



Default and Recovery Statistics

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Preface

The Global Emerging Markets Risk Database (GEMs) Consortium is a joint initiative of the European Investment Bank and the International Finance Corporation. It was established in 2009 to pool credit risk data. This database is a unique example of a tangible common good and is designed to catalyse investments in emerging markets and support technical cooperation between international institutions.

GEMs serves as a discussion and collaboration forum for building technical alignment and sharing best practices among member institutions through working-level meetings. GEMs comprises multilateral development banks (MDBs) and development finance institutions (DFIs) with business activities in emerging markets and developing economies.

GEMs collects de-identified data from MDBs and DFIs on their performing and non-performing exposures across emerging markets and developing economies. Based on this data, output statistics are produced, encompassing default and recovery rates categorised by various dimensions, such as geography, sector and income group, among others. Compiling GEMs risk statistics relies on a robust and shared methodological framework, bringing together data and expertise from leading public institutions.

GEMs offers:

- A risk data hub of contract-level information for private and public lending and sovereign and sovereign-guaranteed lending – one of the largest such datasets for emerging markets and developing economies.
- A trusted data collection and processing platform hosting a scalable data model, which could be expanded to cover other contract-level data related to investment projects.
- A statistical platform for member MDBs and DFIs, with the ability to calculate GEMs outputs, default rates, recovery rates and rating migrations, facilitating better-informed investment decisions in emerging markets and developing economies.
- A public good data source for aggregated statistics, with the reported default and recovery rates for private, public and sovereign and sovereign-guaranteed lending providing an anchor for risk perceptions.
- A framework for collaboration among member MDBs and DFIs to improve risk management practices across the industry.

More private investment is needed to create much needed jobs in emerging markets and achieve sustainable development goals. Global institutions need to work together to address some of the current barriers to these private investments. Some key barriers include, for instance, insufficient support for preparing well-designed projects; minimal coordination between countries and institutions to facilitate the use of public resources to mitigate risks; a lack of an appropriate legal and contractual environment; and a shortage of standardisation, transparency and data availability. The scarcity of data around emerging markets and developing economies, coupled with the tightening of regulatory requirements, calls for sophisticated risk management practices and more reliable metrics.

Through GEMs, member MDBs and DFIs address the investment gap by sharing their experience and market knowledge among themselves and with investors and the broader public. These banks and institutions pool their data using a harmonised template and generate more valuable statistics than those available to any individual lending institution. GEMs is thus a comprehensive data source for current and potential investors in emerging markets, one that helps refine risk perceptions and inform better decision-making.

The scarcity of accessible, standardised, transparent and high-quality information on investment projects in emerging markets can skew risk perceptions and lead to suboptimal investment decisions. Institutions with little or no experience in such markets must rely on risk assumptions based on limited public information. By anchoring risk perceptions with actual statistics, GEMs aims to help unlock capital that can fill such investment gaps.

The statistics produced by GEMs enable the calibration and benchmarking of internal models, leading to efficient provisioning, greater accuracy in setting capital requirements and better-informed investment decisions. In other words, GEMs statistics provide an objective, reliable and statistically significant basis for discussing regulatory compliance, capital adequacy and risk management practices with auditors, rating agencies and supervisors.

Furthermore, the 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 or DFIs, or in any other balance sheet optimisation initiatives, thus supporting the crowding-in of additional funding for emerging markets.

Since 2021, GEMs has shared its aggregated statistics publicly, recognising the potential value for various stakeholders, ranging from academics to regulators and commercial entities. This report builds on past publications, combining and offering default and recovery statistics in greater detail and reflecting the contributing institutions' lending profiles in emerging markets and developing economies.

The report discloses statistics derived from pooled GEMs data from 1994 to 2025, provided by 17 member institutions. It also encompasses niche features and unique insights and covers the methodological framework for generating GEMs statistics.

Specific applications of GEMs statistics may vary across institutions. GEMs welcomes feedback from readers of this report and looks for-

ward to working with financial stakeholders to improve the focus and content of future publications, aiming to support new and sustainable investment where it is most needed.

The GEMs Data Aggregator (DA) is a contracted party responsible for managing the end-to-end data submission process, validating the data and ensuring their quality. The DA is also responsible for hosting of the database platform in a secure and anonymized manner, and for managing the central engine that facilitates the publication, marketing, and dissemination of the GEMs statistics to the public. In 2025, the GEMs Consortium appointed Galytix (GX), a U.K.-based specialised AI firm for financial institutions, in collaboration with PricewaterhouseCoopers Tax and Advisory, Société cooperative, as the new DA. The Consortium tasked the DA with delivering a next-generation AI Agent to modernize GEMs data collection and management, scale the platform's functionality, and provide aggregated insights into GEMs credit risk statistics.

GEMs Member Institutions Participating in this Publication



1. Highlights

The figures and tables in this report provide insights into the composition and credit performance of the GEMs public lending dataset, covering lending to entities such as municipalities and companies that are at least 50% state-owned as well as any lending to the sovereign, states and their agencies that is without an explicit sovereign guarantee and cross-default clauses. Public lending is reported separately from private lending, allowing the characteristics and performance of public counterparties to be assessed independently.

The report presents default and recovery statistics across a range of dimensions, including geography, sector, income group, project type and, new for this edition, currency type. Cross dimensional analysis provides additional insight into differences in observed credit performance across the dataset. This year the publication in-

troduces new measures including analysis of recovery rates by default type, resolution type, and actions taken.

Statistical measures are provided alongside the reported averages to support interpretation of the significance of the results. 90% confidence intervals are presented for average default rates, while recovery statistics include medians, inter-quartile ranges and P10–P90 ranges, reflecting the more skewed distribution of recovery outcomes.

Over the 1994–2025 reporting period, the dataset includes 1,222 public counterparties, representing approximately EUR132.7 billion of signed amounts and 12,318 annual observations. A total of 236 defaults were observed, resulting in an overall average default rate of 1.9%.

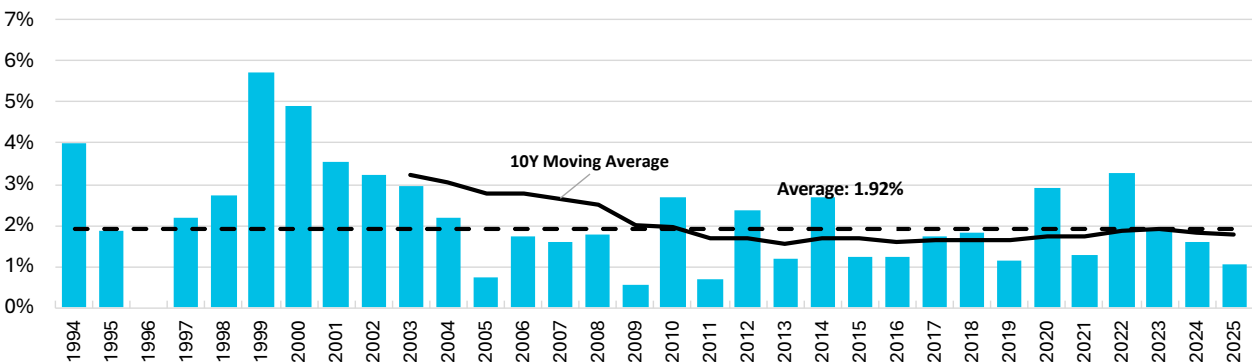
Table 1: Overall Average Default Rate

Counterparts	Signed amount (€m)	Defaults / observations	Average DR (90% CI)
1,222	132,669	236 / 12,318	1.92% (1.63%–2.21%)

Annual default rates fluctuate over the reporting period, while the number of active counterparties has expanded, increasing from 100 in 1994 to 646 in 2025. The highest annual default rate was recorded in 1999 at 5.7%. More recently,

seven defaults were recorded among 646 counterparties in 2025, corresponding to an annual default rate of 1.1%, across signed amounts of approximately EUR 79.0 billion.

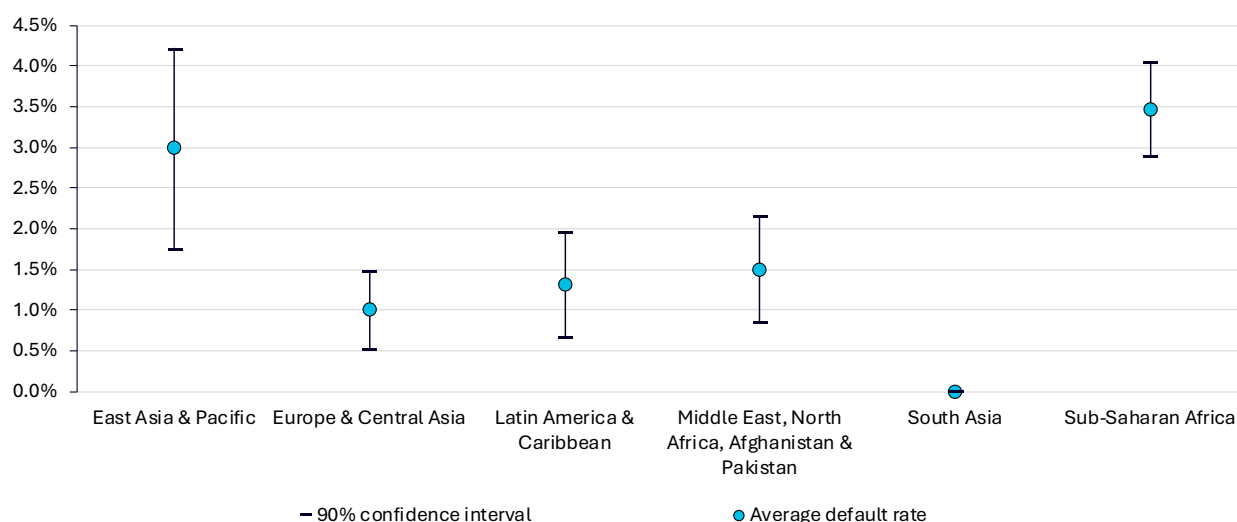
Figure 1: Annual Default Rates over Time



Regional analysis shows that Europe & Central Asia contains the largest number of public borrowers, followed by Sub Saharan Africa. Sub-Saharan Africa records the highest average default rate at 3.5%, compared with an overall portfolio average of 1.9%. In 2025, Sub-Saharan

Africa also recorded the highest regional annual default rate at 2.5%. At the continent level, Oceania records the highest average default rate at 4.1%, although this is based on a relatively small cohort of 20 counterparties, while Europe records the lowest average at close to 1%.

Figure 2: Default Rates by World Bank Region



Default experience also varies across sectors. Under the GICS classification, communication services records the highest average default rate at 3.6%, while energy records the lowest at 0.5%. Financial institutions record lower average default rates than non-financial institutions, at 0.6% compared with 2.1%, respectively.

The income group of the project country remains an important differentiator of observed default performance. Counterparties in low income countries record the highest average default rate at 5.5%, compared with 2.4% for lower middle income, 1.2% for upper middle income and 0.4% for high income countries. Within the combined regional and income analysis, the highest observed rates are concentrated in sub-Saharan Africa, including 5.6% for low-income countries and 4.8% for lower middle-income countries.

Default rates also vary by project type. Project Finance records the highest average default rate at 4.1%, followed by Structured Finance at 3.3%, Corporate Finance at 2.6% and Financial Institu-

tion Finance at 2.1%. The relatively small cohorts within some project types should be considered when interpreting these differences.

The currency type of Pegged LC was introduced as an additional reporting dimension in this edition. Pegged local currency exposures record the highest average default rate at 5.4%, compared with 1.0% for other local currency exposures. Pegged local currency refers to exposures where the local currency is fixed or formally linked to another currency and may also include cases where another country's currency is used as the local currency.

Recovery outcomes remain strong overall. Across 224 defaulted contracts representing approximately EUR 4.9 billion of signed amounts, the average recovery rate is 80.4% and the median recovery rate is 97.3%. Recovery outcomes are concentrated toward the upper end of the distribution, with 63.8% of defaulted contracts recovering between 90% and 100%, while 7.6% record recoveries below 10%.

Table 2: Overall Average Recovery Rates

Number of Defaulted Contracts	Signed Amount (€m)	Average RR	Median RR (IQR)	P10-P90 Range
224	4,913	80.4%	97.3% (72.8%–99.8%)	19.5%–100.0%

Resolution timing varies in reported data. Approximately 49.1% of defaults are resolved within three years and 61.2% within six years. The cumulative proportion resolved reaches 85.3% by year 12 and 87.5% by year 19, while 12.5% of defaults take 20 years or more to resolve.

Recovery performance also differs across key dimensions. Latin America & the Caribbean records the highest average regional recovery rate at 90.4%, while East Asia & Pacific records the lowest at 66.7%. By income group, lower middle-income coun-

terparties record the highest average recovery rate at 89.5%, compared with 82.6% for upper middle income and 71.2% for low-income counterparties.

By project type, Corporate Finance records the highest average recovery rate at 84.6%, followed by Other at 78.2%, Financial Institution Finance at 77.2% and Project Finance at 70.8%. Seniority also remains relevant: senior secured contracts record an average recovery rate of 87.0%, compared with 77.4% for senior unsecured contracts.

Recovery rates generally increase with contract size, although the relationship is not uniform

across all size bands. Contracts above EUR 25 million record the highest average recovery rate at 88.3%, compared with 68.7% for contracts up to EUR 1 million and 57.9% for contracts up to EUR 2 million. Larger contracts also exhibit a more concentrated distribution of recovery outcomes.

Taken together, the 1994–2025 statistics continue to show low average default rates and high median recoveries for public lending, while also highlighting meaningful differences across geography, income group, sector, project type, currency type and contractual characteristics.

2. Characteristics of the Public Counterpart Dataset

2.1 Definition

The GEMs risk database collects credit information on standard debt products of member Multilateral Development Banks (MDBs) and Development Finance Institutions (DFIs). This report presents data on public counterparties. In parallel, separate reports are published with statistics for private counterparties and for sovereign and sovereign guaranteed lending.

This publication excludes equity and non-standard lending products, and operations provided by GEMs member institutions on behalf of third parties.

A materiality threshold for identifying defaults may be applied by each contributing institution

in accordance with its own procedures, and these thresholds may be reassessed over time. As a result, changes in reported default rates and recovery rates may not only reflect changes in underlying credit quality, but also changes in methodologies or materiality thresholds used by contributing institutions. For example, changes in materiality thresholds may reduce the number of exposures classified as defaults, leading to lower reported default rates compared to previous years despite no underlying change in credit risk. Similarly, the removal of default events may also impact on the observed recovery rates. This may potentially limit direct comparability with prior periods.

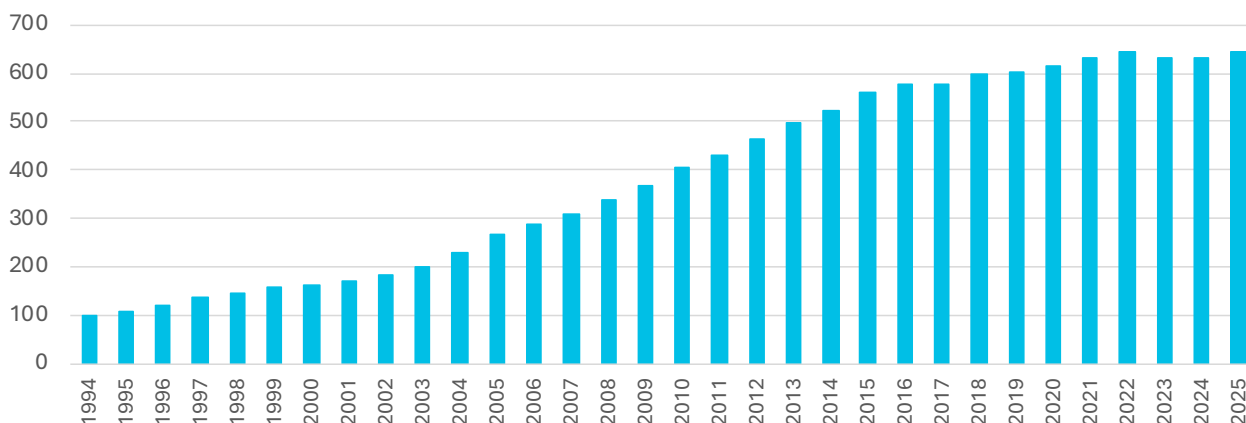
2.2 Counterparties in the Dataset

The dataset includes 1,222 public counterparties from a total of 152 developing countries, countries classified as developed under the GEMs country classification methodology are excluded (see Annex 6.4). For EU member countries that joined after 2000 (Bulgaria, Croatia, Cyprus, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia), data is excluded starting from the most recent year in which all three classification sources—the Human Development Index, World Bank Group

country classification, and IMF classification—classified the country as developed.

The public counterparties included in the dataset have not necessarily been active throughout the 32-year reporting period. The number of active counterparties has grown steadily since 1994, reflecting the wider reach and increased lending by MDBs and DFIs, with signs of stabilisation after 2020 (Figure 3).

Figure 3: Number of Counterparts over Time



3. Default Rate Statistics

3.1 Default Rate Methodology

Default rates in this publication are calculated following GEMs methodology for annual default rates. Annual default rates are calculated at the counterpart level and are provided for various dimensions and combinations thereof. They reflect the observed default frequencies of counterparts defaulting in a given year for the reported dimensions. Detailed calculations can be found in Section 5.1.3.

About 30% of counterparts have multiple contracts with individual member institutions. For the annual default rates, the contract-level categories for the dimensions have been used to establish the categories for the counterparts. In the few cases (0-5%) where the contracts of counterparts belong to different categories, these were excluded from the calculations for the categories and only reported in the overall totals.

3.2 Annual Default Rates

3.2.1 Overall Default Rate

Table 3: Overall Default Rates

Counterparts	Signed amount (€m)	Defaults / observations	Average DR (90% CI)
1,222	132,669	236 / 12,318	1.92% (1.63%–2.21%)

Table 4 represents the annual default rates. The rates fluctuate across the earlier reporting periods, with the number of counterparts increasing from 100 in 1994 to 646 in 2025. The highest annual default rates were recorded in 1999 at 5.7%,

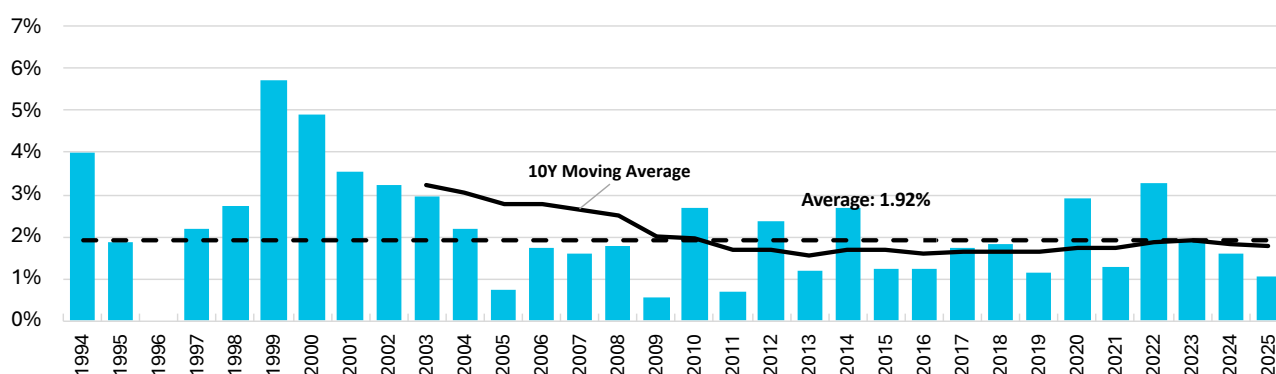
with more recent years generally trending below this rate. In 2025, 7 defaults represented a default rate of 1.1% across 646 counterparts representing total signed amounts of approximately EUR 79.0 billion.

Table 4: Annual Default Rates

Year	Counterparts	Signed amount (€m)	Defaults / observations	Annual Default Rate
1994	100	2,492	4 / 100	4.00%
1995	106	2,871	2 / 106	1.89%
1996	119	3,417	0 / 119	0.00%
1997	138	4,116	3 / 138	2.17%
1998	146	5,100	4 / 146	2.74%
1999	157	5,863	9 / 157	5.73%
2000	163	6,130	8 / 163	4.91%
2001	169	6,799	6 / 169	3.55%
2002	185	8,209	6 / 185	3.24%
2003	202	9,672	6 / 202	2.97%
2004	228	10,913	5 / 228	2.19%

Year	Counterparts	Signed amount (€m)	Defaults / observations	Annual Default Rate
2005	269	13,464	2 / 269	0.74%
2006	289	14,516	5 / 289	1.73%
2007	308	15,096	5 / 308	1.62%
2008	338	18,068	6 / 338	1.78%
2009	367	21,982	2 / 367	0.54%
2010	407	26,209	11 / 407	2.70%
2011	429	29,617	3 / 429	0.70%
2012	465	33,008	11 / 465	2.37%
2013	497	36,944	6 / 497	1.21%
2014	522	40,318	14 / 522	2.68%
2015	560	46,965	7 / 560	1.25%
2016	575	49,219	7 / 575	1.22%
2017	577	53,825	10 / 577	1.73%
2018	599	56,518	11 / 599	1.84%
2019	602	58,487	7 / 602	1.16%
2020	615	61,314	18 / 615	2.93%
2021	631	67,197	8 / 631	1.27%
2022	645	68,100	21 / 645	3.26%
2023	633	70,149	12 / 633	1.90%
2024	631	72,524	10 / 631	1.58%
2025	646	79,041	7 / 646	1.08%

Figure 4: Annual Default Rates



3.2.2 Default Rates by Region

3.2.2.1 Default rates by World Bank region

The statistics in this section are based on the World Bank Group's classification of countries by region.

The largest number of public borrowers is located in Europe & Central Asia, followed by

Sub-Saharan Africa. Sub-Saharan Africa records the highest average default rate 3.5%. Sub-Saharan Africa reported the highest annual default rate in 2025, at 2.5%.

Table 5: Default Rates by World Bank Region

Region	Counter- parts	Signed amount (€m)	Defaults / observa- tions	Average DR (90% CI)
East Asia & Pacific	42	2,990	13 / 435	2.99% (1.76%–4.22%)
Europe & Central Asia	508	45,219	48 / 4,795	1.00% (0.52%–1.48%)
Latin America & Caribbean	162	24,210	17 / 1,296	1.31% (0.67%–1.96%)
Middle East, North Africa, Afghanistan & Pakistan	133	29,495	23 / 1,529	1.50% (0.86%–2.15%)
South Asia	22	3,395	0 / 188	0.00% (0.00%–0.00%)
Sub-Saharan Africa	321	19,656	133 / 3,836	3.47% (2.89%–4.05%)
Overall (Including Omitted Categories)	1,222	132,669	236 / 12,318	1.92% (1.63%–2.21%)

Figure 5: Default Rates by World Bank Region

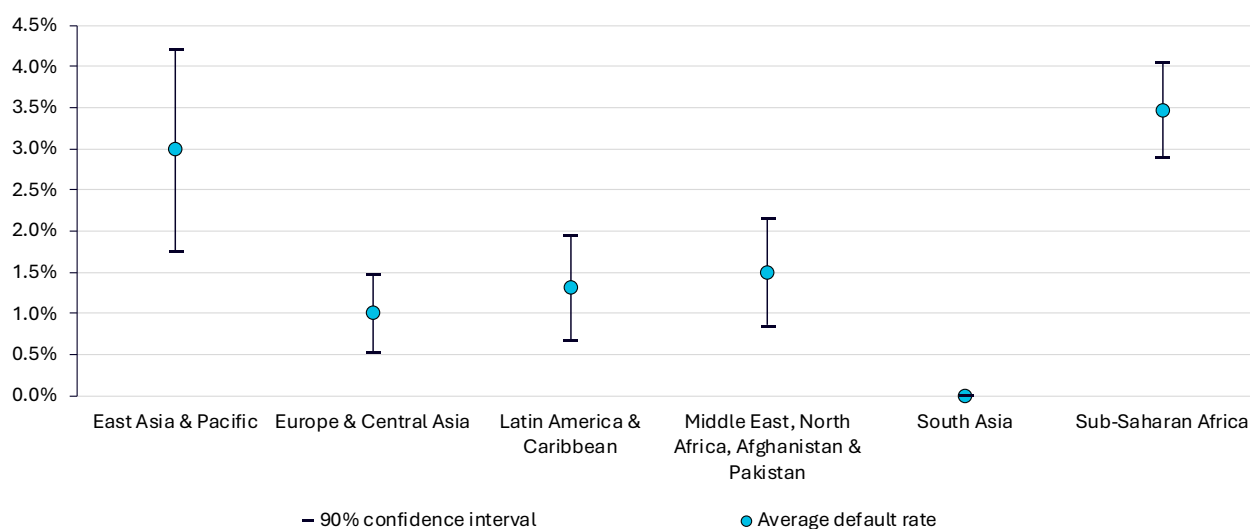


Table 6: Annual Default Rates by World Bank Region

Year	East Asia & Pacific	Europe & Central Asia	Latin America & Caribbean	Middle East, North Africa, Afghanistan & Pakistan	South Asia	Sub-Saharan Africa
1994	0.00%		0.00%	0.00%	0.00%	7.27%
1995	0.00%	0.00%	0.00%	0.00%	0.00%	3.51%
1996	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1997	0.00%	0.00%	0.00%	0.00%	0.00%	4.35%
1998	7.14%	5.56%	0.00%	0.00%	0.00%	2.90%
1999	7.69%	4.17%	5.00%	0.00%	0.00%	8.45%
2000	0.00%	0.00%	5.26%	3.13%	0.00%	8.45%
2001	0.00%	0.00%	5.56%	3.23%	0.00%	5.56%
2002	10.00%	0.00%	5.00%	6.06%	0.00%	2.86%
2003	0.00%	0.00%	0.00%	0.00%	0.00%	8.00%
2004	11.11%	0.00%	5.26%	0.00%	0.00%	3.80%
2005	12.50%	0.00%	0.00%	2.44%	0.00%	0.00%
2006	0.00%	0.00%	11.11%	0.00%	0.00%	2.97%
2007	14.29%	0.00%	0.00%	2.63%	0.00%	3.00%
2008	0.00%	0.00%	0.00%	2.56%	0.00%	4.42%
2009	0.00%	0.00%	0.00%	0.00%	0.00%	1.64%
2010	0.00%	0.54%	0.00%	0.00%	0.00%	7.19%
2011	7.69%	0.00%	0.00%	0.00%	0.00%	1.43%
2012	0.00%	2.42%	7.41%	2.00%	0.00%	1.95%
2013	5.88%	0.46%	0.00%	3.57%	0.00%	1.26%
2014	5.00%	1.28%	2.94%	0.00%	0.00%	5.56%
2015	10.53%	0.41%	0.00%	0.00%	0.00%	2.48%
2016	0.00%	0.40%	0.00%	1.69%	0.00%	3.05%
2017	5.88%	0.41%	1.52%	1.59%	0.00%	3.05%
2018	0.00%	0.40%	0.00%	4.41%	0.00%	4.19%
2019	0.00%	0.79%	0.00%	1.49%	0.00%	2.48%
2020	0.00%	0.40%	3.61%	8.70%	0.00%	4.71%
2021	0.00%	0.78%	0.00%	1.45%	0.00%	2.99%
2022	0.00%	6.84%	0.00%	0.00%	0.00%	1.79%
2023	0.00%	2.14%	2.17%	0.00%	0.00%	2.40%
2024	5.88%	0.42%	1.06%	0.00%	0.00%	4.40%
2025	0.00%	1.21%	0.00%	0.00%	0.00%	2.53%

3.2.2.2 Default Rates by Continent

Oceania and Africa record the highest average default rates, at 4.1% and 3.0% respectively while Europe recorded the lowest at close to 1%. These figures are based on 20 counterparts in

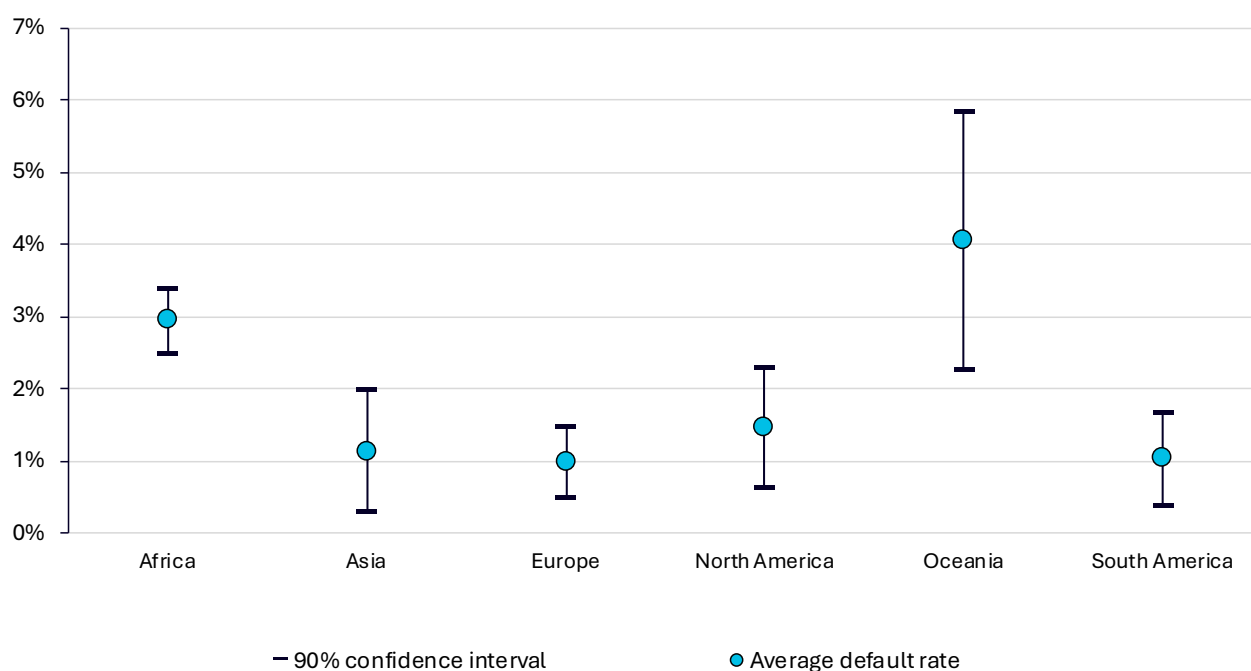
Oceania, 433 in Africa, and 479 in Europe.

