

# DEFAULT AND RECOVERY STATISTICS

**PRIVATE LENDING  
1994-2024**



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# Preface

The Global Emerging Markets Risk Database Consortium (GEMs) is a joint initiative between 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 which output statistics are produced, encompassing default and recovery rates that are 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/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 combat climate change and achieve the 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 initiative – 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 2024, provided by 22 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 forward 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.

GEMs member institutions participating in this publication:



# 1 Highlights

The figures and tables in this report provide insights into the dataset composition for **private lending**. (Unlike in previous years, private and public lending are now covered in two separate reports. Read about public lending here: *Multilateral development banks and development finance institutions default and recovery statistics: Public lending 1994-2024*.) The two reports also offer statistics with a wider scope than in previous years and delve into the details of the dataset, separating the default and recovery rates along various previously undisclosed dimensions.

Statistical metrics are provided on the underlying distributions of results, allowing readers to gauge the significance of the averages presented for default and recovery rates. As default rate distributions mainly follow a normal distribution, 90% confidence intervals are supplied for all averages. In contrast, for recovery rates – where the distributions are heavily skewed – distribution percentiles are provided.

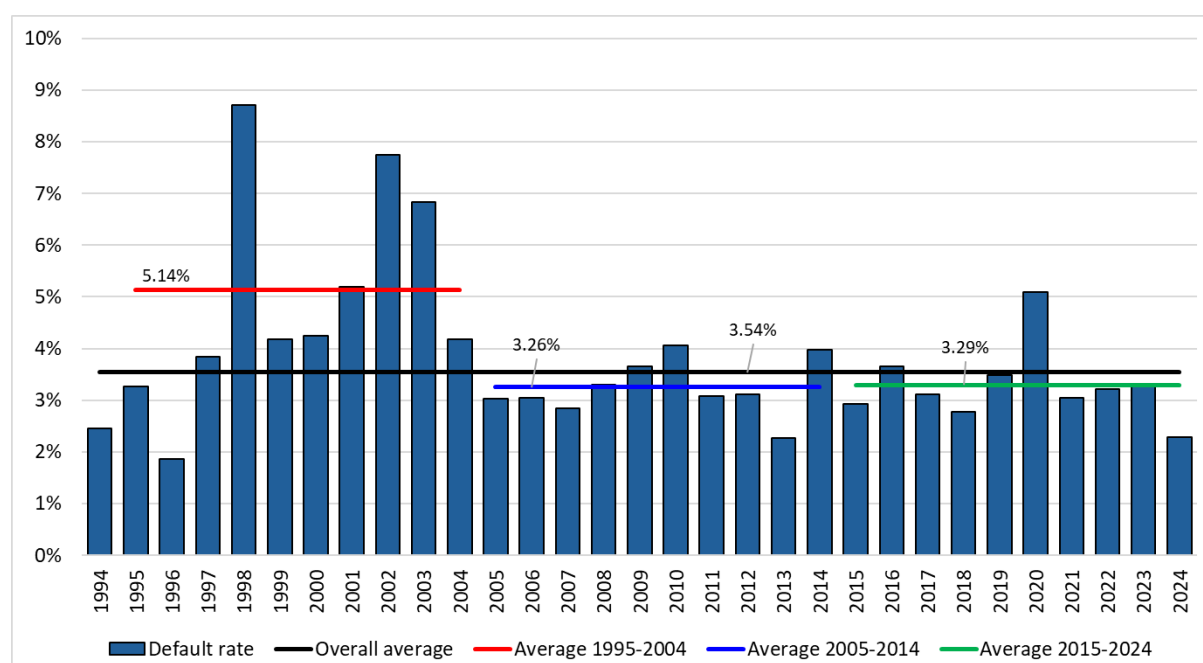
The number of private counterparties has increased compared with the previous edition of this report, [Default and recovery statistics: Private and public lending 1994-2023](#). In addition, over the 1994-2024 reporting period, private counterparties exhibited an overall default rate of 3.54% (90% confidence interval: 3.19%, 3.89%), which is comparable to the result in the previous report (3.56%). (See Table 1; for more information, refer to Section 3.)

Table 1: Overall average default rate

| Counter-parties | Observed years | Number of defaults | Number of observations | Signed amount<br>€ million | Lower of 90%<br>confidence<br>interval | Average<br>default rate | Upper of 90%<br>confidence<br>interval |
|-----------------|----------------|--------------------|------------------------|----------------------------|--|-------------------------|--|
| 10 476          | 31             | 2 101              | 59 361                 | 446 361                    | 3.19%                                  | <b>3.54%</b>            | 3.89%                                  |

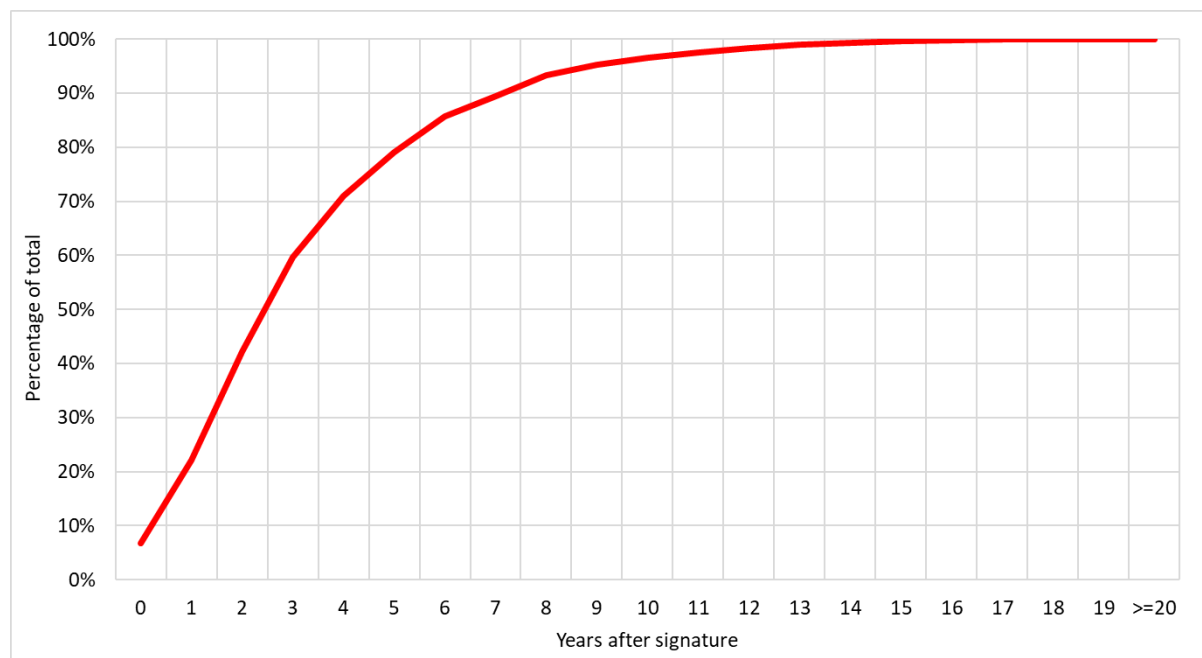
The average default rate for private counterparties was lower between 2005 and 2014 (3.26%) than in the previous decade (5.14% in 1995-2004) and was largely maintained in the following decade (3.29% in 2015-2024). The spike seen in 2020 coincides with the COVID-19 pandemic, which created a challenging business environment across most sectors and economies (Figure 1).

Figure 1: Annual default rates



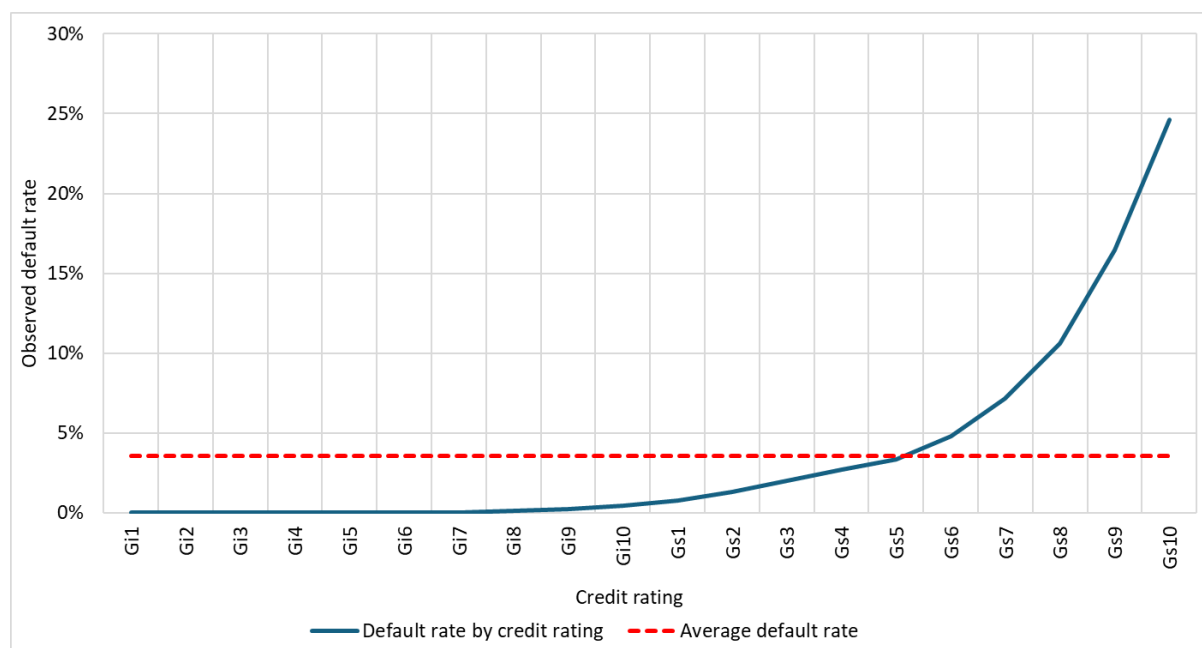
Most defaults occur within the first 12 years after contract signature, with the cumulative percentage of defaults rising sharply during this period. After year 12, the curve plateaus, indicating that very few defaults happen beyond this point (Figure 2).

Figure 2: Time to default



One-year default rates increase steadily as credit ratings deteriorate, with a sharp rise beginning at GEMs rating level Gs4 and peaking at Gs10 (see Figure 3; refer to Table 29 for an explanation of GEMs ratings). The average default rate (red dashed line) serves as a benchmark. It highlights that entities rated Gs6 and below consistently exceed the average, indicating elevated credit risk in these categories.

Figure 3: One-year default rates by credit rating



Recovery rates are calculated at a contract level and reflect a history of 31 years (see Section 4.1). The GEMs database contains 1 801 defaulted contracts with private counterparties.

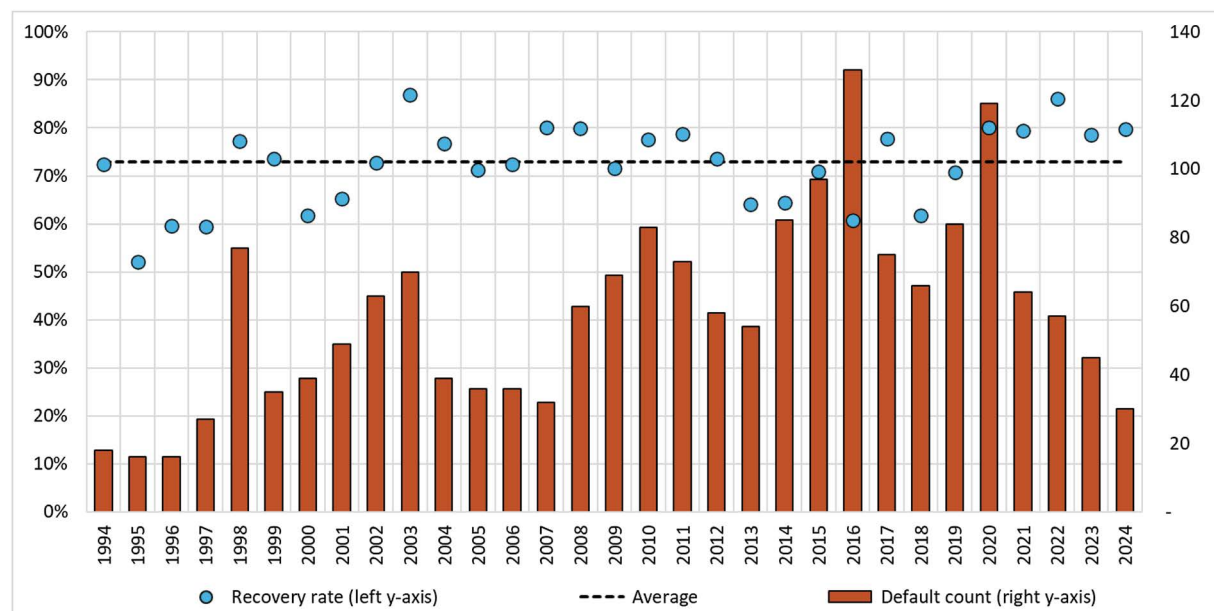
The recovery rates for contracts with private counterparties have an average of 72.9% (unchanged from the 2024 report) and a median of 91.1% (Table 2) compared with an 89.9% median reported in 2024.

Table 2: Overall average recovery rate

| Number of defaults | Signed amount<br>€ million | Average recovery rate | Minimum observation | 10th percentile | 25th percentile | Median | 75th percentile | 90th percentile | Maximum observation |
|--------------------|----------------------------|-----------------------|---------------------|-----------------|-----------------|--------|-----------------|-----------------|---------------------|
| 1 801              | 27 450                     | 72.9%                 | 0.0%                | 11.1%           | 50.6%           | 91.1%  | 99.8%           | 100.0%          | 100.0%              |

Annual recovery rates have remained relatively stable over time, fluctuating only around the long-term average, although with varying numbers of defaults each year (Figure 4). Notably, years with higher default counts do not consistently correspond to lower recovery rates, suggesting resilience in recovery performance across different default cycles.

