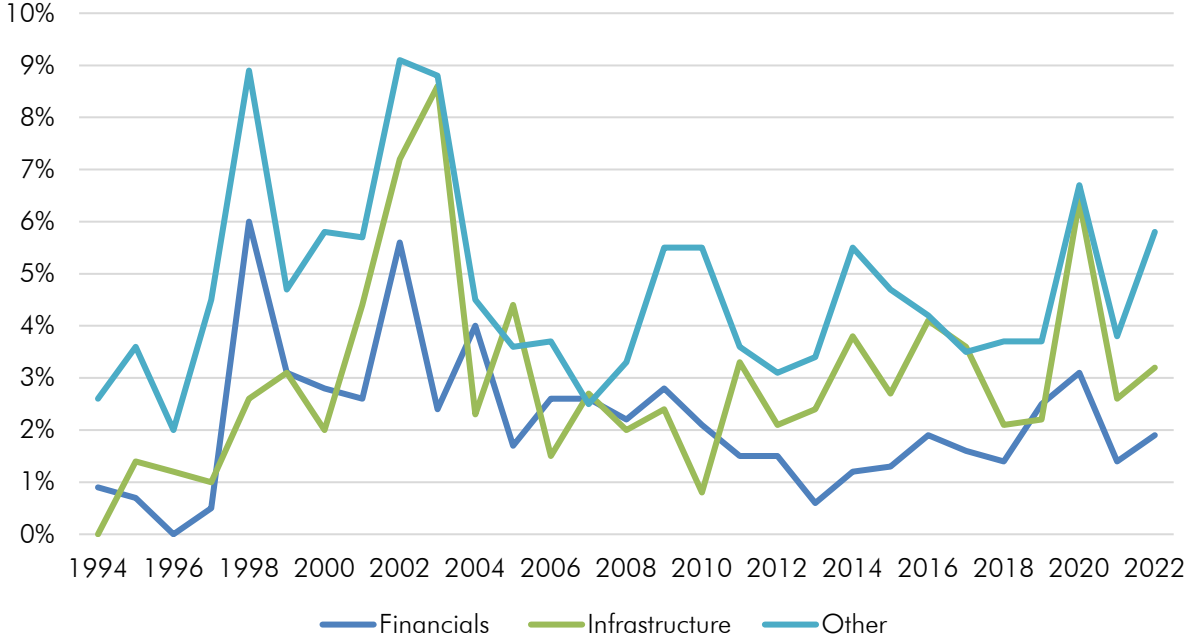
<sup>8</sup> The Financials category includes relevant subsectors according to the Global Industry Classification Standard (GICS). Please see the Glossary for a detailed definition.

<sup>9</sup> The GEMs infrastructure dataset includes relevant GICS subsector codes. Please refer to the Glossary for a detailed definition.

Graph 14: Annual default rate by counterpart type, 1994-2022



Graph 15: Annual default rate by sector for private counterparts, 1994-2022





## GEMs infrastructure sector dataset

In the coming years, emerging markets will require significantly higher infrastructure investment to facilitate economic growth, respond to demographic and urbanisation pressures, and meet the Sustainable Development Goals. Current infrastructure investment in emerging markets amounts to approximately \$1 trillion per year, leaving an estimated unmet need of \$2-4 trillion per year.<sup>10</sup> Over half of this amount will be required in the electricity sector, to finance generation, capacity, transmission and distribution networks. Other important sectors include transport (roads, ports, and airports) and telecommunications.<sup>11</sup>

In most emerging markets, public finance is the largest source of infrastructure finance, with private finance covering only 15-25% of total investment. Given tight government budgets, increasing debt burdens and limited room for fiscal expansion, there is an urgent need — and an opportunity — to significantly increase the share of private sector financing in the overall mix.<sup>12 13</sup>

To meet its commitments to supporting development, the international community must successfully mobilise far greater volumes of private investment into emerging markets infrastructure. Public policy institutions such as MDBs and DFIs face increasing calls to move beyond their classic roles as finance providers and focus more on catalysing the flow of private infrastructure finance from third parties, notably long-term institutional investors. The July 2015 Addis Ababa Action Agenda, the October 2018 report of the G20 Eminent Person Group on Financial Governance (EPG) — *Making the Global Financial System Work for All*, and G20 meetings in summer 2022 highlighted such issues as crucial for emerging markets infrastructure becoming an investable asset class.