The mapping of countries to World Bank regions and continents is provided in Annex 6.2.

Table 7: Default Rates by Continent

Continent	Counterparts	Signed amount (€m)	Defaults / observations	Average DR (90% CI)
Africa	433	47,372	153 / 5,175	2.96% (2.50%–3.41%)
Asia	94	8,987	8 / 702	1.14% (0.30%–1.98%)
Europe	479	43,960	46 / 4,660	0.99% (0.50%–1.48%)
North America	82	10,107	12 / 815	1.47% (0.64%–2.30%)
Oceania	20	436	10 / 246	4.07% (2.27%–5.86%)
South America	80	14,102	5 / 481	1.04% (0.39%–1.69%)
Overall (including omitted categories)	1,222	132,669	236 / 12,318	1.92% (1.63%–2.21%)

Figure 6: Default Rates by Continent



Across the continents in 2025, Africa reported the highest annual default rate at 1.7%, followed by Europe at 1.3%, with no defaults recorded across the remaining continents. Default rates

remain subject to year-on-year variation, reflecting both the number of annual observations and broader economic conditions.

Table 8: Annual Default Rates by Continent

Year	Africa	Asia	Europe	North America	Oceania	South America
1994	5.48%	0.00%		0.00%	0.00%	
1995	2.60%	0.00%	0.00%	0.00%	0.00%	
1996	0.00%	0.00%	0.00%	0.00%	0.00%	
1997	3.23%	0.00%	0.00%	0.00%	0.00%	
1998	2.13%	0.00%	6.67%	0.00%	7.69%	0.00%
1999	6.12%	14.29%	0.00%	5.56%	9.09%	0.00%
2000	6.93%	0.00%	0.00%	5.88%	0.00%	0.00%
2001	4.95%	0.00%	0.00%	6.25%	0.00%	0.00%
2002	3.96%	0.00%	0.00%	5.56%	12.50%	0.00%
2003	5.66%	0.00%	0.00%	0.00%	0.00%	0.00%
2004	2.70%	0.00%	0.00%	5.88%	12.50%	0.00%
2005	0.78%	0.00%	0.00%	0.00%	16.67%	0.00%
2006	2.19%	0.00%	0.00%	11.76%	0.00%	0.00%
2007	2.96%	0.00%	0.00%	0.00%	20.00%	0.00%
2008	4.05%	0.00%	0.00%	0.00%	0.00%	0.00%
2009	1.27%	0.00%	0.00%	0.00%	0.00%	0.00%
2010	5.68%	0.00%	0.55%	0.00%	0.00%	0.00%
2011	1.09%	0.00%	0.00%	0.00%	16.67%	0.00%
2012	2.02%	0.00%	2.44%	11.11%	0.00%	0.00%
2013	1.92%	0.00%	0.46%	0.00%	12.50%	0.00%
2014	4.27%	3.33%	1.30%	0.00%	0.00%	7.14%
2015	1.90%	2.94%	0.42%	0.00%	11.11%	0.00%
2016	2.79%	0.00%	0.41%	0.00%	0.00%	0.00%
2017	2.75%	0.00%	0.42%	2.33%	12.50%	0.00%
2018	4.44%	0.00%	0.41%	0.00%	0.00%	0.00%
2019	2.30%	0.00%	0.79%	0.00%	0.00%	0.00%
2020	4.82%	10.81%	0.00%	2.17%	0.00%	5.41%
2021	2.67%	0.00%	0.79%	0.00%	0.00%	0.00%
2022	1.32%	0.00%	7.00%	0.00%	0.00%	0.00%
2023	1.72%	0.00%	2.21%	0.00%	0.00%	3.85%
2024	3.11%	1.75%	0.44%	2.86%	0.00%	0.00%
2025	1.74%	0.00%	1.31%	0.00%	0.00%	0.00%

3.2.3 Default Rates by Sector

3.2.3.1 Default Rates by GICS Sector

The dataset is categorised into broad industry sectors based on the Global Industry Classification Standard (GICS) 2018, an established industry framework. In addition, contributing institutions may classify certain counterparts under “administration” and “other.” The average default rate varies

across these GICS sectors. Communication services records the highest average default rate at 3.6%, with the lowest in the energy sector at 0.5%. Overall, the dataset records an average default rate of 1.9% across the 12,318 observations.

Table 9: Default Rates by GICS Sector

GICS Sector	Counterparts	Signed amount (€m)	Defaults / observations	Average DR (90% CI)
Energy	46	4,823	2 / 443	0.45% (0.00%–1.04%)
Industrials	175	16,990	42 / 1,851	2.27% (1.62%–2.92%)
Consumer Discretionary	49	1,189	11 / 478	2.30% (1.30%–3.30%)
Financials	213	24,438	9 / 1,550	0.58% (0.16%–1.00%)
Communication Services	45	2,029	15 / 412	3.64% (2.34%–4.94%)
Utilities	247	24,762	64 / 2,560	2.50% (1.98%–3.02%)
Administration	122	7,347	7 / 1,202	0.58% (0.26%–0.90%)
Others	272	32,852	69 / 2,666	2.59% (1.83%–3.34%)
Overall (including omitted categories)	1,222	132,669	236 / 12,318	1.92% (1.63%–2.21%)

Footnote: Consumer Staple, Healthcare, Information Technology, Material, Real Estate data did not meet publication threshold

Figure 7: Default Rates by GICS Sector

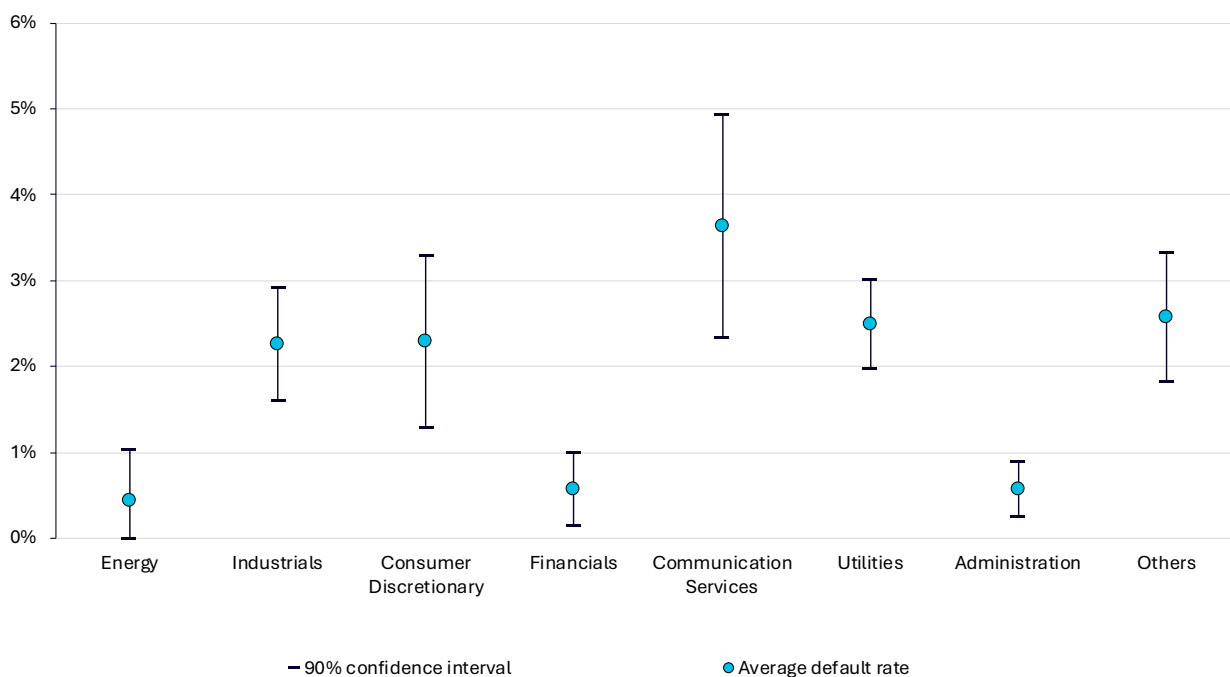


Table 10 shows the evolution of default rates over time for each GICS sector. Annual default rates vary across sectors and years, with several sectors recording periods of elevated defaults alongside years with no observed defaults. Financials generally record lower annual default rates, remaining at

or below 1.9% in reported years with observed defaults. In 2025, defaults were concentrated in Consumer Discretionary at 4.6%, Others 2.3%, Utilities 1.5% and Financials 0.9%, with no defaults recorded in the remaining reported sectors.

Table 10: Annual Default Rates by GICS Sector

Year	Administration	Communication Services	Consumer Discretionary	Energy	Financials	Industrials	Utilities	Others	Mixed
1994		0.00%	0.00%	0.00%		0.00%	8.70%	7.14%	0.00%
1995		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.90%	0.00%
1996		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1997		0.00%	0.00%	14.29%	0.00%	0.00%	3.13%	3.45%	0.00%
1998	0.00%	0.00%	0.00%	0.00%	25.00%	3.45%	0.00%	3.33%	14.29%
1999	0.00%	0.00%	10.00%	0.00%	0.00%	3.45%	10.00%	10.00%	0.00%
2000	0.00%	0.00%	0.00%	0.00%	0.00%	7.14%	0.00%	11.76%	0.00%
2001	0.00%	0.00%	11.11%	0.00%	0.00%	0.00%	4.35%	8.57%	0.00%
2002	0.00%	0.00%	0.00%	0.00%	0.00%	3.70%	2.04%	2.44%	0.00%
2003	0.00%	7.14%	0.00%	0.00%	0.00%	0.00%	3.92%	4.44%	0.00%
2004	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.77%	3.70%	0.00%
2005	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.03%	0.00%
2006	0.00%	6.25%	6.67%	0.00%	0.00%	2.63%	1.54%	1.49%	0.00%
2007	0.00%	0.00%	7.14%	0.00%	0.00%	0.00%	3.03%	1.35%	0.00%
2008	0.00%	7.14%	0.00%	0.00%	0.00%	2.22%	5.71%	0.00%	0.00%
2009	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.22%	0.00%
2010	0.00%	6.67%	0.00%	0.00%	0.00%	6.25%	4.82%	2.17%	0.00%
2011	0.00%	5.88%	0.00%	0.00%	0.00%	1.49%	0.00%	1.11%	0.00%
2012	0.00%	6.25%	6.25%	0.00%	0.00%	0.00%	3.16%	5.32%	0.00%
2013	0.00%	7.14%	0.00%	0.00%	1.85%	0.00%	1.94%	2.02%	0.00%
2014	0.00%	7.69%	0.00%	0.00%	0.00%	7.06%	2.75%	2.73%	0.00%
2015	1.49%	7.69%	5.26%	0.00%	0.00%	0.00%	3.42%	0.00%	0.00%
2016	0.00%	0.00%	5.26%	0.00%	0.00%	1.15%	1.71%	1.63%	3.03%
2017	0.00%	7.14%	4.76%	0.00%	1.23%	3.49%	0.85%	2.40%	0.00%
2018	0.00%	7.69%	0.00%	0.00%	1.08%	3.37%	2.52%	0.79%	2.94%
2019	0.00%	10.00%	0.00%	0.00%	0.00%	1.14%	3.25%	0.00%	0.00%
2020	1.61%	20.00%	9.52%	4.35%	1.04%	3.19%	3.33%	3.01%	0.00%
2021	0.00%	0.00%	0.00%	0.00%	0.00%	4.21%	2.48%	0.70%	0.00%
2022	2.94%	0.00%	0.00%	0.00%	0.00%	4.35%	2.61%	8.45%	0.00%
2023	2.99%	0.00%	0.00%	0.00%	1.75%	1.10%	1.72%	2.40%	2.33%
2024	1.45%	7.69%	0.00%	0.00%	0.91%	4.55%	2.42%	0.00%	0.00%
2025	0.00%	0.00%	4.60%	0.00%	0.90%	0.00%	1.50%	2.30%	0.00%

Footnote: Consumer Staple, Healthcare, Information Technology, Material, Real Estate data did not meet publication threshold

3.2.3.2 Default Rates by GEMs Sector Groupings

Table 11 presents the annual default rates by GEMs sector groupings. Annex 6.3 provides an overview of the GEMs sector grouping codes.

Table 11: Default Rates by GEMs Sector Groupings

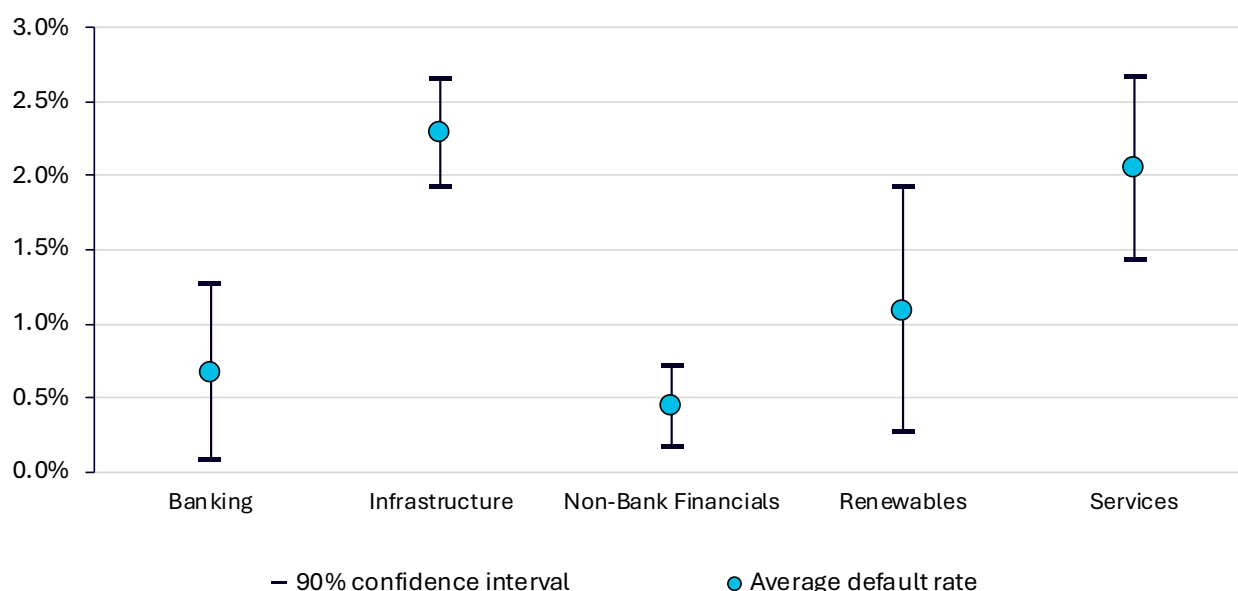
Counterpart GEMs Sector Grouping	Counterparts	Signed amount (€m)	Defaults / observations	Average DR (90% CI)
Banking	123	15,730	6 / 890	0.67% (0.08%–1.27%)
Infrastructure	467	54,945	118 / 5,163	2.29% (1.92%–2.65%)
Non-Bank Financials	93	10,828	3 / 678	0.44% (0.16%–0.72%)
Renewables	68	4,666	6 / 549	1.09% (0.27%–1.92%)
Services	166	15,571	32 / 1,561	2.05% (1.43%–2.67%)
Overall (including omitted categories)	1,222	132,669	236 / 12,318	1.92% (1.63%–2.21%)

Table 12: Annual Default Rates by GEMs Sector Groupings

Active Year	Banking	Infrastructure	Non-Bank Financials	Renewables	Services
1994		4.44%			0.00%
1995	0.00%	0.00%			0.00%
1996	0.00%	0.00%			0.00%
1997	0.00%	1.41%			0.00%
1998	25.00%	1.28%			0.00%
1999	0.00%	5.95%			0.00%
2000	0.00%	2.33%			0.00%
2001	0.00%	2.20%			0.00%
2002	0.00%	2.08%	0.00%		0.00%
2003	0.00%	2.97%	0.00%		3.85%
2004	0.00%	1.87%	0.00%	0.00%	0.00%
2005	0.00%	0.00%	0.00%	0.00%	0.00%
2006	0.00%	2.26%	0.00%	0.00%	5.26%
2007	0.00%	1.49%	0.00%	0.00%	0.00%
2008	0.00%	4.20%	0.00%	0.00%	2.70%
2009	0.00%	0.00%	0.00%	0.00%	0.00%
2010	0.00%	4.52%	0.00%	0.00%	3.92%
2011	0.00%	1.06%	0.00%	0.00%	1.82%
2012	0.00%	1.47%	0.00%	5.88%	1.69%
2013	2.70%	1.36%	0.00%	0.00%	1.67%
2014	0.00%	4.50%	0.00%	9.52%	5.08%

Active Year	Banking	Infrastructure	Non-Bank Financials	Renewables	Services
2015	0.00%	2.16%	0.00%	0.00%	1.49%
2016	0.00%	1.73%	0.00%	0.00%	0.00%
2017	2.50%	2.16%	0.00%	0.00%	1.35%
2018	0.00%	2.95%	2.22%	2.86%	5.00%
2019	0.00%	2.51%	0.00%	0.00%	1.30%
2020	0.00%	2.94%	1.89%	0.00%	5.19%
2021	0.00%	2.51%	0.00%	0.00%	0.00%
2022	0.00%	2.97%	0.00%	0.00%	2.50%
2023	3.51%	1.70%	0.00%	0.00%	2.63%
2024	0.00%	3.40%	1.82%	3.92%	6.67%
2025	1.82%	0.84%	0.00%	0.00%	0.00%

Figure 8: Default Rates by GEMs Sector Groupings



Financial institutions (FI) record a lower average default rate than non-financial institutions. FI counterparts record an average default rate of 0.6%, compared with 2.1% for Non-FI counterparts. This corresponds to 9 defaults across

1,550 FI observations, versus 227 defaults across 10,755 Non-FI observations. The overall average default rate is 1.9%, with a 90% confidence interval of 1.6% to 2.2%.

Table 13: Default Rates by Financial Industries Sector

Financial Industries Sector	Counterparts	Signed amount (€m)	Defaults / observations	Average DR (90% CI)
Financial institutions	213	24,438	9 / 1,550	0.58% (0.16%–1.00%)
Non-Financial institutions	1,010	106,388	227 / 10,755	2.11% (1.79%–2.43%)
Overall (including omitted categories)	1,222	132,669	236 / 12,318	1.92% (1.63%–2.21%)

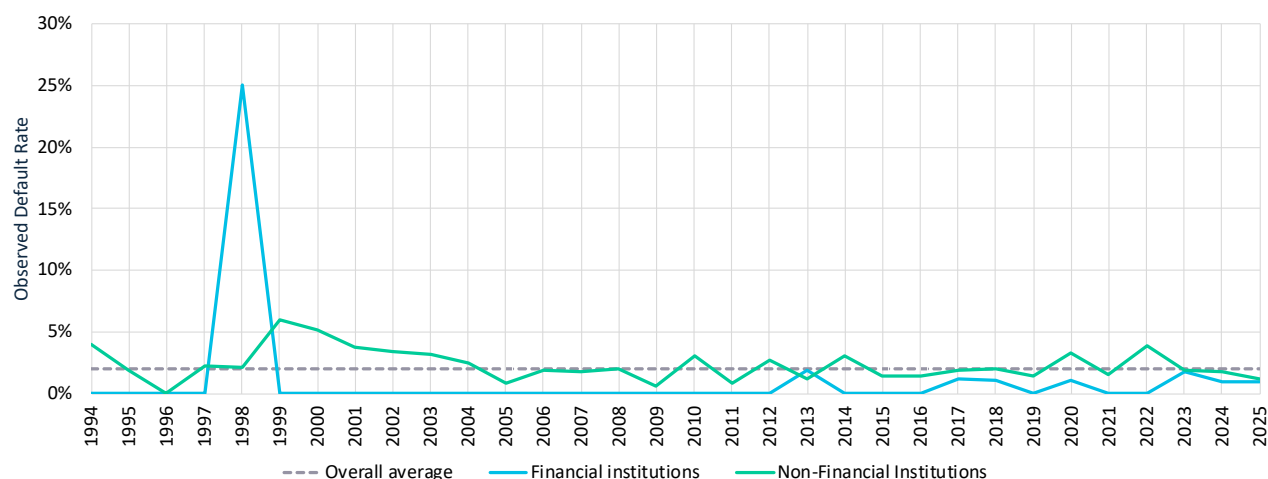
Across most years, FI counterparties record lower annual default rates than Non-FI counterparties, with some years showing no FI defaults. Excluding the isolated 25.0% FI observation in 1998 which was driven by only 1 default, FI default rates remain at or below 1.9%, reporting

0.9% in 2025. Non FI default rates reached a peak of 5.9% in 1999 and have demonstrated a downward trajectory in more recent reported defaults. Most recently Non FI reported a rate of 1.1% in 2025, the lowest in the last decade.

Table 14: Annual Default Rates by Financial Industries Sector

Active Year	Financial Institutions	Non-Financial Institutions
1994		4.00%
1995	0.00%	1.90%
1996	0.00%	0.00%
1997	0.00%	2.24%
1998	25.00%	2.11%
1999	0.00%	5.92%
2000	0.00%	5.10%
2001	0.00%	3.70%
2002	0.00%	3.41%
2003	0.00%	3.21%
2004	0.00%	2.42%
2005	0.00%	0.83%
2006	0.00%	1.92%
2007	0.00%	1.81%
2008	0.00%	1.99%
2009	0.00%	0.61%
2010	0.00%	3.03%
2011	0.00%	0.79%
2012	0.00%	2.65%
2013	1.85%	1.13%
2014	0.00%	3.03%
2015	0.00%	1.44%
2016	0.00%	1.42%
2017	1.23%	1.82%
2018	1.08%	1.98%
2019	0.00%	1.37%
2020	1.04%	3.28%
2021	0.00%	1.52%
2022	0.00%	3.92%
2023	1.75%	1.93%
2024	0.91%	1.73%
2025	0.88%	1.13%

Figure 9: Annual Default Rates by Financial Industries Sector



3.2.4 Default Rates by Country

The average country level default rates show variation across the reported observations. Senegal records the highest average default rate at 7.0%, followed by Ukraine at 4.2%. Romania, Turkey and South Africa remain below 1.1%.

Across the overall dataset, the average default rate is 1.9%, with a 90% confidence interval of 1.6% to 2.2%. Brazil, Poland and Uzbekistan recorded no observed defaults.

