

Multilateral Development Banks and Development Finance Institutions

# DEFAULT STATISTICS

**PRIVATE AND  
SUB-SOVEREIGN  
LENDING 2001-2019**



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SUB-SOVEREIGN  
LENDING 2001-2019**

## **Default statistics: Private and sub-sovereign lending 2001-2019**

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# About the Global Emerging Markets Risk Database consortium

The Global Emerging Markets Risk Database consortium (GEMs) consists of a consortium of multilateral development banks and development finance institutions, including the European Investment Bank (EIB), International Finance Corporation (IFC), African Development Bank (AfDB), Asian Development Bank (ADB), European Bank for Reconstruction and Development (EBRD), Inter-American Development Bank (IDB), Netherlands Development Finance Company (FMO), U.S. International Development Finance Corporation (DFC), Black Sea Trade and Development Bank (BSTDB), Islamic Development Bank (IsDB), Agence Française de Développement (AFD), International Investment Bank (IIB), Inter-American Investment Corporation (IDB Invest), GuarantCo, Council of Europe Development Bank (CEB), Asian Infrastructure Investment Bank (AIIB), CDC Group (CDC), Banque Ouest Africaine de Développement (BOAD), International Bank for Reconstruction and Development (IBRD), Kreditanstalt für Wiederaufbau (KfW), International Fund for Agricultural Development (IFAD), Multilateral Investment Guarantee Agency (MIGA), Deutsche Investitions- und Entwicklungsgesellschaft (DEG), Central American Bank for Economic Integration (CABEI) and New Development Bank (NDB).

The European Investment Bank, as host and administrator, is publishing this report on behalf of itself and of the other ten GEMs consortium members that have contributed data to this report, which are: ADB, BOAD, CEB, EBRD, GuarantCo, IDB Invest, IFC, IsDB, FMO and DFC.





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# FOREWORD

**T**he Global Emerging Markets Risk Database consortium (GEMs consortium) was established in 2009 as a joint initiative between the European Investment Bank (EIB) and the International Finance Corporation (IFC) to pool data on credit defaults. Since then, the GEMs consortium has grown to include 25 members, mainly multilateral development banks and development finance institutions, covering emerging markets and developing economies.

Based on data from 11 member institutions, this is the first GEMs publication on default statistics for private and sub-sovereign lending. We are proud to share our results building on more than ten years of successful cooperation among GEMs members.

Data in this report cover the period from 2001 to 2019, unless otherwise indicated. Built by the consortium to support technical cooperation between international institutions, the GEMs risk database features sub-investment grade observations, and explains the GEMs methodological framework and the various applications of GEMs statistics.

Compiling the report required extensive collaboration and technical harmonisation between the participating multilateral development banks and development finance institutions – this in itself is one of the consortium’s major achievements. We will continue building and refining both methodology and processes that make our statistics robust and valuable. Our aim is to support the scaling-up of investments where most needed.

GEMs is pleased to make this publication freely available. We look forward to receiving feedback from our readers and working with our stakeholders to improve the focus and content of our future reports.



# GEMs AT A GLANCE

**G**EMs collects de-identified data from multilateral development banks and development finance institutions on their performing and non-performing exposures and, in return, the member institutions gain access to GEMs output statistics on default rates by geography, sector and time period.

GEMs is based on the principle of keeping underlying data strictly confidential, and the consortium has jointly developed an anonymised data submission and collection process that protects confidentiality. Because GEMs counterparties are encrypted and cannot be identified, the aggregated credit risk statistics are anonymous.

GEMs output statistics enable members to calibrate and benchmark internal models, assess capital requirements and make better informed investment decisions. The compilation of GEMs risk statistics relies on a sound and shared methodological framework.

Bringing together data and expertise from 25 public development finance institutions, GEMs is a:

- **Harmonised dataset** reflecting more than 30 years of experience in investing in emerging markets.
- **Framework for multilateral development bank and development finance institution collaboration** to improve risk management practices.
- **Trusted data collection and processing platform** hosting a scalable data model that can be expanded to cover other contract-level data on investment projects.
- **Statistics resource for member multilateral development banks and development finance institutions** – GEMs outputs, default rates, recovery rates and rating migrations enable better informed investment decisions.
- **Risk data hub of contract-level information** for private, sovereign, sub-sovereign lending and sovereign-guaranteed lending. It is one of the largest datasets for emerging markets and developing economies.

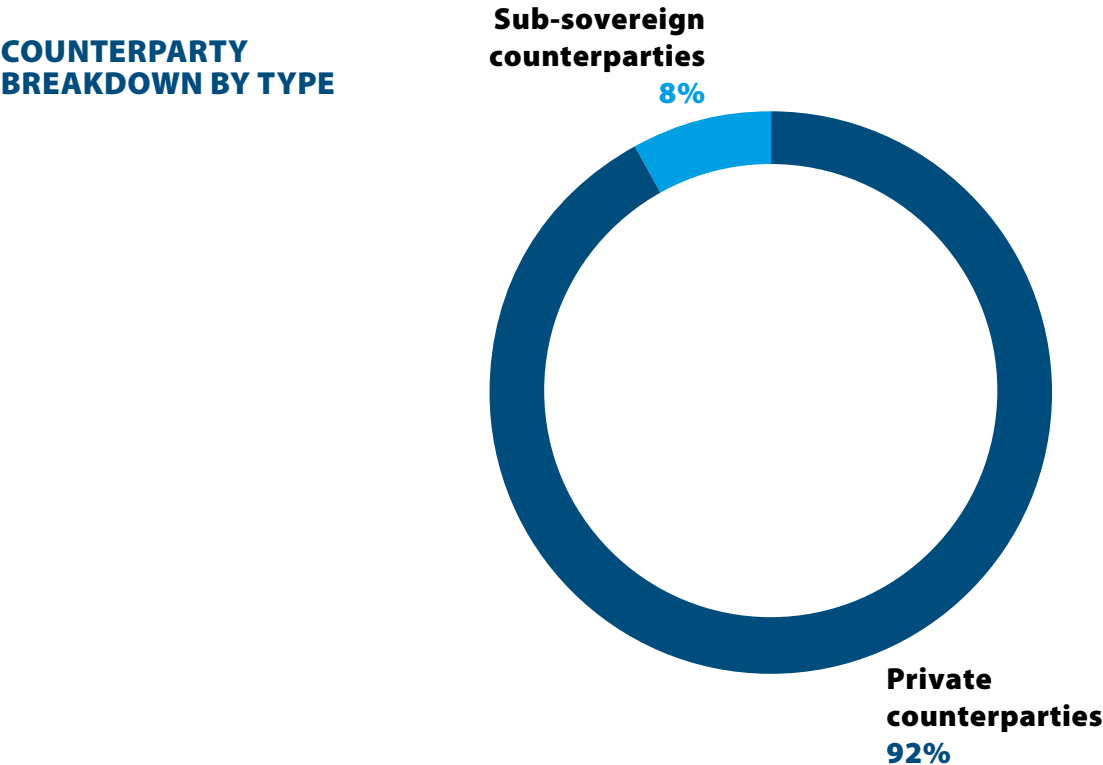
# HIGHLIGHTS

**M**ultilateral development banks and international financial institutions need to unlock greater volumes of private investment in emerging markets to tackle climate change and achieve the 17 United Nations Sustainable Development Goals. Institutions must work together to address some of the hurdles that are holding back investments. Key priorities include facilitating the use of public resources to mitigate risks, enabling a legal and contractual environment and ensuring greater standardisation, transparency and data availability. The scarcity of high-quality data and stricter regulatory requirements for risk management require reliable metrics.

Multilateral development banks and development finance institutions are committed to addressing these issues by sharing – through GEMs work – their experience and market knowledge among themselves and with investors. Working together, we can deliver more, as highlighted by the G20 Eminent Persons Group on Global Financial Governance. This joint work also benefits private investors and other stakeholders constrained by the same persistent data gap.

The scarcity of readily available, standardised and transparent high-quality data on investment projects in emerging markets leads to skewed risk perceptions and therefore sub-optimal investment decisions. Institutions with little or no experience in such markets have to rely on risk assumptions. Owing to regulatory requirements, many investors can invest only in assets with certain risk profiles.

By anchoring risk perceptions with actual data evidence, GEMs helps unlock capital to fill these investment gaps. GEMs is a unique and complementary data source for current and potential investors in emerging markets. It helps investors to refine their risk perceptions and make better informed decisions.