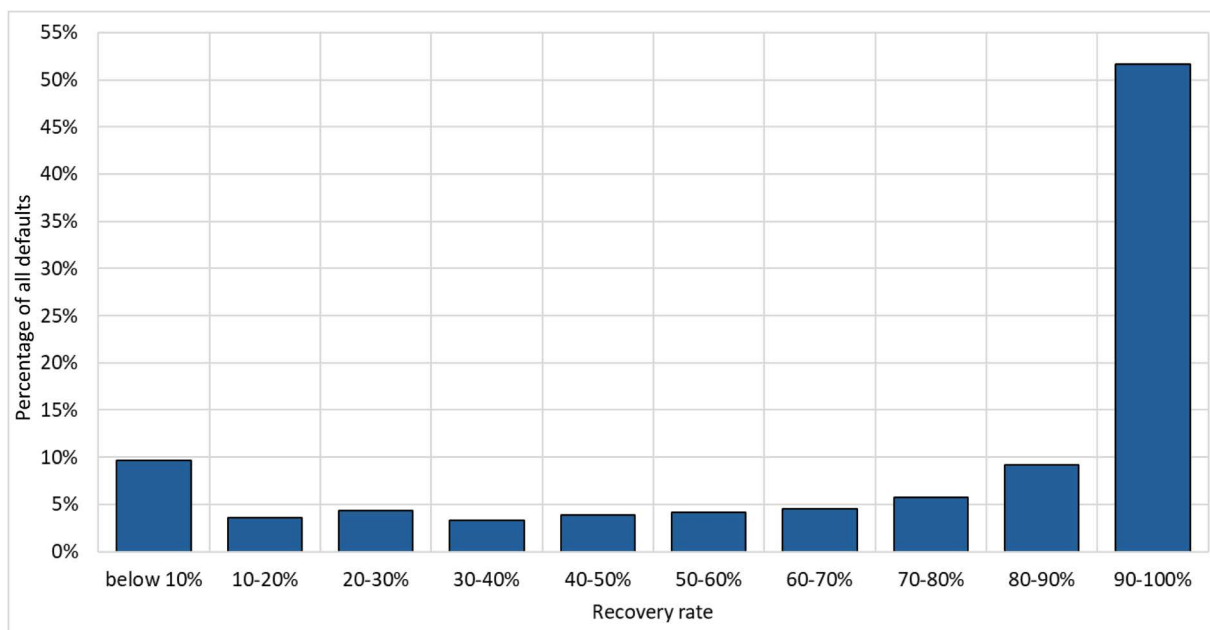
Figure 4: Annual recovery rates



Most defaults result in recovery rates between 90% and 100%, indicating strong overall recovery performance.

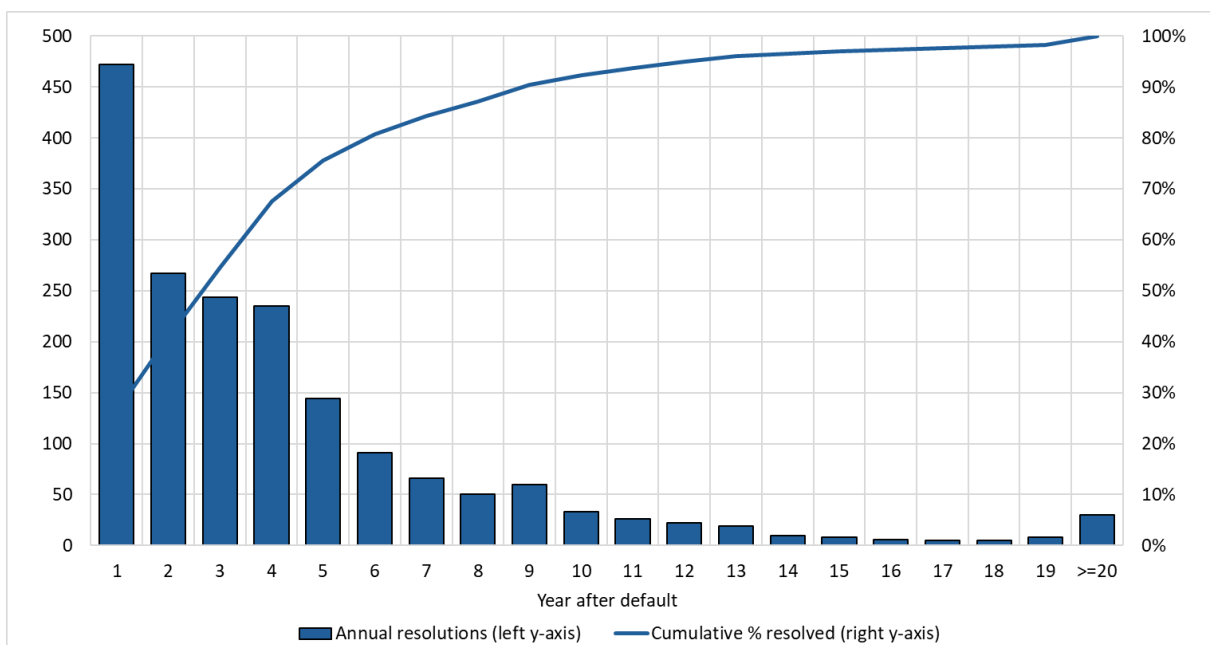
Recovery rates below 70% are much less common, with each accounting for only a small fraction of defaults (Figure 5).

Figure 5: Distribution of recovery rates



Of the defaulted contracts with private counterparties, 68% are recovered within four years of the default event (Figure 6). Only 30 contracts (representing 1.7% of the dataset) took longer than 20 years to recover. The median time to resolution across observations is two to three years.

Figure 6: Time to resolution of defaults



## 2 Characteristics of the private counterparty 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 private counterparties, including a wide range of entities, such as financial institutions and companies. In parallel, separate reports are published with statistics for public counterparties and for sovereign and sovereign-guaranteed lending.

For ease of reporting, this publication excludes equity and non-standard lending products, observations from countries outside the World Bank regional classification system, regional projects not assignable to a single country, and operations provided by GEMs member institutions on behalf of third parties.

### 2.2 Counterparties in the dataset

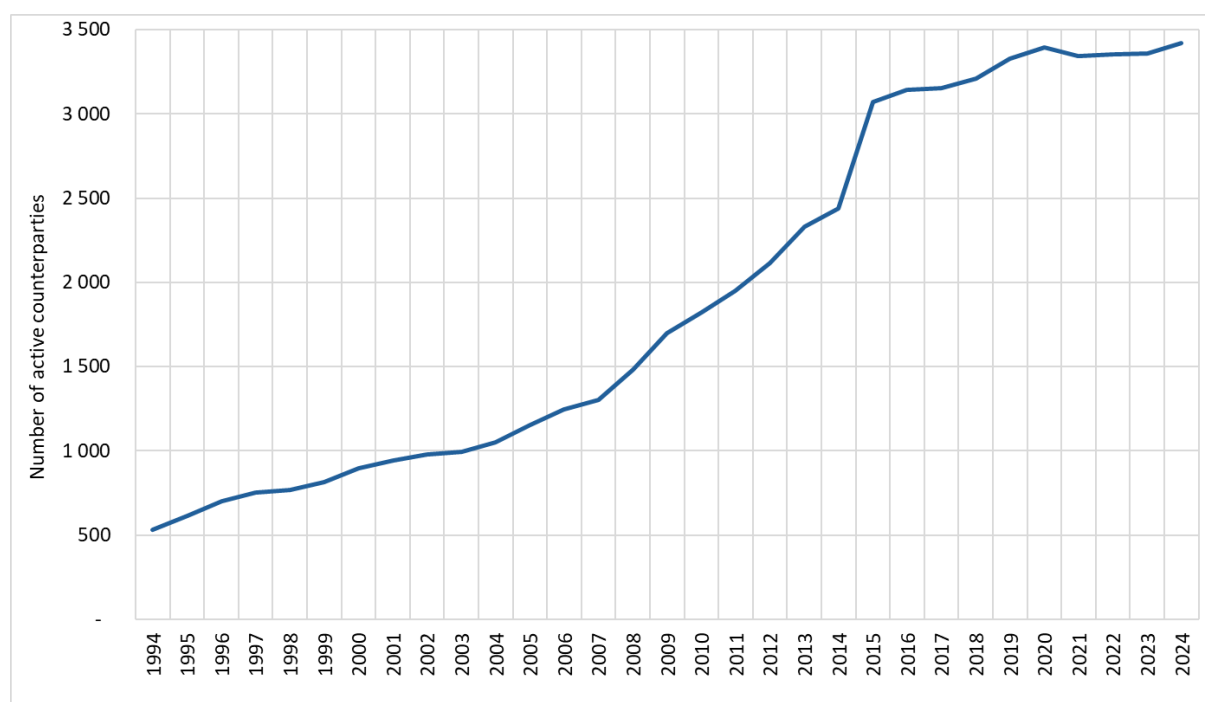
The dataset includes 10 476 private counterparties from a total of 169 developing countries, excluding pre-1990 EU countries and highly rated countries (Table 3). Counterparties from these countries are filtered out either by the submitting institutions or through the quality control performed by the GEMs Secretariat.

Table 3: Dataset composition

| Item                         | Count  |
|------------------------------|--------|
| Counterparties               | 10 476 |
| Contracts                    | 15 507 |
| Defaulted counterparties     | 2 101  |
| Contracts for recovery rates | 1 801  |

The private counterparties included in the dataset have not necessarily been active throughout the 31-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 7).

Figure 7: Active counterparties for observation period





## 3 Default rate statistics

### 3.1 Default rate methodology

#### 3.1.1 Definition

A default event can occur in seven ways:

- non-payment beyond 90 days of the loan being due;
- a specific provision raised for a contract;
- write-off of an outstanding amount (full or partial);
- agreement to pre-emptive restructuring;
- agreement to distressed restructuring;
- the borrower entering bankruptcy;
- realisation of the loan's security.

#### 3.1.2 Calculations

Default rates are calculated at the counterparty level. During each year of the reporting observation period, counterparties can either default or exit a portfolio (that is, maturing contractual obligations). The number of active counterparties is determined at the beginning of each year. The average annual default rate is calculated based on a weighted average that considers the number of observations. This approach is aimed at moderating the impact of outliers compared with the (unweighted) mean of the annual default rates.

Annual default rates are calculated as:

Equation 1: Annual default rate for year  $i$

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

Where:

$d_i$  = Number of new defaults of counterparties during year  $i$

$w_i$  = Number of performing counterparties as of 1 January of year  $i$

Annual default rates are averaged using the number of performing counterparties as of 1 January of each year as weights:

Equation 2: Average annual default rate

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

Where:

$N$  = Number of years

Weighted standard deviations of annual default rates are calculated using the number of performing counterparties as of 1 January of each year as weights:

Equation 3: Standard deviation of annual default rates

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

Where:

$N$  = Number of years

$w_i$  = Number of performing counterparties as of 1 January of year  $i$

$x_i$  = Default rate for year  $i$

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

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

Equation 4: Confidence intervals for annual default rates

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

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

Where:

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

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

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 levels provided across the different figures along the mean values supply insights into the distribution of the underlying data dimension category.

## 3.2 Overall default rate results

Table 4 presents the annual default rates of private counterparties. The increase in the number of counterparties after 2015 may be attributed to expanding operations in emerging markets and developing economies by GEMs members, as reported in the data submission content. The downward trend in default rates reflects the lower numbers of defaults as a percentage of active counterparties. The effects of the COVID-19 pandemic are evident in 2020, when the defaults increased by 49% compared with the preceding year.

Table 4: Annual default rates

| Year           | Signed amount<br>€ million | Number of<br>defaults | Active<br>counterparties | Default rate |
|----------------|----------------------------|-----------------------|--------------------------|--------------|
| 1994           | 7 922                      | 13                    | 530                      | 2.45%        |
| 1995           | 10 863                     | 20                    | 613                      | 3.26%        |
| 1996           | 14 746                     | 13                    | 700                      | 1.86%        |
| 1997           | 17 273                     | 29                    | 754                      | 3.85%        |
| 1998           | 19 274                     | 67                    | 769                      | 8.71%        |
| 1999           | 21 607                     | 34                    | 815                      | 4.17%        |
| 2000           | 27 400                     | 38                    | 896                      | 4.24%        |
| 2001           | 29 836                     | 49                    | 942                      | 5.20%        |
| 2002           | 35 432                     | 76                    | 980                      | 7.76%        |
| 2003           | 39 134                     | 68                    | 995                      | 6.83%        |
| 2004           | 47 796                     | 44                    | 1 053                    | 4.18%        |
| 2005           | 53 218                     | 35                    | 1 155                    | 3.03%        |
| 2006           | 60 067                     | 38                    | 1 245                    | 3.05%        |
| 2007           | 65 422                     | 37                    | 1 303                    | 2.84%        |
| 2008           | 74 982                     | 49                    | 1 484                    | 3.30%        |
| 2009           | 85 585                     | 62                    | 1 697                    | 3.65%        |
| 2010           | 94 478                     | 74                    | 1 819                    | 4.07%        |
| 2011           | 103 205                    | 60                    | 1 948                    | 3.08%        |
| 2012           | 114 337                    | 66                    | 2 115                    | 3.12%        |
| 2013           | 131 087                    | 53                    | 2 328                    | 2.28%        |
| 2014           | 137 958                    | 97                    | 2 440                    | 3.98%        |
| 2015           | 171 555                    | 90                    | 3 071                    | 2.93%        |
| 2016           | 180 298                    | 115                   | 3 143                    | 3.66%        |
| 2017           | 196 269                    | 98                    | 3 155                    | 3.11%        |
| 2018           | 206 027                    | 89                    | 3 209                    | 2.77%        |
| 2019           | 216 576                    | 116                   | 3 327                    | 3.49%        |
| 2020           | 224 029                    | 173                   | 3 396                    | 5.09%        |
| 2021           | 222 993                    | 102                   | 3 343                    | 3.05%        |
| 2022           | 224 376                    | 108                   | 3 354                    | 3.22%        |
| 2023           | 229 319                    | 110                   | 3 360                    | 3.27%        |
| 2024           | 240 900                    | 78                    | 3 422                    | 2.28%        |
| <b>Overall</b> |                            | <b>2 101</b>          | <b>59 361</b>            | <b>3.54%</b> |

Table 5 shows the time to default across various regions. Sub-Saharan Africa records the highest number of defaults (780), followed by Europe and Central Asia (657) and Latin America and the Caribbean (400). East Asia and the Pacific (189), the Middle East and North Africa (175) and South Asia (153) report moderate figures, while the “other” category accounts for the lowest number of defaults (47).

The second table in Table 5 presents the cumulative percentages of total defaults over time. It shows that significant defaults occur within the first few years after signature. Full realisation of defaults extends up to 18 years, but the pace and timing vary significantly, highlighting regional differences in credit risk dynamics.