Table 15: Default Rates by Country

ISO country code - ISO country name	Counterparties	Signed amount (€m)	Defaults / observations	Average DR (90% CI)
BR-Brazil	29	5,511	0 / 158	0.00% (0.00%–0.00%)
EG-Egypt	27	9,718	6 / 292	2.05% (0.69%–3.41%)
KZ-Kazakhstan	40	4,123	7 / 298	2.35% (0.77%–3.92%)
MA-Morocco	61	11,879	8 / 722	1.11% (0.51%–1.71%)
PL-Poland	33	1,611	0 / 405	0.00% (0.00%–0.00%)
RO-Romania	67	2,046	2 / 749	0.27% (0.00%–0.57%)
RS-Serbia	26	1,417	2 / 245	0.82% (0.00%–1.67%)
RU-Russian Federation	46	3,780	5 / 394	1.27% (0.35%–2.19%)
SN-Senegal	24	903	20 / 284	7.04% (3.73%–10.35%)
TN-Tunisia	21	4,007	6 / 295	2.03% (0.74%–3.33%)
TR-Turkey	77	20,712	5 / 882	0.57% (0.15%–0.98%)
UA-Ukraine	52	3,003	17 / 401	4.24% (0.83%–7.64%)
UZ-Uzbekistan	20	1,207	0 / 84	0.00% (0.00%–0.00%)
ZA-South Africa	112	9,688	15 / 1,486	1.01% (0.50%–1.52%)
Overall (including omitted categories)	1,222	132,669	236 / 12,318	1.92% (1.63%–2.21%)

Table 16: Annual Default Rates by Country

ISO country code - ISO country name	Average Default Rate	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
BR-Brazil	0.00%																0.00%
EG-Egypt	2.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	12.50%	14.29%	0.00%	0.00%	11.11%	0.00%	12.50%	0.00%	0.00%
KZ-Kazakhstan	2.35%							0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
MA-Morocco	1.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.25%	0.00%	0.00%	0.00%	0.00%	0.00%	5.26%	0.00%
PL-Poland	0.00%						0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
RO-Romania	0.27%								0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
RS-Serbia	0.82%									0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
RU-Russian Federation	1.27%		0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
SN-Senegal	7.04%	50.00%	0.00%	0.00%	0.00%	0.00%	33.33%	0.00%	0.00%	0.00%	0.00%	14.29%	0.00%	0.00%	25.00%	22.22%	0.00%
TN-Tunisia	2.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
TR-Turkey	0.57%			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
UA-Ukraine	4.24%													0.00%	0.00%	0.00%	0.00%
UZ-Uzbekistan	0.00%				0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
ZA-South Africa	1.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.09%	0.00%	0.00%	8.33%	0.00%	0.00%	0.00%

ISO country code - ISO country name	Average Default Rate	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
BR-Brazil	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
EG-Egypt	2.05%	0.00%	0.00%	0.00%	16.67%	0.00%	0.00%	0.00%	0.00%	7.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
KZ-Kazakhstan	2.35%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.00%	16.00%	0.00%	4.76%
MA-Morocco	1.11%	0.00%	0.00%	3.85%	3.23%	0.00%	0.00%	3.45%	0.00%	0.00%	3.45%	6.67%	0.00%	0.00%	0.00%	0.00%	0.00%
PL-Poland	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
RO-Romania	0.27%	3.70%	0.00%	3.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
RS-Serbia	0.82%	0.00%	0.00%	0.00%	10.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.67%	0.00%	0.00%
RU-Russian Federation	1.27%	0.00%	0.00%	3.45%	0.00%	0.00%	3.85%	5.00%	5.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
SN-Senegal	7.04%	22.22%	0.00%	0.00%	0.00%	23.08%	0.00%	0.00%	8.33%	9.09%	0.00%	9.09%	0.00%	0.00%	0.00%	27.27%	0.00%
TN-Tunisia	2.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.25%	12.50%	0.00%	6.25%	6.67%	0.00%	0.00%	0.00%	0.00%
TR-Turkey	0.57%	0.00%	0.00%	0.00%	0.00%	2.56%	0.00%	0.00%	0.00%	0.00%	4.35%	0.00%	3.92%	0.00%	0.00%	0.00%	0.00%
UA-Ukraine	4.24%	0.00%	0.00%	0.00%	0.00%	11.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	30.00%	0.00%	3.45%	6.45%
UZ-Uzbekistan	0.00%	0.00%								0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
ZA-South Africa	1.01%	0.00%	0.00%	0.00%	0.00%	5.33%	1.33%	0.00%	1.25%	2.41%	1.22%	1.18%	0.00%	0.00%	0.00%	1.15%	1.18%

3.2.5 Default Rates by Income Group

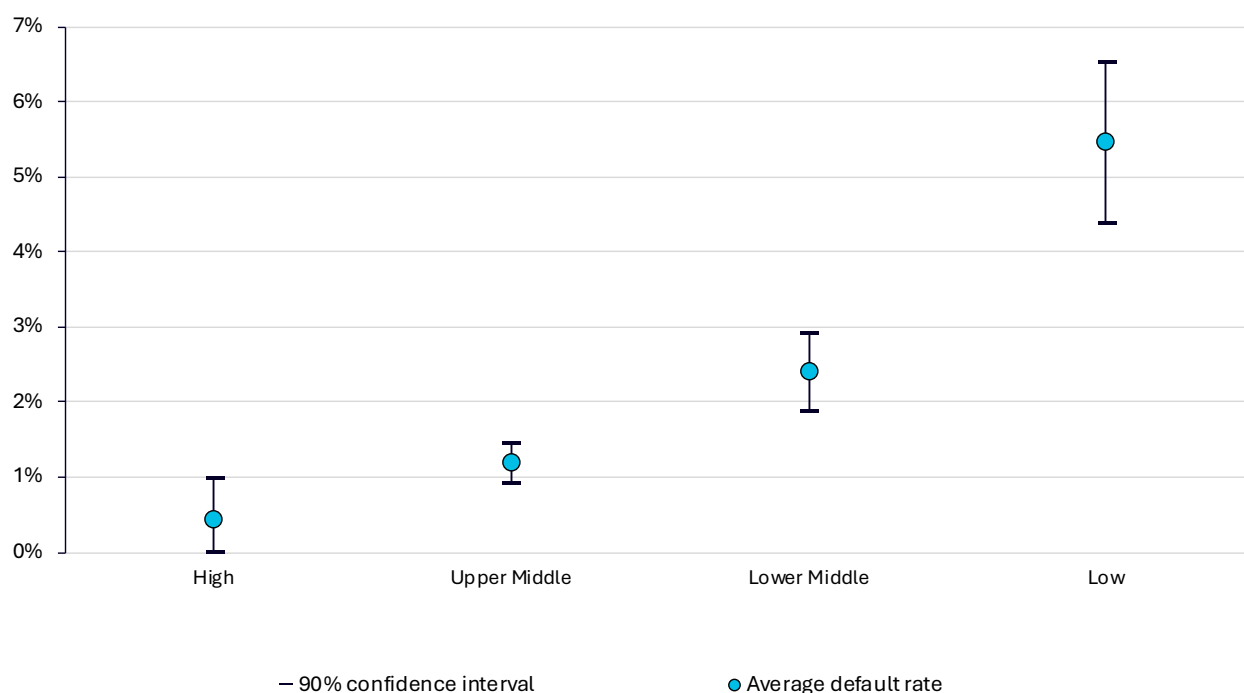
The default rates in this section are presented according to the World Bank Group income group

classification. The highest default rates are observed in low-income countries.

Table 17: Default Rates by Income Group

Income Group	Counterparts	Signed amount (€m)	Defaults / observations	Average DR (90% CI)
High	219	15,067	5 / 1,218	0.41% (0.00%–0.99%)
Upper Middle	738	64,324	69 / 5,900	1.17% (0.90%–1.44%)
Lower Middle	468	42,515	84 / 3,524	2.38% (1.86%–2.91%)
Low	150	2,762	74 / 1,358	5.45% (4.38%–6.51%)
Overall (including omitted categories)	1,222	132,669	236 / 12,318	1.92% (1.63%–2.21%)

Figure 10: Default Rates by Income Group



3.2.6 Default Rates by Income Group and Region

Table 18 reports default rates across both region and income group. Sub-Saharan Africa records the highest observed rates, at 5.6% for low income and 4.8% for lower middle-income counterparts. This is compared with 1.4% for upper middle-income counterparts in the region. Europe & Central Asia ranges from 0.1% for high income to 2.4% for

lower middle-income counterparts, while Latin America & Caribbean records rates between 1.0% and 1.4% across the reported income groups. The results indicate variation within regions as well as across income classifications, noting some classifications have no reported observations.

Table 18: Default Rates by Income Group and Region

Region / Income Group	High	Low	Lower Middle	Upper Middle
East Asia & Pacific			2.34%	
Europe & Central Asia	0.10%		2.44%	0.95%
Latin America & Caribbean	1.19%		0.95%	1.38%
Middle East, North Africa, Afghanistan & Pakistan			1.51%	1.61%
South Asia			0.00%	
Sub-Saharan Africa		5.58%	4.76%	1.35%

3.2.7 Default Rates by Project Type

Average default rates vary by project type. Project Finance records the highest average default rate at 4.1%, followed by Structured Finance at 3.3%, noting project and

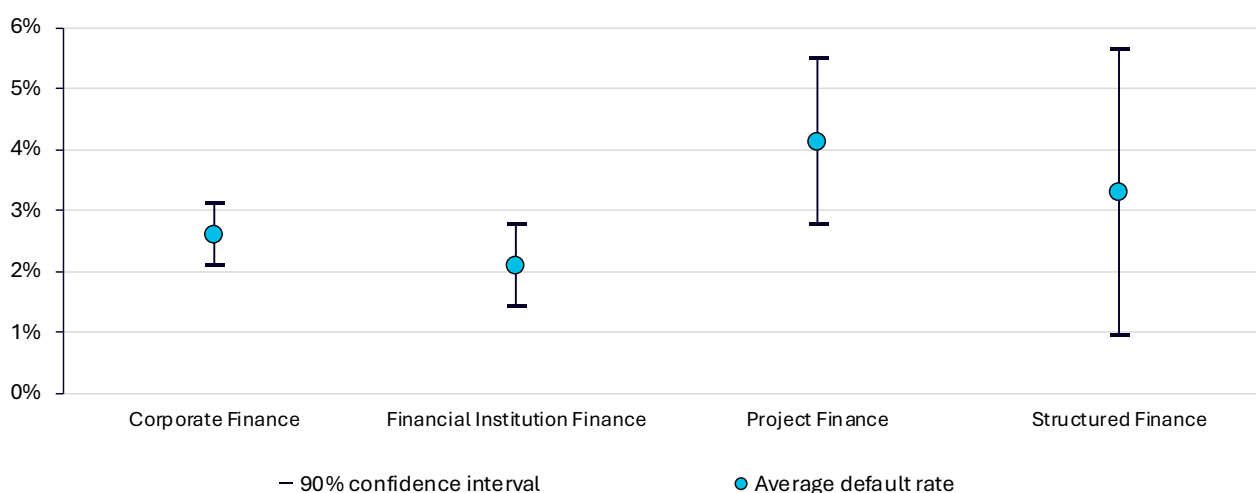
structured finance reported the smaller cohorts at 56 and 23 counterparts respectively. Financial Institution Finance records the lowest rate among the reported project types at 2.1%.

Table 19: Default Rates by Project Type

Project Type	Counterparts	Defaults / observations	Average DR (90% CI)
Corporate Finance	280	83 / 3,194	2.60% (2.09%–3.11%)
Financial Institution Finance	343	62 / 2,952	2.10% (1.44%–2.76%)
Project Finance	56	14 / 339	4.13% (2.77%–5.49%)
Structured Finance	23	5 / 151	3.31% (0.97%–5.65%)
Overall (including omitted categories)	1,222	236 / 12,318	1.92% (1.63%–2.21%)

Footnote: Real Estate Finance data did not meet publication threshold

Figure 11: Default Rates by Project Type



3.2.8 Default Rates by Currency Type

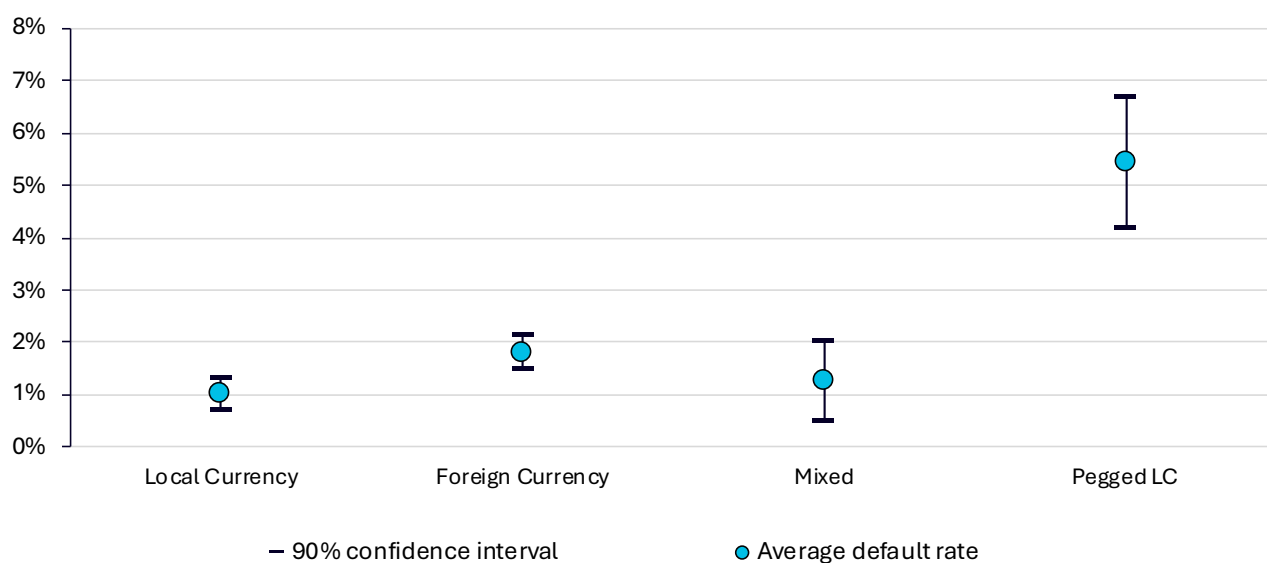
Default rates analysis by currency type do show variances. Pegged local currency refers to exposures where the local currency is fixed or formally linked to another currency and may also include cases where another country's currency is used as the local currency. Pegged local currency, reported for the first time this year as a currency type, recorded the second smallest

cohort with 62 counterparts, with mixed reporting the lowest at 55, and the highest average default rate at 5.4%, compared to the overall default rate sitting at 1.9%. Pegged LC defaults were only recorded in the Sub-Saharan Africa region. Foreign currency lending records the largest cohort at 941 counterparts with an average default rate of 1.8%.

Table 20: Default Rates by Currency Type

Currency Type	Counterparts	Defaults / observations	Average DR (90% CI)
Local Currency	210	22 / 2,129	1.03% (0.71%–1.36%)
Foreign Currency	941	163 / 8,954	1.82% (1.49%–2.15%)
Mixed	55	5 / 390	1.28% (0.53%–2.03%)
Pegged LC	62	46 / 845	5.44% (4.19%–6.70%)
Overall (including omitted categories)	1,222	236 / 12,318	1.92% (1.63%–2.21%)

Figure 12: Default Rates by Currency Type



3.2.8.1 Default Rates by Currency Type and Region

Table 21: Default Rates by Currency Type and Region

Region / Currency type	Local Currency	Foreign Currency	Mixed	Pegged LC
East Asia & Pacific		3.19%		
Europe & Central Asia	1.26%	0.97%	0.52%	
Latin America & Caribbean		1.34%		
Middle East, North Africa, Afghanistan & Pakistan		1.52%		
South Asia		0.00%		
Sub-Saharan Africa	0.95%	4.25%		6.26%

4. Recovery Rate Statistics

4.1 Recovery Rate Definition

The recovery rate is the ratio between the discounted cash flows received (or expected to be received) after a set discount date (for example, default date) and the outstanding amount at that time. These cash flows can include principal, in-

terest, penalties and fees and can originate from the debtor or potential guarantors or from the sale of collateral. Detailed calculations can be found in Section 5.2.

4.2 Overall Results

Table 22: Overall Recovery Rates

Number of Defaulted Contracts	Signed Amount (€m)	Average RR	Median RR (IQR)	P10–P90 Range
224	4,913	80.4%	97.3% (72.8%–99.8%)	19.5%–100.0%

Reported annual recovery rates vary, noting the relatively low volume of reported defaults over time. Several years recorded average recoveries above 90%, with the most recent results for 2024 and 2025 reporting a 96.7% average recovery rate, noting this is based on a single

default for each year. Across the recovery distribution, outcomes remain concentrated at the upper end. 63.8% of defaulted contracts recover between 90% and 100%, while 7.6% record recoveries below 10%.

Table 23: Annual Recovery Rates

Year	Number of Defaults	Signed Amount (€m)	Average RR	Median RR (IQR)	P10–P90 Range
1994	7	48	53.3%	55.3% (24.5%–84.5%)	12.2%–96.3%
1995	2	33	67.7%	67.7% (53.9%–81.4%)	45.6%–89.7%
1996					
1997	6	111	83.4%	95.3% (71.4%–97.4%)	56.9%–97.9%
1998	5	37	79.5%	82.4% (61.6%–93.3%)	61.1%–97.0%
1999	15	175	65.5%	85.1% (13.1%–98.9%)	7.0%–99.6%
2000	13	35	76.2%	98.4% (60.7%–99.8%)	34.6%–100.0%
2001	13	178	88.8%	99.0% (97.8%–100.0%)	73.1%–100.0%
2002	5	119	94.7%	99.6% (91.2%–99.8%)	86.4%–99.8%
2003	11	290	81.6%	97.4% (76.5%–98.9%)	55.6%–99.9%
2004	4	16	56.6%	63.2% (38.0%–81.8%)	15.2%–92.7%
2005	2	4	68.9%	68.9% (64.7%–73.0%)	62.2%–75.6%
2006	5	75	51.0%	35.6% (19.2%–91.8%)	12.7%–96.7%
2007	3	19	61.5%	56.8% (42.3%–78.3%)	33.6%–91.2%
2008	6	82	85.0%	98.4% (76.4%–100.0%)	56.7%–100.0%
2009	3	46	78.1%	69.7% (67.7%–84.3%)	66.5%–93.1%
2010	11	318	89.8%	99.2% (84.8%–99.9%)	77.4%–100.0%
2011	6	48	73.4%	81.5% (54.8%–100.0%)	38.8%–100.0%

Year	Number of Defaults	Signed Amount (€m)	Average RR	Median RR (IQR)	P10-P90 Range
2012	11	190	96.7%	99.8% (94.5%–100.0%)	90.1%–100.0%
2013	6	166	95.2%	97.3% (90.7%–99.7%)	88.4%–99.9%
2014	19	181	71.7%	90.7% (56.6%–100.0%)	7.3%–100.0%
2015	7	133	95.8%	100.0% (98.5%–100.0%)	88.4%–100.0%
2016	10	241	94.7%	99.9% (98.8%–100.0%)	82.9%–100.0%
2017	14	481	66.7%	90.9% (22.5%–98.0%)	3.7%–100.0%
2018	4	732	66.6%	83.1% (49.9%–99.8%)	20.0%–99.9%
2019	2	188	99.5%	99.5% (99.2%–99.7%)	99.1%–99.9%
2020	17	486	92.9%	99.3% (98.2%–99.7%)	94.9%–99.9%
2021	5	190	94.9%	97.2% (93.9%–97.6%)	89.2%–99.0%
2022	10	220	85.5%	96.0% (88.1%–99.1%)	73.2%–99.9%
2023					
2024	1	43	96.7%	96.7% (96.7%–96.7%)	96.7%–96.7%
2025	1	30	96.7%	96.7% (96.7%–96.7%)	96.7%–96.7%

Table 24: Recovery Rates Distribution

Recovery Rate	0-10%	10-20%	20-30%	30-40%	40-50%	50-60%	60-70%	70-80%	80-90%	90-100%
Defaulted contracts	17	6	5	1	3	10	14	9	16	143
% Defaulted contracts	7.6%	2.7%	2.2%	0.4%	1.3%	4.5%	6.3%	4.0%	7.1%	63.8%

Figure 13: Recovery Rates Distribution

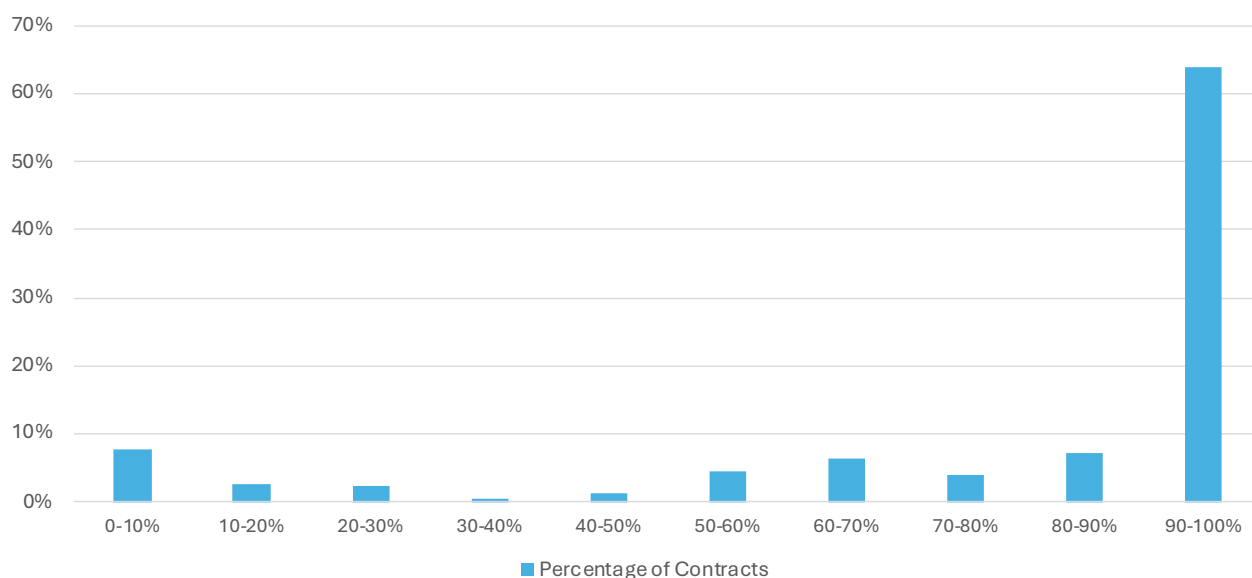


Table 25 shows that 49.1% of defaults are resolved within three years and 61.2% within six years. The cumulative proportion resolved reaches

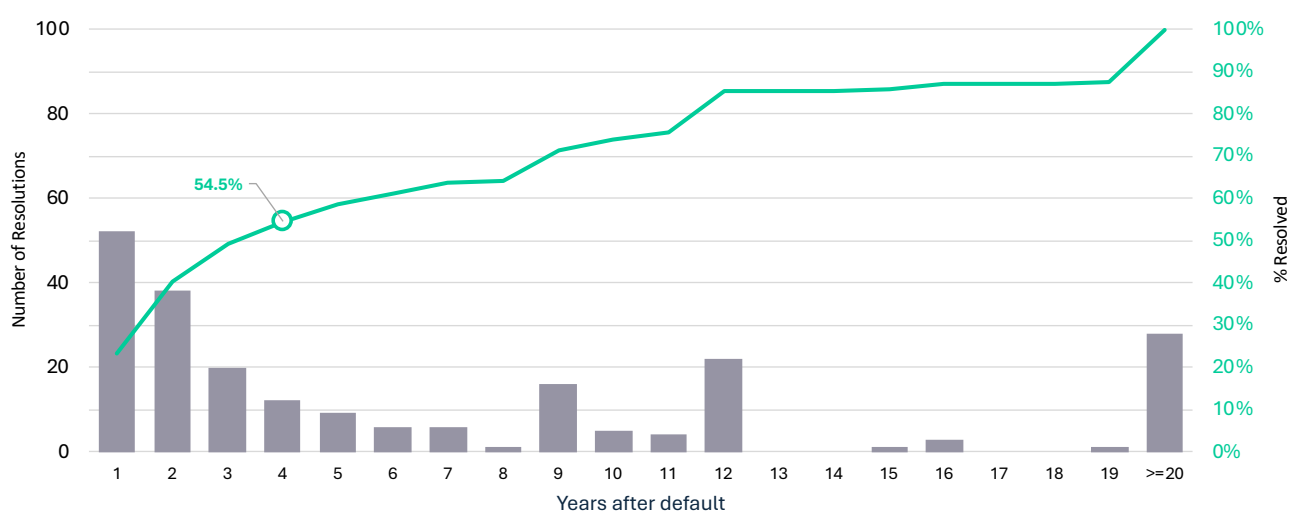
85.3% by year 12 and 87.5% by year 19. A further 12.5% of defaults are resolved after 20 years or more.

Table 25: Time to Resolution

Number of Years	1	2	3	4	5	6	7	8	9	10
Resolutions	52	38	20	12	9	6	6	1	16	5
% Resolved	23.2%	40.2%	49.1%	54.5%	58.5%	61.2%	63.8%	64.3%	71.4%	73.7%

Number of Years	11	12	13	14	15	16	17	18	19	≥ 20
Resolutions	4	22	0	0	1	3	0	0	1	28
% Resolved	75.4%	85.3%	85.3%	85.3%	85.7%	87.1%	87.1%	87.1%	87.5%	100.0%

Figure 14: Time to Resolution



4.3 Recovery Rates by Region

4.3.1 Recovery Rates by World Bank Region

Recovery rates vary across regions, with the highest average recovery rates recorded in Latin America & Caribbean at 90.4%. Sub-Saharan Africa records an average recovery rate of 78.3% across 131 defaults, while East Asia & Pacific records the lowest regional average

at 66.7%. Across the overall dataset, the average recovery rate is 80.4%, with a median of 97.3%, indicating that recovery outcomes are concentrated toward the upper end of the distribution.

Table 26: Recovery Rates by World Bank Region

Region	Number of Defaults	Signed Amount (€m)	Average RR	Median RR (IQR)	P10–P90 Range
East Asia & Pacific	10	213	66.7%	77.4% (56.7%–87.2%)	25.0%–98.3%
Europe & Central Asia	25	480	86.6%	93.1% (85.4%–97.9%)	71.0%–100.0%
Latin America & Caribbean	14	257	90.4%	99.3% (94.0%–99.9%)	78.0%–100.0%
Middle East, North Africa, Afghanistan & Pakistan	26	1,382	90.0%	98.6% (89.8%–99.8%)	60.6%–100.0%
Sub-Saharan Africa	131	2,252	78.3%	97.7% (68.5%–100.0%)	10.0%–100.0%
Overall (Including Omitted Categories)	224	4,913	80.4%	97.3% (72.8%–99.8%)	19.5%–100.0%

Footnote: South Asia data did not meet publication threshold

Figure 15: Recovery Rates by World Bank Region

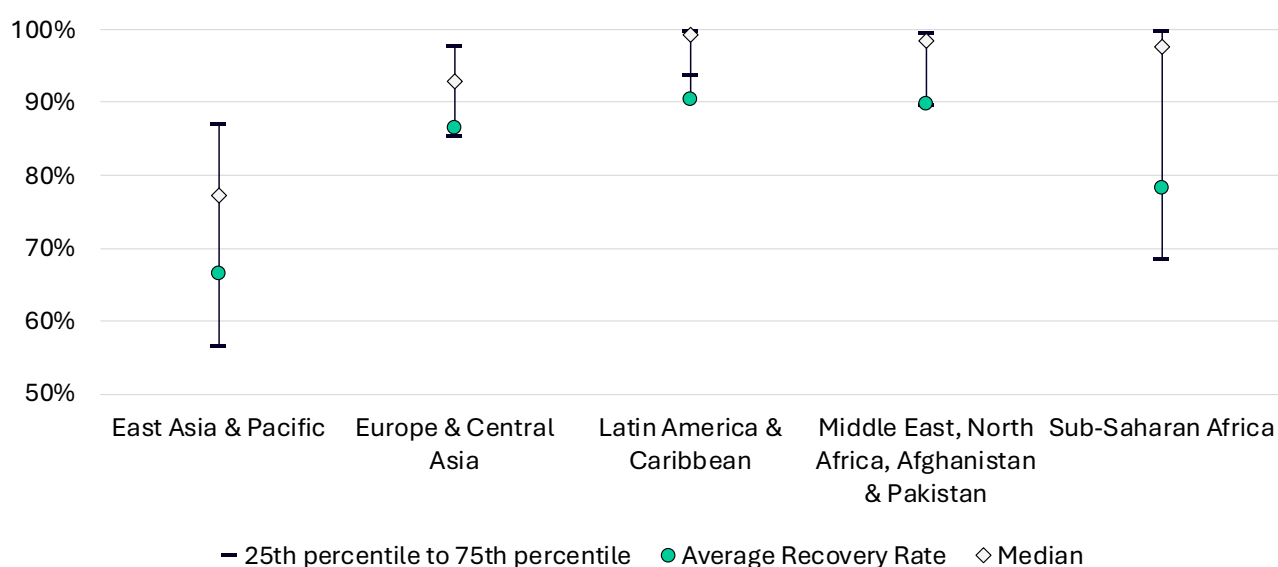


Table 27: Annual Recovery Rates by World Bank Region

Year	East Asia & Pacific	Europe & Central Asia	Latin America & Caribbean	Middle East, North Africa, Afghanistan & Pakistan	Sub-Saharan Africa
1994					53.3%
1995					67.7%
1996					
1997					88.1%
1998	60.8%	93.3%			81.1%
1999	79.4%	97.9%	99.6%		52.7%
2000				67.3%	89.6%
2001			99.4%	100.0%	79.6%
2002	99.6%		83.2%	95.5%	99.9%
2003					89.8%
2004	0.0%		75.8%		75.3%
2005	77.2%			60.5%	
2006			19.2%		59.0%
2007	27.8%			56.8%	99.8%
2008				96.9%	82.7%
2009					78.1%
2010		90.6%			90.2%
2011					81.3%
2012		95.1%	100.0%	99.8%	97.8%
2013	89.2%	100.0%		99.7%	91.3%
2014	55.3%	71.9%			72.8%
2015	98.1%	73.8%			99.8%
2016		85.0%		100.0%	99.7%
2017		85.4%	92.4%	72.8%	52.6%
2018				66.6%	66.5%
2019				99.0%	100.0%
2020		93.1%	99.5%	99.1%	74.0%
2021				97.2%	94.4%
2022		82.3%			98.3%
2023					
2024					96.7%
2025					96.7%

Footnote: South Asia data did not meet publication threshold

4.3.2 Recovery Rates by Continent

Table 28 presents recovery rates categorised by year of default and continent.