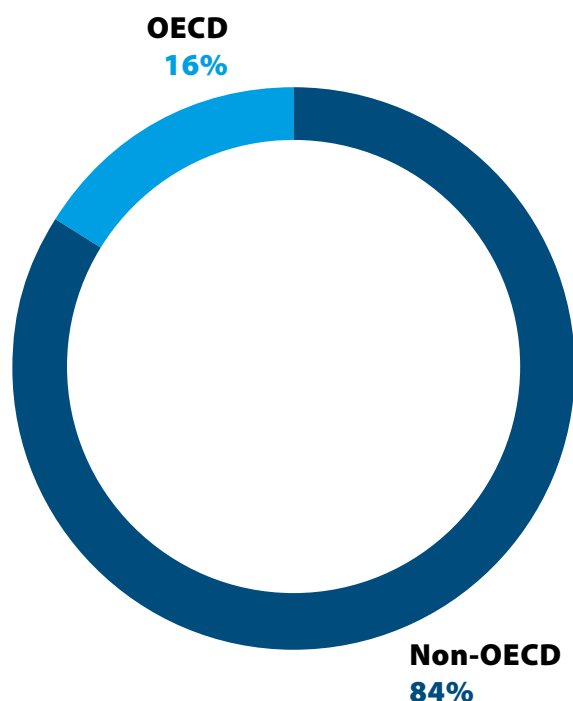


GEMs produces high-quality statistics enabling member organisations to calibrate and benchmark internal models, better estimate provisioning and set capital requirements more accurately. GEMs statistics serve as an objective and reliable platform to discuss regulatory compliance, capital adequacy and risk management practices with auditors, rating agencies and supervisors. GEMs statistics can also be a powerful tool for a transparent assessment of portfolio risks when third parties engage in risk transfer or co-financing operations with multilateral development banks or development finance institutions, or any other balance sheet optimisation initiative.

The 11 consortium members contributing to this report support economic development in many ways. More than 90% of the counterparties registered in this report dataset<sup>1</sup> are private sector entities. The number of sub-sovereign counterparties amounts to 700 entities or 8% of the report dataset – distributed across all geographic regions. Sub-sovereign counterparties are defined as being at least 50% state-owned.

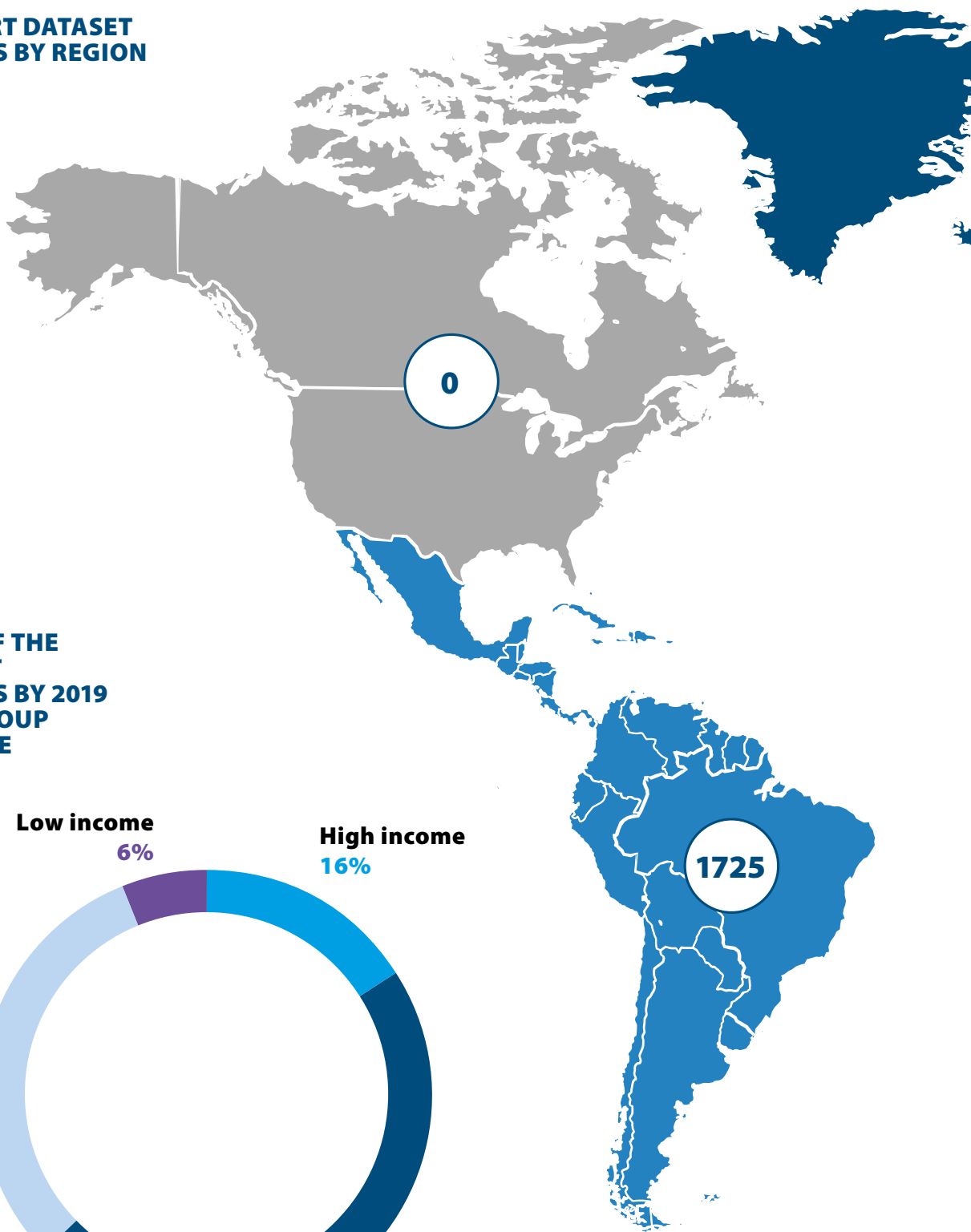
The counterparty and contract-level observations collected by GEMs can be aggregated by country and then grouped according to political or economic criteria. The GEMs private and sub-sovereign dataset covers a wide variety of counterparties operating in both OECD members and non-OECD countries.

