

Multilateral Development Banks and Development Finance Institutions

RECOVERY STATISTICS

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

Multilateral Development Banks and Development Finance Institutions

RECOVERY STATISTICS

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

Multilateral development banks and development finance institutions recovery statistics. Recovery rates publication 1994-2022

© European Investment Bank (the Administrator), as host and administrator for, and on behalf of, Global Emerging Markets Risk Database Consortium (GEMs), 2024. 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), Banque Ouest Africaine de Développement (BOAD), Black Sea Trade and Development Bank (BSTDB), British International Investment (BII), Cassa Depositi e Prestiti (CDP), Central American Bank for Economic Integration (CABEL), Council of Europe Development Bank (CEB), European Bank for Reconstruction and Development (EBRD), European Investment Bank Group (EIB), GuarantCo, Inter-American Development Bank (IDB), Inter-American Investment Corporation (IDB Invest), International Bank for Reconstruction and Development (IBRD), International Finance Corporation (IFC), International Fund for Agricultural Development (IFAD), Islamic Development Bank (IsDB), Kreditanstalt für Wiederaufbau (KfW), Multilateral Investment Guarantee Agency (MIGA), Netherlands Development Finance Company (FMO), New Development Bank (NDB), Proparco and U.S. International Development Finance Corporation (DFC).

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.

Disclaimer

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. Neither GEMs nor any of its members makes any express or implied warranties, and all warranties of merchantability or fitness for a particular purpose or use with respect to this work and its contents are hereby disclaimed.

Neither GEMs nor any of its members shall be liable for any damages, including, without limitation, direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including lost income or profits and opportunity costs or losses caused by negligence) in connection with any use of this work and its content.

Neither GEMs nor any of its members accept any responsibility or liability for the content, conclusions, or judgments, or of any omissions or errors (including, without limitation, typographical and technical errors), in relation to this work 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 and should not be relied upon for any specific purpose. This work does 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. The contents of this work should not be relied upon for, without limitation, the calculation, determination, or derivation of loss given default (LGD) metrics, including, but not limited to, for any modelling or pricing purposes.

GEMs members may have an investment or other financial interest in, or provide advice or other services to, certain companies and parties that underpin this work. The depiction and use of boundaries, geographic names and related data shown on maps and in lists, tables, documents, and databases are not warranted to be free of error and do not imply official endorsement or acceptance by any of the GEMs members or their constituents.

The contents of this work should not be used in violation of these terms or of any law, or to promote any illegal activity or enterprise or provide instructional information about illegal activities. Similarly, the contents of this work should not be copied, modified, used to create a derivative work of, reverse engineered, reverse assembled or otherwise manipulated (manually or through automated means) to identify any data that is not already made available by GEMs.

All rights reserved.

All queries on rights and licences, including subsidiary rights, should be addressed to the Administrator (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 the GEMs consortium members.

pdf: QH-02-24-310-EN-N ISBN 978-92-861-5751-6 doi: 10.2867/839930

CONTENTS

Foreword	1
GEMs at a glance	2
From data to statistics	4
Data processing and quality controls	4
Highlights	5
Methodology	8
Report dataset composition	10
Dataset distribution by World Bank Group region	10
Dataset distribution by income groups	12
Dataset distribution by sector	15
Overview of infrastructure dataset	16
Overview of financials dataset	17
Recovery rate statistics	18
Glossary	20

Foreword

The 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 catalyses investments in emerging markets and supports technical cooperation between international institutions. As of year-end 2023, GEMs comprised 25 member institutions — all multilateral development banks and development finance institutions — covering emerging markets and developing economies.

This report is the first GEMs publication focusing on recovery rates. The report provides outputs derived from pooled GEMs data going back to 1994, supplied by 19 member institutions, and complements the well-received default statistics reports published in the fourth quarter of 2023.

Offering unique insights into the recovery rates experienced by multilateral development banks and development finance institutions, the report highlights the niche features and potential of the database, especially regarding sub-investment grade observations. In addition, the report explains the methodological framework of the presented results.

Looking ahead, 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 enable the ongoing provision of enhanced reporting and new services targeting the scaling up of investment where most needed.

GEMs is pleased to make this publication freely available as a public good, providing readers with valuable and unique insight into the credit profile of multilateral development banks and development finance institutions. The consortium looks forward to gathering feedback and working with its member institutions to maximise value to the wider community.

GEMs member institutions participating in this publication



GEMs at a glance

GEMs collects anonymised data from multilateral development banks and development finance institutions on their performing and non-performing exposures. In return, these member institutions gain access to GEMs output statistics on default and recovery rates by geography, sector and time period. Using the detailed GEMs statistics, members can calibrate and benchmark internal models, set pricing and capital requirements, and make informed investment decisions. GEMs also facilitates technical alignment and sharing of best practices among member institutions, including through working group meetings. The compilation of GEMs risk statistics relies on a robust, shared methodological framework. Bringing together data and expertise from more than 20 public development finance institutions, GEMs offers:

- ✓ A **harmonised dataset** reflecting three decades of experience investing in emerging markets.
- ✓ A **framework for multilateral development bank and development finance institution collaboration** among 25 member institutions to improve risk management practices across the industry.
- ✓ A **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.
- ✓ A **statistics resource for member multilateral development banks and development finance institutions** — GEMs outputs, default rates, recovery rates and rating migrations facilitate better-informed investment decisions in emerging markets.
- ✓ A **public and robust data source for aggregated statistics** — the default rates shown in the Private and sub-sovereign lending and Sovereign and sovereign-guaranteed lending reports provide an anchor for risk perceptions. They can be downloaded from the GEMs website <https://www.gemriskdatabase.org/>.
- ✓ A **risk data hub of contract-level information** for private and sub-sovereign lending and sovereign and sovereign-guaranteed lending. The dataset is one of the largest for emerging markets and developing economies.

Increased private investment is needed for tackling climate change and achieving the UN Sustainable Development Goals. This requires institutions to cooperate on addressing some of the current investment barriers. 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 enhancing standardisation, transparency and data availability. The scarcity of high-quality data and the strict regulatory requirements for more sophisticated risk management practices mean reliable metrics are needed.

Through GEMs, member multilateral development banks and development finance institutions are committed to addressing the investment gap by sharing their experience and market knowledge among themselves and with investors. Currently, 25 multilateral development banks and development finance institutions work together on pooling and harmonising their data, thereby generating statistics that are superior to those available to any individual market participant. GEMs therefore offers a unique additional data source for current and potential investors in emerging markets, helping to refine their risk perceptions and facilitating better-informed decisions. Members cooperate in building a joined-up system that delivers more than the sum of its parts — as highlighted by the G20 Eminent Persons Group on Global Financial Governance.¹ The increased need for cooperation does not only hold for multilateral development banks and development finance institutions but also for private investors and other stakeholders constrained by the same data gap.