Table 28: Recovery Rates by Continent

Continent	Number of Defaults	Signed Amount (€m)	Average RR	Median RR (IQR)	P10–P90 Range
Africa	152	3,489	79.6%	97.8% (68.8%–100.0%)	11.3%–100.0%
Europe	23	463	85.7%	90.6% (85.2%–98.4%)	70.0%–100.0%
North America	11	83	87.9%	99.0% (87.8%–100.0%)	75.8%–100.0%
Overall (including omitted categories)	224	4,913	80.3%	97.3% (72.8%–99.8%)	19.5%–100.0%

Footnote: Asia, South America data did not meet publication threshold

Figure 16: Recovery Rates by Continent

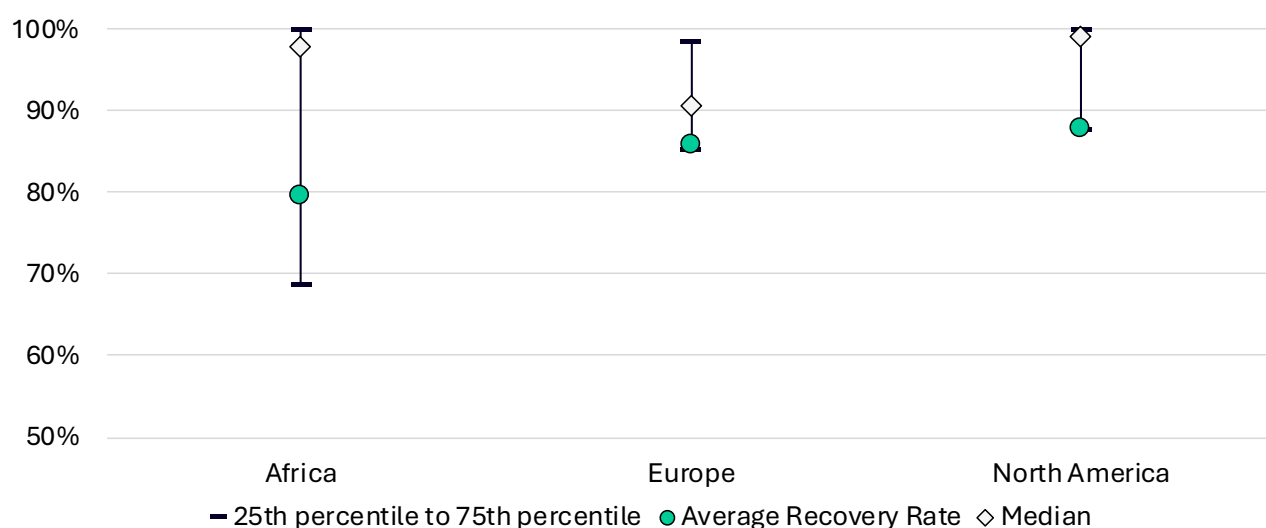


Table 29: Annual Recovery Rates by Continent

Year	Africa	Europe	North America
1994	53.3%		
1995	67.7%		
1996			
1997	88.1%		
1998	81.1%	93.3%	
1999	52.7%		99.6%
2000	84.7%		
2001	82.2%		99.4%
2002	96.9%		83.2%
2003	89.8%		

Year	Africa	Europe	North America
2004	75.3%		75.8%
2005	60.5%		
2006	59.0%		19.2%
2007	78.3%		
2008	85.0%		
2009	78.1%		
2010	90.2%	90.6%	
2011	81.3%		
2012	98.3%	95.1%	100.0%
2013	94.2%	100.0%	
2014	72.8%	71.9%	
2015	99.8%	73.8%	
2016	99.8%	85.0%	
2017	56.6%	85.4%	92.4%
2018	66.6%		
2019	99.5%		
2020	86.5%		
2021	95.0%		
2022	98.3%	82.3%	
2023			
2024	96.7%		
2025	96.7%		

Footnote: Asia, South America data did not meet publication threshold

4.4 Recovery Rates by Sector

Similar to the annual default rates analysis in Section 3.2, the recovery rates by sector are

classified according to the GICS 2018 framework.

4.4.1 Recovery Rates by GICS Sector

Among reported defaults, Utilities, and the Others category account for approximately 64% of observations. Industrials record the highest average recovery rate at 85.0%, followed by Utilities at 81.1%. Based on the

interquartile range the widest dispersion in recovery outcomes is observed in Consumer Discretionary and then Others, while Utilities show the narrowest recovery distribution.

Table 30: Annual Recovery Rates by GICS Sector

Year	Consumer Discretionary	Industrials	Others	Utilities
1994			50.6%	99.8%
1995			67.7%	
1996				
1997			70.5%	96.2%
1998		90.9%	61.2%	
1999	97.9%	85.1%	85.4%	54.3%
2000		87.5%	68.5%	
2001	0.0%		94.2%	98.2%
2002		91.2%	83.2%	99.9%
2003			84.6%	76.5%
2004			37.9%	100.0%
2005			68.9%	
2006	19.2%	45.3%		100.0%
2007	56.8%		27.8%	99.8%
2008		69.5%		99.2%
2009			67.7%	98.9%
2010		95.0%	89.0%	88.4%
2011		99.9%	57.6%	100.0%
2012			97.3%	98.2%
2013			99.7%	91.3%
2014		77.5%	71.9%	67.1%
2015	100.0%			93.2%
2016	63.6%	99.3%	92.5%	99.9%
2017	77.5%	81.4%	88.9%	5.7%
2018		88.7%		0.0%
2019				
2020	98.9%	97.3%	0.0%	99.0%
2021		93.6%	93.9%	100.0%
2022		95.3%	92.8%	67.6%
2023				
2024				
2025				96.7%

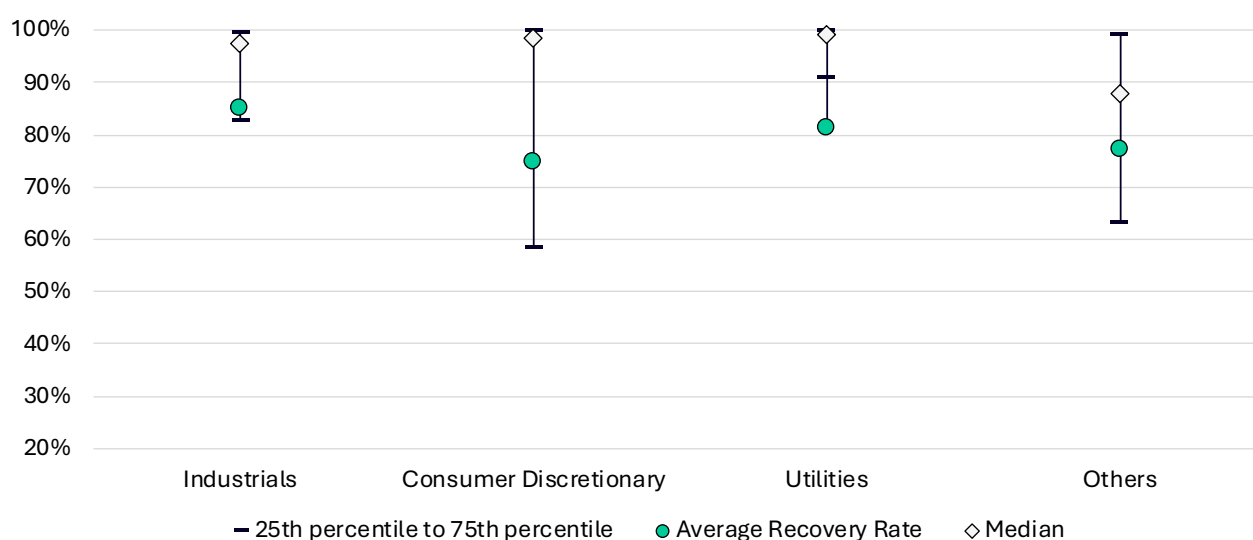
Footnote: Energy, Materials, Consumer Staples, Health Care, Financials, Communication Services, Real Estate data did not meet publication threshold

Table 31: Recovery Rates by GICS Sector

Sector	Number of Defaults	Signed Amount (€m)	Average RR	Median RR (IQR)	P10-P90 Range
Industrials	37	1,632	85.0%	97.2% (82.8%–99.5%)	55.9%–100.0%
Consumer Discretionary	14	93	74.5%	98.3% (58.5%–100.0%)	12.8%–100.0%
Utilities	70	1,032	81.1%	99.1% (90.9%–100.0%)	9.5%–100.0%
Others	74	1,188	76.9%	87.6% (63.3%–99.3%)	32.9%–100.0%
Overall (including omitted categories)	224	4,913	80.3%	97.3% (72.8%–99.8%)	19.5%–100.0%

Footnote: Energy, Materials, Consumer Staples, Health Care, Financials, Communication Services, Real Estate data did not meet publication threshold

Figure 17: Recovery Rates by GICS Sector



4.4.2 Recovery Rates by Sector Groupings

Table 32 shows recovery rates by sector groupings. The assignment of individual GICS and

NACE2 sectors to their respective sector groupings is detailed in Annex 6.3.

Table 32: Annual Recovery Rates by GEMS Sector Groupings

Year	Infrastructure	Services
1994	99.8%	
1995		
1996		
1997	96.2%	
1998	99.5%	
1999	57.1%	
2000	87.5%	

Year	Infrastructure	Services
2001	98.2%	
2002	95.5%	
2003	69.5%	55.6%
2004	100.0%	
2005		
2006	59.0%	45.3%
2007	99.8%	
2008	85.0%	43.8%
2009	98.9%	
2010	88.8%	90.6%
2011	81.3%	25.5%
2012	98.2%	85.7%
2013	90.6%	89.2%
2014	71.7%	63.5%
2015	93.2%	
2016	99.7%	
2017	42.7%	1.0%
2018	66.6%	66.6%
2019	100.0%	100.0%
2020	98.3%	97.4%
2021	94.4%	
2022	74.6%	
2023		
2024		
2025	96.7%	

Footnote: Banking, Non-Bank Financials, Renewables data did not meet publication threshold

Table 33: Recovery Rates by GEMs Sector Groupings

GEMs Sector Groupings	Number of Defaults	Signed Amount (€m)	Average RR	Median RR (IQR)	P10–P90 Range
Infrastructure	109	2,741	80.3%	98.2% (82.8%–100.0%)	10.9%–100.0%
Services	18	535	65.3%	84.2% (37.6%–92.8%)	8.2%–99.8%
Overall (including omitted categories)	224	4,913	80.3%	97.3% (72.8%–99.8%)	19.5%–100.0%

Footnote: Banking, Non-Bank Financials, Renewables data did not meet publication threshold

Figure 18: Recovery Rates by GEMs Sector Groupings

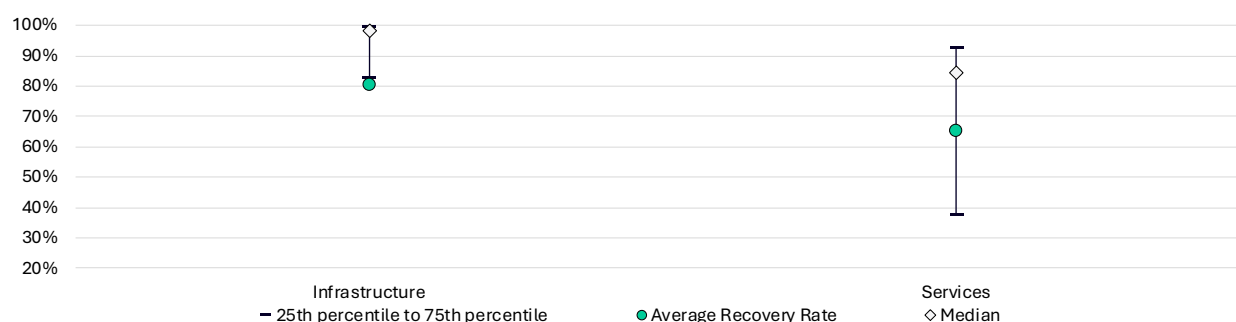


Table 34: Recovery Rates by Financial Industries Sector

Financial Industries Sector	Number of Defaults	Signed Amount (€m)	Average RR	Median RR (IQR)	P10–P90 Range
Non-FI	219	4,829	79.9%	97.4% (69.6%–99.8%)	18.4%–100.0%
Overall (including omitted categories)	224	4,913	80.3%	97.3% (72.8%–99.8%)	19.5%–100.0%

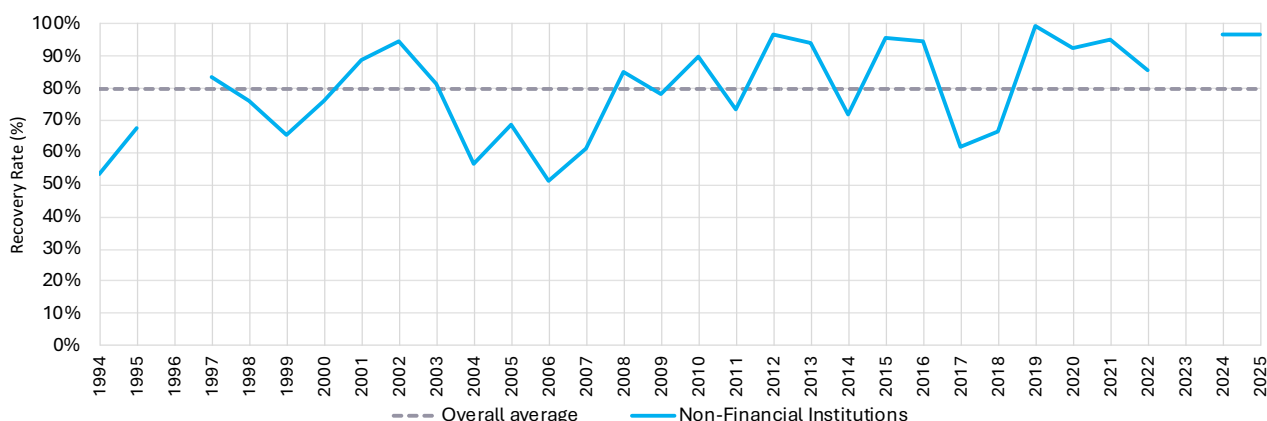
Footnote: Financial Institutions data did not meet publication threshold

Table 35: Annual Recovery Rates by Financial Industries Sector

Year	Non-FI
1994	53.3%
1995	67.7%
1996	
1997	83.4%
1998	76.1%
1999	65.5%
2000	76.2%
2001	88.8%
2002	94.7%
2003	81.6%
2004	56.6%
2005	68.9%
2006	51.0%
2007	61.5%
2008	85.0%
2009	78.1%
2010	89.8%
2011	73.4%
2012	96.7%
2013	94.2%
2014	71.7%
2015	95.8%
2016	94.7%
2017	62.0%
2018	66.6%
2019	99.5%
2020	92.5%
2021	95.0%
2022	85.5%
2023	
2024	96.7%
2025	96.7%

Footnote: Financial Institutions data did not meet publication threshold

Figure 19: Annual Recovery Rates by Financial Industries Sector



4.5 Recovery Rates by Income Group

Median recovery rates remain high across the reported income groups, ranging from 93.9% for low-income counterparts to 98.3% for lower middle-income counterparts. Average recovery rates show greater dispersion, with lower middle-income counterpart recording the highest average recovery rate at 89.5%.

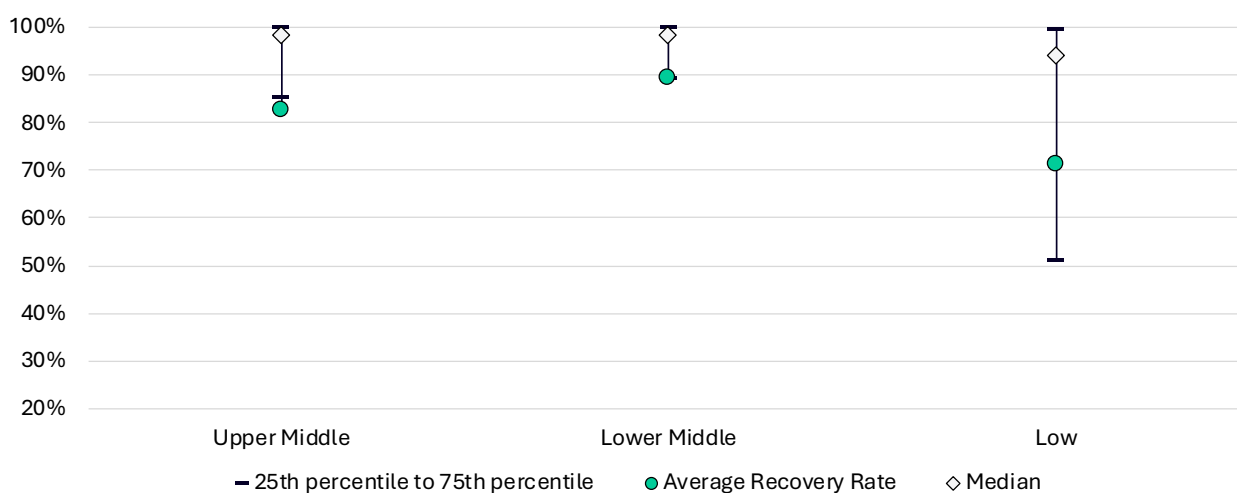
erage recovery rates show greater dispersion, with lower middle-income counterpart recording the highest average recovery rate at 89.5%.

Table 36: Recovery Rates by Income Group

Income Group	Number of Defaults	Signed Amount (€m)	Average RR	Median RR (IQR)	P10–P90 Range
Upper Middle	60	1,253	82.5%	98.2% (85.1%–100.0%)	11.5%–100.0%
Lower Middle	72	2,443	89.4%	98.3% (89.1%–99.9%)	61.1%–100.0%
Low	68	839	71.2%	93.9% (51.1%–99.6%)	10.8%–100.0%
Overall (including omitted categories)	224	4,913	80.3%	97.3% (72.8%–99.8%)	19.5%–100.0%

Footnote: High data did not meet publication threshold

Figure 20: Recovery Rates by Income Group



4.6 Recovery Rates by Income Group and Region

The highest reported average recovery rate is observed for lower middle-income counterparts in Sub-Saharan Africa at 91.2%. The lowest reported recovery rate is observed for low-income counterparts in Sub-Saharan Africa at 70.8%.

There is limited data reported across some income ranges across all regions, with Europe & Central Asia only reporting data for the Upper Middle counterparts.

Table 37: Recovery Rates by Income Group and Region

Region / Income Group	Low	Lower Middle	Upper Middle
Europe & Central Asia			86.2%
Middle East, North Africa, Afghanistan & Pakistan		88.8%	
Sub-Saharan Africa	70.8%	91.2%	79.1%

Footnote: East Asia & Pacific, Latin America & Caribbean, South Asia and High income group data did not meet publication threshold

4.7 Recovery Rates by Default Characteristics

4.7.1 Recovery Rates by Default Type

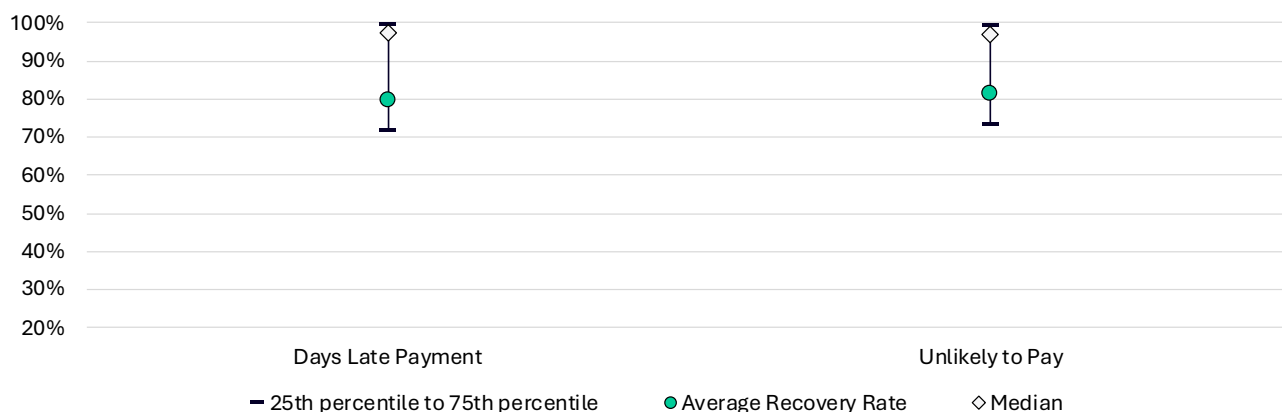
Reported for the first time in this year's publication, Recovery rates are similar across the two default types. The Unlikely to Pay type records a minimally higher average recovery rate of 81.8%, compared with 80.0% for Days Late Payment

cohort, noting that median recovery rates are nearly identical at 97.2% and 97.4%, respectively. The number of defaults are weighted more to DLP, reporting as 78% of the population.

Table 38: Recovery Rates by Default Type

Default type last	Number of Defaults	Signed Amount (€m)	Average RR	Median RR (IQR)	P10-P90 Range
Days Late Payment	175	3,041	79.9%	97.4% (71.8%–99.9%)	16.7%–100.0%
Unlikely to Pay	49	1,872	81.7%	97.2% (73.8%–99.7%)	47.3%–100.0%
Overall (including omitted categories)	224	4,913	80.3%	97.3% (72.8%–99.8%)	19.5%–100.0%

Figure 21: Recovery Rates by Default Type



4.7.2 Recovery Rates by Resolution Type

Recovery outcomes also vary by resolution type, this is being reported for the first time in this year's publication. Returning to performing book records the highest average recovery rate at 90.6%, compared with 67.6% for unresolved defaults and 53.5% for closed out contracts.

The wider dispersion for unresolved and closed cases is reflected in their lower medians and broader percentile ranges, noting return to performing reported the highest proportion of reported defaults at 62.5%.

Table 39: Recovery Rates by Resolution Type

Resolution type	Number of Defaults	Signed Amount (€m)	Average RR	Median RR (IQR)	P10-P90 Range
Close-out	26	117	53.5%	60.8% (32.4%–76.9%)	0.0%–85.0%
Return to performing	140	3,446	90.6%	98.7% (92.7%–99.9%)	66.5%–100.0%
Unresolved	58	1,350	67.5%	92.9% (17.6%–99.9%)	5.3%–100.0%
Overall (including omitted categories)	224	4,913	80.3%	97.3% (72.8%–99.8%)	19.5%–100.0%

Figure 22: Recovery Rates by Resolution Type



4.7.3 Recovery Rates by Actions Taken

Recovery outcomes vary by default action, this analysis is being reported for the first time in this year's publication. The Specific Provisioning segment reported the highest average recovery rate at 84.1%. This segment is applied where a specific provision has been taken, and no other

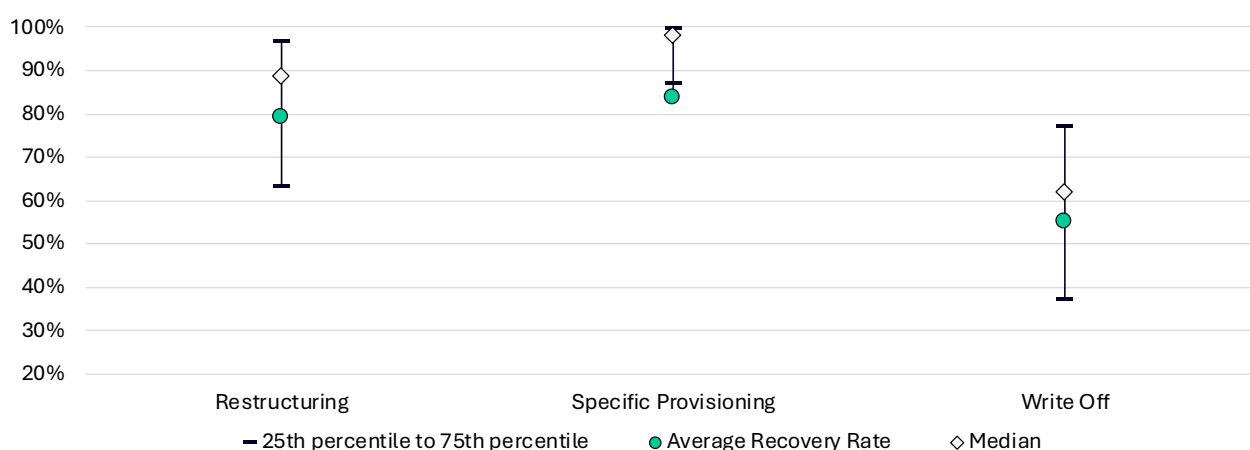
available default definition applies. The group, indicating a full write off, records the lowest average recovery rate at 55.3%. Overall, the dataset records an average recovery rate of 80.4% with a median of 97.3%.