To make well-informed decisions about capital allocation to emerging markets, private and public investors require robust and accessible information. Misapprehension of risk most often stems from a lack of objective, verifiable track records on emerging markets infrastructure projects. Potential investors may consequently be dissuaded by unverified anecdotal evidence of protracted project lifecycles marred by cost overruns and political instability. Crucially, such information is essential for performance benchmarking and asset allocation decisions, and thus for emerging market interactions with institutional investors.

The need to address this data gap was highlighted in the *G20 Roadmap to Infrastructure as an asset class*, which stated that “availability of clear and timely data ensures that investors can assess the key features of infrastructure projects, *in particular their expected risk-return profile.*” Data have the potential to unlock significant value for investors and financial markets, enabling them to optimise portfolio strategies. Data can also usefully support policy debate, help shape the regulatory treatment of investment, and provide valuable inputs to the work of other stakeholders such as rating agencies, academic research bodies and think-tanks.

---

<sup>10</sup> Inderst, Georg and Stewart, Fiona. 2014. Institutional investment in infrastructure in emerging markets and developing economies; World Bank Group Public-Private Infrastructure Advisory Facility (PPIAF).

<sup>11</sup> Organisation for Economic Co-operation and Development [OECD] (2020). OECD Compendium of Policy Good Practices for Quality Infrastructure Investment.

<sup>12</sup> Green Action Alliance, 2013. The Green Investment Report: The ways and means to unlock private finance for green growth. World Economic Forum.

<sup>13</sup> A. Bhattacharya, M. Dooley, H. Kharas, Ch. Taylor and N. Stern. May 2022. Financing a big investment push in emerging markets and developing countries for sustainable, resilient and inclusive recovery and growth. LSE Grantham Research Institute on Climate Change and the Environment.

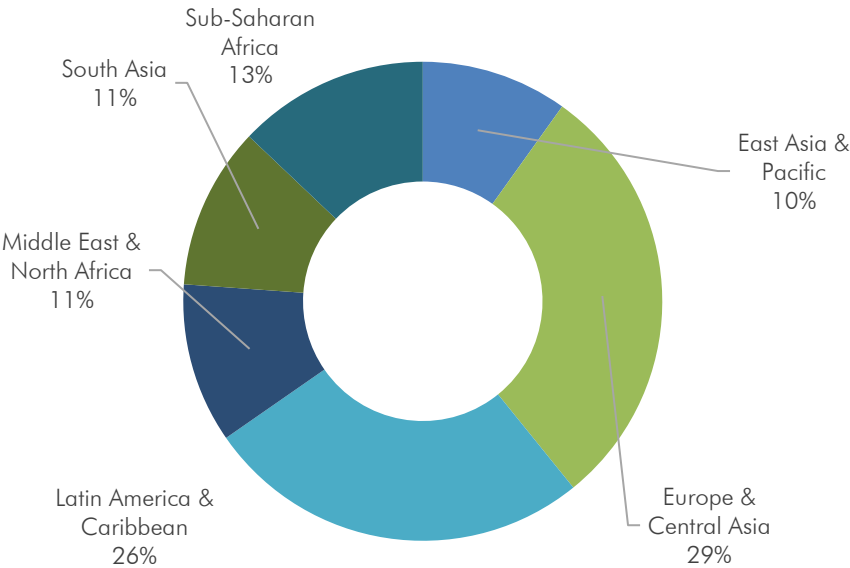
# Overview of infrastructure dataset

The GEMs infrastructure dataset comprises a specific set of GICS subsector codes.<sup>14</sup> The below figures combine observations for private and sub-sovereign counterpart types.