The lack of readily available, standardised, transparent and high-quality data on investment projects in emerging markets can skew risk perceptions, leading to suboptimal investment decisions. Institutions with little or no experience in such markets have to rely on risk assumptions based on limited data. In addition, 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 unlock capital that can fill investment gaps.

The statistics produced by GEMs from members' input data enable internal models to be calibrated and benchmarked, improve estimate provisioning, increase accuracy in setting capital requirements and facilitate better-informed investment decisions. GEMs statistics are an objective, reliable and statistically significant base for discussing regulatory compliance, capital adequacy and risk management practices with auditors, rating agencies and supervisors. Furthermore, 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 multilateral development banks or development finance institutions, or any other balance sheet optimisation initiative. In summary, GEMs statistics support the crowding-in of additional funding for emerging markets.

Until 2021, only GEMs members had access to GEMs statistics. However, GEMs is now sharing aggregated statistics outside the consortium, recognising their potential value to a diverse group of stakeholders, ranging from academics to regulators and commercial entities. The specific application of GEMs statistics may vary by institution. GEMs therefore looks forward to receiving feedback from readers of this report and working with stakeholders on improving the focus and content of future publications.

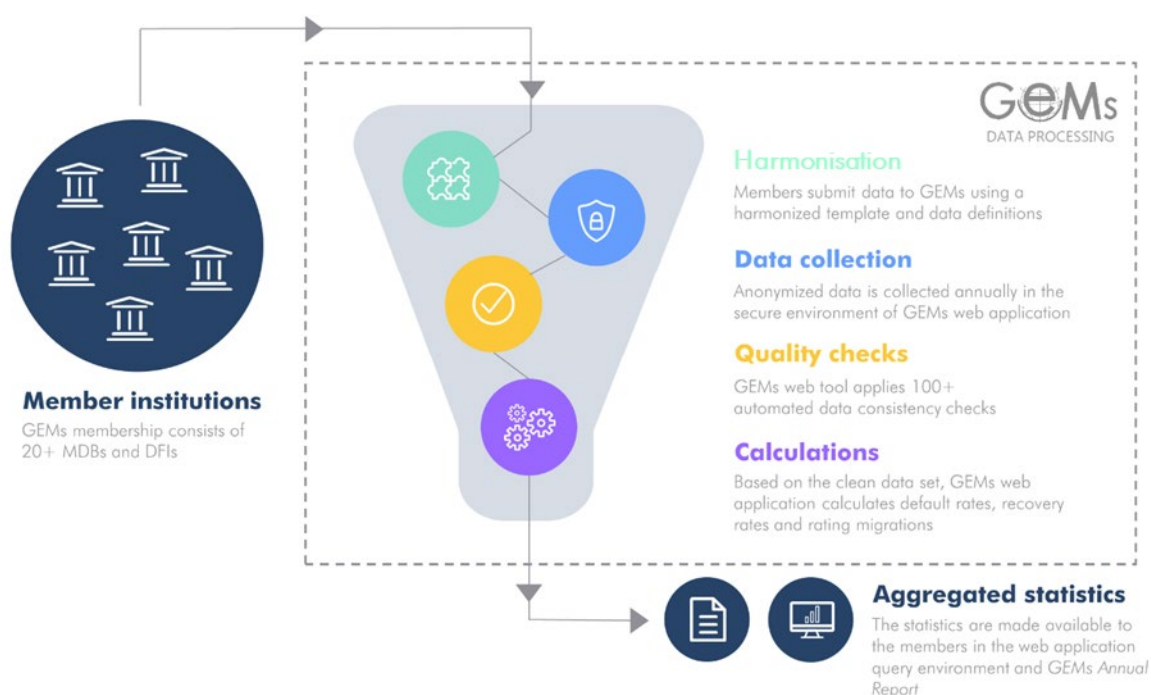
¹ <https://www.globalfinancialgovernance.org/>

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.

Figure 1: GEMs data aggregation process



The entire GEMs historical dataset is submitted annually by the consortium members, leading to updates of previous data and addition of new data. This means that data quality continuously improves over time. An automated system of data quality checks and expert verification ensures consistency and adherence to GEMs guidelines by all submitting institutions. All information provided by the institutions is de-identified and held in confidence.

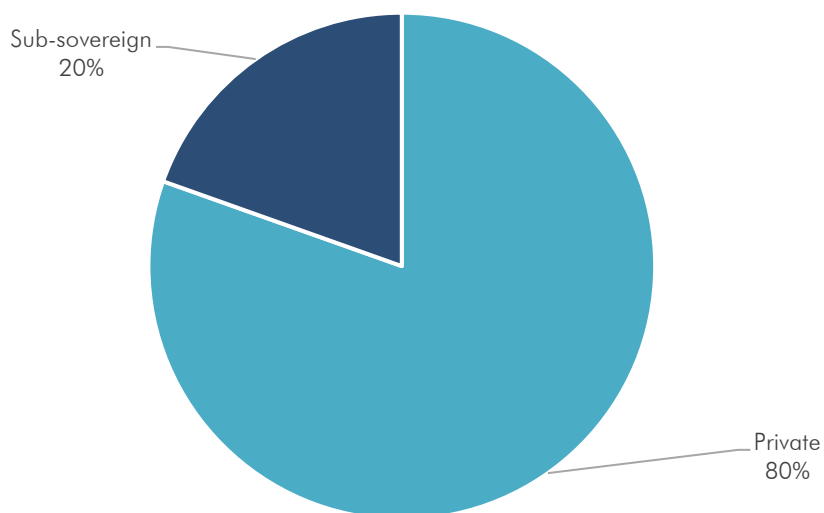
The dataset applied in this report contains data from 19 GEMs member institutions.