Table 40: Recovery Rates by Actions Taken

Default Action	Number of Defaults	Signed Amount (€m)	Average RR	Median RR (IQR)	P10–P90 Range
Restructuring	11	595	79.3%	88.8% (63.4%–96.9%)	52.1%–99.7%
Specific Provisioning	180	3,808	84.1%	98.4% (87.3%–100.0%)	24.8%–100.0%
Write Off	28	297	55.3%	62.3% (37.5%–77.4%)	0.0%–84.5%
Overall (including omitted categories)	224	4,913	80.4%	97.3% (72.8%–99.8%)	19.5%–100.0%

Footnote: Write Down data did not meet publication threshold

Figure 23: Recovery Rates by Actions Taken



4.8 Recovery Rates by Currency Type

Recovery rates are highest for Pegged LC contracts, the analysis of this currency type is being presented for the first time in this year's publication. The average recovery rate of 90.3%. Pegged LC is concentrated in Sub Saharan Africa. Foreign currency contracts record an

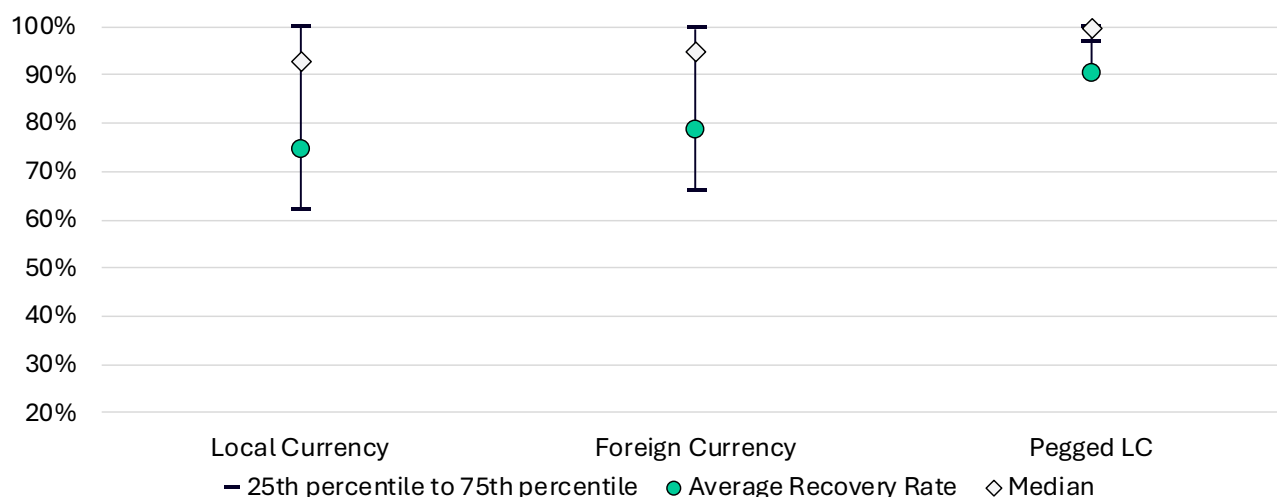
average recovery rate of 78.4%, compared with 74.3% for local currency contracts. Median recovery rates remain high across currency types, while the wider P10–P90 ranges for local and foreign currency contracts indicate greater dispersion in realised recovery outcomes.

Table 41: Recovery Rates by Currency Type

Currency Type	Number of Defaults	Signed Amount (€m)	Average RR	Median RR (IQR)	P10–P90 Range
Local Currency	30	560	74.3%	92.6% (61.9%–100.0%)	8.4%–100.0%
Foreign Currency	147	3,706	78.4%	94.7% (66.1%–99.6%)	19.9%–100.0%
Pegged LC	45	592	90.3%	99.5% (96.7%–100.0%)	61.2%–100.0%
Overall (including omitted categories)	224	4,913	80.4%	97.3% (72.8%–99.8%)	19.5%–100.0%

Footnote: Mixed data did not meet publication threshold

Figure 24: Recovery Rates by Currency Type



4.8.1 Recovery Rates by Currency Type and Region

Recovery rates by currency type vary across regions. Foreign currency contracts record average recovery rates ranging from 66.7% in East Asia & Pacific to 90.0% in Middle East, North Africa, Afghanistan & Pakistan.

In Sub-Saharan Africa, average recovery rates are similar for local and foreign currency contracts at 71.3% and 72.0%, respectively, but Pegged LC contracts record a higher average recovery rate of 90.3%.

Table 42: Recovery Rates by Currency Type and Region

Region / Income Group	Local Currency	Foreign Currency	Pegged LC
East Asia & Pacific		66.7%	
Europe & Central Asia		88.0%	
Latin America & Caribbean		89.7%	
Middle East, North Africa, Afghanistan & Pakistan		90.0%	
Sub-Saharan Africa	71.3%	72.0%	90.3%

Footnote: South Asia and Mixed data did not meet publication threshold

4.9 Recovery Rates by Project Type

Corporate Finance records the highest average recovery rate at 84.6%, followed by Other at 78.2% and Financial Institution Finance

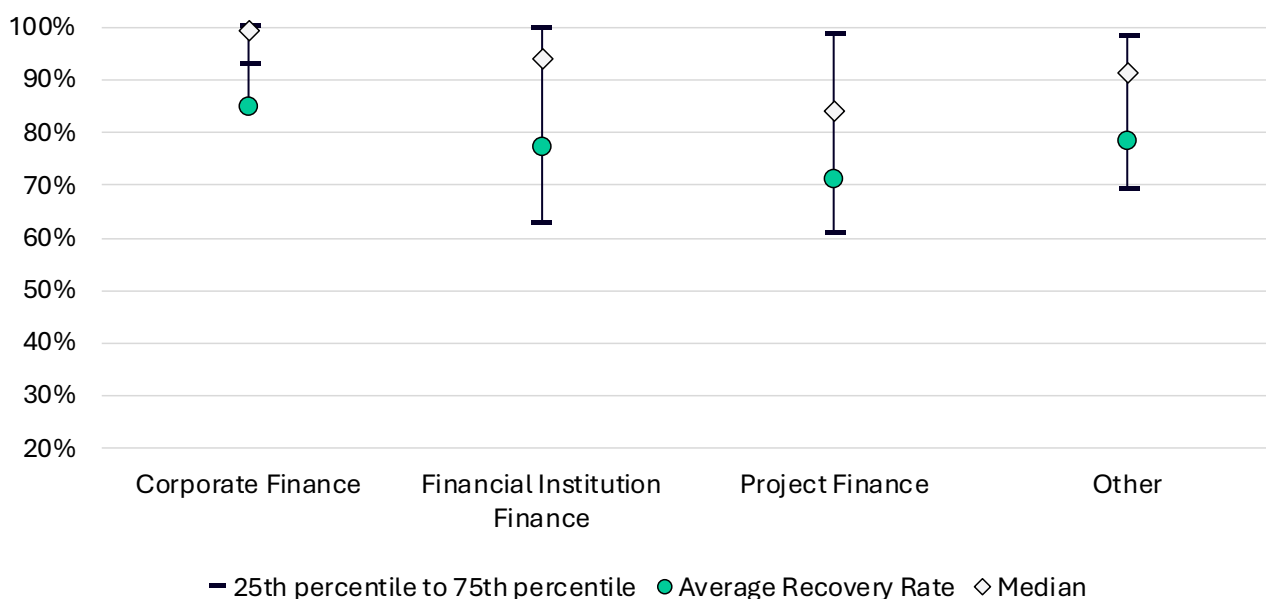
at 77.2%. Project Finance records the lowest average recovery rate at 70.8%.

Table 43: Recovery Rates by Project Type

Lending Product	Number of Defaults	Signed Amount (€m)	Average RR	Median RR (IQR)	P10–P90 Range
Corporate Finance	88	1,716	84.6%	99.4% (92.9%–100.0%)	21.3%–100.0%
Financial Institution Finance	72	1,001	77.2%	93.9% (62.7%–99.8%)	28.8%–100.0%
Project Finance	10	439	70.8%	84.1% (60.8%–98.7%)	10.1%–99.1%
Other	51	1,585	78.2%	91.2% (69.1%–98.2%)	15.0%–99.9%
Overall (including omitted categories)	224	4,913	80.3%	97.3% (72.8%–99.8%)	19.5%–100.0%

Footnote: Real Estate Finance and Structured Finance data did not meet publication threshold

Figure 25: Recovery Rates by Project Type



4.10 Recovery Rates by Seniority

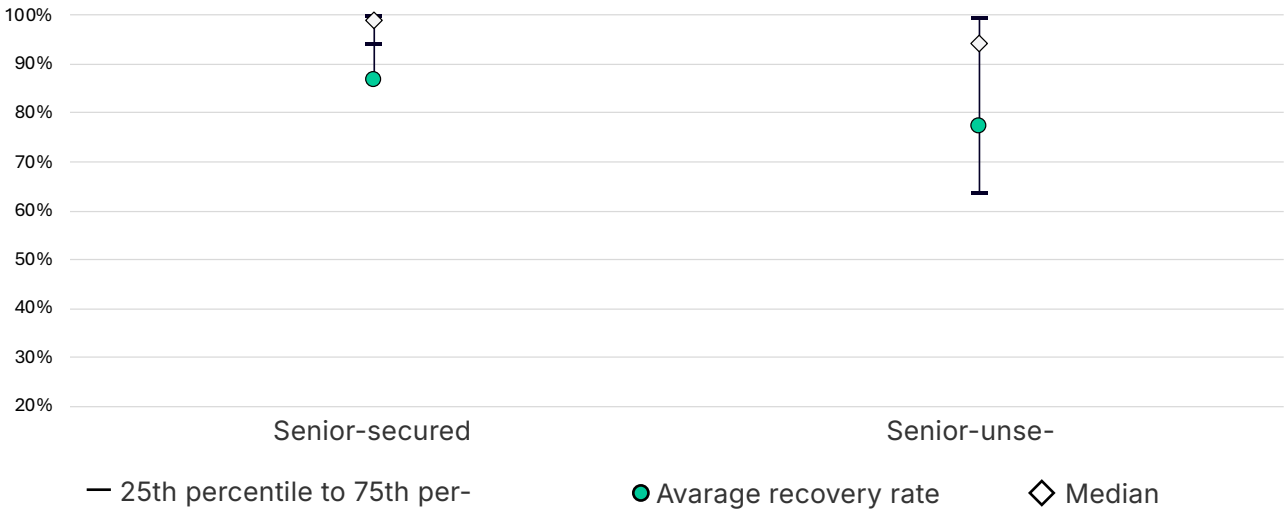
Senior secured contracts record a higher average recovery rate of 87.0%, compared with 77.4% for senior unsecured contracts. Median recovery rates are also higher for senior secured contracts at 99.2%, versus 94.3% for senior unsecured contracts.

Table 44: Recovery Rates by Seniority

Seniority	Number of Defaults	Signed Amount (€m)	Average RR	Median RR (IQR)	P10-P90 Range
Senior-secured	63	1,252	87.0%	99.2% (94.1%–100.0%)	51.6%–100.0%
Senior-unsecured	157	3,587	77.4%	94.3% (63.8%–99.8%)	13.7%–100.0%
Overall (including omitted categories)	224	4,913	80.4%	97.3% (72.8%–99.8%)	19.5%–100.0%

Footnote: Subordinated and Senior data did not meet publication threshold

Figure 26: Recovery Rates by Seniority



4.11 Recovery Rates by Contract Size

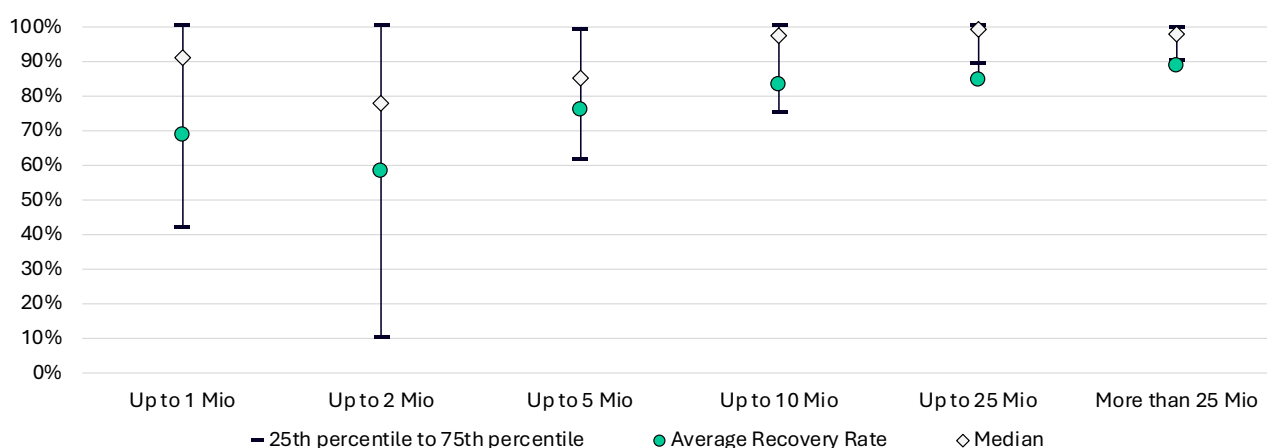
Recovery rates generally increase with contract size, although the relationship is not uniform across all size bands. Average recovery rates fall from 68.7% for contracts up to EUR 1 million, down to 57.9% for contracts up to EUR 2 million. This trend shifts back up to 77.5%

for contracts up to EUR 5 Million, culminating in 88.3% for contracts above EUR 25 million. Larger contracts also show a more concentrated distribution of recovery outcomes, with contracts above EUR 25 million recording a P10–P90 range of 65.6%–100.0%.

Table 45: Recovery Rates by Contract Size

Contract Size Grouped	Number of Defaults	Signed Amount (€m)	Average RR	Median RR (IQR)	P10–P90 Range
Up to 1 Mio	19	9	68.7%	90.7% (41.9%–100.0%)	6.8%–100.0%
Up to 2 Mio	15	22	57.9%	77.6% (10.0%–100.0%)	0.0%–100.0%
Up to 5 Mio	38	138	75.5%	84.8% (61.5%–99.1%)	31.1%–100.0%
Up to 10 Mio	43	333	83.0%	96.9% (75.1%–100.0%)	51.6%–100.0%
Up to 25 Mio	59	965	84.2%	98.8% (89.1%–99.9%)	28.1%–100.0%
More than 25 Mio	50	3,446	88.3%	97.6% (89.8%–99.7%)	65.6%–100.0%
Overall (including omitted categories)	224	4,913	80.4%	97.3% (72.8%–99.8%)	19.5%–100.0%

Figure 27: Recovery Rates by Contract Size



5. Methodology

5.1 Default Rates

5.1.1 Default Types

Following the Basel II definition of default in quantifying the risk parameters, the following approach is used to determine when an obligor has defaulted.

A default on a loan shall occur when either of the following has taken place:

- a. The institution considers that the obligor is unlikely to pay its credit obligations to the institution, the parent undertaking or any of its subsidiaries in full, without recourse by the institution to actions such as realising security.
- b. The obligor is past due more than 90 days on any material credit obligation to the institution, the parent undertaking or any of its subsidiaries.

A materiality threshold for identifying defaults may be applied by each contributing institution in accordance with its own procedures, and these thresholds may be reassessed over time. As a result, changes in reported default rates and recovery rates may not only reflect changes in underlying credit quality, but also changes in methodologies or materiality thresholds used by contributing institutions. For example, changes in materiality thresholds may reduce the number of exposures classified as defaults, leading to lower reported default rates compared to previous years despite no underlying change in credit risk. Similarly, the removal of default events may also impact on the observed recovery rates. This may potentially limit direct comparability with prior periods.

5.1.2 Output Parameters

To ensure the significance of the resulting default rate statistics, each disclosed table or figure must meet the following requirements:

- The minimum number of counterparts for each bucket in the reporting dimension is ten.
- The minimum number of active years for each bucket in the reporting dimension is five.

For the purpose of point (a) above, elements to be taken as indications of unlikelihood to pay shall include:

- The institution places the credit obligation on non-accrual status.
- The institution recognises a specific credit adjustment resulting from a significant perceived decline in credit quality after the exposure was taken on.
- The institution sells the credit obligation at a material credit-related economic loss.
- The institution consents to a pre-emptive restructuring without reducing the overall financial obligation of the borrower in order to avoid a severe default.
- The institution consents to a distressed restructuring of the credit obligation that reduces the financial obligation through material forgiveness, or postponement, of principal, interest or, where relevant, fees.
- The institution has filed for the obligor's bankruptcy or a similar order regarding a credit obligation to the institution, the parent undertaking or any of its subsidiaries.
- The obligor has sought or has been placed in bankruptcy or similar protection to avoid or delay repayment of a credit obligation to the institution, the parent undertaking or any of its subsidiaries.

No values are disclosed if the predefined threshold is not met. The average recovery rates shown represent simple averages of the observations in the respective dimensions and categories.

The confidence intervals displayed alongside the mean values provide insight into the distribution of the underlying data dimension category.

5.1.3 Annual Default Rates Calculations

During each year of the reporting horizon, the number of active counterparts is determined at the beginning of the year. Active counterparts are those that have at least one signed and not

matured contract on 1 January of the year. To calculate an annual default rate, the number of defaults for these counterparts is then divided by their total number at the beginning of the year.

Annual default rates are calculated as:

Equation 1: Annual default rate for year i

$$x_i = \frac{d_i}{w_i}$$

d_i = Number of new defaults of counterparts during year i

w_i = Number of performing counterparts as of 1 January of year i

Annual default rates are averaged using the number of performing counterparts as of 1

January of each year as weights:

Equation 2: Average annual default rate

$$\bar{x}^* = \frac{\sum_{i=1}^N w_i x_i}{\sum_{i=1}^N w_i}$$

N = Number of years

Weighted standard deviations of annual default rates are calculated using the number of performing

counterparts as of 1 January of each year as weights:

Equation 3: Standard deviation of annual default rates

$$\sigma = \sqrt{\frac{\sum_{i=1}^N w_i (x_i - \bar{x}^*)^2}{\frac{N-1}{N} \sum_{i=1}^N w_i}}$$

N = Number of years

w_i = Number of performing counterparts as of 1 January of year i

x_i = Default rate for year i

$\bar{x}^*$ = Weighted mean of the annual default rates

The confidence intervals indicate the degree of statistical uncertainty associated with each regional estimate. Assuming default rates are

normally distributed, the confidence intervals around the averages are determined as:

$$CI_{upper} = \bar{x}^* + z * \frac{\sigma}{\sqrt{N}}$$

$$CI_{lower} = \bar{x}^* - z * \frac{\sigma}{\sqrt{N}}$$

z^* = z^* -value from the standard normal distribution for the chosen confidence interval

5.1.4 Default Rates by Cohorts Calculations

Default rates following the cohort approach are calculated at the counterpart level. A *cohort*_(j,r) consists of all counterparts with the same *credit rating*_r that were active on 1 January of a given *year*_j.

A new cohort is formed for each year and credit rating, and the default and survival status of each counterpart is tracked across years. During every year, a fraction of counterparts in each cohort may default and marginal default rates per year (and credit rating) and the cumulative default rates since inception of the cohort (and credit rating) can be calculated.

For this publication, a dynamic cohort approach was used in which the number of counterparts decreases over time. Each year, the cohort starts out with only the active counterparts as of 1 January of that year. Counterparts that defaulted or matured in prior years are excluded from the count. This number is further reduced by half of the number of counterparts that mature during the year, assuming maturities are equally distributed over the year and deriving an approximate average number of active counterparts during the year.

The number of counterparts $c_{j,r}^i$ in *year*_i for *cohort*_(j,r) is calculated as:

Equation 5: Number of counterparts in a cohort

for $i = 1$: $c_1^{j,r}$ = Number of Counterparts on 1 January for cohort year and credit rating

for $i > 1$: $c_i^{j,r} = c_{i-1}^{j,r} - d_{i-1}^{j,r} - m_{i-1}^{j,r} - \frac{m_i^{j,r}}{2}$

$d_{i-1}^{j,r}$ = Number of counterparts in *cohort*_(j,r) that default in *year*_i

$m_{i-1}^{j,r}$ = Number of counterparts in *cohort*_(j,r) that mature during *year*_i

Equation 6: Marginal default rate for a cohort

$$MDR_i^{j,r} = \frac{d_i^{j,r}}{c_i^{j,r}}$$

$d_i^{j,r}$ = Number of counterparts in *cohort*_(j,r) that default during *year*_i

$c_i^{j,r}$ = Number of counterparts in *cohort*_(j,r) during *year*_i

Combining all cohorts for a credit rating, the average marginal default rate $aMDR_i^r$ for all

cohorts with $credit\ rating_r$ in $year_i$ is calculated as:

Equation 7: Marginal default rate for a credit rating and year

$$aMDR_i^r = \frac{\sum_{j=1}^K d_i^{j,r}}{\sum_{j=1}^K c_i^{j,r}}$$

K = Total number of cohorts for $credit\ rating_r$

The cumulative default rates CDR_i^r can be calculated from the average marginal default

rate $aMDR_i^r$ for $credit\ rating_r$ in $year_i$ as:

Equation 8: Cumulative default rate for a credit rating and year

$$\text{for } i=1: CDR_i^r = aMDR_i^r$$

$$\text{for } i>1: CDR_i^r = CDR_{i-1}^r + (1 - CDR_{i-1}^r) * aMDR_i^r$$

5.1.5 Contract Lifetime Default Rates Calculations

The calculation is performed at the contract level and is based on all contracts with signature and maturity dates during the reporting horizon, i.e., from 1 January 1994 to 31 December 2025.

For lifetime default rates calculations:

y_i = Year i = Calculated for each contract individually, the number of years between its signature

date and the i -th anniversary of such date until maturity of contract.

c_i = Contract i = Any contract, which has not matured or defaulted on or before its signature date plus y_{i-1} years.

Marginal lifetime default rates are calculated as:

Equation 9: Marginal lifetime default rates for year i

$$MDR_i = \frac{dc_i}{cc_i}$$

dc_i = Marginal Default Count for year i = Count of defaults of all c_i during y_i

cc_i = Marginal Contract Count for year i = Count of all c_i

Cumulative lifetime default rates are calculated as:

Equation 10: Cumulative lifetime default rates for year i

$$CDR_i = \frac{cdc_i}{cc_1} = \frac{\sum_{n=1}^i dc_n}{cc_1}$$

cdc_i = Cumulative Default Count for year i = Count of defaults for all contracts from y_1 to and including y_i
 cc_1 = Count of all contracts at the beginning of year 1

5.2 Recovery Rates

5.2.1 Calculations

The database captures exposure at three levels: counterpart, contract and tranche. This structure shows that a single counterpart may have several contracts, each comprising several tranches with varying currencies and/or interest rates. For private and public counterparts, recovery rates are calculated per contract by aggregating all discounted cash flows from each tranche. These calculations account for the timing of payments and the applicable lending rate over the life of the contract. As a result, one recovery rate is calculated per contract, covering the

period from the earliest default to the final maturity date, and includes all subsequent default events and associated cash flows.

The recovery rate statistics in this publication include unresolved contracts in default for at least eight years. This threshold ensures consistency in the statistics.

In such cases, unrecovered amounts at the reporting date are considered lost, and no estimates of future cash flows are included. Recovery rates are calculated as follows:

Equation 11: Recovery rates (RR) calculation

$$RR = \frac{A+B}{C+D}$$

A = Amounts paid after the discount date and up to the resolution of default, discounted to the chosen discount date
 B = Amount outstanding after the chosen reporting horizon for cash flows discounted to the chosen discount date
 C = Initial amount outstanding as of the discount date
 D = Postdefault disbursed amounts, discounted to the chosen discount date.

5.2.2 Output Parameters

To ensure the significance of the recovery rate statistics, each table or figure must include data from at least ten defaulted contracts within each relevant category (for example, a specific sector or region). If this threshold is not met, no values are disclosed. The average recovery rates presented are simple averages of the

observations available within each category. Percentile values are provided alongside mean and median values to illustrate the distribution of recovery rates. This method was chosen over the confidence interval approach – used in the default rate statistics – due to the non-normal distribution of recovery data.