**Table 7: Number of infrastructure counterparts and their exposure by 2022 World Bank Group region**

Geographic region	# Counterparts	Total exposure in billions (€)
East Asia & Pacific	186	6.52
Europe & Central Asia	551	29.10
Latin America & Caribbean	492	23.77
Middle East & North Africa	203	15.23
South Asia	206	3.50
Sub-Saharan Africa	243	9.59
<b>Total:</b>	<b>1,881</b>	<b>87.71</b>

**Graph 16: Distribution of infrastructure counterparts by 2022 World Bank Group region**



<sup>14</sup> Please refer to the Glossary for a detailed definition of infrastructure.

Graph 17: Distribution of infrastructure exposure by 2022 World Bank Group region

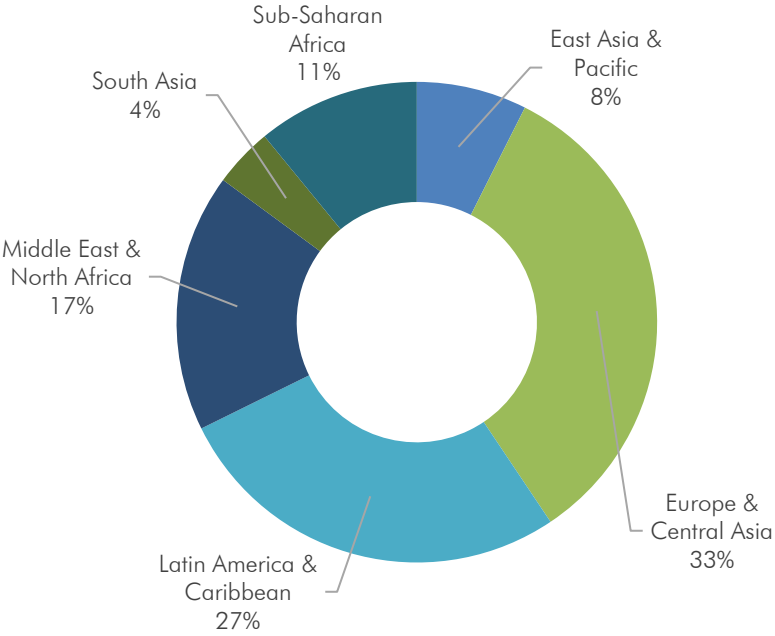
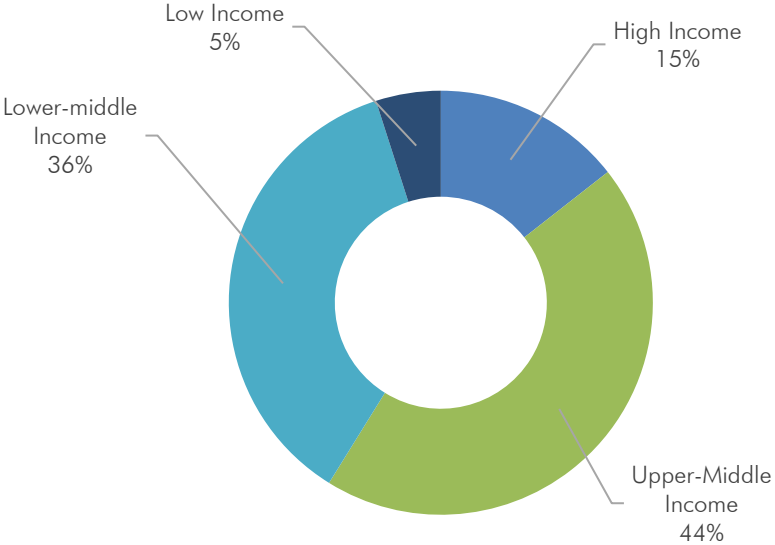