Highlights

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

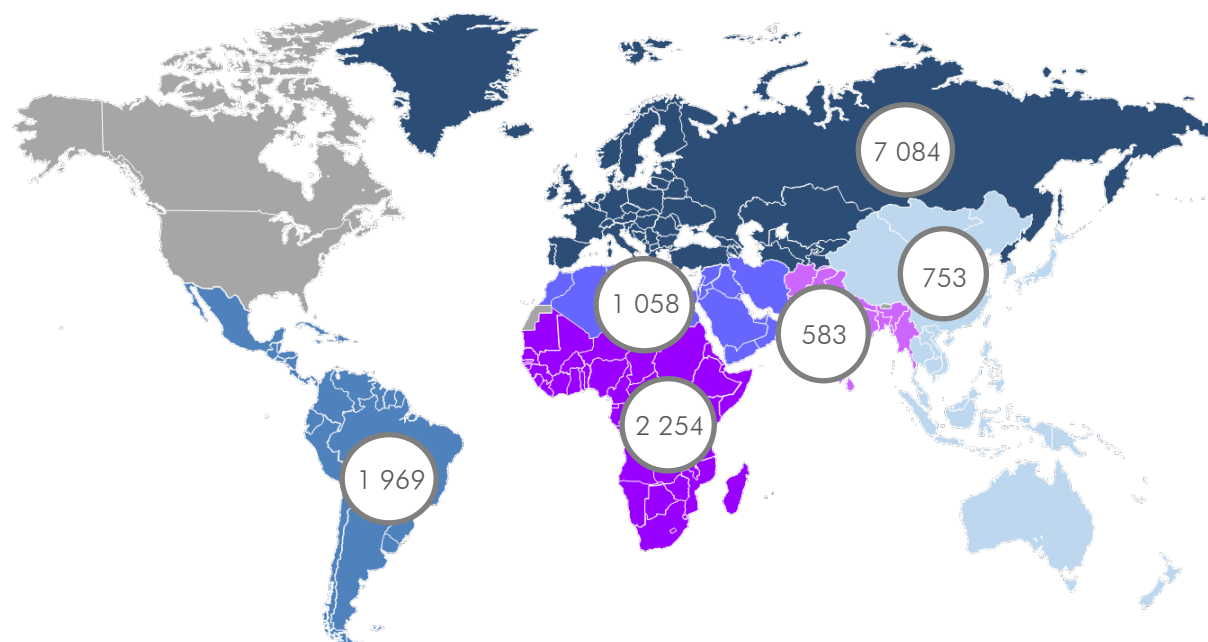
Of the signed contracts registered in the dataset² underlying this report, 80% (11 486 contracts) are with private sector entities and 20% (2 794 contracts) are with sub-sovereign counterparts, distributed across geographic regions. Sub-sovereign counterparts are defined as being at least 50% state-owned.

Figure 2: Distribution of contracts by counterpart type



² Observations outside the World Bank Group regional classification system, as well as regional projects that cannot be assigned to a single country, are included in the dataset and are assigned to the N/A category. In addition, counterparties that are in North America do not form part of this report, owing to the focus of the report on emerging markets. See the Methodology section of this report for more insights on the dataset coverage.

Figure 3: Distribution of contracts by 2022 World Bank Group region³



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 various counterparts operating in both member and non-member countries of the Organisation for Economic Co-operation and Development (OECD).

³ The countries that comprise each of the World Bank Group regions are detailed in the Glossary. The contracts in the GEMs database that have not been assigned a specific geographical reporting region are included in the report but do not feature in Figure 3.

Figure 4: Distribution of contracts by 2022 OECD membership

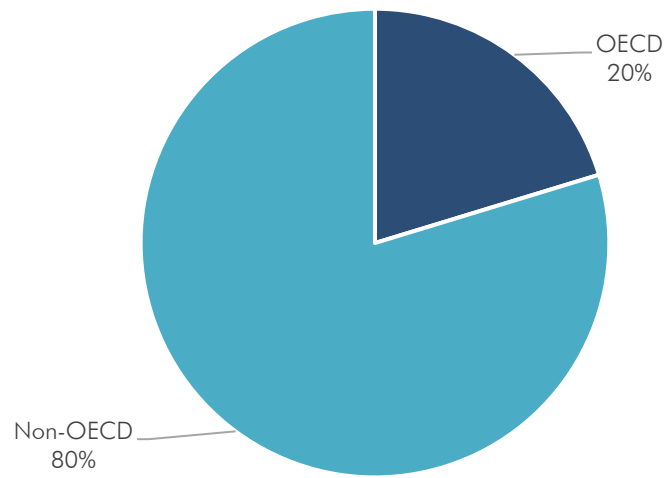
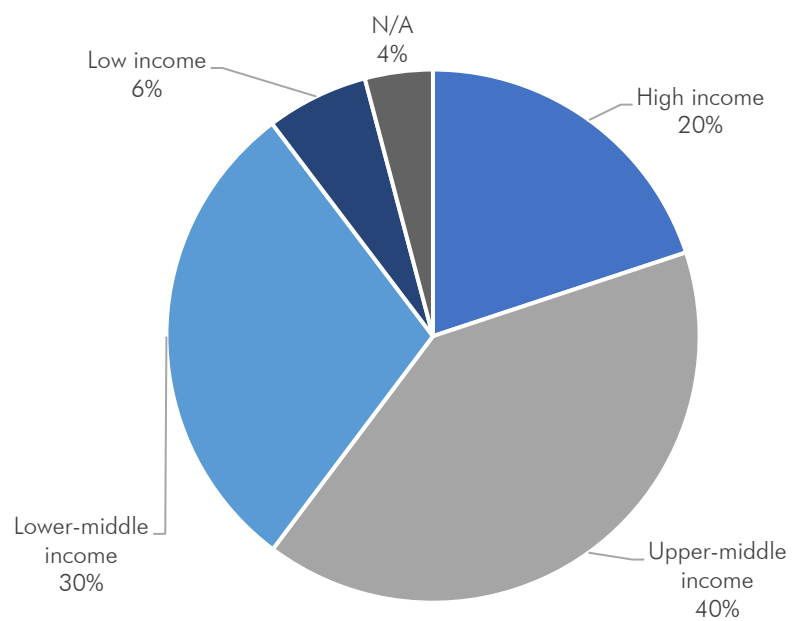


Figure 5: Distribution of contracts by 2022 World Bank Group country income group



Methodology

The GEMs risk database includes credit data on standard debt products. The database structure enables default and loss statistics to be analysed in various relevant ways, providing quantitative facts that can support discussions on specific lending segments 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 that may benefit from a sovereign government guarantee. The report dataset comprises debt contracts and thus excludes equity and non-standard lending products.

Observations from countries outside the World Bank Group regional classification system, as well as regional projects not assignable to a single country, are included in the report dataset, without the assignment of a specific income or geographical designation. In addition, 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.

GEMs collects data at both counterpart and contract level, allowing for their aggregation across various geographic and economic classifications. Sectorial classification follows the widely recognised Global Industry Classification Standard (GICS) system, facilitating comparative analysis across more 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. This 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

In addition, according to some members' definition of default, contracts with the same counterpart are considered to be in default even if service payment obligations are met. This results in their inclusion in the recovery statistics and at a calculated recovery rate of 100%.

Definition of resolution

There are different types of resolution for a contract.

- A defaulted contract that has no further outstanding balances. The defaulted contract has been fully written off, fully pre-paid (under new loan terms or existing ones), or partially written off with full repayment of remaining outstanding balances under restructured terms.
- A defaulted contract that recovers and the counterpart is continuing to meet debt service on this contract. In this case, a counterpart can become active in the year after resolution if criteria for active counterparts are fulfilled.
- A defaulted contract that returns to performing after a restructuring event. This can occur with or without a partial write-off and might include changes in contractual terms, such as maturity extension, payment schedule amendment, collateral realisation and/or interest rate renegotiation.

For multilateral development banks, the loans are often guaranteed by the governments of the countries in which the project or company associated with the loan operates. As a result, recoveries are calculated based on the pre-government guarantee cash flows. Recoveries from other sources are included in the calculation.

Definition of recovery rate

Recovery rate is the ratio between the discounted cash flows received (or expected to be received) and the outstanding amount at default. The ratio is calculated for contracts with a resolved default event. Recovery rates are measured on an economic (discounted) basis by considering the cash flows and collateral recovered after default.