### **DISTRIBUTION OF THE REPORT DATASET COUNTERPARTIES BY 2019 OECD MEMBERSHIP**

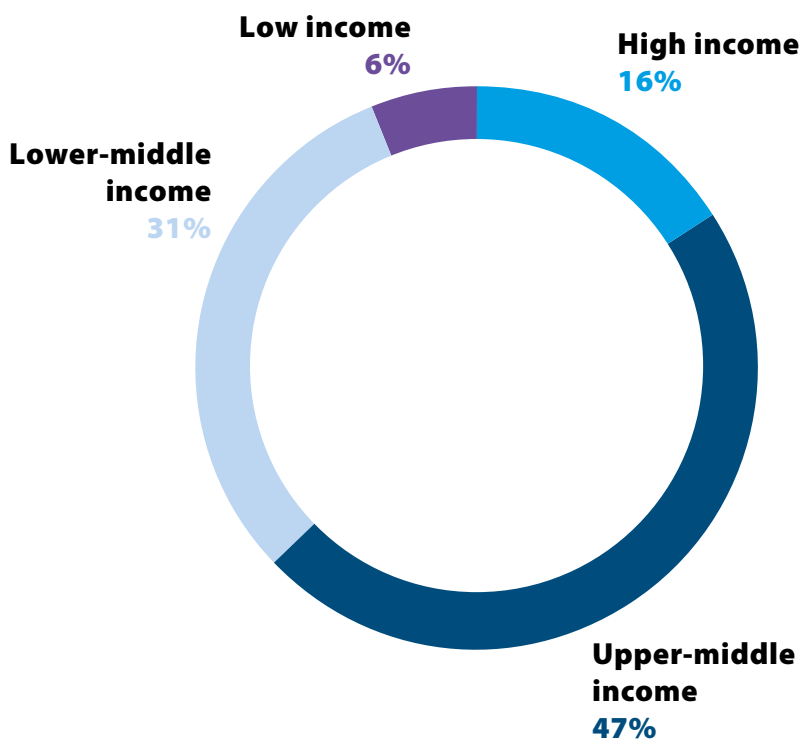


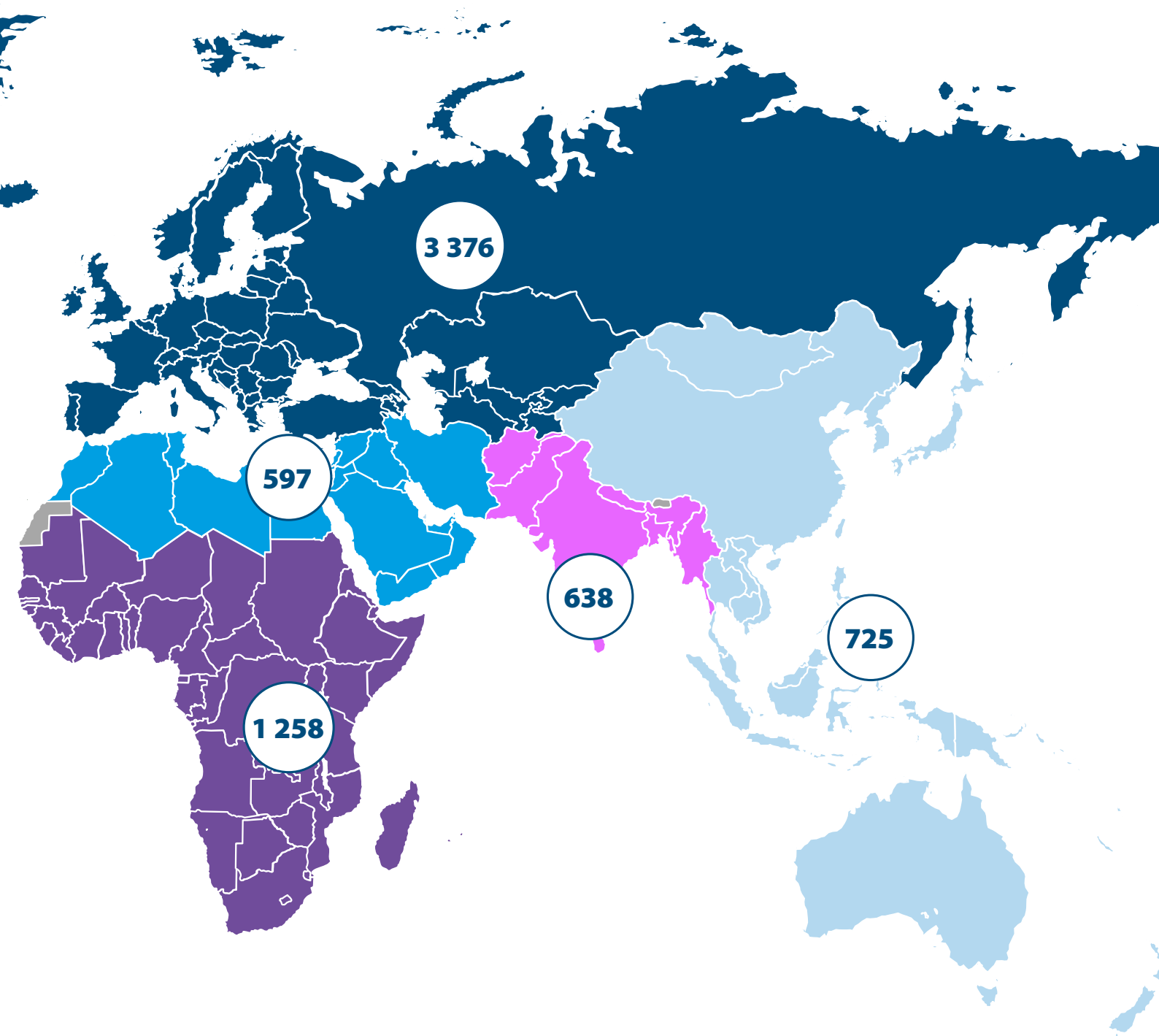
<sup>1</sup> For ease of reporting, observations located in countries that are not part of the World Bank Group region classification system – as well as regional projects that cannot be assigned to a single country – are not included in the report dataset. See the Methodology section of this report for more insights on the dataset coverage.

**COUNT OF REPORT DATASET  
COUNTERPARTIES BY REGION**



**DISTRIBUTION OF THE  
REPORT DATASET  
COUNTERPARTIES BY 2019  
WORLD BANK GROUP  
COUNTRY INCOME  
GROUPS**



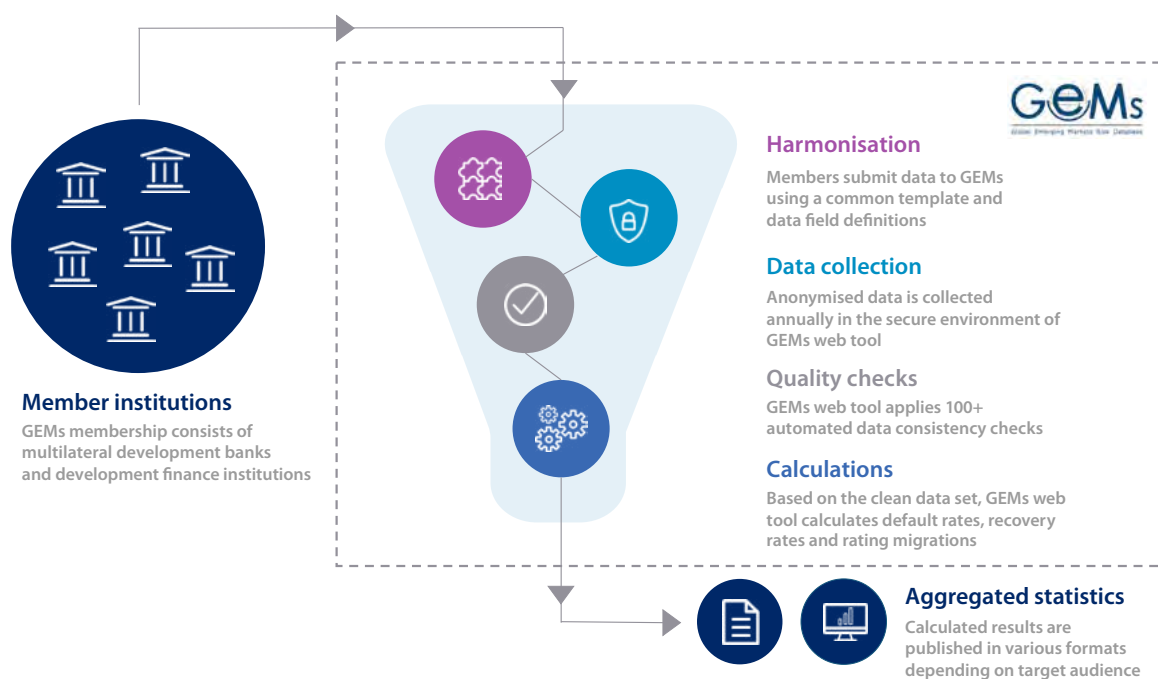


# FROM DATA TO STATISTICS

## Data processing and quality controls

The GEMs consortium has developed a submission process and risk methodology that aims to ensure data confidentiality and a high level of data quality while allowing for the compilation of various types of output statistics.

### GEMS DATA AGGREGATION PROCESS



The annual GEMs dataset includes an update of the complete data history, meaning that data quality improves over time. All information provided by the institutions is anonymised to ensure confidentiality.



# METHODOLOGY

**T**he GEMs risk database collects credit data concerning standard debt products. The database structure makes it possible to analyse the default, the loss statistics and other relevant dimensions in a strictly confidential manner. This helps to apply quantitative facts to underpin discussions around specific lending segments such as emerging markets, developing economies and the infrastructure sector.

Data reporting on private and sub-sovereign lending is organised by counterparty and contract level, including the counterparty type (private or sub-sovereign), the sector classification and country information. This report also captures counterparties with loan contracts that may benefit from a guarantee from a sovereign government, including municipalities and public enterprises. The report dataset comprises standard debt contracts, excluding equity and non-standard lending products.

Some consortium members have excluded special operations whose risk is not representative of the overall portfolio or whose financing is provided on behalf of third parties from their contributions.

GEMs collects anonymised data on both counterparty and contract level. This enables the data to be grouped across various geographic and economic country group classifications. The sectorial classification follows the widely recognised Global Industry Classification Standard (GICS) system to facilitate comparative analysis across more data sources.

To distinguish between investment grade and sub-investment grade counterparty ratings, individual institutions map their internal ratings to a common rating scale. When submitting data for private and sub-sovereign observations to GEMs, the member institutions mapped their internal ratings to GEMs' own rating scale including 20 performing grades and one default grade.

According to the GEMs methodology, a default event happens when:

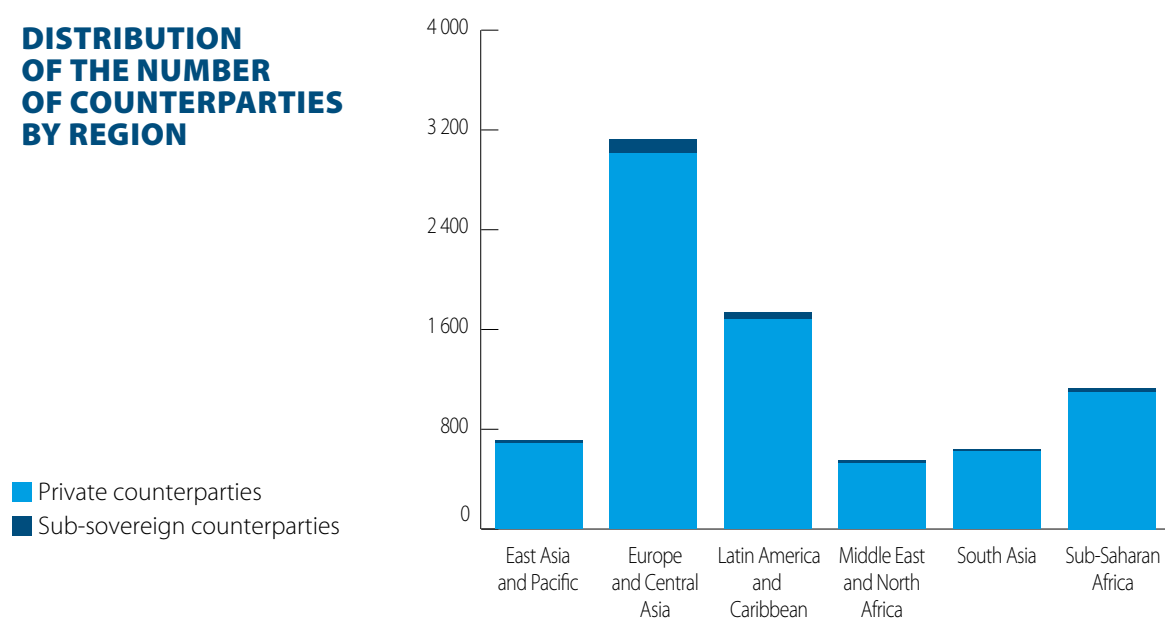
- A payment is more than 90 days past due.
- A specific provision has been raised against a loan.
- A write-off has been made to an outstanding loan.
- A distressed restructuring has been agreed.
- A borrower has entered bankruptcy.
- A loan security has been released.