Table 5: Time to default – regions

| Region                     | Number of defaults |   |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |      |
|----------------------------|--------------------|---|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|
|                            | Total              | Time of default (years after signature) |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |      |
|                            |                    | 0                                       | 1   | 2   | 3   | 4   | 5   | 6   | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | >=20 |
| East Asia & Pacific        | 189                | 6                                       | 34  | 50  | 29  | 22  | 18  | 18  | 5  | 5  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0    |
| Europe & Central Asia      | 657                | 41                                      | 124 | 150 | 136 | 76  | 59  | 24  | 15 | 15 | 9  | 2  | 0  | 2  | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0    |
| Latin America & Caribbean  | 400                | 19                                      | 57  | 72  | 67  | 52  | 30  | 29  | 20 | 20 | 10 | 7  | 5  | 4  | 2  | 1  | 1  | 2  | 0  | 1  | 1  | 0    |
| Middle East & North Africa | 175                | 5                                       | 17  | 27  | 29  | 14  | 15  | 9   | 16 | 11 | 1  | 3  | 5  | 7  | 9  | 3  | 1  | 1  | 1  | 1  | 0  | 0    |
| South Asia                 | 153                | 8                                       | 18  | 27  | 19  | 22  | 18  | 13  | 10 | 4  | 5  | 3  | 3  | 2  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0    |
| Sub-Saharan Africa         | 780                | 78                                      | 113 | 141 | 130 | 82  | 52  | 66  | 20 | 36 | 22 | 16 | 7  | 7  | 2  | 4  | 2  | 2  | 0  | 0  | 0  | 0    |
| Other                      | 47                 | 5                                       | 8   | 12  | 9   | 5   | 1   | 2   | 3  | 1  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0    |
| All regions                | 2 401              | 162                                     | 371 | 479 | 419 | 273 | 193 | 161 | 89 | 92 | 48 | 33 | 20 | 22 | 15 | 9  | 5  | 6  | 1  | 0  | 0  | 3    |

| Region                     | Total defaults | Percentage of total defaults (cumulative) |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |
|----------------------------|----------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|
|                            |                | Time of default (years after signature)   |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |
|                            |                | 0   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | >=20 |
| East Asia & Pacific        | 189            | 3%  | 21% | 48% | 63% | 75% | 84% | 94% | 96% | 99% | 99% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Europe & Central Asia      | 657            | 6%  | 25% | 48% | 69% | 80% | 89% | 93% | 95% | 97% | 99% | 99%  | 99%  | 99%  | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Latin America & Caribbean  | 400            | 5%  | 19% | 37% | 54% | 67% | 74% | 82% | 87% | 92% | 94% | 96%  | 97%  | 98%  | 99%  | 99%  | 99%  | 100% | 100% | 100% | 100% | 100% |
| Middle East & North Africa | 175            | 3%  | 13% | 28% | 45% | 53% | 61% | 66% | 75% | 82% | 82% | 84%  | 87%  | 91%  | 96%  | 98%  | 98%  | 99%  | 99%  | 100% | 100% | 100% |
| South Asia                 | 153            | 5%  | 17% | 35% | 47% | 61% | 73% | 82% | 88% | 91% | 94% | 96%  | 98%  | 99%  | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Sub-Saharan Africa         | 780            | 10%                                       | 24% | 43% | 59% | 70% | 76% | 85% | 87% | 92% | 95% | 97%  | 98%  | 99%  | 99%  | 99%  | 100% | 100% | 100% | 100% | 100% | 100% |
| Other                      | 47             | 11%                                       | 28% | 53% | 72% | 83% | 85% | 89% | 96% | 98% | 98% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| All regions                | 2 401          | 7%  | 22% | 42% | 60% | 71% | 79% | 86% | 89% | 93% | 95% | 97%  | 97%  | 98%  | 99%  | 99%  | 100% | 100% | 100% | 100% | 100% | 100% |

The dataset is categorised into industry sectors based on the [Global Industry Classification Standard \(GICS\)](#) 2018, a widely recognised industry standard. In addition, contributing institutions may categorise some sectors as “administration” or “other.”

Table 6 shows the time to default across GICS sectors. Financials, consumer staples and utilities are among the sectors with the highest number of defaults, particularly concentrated in the early years following contract signature. The financials sector shows a sharp spike in defaults in the first year and, along with utilities and consumer staples, exhibits strong early default patterns.

Table 6: Time to default – GICS sectors

| GICS sector            | Number of defaults |   |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |      |
|------------------------|--------------------|---|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|
|                        | Total              | Time of default (years after signature) |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |      |
|                        |                    | 0                                       | 1   | 2   | 3   | 4   | 5   | 6   | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | >=20 |
| Administration         |                    |   |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |      |
| Communication services | 61                 | 2                                       | 15  | 10  | 13  | 6   | 4   | 4   | 3  | 2  | 0  | 0  | 0  | 2  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0    |
| Consumer discretionary | 247                | 10                                      | 35  | 56  | 33  | 30  | 23  | 23  | 8  | 14 | 7  | 2  | 3  | 1  | 0  | 1  | 0  | 0  | 1  | 0  | 0  | 0    |
| Consumer staples       | 385                | 24                                      | 67  | 81  | 81  | 46  | 39  | 19  | 8  | 6  | 2  | 6  | 2  | 0  | 1  | 0  | 2  | 1  | 0  | 0  | 0  | 0    |
| Energy                 | 47                 | 1                                       | 9   | 12  | 8   | 4   | 5   | 4   | 1  | 0  | 0  | 1  | 0  | 0  | 2  | 0  | 0  | 0  | 0  | 0  | 0  | 0    |
| Financials             | 552                | 67                                      | 98  | 104 | 102 | 60  | 37  | 29  | 15 | 21 | 5  | 2  | 2  | 4  | 3  | 2  | 1  | 0  | 0  | 0  | 0  | 0    |
| Health care            | 75                 | 1                                       | 11  | 16  | 16  | 13  | 4   | 4   | 4  | 2  | 0  | 3  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0    |
| Industrials            | 170                | 11                                      | 25  | 33  | 34  | 22  | 11  | 14  | 6  | 4  | 3  | 1  | 1  | 1  | 2  | 1  | 0  | 1  | 0  | 0  | 0  | 0    |
| Information technology |                    |   |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |      |
| Materials              | 240                | 12                                      | 31  | 52  | 35  | 20  | 20  | 18  | 16 | 15 | 6  | 7  | 2  | 2  | 0  | 3  | 0  | 1  | 0  | 0  | 0  | 0    |
| Real estate            | 40                 | 0                                       | 6   | 10  | 8   | 6   | 4   | 3   | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0    |
| Utilities              | 303                | 21                                      | 39  | 63  | 54  | 37  | 22  | 20  | 9  | 12 | 8  | 7  | 2  | 7  | 1  | 0  | 1  | 0  | 0  | 0  | 0  | 0    |
| Others                 | 270                | 12                                      | 33  | 41  | 32  | 28  | 23  | 23  | 18 | 14 | 15 | 4  | 7  | 5  | 6  | 2  | 1  | 3  | 0  | 0  | 0  | 3    |
| All sectors            | 2 401              | 162                                     | 371 | 479 | 419 | 273 | 193 | 161 | 89 | 92 | 48 | 33 | 20 | 22 | 15 | 9  | 5  | 6  | 1  | 0  | 0  | 3    |

| GICS sector            | Total defaults | Percentage of total defaults (cumulative) |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |      |
|------------------------|----------------|---|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|
|                        |                | Time of default (years after signature)   |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |      |
|                        |                | 0   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | >=20 |
| Administration         |                |   |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |      |
| Communication services | 61             | 3%  | 28% | 44% | 66% | 75% | 82% | 89% | 93% | 97% | 97%  | 97%  | 97%  | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Consumer discretionary | 247            | 4%  | 18% | 41% | 54% | 66% | 76% | 85% | 88% | 94% | 97%  | 98%  | 99%  | 99%  | 99%  | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Consumer staples       | 385            | 6%  | 24% | 45% | 66% | 78% | 88% | 93% | 95% | 96% | 97%  | 98%  | 99%  | 99%  | 99%  | 99%  | 100% | 100% | 100% | 100% | 100% | 100% |
| Energy                 | 47             | 2%  | 21% | 47% | 64% | 72% | 83% | 91% | 94% | 94% | 94%  | 96%  | 96%  | 96%  | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Financials             | 552            | 12%                                       | 30% | 49% | 67% | 78% | 85% | 90% | 93% | 97% | 97%  | 98%  | 98%  | 99%  | 99%  | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Health care            | 75             | 1%  | 16% | 37% | 59% | 76% | 81% | 87% | 92% | 95% | 95%  | 99%  | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Industrials            | 170            | 6%  | 21% | 41% | 61% | 74% | 80% | 88% | 92% | 94% | 96%  | 96%  | 97%  | 98%  | 99%  | 99%  | 99%  | 100% | 100% | 100% | 100% | 100% |
| Information technology |                |   |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |      |
| Materials              | 240            | 5%  | 18% | 40% | 54% | 63% | 71% | 78% | 85% | 91% | 94%  | 97%  | 98%  | 98%  | 98%  | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Real estate            | 40             | 0%  | 15% | 40% | 60% | 75% | 85% | 93% | 95% | 98% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Utilities              | 303            | 7%  | 20% | 41% | 58% | 71% | 78% | 84% | 87% | 91% | 94%  | 96%  | 97%  | 99%  | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Others                 | 270            | 4%  | 17% | 32% | 44% | 54% | 63% | 71% | 78% | 83% | 89%  | 90%  | 93%  | 94%  | 97%  | 97%  | 98%  | 99%  | 99%  | 99%  | 99%  | 100% |
| All sectors            | 2 401          | 7%  | 22% | 42% | 60% | 71% | 79% | 86% | 89% | 93% | 95%  | 97%  | 97%  | 98%  | 99%  | 99%  | 100% | 100% | 100% | 100% | 100% | 100% |

Table 7: Time to default – sector groupings

| Sector groupings           | Number of defaults |   |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |      |
|----------------------------|--------------------|---|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|
|                            | Total              | Time of default (years after signature) |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |      |
|                            |                    | 0                                       | 1   | 2   | 3   | 4   | 5   | 6   | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | >=20 |
| Financial institutions     | 552                | 67                                      | 98  | 104 | 102 | 60  | 37  | 29  | 15 | 21 | 5  | 2  | 2  | 4  | 3  | 2  | 1  | 0  | 0  | 0  | 0  | 0    |
| Non-financial institutions | 1 849              | 95                                      | 273 | 375 | 317 | 213 | 156 | 132 | 74 | 71 | 43 | 31 | 18 | 18 | 12 | 7  | 4  | 6  | 1  | 0  | 0  | 3    |
| Banking                    | 398                | 59                                      | 68  | 69  | 76  | 41  | 26  | 23  | 11 | 15 | 3  | 1  | 0  | 3  | 2  | 1  | 0  | 0  | 0  | 0  | 0  | 0    |
| Infrastructure             | 429                | 22                                      | 62  | 91  | 83  | 55  | 36  | 34  | 13 | 13 | 10 | 3  | 1  | 4  | 2  | 0  | 0  | 0  | 0  | 0  | 0  | 0    |
| Non-bank financials        | 154                | 8                                       | 30  | 35  | 26  | 19  | 11  | 6   | 4  | 6  | 2  | 1  | 2  | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0    |
| Renewables                 | 185                | 11                                      | 25  | 43  | 34  | 26  | 16  | 12  | 3  | 6  | 7  | 1  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0    |
| Services                   | 185                | 9                                       | 33  | 36  | 29  | 25  | 16  | 14  | 7  | 5  | 1  | 0  | 2  | 2  | 2  | 2  | 1  | 1  | 0  | 0  | 0  | 0    |
| All sectors *              | 2 401              | 162                                     | 371 | 479 | 419 | 273 | 193 | 161 | 89 | 92 | 48 | 33 | 20 | 22 | 15 | 9  | 5  | 6  | 1  | 0  | 0  | 3    |

| Sector groupings           | Total defaults | Percentage of total defaults (cumulative) |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
|----------------------------|----------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|
|                            |                | Time of default (years after signature)   |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |
|                            |                | 0   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | >=20 |
| Financial institutions     | 552            | 12%                                       | 30% | 49% | 67% | 78% | 85% | 90% | 93% | 97% | 97% | 98% | 98% | 99%  | 99%  | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Non-financial institutions | 1 849          | 5%  | 20% | 40% | 57% | 69% | 77% | 84% | 88% | 92% | 95% | 96% | 97% | 98%  | 99%  | 99%  | 99%  | 100% | 100% | 100% | 100% | 100% |
| Banking                    | 398            | 15%                                       | 32% | 49% | 68% | 79% | 85% | 91% | 94% | 97% | 98% | 98% | 98% | 99%  | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Infrastructure             | 429            | 5%  | 20% | 41% | 60% | 73% | 81% | 89% | 92% | 95% | 98% | 98% | 99% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Non-bank financials        | 154            | 5%  | 25% | 47% | 64% | 77% | 84% | 88% | 90% | 94% | 95% | 96% | 97% | 98%  | 99%  | 99%  | 100% | 100% | 100% | 100% | 100% | 100% |
| Renewables                 | 185            | 6%  | 19% | 43% | 61% | 75% | 84% | 90% | 92% | 95% | 99% | 99% | 99% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Services                   | 185            | 5%  | 23% | 42% | 58% | 71% | 80% | 88% | 91% | 94% | 95% | 95% | 96% | 97%  | 98%  | 99%  | 99%  | 100% | 100% | 100% | 100% | 100% |
| All sectors *              | 2 401          | 7%  | 22% | 42% | 60% | 71% | 79% | 86% | 89% | 93% | 95% | 97% | 97% | 98%  | 99%  | 99%  | 100% | 100% | 100% | 100% | 100% | 100% |

\*Note: The sum of the individual groupings exceeds the total as counterparties can be part of multiple groups

## 3.3 Default rates by region

### 3.3.1 Default rates by World Bank region

The country and region assigned to each counterparty in the dataset represent the location of the main legal address of the borrower. The statistics in this section are based on the [World Bank classification of countries to regions](#).

Among the private counterparties, 55.8% are in Europe and Central Asia and Latin America and the Caribbean, representing around 45% of the observed defaults. The highest average default rate is observed in sub-Saharan Africa, followed by the East Asia and Pacific region.