Report dataset composition

Dataset distribution by World Bank Group region

Table 1: Dataset composition by 2022 World Bank Group region

Geographic region	# Contracts	Total exposure (€ billion)
Contracts of private counterparts		
East Asia and Pacific	602	20
Europe and Central Asia	5 705	142.5
Latin America and Caribbean	1 785	51.5
Middle East and North Africa	668	24.5
South Asia	539	15.3
Sub-Saharan Africa	1 756	27.2
N/A	431	11.2
Total	11 486	292.1
Contracts of sub-sovereign counterparts		
East Asia & Pacific	151	7.8
Europe & Central Asia	1 379	56.1
Latin America & Caribbean	184	16
Middle East & North Africa	390	30.9
South Asia	44	6.1
Sub-Saharan Africa	498	15.4
N/A	148	8.4
Total	2 794	140.7

Figure 6: Number of contracts by 2022 World Bank Group region

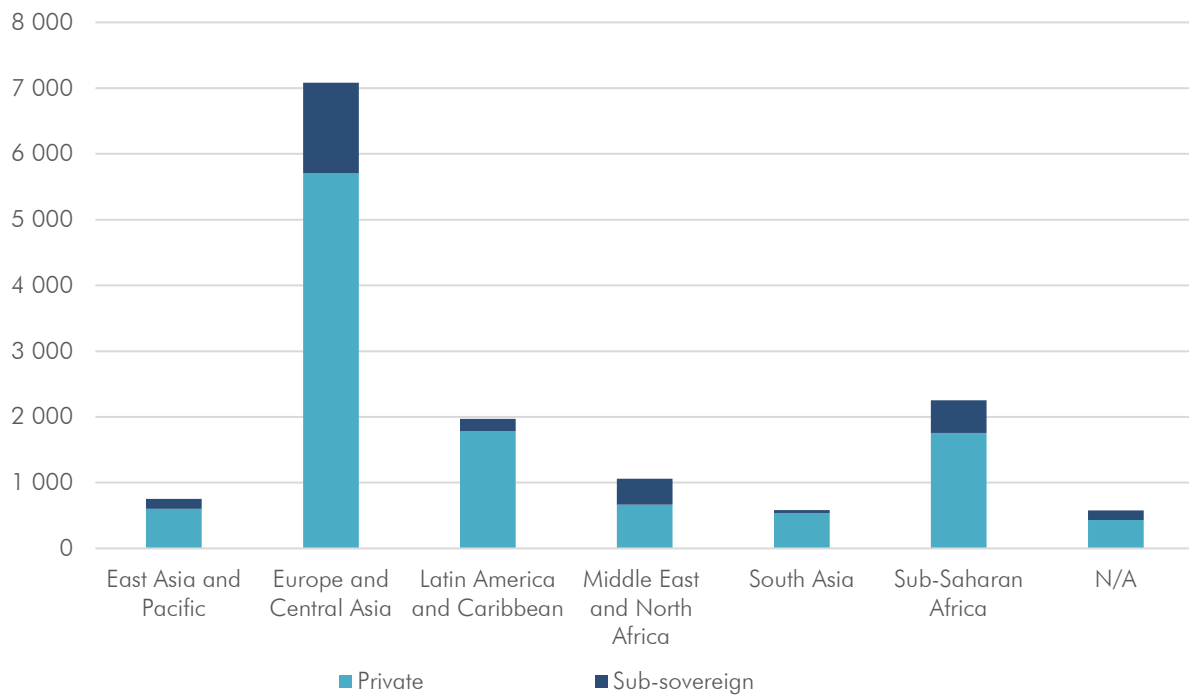
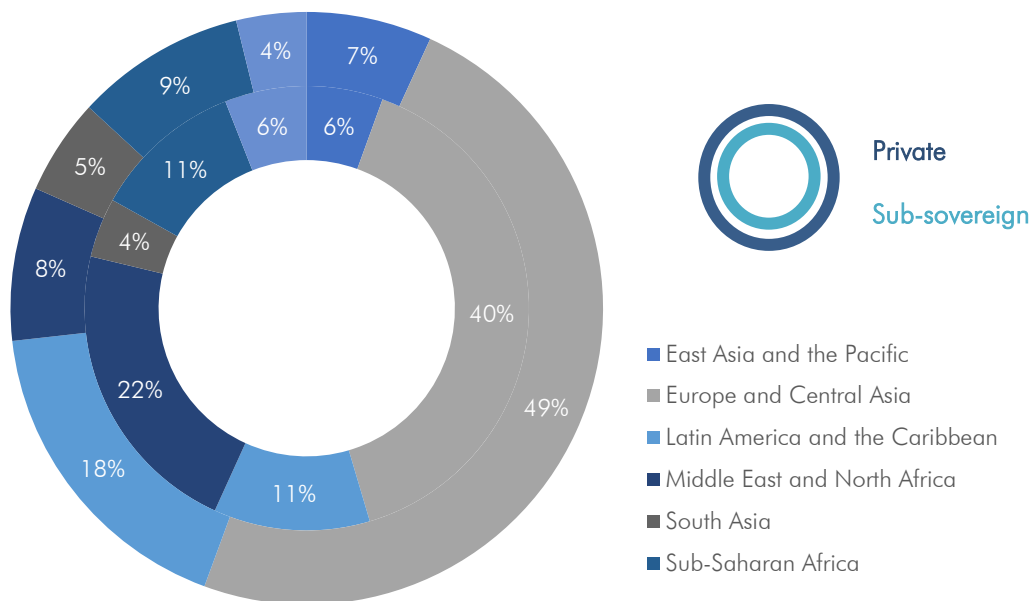