# DATASET COMPOSITION

## DATASET COMPOSITION BY REGIONAL SUBSETS BASED ON THE WORLD BANK GROUP CLASSIFICATION SYSTEM

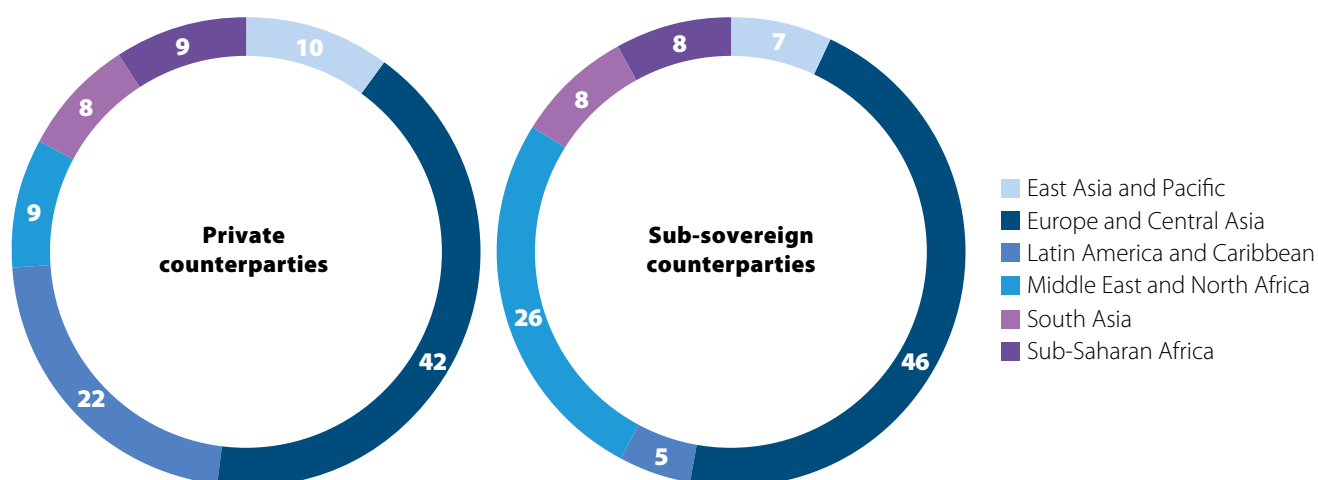
| Geographic region                   | # Counterparties | Total exposure in billions (€) <sup>2</sup> |
|-------------------------------------|------------------|---|
| <b>Private counterparties</b>       |                  |   |
| East Asia & Pacific                 | 683              | 26.9  |
| Europe & Central Asia               | 3 012            | 113.2                                       |
| Latin America & Caribbean           | 1 677            | 58.8  |
| Middle East & North Africa          | 528              | 23.7  |
| South Asia                          | 620              | 21.4  |
| Sub-Saharan Africa                  | 1 099            | 26.3  |
| <b>Total</b>                        | <b>7 619</b>     | <b>270.3</b>                                |
| <b>Sub-sovereign counterparties</b> |                  |   |
| East Asia & Pacific                 | 42               | 4.7   |
| Europe & Central Asia               | 364              | 31.2  |
| Latin America & Caribbean           | 48               | 3.6   |
| Middle East & North Africa          | 69               | 18.2  |
| South Asia                          | 18               | 5.4   |
| Sub-Saharan Africa                  | 159              | 5.4   |
| <b>Total</b>                        | <b>700</b>       | <b>68.4</b>                                 |

### DISTRIBUTION OF THE NUMBER OF COUNTERPARTIES BY REGION



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

## DISTRIBUTION OF EXPOSURE BY REGION IN BILLIONS (€, IN %)



## DATASET COMPOSITION BY COUNTRY-SPECIFIC INCOME GROUPS<sup>3</sup>

| Country group                       | # Counterparties | Total exposure in billions (€) |
|-------------------------------------|------------------|--------------------------------|
| <b>Private counterparties</b>       |                  |                                |
| EEA <sup>4</sup>                    | 863              | 33.2                           |
| EEA/OECD <sup>5</sup>               | 1 557            | 79.4                           |
| EMDE-A <sup>6</sup>                 | 6 807            | 237.6                          |
| EMDE-B <sup>7</sup>                 | 5 476            | 170.1                          |
| OECD                                | 1 232            | 68.1                           |
| Non-OECD                            | 6 387            | 202.2                          |
| <b>Sub-sovereign counterparties</b> |                  |                                |
| EEA                                 | 149              | 8.9                            |
| EEA/OECD                            | 191              | 21.5                           |
| EMDE-A                              | 584              | 59.4                           |
| EMDE-B                              | 433              | 42.3                           |
| OECD                                | 121              | 21.5                           |
| Non-OECD                            | 579              | 46.9                           |

<sup>3</sup> As applied by the 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.

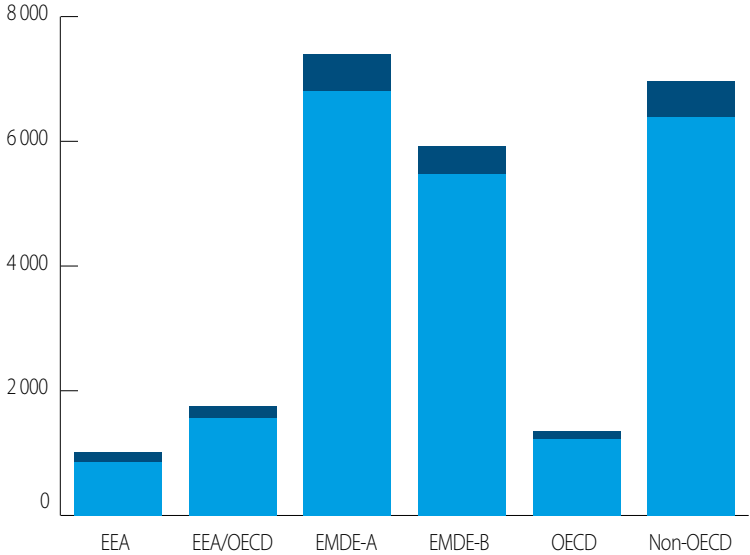
<sup>5</sup> European Economic Area or OECD.

<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.

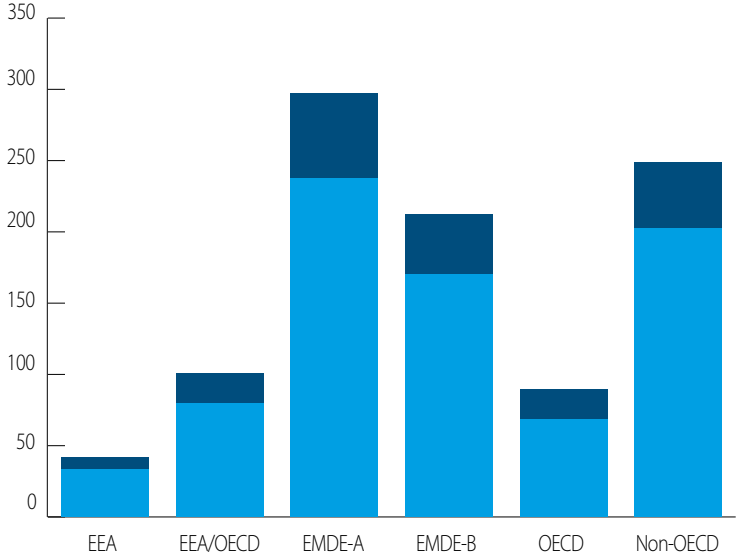
**DISTRIBUTION OF NUMBER OF COUNTERPARTIES BY COUNTRY-SPECIFIC INCOME GROUPS**