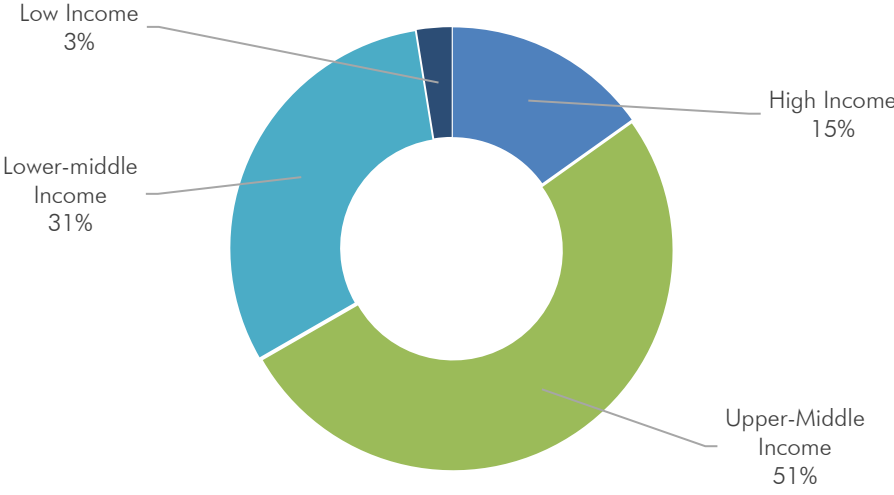
Table 8: Number of infrastructure counterparts and their exposure by 2022 World Bank Group country income group

Country income groups	# Counterparts	Total exposure in billions (€)
High Income	271	13.28
Upper-Middle Income	834	45.18
Lower-middle Income	680	26.97
Low income	92	2.23
N/A	3	0.04
<b>Total:</b>	<b>1,881</b>	<b>87.71</b>

Graph 18: Distribution of infrastructure counterparts by 2022 World Bank Group country income group



Graph 19: Distribution of infrastructure exposure by 2022 World Bank Group country income group