Figure 7: Exposure by 2022 World Bank Group region



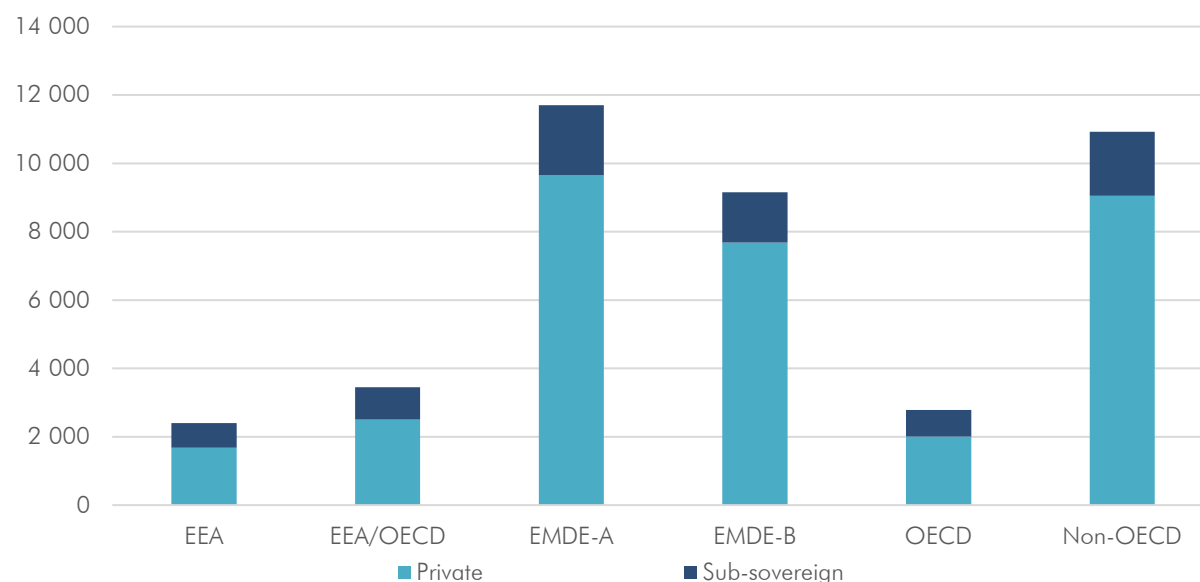
Dataset distribution by income groups

Table 2: Dataset composition by 2022 World Bank Group economic area⁴

Country income group	Number of contracts	Total exposure (€ billion)
Contracts of private counterparts		
EEA*	1 675	38.9
EEA/OECD	2 501	80.2
EMDE-A**	9 653	237
EMDE-B***	7 679	172.4
OECD	2 005	69.3
Non-OECD	9 050	211.7
Contracts of sub-sovereign counterparts		
EEA	727	18.4
EEA/OECD	947	38.4
EMDE-A	2 049	112.8
EMDE-B	1 469	85.2
OECD	775	39.2
Non-OECD	1 871	93.1

*European Economic Area. ** Emerging market and developing economies A: non-high income. ***Emerging market and developing economies B: non-high income, non-EEA, non-OECD.

Figure 8: Number of contracts by 2022 World Bank Group economic area



⁴ As applied by the Moody's Investors Service and Jobst, A.A. (2018). Credit Risk Dynamics of Infrastructure Investment: Considerations for Financial Regulators. Washington, DC: World Bank. <https://openknowledge.worldbank.org/handle/10986/29540> Licence: CC BY 3.0 IGO. Please see Glossary for detailed list of countries.

Figure 9: Exposure by 2022 World Bank Group economic area (€ billion)

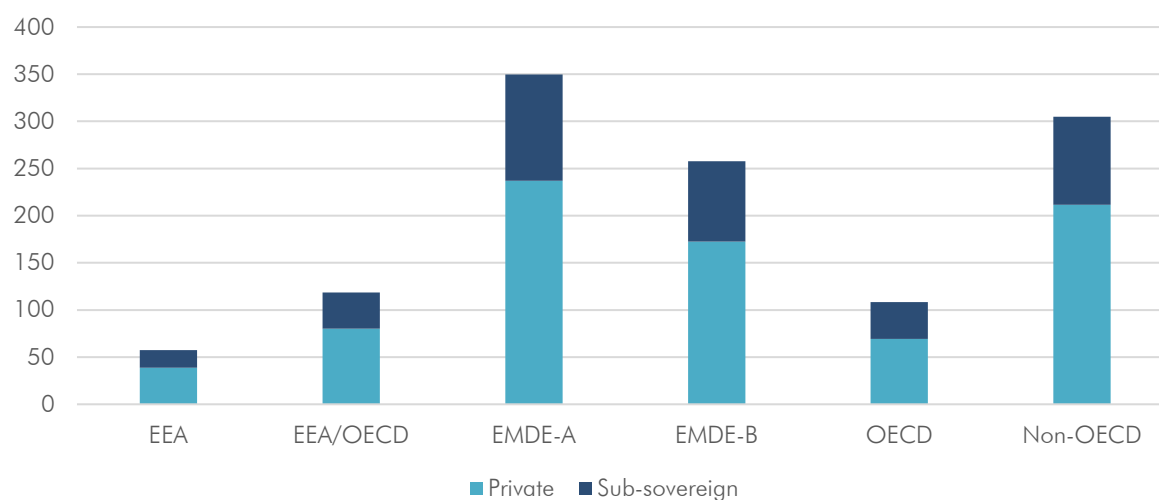


Table 3: Dataset composition by 2022 World Bank Group country income group

Country income group	Number of contracts	Total exposure (€ billion)
Contracts of private counterparts		
High income	1 989	52.2
Upper-middle income	4 914	145.1
Lower-middle income	3 405	75.6
Low income	738	7.8
N/A	440	11.3
Total	11 486	292.1
Contracts of sub-sovereign counterparts		
High income	855	23.6
Upper-middle income	847	56.8
Lower-middle income	797	50.4
Low income	147	1.5
N/A	148	8.4
Total	2 794	140.7