6. Annexes

6.1 List of Abbreviations

The following abbreviations and acronyms are used throughout this report:

CI	Confidence interval
CLOSE	Closed (recovery resolution type)
COVID-19	Coronavirus disease in 2020
DFI(s)	Development finance institution(s)
DLP	Days late payment (default identified as more than 90 days past due)
DR	Default rate
EU	European Union
EUR	Euro
FI / Non-FI	Financial institution(s) / non-financial institution(s)
GEMs	Global Emerging Markets Risk Database (Consortium)
GICS	Global Industry Classification Standard
IQR	Interquartile range
ISO	International Organization for Standardization (used for country codes)
MDB(s)	Multilateral development bank(s)
NA	Not available
NACE	Nomenclature of Economic Activities
NAICS	North American Industry Classification System
P10 / P90	10th percentile / 90th percentile
PERFO	Performing (recovery resolution type)
PRSTR	Pre-restructuring (default action)
RESTR	Restructuring (default action)
RR	Recovery rate
S&P	Standard & Poor's
UNLPY	Unlikely to pay (default type)
URSVD	Unresolved (recovery resolution type)
US	United States

6.2 Mapping of Countries to Regions and Continents

ISO country code and ISO country name	Region	Continent
AD-Andorra	Europe & Central Asia	Europe
AE-United Arab Emirates	Middle East, North Africa, Afghanistan & Pakistan	Asia
AF-Afghanistan	Middle East, North Africa, Afghanistan & Pakistan	Asia
AG-Antigua and Barbuda	Latin America & Caribbean	North America
AI-Anguilla	Latin America & Caribbean	North America
AL-Albania	Europe & Central Asia	Europe
AM-Armenia	Europe & Central Asia	Europe
AN-Netherlands Antilles	Latin America & Caribbean	North America
AO-Angola	Sub-Saharan Africa	Africa
AQ-Antarctica	Other	Antarctica
AR-Argentina	Latin America & Caribbean	South America
AS-American Samoa	East Asia & Pacific	Oceania
AT-Austria	Europe & Central Asia	Europe
AU-Australia	East Asia & Pacific	Oceania
AW-Aruba	Latin America & Caribbean	North America
AX-Åland Islands	Europe & Central Asia	Europe
AZ-Azerbaijan	Europe & Central Asia	Europe
BA-Bosnia and Herzegovina	Europe & Central Asia	Europe
BB-Barbados	Latin America & Caribbean	North America
BD-Bangladesh	South Asia	Asia
BE-Belgium	Europe & Central Asia	Europe
BF-Burkina Faso	Sub-Saharan Africa	Africa
BG-Bulgaria	Europe & Central Asia	Europe
BH-Bahrain	Middle East, North Africa, Afghanistan & Pakistan	Asia
BI-Burundi	Sub-Saharan Africa	Africa
BJ-Benin	Sub-Saharan Africa	Africa
BL-Saint Barthélemy	Latin America & Caribbean	North America
BM-Bermuda	North America	North America
BN-Brunei	East Asia & Pacific	Asia
BO-Bolivia	Latin America & Caribbean	South America
BQ-Bonaire, Sint Eustatius and Saba	Latin America & Caribbean	North America
BR-Brazil	Latin America & Caribbean	South America
BS-Bahamas	Latin America & Caribbean	North America
BT-Bhutan	South Asia	Asia

ISO country code and ISO country name	Region	Continent
BV-Bouvet Island	Latin America & Caribbean	North America
BW-Botswana	Sub-Saharan Africa	Africa
BY-Belarus	Europe & Central Asia	Europe
BZ-Belize	Latin America & Caribbean	North America
CA-Canada	North America	North America
CC-Cocos (Keeling Islands)	East Asia & Pacific	Oceania
CD-Congo, Democratic Republic of	Sub-Saharan Africa	Africa
CF-Central African Republic	Sub-Saharan Africa	Africa
CG-Congo	Sub-Saharan Africa	Africa
CH-Switzerland	Europe & Central Asia	Europe
CI-Cote D'Ivoire	Sub-Saharan Africa	Africa
CK-Cook Islands	East Asia & Pacific	Oceania
CL-Chile	Latin America & Caribbean	South America
CM-Cameroon	Sub-Saharan Africa	Africa
CN-China	East Asia & Pacific	Asia
CO-Colombia	Latin America & Caribbean	South America
CR-Costa Rica	Latin America & Caribbean	North America
CS-Serbia and Montenegro	Europe & Central Asia	Europe
CU-Cuba	Latin America & Caribbean	North America
CV-Cape Verde	Sub-Saharan Africa	Africa
CW-Curaçao	Latin America & Caribbean	North America
CX-Christmas Island	East Asia & Pacific	Oceania
CY-Cyprus	Europe & Central Asia	Europe
CZ-Czech Republic	Europe & Central Asia	Europe
DE-Germany	Europe & Central Asia	Europe
DJ-Djibouti	Middle East, North Africa, Afghanistan & Pakistan	Asia
DK-Denmark	Europe & Central Asia	Europe
DM-Dominica	Latin America & Caribbean	North America
DO-Dominican Republic	Latin America & Caribbean	North America
DZ-Algeria	Middle East, North Africa, Afghanistan & Pakistan	Africa
EC-Ecuador	Latin America & Caribbean	South America
EE-Estonia	Europe & Central Asia	Europe
EG-Egypt	Middle East, North Africa, Afghanistan & Pakistan	Africa
EH-Western Sahara	Middle East, North Africa, Afghanistan & Pakistan	Africa
ER-Eritrea	Sub-Saharan Africa	Africa

ISO country code and ISO country name	Region	Continent
ES-Spain	Europe & Central Asia	Europe
ET-Ethiopia	Sub-Saharan Africa	Africa
FI-Finland	Europe & Central Asia	Europe
FJ-Fiji	East Asia & Pacific	Oceania
FK-Falkland Islands	Latin America & Caribbean	South America
FM-Micronesia, Federated States of	East Asia & Pacific	Oceania
FO-Faroe Islands	Europe & Central Asia	Europe
FR-France	Europe & Central Asia	Europe
GA-Gabon	Sub-Saharan Africa	Africa
GB-United Kingdom	Europe & Central Asia	Europe
GD-Grenada	Latin America & Caribbean	North America
GE-Georgia	Europe & Central Asia	Europe
GF-French Guiana	Latin America & Caribbean	South America
GG-Guernsey	Europe & Central Asia	Europe
GH-Ghana	Sub-Saharan Africa	Africa
GI-Gibraltar	Europe & Central Asia	Europe
GL-Greenland	Europe & Central Asia	Europe
GM-Gambia	Sub-Saharan Africa	Africa
GN-Guinea	Sub-Saharan Africa	Africa
GP-Guadeloupe	Latin America & Caribbean	North America
GQ-Equatorial Guinea	Sub-Saharan Africa	Africa
GR-Greece	Europe & Central Asia	Europe
GS-South Georgia and the South Sandwich Islands	Latin America & Caribbean	South America
GT-Guatemala	Latin America & Caribbean	North America
GU-Guam	East Asia & Pacific	Oceania
GW-Guinea-Bissau	Sub-Saharan Africa	Africa
GY-Guyana	Latin America & Caribbean	South America
HK-Hong Kong	East Asia & Pacific	Asia
HM-Heard Island and McDonald Islands	East Asia & Pacific	Oceania
HN-Honduras	Latin America & Caribbean	North America
HR-Croatia	Europe & Central Asia	Europe
HT-Haiti	Latin America & Caribbean	North America
HU-Hungary	Europe & Central Asia	Europe
ID-Indonesia	East Asia & Pacific	Asia
IE-Ireland	Europe & Central Asia	Europe
IL-Israel	Middle East, North Africa, Afghanistan & Pakistan	Asia

ISO country code and ISO country name	Region	Continent
IM-Isle of Man	Europe & Central Asia	Europe
IN-India	South Asia	Asia
IO-British Indian Ocean Territory	South Asia	Oceania
IQ-Iraq	Middle East, North Africa, Afghanistan & Pakistan	Asia
IR-Iran, Islamic Republic of	Middle East, North Africa, Afghanistan & Pakistan	Asia
IS-Iceland	Europe & Central Asia	Europe
IT-Italy	Europe & Central Asia	Europe
JE-Jersey	Europe & Central Asia	Europe
JM-Jamaica	Latin America & Caribbean	North America
JO-Jordan	Middle East, North Africa, Afghanistan & Pakistan	Asia
JP-Japan	East Asia & Pacific	Asia
KE-Kenya	Sub-Saharan Africa	Africa
KG-Kyrgyzstan	Europe & Central Asia	Asia
KH-Cambodia	East Asia & Pacific	Asia
KI-Kiribati	East Asia & Pacific	Oceania
KM-Comoros	Sub-Saharan Africa	Africa
KN-Saint Kitts and Nevis	Latin America & Caribbean	North America
KP-Korea, Democratic People's Republic of	East Asia & Pacific	Asia
KR-Korea, Republic of	East Asia & Pacific	Asia
KW-Kuwait	Middle East, North Africa, Afghanistan & Pakistan	Asia
KY-Cayman Islands	Latin America & Caribbean	North America
KZ-Kazakhstan	Europe & Central Asia	Europe
LA-Laos	East Asia & Pacific	Asia
LB-Lebanon	Middle East, North Africa, Afghanistan & Pakistan	Asia
LC-Saint Lucia	Latin America & Caribbean	North America
LI-Liechtenstein	Europe & Central Asia	Europe
LK-Sri Lanka	South Asia	Asia
LR-Liberia	Sub-Saharan Africa	Africa
LS-Lesotho	Sub-Saharan Africa	Africa
LT-Lithuania	Europe & Central Asia	Europe
LU-Luxembourg	Europe & Central Asia	Europe
LV-Latvia	Europe & Central Asia	Europe
LY-Libyan Arab Jamahiriya	Middle East, North Africa, Afghanistan & Pakistan	Africa

ISO country code and ISO country name	Region	Continent
MA-Morocco	Middle East, North Africa, Afghanistan & Pakistan	Africa
MC-Monaco	Europe & Central Asia	Europe
MD-Moldova	Europe & Central Asia	Europe
ME-Montenegro	Europe & Central Asia	Europe
MF-Saint Martin (French)	Latin America & Caribbean	North America
MG-Madagascar	Sub-Saharan Africa	Africa
MH-Marshall Islands	East Asia & Pacific	Oceania
MK-Macedonia, Former Yugo- slav Republic of	Europe & Central Asia	Europe
ML-Mali	Sub-Saharan Africa	Africa
MM-Myanmar	East Asia & Pacific	Asia
MN-Mongolia	East Asia & Pacific	Asia
MO-Macao	East Asia & Pacific	Asia
MP-Northern Mariana Island	East Asia & Pacific	Oceania
MQ-Martinique	Latin America & Caribbean	North America
MR-Mauritania	Sub-Saharan Africa	Africa
MS-Montserrat	Latin America & Caribbean	North America
MT-Malta	Middle East, North Africa, Afghanistan & Pakistan	Europe
MU-Mauritius	Sub-Saharan Africa	Africa
MV-Maldives	South Asia	Asia
MW-Malawi	Sub-Saharan Africa	Africa
MX-Mexico	Latin America & Caribbean	North America
MY-Malaysia	East Asia & Pacific	Asia
MZ-Mozambique	Sub-Saharan Africa	Africa
NA-Namibia	Sub-Saharan Africa	Africa
NC-Nouvelle Caledonie	East Asia & Pacific	Oceania
NE-Niger	Sub-Saharan Africa	Africa
NF-Norfolk Island	East Asia & Pacific	Oceania
NG-Nigeria	Sub-Saharan Africa	Africa
NI-Nicaragua	Latin America & Caribbean	North America
NL-Netherlands	Europe & Central Asia	Europe
NO-Norway	Europe & Central Asia	Europe
NP-Nepal	South Asia	Asia
NR-Nauru	East Asia & Pacific	Oceania
NU-Niue	East Asia & Pacific	Oceania
NZ-New Zealand	East Asia & Pacific	Oceania
OM-Oman	Middle East, North Africa, Afghanistan & Pakistan	Asia

ISO country code and ISO country name	Region	Continent
OT-Other, e.g., supranational organizations, cannot be allocated to one country	Other	Other
PA-Panama	Latin America & Caribbean	North America
PE-Peru	Latin America & Caribbean	South America
PF-French Polynesia	East Asia & Pacific	Oceania
PG-Papua New Guinea	East Asia & Pacific	Oceania
PH-Philippines	East Asia & Pacific	Asia
PK-Pakistan	Middle East, North Africa, Afghanistan & Pakistan	Asia
PL-Poland	Europe & Central Asia	Europe
PM-Saint Pierre and Miquelon	Latin America & Caribbean	North America
PN-Pitcairn	East Asia & Pacific	Oceania
PR-Puerto Rico	Latin America & Caribbean	North America
PS-Palestinian Territory (West Bank and Gaza)	Middle East, North Africa, Afghanistan & Pakistan	Asia
PT-Portugal	Europe & Central Asia	Europe
PW-Palau	East Asia & Pacific	Oceania
PY-Paraguay	Latin America & Caribbean	South America
QA-Qatar	Middle East, North Africa, Afghanistan & Pakistan	Asia
RE-Réunion	Sub-Saharan Africa	Africa
REG-Regional: more t han one country	Other	Regional
RO-Romania	Europe & Central Asia	Europe
RS-Serbia	Europe & Central Asia	Europe
RU-Russian Federation	Europe & Central Asia	Europe
RW-Rwanda	Sub-Saharan Africa	Africa
SA-Saudi Arabia	Middle East, North Africa, Afghanistan & Pakistan	Asia
SB-Solomon Islands	East Asia & Pacific	Oceania
SC-Seychelles	Sub-Saharan Africa	Africa
SD-Sudan, Republic of	Sub-Saharan Africa	Africa
SE-Sweden	Europe & Central Asia	Europe
SG-Singapore	East Asia & Pacific	Asia
SH-Saint Helena, Ascension and Tristan da Cunha	Sub-Saharan Africa	Africa
SI-Slovenia	Europe & Central Asia	Europe
SJ-Svalbard and Jan Mayen	Europe & Central Asia	Europe
SK-Slovakia	Europe & Central Asia	Europe
SL-Sierra Leone	Sub-Saharan Africa	Africa

ISO country code and ISO country name	Region	Continent
SM-San Marino	Europe & Central Asia	Europe
SN-Senegal	Sub-Saharan Africa	Africa
SO-Somalia	Sub-Saharan Africa	Africa
SR-Suriname	Latin America & Caribbean	South America
SS-South Sudan, Republic of	Sub-Saharan Africa	Africa
ST-Sao Tome and Principe	Sub-Saharan Africa	Africa
SV-El Salvador	Latin America & Caribbean	North America
SX-Sint Maarten (Dutch)	Latin America & Caribbean	North America
SY-Syrian Arab Republic	Middle East, North Africa, Afghanistan & Pakistan	Asia
SZ-Swaziland	Sub-Saharan Africa	Africa
TC-Turks and Caicos Islands	Latin America & Caribbean	North America
TD-Chad	Sub-Saharan Africa	Africa
TF-French Southern Territories	Sub-Saharan Africa	Africa
TG-Togo	Sub-Saharan Africa	Africa
TH-Thailand	East Asia & Pacific	Asia
TJ-Tajikistan	Europe & Central Asia	Asia
TK-Tokelau	East Asia & Pacific	Oceania
TL-East Timor	East Asia & Pacific	Asia
TM-Turkmenistan	Europe & Central Asia	Asia
TN-Tunisia	Middle East, North Africa, Afghanistan & Pakistan	Africa
TO-Tonga	East Asia & Pacific	Oceania
TR-Turkey	Europe & Central Asia	Europe
TT-Trinidad and Tobago	Latin America & Caribbean	North America
TV-Tuvalu	East Asia & Pacific	Oceania
TW-Taiwan	East Asia & Pacific	Asia
TZ-Tanzania	Sub-Saharan Africa	Africa
UA-Ukraine	Europe & Central Asia	Europe
UG-Uganda	Sub-Saharan Africa	Africa
UM-United States Minor Outlying Islands	East Asia & Pacific	Oceania
US-United States	North America	North America
UY-Uruguay	Latin America & Caribbean	South America
UZ-Uzbekistan	Europe & Central Asia	Asia
VA-Holy See (Vatican City State)	Europe & Central Asia	Europe
VC-Saint Vincent and The Grenadines	Latin America & Caribbean	North America
VE-Venezuela	Latin America & Caribbean	South America

ISO country code and ISO country name	Region	Continent
VG-Virgin Islands, British	Latin America & Caribbean	North America
VI-Virgin Islands, U.S.	Latin America & Caribbean	North America
VN-Vietnam	East Asia & Pacific	Asia
VU-Vanuatu	East Asia & Pacific	Oceania
WF-Wallis and Futuna	East Asia & Pacific	Oceania
WS-Samoa	East Asia & Pacific	Oceania
XK-Kosovo	Europe & Central Asia	Europe
XT-Turkish Republic of North- ern Cyprus	Europe & Central Asia	Europe
YE-Yemen, Republic of	Middle East, North Africa, Afghanistan & Pakistan	Asia
YT-Mayotte	Sub-Saharan Africa	Africa
ZA-South Africa	Sub-Saharan Africa	Africa
ZM-Zambia	Sub-Saharan Africa	Africa
ZW-Zimbabwe	Sub-Saharan Africa	Africa

6.3 Mapping of GICS, NACE and NAICS Sectors to Sector Groupings

Sector categorisation	Sector code	Description
GICS 2018	10101010	Oil & Gas Drilling
GICS 2018	10101020	Oil & Gas Equipment & Services
GICS 2018	10102010	Integrated Oil & Gas
GICS 2018	10102020	Oil & Gas Exploration & Production
GICS 2018	10102030	Oil & Gas Refining & Marketing
GICS 2018	10102040	Oil & Gas Storage & Transportation
GICS 2018	10102050	Coal & Consumable Fuels
GICS 2018	15101010	Commodity Chemicals
GICS 2018	15101020	Diversified Chemicals
GICS 2018	15101030	Fertilisers & Agricultural Chemicals
GICS 2018	15101040	Industrial Gases
GICS 2018	15101050	Specialty Chemicals
GICS 2018	15102010	Construction Materials
GICS 2018	15103010	Metal & Glass Containers
GICS 2018	15103020	Paper Packaging
GICS 2018	15104010	Aluminum
GICS 2018	15104020	Diversified Metals & Mining
GICS 2018	15104025	Copper
GICS 2018	15104030	Gold
GICS 2018	15104040	Precious Metals & Minerals
GICS 2018	15104045	Silver
GICS 2018	15104050	Steel
GICS 2018	15105010	Forest Products
GICS 2018	15105020	Paper Products
GICS 2018	20101010	Aerospace & Defense
GICS 2018	20102010	Building Products
GICS 2018	20103010	Construction & Engineering
GICS 2018	20104010	Electrical Components & Equipment
GICS 2018	20104020	Heavy Electrical Equipment
GICS 2018	20105010	Industrial Conglomerates
GICS 2018	20106010	Construction Machinery & Heavy Trucks
GICS 2018	20106015	Agricultural & Farm Machinery
GICS 2018	20106020	Industrial Machinery
GICS 2018	20107010	Trading Companies & Distributors
GICS 2018	20201010	Commercial Printing
GICS 2018	20201050	Environmental & Facilities Services
GICS 2018	20201060	Office Services & Supplies

Sector categorisation	Sector code	Description
GICS 2018	20201080	Security & Alarm Services
GICS 2018	20202010	Human Resource & Employment Services
GICS 2018	20202020	Research & Consulting Services
GICS 2018	20301010	Air Freight & Logistics
GICS 2018	20302010	Airlines
GICS 2018	20303010	Marine
GICS 2018	20304010	Railroads
GICS 2018	20304020	Trucking
GICS 2018	20305010	Airport Services
GICS 2018	20305020	Highways & Railtracks
GICS 2018	20305030	Marine Ports & Services
GICS 2018	25101010	Auto Parts & Equipment
GICS 2018	25101020	Tires & Rubber
GICS 2018	25102010	Automobile Manufacturers
GICS 2018	25102020	Motorcycle Manufacturers
GICS 2018	25201010	Consumer Electronics
GICS 2018	25201020	Home Furnishings
GICS 2018	25201030	Homebuilding
GICS 2018	25201040	Household Appliances
GICS 2018	25201050	Housewares & Specialties
GICS 2018	25202010	Leisure Products
GICS 2018	25203010	Apparel, Accessories & Luxury Goods
GICS 2018	25203020	Footwear
GICS 2018	25203030	Textiles
GICS 2018	25301010	Casinos & Gaming
GICS 2018	25301020	Hotels, Resorts & Cruise Lines
GICS 2018	25301030	Leisure Facilities
GICS 2018	25301040	Restaurants
GICS 2018	25302010	Education Services
GICS 2018	25302020	Specialised Consumer Services
GICS 2018	25501010	Distributors
GICS 2018	25502020	Internet & Direct Marketing Retail
GICS 2018	25503010	Department Stores
GICS 2018	25503020	General Merchandise Stores
GICS 2018	25504010	Apparel Retail
GICS 2018	25504020	Computer & Electronics Retail
GICS 2018	25504030	Home Improvement Retail
GICS 2018	25504040	Specialty Stores
GICS 2018	25504050	Automotive Retail

Sector categorisation	Sector code	Description
GICS 2018	25504060	Homefurnishing Retail
GICS 2018	30101010	Drug Retail
GICS 2018	30101020	Food Distributors
GICS 2018	30101030	Food Retail
GICS 2018	30101040	Hypermarkets & Super Centers
GICS 2018	30201010	Brewers
GICS 2018	30201020	Distillers & Vintners
GICS 2018	30201030	Soft Drinks
GICS 2018	30202010	Agricultural Products
GICS 2018	30202030	Packaged Foods & Meats
GICS 2018	30203010	Tobacco
GICS 2018	30301010	Household Products
GICS 2018	30302010	Personal Products
GICS 2018	35101010	Health Care Equipment
GICS 2018	35101020	Health Care Supplies
GICS 2018	35102010	Health Care Distributors
GICS 2018	35102015	Health Care Services
GICS 2018	35102020	Health Care Facilities
GICS 2018	35102030	Managed Health Care
GICS 2018	35103010	Health Care Technology
GICS 2018	35201010	Biotechnology
GICS 2018	35202010	Pharmaceuticals
GICS 2018	35203010	Life Sciences Tools & Services
GICS 2018	40101010	Diversified Banks
GICS 2018	40101015	Regional Banks
GICS 2018	40102010	Thriffs & Mortgage Finance
GICS 2018	40201020	Other Diversified Financial Services
GICS 2018	40201030	Multi-Sector Holdings
GICS 2018	40201040	Specialised Finance
GICS 2018	40202010	Consumer Finance
GICS 2018	40203010	Asset Management & Custody Banks
GICS 2018	40203020	Investment Banking & Brokerage
GICS 2018	40203030	Diversified Capital Markets
GICS 2018	40203040	Financial Exchanges & Data
GICS 2018	40204010	Mortgage REITs
GICS 2018	40301010	Insurance Brokers
GICS 2018	40301020	Life & Health Insurance
GICS 2018	40301030	Multi-line Insurance
GICS 2018	40301040	Property & Casualty Insurance
GICS 2018	40301050	Reinsurance

Sector categorisation	Sector code	Description
GICS 2018	45102030	Internet Services & Infrastructure
GICS 2018	45103010	Application Software
GICS 2018	45103020	Systems Software
GICS 2018	45201020	Communications Equipment
GICS 2018	45202030	Technology Hardware, Storage & Peripherals
GICS 2018	45203010	Electronic Equipment & Instruments
GICS 2018	45203015	Electronic Components
GICS 2018	45203020	Electronic Manufacturing Services
GICS 2018	45203030	Technology Distributors
GICS 2018	45301010	Semiconductor Equipment
GICS 2018	45301020	Semiconductors
GICS 2018	50101010	Alternative Carriers
GICS 2018	50101020	Integrated Telecommunication Services
GICS 2018	50102010	Wireless Telecommunication Services
GICS 2018	50201010	Advertising
GICS 2018	50201020	Broadcasting
GICS 2018	50201030	Cable & Satellite
GICS 2018	50201040	Publishing
GICS 2018	50202010	Movies & Entertainment
GICS 2018	50202020	Interactive Home Entertainment
GICS 2018	50203010	Interactive Media & Services
GICS 2018	55101010	Electric Utilities
GICS 2018	55102010	Gas Utilities
GICS 2018	55103010	Multi-Utilities
GICS 2018	55104010	Water Utilities
GICS 2018	55105010	Independent Power Producers & Energy Traders
GICS 2018	55105020	Renewable Electricity
GICS 2018	60101010	Diversified REITs
GICS 2018	60101020	Industrial REITs
GICS 2018	60101030	Hotel & Resort REITs
GICS 2018	60101040	Office REITs
GICS 2018	60101050	Health Care REITs
GICS 2018	60101060	Residential REITs
GICS 2018	60101070	Retail REITs
GICS 2018	60101080	Specialised REITs
GICS 2018	60102010	Diversified Real Estate Activities
GICS 2018	60102020	Real Estate Operating Companies
GICS 2018	60102030	Real Estate Development
GICS 2018	60102040	Real Estate Services
GICS 2018	ADM	Administration

Sector categorisation	Sector code	Description
GICS 2018	OTH	Others
GICS 2018	SOV	Sovereign
NACE 2	1.11	Growing of cereals (except rice), leguminous crops and oil seeds
NACE 2	1.12	Growing of rice
NACE 2	1.13	Growing of vegetables and melons, roots and tubers
NACE 2	1.14	Growing of sugar cane
NACE 2	1.15	Growing of tobacco
NACE 2	1.16	Growing of fibre crops
NACE 2	1.19	Growing of other non-perennial crops
NACE 2	1.21	Growing of grapes
NACE 2	1.22	Growing of tropical and subtropical fruits
NACE 2	1.23	Growing of citrus fruits
NACE 2	1.24	Growing of pome fruits and stone fruits
NACE 2	1.25	Growing of other tree and bush fruits and nuts
NACE 2	1.26	Growing of oleaginous fruits
NACE 2	1.27	Growing of beverage crops
NACE 2	1.28	Growing of spices, aromatic, drug and pharmaceutical crops
NACE 2	1.29	Growing of other perennial crops
NACE 2	1.3	Plant propagation
NACE 2	1.41	Raising of dairy cattle
NACE 2	1.42	Raising of other cattle and buffaloes
NACE 2	1.43	Raising of horses and other equines
NACE 2	1.44	Raising of camels and camelids
NACE 2	1.45	Raising of sheep and goats
NACE 2	1.46	Raising of swine/pigs
NACE 2	1.47	Raising of poultry
NACE 2	1.49	Raising of other animals
NACE 2	1.5	Mixed farming
NACE 2	1.61	Support activities for crop production
NACE 2	1.62	Support activities for animal production
NACE 2	1.63	Post-harvest crop activities
NACE 2	1.64	Seed processing for propagation
NACE 2	1.7	Hunting, trapping and related service activities
NACE 2	2.1	Silviculture and other forestry activities
NACE 2	2.2	Logging
NACE 2	2.3	Gathering of wild growing non-wood products
NACE 2	2.4	Support services to forestry
NACE 2	3.11	Marine fishing
NACE 2	3.12	Freshwater fishing
NACE 2	3.21	Marine aquaculture

Sector categorisation	Sector code	Description
NACE 2	5.2	Mining of lignite
NACE 2	6.1	Extraction of crude petroleum
NACE 2	6.2	Extraction of natural gas
NACE 2	7.1	Mining of iron ores
NACE 2	7.21	Mining of uranium and thorium ores
NACE 2	7.29	Mining of other non-ferrous metal ores
NACE 2	8.11	Quarrying of ornamental and building stone, limestone, gypsum, chalk and slate
NACE 2	8.12	Operation of gravel and sand pits; mining of clays and kaolin
NACE 2	8.91	Mining of chemical and fertiliser minerals
NACE 2	8.92	Extraction of peat
NACE 2	8.93	Extraction of salt
NACE 2	8.99	Other mining and quarrying n.e.c.
NACE 2	9.1	Support activities for petroleum and natural gas extraction
NACE 2	9.9	Support activities for other mining and quarrying
NACE 2	10.11	Processing and preserving of meat
NACE 2	10.12	Processing and preserving of poultry meat
NACE 2	10.13	Production of meat and poultry meat products
NACE 2	10.2	Processing and preserving of fish, crustaceans and molluscs
NACE 2	10.31	Processing and preserving of potatoes
NACE 2	10.32	Manufacture of fruit and vegetable juice
NACE 2	10.39	Other processing and preserving of fruit and vegetables
NACE 2	10.41	Manufacture of oils and fats
NACE 2	10.42	Manufacture of margarine and similar edible fats
NACE 2	10.51	Operation of dairies and cheese making
NACE 2	10.52	Manufacture of ice cream
NACE 2	10.61	Manufacture of grain mill products
NACE 2	10.62	Manufacture of starches and starch products
NACE 2	10.71	Manufacture of bread; manufacture of fresh pastry goods and cakes
NACE 2	10.72	Manufacture of rusks and biscuits; manufacture of preserved pastry goods and cakes
NACE 2	10.73	Manufacture of macaroni, noodles, couscous and similar farinaceous products
NACE 2	10.81	Manufacture of sugar
NACE 2	10.82	Manufacture of cocoa, chocolate and sugar confectionery
NACE 2	10.83	Processing of tea and coffee
NACE 2	10.84	Manufacture of condiments and seasonings
NACE 2	10.85	Manufacture of prepared meals and dishes
NACE 2	10.86	Manufacture of homogenised food preparations and dietetic food
NACE 2	10.89	Manufacture of other food products n.e.c.
NACE 2	10.91	Manufacture of prepared feeds for farm animals

Sector categorisation	Sector code	Description
NACE 2	10.92	Manufacture of prepared pet foods
NACE 2	11.01	Distilling, rectifying and blending of spirits
NACE 2	11.02	Manufacture of wine from grape
NACE 2	11.03	Manufacture of cider and other fruit wines
NACE 2	11.04	Manufacture of other non-distilled fermented beverages
NACE 2	11.05	Manufacture of beer
NACE 2	11.06	Manufacture of malt
NACE 2	11.07	Manufacture of soft drinks; production of mineral waters and other bottled waters
NACE 2	12	Manufacture of tobacco products
NACE 2	12	Manufacture of tobacco products
NACE 2	13.1	Preparation and spinning of textile fibres
NACE 2	13.2	Weaving of textiles
NACE 2	13.3	Finishing of textiles
NACE 2	13.91	Manufacture of knitted and crocheted fabrics
NACE 2	13.92	Manufacture of made-up textile articles, except apparel
NACE 2	13.93	Manufacture of carpets and rugs
NACE 2	13.94	Manufacture of cordage, rope, twine and netting
NACE 2	13.95	Manufacture of non-wovens and articles made from non-wovens, except apparel
NACE 2	13.96	Manufacture of other technical and industrial textiles
NACE 2	13.99	Manufacture of other textiles n.e.c.
NACE 2	14.11	Manufacture of leather clothes
NACE 2	14.12	Manufacture of workwear
NACE 2	14.13	Manufacture of other outerwear
NACE 2	14.14	Manufacture of underwear
NACE 2	14.19	Manufacture of other wearing apparel and accessories
NACE 2	14.2	Manufacture of articles of fur
NACE 2	14.31	Manufacture of knitted and crocheted hosiery
NACE 2	14.39	Manufacture of other knitted and crocheted apparel
NACE 2	15.11	Tanning and dressing of leather; dressing and dyeing of fur
NACE 2	15.12	Manufacture of luggage, handbags and the like, saddlery and harness
NACE 2	15.2	Manufacture of footwear
NACE 2	16.1	Sawmilling and planing of wood
NACE 2	16.21	Manufacture of veneer sheets and wood-based panels
NACE 2	16.22	Manufacture of assembled parquet floors
NACE 2	16.23	Manufacture of other builders' carpentry and joinery
NACE 2	16.24	Manufacture of wooden containers
NACE 2	16.29	Manufacture of other products of wood; manufacture of articles of cork, straw and plaiting materials