■ Private counterparties  
 ■ Sub-sovereign counterparties



**DISTRIBUTION OF EXPOSURE BY COUNTRY-SPECIFIC INCOME GROUPS IN BILLIONS (€)**

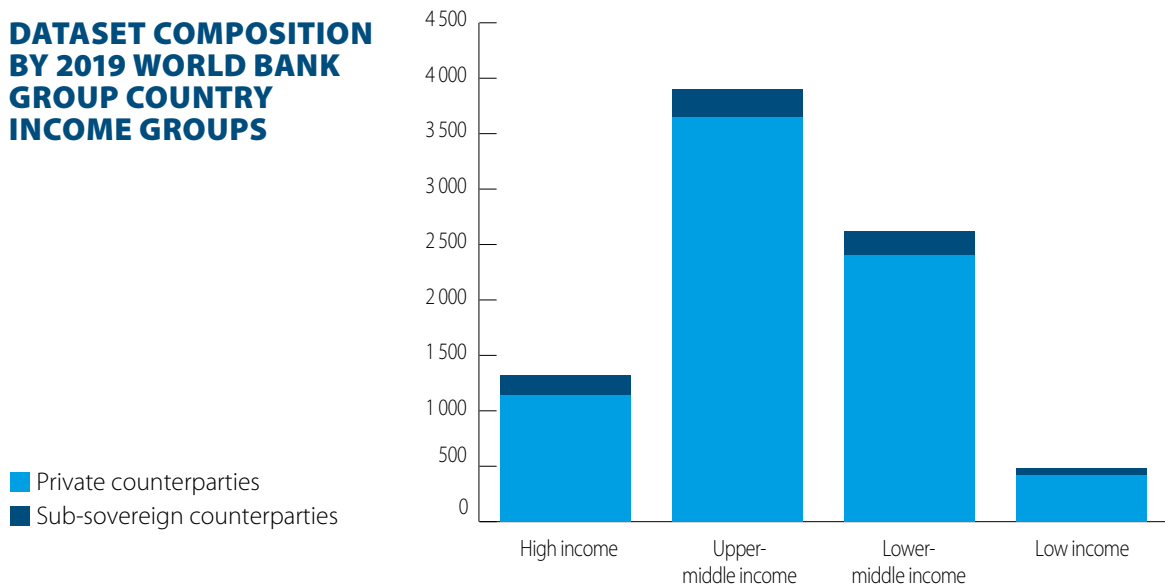
■ Private counterparties  
 ■ Sub-sovereign counterparties



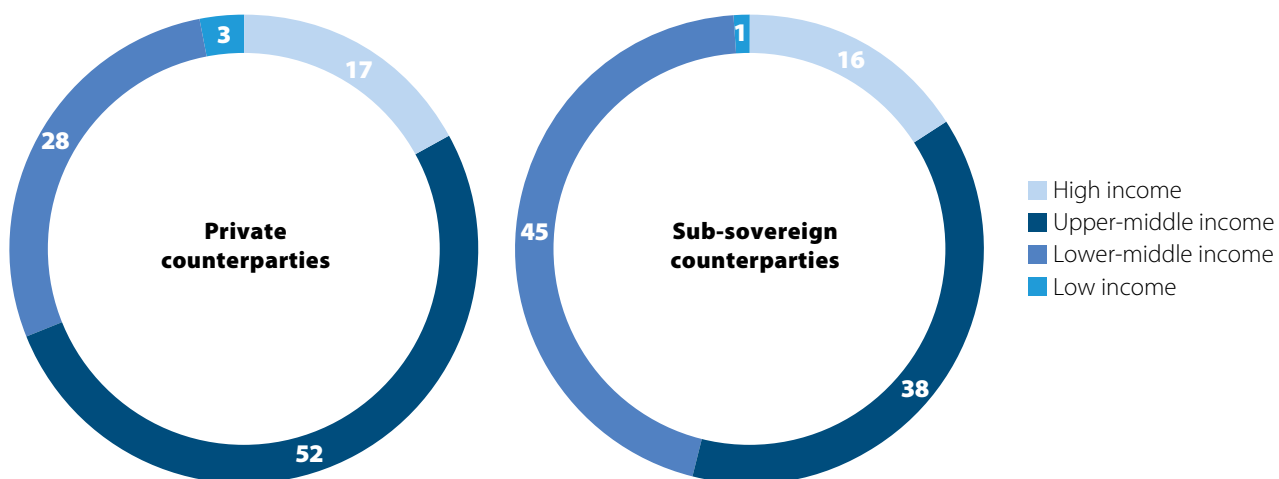
## DATASET COMPOSITION BY 2019 WORLD BANK GROUP COUNTRY INCOME GROUPS

| Country income groups               | # Counterparties | Total exposure in billions (€) |
|-------------------------------------|------------------|--------------------------------|
| <b>Private counterparties</b>       |                  |                                |
| High income                         | 1 145            | 45.5                           |
| Upper-middle income                 | 3 647            | 141.8                          |
| Lower-middle income                 | 2 406            | 76.1                           |
| Low income                          | 421              | 7.0                            |
| <b>Total</b>                        | <b>7 619</b>     | <b>270.3</b>                   |
| <b>Sub-sovereign counterparties</b> |                  |                                |
| High income                         | 178              | 11.0                           |
| Upper-middle income                 | 252              | 26.1                           |
| Lower-middle income                 | 215              | 30.6                           |
| Low income                          | 55               | 0.8                            |
| <b>Total</b>                        | <b>700</b>       | <b>68.4</b>                    |

### DATASET COMPOSITION BY 2019 WORLD BANK GROUP COUNTRY INCOME GROUPS



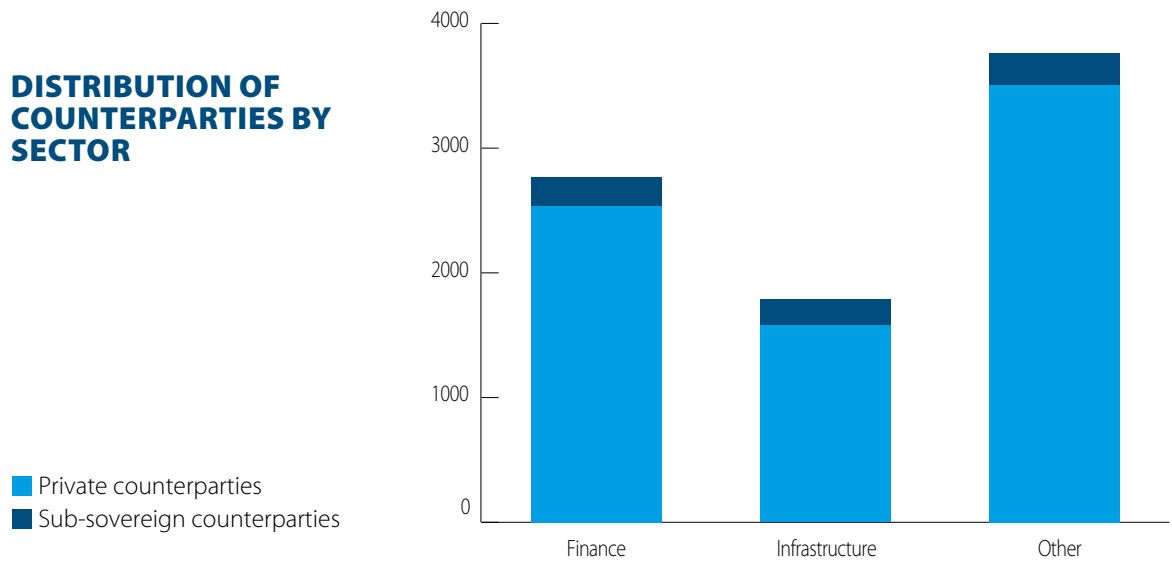
## EXPOSURE BY 2019 WORLD BANK GROUP COUNTRY INCOME GROUPS IN BILLIONS (€, IN %)



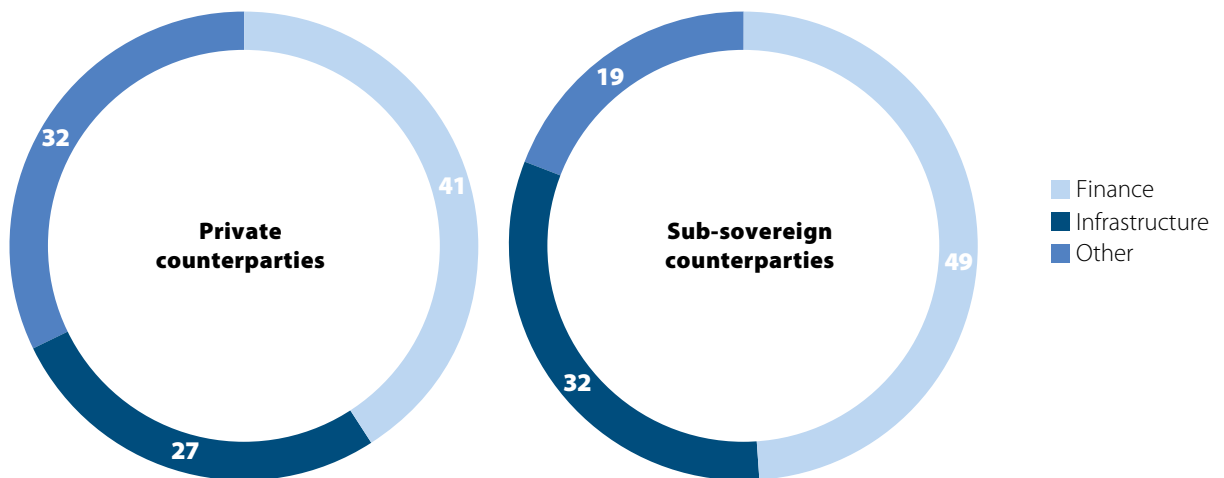
## DATASET COMPOSITION BY SECTOR GROUPS

| Sector group                        | # Counterparties | Total exposure in billions (€) |
|-------------------------------------|------------------|--------------------------------|
| <b>Private counterparties</b>       |                  |                                |
| Finance                             | 2 534            | 111.3                          |
| Infrastructure                      | 1 579            | 71.9                           |
| Other                               | 3 506            | 87.1                           |
| <b>Total</b>                        | <b>7 619</b>     | <b>270.3</b>                   |
| <b>Sub-sovereign counterparties</b> |                  |                                |
| Finance                             | 236              | 33.5                           |
| Infrastructure                      | 211              | 21.9                           |
| Other                               | 253              | 13.0                           |
| <b>Total</b>                        | <b>700</b>       | <b>68.4</b>                    |