Figure 10: Dataset composition by 2022 World Bank Group country income group

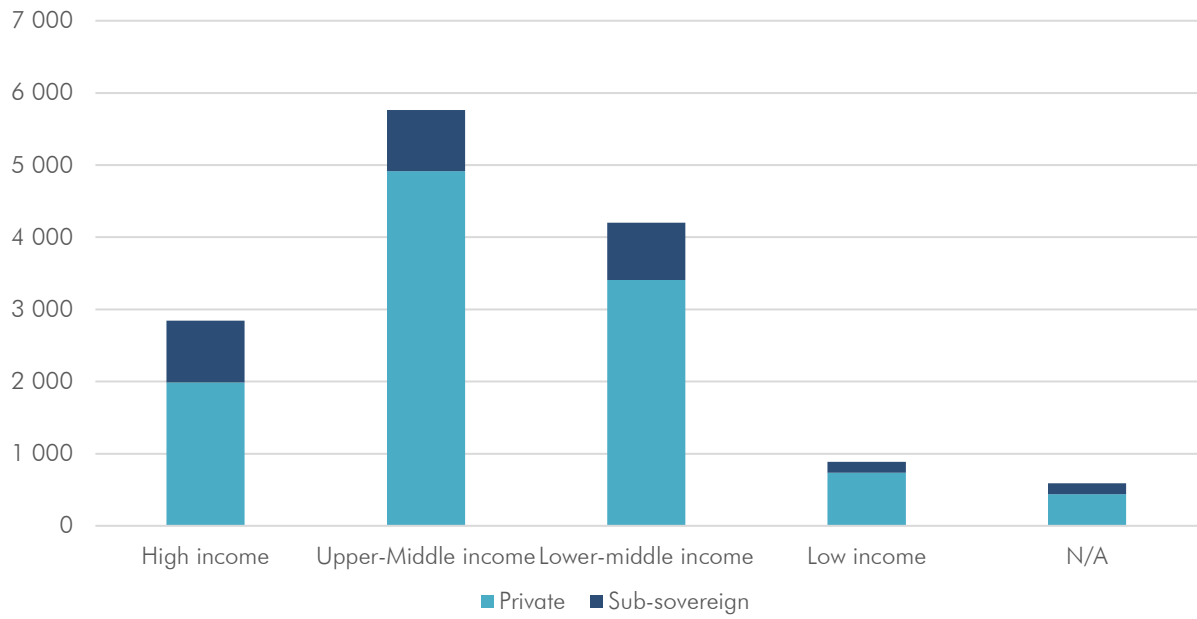
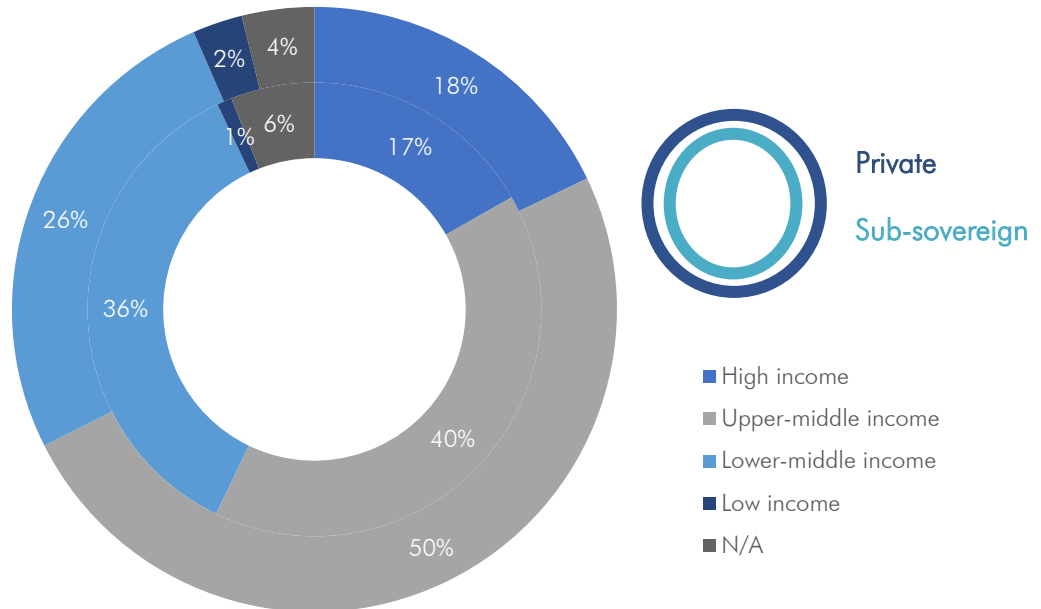


Figure 11: Exposure by 2022 World Bank Group country income group (€ billion)



Dataset distribution by sector

Table 4: Dataset composition by sector group

Sector group	Number of contracts	Total exposure (€ billion)
Contracts of private counterparts		
Finance	5 132	99.7
Infrastructure	1 625	59.8
Other	4 729	132.7
Total	11 486	292.1
Contracts of sub-sovereign counterparts		
Finance	711	28.6
Infrastructure	466	29.4
Other	1 617	77.6
Total	2 794	135.6

Figure 12: Number of contracts by sector group

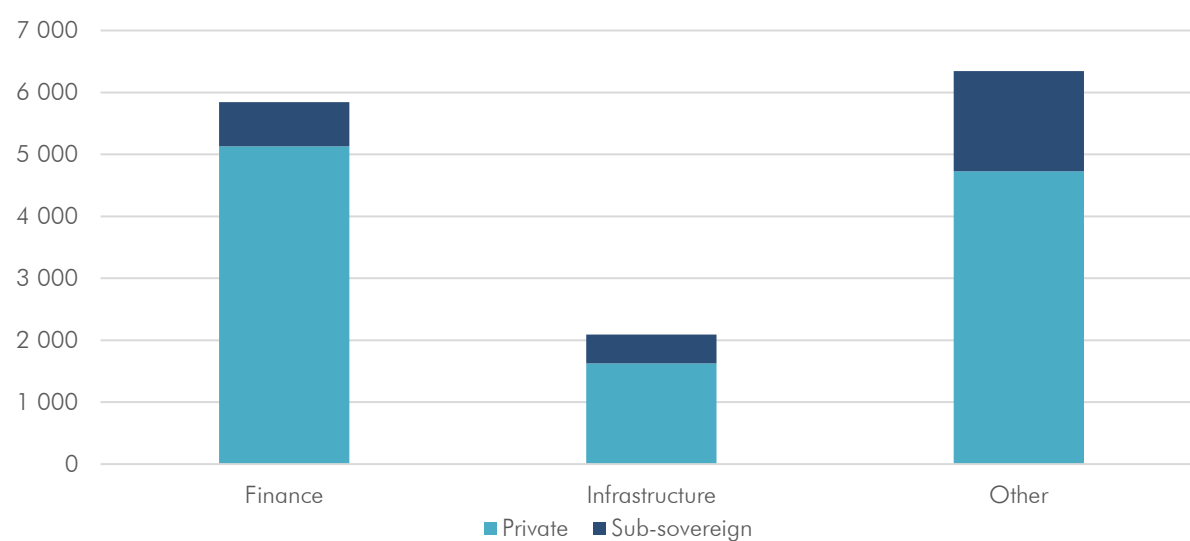
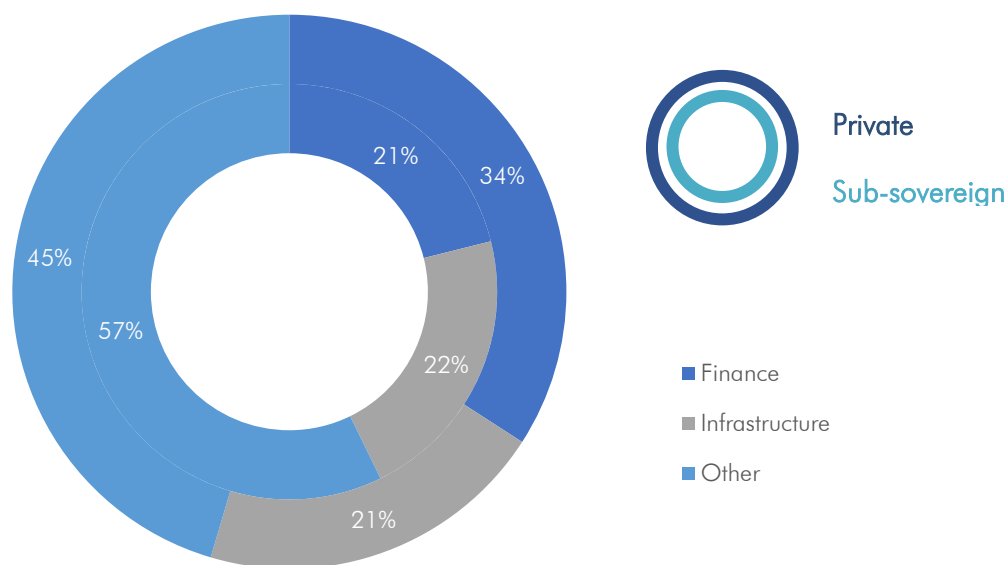


Figure 13: Exposure by sector group (€ billion)



Overview of infrastructure dataset

In the coming years, emerging markets will require significant infrastructure investment to facilitate economic growth, respond to demographic and urbanisation pressures and meet the Sustainable Development Goals. Current infrastructure investment in emerging markets is approximately \$1 trillion per year, leaving an estimated unmet need of \$2 trillion to \$4 trillion per year.⁵ Over half of this amount will be required in the electricity sector for financing generation, capacity, transmission and distribution networks. Other important sectors requiring investment include transport (roads, ports and airports) and telecommunications.⁶

The GEMs infrastructure dataset comprises a specific set of Global Industry Classification Standard (GICS) subsector codes.⁷ Tables 5 and 6 combine observations for private and sub-sovereign counterparts.