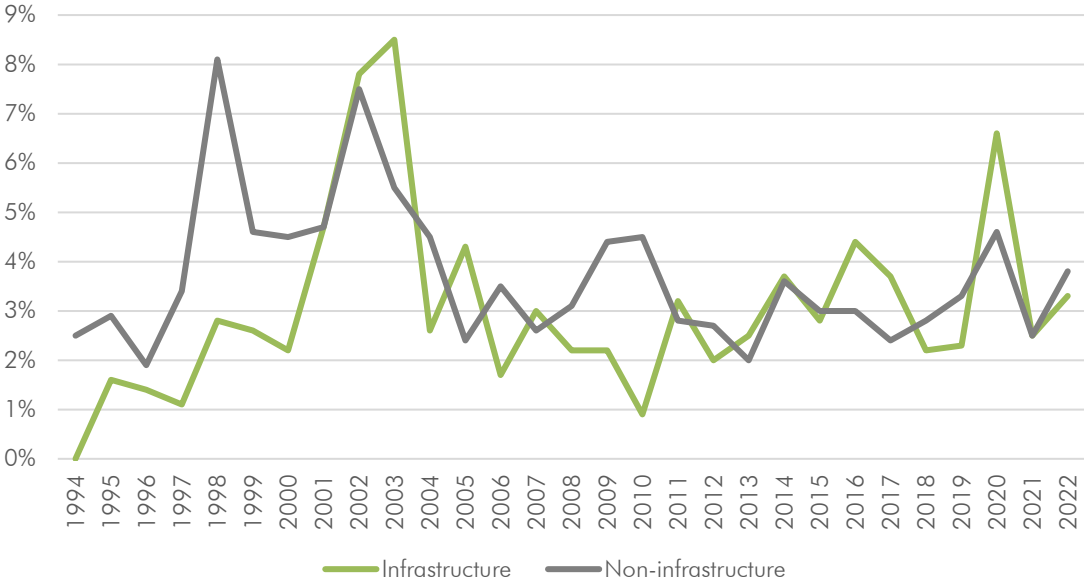


## Overview of infrastructure sector default statistics

Table 9: Annual default rate for infrastructure and non-infrastructure sectors

Year	Infrastructure	Non-infrastructure
1994	0.0%	2.5%
1995	1.6%	2.9%
1996	1.4%	1.9%
1997	1.1%	3.4%
1998	2.8%	8.1%
1999	2.6%	4.6%
2000	2.2%	4.5%
2001	4.7%	4.7%
2002	7.8%	7.5%
2003	8.5%	5.5%
2004	2.6%	4.5%
2005	4.3%	2.4%
2006	1.7%	3.5%
2007	3.0%	2.6%
2008	2.2%	3.1%
2009	2.2%	4.4%
2010	0.9%	4.5%
2011	3.2%	2.8%
2012	2.0%	2.7%
2013	2.5%	2.0%
2014	3.7%	3.6%
2015	2.8%	3.0%
2016	4.4%	3.0%
2017	3.7%	2.4%
2018	2.2%	2.8%
2019	2.3%	3.3%
2020	6.6%	4.6%
2021	2.5%	2.5%
2022	3.3%	3.8%
<b>Average:</b>	<b>3.1%</b>	<b>3.7%</b>