### DISTRIBUTION OF COUNTERPARTIES BY SECTOR



### DISTRIBUTION OF THE EXPOSURE BY SECTOR GROUP IN BILLIONS (€, IN %)



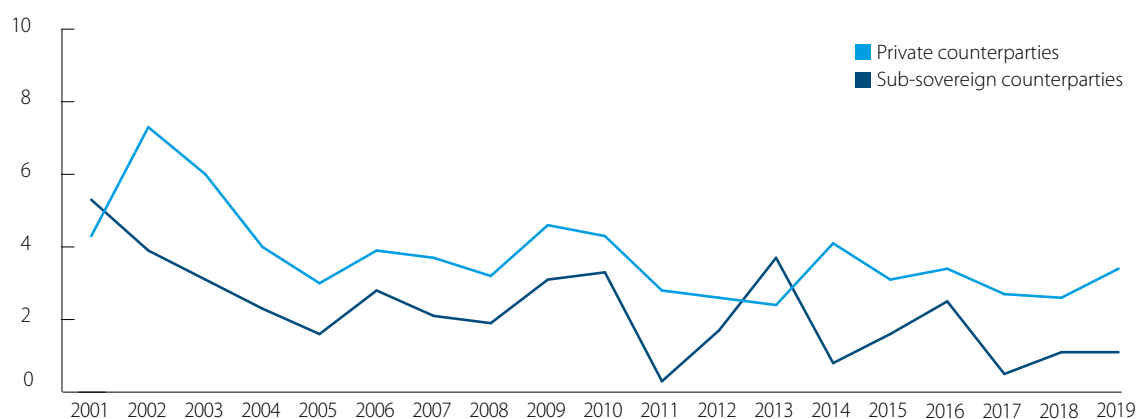
# DEFAULT RATE STATISTICS

The GEMs default rate calculation is counterparty-based and follows the cohort approach<sup>8</sup> used by rating agencies. The statistics from the data collected by GEMs members is presented at an aggregated level to maintain the integrity of the database and ensure that data are not identifiable. Only the member multilateral development banks and development finance institutions have access to more disaggregated statistics for their internal purposes. For the first time, this report shares aggregate-level statistics with the public.

## ANNUAL DEFAULT RATE BY COUNTERPARTY TYPE FOR 2001-2019

| Year                 | Private | Sub-sovereign |
|----------------------|---------|---------------|
| 2001                 | 4.3%    | 5.3%          |
| 2002                 | 7.3%    | 3.9%          |
| 2003                 | 6.0%    | 3.1%          |
| 2004                 | 4.0%    | 2.3%          |
| 2005                 | 3.0%    | 1.6%          |
| 2006                 | 3.9%    | 2.8%          |
| 2007                 | 3.7%    | 2.1%          |
| 2008                 | 3.2%    | 1.9%          |
| 2009                 | 4.6%    | 3.1%          |
| 2010                 | 4.3%    | 3.3%          |
| 2011                 | 2.8%    | 0.3%          |
| 2012                 | 2.6%    | 1.7%          |
| 2013                 | 2.4%    | 3.7%          |
| 2014                 | 4.1%    | 0.8%          |
| 2015                 | 3.1%    | 1.6%          |
| 2016                 | 3.4%    | 2.5%          |
| 2017                 | 2.7%    | 0.5%          |
| 2018                 | 2.6%    | 1.1%          |
| 2019                 | 3.4%    | 1.1%          |
| Average <sup>9</sup> | 3.7%    | 2.3%          |

## ANNUAL DEFAULT RATE BY COUNTERPARTY TYPE FOR 2001-2019 (IN %)



<sup>8</sup> Please refer to the Glossary for a definition of the cohort approach.

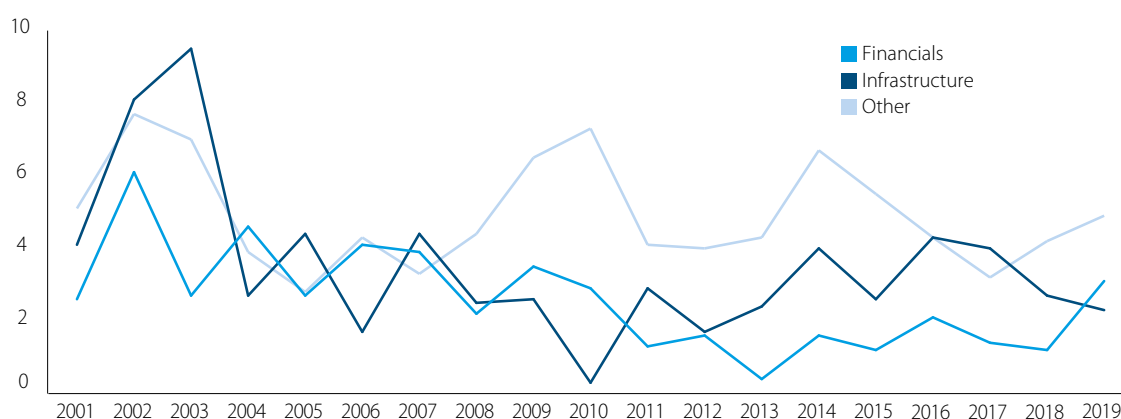
<sup>9</sup> Average of annual default rates.



## ANNUAL DEFAULT RATE BY SECTOR FOR PRIVATE COUNTERPARTIES FOR 2001-2019

| Year                  | Financials <sup>10</sup> | Infrastructure <sup>11</sup> | Other |
|-----------------------|--------------------------|------------------------------|-------|
| 2001                  | 2.6%                     | 4.1%                         | 5.1%  |
| 2002                  | 6.1%                     | 8.1%                         | 7.7%  |
| 2003                  | 2.7%                     | 9.5%                         | 7.0%  |
| 2004                  | 4.6%                     | 2.7%                         | 3.9%  |
| 2005                  | 2.7%                     | 4.4%                         | 2.8%  |
| 2006                  | 4.1%                     | 1.7%                         | 4.3%  |
| 2007                  | 3.9%                     | 4.4%                         | 3.3%  |
| 2008                  | 2.2%                     | 2.5%                         | 4.4%  |
| 2009                  | 3.5%                     | 2.6%                         | 6.5%  |
| 2010                  | 2.9%                     | 0.3%                         | 7.3%  |
| 2011                  | 1.3%                     | 2.9%                         | 4.1%  |
| 2012                  | 1.6%                     | 1.7%                         | 4.0%  |
| 2013                  | 0.4%                     | 2.4%                         | 4.3%  |
| 2014                  | 1.6%                     | 4.0%                         | 6.7%  |
| 2015                  | 1.2%                     | 2.6%                         | 5.5%  |
| 2016                  | 2.1%                     | 4.3%                         | 4.3%  |
| 2017                  | 1.4%                     | 4.0%                         | 3.2%  |
| 2018                  | 1.2%                     | 2.7%                         | 4.2%  |
| 2019                  | 3.1%                     | 2.3%                         | 4.9%  |
| Average <sup>12</sup> | 2.6%                     | 3.5%                         | 4.9%  |

## ANNUAL DEFAULT RATE BY SECTOR FOR PRIVATE COUNTERPARTIES FOR 2001-2019 (IN %)



<sup>10</sup> The Financials category includes relevant sub-sectors according to the Global Industry Classification Standard (GICS). Please see Glossary for a detailed definition.

<sup>11</sup> The GEMs infrastructure dataset is defined as a set of GICS sub-sector codes. Please refer to the Glossary for a detailed definition of Infrastructure.

<sup>12</sup> Average of annual default rates.

# GEMs INFRASTRUCTURE DATA

In most emerging markets, public finance is the largest source of infrastructure finance, with private finance covering only 15-25% of total investment. Tight government budgets, increasing debt burdens and limited room for fiscal expansion show that there is an urgent need – and an opportunity – to significantly increase the share of private sector financing in the overall mix.