Sector categorisation	Sector code	Description
NACE 2	25.29	Manufacture of other tanks, reservoirs and containers of metal
NACE 2	25.3	Manufacture of steam generators, except central heating hot water boilers
NACE 2	25.4	Manufacture of weapons and ammunition
NACE 2	25.5	Forging, pressing, stamping and roll-forming of metal; powder metallurgy
NACE 2	25.61	Treatment and coating of metals
NACE 2	25.62	Machining
NACE 2	25.71	Manufacture of cutlery
NACE 2	25.72	Manufacture of locks and hinges
NACE 2	25.73	Manufacture of tools
NACE 2	25.91	Manufacture of steel drums and similar containers
NACE 2	25.92	Manufacture of light metal packaging
NACE 2	25.93	Manufacture of wire products, chain and springs
NACE 2	25.94	Manufacture of fasteners and screw machine products
NACE 2	25.99	Manufacture of other fabricated metal products n.e.c.
NACE 2	26.11	Manufacture of electronic components
NACE 2	26.12	Manufacture of loaded electronic boards
NACE 2	26.2	Manufacture of computers and peripheral equipment
NACE 2	26.3	Manufacture of communication equipment
NACE 2	26.4	Manufacture of consumer electronics
NACE 2	26.51	Manufacture of instruments and appliances for measuring, testing and navigation
NACE 2	26.52	Manufacture of watches and clocks
NACE 2	26.6	Manufacture of irradiation, electromedical and electrotherapeutic equipment
NACE 2	26.7	Manufacture of optical instruments and photographic equipment
NACE 2	26.8	Manufacture of magnetic and optical media
NACE 2	27.11	Manufacture of electric motors, generators and transformers
NACE 2	27.12	Manufacture of electricity distribution and control apparatus
NACE 2	27.2	Manufacture of batteries and accumulators
NACE 2	27.31	Manufacture of fibre optic cables
NACE 2	27.32	Manufacture of other electronic and electric wires and cables
NACE 2	27.33	Manufacture of wiring devices
NACE 2	27.4	Manufacture of electric lighting equipment
NACE 2	27.51	Manufacture of electric domestic appliances
NACE 2	27.52	Manufacture of non-electric domestic appliances
NACE 2	27.9	Manufacture of other electrical equipment
NACE 2	28.11	Manufacture of engines and turbines, except aircraft, vehicle and cycle engines

Sector categorisation	Sector code	Description
NACE 2	28.12	Manufacture of fluid power equipment
NACE 2	28.13	Manufacture of other pumps and compressors
NACE 2	28.14	Manufacture of other taps and valves
NACE 2	28.15	Manufacture of bearings, gears, gearing and driving elements
NACE 2	28.21	Manufacture of ovens, furnaces and furnace burners
NACE 2	28.22	Manufacture of lifting and handling equipment
NACE 2	28.23	Manufacture of office machinery and equipment (except computers and peripheral equipment)
NACE 2	28.24	Manufacture of power-driven hand tools
NACE 2	28.25	Manufacture of non-domestic cooling and ventilation equipment
NACE 2	28.29	Manufacture of other general-purpose machinery n.e.c.
NACE 2	28.3	Manufacture of agricultural and forestry machinery
NACE 2	28.41	Manufacture of metal forming machinery
NACE 2	28.49	Manufacture of other machine tools
NACE 2	28.91	Manufacture of machinery for metallurgy
NACE 2	28.92	Manufacture of machinery for mining, quarrying and construction
NACE 2	28.93	Manufacture of machinery for food, beverage and tobacco processing
NACE 2	28.94	Manufacture of machinery for textile, apparel and leather production
NACE 2	28.95	Manufacture of machinery for paper and paperboard production
NACE 2	28.96	Manufacture of plastics and rubber machinery
NACE 2	28.99	Manufacture of other special-purpose machinery n.e.c.
NACE 2	29.1	Manufacture of motor vehicles
NACE 2	29.2	Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers
NACE 2	29.31	Manufacture of electrical and electronic equipment for motor vehicles
NACE 2	29.32	Manufacture of other parts and accessories for motor vehicles
NACE 2	30.11	Building of ships and floating structures
NACE 2	30.12	Building of pleasure and sporting boats
NACE 2	30.2	Manufacture of railway locomotives and rolling stock
NACE 2	30.3	Manufacture of air and spacecraft and related machinery
NACE 2	30.4	Manufacture of military fighting vehicles
NACE 2	30.91	Manufacture of motorcycles
NACE 2	30.92	Manufacture of bicycles and invalid carriages
NACE 2	30.99	Manufacture of other transport equipment n.e.c.
NACE 2	31.01	Manufacture of office and shop furniture
NACE 2	31.02	Manufacture of kitchen furniture
NACE 2	31.03	Manufacture of mattresses
NACE 2	31.09	Manufacture of other furniture
NACE 2	32.11	Striking of coins

Sector categorisation	Sector code	Description
NACE 2	32.91	Manufacture of brooms and brushes
NACE 2	32.99	Other manufacturing n.e.c.
NACE 2	33.11	Repair of fabricated metal products
NACE 2	33.12	Repair of machinery
NACE 2	33.13	Repair of electronic and optical equipment
NACE 2	33.14	Repair of electrical equipment
NACE 2	33.15	Repair and maintenance of ships and boats
NACE 2	33.16	Repair and maintenance of aircraft and spacecraft
NACE 2	33.17	Repair and maintenance of other transport equipment
NACE 2	33.19	Repair of other equipment
NACE 2	33.2	Installation of industrial machinery and equipment
NACE 2	35.11	Production of electricity
NACE 2	35.12	Transmission of electricity
NACE 2	35.13	Distribution of electricity
NACE 2	35.14	Trade of electricity
NACE 2	35.21	Manufacture of gas
NACE 2	35.22	Distribution of gaseous fuels through mains
NACE 2	35.23	Trade of gas through mains
NACE 2	35.3	Steam and air conditioning supply
NACE 2	36	Water collection, treatment and supply
NACE 2	36	Water collection, treatment and supply
NACE 2	37	Sewerage
NACE 2	37	Sewerage
NACE 2	38.11	Collection of non-hazardous waste
NACE 2	38.12	Collection of hazardous waste
NACE 2	38.21	Treatment and disposal of non-hazardous waste
NACE 2	38.22	Treatment and disposal of hazardous waste
NACE 2	38.31	Dismantling of wrecks
NACE 2	38.32	Recovery of sorted materials
NACE 2	39	Remediation activities and other waste management services
NACE 2	39	Remediation activities and other waste management services
NACE 2	41.1	Development of building projects
NACE 2	41.2	Construction of residential and non-residential buildings
NACE 2	42.11	Construction of roads and motorways
NACE 2	42.12	Construction of railways and underground railways
NACE 2	42.13	Construction of bridges and tunnels
NACE 2	42.21	Construction of utility projects for fluids
NACE 2	42.22	Construction of utility projects for electricity and telecommunications
NACE 2	42.91	Construction of water projects

Sector categorisation	Sector code	Description
NACE 2	42.99	Construction of other civil engineering projects n.e.c.
NACE 2	43.11	Demolition
NACE 2	43.12	Site preparation
NACE 2	43.13	Test drilling and boring
NACE 2	43.21	Electrical installation
NACE 2	43.22	Plumbing, heat and air-conditioning installation
NACE 2	43.29	Other construction installation
NACE 2	43.31	Plastering
NACE 2	43.32	Joinery installation
NACE 2	43.33	Floor and wall covering
NACE 2	43.34	Painting and glazing
NACE 2	43.39	Other building completion and finishing
NACE 2	43.91	Roofing activities
NACE 2	43.99	Other specialised construction activities n.e.c.
NACE 2	45.11	Sale of cars and light motor vehicles
NACE 2	45.19	Sale of other motor vehicles
NACE 2	45.2	Maintenance and repair of motor vehicles
NACE 2	45.31	Wholesale trade of motor vehicle parts and accessories
NACE 2	45.32	Retail trade of motor vehicle parts and accessories
NACE 2	45.4	Sale, maintenance and repair of motorcycles and related parts and accessories
NACE 2	46.11	Agents involved in the sale of agricultural raw materials, live animals, textile raw materials and semi-finished goods
NACE 2	46.12	Agents involved in the sale of fuels, ores, metals and industrial chemicals
NACE 2	46.13	Agents involved in the sale of timber and building materials
NACE 2	46.14	Agents involved in the sale of machinery, industrial equipment, ships and aircraft
NACE 2	46.15	Agents involved in the sale of furniture, household goods, hardware and ironmongery
NACE 2	46.16	Agents involved in the sale of textiles, clothing, fur, footwear and leather goods
NACE 2	46.17	Agents involved in the sale of food, beverages and tobacco
NACE 2	46.18	Agents specialised in the sale of other particular products
NACE 2	46.19	Agents involved in the sale of a variety of goods
NACE 2	46.21	Wholesale of grain, unmanufactured tobacco, seeds and animal feeds
NACE 2	46.22	Wholesale of flowers and plants
NACE 2	46.23	Wholesale of live animals
NACE 2	46.24	Wholesale of hides, skins and leather
NACE 2	46.31	Wholesale of fruit and vegetables

Sector categorisation	Sector code	Description
NACE 2	46.37	Wholesale of coffee, tea, cocoa and spices
NACE 2	46.38	Wholesale of other food, including fish, crustaceans and molluscs
NACE 2	46.39	Non-specialised wholesale of food, beverages and tobacco
NACE 2	46.41	Wholesale of textiles
NACE 2	46.42	Wholesale of clothing and footwear
NACE 2	46.43	Wholesale of electrical household appliances
NACE 2	46.44	Wholesale of china and glassware and cleaning materials
NACE 2	46.45	Wholesale of perfume and cosmetics
NACE 2	46.46	Wholesale of pharmaceutical goods
NACE 2	46.47	Wholesale of furniture, carpets and lighting equipment
NACE 2	46.48	Wholesale of watches and jewellery
NACE 2	46.49	Wholesale of other household goods
NACE 2	46.51	Wholesale of computers, computer peripheral equipment and software
NACE 2	46.52	Wholesale of electronic and telecommunications equipment and parts
NACE 2	46.61	Wholesale of agricultural machinery, equipment and supplies
NACE 2	46.62	Wholesale of machine tools
NACE 2	46.63	Wholesale of mining, construction and civil engineering machinery
NACE 2	46.64	Wholesale of machinery for the textile industry and of sewing and knitting machines
NACE 2	46.65	Wholesale of office furniture
NACE 2	46.66	Wholesale of other office machinery and equipment
NACE 2	46.69	Wholesale of other machinery and equipment
NACE 2	46.71	Wholesale of solid, liquid and gaseous fuels and related products
NACE 2	46.72	Wholesale of metals and metal ores
NACE 2	46.73	Wholesale of wood, construction materials and sanitary equipment
NACE 2	46.74	Wholesale of hardware, plumbing and heating equipment and supplies
NACE 2	46.75	Wholesale of chemical products
NACE 2	46.76	Wholesale of other intermediate products
NACE 2	46.77	Wholesale of waste and scrap
NACE 2	46.9	Non-specialised wholesale trade
NACE 2	47.11	Retail sale in non-specialised stores with food, beverages or tobacco predominating
NACE 2	47.19	Other retail sale in non-specialised stores
NACE 2	47.21	Retail sale of fruit and vegetables in specialised stores
NACE 2	47.22	Retail sale of meat and meat products in specialised stores
NACE 2	47.23	Retail sale of fish, crustaceans and molluscs in specialised stores
NACE 2	47.24	Retail sale of bread, cakes, flour confectionery and sugar confectionery in specialised stores

Sector categorisation	Sector code	Description
NACE 2	47.25	Retail sale of beverages in specialised stores
NACE 2	47.26	Retail sale of tobacco products in specialised stores
NACE 2	47.29	Other retail sale of food in specialised stores
NACE 2	47.3	Retail sale of automotive fuel in specialised stores
NACE 2	47.41	Retail sale of computers, peripheral units and software in specialised stores
NACE 2	47.42	Retail sale of telecommunications equipment in specialised stores
NACE 2	47.43	Retail sale of audio and video equipment in specialised stores
NACE 2	47.51	Retail sale of textiles in specialised stores
NACE 2	47.52	Retail sale of hardware, paints and glass in specialised stores
NACE 2	47.53	Retail sale of carpets, rugs, wall and floor coverings in specialised stores
NACE 2	47.54	Retail sale of electrical household appliances in specialised stores
NACE 2	47.59	Retail sale of furniture, lighting equipment and other household articles in specialised stores
NACE 2	47.61	Retail sale of books in specialised stores
NACE 2	47.62	Retail sale of newspapers and stationery in specialised stores
NACE 2	47.63	Retail sale of music and video recordings in specialised stores
NACE 2	47.64	Retail sale of sporting equipment in specialised stores
NACE 2	47.65	Retail sale of games and toys in specialised stores
NACE 2	47.71	Retail sale of clothing in specialised stores
NACE 2	47.72	Retail sale of footwear and leather goods in specialised stores
NACE 2	47.73	Dispensing chemist in specialised stores
NACE 2	47.74	Retail sale of medical and orthopaedic goods in specialised stores
NACE 2	47.75	Retail sale of cosmetic and toilet articles in specialised stores
NACE 2	47.76	Retail sale of flowers, plants, seeds, fertilisers, pet animals and pet food in specialised stores
NACE 2	47.77	Retail sale of watches and jewellery in specialised stores
NACE 2	47.78	Other retail sale of new goods in specialised stores
NACE 2	47.79	Retail sale of second-hand goods in stores
NACE 2	47.81	Retail sale via stalls and markets of food, beverages and tobacco products
NACE 2	47.82	Retail sale via stalls and markets of textiles, clothing and footwear
NACE 2	47.89	Retail sale via stalls and markets of other goods
NACE 2	47.91	Retail sale via mail order houses or via Internet
NACE 2	47.99	Other retail sale not in stores, stalls or markets
NACE 2	49.1	Passenger rail transport, interurban
NACE 2	49.2	Freight rail transport
NACE 2	49.31	Urban and suburban passenger land transport
NACE 2	49.32	Taxi operation
NACE 2	49.39	Other passenger land transport n.e.c.

Sector categorisation	Sector code	Description
NACE 2	50.4	Inland freight water transport
NACE 2	51.1	Passenger air transport
NACE 2	51.21	Freight air transport
NACE 2	51.22	Space transport
NACE 2	52.1	Warehousing and storage
NACE 2	52.21	Service activities incidental to land transportation
NACE 2	52.22	Service activities incidental to water transportation
NACE 2	52.23	Service activities incidental to air transportation
NACE 2	52.24	Cargo handling
NACE 2	52.29	Other transportation support activities
NACE 2	53.1	Postal activities under universal service obligation
NACE 2	53.2	Other postal and courier activities
NACE 2	55.1	Hotels and similar accommodation
NACE 2	55.2	Holiday and other short-stay accommodation
NACE 2	55.3	Camping grounds, recreational vehicle parks and trailer parks
NACE 2	55.9	Other accommodation
NACE 2	56.1	Restaurants and mobile food service activities
NACE 2	56.21	Event catering activities
NACE 2	56.29	Other food service activities
NACE 2	56.3	Beverage serving activities
NACE 2	58.11	Book publishing
NACE 2	58.12	Publishing of directories and mailing lists
NACE 2	58.13	Publishing of newspapers
NACE 2	58.14	Publishing of journals and periodicals
NACE 2	58.19	Other publishing activities
NACE 2	58.21	Publishing of computer games
NACE 2	58.29	Other software publishing
NACE 2	59.11	Motion picture, video and television programme production activities
NACE 2	59.12	Motion picture, video and television programme post-production activities
NACE 2	59.13	Motion picture, video and television programme distribution activities
NACE 2	59.14	Motion picture projection activities
NACE 2	59.2	Sound recording and music publishing activities
NACE 2	60.1	Radio broadcasting
NACE 2	60.2	Television programming and broadcasting activities
NACE 2	61.1	Wired telecommunications activities
NACE 2	61.2	Wireless telecommunications activities
NACE 2	61.3	Satellite telecommunications activities

Sector categorisation	Sector code	Description
NACE 2	61.9	Other telecommunications activities
NACE 2	62.01	Computer programming activities
NACE 2	62.02	Computer consultancy activities
NACE 2	62.03	Computer facilities management activities
NACE 2	62.09	Other information technology and computer service activities
NACE 2	63.11	Data processing, hosting and related activities
NACE 2	63.12	Web portals
NACE 2	63.91	News agency activities
NACE 2	63.99	Other information service activities n.e.c.
NACE 2	64.11	Central banking
NACE 2	64.19	Other monetary intermediation
NACE 2	64.2	Activities of holding companies
NACE 2	64.3	Trusts, funds and similar financial entities
NACE 2	64.91	Financial leasing
NACE 2	64.92	Other credit granting
NACE 2	64.99	Other financial service activities, except insurance and pension funding n.e.c.
NACE 2	65.11	Life insurance
NACE 2	65.12	Non-life insurance
NACE 2	65.2	Reinsurance
NACE 2	65.3	Pension funding
NACE 2	66.11	Administration of financial markets
NACE 2	66.12	Security and commodity contracts brokerage
NACE 2	66.19	Other activities auxiliary to financial services, except insurance and pension funding
NACE 2	66.21	Risk and damage evaluation
NACE 2	66.22	Activities of insurance agents and brokers
NACE 2	66.29	Other activities auxiliary to insurance and pension funding
NACE 2	66.3	Fund management activities
NACE 2	68.1	Buying and selling of own real estate
NACE 2	68.2	Rental and operating of own or leased real estate
NACE 2	68.31	Real estate agencies
NACE 2	68.32	Management of real estate on a fee or contract basis
NACE 2	69.1	Legal activities
NACE 2	69.2	Accounting, bookkeeping and auditing activities; tax consultancy
NACE 2	70.1	Activities of head offices
NACE 2	70.21	Public relations and communication activities
NACE 2	70.22	Business and other management consultancy activities
NACE 2	71.11	Architectural activities
NACE 2	71.12	Engineering activities and related technical consultancy

Sector categorisation	Sector code	Description
NACE 2	73.11	Advertising agencies
NACE 2	73.12	Media representation
NACE 2	73.2	Market research and public opinion polling
NACE 2	74.1	Specialised design activities
NACE 2	74.2	Photographic activities
NACE 2	74.3	Translation and interpretation activities
NACE 2	74.9	Other professional, scientific and technical activities n.e.c.
NACE 2	75	Veterinary activities
NACE 2	75	Veterinary activities
NACE 2	77.11	Rental and leasing of cars and light motor vehicles
NACE 2	77.12	Rental and leasing of trucks
NACE 2	77.21	Rental and leasing of recreational and sports goods
NACE 2	77.22	Rental of video tapes and disks
NACE 2	77.29	Rental and leasing of other personal and household goods
NACE 2	77.31	Rental and leasing of agricultural machinery and equipment
NACE 2	77.32	Rental and leasing of construction and civil engineering machinery and equipment
NACE 2	77.33	Rental and leasing of office machinery and equipment (including computers)
NACE 2	77.34	Rental and leasing of water transport equipment
NACE 2	77.35	Rental and leasing of air transport equipment
NACE 2	77.39	Rental and leasing of other machinery, equipment and tangible goods n.e.c.
NACE 2	77.4	Leasing of intellectual property and similar products, except copy-righted works
NACE 2	78.1	Activities of employment placement agencies
NACE 2	78.2	Temporary employment agency activities
NACE 2	78.3	Other human resources provision
NACE 2	79.11	Travel agency activities
NACE 2	79.12	Tour operator activities
NACE 2	79.9	Other reservation service and related activities
NACE 2	80.1	Private security activities
NACE 2	80.2	Security systems service activities
NACE 2	80.3	Investigation activities
NACE 2	81.1	Combined facilities support activities
NACE 2	81.21	General cleaning of buildings
NACE 2	81.22	Other building and industrial cleaning activities
NACE 2	81.29	Other cleaning activities
NACE 2	81.3	Landscape service activities
NACE 2	82.11	Combined office administrative service activities

Sector categorisation	Sector code	Description
NACE 2	82.19	Photocopying, document preparation and other specialised office support activities
NACE 2	82.2	Activities of call centres
NACE 2	82.3	Organisation of conventions and trade shows
NACE 2	82.91	Activities of collection agencies and credit bureaus
NACE 2	82.92	Packaging activities
NACE 2	82.99	Other business support service activities n.e.c.
NACE 2	84.11	General public administration activities
NACE 2	84.12	Regulation of the activities of providing health care, education, cultural services and other social services, excluding social security
NACE 2	84.13	Regulation of and contribution to more efficient operation of businesses
NACE 2	84.21	Foreign affairs
NACE 2	84.22	Defence activities
NACE 2	84.23	Justice and judicial activities
NACE 2	84.24	Public order and safety activities
NACE 2	84.25	Fire service activities
NACE 2	84.3	Compulsory social security activities
NACE 2	85.1	Pre-primary education
NACE 2	85.2	Primary education
NACE 2	85.31	General secondary education
NACE 2	85.32	Technical and vocational secondary education
NACE 2	85.41	Post-secondary non-tertiary education
NACE 2	85.42	Tertiary education
NACE 2	85.51	Sports and recreation education
NACE 2	85.52	Cultural education
NACE 2	85.53	Driving school activities
NACE 2	85.59	Other education n.e.c.
NACE 2	85.6	Educational support activities
NACE 2	86.1	Hospital activities
NACE 2	86.21	General medical practice activities
NACE 2	86.22	Specialist medical practice activities
NACE 2	86.23	Dental practice activities
NACE 2	86.9	Other human health activities
NACE 2	87.1	Residential nursing care activities
NACE 2	87.2	Residential care activities for mental retardation, mental health and substance abuse
NACE 2	87.3	Residential care activities for the elderly and disabled
NACE 2	87.9	Other residential care activities
NACE 2	88.1	Social work activities without accommodation for the elderly and disabled

Sector categorisation	Sector code	Description
NACE 2	90.04	Operation of arts facilities
NACE 2	91.01	Library and archives activities
NACE 2	91.02	Museums activities
NACE 2	91.03	Operation of historical sites and buildings and similar visitor attractions
NACE 2	91.04	Botanical and zoological gardens and nature reserves activities
NACE 2	92	Gambling and betting activities
NACE 2	92	Gambling and betting activities
NACE 2	93.11	Operation of sports facilities
NACE 2	93.12	Activities of sports clubs
NACE 2	93.13	Fitness facilities
NACE 2	93.19	Other sports activities
NACE 2	93.21	Activities of amusement parks and theme parks
NACE 2	93.29	Other amusement and recreation activities
NACE 2	94.11	Activities of business and employers membership organisations
NACE 2	94.12	Activities of professional membership organisations
NACE 2	94.2	Activities of trade unions
NACE 2	94.91	Activities of religious organisations
NACE 2	94.92	Activities of political organisations
NACE 2	94.99	Activities of other membership organisations n.e.c.
NACE 2	95.11	Repair of computers and peripheral equipment
NACE 2	95.12	Repair of communication equipment
NACE 2	95.21	Repair of consumer electronics
NACE 2	95.22	Repair of household appliances and home and garden equipment
NACE 2	95.23	Repair of footwear and leather goods
NACE 2	95.24	Repair of furniture and home furnishings
NACE 2	95.25	Repair of watches, clocks and jewellery
NACE 2	95.29	Repair of other personal and household goods
NACE 2	96.01	Washing and (dry-)cleaning of textile and fur products
NACE 2	96.02	Hairdressing and other beauty treatment
NACE 2	96.03	Funeral and related activities
NACE 2	96.04	Physical well-being activities
NACE 2	96.09	Other personal service activities n.e.c.
NACE 2	97	Activities of households as employers of domestic personnel
NACE 2	97	Activities of households as employers of domestic personnel
NACE 2	98.1	Undifferentiated goods-producing activities of private households for own use
NACE 2	98.2	Undifferentiated service-producing activities of private households for own use
NACE 2	99	Activities of extraterritorial organisations and bodies
NACE 2	99	Activities of extraterritorial organisations and bodies

Sector categorisation	Sector code	Description
NAICS 2017	111110	Soybean Farming
NAICS 2017	111120	Oilseed (except Soybean) Farming
NAICS 2017	111130	Dry Pea and Bean Farming
NAICS 2017	111140	Wheat Farming
NAICS 2017	111150	Corn Farming
NAICS 2017	111160	Rice Farming
NAICS 2017	111199	Other Grain Farming
NAICS 2017	11121	Vegetable and Melon Farming
NAICS 2017	111320	Citrus (except Orange) Groves
NAICS 2017	111336	Fruit and Tree Nut Combination Farming
NAICS 2017	111339	Other Noncitrus Fruit Farming
NAICS 2017	111419	Other Food Crops Grown Under Cover
NAICS 2017	111422	Floriculture Production
NAICS 2017	111920	Cotton Farming
NAICS 2017	111930	Sugarcane Farming
NAICS 2017	111991	Sugar Beet Farming
NAICS 2017	111998	All Other Miscellaneous Crop Farming
NAICS 2017	112111	Beef Cattle Ranching and Farming
NAICS 2017	112320	Broilers and Other Meat Type Chicken Production
NAICS 2017	112330	Turkey Production
NAICS 2017	112390	Other Poultry Production
NAICS 2017	112511	Finfish Farming and Fish Hatcheries
NAICS 2017	112512	Shellfish Farming
NAICS 2017	112519	Other Aquaculture
NAICS 2017	112990	All Other Animal Production
NAICS 2017	113310	Logging
NAICS 2017	114111	Finfish Fishing
NAICS 2017	114112	Shellfish Fishing
NAICS 2017	114119	Other Marine Fishing
NAICS 2017	115310	Support Activities for Forestry
NAICS 2017	211120	Crude Petroleum Extraction
NAICS 2017	211130	Natural Gas Extraction
NAICS 2017	212111	Bituminous Coal and Lignite Surface Mining
NAICS 2017	212112	Bituminous Coal Underground Mining
NAICS 2017	212113	Anthracite Mining
NAICS 2017	212210	Iron Ore Mining
NAICS 2017	212221	Gold Ore Mining
NAICS 2017	212222	Silver Ore Mining
NAICS 2017	212230	Copper, Nickel, Lead, and Zinc Mining