Graph 20: Annual default rates for infrastructure and non-infrastructure sectors



# Glossary

<b>Cohort approach</b>	A cohort consists of all counterparts with the same rating at a given formation date, which for GEMs is always end of day on 31 <sup>st</sup> December of the relevant year. Every year a new cohort $j$ is formed. The default or survival status of every counterpart in each cohort is then followed over a time horizon, divided into years $i = (1, \dots, T)$ . In every year $i$ , the marginal default rate is calculated as the proportion of counterparts defaulting in that year.
<b>Counterpart category</b>	The GEMs database collects data across three counterpart types: private, sub-sovereign and sovereign. Sub-sovereign counterparts are at least 50% state-owned. This publication presents statistics for private and sub-sovereign counterparts.
<b>Country</b>	Name of a nation state or regional grouping of nations where the counterpart holding company is located.
<b>Default</b>	A default event on any private or sub-private operation can occur in one of six ways: <ul style="list-style-type: none"> <li>• Non-payment within 90 days of the due date</li> <li>• Specific provision raised against a loan</li> <li>• Write-off of an outstanding loan (full or partial)</li> <li>• Agreement to distressed restructuring</li> <li>• Client enters bankruptcy</li> <li>• Realisation of loan security.</li> </ul>
<b>Default rate</b>	The default rate is computed based on the dynamic cohort approach used by rating agencies.
<b>East Asia and Pacific</b>	World Bank Group region definition (2022): American Samoa, Australia, Brunei Darussalam, Cambodia, China, Fiji, French Polynesia, Guam, Hong Kong SAR, China, Indonesia, Japan, Kiribati, Korea Dem. People's Rep., Korea Rep., Lao PDR, Macao SAR, China, Malaysia, Marshall Islands, Micronesia, Fed. Sts., Mongolia, Myanmar, Nauru, New Caledonia, New Zealand, Northern Mariana Islands, Palau, Papua New Guinea, Philippines, Samoa, Singapore, Solomon Islands, Taiwan, China, Thailand, Timor-Leste, Tonga, Tuvalu, Vanuatu, Vietnam
<b>EEA</b>	The European Economic Area, comprising the 27 member countries of the European Union and Norway, Iceland and Liechtenstein.
<b>EMDE</b>	Emerging Markets and Developing Economies
<b>EMDE-A</b>	Afghanistan, Albania, Algeria, Angola, Antigua and Barbuda, Argentina, Armenia, Azerbaijan, Bangladesh, Belarus, Belize, Benin, Bhutan, Bolivia, Bosnia and Herzegovina, Botswana, Brazil, Bulgaria, Burkina Faso, Burundi, Cabo Verde, Cambodia, Cameroon, Central African Republic, Chad, Chile, China, Colombia, Comoros, Congo, Dem. Rep., Congo, Rep., Costa Rica, Côte d'Ivoire, Croatia, Cuba, Czech Republic, Djibouti, Dominica, Dominican Republic, Ecuador, Egypt, Arab Rep., El Salvador, Equatorial Guinea, Eritrea, Estonia, Ethiopia, Fiji, Gabon, Gambia, The, Georgia, Ghana, Grenada, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, Hungary, India, Indonesia, Iran, Islamic Rep., Iraq, Jamaica, Jordan, Kazakhstan, Kenya, Kiribati, Korea, Dem. People's Rep., Kosovo, Kyrgyz Republic, Lao PDR, Latvia, Lebanon, Lesotho, Liberia, Libya, Lithuania, Macedonia, FYR, Madagascar, Malawi, Malaysia, Maldives, Mali, Mauritania, Mauritius, Mexico, Moldova, Mongolia, Montenegro, Morocco, Mozambique, Myanmar, Namibia, Nauru, Nepal, Nicaragua, Niger, Nigeria, Oman, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Romania, Russia, Rwanda, Samoa, São Tomé and Príncipe, Senegal, Serbia, Seychelles, Sierra Leone, Slovak Republic, Solomon Islands, Somalia, South Africa, South Sudan, Sri Lanka, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Sudan, Suriname, Swaziland, Syrian Arab Republic, Tajikistan, Tanzania, Thailand, Timor-Leste, Togo, Tonga, Tunisia, Turkey, Turkmenistan, Tuvalu, Uganda, Ukraine, Uruguay, Uzbekistan, Vanuatu, Venezuela, RB, Vietnam, West Bank and Gaza, Yemen, Rep., Zambia, Zimbabwe
<b>EMDE-B</b>	Afghanistan, Albania, Algeria, Angola, Antigua and Barbuda, Argentina, Armenia, Azerbaijan, Bangladesh, Belarus, Belize, Benin, Bhutan, Bolivia, Bosnia and Herzegovina, Botswana, Brazil, Burkina Faso, Burundi, Cabo Verde, Cambodia, Cameroon, Central African Republic, Chad, China, Colombia, Comoros, Congo, Dem. Rep., Congo, Rep., Costa Rica, Côte d'Ivoire, Croatia, Cuba, Djibouti, Dominica, Dominican Republic, Ecuador, Egypt, Arab Rep., El Salvador, Equatorial Guinea, Eritrea, Ethiopia, Fiji, Gabon, Gambia, The, Georgia, Ghana, Grenada, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, India, Indonesia, Iran, Islamic Rep., Iraq, Jamaica, Jordan, Kazakhstan, Kenya, Kiribati, Korea, Dem. People's Rep., Kosovo, Kyrgyz Republic, Lao PDR, Lebanon, Lesotho, Liberia, Libya, Macedonia, FYR, Madagascar, Malawi, Malaysia, Maldives, Mali, Mauritania, Mauritius, Moldova, Mongolia, Montenegro, Morocco, Mozambique, Myanmar, Namibia, Nauru, Nepal, Nicaragua, Niger, Nigeria, Oman, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Russia, Rwanda, Samoa, São Tomé and Príncipe, Senegal, Serbia, Seychelles, Sierra Leone, Slovak Republic, Solomon Islands, Somalia, South Africa, South Sudan, Sri Lanka, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Sudan, Suriname, Swaziland, Syrian Arab Republic, Tajikistan, Tanzania, Thailand, Timor-Leste, Togo, Tonga, Tunisia, Turkey, Turkmenistan, Tuvalu, Uganda, Uruguay, Uzbekistan, Vanuatu, Venezuela, RB, Vietnam, West Bank and Gaza, Yemen, Rep., Zambia, Zimbabwe