Emerging markets will require a significant increase in infrastructure investment to facilitate economic growth, to respond to demographic and urbanisation pressures and to meet sustainable development goals. Current infrastructure investment in emerging markets amounts to approximately \$1 trillion per year, leaving an estimated unmet need of between \$2 trillion and \$4 trillion per year.<sup>13</sup> More than half of the required investment will be in the electricity sector, including generation, capacity, transmission and distribution networks. Other important sectors include transport (roads, ports and airports) and telecommunication.

Public policy institutions such as multilateral development banks and development finance institutions are increasingly called upon to move beyond their classic roles as providers of finance 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 and the October 2018 report of the G20 Eminent Persons Group on Global Financial Governance highlighted such issues as crucial for emerging market infrastructure.

Private and public investors need robust and accessible information to make better informed decisions about capital allocation to emerging markets. Misapprehension of risk most often stems from the lack of an objective, verifiable track record on emerging markets' infrastructure projects, which opens the door to unverified anecdotal evidence of protracted project lifecycles marred by cost overruns and political instability. Crucially, such statistics are essential for performance benchmarking and asset allocation decisions, and thus for interaction with institutional investors.

The need to address this data gap was highlighted in the G20 Roadmap to Infrastructure as an Asset Class, which stated “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, allowing them to optimise portfolio strategies. Data can also usefully support policy debate and, where relevant, help shape the regulatory treatment of investment, while providing valuable input to the work of other stakeholders such as rating agencies, academic research bodies and think-tanks.

<sup>13</sup> See Inderst, Georg and Stewart, Fiona, Institutional Investment in Infrastructure in Emerging Markets and Developing Economies; World Bank Group Public-Private Infrastructure Advisory Facility (PPIAF), 2014.

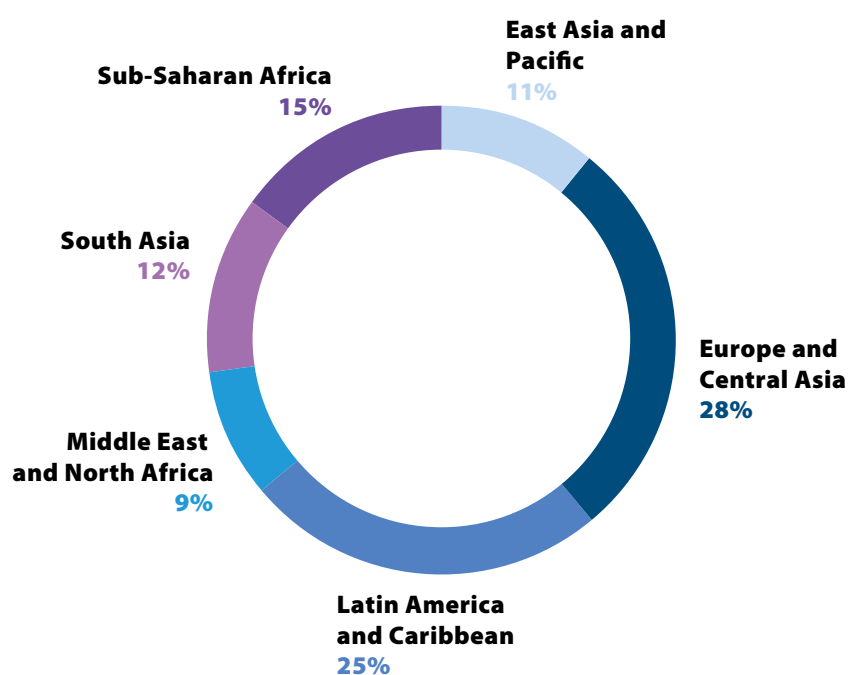
## Overview of GEMs infrastructure data

GEMs infrastructure data are defined as a set of GICS sub-sector codes<sup>14</sup>. The below figures combine observations for both private and sub-sovereign counterparty types.

### GEMs INFRASTRUCTURE DATA DISTRIBUTION BY REGION FOR 2001-2019

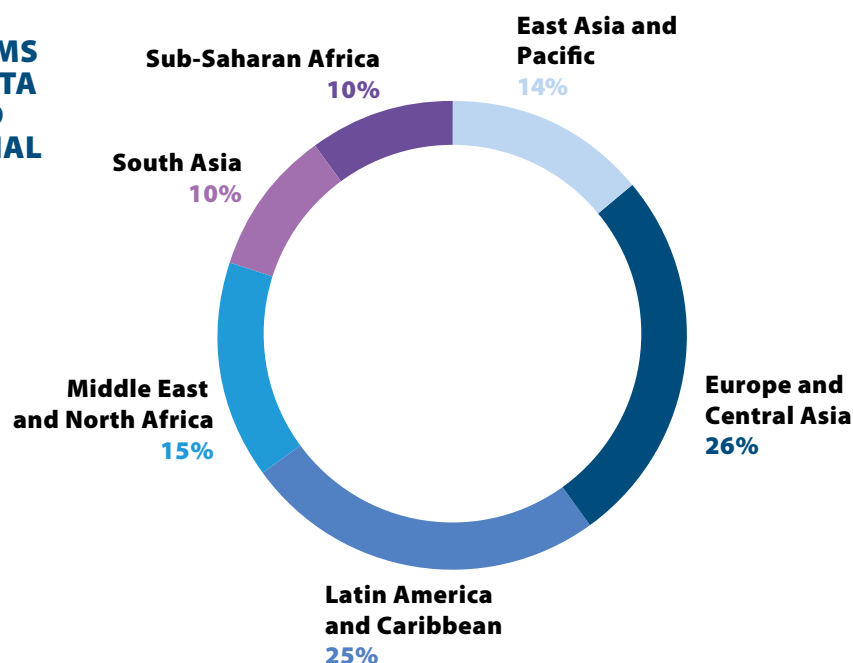
| Geographic region          | # Counterparties | Total exposure in billions (€) |
|----------------------------|------------------|--------------------------------|
| East Asia & Pacific        | 187              | 12.8                           |
| Europe & Central Asia      | 504              | 24.0                           |
| Latin America & Caribbean  | 446              | 23.8                           |
| Middle East & North Africa | 164              | 14.4                           |
| South Asia                 | 214              | 9.6                            |
| Sub-Saharan Africa         | 275              | 9.3                            |
| <b>Total</b>               | <b>1 790</b>     | <b>93.8</b>                    |

### DISTRIBUTION OF GEMs INFRASTRUCTURE DATA COUNTERPARTIES BY WORLD BANK GROUP REGIONAL CLASSIFICATION



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

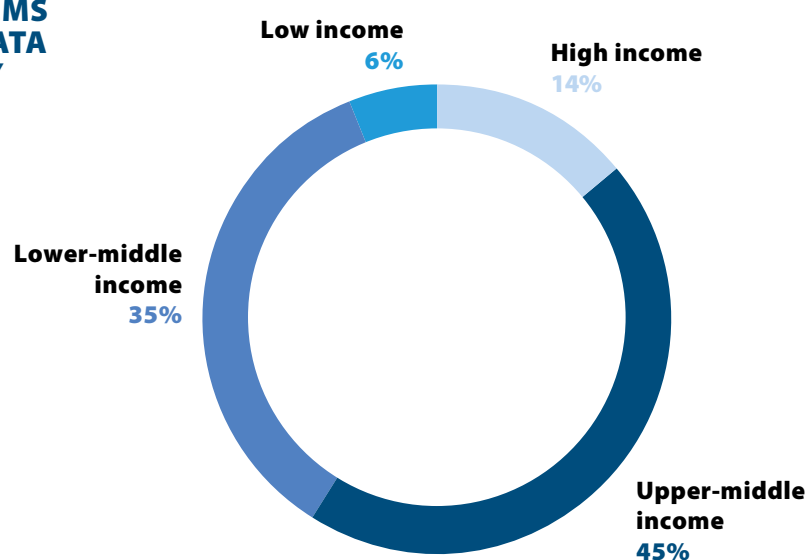
### DISTRIBUTION OF GEMS INFRASTRUCTURE DATA EXPOSURE BY WORLD BANK GROUP REGIONAL CLASSIFICATION



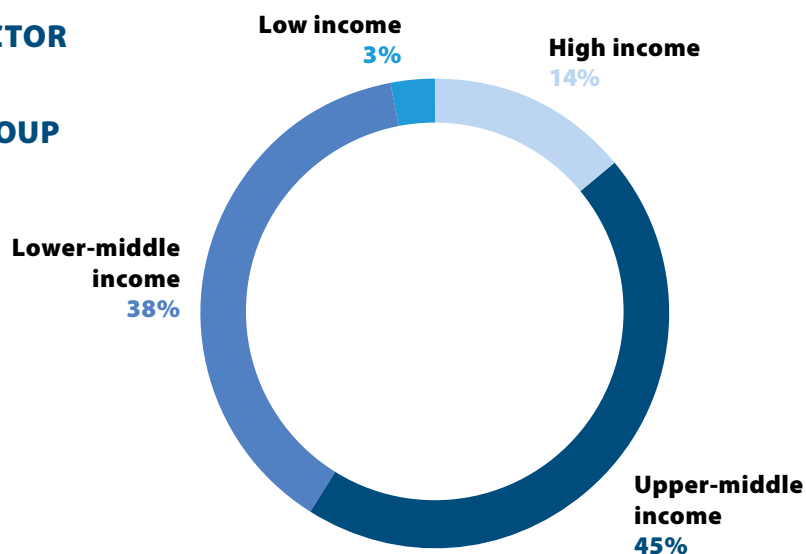
### GEMS INFRASTRUCTURE DATA DISTRIBUTION BY 2019 WORLD BANK GROUP COUNTRY INCOME GROUP

| Country income groups | # Counterparties | Total exposure in billions (€) |
|-----------------------|------------------|--------------------------------|
| High income           | 258              | 13.7                           |
| Upper-middle income   | 800              | 42.1                           |
| Lower-middle income   | 623              | 35.5                           |
| Low income            | 109              | 2.5                            |
| total                 | 1790             | 93.8                           |