Table 8: Default rates by World Bank region

| World Bank region                     | Counter-parties | Observed years | Number of defaults | Number of observations | Signed amount<br>€ million | Lower of 90%<br>confidence<br>interval | Average<br>default rate | Upper of 90%<br>confidence<br>interval |
|---------------------------------------|-----------------|----------------|--------------------|------------------------|----------------------------|--|-------------------------|--|
| East Asia & Pacific                   | 927             | 31             | 184                | 4 732                  | 41 675                     | 2.89%                                  | 3.89%                   | 4.89%                                  |
| Europe & Central Asia                 | 3 543           | 31             | 573                | 20 888                 | 141 719                    | 2.29%                                  | 2.74%                   | 3.20%                                  |
| Latin America & Caribbean             | 2 305           | 31             | 372                | 12 771                 | 94 130                     | 2.28%                                  | 2.91%                   | 3.55%                                  |
| Middle East & North Africa            | 704             | 31             | 148                | 4 361                  | 31 100                     | 2.61%                                  | 3.39%                   | 4.18%                                  |
| South Asia                            | 898             | 31             | 158                | 4 823                  | 33 902                     | 2.20%                                  | 3.28%                   | 4.36%                                  |
| Sub-Saharan Africa                    | 1 800           | 31             | 626                | 10 348                 | 75 299                     | 5.46%                                  | 6.05%                   | 6.63%                                  |
| Overall, including omitted categories | 10 476          | 31             | 2 101              | 59 361                 | 446 361                    | 3.19%                                  | 3.54%                   | 3.89%                                  |

Figure 8: Default rates by World Bank region

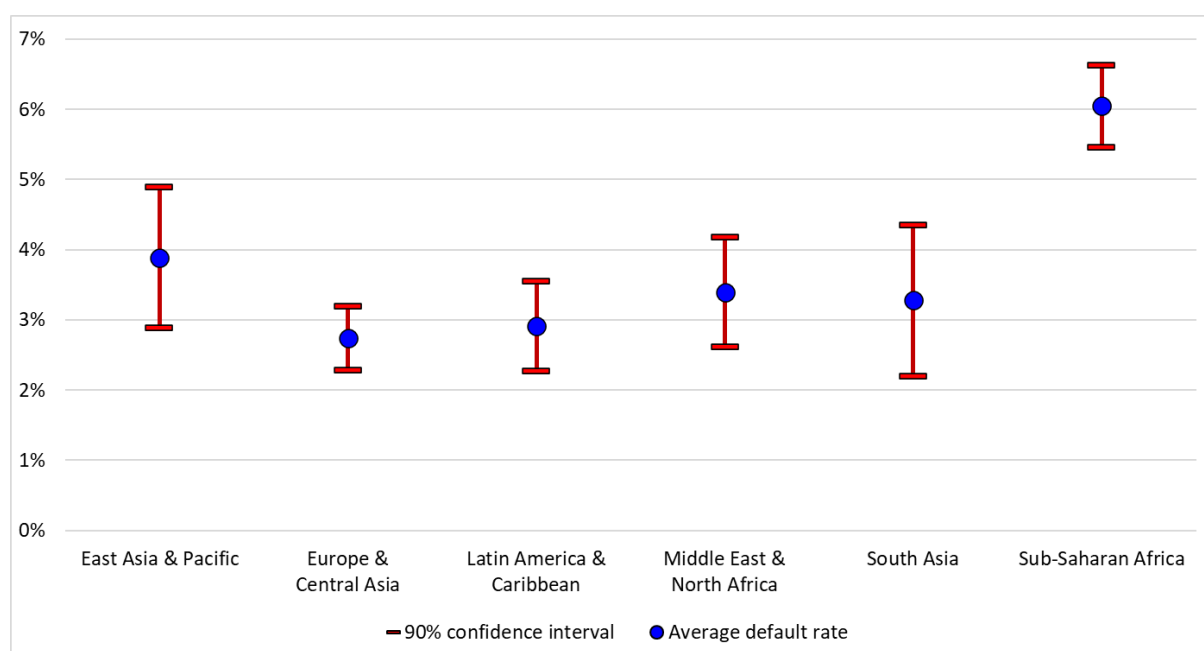


Table 9: Annual default rates by World Bank region

|                      | East Asia & Pacific | Europe & Central Asia | Latin America & Caribbean | Middle East & North Africa | South Asia | Sub-Saharan Africa |
|----------------------|---------------------|-----------------------|---------------------------|----------------------------|------------|--------------------|
| Years                | 31                  | 31                    | 31                        | 31                         | 31         | 31                 |
| Counterparties       | 927                 | 3 543                 | 2 305                     | 704                        | 898        | 1 800              |
| Defaults             | 184                 | 573                   | 372                       | 148                        | 158        | 626                |
| Observations         | 4 732               | 20 888                | 12 771                    | 4 361                      | 4 823      | 10 348             |
| Average default rate | 3.89%               | 2.74%                 | 2.91%                     | 3.39%                      | 3.28%      | 6.05%              |
| 1994                 | 2.33%               | 4.08%                 | 1.02%                     | 6.90%                      | 0.00%      | 3.45%              |
| 1995                 | 5.45%               | 3.01%                 | 2.84%                     | 0.00%                      | 0.00%      | 5.69%              |
| 1996                 | 1.59%               | 3.23%                 | 0.45%                     | 7.14%                      | 0.00%      | 1.52%              |
| 1997                 | 4.11%               | 2.48%                 | 2.16%                     | 0.00%                      | 6.15%      | 8.63%              |
| 1998                 | 20.78%              | 5.96%                 | 2.26%                     | 2.33%                      | 26.76%     | 9.42%              |
| 1999                 | 4.17%               | 5.60%                 | 1.71%                     | 1.52%                      | 1.85%      | 7.97%              |
| 2000                 | 6.17%               | 4.04%                 | 3.23%                     | 0.00%                      | 1.92%      | 7.95%              |
| 2001                 | 8.33%               | 3.68%                 | 3.21%                     | 5.88%                      | 7.69%      | 8.62%              |
| 2002                 | 6.85%               | 2.33%                 | 12.64%                    | 14.08%                     | 7.41%      | 8.57%              |
| 2003                 | 14.71%              | 2.85%                 | 11.02%                    | 1.45%                      | 6.25%      | 8.99%              |
| 2004                 | 12.50%              | 0.00%                 | 4.62%                     | 4.76%                      | 14.29%     | 8.20%              |
| 2005                 | 1.56%               | 0.38%                 | 1.65%                     | 4.88%                      | 1.92%      | 12.17%             |
| 2006                 | 5.13%               | 0.86%                 | 2.92%                     | 2.33%                      | 4.62%      | 8.90%              |
| 2007                 | 4.76%               | 0.97%                 | 1.65%                     | 7.06%                      | 2.67%      | 8.02%              |
| 2008                 | 3.16%               | 2.28%                 | 2.41%                     | 2.04%                      | 6.74%      | 6.61%              |
| 2009                 | 2.16%               | 2.19%                 | 5.42%                     | 2.91%                      | 5.17%      | 6.69%              |
| 2010                 | 1.99%               | 4.88%                 | 2.86%                     | 3.67%                      | 0.81%      | 5.49%              |
| 2011                 | 2.41%               | 2.70%                 | 0.34%                     | 6.42%                      | 3.68%      | 4.64%              |
| 2012                 | 0.58%               | 2.26%                 | 4.14%                     | 2.73%                      | 1.32%      | 7.06%              |
| 2013                 | 2.07%               | 1.30%                 | 3.83%                     | 1.45%                      | 3.37%      | 3.02%              |
| 2014                 | 5.26%               | 3.58%                 | 2.80%                     | 1.92%                      | 4.12%      | 5.63%              |
| 2015                 | 2.63%               | 3.24%                 | 1.93%                     | 3.63%                      | 0.84%      | 5.03%              |
| 2016                 | 2.26%               | 2.91%                 | 3.42%                     | 3.05%                      | 2.54%      | 7.37%              |
| 2017                 | 1.29%               | 2.60%                 | 3.03%                     | 1.93%                      | 0.00%      | 7.04%              |
| 2018                 | 2.42%               | 2.08%                 | 2.20%                     | 1.43%                      | 2.41%      | 5.94%              |
| 2019                 | 3.00%               | 2.17%                 | 3.12%                     | 4.93%                      | 3.57%      | 5.85%              |
| 2020                 | 5.67%               | 5.12%                 | 3.79%                     | 8.65%                      | 4.23%      | 5.51%              |
| 2021                 | 7.75%               | 1.86%                 | 2.03%                     | 2.04%                      | 2.55%      | 4.84%              |
| 2022                 | 2.46%               | 6.72%                 | 0.68%                     | 0.68%                      | 4.91%      | 2.28%              |
| 2023                 | 2.36%               | 1.39%                 | 3.00%                     | 3.10%                      | 2.70%      | 6.97%              |
| 2024                 | 1.97%               | 1.64%                 | 1.33%                     | 1.99%                      | 0.29%      | 5.10%              |



### 3.3.2 Default rates by continent

Table 10 presents default rates by continent. The assignment of individual countries to their respective continents is detailed in Annex 1.

Table 10: Annual default rates by continent

|                      | Africa | Asia   | Europe | North America | Oceania | South America |
|----------------------|--------|--------|--------|---------------|---------|---------------|
| Years                | 31     | 31     | 31     | 31            | 31      | 31            |
| Counterparties       | 2 094  | 2 353  | 3 125  | 1 000         | 37      | 1 210         |
| Defaults             | 667    | 488    | 491    | 167           | 6       | 188           |
| Observations         | 12 416 | 12 531 | 18 681 | 5 882         | 192     | 6 483         |
| Average default rate | 5.37%  | 3.89%  | 2.63%  | 2.84%         | 3.13%   | 2.90%         |
| 1994                 | 4.29%  | 1.08%  | 4.17%  | 1.72%         | 0.00%   | 0.72%         |
| 1995                 | 4.73%  | 2.54%  | 3.08%  | 0.00%         | 0.00%   | 4.14%         |
| 1996                 | 1.94%  | 2.26%  | 3.35%  | 0.00%         | 0.00%   | 0.65%         |
| 1997                 | 7.41%  | 4.55%  | 2.60%  | 1.35%         | 0.00%   | 2.55%         |
| 1998                 | 8.18%  | 21.30% | 6.28%  | 2.99%         | 0.00%   | 1.95%         |
| 1999                 | 7.14%  | 1.88%  | 5.49%  | 0.00%         | 22.22%  | 2.50%         |
| 2000                 | 6.74%  | 3.55%  | 3.93%  | 2.33%         | 0.00%   | 3.73%         |
| 2001                 | 8.42%  | 6.71%  | 3.61%  | 4.82%         | 12.50%  | 2.44%         |
| 2002                 | 8.70%  | 9.47%  | 2.54%  | 4.65%         | 0.00%   | 16.86%        |
| 2003                 | 7.94%  | 9.03%  | 2.82%  | 9.89%         | 0.00%   | 11.41%        |
| 2004                 | 6.41%  | 10.74% | 0.00%  | 7.61%         | 25.00%  | 1.44%         |
| 2005                 | 10.12% | 2.53%  | 0.43%  | 1.01%         | 0.00%   | 2.19%         |
| 2006                 | 7.26%  | 6.03%  | 0.19%  | 2.80%         | 0.00%   | 3.15%         |
| 2007                 | 6.58%  | 6.02%  | 0.73%  | 2.73%         | 0.00%   | 0.79%         |
| 2008                 | 5.88%  | 4.44%  | 2.20%  | 1.06%         | 0.00%   | 2.70%         |
| 2009                 | 5.40%  | 3.73%  | 1.84%  | 8.33%         | 10.00%  | 3.13%         |
| 2010                 | 5.74%  | 3.08%  | 4.35%  | 5.50%         | 0.00%   | 0.62%         |
| 2011                 | 5.10%  | 3.63%  | 2.74%  | 0.00%         | 0.00%   | 0.59%         |
| 2012                 | 6.82%  | 1.41%  | 2.17%  | 6.15%         | 0.00%   | 2.84%         |
| 2013                 | 2.92%  | 2.51%  | 1.15%  | 5.26%         | 0.00%   | 2.40%         |
| 2014                 | 5.42%  | 3.98%  | 3.51%  | 2.11%         | 0.00%   | 2.37%         |
| 2015                 | 5.04%  | 1.56%  | 3.46%  | 2.53%         | 0.00%   | 1.33%         |
| 2016                 | 7.12%  | 2.51%  | 2.86%  | 2.16%         | 0.00%   | 4.79%         |
| 2017                 | 6.11%  | 1.15%  | 2.58%  | 2.16%         | 0.00%   | 4.11%         |
| 2018                 | 5.09%  | 1.92%  | 2.32%  | 2.49%         | 0.00%   | 1.67%         |
| 2019                 | 5.05%  | 4.85%  | 1.66%  | 3.21%         | 0.00%   | 2.94%         |
| 2020                 | 4.85%  | 6.67%  | 5.56%  | 3.53%         | 0.00%   | 4.36%         |
| 2021                 | 3.76%  | 5.43%  | 1.17%  | 2.56%         | 0.00%   | 1.55%         |
| 2022                 | 1.99%  | 4.68%  | 6.13%  | 1.08%         | 0.00%   | 0.30%         |
| 2023                 | 5.83%  | 2.85%  | 1.21%  | 3.35%         | 0.00%   | 2.47%         |
| 2024                 | 4.08%  | 1.54%  | 1.54%  | 1.48%         | 25.00%  | 1.07%         |

## 3.4 Default rates by sector

### 3.4.1 Default rates by GICS sector

Among the private borrowing obligations, 36% fall under financials, and the three largest sectors (financials, consumer staples and utilities) cover 62% of available data. The highest default rate occurs in consumer discretionary and health care, and the lowest is in financials.

Table 11: Default rates by GICS sector

| GICS Sector                           | Counter-parties | Observed years | Number of defaults | Number of observations | Signed amount<br>€ million | Lower of 90%<br>confidence<br>interval | Average<br>default rate | Upper of 90%<br>confidence<br>interval |
|---------------------------------------|-----------------|----------------|--------------------|------------------------|----------------------------|--|-------------------------|--|
| Administration                        |                 |                |                    |                        |                            |  |                         |  |
| Communication services                | 301             | 31             | 59                 | 1 488                  | 12 448                     | 3.08%                                  | <b>3.97%</b>            | 4.85%                                  |
| Consumer discretionary                | 843             | 31             | 258                | 4 331                  | 30 632                     | 5.03%                                  | <b>5.96%</b>            | 6.88%                                  |
| Consumer staples                      | 1 279           | 31             | 349                | 6 585                  | 32 326                     | 4.62%                                  | <b>5.30%</b>            | 5.98%                                  |
| Energy                                | 242             | 31             | 48                 | 1 347                  | 15 628                     | 2.72%                                  | <b>3.56%</b>            | 4.41%                                  |
| Financials                            | 3 788           | 31             | 520                | 23 045                 | 186 888                    | 1.94%                                  | <b>2.26%</b>            | 2.57%                                  |
| Health care                           | 251             | 31             | 74                 | 1 241                  | 7 339                      | 4.58%                                  | <b>5.96%</b>            | 7.35%                                  |
| Industrials                           | 817             | 31             | 153                | 4 222                  | 53 491                     | 2.96%                                  | <b>3.62%</b>            | 4.29%                                  |
| Information technology                | 62              | 30             | 14                 | 236                    | 2 189                      | 3.32%                                  | <b>5.93%</b>            | 8.55%                                  |
| Materials                             | 911             | 31             | 241                | 5 330                  | 30 875                     | 3.83%                                  | <b>4.52%</b>            | 5.22%                                  |
| Real estate                           | 187             | 31             | 43                 | 862                    | 5 852                      | 3.96%                                  | <b>4.99%</b>            | 6.02%                                  |
| Utilities                             | 1 390           | 31             | 255                | 8 633                  | 61 551                     | 2.52%                                  | <b>2.95%</b>            | 3.39%                                  |
| Others                                | 396             | 31             | 86                 | 1 996                  | 7 059                      | 3.15%                                  | <b>4.31%</b>            | 5.47%                                  |
| Overall, including omitted categories | 10 476          |                | 2 101              | 59 361                 | 446 361                    | 3.19%                                  | <b>3.54%</b>            | 3.89%                                  |