Sector categorisation	Sector code	Description
NAICS 2017	212319	Other Crushed and Broken Stone Mining and Quarrying
NAICS 2017	212399	All Other Nonmetallic Mineral Mining
NAICS 2017	213111	Drilling Oil and Gas Wells
NAICS 2017	213112	Support Activities for Oil and Gas Operations
NAICS 2017	213113	Support Activities for Coal Mining
NAICS 2017	213114	Support Activities for Metal Mining
NAICS 2017	213115	Support Activities for Nonmetallic Minerals (except Fuels) Mining
NAICS 2017	221111	Hydroelectric Power Generation
NAICS 2017	221112	Fossil Fuel Electric Power Generation
NAICS 2017	221114	Solar Electric Power Generation
NAICS 2017	221115	Wind Electric Power Generation
NAICS 2017	221116	Geothermal Electric Power Generation
NAICS 2017	221117	Biomass Electric Power Generation
NAICS 2017	221121	Electric Bulk Power Transmission and Control
NAICS 2017	221122	Electric Power Distribution
NAICS 2017	221210	Natural Gas Distribution
NAICS 2017	221310	Water Supply and Irrigation Systems
NAICS 2017	221320	Sewage Treatment Facilities
NAICS 2017	221330	Steam and Air-Conditioning Supply
NAICS 2017	236115	New Single-Family Housing Construction (except For-Sale Builders)
NAICS 2017	236116	New Multifamily Housing Construction (except For-Sale Builders)
NAICS 2017	236117	New Housing For-Sale Builders
NAICS 2017	236118	Residential Remodelers
NAICS 2017	236210	Industrial Building Construction
NAICS 2017	236220	Commercial and Institutional Building Construction
NAICS 2017	237310	Civil work Construction
NAICS 2017	311211	Flour Milling
NAICS 2017	311212	Rice Milling
NAICS 2017	311213	Malt Manufacturing
NAICS 2017	31122	Starch and Vegetable Fats and Oils Manufacturing
NAICS 2017	311224	Soybean and Other Oilseed Processing
NAICS 2017	311225	Fats and Oils Refining and Blending
NAICS 2017	311313	Beet Sugar Manufacturing
NAICS 2017	311314	Cane Sugar Manufacturing
NAICS 2017	311340	Nonchocolate Confectionery Manufacturing
NAICS 2017	311351	Chocolate and Confectionery Manufacturing from Cacao Beans
NAICS 2017	311352	Confectionery Manufacturing from Purchased Chocolate
NAICS 2017	311411	Frozen Fruit, Juice, and Vegetable Manufacturing
NAICS 2017	311412	Frozen Specialty Food Manufacturing

Sector categorisation	Sector code	Description
NAICS 2017	311421	Fruit and Vegetable Canning
NAICS 2017	311422	Specialty Canning
NAICS 2017	311423	Dried and Dehydrated Food Manufacturing
NAICS 2017	311511	Fluid Milk Manufacturing
NAICS 2017	311512	Creamery Butter Manufacturing
NAICS 2017	311513	Cheese Manufacturing
NAICS 2017	311514	Dry, Condensed, and Evaporated Dairy Product Manufacturing
NAICS 2017	311520	Ice Cream and Frozen Dessert Manufacturing
NAICS 2017	311611	Animal (except Poultry) Slaughtering
NAICS 2017	311612	Meat Processed from Carcasses
NAICS 2017	311613	Rendering and Meat Byproduct Processing
NAICS 2017	311615	Poultry Processing
NAICS 2017	311710	Seafood Product Preparation and Packaging
NAICS 2017	311999	All Other Miscellaneous Food Manufacturing
NAICS 2017	312111	Soft Drink Manufacturing
NAICS 2017	312120	Breweries
NAICS 2017	312130	Wineries
NAICS 2017	313110	Fiber, Yarn, and Thread Mills
NAICS 2017	313210	Broadwoven Fabric Mills
NAICS 2017	313220	Narrow Fabric Mills and Schiffli Machine Embroidery
NAICS 2017	313230	Nonwoven Fabric Mills
NAICS 2017	313240	Knit Fabric Mills
NAICS 2017	313310	Textile and Fabric Finishing Mills
NAICS 2017	315210	Cut and Sew Apparel Contractors
NAICS 2017	315280	Other Cut and Sew Apparel Manufacturing
NAICS 2017	316210	Footwear Manufacturing
NAICS 2017	316992	Women's Handbag and Purse Manufacturing
NAICS 2017	316998	All Other Leather Good and Allied Product Manufacturing
NAICS 2017	32111	Sawmills and Wood Preservation
NAICS 2017	321113	Sawmills
NAICS 2017	321114	Wood Preservation
NAICS 2017	321211	Hardwood Veneer and Plywood Manufacturing
NAICS 2017	321212	Softwood Veneer and Plywood Manufacturing
NAICS 2017	321213	Engineered Wood Member (except Truss) Manufacturing
NAICS 2017	322110	Pulp Mills
NAICS 2017	322121	Paper (except Newsprint) Mills
NAICS 2017	322122	Newsprint Mills
NAICS 2017	322130	Paperboard Mills
NAICS 2017	322220	Paper Bag and Coated and Treated Paper Manufacturing

Sector categorisation	Sector code	Description
NAICS 2017	323117	Books Printing
NAICS 2017	324110	Petroleum Refineries
NAICS 2017	324191	Petroleum Lubricating Oil and Grease Manufacturing
NAICS 2017	324199	All Other Petroleum and Coal Products Manufacturing
NAICS 2017	325110	Petrochemical Manufacturing
NAICS 2017	325120	Industrial Gas Manufacturing
NAICS 2017	325180	Other Basic Inorganic Chemical Manufacturing
NAICS 2017	325199	All Other Basic Organic Chemical Manufacturing
NAICS 2017	325211	Plastics Material and Resin Manufacturing
NAICS 2017	325220	Artificial and Synthetic Fibers and Filaments Manufacturing
NAICS 2017	325311	Nitrogenous Fertiliser Manufacturing
NAICS 2017	325312	Phosphatic Fertiliser Manufacturing
NAICS 2017	325314	Fertiliser (Mixing Only) Manufacturing
NAICS 2017	325320	Pesticide and Other Agricultural Chemical Manufacturing
NAICS 2017	32541	Pharmaceutical and Medicine Manufacturing
NAICS 2017	325411	Medicinal and Botanical Manufacturing
NAICS 2017	325412	Pharmaceutical Preparation Manufacturing
NAICS 2017	325413	In-Vitro Diagnostic Substance Manufacturing
NAICS 2017	325414	Biological Product (except Diagnostic) Manufacturing
NAICS 2017	325510	Paint and Coating Manufacturing
NAICS 2017	325520	Adhesive Manufacturing
NAICS 2017	325611	Soap and Other Detergent Manufacturing
NAICS 2017	325612	Polish and Other Sanitation Good Manufacturing
NAICS 2017	325613	Surface Active Agent Manufacturing
NAICS 2017	325998	All Other Miscellaneous Chemical Product and Preparation Manufacturing
NAICS 2017	326111	Plastics Bag and Pouch Manufacturing
NAICS 2017	326112	Plastics Packaging Film and Sheet (including Laminated) Manufacturing
NAICS 2017	326113	Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing
NAICS 2017	326121	Unlaminated Plastics Profile Shape Manufacturing
NAICS 2017	326122	Plastics Pipe and Pipe Fitting Manufacturing
NAICS 2017	326130	Laminated Plastics Plate, Sheet (except Packaging), and Shape Manufacturing
NAICS 2017	326140	Polystyrene Foam Product Manufacturing
NAICS 2017	326150	Urethane and Other Foam Product (except Polystyrene) Manufacturing
NAICS 2017	326160	Plastics Bottle Manufacturing
NAICS 2017	326191	Plastics Plumbing Fixture Manufacturing
NAICS 2017	326199	All Other Plastics Product Manufacturing

Sector categorisation	Sector code	Description
NAICS 2017	326211	Tire Manufacturing (except Retreading)
NAICS 2017	326212	Tire Retreading
NAICS 2017	326220	Rubber and Plastics Hoses and Belting Manufacturing
NAICS 2017	326291	Rubber Product Manufacturing for Mechanical Use
NAICS 2017	326299	All Other Rubber Product Manufacturing
NAICS 2017	327110	Pottery, Ceramics, and Plumbing Fixture Manufacturing
NAICS 2017	327120	Clay Building Material and Refractories Manufacturing
NAICS 2017	327211	Flat Glass Manufacturing
NAICS 2017	327212	Other Pressed and Blown Glass and Glassware Manufacturing
NAICS 2017	327213	Glass Container Manufacturing
NAICS 2017	327215	Glass Product Manufacturing Made of Purchased Glass
NAICS 2017	327310	Cement Manufacturing
NAICS 2017	327331	Concrete Block and Brick Manufacturing
NAICS 2017	327332	Concrete Pipe Manufacturing
NAICS 2017	327420	Gypsum Product Manufacturing
NAICS 2017	327993	Mineral Wool Manufacturing
NAICS 2017	327999	All Other Miscellaneous Nonmetallic Mineral Product Manufacturing
NAICS 2017	331110	Iron and Steel Mills and Ferroalloy Manufacturing
NAICS 2017	331210	Iron and Steel Pipe and Tube Manufacturing from Purchased Steel
NAICS 2017	331221	Rolled Steel Shape Manufacturing
NAICS 2017	331222	Steel Wire Drawing
NAICS 2017	331313	Alumina Refining and Primary Aluminum Production
NAICS 2017	331314	Secondary Smelting and Alloying of Aluminum
NAICS 2017	331315	Aluminum Sheet, Plate, and Foil Manufacturing
NAICS 2017	331318	Other Aluminum Rolling, Drawing, and Extruding
NAICS 2017	331420	Copper Rolling, Drawing, Extruding, and Alloying
NAICS 2017	331511	Iron Foundries
NAICS 2017	331512	Steel Investment Foundries
NAICS 2017	331513	Steel Foundries (except Investment)
NAICS 2017	332111	Iron and Steel Forging
NAICS 2017	332215	Metal Kitchen Cookware, Utensil, Cutlery, and Flatware (except Precious) Manufacturing
NAICS 2017	332216	Saw Blade and Handtool Manufacturing
NAICS 2017	332311	Prefabricated Metal Building and Component Manufacturing
NAICS 2017	332431	Metal Can Manufacturing
NAICS 2017	332439	Other Metal Container Manufacturing
NAICS 2017	332812	Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers
NAICS 2017	332991	Ball and Roller Bearing Manufacturing

Sector categorisation	Sector code	Description
NAICS 2017	333241	Food Product Machinery Manufacturing
NAICS 2017	333242	Semiconductor Machinery Manufacturing
NAICS 2017	333243	Sawmill, Woodworking, and Paper Machinery Manufacturing
NAICS 2017	333244	Printing Machinery and Equipment Manufacturing
NAICS 2017	333249	Other Industrial Machinery Manufacturing
NAICS 2017	333413	Industrial and Commercial Fan and Blower and Air Purification Equipment Manufacturing
NAICS 2017	333414	Heating Equipment (except Warm Air Furnaces) Manufacturing
NAICS 2017	333415	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing
NAICS 2017	333517	Machine Tool Manufacturing
NAICS 2017	333519	Rolling Mill and Other Metalworking Machinery Manufacturing
NAICS 2017	333611	Turbine and Turbine Generator Set Units Manufacturing
NAICS 2017	334111	Electronic Computer Manufacturing
NAICS 2017	334210	Telephone Apparatus Manufacturing
NAICS 2017	334220	Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing
NAICS 2017	334413	Semiconductor and Related Device Manufacturing
NAICS 2017	335110	Electric Lamp Bulb and Part Manufacturing
NAICS 2017	335121	Residential Electric Lighting Fixture Manufacturing
NAICS 2017	335122	Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing
NAICS 2017	335129	Other Lighting Equipment Manufacturing
NAICS 2017	335210	Small Electrical Appliance Manufacturing
NAICS 2017	335220	Major Household Appliance Manufacturing
NAICS 2017	335312	Motor and Generator Manufacturing
NAICS 2017	335911	Storage Battery Manufacturing
NAICS 2017	335912	Primary Battery Manufacturing
NAICS 2017	335921	Fiber Optic Cable Manufacturing
NAICS 2017	335929	Other Communication and Energy Wire Manufacturing
NAICS 2017	335991	Carbon and Graphite Product Manufacturing
NAICS 2017	336211	Motor Vehicle Body Manufacturing
NAICS 2017	336320	Motor Vehicle Electrical and Electronic Equipment Manufacturing
NAICS 2017	336411	Aircraft Manufacturing
NAICS 2017	336412	Aircraft Engine and Engine Parts Manufacturing
NAICS 2017	336413	Other Aircraft Parts and Auxiliary Equipment Manufacturing
NAICS 2017	336414	Guided Missile and Space Vehicle Manufacturing
NAICS 2017	336415	Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manufacturing
NAICS 2017	336419	Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing

Sector categorisation	Sector code	Description
NAICS 2017	336510	Railroad Rolling Stock Manufacturing
NAICS 2017	336611	Ship Building and Repairing
NAICS 2017	336991	Motorcycle, Bicycle, and Parts Manufacturing
NAICS 2017	337110	Wood Kitchen Cabinet and Countertop Manufacturing
NAICS 2017	337121	Upholstered Household Furniture Manufacturing
NAICS 2017	337122	Nonupholstered Wood Household Furniture Manufacturing
NAICS 2017	337124	Metal Household Furniture Manufacturing
NAICS 2017	337125	Household Furniture (except Wood and Metal) Manufacturing
NAICS 2017	337127	Institutional Furniture Manufacturing
NAICS 2017	337910	Mattress Manufacturing
NAICS 2017	337920	Blind and Shade Manufacturing
NAICS 2017	339112	Surgical and Medical Instrument Manufacturing
NAICS 2017	339113	Surgical Appliance and Supplies Manufacturing
NAICS 2017	339114	Rental Equipment and Supplies Manufacturing
NAICS 2017	339115	Ophthalmic Goods Manufacturing
NAICS 2017	339116	Dental Laboratories
NAICS 2017	339920	Sporting and Athletic Goods Manufacturing
NAICS 2017	339930	Doll, Toy, and Game Manufacturing
NAICS 2017	339992	Musical Instrument Manufacturing
NAICS 2017	42345	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers
NAICS 2017	42421	Drugs and Druggists' Sundries Merchant Wholesalers
NAICS 2017	424410	General Line Grocery Merchant Wholesalers
NAICS 2017	424420	Packaged Frozen Food Merchant Wholesalers
NAICS 2017	424430	Dairy Product (except Dried or Canned) Merchant Wholesalers
NAICS 2017	424440	Poultry and Poultry Product Merchant Wholesalers
NAICS 2017	424450	Confectionery Merchant Wholesalers
NAICS 2017	424460	Fish and Seafood Merchant Wholesalers
NAICS 2017	424470	Meat and Meat Product Merchant Wholesalers
NAICS 2017	424480	Fresh Fruit and Vegetable Merchant Wholesalers
NAICS 2017	424490	Other Grocery and Related Products Merchant Wholesalers
NAICS 2017	424510	Grain and Field Bean Merchant Wholesalers
NAICS 2017	424520	Livestock Merchant Wholesalers
NAICS 2017	424590	Other Farm Product Raw Material Merchant Wholesalers
NAICS 2017	445110	Supermarkets and Other Grocery (except Convenience) Stores
NAICS 2017	44611	Pharmacies and Drug Stores
NAICS 2017	481111	Scheduled Passenger Air Transportation
NAICS 2017	481112	Scheduled Freight Air Transportation
NAICS 2017	481211	Nonscheduled Chartered Passenger Air Transportation
NAICS 2017	481212	Nonscheduled Chartered Freight Air Transportation

Sector categorisation	Sector code	Description
NAICS 2017	482112	Short Line Railroads
NAICS 2017	483111	Deep Sea Freight Transportation
NAICS 2017	483112	Deep Sea Passenger Transportation
NAICS 2017	483113	Coastal and Great Lakes Freight Transportation
NAICS 2017	483114	Coastal and Great Lakes Passenger Transportation
NAICS 2017	483211	Inland Water Freight Transportation
NAICS 2017	483212	Inland Water Passenger Transportation
NAICS 2017	484110	General Freight Trucking, Local
NAICS 2017	484122	General Freight Trucking, Long-Distance, Less Than Truckload
NAICS 2017	485111	Mixed Mode Transit Systems
NAICS 2017	485112	Commuter Rail Systems
NAICS 2017	485113	Bus and Other Motor Vehicle Transit Systems
NAICS 2017	485119	Other Urban Transit Systems
NAICS 2017	485210	Interurban and Rural Bus Transportation
NAICS 2017	485310	Taxi Service
NAICS 2017	485320	Limousine Service
NAICS 2017	485410	School and Employee Bus Transportation
NAICS 2017	485510	Charter Bus Industry
NAICS 2017	485991	Special Needs Transportation
NAICS 2017	485999	All Other Transit and Ground Passenger Transportation
NAICS 2017	486110	Pipeline Transportation of Crude Oil
NAICS 2017	486210	Pipeline Transportation of Natural Gas
NAICS 2017	486910	Pipeline Transportation of Refined Petroleum Products
NAICS 2017	486990	All Other Pipeline Transportation
NAICS 2017	488119	Other Airport Operations
NAICS 2017	488210	Support Activities for Rail Transportation
NAICS 2017	488310	Port and Harbor Operations
NAICS 2017	488490	Other Support Activities for Road Transportation
NAICS 2017	488999	All Other Support Activities for Transportation
NAICS 2017	493110	General Warehousing and Storage
NAICS 2017	493120	Refrigerated Warehousing and Storage
NAICS 2017	493130	Farm Product Warehousing and Storage
NAICS 2017	49319	Other Warehousing and Storage
NAICS 2017	511110	Newspaper Publishers
NAICS 2017	511120	Periodical Publishers
NAICS 2017	511130	Book Publishers
NAICS 2017	511140	Directory and Mailing List Publishers
NAICS 2017	511191	Greeting Card Publishers
NAICS 2017	511199	All Other Publishers

Sector categorisation	Sector code	Description
NAICS 2017	515111	Radio Networks
NAICS 2017	515112	Radio Stations
NAICS 2017	515120	Television Broadcasting
NAICS 2017	517311	Wired Telecommunications Carriers
NAICS 2017	517312	Wireless Telecommunications Carriers (except Satellite)
NAICS 2017	517911	Telecommunications Resellers
NAICS 2017	517919	All Other Telecommunications
NAICS 2017	519130	Internet Publishing and Broadcasting and Web Search Portals
NAICS 2017	522110	Commercial Banking
NAICS 2017	522291	Consumer Lending
NAICS 2017	522292	Real Estate Credit
NAICS 2017	522293	International Trade Financing
NAICS 2017	522298	All Other Nondepository Credit Intermediation
NAICS 2017	522310	Mortgage and Nonmortgage Loan Brokers
NAICS 2017	522320	Financial Transactions Processing, Reserve, and Clearinghouse Activities
NAICS 2017	522390	Other Activities Related to Credit Intermediation
NAICS 2017	523110	Investment Banking and Securities Dealing
NAICS 2017	523120	Securities Brokerage
NAICS 2017	523210	Securities and Commodity Exchanges
NAICS 2017	523920	Portfolio Management
NAICS 2017	523930	Investment Advice
NAICS 2017	523991	Trust, Fiduciary, and Custody Activities
NAICS 2017	52411	Direct Life, Health, and Medical Insurance Carriers
NAICS 2017	524113	Direct Life Insurance Carriers
NAICS 2017	524114	Direct Health and Medical Insurance Carriers
NAICS 2017	52412	Direct Insurance (except Life, Health, and Medical) Carriers
NAICS 2017	524126	Direct Property and Casualty Insurance Carriers
NAICS 2017	524127	Direct Title Insurance Carriers
NAICS 2017	524128	Other Direct Insurance (except Life, Health, and Medical) Carriers
NAICS 2017	52413	Reinsurance Carriers
NAICS 2017	525910	Open-End Investment Funds
NAICS 2017	525990	Other Financial Vehicles
NAICS 2017	531110	Housing authorities building, owning and operating residential buildings
NAICS 2017	531111	Residential Property Managers
NAICS 2017	531120	Non-Residential Rental or Leasing
NAICS 2017	531130	Lessors of Miniwarehouses and Self-Storage Units
NAICS 2017	531190	Lessors of Other Real Estate Property
NAICS 2017	531312	Nonresidential Property Managers

Sector categorisation	Sector code	Description
NAICS 2017	532120	Truck, Utility Trailer, and RV (Recreational Vehicle) Rental and Leasing
NAICS 2017	53221	Consumer Electronics and Appliances Rental
NAICS 2017	532210	Consumer Electronics and Appliances Rental
NAICS 2017	53228	Other Consumer Goods Rental
NAICS 2017	532310	General Rental Centers
NAICS 2017	532411	Commercial Air, Rail, and Water Transportation Equipment Rental and Leasing
NAICS 2017	532412	Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing
NAICS 2017	532420	Office Machinery and Equipment Rental and Leasing
NAICS 2017	532490	Other Commercial and Industrial Machinery and Equipment Rental and Leasing
NAICS 2017	541330	Engineering Services
NAICS 2017	541350	Building Inspection Services
NAICS 2017	541512	Computer Systems Design Services
NAICS 2017	541613	Marketing Consulting Services
NAICS 2017	541990	All Other Professional, Scientific, and Technical Services
NAICS 2017	561450	Credit Bureaus
NAICS 2017	561510	Travel Agencies
NAICS 2017	561520	Tour Operators
NAICS 2017	561599	All Other Travel Arrangement and Reservation Services
NAICS 2017	562111	Solid Waste Collection
NAICS 2017	562112	Hazardous Waste Collection
NAICS 2017	562119	Other Waste Collection
NAICS 2017	562211	Hazardous Waste Treatment and Disposal
NAICS 2017	562212	Solid Waste Landfill
NAICS 2017	562213	Solid Waste Combustors and Incinerators
NAICS 2017	562219	Other Non-hazardous Waste Treatment and Disposal
NAICS 2017	562910	Remediation Services
NAICS 2017	562920	Materials Recovery Facilities
NAICS 2017	562998	All Other Miscellaneous Waste Management Services
NAICS 2017	611110	Elementary and Secondary Schools
NAICS 2017	611310	Colleges, Universities, and Professional Schools
NAICS 2017	611610	Fine Arts Schools
NAICS 2017	611620	Sports and Recreation Instruction
NAICS 2017	611630	Language Schools
NAICS 2017	611691	Exam Preparation and Tutoring
NAICS 2017	611692	Automobile Driving Schools
NAICS 2017	611699	All Other Miscellaneous Schools and Instruction
NAICS 2017	62111	Offices of Physicians

Sector categorisation	Sector code	Description
NAICS 2017	62121	Offices of Dentists
NAICS 2017	62131	Offices of Chiropractors
NAICS 2017	62132	Offices of Optometrists
NAICS 2017	62133	Offices of Mental Health Practitioners (except Physicians)
NAICS 2017	62134	Offices of Physical, Occupational and Speech Therapists, and Audiologists
NAICS 2017	62139	Offices of All Other Health Practitioners
NAICS 2017	62141	Family Planning Centers
NAICS 2017	62142	Outpatient Mental Health and Substance Abuse Centers
NAICS 2017	621420	Outpatient Mental Health and Substance Abuse Centers
NAICS 2017	62149	Other Outpatient Care Centers
NAICS 2017	621491	HMO Medical Centers
NAICS 2017	621492	Kidney Dialysis Centers
NAICS 2017	621493	Freestanding Ambulatory Surgical and Emergency Centers
NAICS 2017	621498	All Other Outpatient Care Centers
NAICS 2017	621511	Medical Laboratories
NAICS 2017	62161	Home Health Care Services
NAICS 2017	62191	Ambulance Services
NAICS 2017	62199	All Other Ambulatory Health Care Services
NAICS 2017	622110	General Medical and Surgical Hospitals
NAICS 2017	622210	Psychiatric and Substance Abuse Hospitals
NAICS 2017	622310	Specialty (except Psychiatric and Substance Abuse) Hospitals
NAICS 2017	62311	Nursing Care Facilities (Skilled Nursing Facilities)
NAICS 2017	62321	Residential Intellectual and Developmental Disability Facilities
NAICS 2017	62322	Residential Mental Health, and Substance Abuse Facilities
NAICS 2017	62331	Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly
NAICS 2017	62390	Other Residential Care Facilities
NAICS 2017	721110	Hotels (except Casino Hotels) and Motels
NAICS 2017	921110	Executive Offices
NAICS 2017	921120	Legislative Bodies
NAICS 2017	921130	Public Finance Activities
NAICS 2017	92114	Executive and Legislative Offices, Combined
NAICS 2017	921140	Executive and Legislative Offices, Combined
NAICS 2017	921150	American Indian and Alaska Native Tribal Governments
NAICS 2017	92119	Other General Government Support
NAICS 2017	921190	Other General Government Support
NAICS 2017	923110	Administration of Education Programs
NAICS 2017	924110	Administration of Air and Water Resource and Solid Waste Management Programs
NAICS 2017	926120	Regulation and Administration of Transportation Programs

6.4 List of Excluded Countries

GEMs member institutions operate in both EMDEs in developed countries. Institutional judgement is applied when determining the geographical scope of data submitted to GEMs. As GEMs to report risk statistics that reflect the lending activities of member institutions in EMDEs, the overall dataset underlying GEMs publications is filtered based on the submitted counterpart country, according to the following criteria:

- Exclusion of EU member countries that joined prior to 2000;
- Exclusion of countries rated AAA and AA+ as of reporting date;

- Exclusion of selected other countries considered developed;
- Exclusion of dependent overseas territories.

For EU member countries that joined after 2000 (i.e., Bulgaria, Croatia, Cyprus, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia) and non-EU countries, three different sources of country classification—the Human Development Index, the World Bank Group country classification, and the IMF classification—are considered to exclude data starting from the most recent year in which all three sources classified the country as developed.

ISO country code and ISO country name	Exclusion
AD-Andorra	All years
AT-Austria	All years
AU-Australia	All years
BE-Belgium	All years
BM-Bermuda	All years
CA-Canada	All years
CH-Switzerland	All years
CZ-Czechia	Starting 2009
DE-Germany	All years
DK-Denmark	All years
EE-Estonia	Starting 2011
ES-Spain	All years
FI-Finland	All years
FR-France	All years
GB-United Kingdom	All years
GG-Guernsey	All years
GI-Gibraltar	All years
GR-Greece	All years
HK-Hong Kong	All years
HR-Croatia	Starting 2023
IE-Ireland	All years
IM-Isle of Man	All years
IS-Iceland	All years
IT-Italy	All years
JE-Jersey	All years

ISO country code and ISO country name	Exclusion
JP-Japan	All years
LI-Liechtenstein	All years
LT-Lithuania	Starting 2015
LU-Luxembourg	All years
LV-Latvia	Starting 2014
MC-Monaco	All years
MT-Malta	All years
NL-Netherlands	All years
NO-Norway	All years
NZ-New Zealand	All years
PT-Portugal	All years
SE-Sweden	All years
SG-Singapore	All years
SI-Slovenia	Starting 2007
SM-San Marino	All years
SK-Slovakia	Starting 2009
TW-Taiwan, Province of China	All years
UM-United States Minor Outlying Islands	All years
US-United States	All years
VA-Holy See (Vatican City State)	All years



PUBLIC LENDING 1994-2025



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