### DISTRIBUTION OF GEMS INFRASTRUCTURE DATA COUNTERPARTIES BY 2019 WORLD BANK GROUP COUNTRY INCOME GROUP



**DISTRIBUTION OF  
INFRASTRUCTURE SECTOR  
EXPOSURE BY 2019  
WORLD BANK GROUP  
COUNTRY INCOME GROUP**

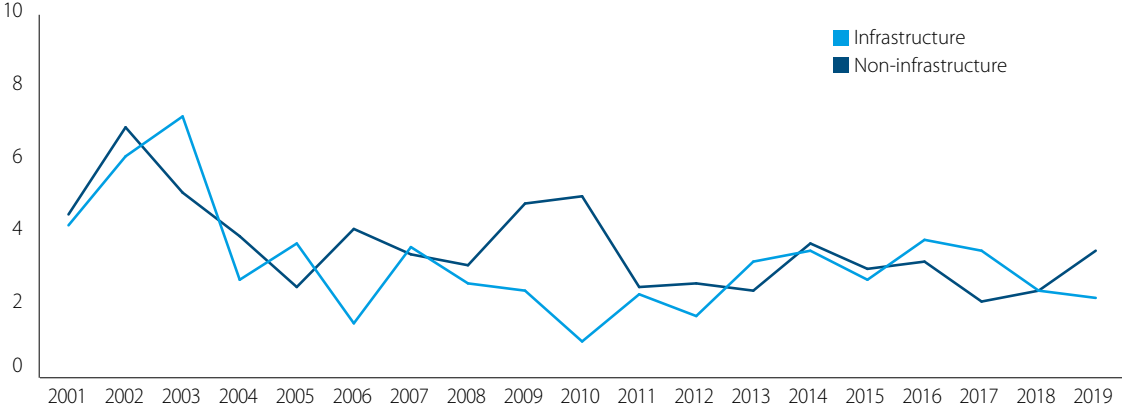


**ANNUAL DEFAULT RATE FOR INFRASTRUCTURE AND NON-  
INFRASTRUCTURE SECTORS FOR 2001-2019**

| Year                  | Infrastructure | Non-infrastructure |
|-----------------------|----------------|--------------------|
| 2001                  | 4.2%           | 4.5%               |
| 2002                  | 6.1%           | 6.9%               |
| 2003                  | 7.2%           | 5.1%               |
| 2004                  | 2.7%           | 3.9%               |
| 2005                  | 3.7%           | 2.5%               |
| 2006                  | 1.5%           | 4.1%               |
| 2007                  | 3.6%           | 3.4%               |
| 2008                  | 2.6%           | 3.1%               |
| 2009                  | 2.4%           | 4.8%               |
| 2010                  | 1.0%           | 5.0%               |
| 2011                  | 2.3%           | 2.5%               |
| 2012                  | 1.7%           | 2.6%               |
| 2013                  | 3.2%           | 2.4%               |
| 2014                  | 3.5%           | 3.7%               |
| 2015                  | 2.7%           | 3.0%               |
| 2016                  | 3.8%           | 3.2%               |
| 2017                  | 3.5%           | 2.1%               |
| 2018                  | 2.4%           | 2.4%               |
| 2019                  | 2.2%           | 3.5%               |
| Average <sup>15</sup> | 3.2%           | 3.6%               |

<sup>14</sup> Average of annual default rates.

**ANNUAL DEFAULT RATE FOR INFRASTRUCTURE AND NON-INFRASTRUCTURE SECTORS FOR 2001-2019 (IN %)**



# GLOSSARY

| Term                         | Definition   |
|------------------------------|--|
| <b>Cohort approach</b>       | A cohort consists of all counterparties with the same rating at a given formation date, which for GEMs is always the end of the day on 31 December. Every year $j$ a new cohort is formed. The default or survival status of every counterparty in each cohort is then followed over a time horizon, which is divided into years $i = (1, \dots, T)$ . In every year $i$ a fraction of the counterparties may default and thus the marginal default rates per year can be calculated.  |
| <b>Counterparty category</b> | The GEMs database collects data across three counterparty types: Private, Sub-sovereign and Sovereign. This publication presents statistics for private and sub-sovereign counterparties. Sub-sovereign counterparties are defined as being at least 50% state-owned.  |
| <b>Country</b>               | Name of a nation state or regional grouping of nations where the counterparty 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>• A payment is not made within 90 days of being due.</li> <li>• A specific provision has been raised against a loan.</li> <li>• A write-off has been made to an outstanding loan.</li> <li>• A distressed restructuring has been agreed.</li> <li>• A borrower has entered bankruptcy.</li> <li>• A loan security has been realised.</li> </ul>   |
| <b>Default rate</b>          | Default rate is computed upon the dynamic cohort approach used by rating agencies.   |
| <b>East Asia and Pacific</b> | 2019 World Bank Group region group: 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. The EEA includes the 27 member countries of the European Union and Norway, Iceland and Liechtenstein.  |

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**EMDE-A**

Emerging market and developing economies A: 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.

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**EMDE-B**

Emerging market and developing economies 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.

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**Europe and Central Asia**

2019 World Bank Group region group: 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.

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|  |   |
|--|---|
| <b>Exposure</b>                          | The signed amount of the loan as of signature date, denominated in €.   |
| <b>Financials sector</b>                 | <p>The Financials sector definition includes the following sub-sector codes according to the Global Industry Classification Standard (GICS): 40101010 (Diversified Banks), 40101015 (Regional Banks), 40102010 (Thriffs &amp; Mortgage Finance), 40201020 (Other Diversified Financial Services),</p> <p>40201030 (Multi-Sector Holdings), 40201040 (Specialized Finance), 40202010 (Consumer Finance), 40203010 (Asset Management &amp; Custody Banks), 40203020 (Investment Banking &amp; Brokerage), 40203030 (Diversified Capital Markets), 40301010 (Insurance Brokers), 40301020 (Life &amp; Health Insurance), 40301030 (Multi-line Insurance), 40301040 (Property &amp; Casualty Insurance), 40301050 (Reinsurance).</p>  |
| <b>GICS</b>                              | The Global Industry Classification Standard (GICS) is an industry taxonomy developed by 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>             | <p>In the context of this publication, the GEMs infrastructure data are defined as the following set of sub-sector GICS codes: 10102040 (Oil &amp; Gas Storage &amp; Transportation), 20201050 (Environmental &amp; Facilities Services), 20301010 (Air Freight &amp; Logistics), 20302010 (Airlines), 20303010 (Marine), 20304010 (Railroads), 20304020 (Trucking), 20305010 (Airport Services), 20305020 (Highways &amp; Railtracks), 20305030 (Marine Ports &amp; 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 &amp; Energy Traders), 55105020 (Renewable Electricity), 40402045 (Health Care REITs).</p> |
| <b>Latin America &amp; the Caribbean</b> | 2019 World Bank Group region group: 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 (US).   |
| <b>Middle East and North Africa</b>      | 2019 World Bank Group region group: 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 OECD refers to the Organisation for Economic Co-operation and Development and consists of 36 member countries, founded in 1961 to stimulate economic progress and world trade.  |
| <b>Other sector</b>                      | Includes all GICS sub-sector codes, excluding the sub-sectors listed under Infrastructure and Financials sectors above.   |
| <b>South Asia</b>                        | 2019 World Bank Group region group: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka.   |

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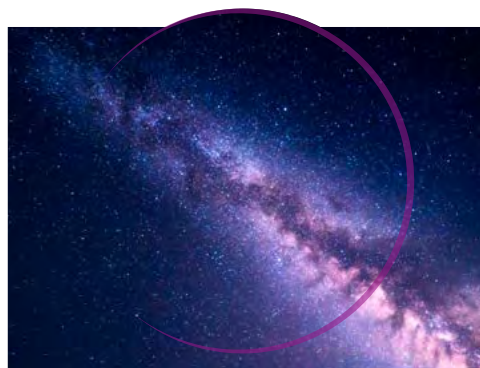
**Sub-Saharan  
Africa**

2019 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.

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# DEFAULT STATISTICS



## PRIVATE AND SUB-SOVEREIGN LENDING 2001-2019



**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)

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