Figure 9: Default rates by GICS sector

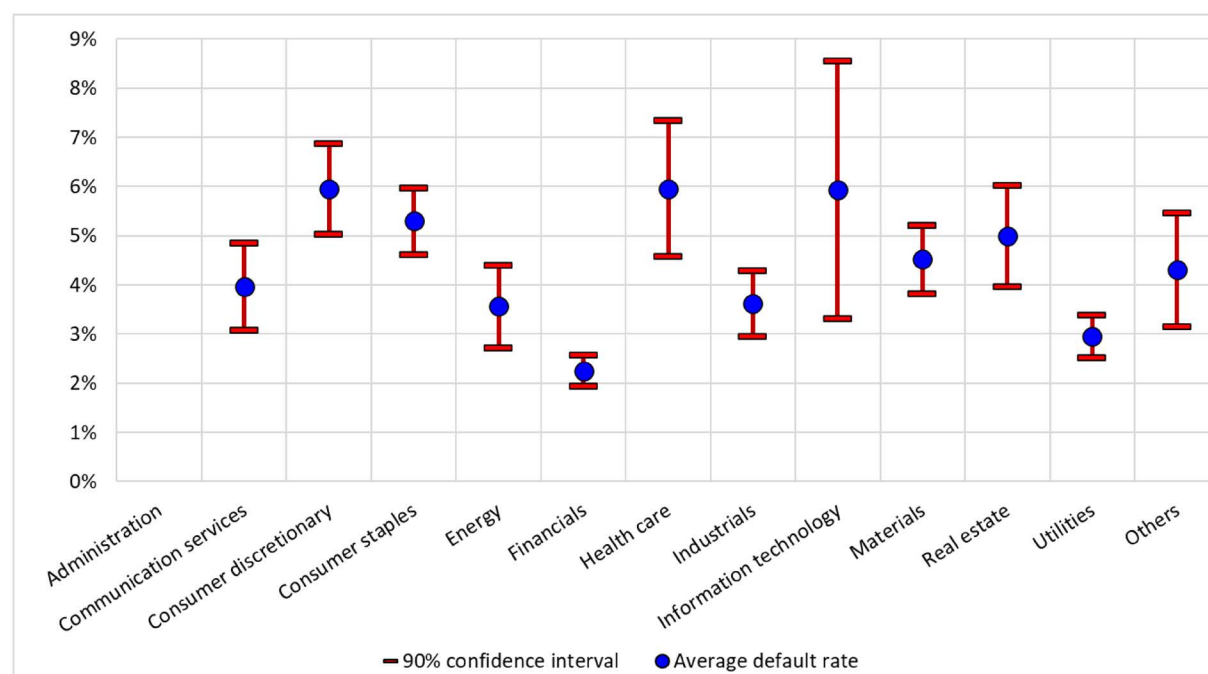


Table 12: Annual default rates by GICS sector

|                      | Administration | Communication services | Consumer discretionary | Consumer staples | Energy | Financials | Health care | Industrials | Information technology | Materials | Real estate | Utilities | Other  |
|----------------------|----------------|------------------------|------------------------|------------------|--------|------------|-------------|-------------|------------------------|-----------|-------------|-----------|--------|
| Years                |                | 31                     | 31                     | 31               | 31     | 31         | 31          | 31          | 30                     | 31        | 31          | 31        | 31     |
| Counterparties       |                | 301                    | 843                    | 1 279            | 242    | 3 788      | 251         | 817         | 62                     | 911       | 187         | 1 390     | 396    |
| Defaults             |                | 59                     | 258                    | 349              | 48     | 520        | 74          | 153         | 14                     | 241       | 43          | 255       | 86     |
| Observations         |                | 1 488                  | 4 331                  | 6 585            | 1 347  | 23 045     | 1 241       | 4 222       | 236                    | 5 330     | 862         | 8 633     | 1 996  |
| Average default rate |                | 3.97%                  | 5.96%                  | 5.30%            | 3.56%  | 2.26%      | 5.96%       | 3.62%       | 5.93%                  | 4.52%     | 4.99%       | 2.95%     | 4.31%  |
| 1994                 |                | 0.00%                  | 3.06%                  | 2.82%            | 0.00%  | 1.08%      | 0.00%       | 5.88%       | 0.00%                  | 3.10%     | 0.00%       | 0.00%     | 2.33%  |
| 1995                 |                | 0.00%                  | 3.03%                  | 9.88%            | 0.00%  | 0.00%      | 14.29%      | 0.00%       | 0.00%                  | 3.50%     | 0.00%       | 3.13%     | 3.77%  |
| 1996                 |                | 0.00%                  | 3.81%                  | 1.25%            | 0.00%  | 1.27%      | 16.67%      | 0.00%       | 0.00%                  | 0.65%     | 0.00%       | 2.56%     | 5.36%  |
| 1997                 |                | 0.00%                  | 9.71%                  | 8.89%            | 0.00%  | 1.08%      | 0.00%       | 0.00%       | 0.00%                  | 4.52%     | 0.00%       | 4.26%     | 0.00%  |
| 1998                 |                | 0.00%                  | 13.33%                 | 4.85%            | 8.00%  | 8.42%      | 50.00%      | 6.25%       | 0.00%                  | 10.67%    | 0.00%       | 0.00%     | 15.52% |
| 1999                 |                | 13.33%                 | 6.25%                  | 5.26%            | 3.85%  | 3.20%      | 16.67%      | 2.04%       | 0.00%                  | 2.65%     | 0.00%       | 1.64%     | 5.88%  |
| 2000                 |                | 2.94%                  | 7.55%                  | 7.20%            | 0.00%  | 3.23%      | 0.00%       | 5.45%       | 0.00%                  | 5.06%     | 0.00%       | 0.00%     | 1.75%  |
| 2001                 |                | 5.88%                  | 8.82%                  | 5.69%            | 3.70%  | 3.86%      | 21.43%      | 5.08%       | 0.00%                  | 4.58%     | 0.00%       | 1.35%     | 8.20%  |
| 2002                 |                | 2.86%                  | 18.27%                 | 6.03%            | 0.00%  | 6.09%      | 12.50%      | 10.71%      | 0.00%                  | 9.38%     | 9.09%       | 7.69%     | 0.00%  |
| 2003                 |                | 5.56%                  | 10.31%                 | 14.29%           | 5.88%  | 3.92%      | 18.75%      | 8.62%       | 16.67%                 | 5.41%     | 0.00%       | 9.21%     | 0.00%  |
| 2004                 |                | 4.88%                  | 4.30%                  | 7.14%            | 10.26% | 3.79%      | 5.56%       | 6.56%       | 42.86%                 | 1.35%     | 6.67%       | 0.00%     | 1.33%  |
| 2005                 |                | 7.14%                  | 6.93%                  | 5.04%            | 4.44%  | 1.89%      | 5.56%       | 2.94%       | 0.00%                  | 1.71%     | 0.00%       | 3.70%     | 0.00%  |
| 2006                 |                | 2.70%                  | 4.90%                  | 7.81%            | 0.00%  | 2.20%      | 5.56%       | 0.00%       | 0.00%                  | 3.83%     | 0.00%       | 2.20%     | 2.04%  |
| 2007                 |                | 2.38%                  | 5.83%                  | 3.45%            | 2.63%  | 2.52%      | 0.00%       | 3.90%       | 20.00%                 | 1.60%     | 0.00%       | 3.41%     | 0.00%  |
| 2008                 |                | 5.36%                  | 4.55%                  | 6.21%            | 1.96%  | 2.64%      | 0.00%       | 4.60%       | 0.00%                  | 2.50%     | 0.00%       | 2.97%     | 4.00%  |
| 2009                 |                | 3.85%                  | 5.13%                  | 3.83%            | 3.64%  | 2.76%      | 3.13%       | 7.00%       |                        | 6.25%     | 0.00%       | 1.50%     | 2.94%  |
| 2010                 |                | 0.00%                  | 8.55%                  | 8.02%            | 1.79%  | 2.25%      | 5.56%       | 1.77%       | 0.00%                  | 8.82%     | 10.00%      | 0.63%     | 4.88%  |
| 2011                 |                | 4.71%                  | 0.84%                  | 3.62%            | 3.45%  | 1.75%      | 4.88%       | 7.80%       | 0.00%                  | 3.13%     | 6.25%       | 2.11%     | 10.00% |
| 2012                 |                | 4.49%                  | 6.02%                  | 4.78%            | 1.75%  | 2.06%      | 4.55%       | 2.00%       | 0.00%                  | 4.46%     | 10.87%      | 0.86%     | 5.45%  |
| 2013                 |                | 2.53%                  | 3.75%                  | 4.37%            | 4.62%  | 0.55%      | 5.77%       | 2.22%       | 0.00%                  | 2.75%     | 6.25%       | 2.11%     | 5.19%  |
| 2014                 |                | 3.03%                  | 5.45%                  | 3.78%            | 9.09%  | 1.47%      | 3.70%       | 7.26%       | 12.50%                 | 8.33%     | 2.13%       | 3.82%     | 10.00% |
| 2015                 |                | 1.47%                  | 3.48%                  | 5.87%            | 8.45%  | 1.45%      | 5.80%       | 5.08%       | 9.09%                  | 5.21%     | 2.13%       | 1.63%     | 2.11%  |
| 2016                 |                | 4.62%                  | 7.14%                  | 3.82%            | 2.94%  | 2.03%      | 6.58%       | 4.37%       | 7.14%                  | 4.89%     | 2.08%       | 5.28%     | 3.88%  |
| 2017                 |                | 13.21%                 | 3.96%                  | 3.77%            | 3.03%  | 1.99%      | 4.88%       | 2.82%       | 0.00%                  | 3.80%     | 4.65%       | 3.58%     | 3.92%  |
| 2018                 |                | 2.33%                  | 5.53%                  | 2.65%            | 3.45%  | 1.44%      | 7.23%       | 3.35%       | 10.00%                 | 4.60%     | 4.76%       | 2.68%     | 5.32%  |
| 2019                 |                | 4.00%                  | 6.22%                  | 5.83%            | 0.00%  | 2.59%      | 7.04%       | 2.46%       | 5.88%                  | 3.61%     | 2.38%       | 2.07%     | 14.29% |
| 2020                 |                | 3.92%                  | 9.85%                  | 5.80%            | 6.38%  | 3.75%      | 9.21%       | 4.82%       | 14.29%                 | 6.71%     | 8.89%       | 5.11%     | 2.56%  |
| 2021                 |                | 6.52%                  | 5.73%                  | 5.34%            | 2.38%  | 2.00%      | 4.05%       | 2.89%       | 7.69%                  | 4.09%     | 6.52%       | 2.48%     | 2.47%  |
| 2022                 |                | 2.08%                  | 4.48%                  | 8.15%            | 3.03%  | 1.79%      | 2.47%       | 3.19%       | 0.00%                  | 5.03%     | 10.20%      | 2.56%     | 1.32%  |
| 2023                 |                | 6.25%                  | 3.55%                  | 7.10%            | 2.94%  | 2.16%      | 6.90%       | 1.09%       | 0.00%                  | 3.38%     | 5.77%       | 3.58%     | 2.53%  |
| 2024                 |                | 1.92%                  | 3.32%                  | 1.40%            | 4.00%  | 2.25%      | 3.23%       | 1.36%       | 0.00%                  | 3.27%     | 5.77%       | 2.28%     | 2.67%  |

## 3.4.2 Default rates by sector groupings

Default rates by sector groupings are displayed in Table 13. Assignments of individual GICS, NACE<sup>1</sup> and NAICS<sup>2</sup> sectors to sector groupings can be found in Annex 2.