⁵ Inderst, G., & Stewart, F. (2014). Institutional Investment in Infrastructure in Emerging Markets and Developing Economies. Washington, DC: World Bank Group Public-Private Infrastructure Advisory Facility. (<https://ppp.worldbank.org/public-private-partnership/sites/ppp.worldbank.org/files/2022-05/PPIAF-Institutional-Investors-final-web.pdf>)

⁶ Organisation for Economic Co-operation and Development. (2020). OECD Compendium of Policy Good Practices for Quality Infrastructure Investment. (<https://www.oecd.org/finance/oecd-compendium-of-policy-good-practices-for-quality-infrastructure-investment.htm>)

⁷ Please refer to the Glossary for a detailed definition of Infrastructure.

Table 5: Number of infrastructure contracts and exposure by 2022 World Bank Group region

Geographic region	# Contracts	Total exposure (€ billion)
East Asia and the Pacific	152	6.5
Europe and Central Asia	627	29.1
Latin America and the Caribbean	475	23.7
Middle East and North Africa	278	15.2
South Asia	130	3.5
Sub-Saharan Africa	377	9.6
N/A	52	1.5
Total	2 091	89.2

Overview of financials dataset

As supply and demand increase, businesses in emerging markets need continuous working capital to optimise distribution, operational efficiency and inventory turnover. International trade finance companies can help businesses in emerging markets improve their cash flow position and reduce their risk exposure.

Currently, one of the most substantial barriers to business growth in emerging markets is a lack of reliable financials data. Improving availability to lending can benefit small and medium businesses in increasing working capital capacity, improving inventory turnover and revenue and offering increased employment opportunities.

Table 6: Number of financials contracts and exposure by 2022 World Bank Group region

Geographic region	Number of contracts	Total exposure (€ billion)
East Asia and the Pacific	208	5.2
Europe and Central Asia	3 356	68.8
Latin America and the Caribbean	770	21.3
Middle East and North Africa	229	7.4
South Asia	261	9.3
Sub-Saharan Africa	741	10.6
N/A	278	10.3
Total	5 843	132.9

Recovery rate statistics

The recovery rate for each contract with a resolved default event is the ratio between the discounted cash flows received after the default date and the capital outstanding at the default date. The cash flows included are principal, interest, penalties, and fees.

Cash flows received are discounted to the default date on a tranche level and then aggregated to the contract level. Therefore, recovery rates are always calculated on a contract level.

The recovery rate calculation considers the full exposure at default — that is, the full outstanding amount until maturity as it stands at default date. This is the full risk at default.

A contract belonging to any counterpart can have multiple default events and associated resolutions. However, only one recovery rate per contract is calculated, capturing all default events on the contract.

Recovery rates are capped at 100% of the exposure at default. Although gains are possible on collateral received in place of balances due, such gains are not viewed separately on defaulted loans.

Table 7: Recovery rates by default period

Time period	Contracts of private counterparts	Contracts of sub-sovereign counterparts
1994-2007 ⁸	75.5%	87.2%
2008-2022	74.2%	97.4%
1994-2022	74.7%	91.0%

Table 8: Recovery rates for contracts of private counterparts by 2022 World Bank Group region

Geographic region	All	Infrastructure ⁹	Financials ¹⁰	Other
East Asia and the Pacific	69.7%	65.0%	62.9%	71.9%
Europe and Central Asia	72.5%	79.1%	73.8%	70.8%
Latin America and the Caribbean	71.7%	73.1%	65.4%	72.8%
Middle East and North Africa	82.5%	87.9%	82.6%	81.4%
South Asia	68.1%	68.9%	78.6%	63.9%
Sub-Saharan Africa	83.0%	94.3%	82.1%	80.8%
N/A	63.8%	70.5%	56.7%	66.9%
Average	74.7%	78.7%	74.1%	73.9%
Standard Deviation	0.36	0.33	0.37	0.36

⁸ The split reflects the effect of the 2008 financial crisis.

⁹ The GEMs infrastructure dataset includes relevant Global Industry Classification Standard (GICS) subsector codes. Please refer to the Glossary for a detailed definition.

¹⁰ The Financials category includes relevant subsectors according to the Global Industry Classification Standard (GICS). Please see the Glossary for a detailed definition.

Table 9: Recovery rates for contracts of private counterparts by World Bank Group country income group

Country income group	All	Infrastructure ¹¹	Financials ¹²	Other
High income	66.2%	68.3%	55.9%	67.1%
Upper-middle income	75.1%	80.0%	72.4%	74.7%
Lower-middle income	74.7%	78.1%	77.3%	73.0%
Low income	83.5%	92.8%	90.0%	80.3%
N/A	65.2%	71.8%	55.9%	69.6%
Average	74.7%	78.7%	74.1%	73.9%
Standard deviation	0.36	0.33	0.37	0.36

Table 10: Recovery rates for contracts of sub-sovereign counterparts by 2022 World Bank Group region

Geographic region	All	Infrastructure	Financials	Other
East Asia and the Pacific	85.00%	99.30%	3.50%	91.10%
Europe and Central Asia	99.10%	99.70%	99.80%	98.60%
Latin America and the Caribbean	89.20%	-	95.00%	88.60%
Middle East and North Africa	91.30%	100.00%	-	87.60%
South Asia	-	-	-	-
Sub-Saharan Africa	90.70%	99.00%	99.70%	86.90%
N/A	100.00%	-	100.00%	-
Average	91.00%	99.10%	82.90%	88.10%
Standard deviation	0.23	0.02	0.39	0.36

Table 11: Recovery rates for contracts of sub-sovereign counterparts by World Bank Group country income group

Country income group	All	Infrastructure	Financials	Other
High income	96.80%	99.70%	-	96.50%
Upper-middle income	96.60%	99.90%	98.20%	95.70%
Lower-middle income	85.70%	99.30%	3.50%	79.90%
Low income	95.90%	98.60%	99.70%	94.60%
N/A	92.90%	99.30%	100.00%	91.60%
Average	91.00%	99.10%	82.90%	88.10%
Standard deviation	0.23	0.02	0.39	0.26

¹¹ The GEMs infrastructure dataset includes relevant Global Industry Classification Standard (GICS) subsector codes. Please refer to the Glossary for a detailed definition.