<b>Europe and Central Asia</b>	World Bank Group region definition (2022): Albania, Andorra, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Channel Islands, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Faroe Islands, Finland, France, Georgia, Germany, Gibraltar, Greece, Greenland, Hungary, Iceland, Ireland, Isle of Man, Italy, Kazakhstan, Kosovo, Kyrgyz Republic, Latvia, Liechtenstein, Lithuania, Luxembourg, Moldova, Monaco, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Russian Federation, San Marino, Serbia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Tajikistan, Turkey, Turkmenistan, Ukraine, United Kingdom, Uzbekistan
<b>Exposure</b>	The signed amount of the loan as of signature date, denominated in euros
<b>Financials sector</b>	The Financials sector dataset includes the following subsector codes according to the Global Industry Classification Standard (GICS): 40101010 (Diversified Banks), 40101015 (Regional Banks), 40102010 (Thrifts & Mortgage Finance), 40201020 (Other Diversified Financial Services), 40201030 (Multi-Sector Holdings), 40201040 (Specialized Finance), 40202010 (Consumer Finance), 40203010 (Asset Management & Custody Banks), 40203020 (Investment Banking & Brokerage), 40203030 (Diversified Capital Markets), 40301010 (Insurance Brokers), 40301020 (Life & Health Insurance), 40301030 (Multi-line Insurance), 40301040 (Property & Casualty Insurance), 40301050 (Reinsurance)
<b>GICS</b>	The Global Industry Classification Standard (GICS), an industry taxonomy developed by Morgan Stanley Capital International (MSCI) and Standard & Poor's (S&P). The GICS structure consists of 11 sectors, 24 industry groups, 69 industries and 158 sub-industries.
<b>Infrastructure sector</b>	The infrastructure sector dataset includes the following GICS subsector codes: 10102040 (Oil & Gas Storage & Transportation), 20201050 (Environmental & Facilities Services), 20301010 (Air Freight & Logistics), 20302010 (Airlines), 20303010 (Marine), 20304010 (Railroads), 20304020 (Trucking), 20305010 (Airport Services), 20305020 (Highways & Railtracks), 20305030 (Marine Ports & Services), 35102020 (Health Care Facilities), 50101010 (Alternative Carriers), 50101020 (Integrated Telecommunication Services), 50102010 (Wireless Telecommunication Services), 55101010 (Electric Utilities), 55102010 (Gas Utilities), 55103010 (Multi-Utilities), 55104010 (Water Utilities), 55105010 (Independent Power Producers & Energy Traders), 55105020 (Renewable Electricity), 40402045 (Health Care Real Estate Investment Trusts – REITs).
<b>Latin America &amp; the Caribbean</b>	World Bank Group region definition (2022): Antigua and Barbuda, Argentina, Aruba, Bahamas, Barbados, Belize, Bolivia, Brazil, British Virgin Islands, Cayman Islands, Chile, Colombia, Costa Rica, Cuba, Curaçao, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, Sint Maarten (Dutch part), St. Kitts and Nevis, St. Lucia, St. Martin (French part), St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Turks and Caicos Islands, Uruguay, Venezuela, RB, Virgin Islands (U.S.)
<b>Middle East and North Africa</b>	World Bank Group region definition (2022): Algeria, Bahrain, Djibouti, Egypt, Arab Rep., Iran, Islamic Rep., Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Malta, Morocco, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Tunisia, United Arab Emirates, West Bank and Gaza, Yemen, Rep.
<b>OECD</b>	The Organisation for Economic Co-operation and Development, comprising 36 member countries. The OECD was founded in 1961 to stimulate economic progress and world trade.
<b>Other sector</b>	Includes all GICS subsector codes, except those listed under the Financials and Infrastructure sectors above.
<b>Size of loan</b>	Total principal disbursement from lender to counterpart, in accordance with contract/instrument.
<b>South Asia</b>	World Bank Group region definition (2022): Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka
<b>Sub-Saharan Africa</b>	2020 World Bank Group region group: Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo, Dem. Rep., Congo, Rep., Côte d'Ivoire, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Gabon, Gambia, The, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, São Tomé and Príncipe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Tanzania, Togo, Uganda, Zambia, Zimbabwe





# DEFAULT STATISTICS



## PRIVATE AND SUB-SOVEREIGN LENDING 1994-2022 VOLUME 1



Global Emerging Markets Risk Database

**European Investment Bank**  
98-100, boulevard Konrad Adenauer  
L-2950 Luxembourg  
+352 4379-1  
[www.eib.org](http://www.eib.org) – [info@eib.org](mailto:info@eib.org)

 [twitter.com/EIB](https://twitter.com/EIB)

 [facebook.com/EuropeanInvestmentBank](https://facebook.com/EuropeanInvestmentBank)

 [youtube.com/EIBtheEUBank](https://youtube.com/EIBtheEUBank)