Table 13: Annual default rates for sector groupings

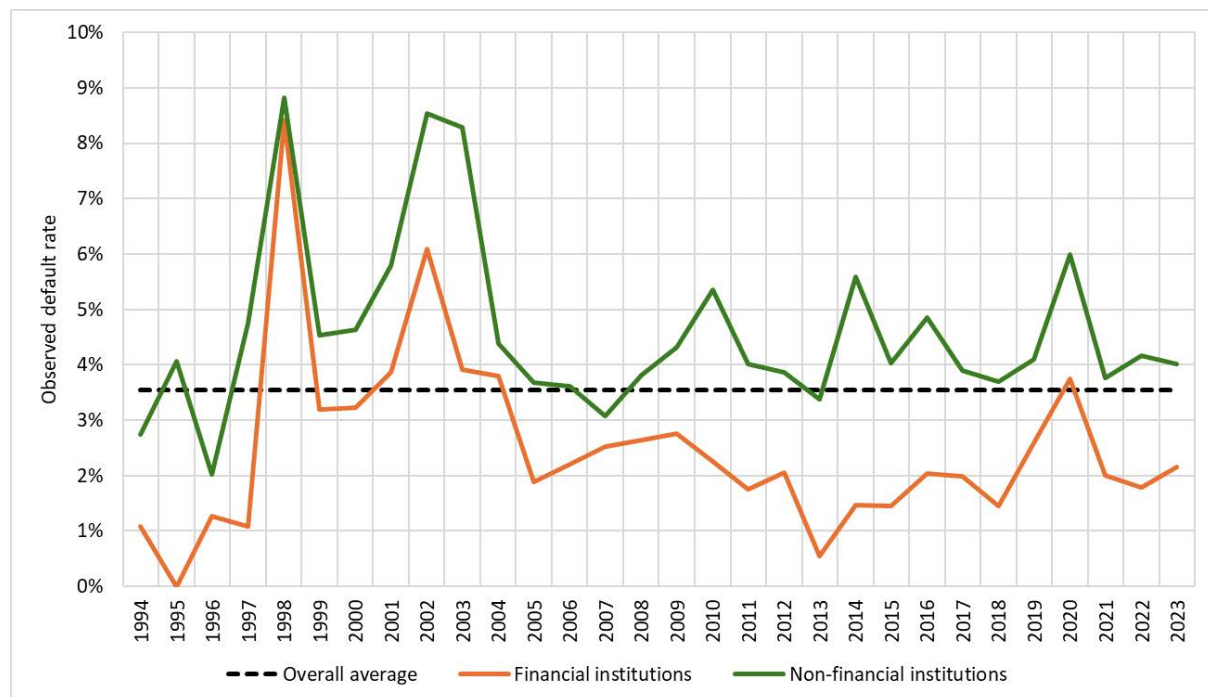
|                      | Financial institutions | Non-financial institutions | Banking | Infrastructure | Non-bank financials | Renewables | Services |
|----------------------|------------------------|----------------------------|---------|----------------|---------------------|------------|----------|
| Years                | 31                     | 31                         | 31      | 31             | 31                  | 31         | 31       |
| Counterparties       | 3 788                  | 6 688                      | 2 617   | 1 863          | 1 171               | 852        | 842      |
| Defaults             | 520                    | 1 581                      | 343     | 375            | 177                 | 152        | 177      |
| Observations         | 23 045                 | 36 316                     | 17 150  | 10 419         | 5 895               | 4 981      | 4 379    |
| Average default rate | 2.26%                  | 4.35%                      | 2.00%   | 3.60%          | 3.00%               | 3.05%      | 4.04%    |
| 1994                 | 1.08%                  | 2.75%                      | 1.43%   | 3.23%          | 0.00%               | 0.00%      | 0.00%    |
| 1995                 | 0.00%                  | 4.07%                      | 0.00%   | 0.00%          | 0.00%               | 0.00%      | 0.00%    |
| 1996                 | 1.27%                  | 2.03%                      | 0.78%   | 0.00%          | 3.45%               | 0.00%      | 0.00%    |
| 1997                 | 1.08%                  | 4.75%                      | 0.64%   | 0.00%          | 3.45%               | 0.00%      | 0.00%    |
| 1998                 | 8.42%                  | 8.82%                      | 8.05%   | 4.05%          | 10.71%              | 0.00%      | 9.80%    |
| 1999                 | 3.20%                  | 4.53%                      | 3.16%   | 3.66%          | 3.45%               | 0.00%      | 7.84%    |
| 2000                 | 3.23%                  | 4.63%                      | 3.26%   | 3.03%          | 3.03%               | 0.00%      | 3.51%    |
| 2001                 | 3.86%                  | 5.78%                      | 4.12%   | 6.36%          | 2.38%               | 9.09%      | 5.00%    |
| 2002                 | 6.09%                  | 8.53%                      | 5.62%   | 7.76%          | 8.89%               | 0.00%      | 6.15%    |
| 2003                 | 3.92%                  | 8.30%                      | 3.19%   | 10.26%         | 8.00%               | 18.18%     | 8.57%    |
| 2004                 | 3.79%                  | 4.39%                      | 2.92%   | 4.80%          | 8.20%               | 0.00%      | 5.63%    |
| 2005                 | 1.89%                  | 3.69%                      | 2.25%   | 6.87%          | 0.00%               | 0.00%      | 6.33%    |
| 2006                 | 2.20%                  | 3.62%                      | 1.67%   | 1.54%          | 5.06%               | 7.14%      | 2.63%    |
| 2007                 | 2.52%                  | 3.08%                      | 1.90%   | 2.90%          | 6.02%               | 0.00%      | 3.53%    |
| 2008                 | 2.64%                  | 3.81%                      | 2.55%   | 3.51%          | 3.16%               | 4.17%      | 2.80%    |
| 2009                 | 2.76%                  | 4.32%                      | 2.15%   | 2.24%          | 5.83%               | 3.03%      | 5.97%    |
| 2010                 | 2.25%                  | 5.35%                      | 1.61%   | 0.80%          | 5.30%               | 2.56%      | 1.38%    |
| 2011                 | 1.75%                  | 4.01%                      | 1.21%   | 4.00%          | 4.32%               | 0.00%      | 5.81%    |
| 2012                 | 2.06%                  | 3.87%                      | 1.39%   | 3.01%          | 5.23%               | 2.56%      | 4.12%    |
| 2013                 | 0.55%                  | 3.38%                      | 0.40%   | 2.09%          | 1.20%               | 1.87%      | 3.35%    |
| 2014                 | 1.47%                  | 5.59%                      | 1.73%   | 4.21%          | 0.50%               | 6.52%      | 5.17%    |
| 2015                 | 1.45%                  | 4.03%                      | 0.74%   | 3.14%          | 3.28%               | 2.08%      | 3.90%    |
| 2016                 | 2.03%                  | 4.85%                      | 1.66%   | 6.11%          | 3.02%               | 6.40%      | 4.03%    |
| 2017                 | 1.99%                  | 3.90%                      | 1.90%   | 4.76%          | 2.20%               | 4.85%      | 5.70%    |
| 2018                 | 1.44%                  | 3.70%                      | 1.51%   | 2.85%          | 1.30%               | 2.51%      | 2.82%    |
| 2019                 | 2.59%                  | 4.10%                      | 1.83%   | 2.70%          | 4.26%               | 1.67%      | 2.37%    |
| 2020                 | 3.75%                  | 5.99%                      | 3.91%   | 6.65%          | 3.42%               | 6.15%      | 3.92%    |
| 2021                 | 2.00%                  | 3.76%                      | 2.31%   | 2.83%          | 1.37%               | 2.26%      | 4.92%    |
| 2022                 | 1.79%                  | 4.17%                      | 1.81%   | 2.44%          | 1.75%               | 1.66%      | 2.89%    |
| 2023                 | 2.16%                  | 4.02%                      | 1.53%   | 3.59%          | 3.22%               | 3.02%      | 3.48%    |
| 2024                 | 2.25%                  | 2.30%                      | 2.01%   | 1.80%          | 2.61%               | 0.97%      | 3.43%    |

<sup>1</sup> Nomenclature of Economic Activities (NACE) is the European statistical classification of economic activities.

<sup>2</sup> The North American Industry Classification System (NAICS) is the standard used by US federal statistical agencies in classifying business establishments for the purpose of collecting, analysing and publishing statistical data related to the US business economy.

Figure 10 shows the annual default rates of financial and non-financial institutions from 1994 to 2023. Financial institutions generally exhibit lower and more stable default rates compared with non-financial institutions, which show more pronounced fluctuations. The black dashed line represents the overall average default rate across the period, serving as a benchmark.

Figure 10: Annual default rates for financial and non-financial institutions



## 3.5 Default rates by World Bank region and sector

### 3.5.1 Default rates by World Bank region and GICS sector

Table 14 shows the average default rates and confidence intervals per World Bank region and per sector, providing insights into the lending profile characteristics of the different industrial sectors for each World Bank region. The range and confidence intervals are wide at times, which is due to regional market differences and dataset characteristics that reflect the implicit guarantees for certain sectors (financials, utilities) or government subsidies (energy).

Table 15 shows similar results, although by region and sector groupings.

Table 14: Default rates by World Bank region and GICS sector

| World Bank region          | Item             | Administration | Communication services | Consumer discretionary | Consumer staples | Energy | Financials | Health care | Industrials | Information technology | Materials | Real estate | Utilities | Other  |
|----------------------------|------------------|----------------|------------------------|------------------------|------------------|--------|------------|-------------|-------------|------------------------|-----------|-------------|-----------|--------|
| East Asia & Pacific        | Lower of 90% CI* |                | 1.02%                  | 3.53%                  | 2.56%            |        | 1.63%      | 0.00%       | 2.71%       |                        | 4.54%     |             | 0.43%     | 4.99%  |
|                            | Default rate     |                | 3.18%                  | 5.62%                  | 4.19%            |        | 3.00%      | 3.23%       | 5.39%       |                        | 6.63%     |             | 1.16%     | 7.69%  |
|                            | Upper of 90% CI  |                | 5.35%                  | 7.71%                  | 5.81%            |        | 4.37%      | 7.09%       | 8.08%       |                        | 8.72%     |             | 1.88%     | 10.39% |
| Europe & Central Asia      | Lower of 90% CI  |                | 0.50%                  | 3.63%                  | 3.16%            | 1.59%  | 0.80%      | 3.02%       | 2.70%       | 0.91%                  | 2.60%     | 2.63%       | 2.98%     | 1.55%  |
|                            | Default rate     |                | 1.76%                  | 4.66%                  | 4.41%            | 2.56%  | 1.12%      | 4.51%       | 3.61%       | 2.65%                  | 3.59%     | 4.27%       | 4.21%     | 2.99%  |
|                            | Upper of 90% CI  |                | 3.02%                  | 5.69%                  | 5.67%            | 3.52%  | 1.44%      | 6.01%       | 4.52%       | 4.40%                  | 4.57%     | 5.92%       | 5.45%     | 4.44%  |
| Latin America & Caribbean  | Lower of 90% CI  |                | 1.69%                  | 1.94%                  | 2.96%            | 0.04%  | 1.29%      | 2.48%       | 1.50%       |                        | 2.00%     | 1.38%       | 2.56%     | 2.26%  |
|                            | Default Rate     |                | 3.40%                  | 3.30%                  | 4.27%            | 1.66%  | 1.97%      | 5.85%       | 2.42%       |                        | 3.57%     | 6.10%       | 3.48%     | 3.78%  |
|                            | Upper of 90% CI  |                | 5.11%                  | 4.66%                  | 5.58%            | 3.28%  | 2.65%      | 9.21%       | 3.34%       |                        | 5.14%     | 10.81%      | 4.39%     | 5.30%  |
| Middle East & North Africa | Lower of 90% CI  |                |                        | 3.15%                  | 1.66%            | 2.50%  | 2.42%      | 0.61%       | 3.56%       |                        | 2.71%     |             | 0.28%     |        |
|                            | Default rate     |                |                        | 6.64%                  | 4.74%            | 5.06%  | 3.84%      | 3.60%       | 6.70%       |                        | 4.00%     |             | 0.50%     |        |
|                            | Upper of 90% CI  |                |                        | 10.13%                 | 7.82%            | 7.63%  | 5.27%      | 6.59%       | 9.84%       |                        | 5.29%     |             | 0.71%     |        |
| South Asia                 | Lower of 90% CI  |                | 1.25%                  | 3.62%                  | 1.51%            |        | 1.45%      | 0.65%       | 1.40%       |                        | 1.36%     |             | 1.15%     |        |
|                            | Default rate     |                | 3.88%                  | 7.64%                  | 3.02%            |        | 2.82%      | 5.22%       | 3.19%       |                        | 4.52%     |             | 1.75%     |        |
|                            | Upper of 90% CI  |                | 6.52%                  | 11.67%                 | 4.53%            |        | 4.19%      | 9.80%       | 4.97%       |                        | 7.69%     |             | 2.34%     |        |
| Sub-Saharan Africa         | Lower of 90% CI  |                | 3.82%                  | 8.88%                  | 8.50%            | 3.08%  | 3.33%      | 11.50%      | 2.47%       |                        | 5.53%     | 4.87%       | 3.71%     | 3.18%  |
|                            | Default rate     |                | 6.42%                  | 11.06%                 | 10.27%           | 5.24%  | 3.96%      | 16.56%      | 4.48%       |                        | 6.84%     | 6.88%       | 4.64%     | 5.67%  |
|                            | Upper of 90% CI  |                | 9.02%                  | 13.24%                 | 12.04%           | 7.39%  | 4.58%      | 21.62%      | 6.50%       |                        | 8.15%     | 8.88%       | 5.56%     | 8.17%  |

\*Confidence interval

## 3.5.2 Default rates by World Bank region and sector groupings

Table 15: Default rates by World Bank region and sector groupings

| World Bank region          | Item             | Financial institutions | Non-financial institutions | Banking      | Infrastructure | Non-bank financials | Renewables   | Services     |
|----------------------------|------------------|------------------------|----------------------------|--------------|----------------|---------------------|--------------|--------------|
| East Asia & Pacific        | Lower of 90% CI* | 1.63%                  | 3.23%                      | 0.63%        | 1.53%          | 1.70%               | 0.00%        | 2.87%        |
|                            | Default rate     | <b>3.00%</b>           | <b>4.21%</b>               | <b>2.84%</b> | <b>2.67%</b>   | <b>3.25%</b>        | <b>0.57%</b> | <b>4.64%</b> |
|                            | Upper of 90% CI  | 4.37%                  | 5.20%                      | 5.06%        | 3.81%          | 4.80%               | 1.24%        | 6.42%        |
| Europe & Central Asia      | Lower of 90% CI  | 0.80%                  | 3.22%                      | 0.78%        | 2.86%          | 0.25%               | 4.17%        | 1.64%        |
|                            | Default rate     | <b>1.12%</b>           | <b>3.91%</b>               | <b>1.05%</b> | <b>3.92%</b>   | <b>1.53%</b>        | <b>5.95%</b> | <b>2.46%</b> |
|                            | Upper of 90% CI  | 1.44%                  | 4.61%                      | 1.32%        | 4.99%          | 2.81%               | 7.72%        | 3.27%        |
| Latin America & Caribbean  | Lower of 90% CI  | 1.29%                  | 2.76%                      | 0.59%        | 2.72%          | 2.43%               | 2.55%        | 2.31%        |
|                            | Default rate     | <b>1.97%</b>           | <b>3.49%</b>               | <b>1.29%</b> | <b>3.64%</b>   | <b>3.36%</b>        | <b>3.54%</b> | <b>3.01%</b> |
|                            | Upper of 90% CI  | 2.65%                  | 4.23%                      | 1.99%        | 4.56%          | 4.28%               | 4.53%        | 3.71%        |
| Middle East & North Africa | Lower of 90% CI  | 2.42%                  | 2.13%                      | 1.99%        | 0.81%          | 2.43%               | 0.00%        | 2.54%        |
|                            | Default rate     | <b>3.84%</b>           | <b>3.09%</b>               | <b>3.73%</b> | <b>1.30%</b>   | <b>4.12%</b>        | <b>0.13%</b> | <b>4.55%</b> |
|                            | Upper of 90% CI  | 5.27%                  | 4.06%                      | 5.47%        | 1.79%          | 5.80%               | 0.28%        | 6.56%        |
| South Asia                 | Lower of 90% CI  | 1.45%                  | 2.18%                      | 1.57%        | 1.25%          |                     |              |              |
|                            | Default rate     | <b>2.82%</b>           | <b>3.52%</b>               | <b>3.44%</b> | <b>2.14%</b>   |                     |              |              |
|                            | Upper of 90% CI  | 4.19%                  | 4.87%                      | 5.31%        | 3.02%          |                     |              |              |
| Sub-Saharan Africa         | Lower of 90% CI  | 3.33%                  | 6.67%                      |              |                |                     |              |              |
|                            | Default rate     | <b>3.96%</b>           | <b>7.38%</b>               |              |                |                     |              |              |
|                            | Upper of 90% CI  | 4.58%                  | 8.09%                      |              |                |                     |              |              |

\*Confidence interval

## 3.6. Default rates by country

The average default rates for counterparties by country are presented in Table 16. In Table 17, the average default rates are combined by country and by year from 1994 to 2024. The confidence intervals per country show a large disparity that depends on the number of observations and the default profiles.