¹² The Financials category includes relevant subsectors according to the Global Industry Classification Standard (GICS). Please see the Glossary for a detailed definition.

Glossary

Cohort approach	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 December. 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.
Counterpart category	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.
Country	Name of a nation state or regional grouping of nations where the counterpart holding company is located.
Default	A default event on any private or sub-private operation can occur in one of six ways: <ul style="list-style-type: none"> • Non-payment within 90 days of the due date • Specific provision raised against a loan • Write-off of an outstanding loan (full or partial) • Agreement to distressed restructuring • Client entered bankruptcy • Realisation of loan security
Default rate	Default rate is computed according to the dynamic cohort approach used by rating agencies.
East Asia and the Pacific	World Bank Group region definition (2022): American Samoa, Australia, Brunei, Cambodia, China, Fiji, French Polynesia, Guam, Hong Kong, Indonesia, Japan, Kiribati, Laos, Macao, Malaysia, Marshall Islands, Micronesia, Mongolia, Myanmar, Nauru, New Caledonia, New Zealand, Northern Mariana Islands, North Korea, Palau, Papua New Guinea, Philippines, Samoa, Singapore, Solomon Islands, South Korea, Taiwan, Thailand, Timor-Leste, Tonga, Tuvalu, Vanuatu and Vietnam.
EEA	The European Economic Area. The EEA includes the 27 member countries of the European Union, plus Norway, Iceland and Liechtenstein.
EMDE	Emerging Markets and Developing Economies.
EMDE-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, Costa Rica, Côte d'Ivoire, Croatia, Cuba, Czech Republic, Democratic Republic of the Congo, Djibouti, Dominica, Dominican Republic, Ecuador, Egypt, El Salvador, Equatorial Guinea, Eritrea, Estonia, Eswatini, Ethiopia, Fiji, Gabon, The Gambia, Georgia, Ghana, Grenada, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, Hungary, India, Indonesia, Iran, Iraq, Jamaica, Jordan, Kazakhstan, Kenya, Kiribati, Kosovo, Kyrgyzstan, Laos, Latvia, Lebanon, Lesotho, Liberia, Libya, Lithuania, Madagascar, Malawi, Malaysia, Maldives, Mali, Mauritania, Mauritius, Mexico, Moldova, Mongolia, Montenegro, Morocco, Mozambique, Myanmar, Namibia, Nauru, Nepal, Nicaragua, Niger, Nigeria, North Korea, North Macedonia, Oman, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Romania, Russia, Rwanda, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Samoa, São Tomé and Príncipe, Senegal, Serbia, Seychelles, Sierra Leone, Slovakia, Solomon Islands, Somalia, South Africa, South Sudan, Sri Lanka, Sudan, Suriname, Syria, Tajikistan, Tanzania, Thailand, Timor-Leste, Togo, Tonga, Tunisia, Türkiye, Turkmenistan, Tuvalu, Uganda, Ukraine, Uruguay, Uzbekistan, Vanuatu, Venezuela, Vietnam, West Bank and Gaza, Yemen, Zambia and Zimbabwe.
EMDE-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, Costa Rica, Côte d'Ivoire, Croatia, Cuba, Democratic Republic of the Congo, Djibouti, Dominica, Dominican Republic, Ecuador, Egypt, El Salvador, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Fiji, Gabon, The Gambia, Georgia, Ghana, Grenada, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, India, Indonesia, Iran, Iraq, Jamaica, Jordan, Kazakhstan, Kenya, Kiribati, Kosovo, Kyrgyzstan, Laos, Lebanon, Lesotho, Liberia, Libya, Madagascar, Malawi, Malaysia, Maldives, Mali, Mauritania, Mauritius, Moldova, Mongolia, Montenegro, Morocco, Mozambique, Myanmar, Namibia, Nauru, Nepal, Nicaragua, Niger, Nigeria, North Korea, North Macedonia, Oman, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Russia, Rwanda, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Samoa, São Tomé and Príncipe, Senegal, Serbia, Seychelles, Sierra Leone, Slovakia, Solomon Islands, Somalia, South Africa, South Sudan, Sri Lanka, Sudan, Suriname, Syria, Tajikistan, Tanzania, Thailand, Timor-Leste, Togo, Tonga, Tunisia, Türkiye, Turkmenistan, Tuvalu, Uganda, Uruguay, Uzbekistan, Vanuatu, Venezuela, Vietnam, West Bank and Gaza, Yemen, Zambia and Zimbabwe.
Europe and Central Asia	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, Kyrgyzstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Moldova, Monaco, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Russian Federation, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Tajikistan, Türkiye, Turkmenistan, Ukraine, United Kingdom and Uzbekistan.
Exposure	The signed amount of the loan as of signature date, denominated in euros.
Financials sector	The Financials sector dataset includes the following subsector codes according to the Global Industry Classification Standard (GICS): 40101010 (Diversified Banks), 40101015 (Regional Banks), 40102010 (Thriffs & 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) and 40301050 (Reinsurance).
GICS	The Global Industry Classification Standard (GICS) on 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.
Infrastructure sector	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) and 40402045 (Health Care REITs).
Latin America and the Caribbean	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, Saint Kitts and Nevis, Saint Lucia, Saint Martin, Saint Vincent and the Grenadines, Sint Maarten, Suriname, Trinidad and Tobago, Turks and Caicos Islands, Uruguay, US Virgin Islands and Venezuela.
Middle East and North Africa	World Bank Group region definition (2022): Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Malta, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates, West Bank and Gaza and Yemen.
OECD	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.
Other sector	Includes all GICS subsector codes, except those listed under the Financials and Infrastructure sectors.
Recovery	A contract belonging to any counterpart can have multiple default events and associated resolutions for each event. Recoveries are calculated at the contract level, only one recovery per contract is calculated.
Recovery rate	Recovery rate is the ratio between the discounted cash flows received (or expected to be received) after the default date and the amount outstanding at default. The cash flows included are principal, interest, penalties and fees.
Size of loan	Total principal disbursement from lender to counterpart, in accordance with contract/instrument.
South Asia	World Bank Group region definition (2022): Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.
Sub-Saharan Africa	2022 World Bank Group region group: Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Gabon, The Gambia, 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 and Zimbabwe.
World Bank Group classification (region and income)	The World Bank Group classifies the world countries by region, income and lending type. Each year the classifications are published on the World Bank Group's website (WDI - The World by Income and Region (worldbank.org)).

RECOVERY STATISTICS



PRIVATE AND SUB-SOVEREIGN LENDING 1994-2022



European Investment Bank
98-100, boulevard Konrad Adenauer
L-2950 Luxembourg
+352 4379-1
www.eib.org – info@eib.org

✕ | twitter.com/EIB
f | facebook.com/EuropeanInvestmentBank
▶ | youtube.com/EIBtheEUBank