Table 16: Default rates by country

| ISO country code and ISO country name | Counter-parties | Observed years | Number of defaults | Number of observations | Signed amount<br>€ million | Lower of 90%<br>confidence interval | Average default rate | Upper of 90%<br>confidence interval |
|---------------------------------------|-----------------|----------------|--------------------|------------------------|----------------------------|-------------------------------------|----------------------|-------------------------------------|
| AL-Albania                            | 57              | 31             | 18                 | 297                    | 912                        | 3.86%                               | 6.06%                | 8.26%                               |
| AM-Armenia                            | 123             | 24             | 11                 | 788                    | 2 478                      | 0.80%                               | 1.40%                | 1.99%                               |
| AR-Argentina                          | 227             | 31             | 56                 | 1 290                  | 6 936                      | 2.15%                               | 4.34%                | 6.53%                               |
| AZ-Azerbaijan                         | 137             | 27             | 32                 | 756                    | 2 784                      | 2.62%                               | 4.23%                | 5.85%                               |
| BA-Bosnia and Herzegovina             | 85              | 27             | 15                 | 640                    | 2 006                      | 0.70%                               | 2.34%                | 3.99%                               |
| BD-Bangladesh                         | 104             | 29             | 11                 | 573                    | 3 405                      | 0.26%                               | 1.92%                | 3.58%                               |
| BF-Burkina Faso                       | 49              | 31             | 23                 | 264                    | 441                        | 6.05%                               | 8.71%                | 11.38%                              |
| BG-Bulgaria                           | 116             | 28             | 22                 | 826                    | 3 595                      | 1.18%                               | 2.66%                | 4.15%                               |
| BJ-Benin                              | 31              | 31             | 23                 | 227                    | 260                        | 6.89%                               | 10.13%               | 13.37%                              |
| BO-Bolivia                            | 36              | 31             | 11                 | 220                    | 488                        | 2.52%                               | 5.00%                | 7.48%                               |
| BR-Brazil                             | 324             | 31             | 38                 | 1 774                  | 21 910                     | 1.42%                               | 2.14%                | 2.86%                               |
| BW-Botswana                           | 20              | 25             | 7                  | 94                     | 324                        | 2.95%                               | 7.45%                | 11.95%                              |
| BY-Belarus                            | 58              | 21             | 14                 | 315                    | 1 270                      | 1.42%                               | 4.44%                | 7.47%                               |
| CD-Congo, The Democratic Republic of  | 31              | 27             | 6                  | 141                    | 612                        | 2.24%                               | 4.26%                | 6.27%                               |
| CI-Côte D'Ivoire                      | 113             | 31             | 60                 | 677                    | 2 750                      | 7.33%                               | 8.86%                | 10.39%                              |
| CL-Chile                              | 96              | 31             | 23                 | 459                    | 6 036                      | 3.21%                               | 5.01%                | 6.81%                               |
| CM-Cameroon                           | 59              | 31             | 23                 | 407                    | 1 361                      | 3.36%                               | 5.65%                | 7.95%                               |
| CN-China                              | 247             | 31             | 37                 | 1 227                  | 11 615                     | 2.04%                               | 3.02%                | 3.99%                               |
| CO-Colombia                           | 146             | 31             | 19                 | 690                    | 8 009                      | 1.67%                               | 2.75%                | 3.84%                               |
| CR-Costa Rica                         | 110             | 31             | 10                 | 709                    | 2 537                      | 0.50%                               | 1.41%                | 2.32%                               |
| CZ-Czech Republic                     | 35              | 31             | 3                  | 208                    | 1 984                      | 0.27%                               | 1.44%                | 2.62%                               |
| DO-Dominican Republic                 | 61              | 31             | 11                 | 431                    | 1 654                      | 0.76%                               | 2.55%                | 4.34%                               |
| EC-Ecuador                            | 93              | 31             | 5                  | 467                    | 4 709                      | 0.00%                               | 1.07%                | 2.47%                               |
| EG-Egypt                              | 208             | 31             | 28                 | 1 169                  | 8 159                      | 1.48%                               | 2.40%                | 3.31%                               |
| GA-Gabon                              | 27              | 28             | 6                  | 95                     | 1 014                      | 2.19%                               | 6.32%                | 10.44%                              |
| GE-Georgia                            | 196             | 27             | 31                 | 1 120                  | 5 863                      | 1.65%                               | 2.77%                | 3.89%                               |
| GH-Ghana                              | 97              | 31             | 36                 | 587                    | 3 226                      | 4.80%                               | 6.13%                | 7.46%                               |
| GN-Guinea                             | 20              | 31             | 9                  | 112                    | 832                        | 2.76%                               | 8.04%                | 13.31%                              |
| GT-Guatemala                          | 79              | 31             | 8                  | 438                    | 3 047                      | 1.00%                               | 1.83%                | 2.65%                               |
| HN-Honduras                           | 82              | 30             | 11                 | 504                    | 1 996                      | 1.03%                               | 2.18%                | 3.33%                               |
| HR-Croatia                            | 68              | 29             | 10                 | 449                    | 2 669                      | 0.96%                               | 2.23%                | 3.49%                               |
| HT-Haiti                              | 26              | 27             | 13                 | 143                    | 205                        | 4.88%                               | 9.09%                | 13.30%                              |
| HU-Hungary                            | 58              | 31             | 6                  | 309                    | 1 572                      | 0.71%                               | 1.94%                | 3.17%                               |
| ID-Indonesia                          | 135             | 31             | 31                 | 700                    | 6 724                      | 1.84%                               | 4.43%                | 7.01%                               |
| IN-India                              | 538             | 31             | 71                 | 2 694                  | 23 373                     | 1.81%                               | 2.64%                | 3.46%                               |
| JM-Jamaica                            | 41              | 31             | 6                  | 273                    | 994                        | 0.06%                               | 2.20%                | 4.34%                               |
| JO-Jordan                             | 117             | 31             | 13                 | 770                    | 3 701                      | 0.37%                               | 1.69%                | 3.01%                               |
| KE-Kenya                              | 155             | 31             | 32                 | 825                    | 4 694                      | 2.79%                               | 3.88%                | 4.97%                               |
| KG-Kyrgyzstan                         | 71              | 29             | 1                  | 397                    | 504                        | 0.00%                               | 0.25%                | 0.54%                               |
| KH-Cambodia                           | 46              | 20             | 3                  | 268                    | 1 585                      | 0.41%                               | 1.12%                | 1.83%                               |
| KZ-Kazakhstan                         | 140             | 28             | 13                 | 818                    | 6 116                      | 0.73%                               | 1.59%                | 2.45%                               |
| LB-Lebanon                            | 57              | 31             | 38                 | 382                    | 1 981                      | 4.15%                               | 9.95%                | 15.74%                              |
| LK-Sri Lanka                          | 63              | 29             | 18                 | 338                    | 1 944                      | 0.66%                               | 5.33%                | 9.99%                               |
| LT-Lithuania                          | 24              | 27             | 5                  | 96                     | 379                        | 2.42%                               | 5.21%                | 7.99%                               |
| MA-Morocco                            | 86              | 31             | 11                 | 536                    | 3 037                      | 0.83%                               | 2.05%                | 3.28%                               |
| MD-Moldova                            | 74              | 29             | 7                  | 525                    | 1 513                      | 0.53%                               | 1.33%                | 2.14%                               |
| ME-Montenegro                         | 32              | 22             | 6                  | 257                    | 521                        | 0.75%                               | 2.33%                | 3.92%                               |
| MG-Madagascar                         | 38              | 31             | 15                 | 225                    | 902                        | 2.27%                               | 6.67%                | 11.07%                              |
| MK-Macedonia                          | 46              | 29             | 4                  | 315                    | 711                        | 0.00%                               | 1.27%                | 2.78%                               |
| ML-Mali                               | 55              | 31             | 45                 | 347                    | 464                        | 10.03%                              | 12.97%               | 15.91%                              |



Table 16: Default rates by country (continued)

| ISO country code and ISO country name | Counter-parties | Observed years | Number of defaults | Number of observations | Signed amount<br>€ million | Lower of 90% confidence interval | Average default rate | Upper of 90% confidence interval |
|---------------------------------------|-----------------|----------------|--------------------|------------------------|----------------------------|----------------------------------|----------------------|----------------------------------|
| MM-Myanmar                            | 45              | 11             | 29                 | 190                    | 1 816                      | 4.69%                            | 15.26%               | 25.84%                           |
| MN-Mongolia                           | 96              | 22             | 20                 | 592                    | 3 479                      | 2.09%                            | 3.38%                | 4.67%                            |
| MR-Mauritania                         | 20              | 27             | 11                 | 129                    | 418                        | 4.13%                            | 8.53%                | 12.92%                           |
| MU-Mauritius                          | 31              | 31             | 6                  | 242                    | 965                        | 0.75%                            | 2.48%                | 4.20%                            |
| MX-Mexico                             | 276             | 31             | 58                 | 1 375                  | 11 021                     | 3.09%                            | 4.22%                | 5.35%                            |
| MZ-Mozambique                         | 43              | 31             | 21                 | 288                    | 1 449                      | 5.12%                            | 7.29%                | 9.47%                            |
| NG-Nigeria                            | 151             | 31             | 41                 | 882                    | 8 161                      | 3.45%                            | 4.65%                | 5.85%                            |
| NI-Nicaragua                          | 84              | 26             | 16                 | 543                    | 1 830                      | 1.48%                            | 2.95%                | 4.41%                            |
| NP-Nepal                              | 25              | 31             | 6                  | 134                    | 460                        | 0.90%                            | 4.48%                | 8.05%                            |
| OT-Other                              | 299             | 28             | 40                 | 1 438                  | 28 535                     | 1.92%                            | 2.78%                | 3.64%                            |
| PA-Panama                             | 82              | 31             | 11                 | 436                    | 3 163                      | 1.47%                            | 2.52%                | 3.58%                            |
| PE-Peru                               | 136             | 31             | 18                 | 724                    | 5 414                      | 1.51%                            | 2.49%                | 3.46%                            |
| PH-Philippines                        | 83              | 31             | 24                 | 440                    | 3 618                      | 3.06%                            | 5.45%                | 7.85%                            |
| PK-Pakistan                           | 137             | 31             | 42                 | 918                    | 3 906                      | 1.71%                            | 4.58%                | 7.44%                            |
| PL-Poland                             | 187             | 31             | 16                 | 968                    | 10 664                     | 0.91%                            | 1.65%                | 2.40%                            |
| PS-Palestine, State of*               | 31              | 27             | 16                 | 171                    | 416                        | 4.39%                            | 9.36%                | 14.32%                           |
| PY-Paraguay                           | 64              | 18             | 1                  | 332                    | 2 750                      | 0.00%                            | 0.30%                | 0.68%                            |
| REG-Regional                          | 358             | 31             | 54                 | 1 738                  | 18 686                     | 2.44%                            | 3.11%                | 3.77%                            |
| RO-Romania                            | 202             | 31             | 12                 | 1 206                  | 8 605                      | 0.44%                            | 1.00%                | 1.55%                            |
| RS-Serbia                             | 131             | 23             | 16                 | 880                    | 7 472                      | 1.03%                            | 1.82%                | 2.60%                            |
| RU-Russia                             | 430             | 31             | 58                 | 2 429                  | 15 251                     | 1.25%                            | 2.39%                | 3.53%                            |
| RW-Rwanda                             | 35              | 19             | 14                 | 200                    | 363                        | 2.35%                            | 7.00%                | 11.65%                           |
| SI-Slovenia                           | 35              | 31             | 2                  | 225                    | 763                        | 0.00%                            | 0.89%                | 1.97%                            |
| SK-Slovakia                           | 32              | 30             | 1                  | 250                    | 1 653                      | 0.00%                            | 0.40%                | 1.00%                            |
| SN-Senegal                            | 101             | 31             | 50                 | 684                    | 2 197                      | 5.53%                            | 7.31%                | 9.09%                            |
| SV-El Salvador                        | 97              | 30             | 1                  | 611                    | 2 844                      | 0.01%                            | 0.16%                | 0.32%                            |
| TG-Togo                               | 27              | 31             | 10                 | 160                    | 1 042                      | 3.30%                            | 6.25%                | 9.20%                            |
| TH-Thailand                           | 67              | 31             | 11                 | 385                    | 3 874                      | 1.14%                            | 2.86%                | 4.58%                            |
| TJ-Tajikistan                         | 70              | 27             | 18                 | 409                    | 402                        | 2.76%                            | 4.40%                | 6.04%                            |
| TM-Turkmenistan                       | 44              | 22             | 30                 | 220                    | 228                        | 6.77%                            | 13.64%               | 20.50%                           |
| TN-Tunisia                            | 79              | 31             | 14                 | 630                    | 6 112                      | 1.22%                            | 2.22%                | 3.23%                            |
| TR-Türkiye                            | 467             | 31             | 63                 | 2 893                  | 38 023                     | 1.50%                            | 2.18%                | 2.86%                            |
| TT-Trinidad and Tobago                | 21              | 28             | 8                  | 119                    | 626                        | 2.14%                            | 6.72%                | 11.31%                           |
| TZ-Tanzania                           | 65              | 31             | 22                 | 337                    | 1 738                      | 3.65%                            | 6.53%                | 9.40%                            |
| UA-Ukraine                            | 316             | 29             | 117                | 1 660                  | 10 896                     | 3.94%                            | 7.05%                | 10.16%                           |
| UG-Uganda                             | 77              | 31             | 20                 | 505                    | 1 463                      | 2.19%                            | 3.96%                | 5.73%                            |
| UY-Uruguay                            | 52              | 31             | 7                  | 316                    | 1 973                      | 0.00%                            | 2.22%                | 5.15%                            |
| UZ-Uzbekistan                         | 108             | 31             | 20                 | 393                    | 2 697                      | 2.24%                            | 5.09%                | 7.94%                            |
| VE-Venezuela                          | 23              | 26             | 8                  | 132                    | 646                        | 1.93%                            | 6.06%                | 10.19%                           |
| VN-Viet Nam                           | 109             | 30             | 15                 | 469                    | 4 745                      | 1.42%                            | 3.20%                | 4.98%                            |
| XK-Kosovo                             | 38              | 19             | 5                  | 235                    | 430                        | 0.44%                            | 2.13%                | 3.81%                            |
| ZA-South Africa                       | 186             | 27             | 26                 | 1 148                  | 29 481                     | 1.47%                            | 2.26%                | 3.06%                            |
| ZM-Zambia                             | 68              | 31             | 29                 | 390                    | 1 595                      | 5.21%                            | 7.44%                | 9.67%                            |
| ZW-Zimbabwe                           | 41              | 31             | 13                 | 190                    | 2 944                      | 3.57%                            | 6.84%                | 10.11%                           |
| Overall, including omitted categories | 10 476          | 31             | 2 101              | 59 361                 | 446 361                    | 3.19%                            | 3.54%                | 3.89%                            |

\*This designation shall not be construed as recognition of a State of Palestine and is without prejudice to the individual positions of the Member States on this issue.

Table 17: Annual default rates by country

| ISO country code | Average default rate | 1994  | 1995  | 1996  | 1997   | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  | 2007  | 2008  | 2009  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  | 2019  | 2020  | 2021  | 2022  | 2023  | 2024  |      |
|------------------|----------------------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| AL               | 6.06%                | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 33.3% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 21.4% | 5.9%  | 5.0%  | 8.0%  | 4.3%  | 9.1%  | 17.6% | 20.0% | 0.0%  | 0.0%  | 0.0%  | 9.1%  | 0.0%  | 0.0%  | 0.0%  |      |
| AM               | 1.40%                |       |       |       |        |       |       |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 5.3%  | 4.1%  | 0.0%  | 1.9%  | 0.0%  | 1.7%  | 1.7%  | 0.0%  | 0.0%  | 2.3%  | 5.0%  | 0.0%  | 0.0%  | 2.7%  | 0.0%  |      |
| AR               | 4.34%                | 0.0%  | 1.4%  | 0.0%  | 1.4%   | 1.8%  | 3.8%  | 6.4%  | 2.1%  | 32.0% | 26.7% | 4.0%  | 4.3%  | 11.1% | 0.0%  | 12.5% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 6.7%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 7.3%  | 5.8%  | 8.2%  | 3.7%  | 0.0%  | 0.0%  | 2.0%  |      |
| AZ               | 4.23%                |       |       |       |        | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 3.0%  | 2.2%  | 2.1%  | 2.1%  | 2.2%  | 4.4%  | 0.0%  | 5.3%  | 14.5% | 17.5% | 7.7%  | 4.3%  | 4.2%  | 0.0%  | 10.0% | 5.3%  | 0.0%  |      |
| BA               | 2.34%                |       |       |       |        | 0.0%  | 0.0%  | 27.3% | 20.0% | 12.5% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 3.8%  | 0.0%  | 0.0%  | 8.3%  | 0.0%  | 5.4%  | 0.0%  | 9.4%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| BD               | 1.92%                | 0.0%  | 0.0%  | 0.0%  | 100.0% |       |       | 0.0%  | 25.0% | 0.0%  | 0.0%  | 8.3%  | 0.0%  | 9.1%  | 8.3%  | 7.7%  | 0.0%  | 0.0%  | 7.7%  | 0.0%  | 4.8%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 2.2%  | 5.6%  | 0.0%  | 0.0%  | 0.0%  |      |
| BF               | 8.71%                | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 40.0% | 0.0%  | 0.0%  | 0.0%  | 8.3%  | 16.7% | 16.7% | 9.1%  | 8.3%  | 7.7%  | 0.0%  | 16.7% | 20.0% | 12.5% | 25.0% | 0.0%  | 0.0%  | 25.0% | 0.0%  | 14.3% | 0.0%  | 0.0%  | 0.0%  | 5.9%  | 15.8% |      |
| BG               | 2.66%                |       |       |       | 0.0%   | 25.0% | 28.6% | 22.2% | 0.0%  | 0.0%  | 14.3% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 5.9%  | 0.0%  | 0.0%  | 5.0%  | 0.0%  | 2.3%  | 6.7%  | 0.0%  | 2.1%  | 4.3%  | 0.0%  | 0.0%  | 5.1%  | 0.0%  | 0.0%  | 0.0%  | 5.9%  |      |
| BJ               | 10.13%               | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 14.3% | 0.0%  | 28.6% | 30.0% | 0.0%  | 22.2% | 0.0%  | 20.0% | 0.0%  | 22.2% | 0.0%  | 0.0%  | 12.5% | 14.3% | 25.0% | 25.0% | 0.0%  | 0.0%  | 14.3% | 0.0%  | 0.0%  | 0.0%  | 12.5% | 0.0%  | 0.0%  | 22.2% | 9.1%  |      |
| BO               | 5.00%                | 0.0%  | 0.0%  | 0.0%  | 20.0%  | 0.0%  | 0.0%  | 0.0%  | 9.1%  | 12.5% | 25.0% | 0.0%  | 10.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 14.3% | 28.6% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 12.5% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 20.0% | 0.0%  |      |
| BR               | 2.14%                | 0.0%  | 0.0%  | 0.0%  | 5.3%   | 0.0%  | 0.0%  | 1.7%  | 0.0%  | 5.6%  | 5.8%  | 0.0%  | 1.7%  | 0.0%  | 2.0%  | 1.8%  | 6.2%  | 0.0%  | 0.0%  | 3.6%  | 4.3%  | 7.0%  | 1.7%  | 7.9%  | 3.6%  | 0.0%  | 0.0%  | 3.2%  | 1.4%  | 0.0%  | 1.2%  | 1.2%  |      |
| BW               | 7.45%                |       |       |       |        |       |       | 0.0%  | 0.0%  | 50.0% | 0.0%  | 0.0%  | 25.0% | 33.3% | 50.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 25.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 25.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% |
| BY               | 4.44%                |       |       |       |        |       |       |       |       |       |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 6.3%  | 11.1% | 0.0%  | 4.2%  | 4.8%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 4.2%  | 31.8% | 11.1% | 0.0%  |      |
| CD               | 4.26%                | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  |       |       |       |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 33.3% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 9.1%  | 10.0% | 10.0% | 9.1%  | 9.1%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| CI               | 8.86%                | 7.7%  | 0.0%  | 0.0%  | 9.1%   | 9.5%  | 13.6% | 18.2% | 15.0% | 11.8% | 21.4% | 9.1%  | 0.0%  | 18.2% | 11.1% | 22.2% | 0.0%  | 11.1% | 11.1% | 0.0%  | 6.7%  | 13.6% | 16.0% | 7.7%  | 3.7%  | 3.6%  | 9.4%  | 10.5% | 6.5%  | 6.5%  | 6.5%  | 7.4%  |      |
| CL               | 5.01%                | 0.0%  | 7.7%  | 7.1%  | 0.0%   | 7.7%  | 0.0%  | 0.0%  | 0.0%  | 20.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 8.3%  | 2.9%  | 18.4% | 14.3% | 3.4%  | 3.6%  | 7.7%  | 0.0%  | 0.0%  | 0.0%  | 3.7%  | 0.0%  |      |
| CM               | 5.65%                | 0.0%  | 0.0%  | 14.3% | 0.0%   | 0.0%  | 16.7% | 0.0%  | 12.5% | 0.0%  | 0.0%  | 8.3%  | 0.0%  | 33.3% | 18.2% | 0.0%  | 9.1%  | 10.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 17.6% | 6.7%  | 0.0%  | 9.1%  | 0.0%  | 0.0%  | 8.0%  | 16.7% | 0.0%  |      |
| CN               | 3.02%                | 0.0%  | 16.7% | 16.7% | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 7.1%  | 5.0%  | 5.6%  | 0.0%  | 5.6%  | 13.0% | 6.3%  | 0.0%  | 3.8%  | 3.7%  | 1.8%  | 0.0%  | 3.5%  | 10.3% | 6.7%  | 1.7%  | 0.0%  | 1.6%  | 3.0%  | 3.1%  | 1.4%  | 0.0%  | 1.4%  | 1.5%  |      |
| CO               | 2.75%                | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 11.1% | 0.0%  | 0.0%  | 16.7% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 2.6%  | 2.6%  | 6.8%  | 2.6%  | 10.3% | 9.1%  | 2.3%  | 0.0%  | 3.6%  | 0.0%  |      |
| CR               | 1.41%                | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 16.7% | 0.0%  | 0.0%  | 20.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 16.7% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 6.7%  | 0.0%  | 3.6%  | 0.0%  | 1.5%  | 0.0%  | 0.0%  | 1.7%  | 0.0%  | 0.0%  | 0.0%  | 4.4%  |      |
| CZ               | 1.44%                | 0.0%  | 11.1% | 8.3%  | 0.0%   | 0.0%  | 0.0%  | 16.7% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| DO               | 2.55%                | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 14.3% | 0.0%  | 14.3% | 37.5% | 0.0%  | 8.3%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 5.6%  | 0.0%  | 0.0%  | 8.3%  | 0.0%  | 4.8%  | 4.5%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% |
| EC               | 1.07%                | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 33.3% | 20.0% | 0.0%  | 25.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 25.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 2.9%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% |
| EG               | 2.40%                | 12.5% | 0.0%  | 9.1%  | 0.0%   | 0.0%  | 5.9%  | 0.0%  | 7.1%  | 17.6% | 5.6%  | 0.0%  | 4.3%  | 0.0%  | 0.0%  | 3.6%  | 3.8%  | 8.7%  | 4.5%  | 0.0%  | 0.0%  | 9.5%  | 4.5%  | 3.8%  | 3.3%  | 2.4%  | 2.9%  | 1.9%  | 1.0%  | 1.0%  | 0.0%  | 0.0%  |      |
| GA               | 6.32%                | 0.0%  | 0.0%  | 0.0%  | 50.0%  |       |       |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 33.3% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 50.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 50.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 8.3%  | 7.7%  |      |
| GE               | 2.77%                |       |       |       |        | 0.0%  | 0.0%  | 0.0%  | 25.0% | 16.7% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 8.8%  | 2.6%  | 4.9%  | 6.5%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 4.8%  | 0.0%  | 3.7%  | 7.1%  | 0.0%  | 5.3%  | 2.7%  | 0.0%  | 1.4%  | 0.0% |
| GH               | 6.13%                | 11.1% | 11.1% | 0.0%  | 0.0%   | 14.3% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 20.0% | 0.0%  | 20.0% | 0.0%  | 0.0%  | 8.3%  | 7.7%  | 5.6%  | 0.0%  | 4.3%  | 3.6%  | 3.6%  | 6.3%  | 9.4%  | 2.9%  | 7.7%  | 2.6%  | 2.8%  | 7.7%  | 5.6%  | 14.3% | 12.1% |      |
| GN               | 8.04%                | 0.0%  | 0.0%  | 0.0%  | 75.0%  | 50.0% | 0.0%  | 0.0%  | 50.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 50.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 16.7% | 9.1%  | 0.0%  | 0.0%  | 0.0%  |      |
| GT               | 1.83%                | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 2.6%  | 2.8%  | 3.2%  | 10.3% | 3.6%  | 4.2%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| HN               | 2.18%                |       | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 33.3% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 3.4%  | 5.5%  | 0.0%  | 2.0%  | 2.2%  | 0.0%  | 0.0%  | 0.0%  | 11.5% | 0.0%  |      |
| HR               | 2.23%                |       |       | 0.0%  | 0.0%   | 0.0%  | 11.1% | 22.2% | 0.0%  | 6.7%  | 6.3%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 5.6%  | 0.0%  | 5.3%  | 5.9%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 4.5%  | 7.1%  | 0.0%  | 0.0%  | 0.0%  |      |
| HT               | 9.09%                |       |       | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |       |       | 0.0%  | 0.0%  | 0.0%  | 20.0% | 0.0%  | 0.0%  | 6.3%  | 6.7%  | 0.0%  | 41.7% | 10.0% | 10.0% | 0.0%  | 33.3% | 0.0%  |      |
| HU               | 1.94%                | 0.0%  | 0.0%  | 5.6%  | 5.9%   | 0.0%  | 0.0%  | 0.0%  | 9.1%  | 10.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 7.7%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 25.0% |      |
| ID               | 4.43%                | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 41.4% | 5.9%  | 6.3%  | 7.1%  | 7.1%  | 0.0%  | 14.3% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 4.8%  | 0.0%  | 0.0%  | 0.0%  | 3.8%  | 3.4%  | 3.1%  | 2.9%  | 14.3% | 3.4%  | 0.0%  | 0.0%  | 5.7%  |      |
| IN               | 2.64%                | 0.0%  | 0.0%  | 0.0%  | 7.1%   | 9.7%  | 0.0%  | 0.0%  | 9.5%  | 13.6% | 12.5% | 14.3% | 3.8%  | 0.0%  | 0.0%  | 4.5%  | 3.4%  | 1.5%  | 5.2%  | 0.0%  | 4.0%  | 5.4%  | 0.7%  | 3.1%  | 0.0%  | 3.0%  | 5.0%  | 4.7%  | 1.6%  | 0.5%  | 1.0%  | 0.5%  |      |
| JM               | 2.20%                | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 25.0% | 0.0%  | 50.0% | 0.0%  | 0.0%  | 28.6% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 7.1%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 12.5% | 0.0%  |      |
| JO               | 1.69%                | 0.0%  | 0.0%  | 50.0% | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 16.7% | 0.0%  | 9.1%  | 12.5% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 5.3%  | 0.0%  | 0.0%  | 0.0%  | 1.8%  | 0.0%  | 1.7%  | 1.6%  | 1.6%  | 1.6%  | 1.7%  | 0.0%  |      |
| KE               | 3.88%                | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 20.0% | 0.0%  | 11.1% | 16.7% | 0.0%  | 11.1% | 0.0%  | 10.0% | 0.0%  | 9.1%  | 8.3%  | 0.0%  | 0.0%  | 0.0%  | 5.0%  | 0.0%  | 5.6%  | 0.0%  | 6.0%  | 4.0%  | 6.1%  | 3.3%  | 6.0%  | 1.6%  | 0.0%  | 7.0%  | 1.3%  |      |
| KG               | 0.25%                |       |       | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 3.7%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| KH               | 1.12%                |       |       |       |        |       |       |       |       |       |       |       |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 4.5%  | 5.0%  | 0.0%  | 0.0%  | 3.2%  |      |
| KZ               | 1.59%                |       |       |       | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 10.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 6.3%  | 6.7%  | 6.9%  | 6.9%  | 0.0%  | 4.9%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 4.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% |
| LB               | 9.95%                | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 8.3%  | 0.0%  | 0.0%  | 14.3% | 15.4% | 0.0%  | 22.2% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 7.1%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 5.0%  | 0.0%  | 0.0%  | 30.0% | 73.9% | 50.0% | 0.0%  | 0.0%  | 0.0%  |      |
| LK               | 5.33%                | 0.0%  |       |       | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 6.3%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 8.3%  | 55.6% | 0.0%  | 0.0%  |      |
| LT               | 5.21%                |       |       | 0.0%  | 25.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 12.5% | 12.5% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |       |       | 0.0%  | 0.0%  | 33.3% | 0.0%  | 14.3% |      |
| MA               | 2.05%                | 8.3%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 8.3%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 8.3%  | 0.0%  | 25.0% | 0.0%  | 0.0%  | 0.0%  | 8.7%  | 0.0%  | 0.0%  | 0.0%  | 4.7%  | 0.0%  | 5.1%  | 0.0%  | 0.0%  |      |
| MD               | 1.33%                |       |       | 0.0%  | 0.0%   | 0.0   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |      |

Table 17: Annual default rates by country (continued)

| ISO country code | Average default rate | 1994  | 1995   | 1996  | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  | 2007  | 2008  | 2009  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  | 2019   | 2020  | 2021  | 2022  | 2023  | 2024  |      |
|------------------|----------------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|------|
| MM               | 15.26%               |       |        |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 2.8%   | 5.7%  | 51.5% | 37.5% | 37.5% | 0.0%  |      |
| MN               | 3.38%                |       |        |       |       |       |       |       |       |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 2.9%  | 7.3%  | 4.9%  | 7.1%  | 0.0%  | 6.8%  | 0.0%   | 11.1% | 2.4%  | 0.0%  | 4.8%  | 0.0%  |      |
| MR               | 8.53%                |       |        |       |       | 0.0%  | 25.0% | 0.0%  | 0.0%  | 20.0% | 0.0%  | 0.0%  | 28.6% | 11.1% | 11.1% | 0.0%  | 42.9% | 0.0%  | 0.0%  | 40.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| MU               | 2.48%                | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 7.7%  | 7.7%  | 0.0%  | 11.1% | 0.0%  | 28.6% | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 11.1% |      |
| MX               | 4.22%                | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 3.0%  | 9.4%  | 3.2%  | 9.1%  | 3.3%  | 0.0%  | 6.3%  | 0.0%  | 19.2% | 10.0% | 0.0%  | 4.8%  | 13.8% | 3.7%  | 1.7%  | 4.2%  | 5.6%  | 1.5%  | 5.1%   | 8.3%  | 6.7%  | 3.6%  | 2.4%  | 3.4%  |      |
| MZ               | 7.29%                | 0.0%  | 0.0%   | 0.0%  | 33.3% | 0.0%  | 0.0%  | 0.0%  | 22.2% | 11.1% | 0.0%  | 0.0%  | 8.3%  | 0.0%  | 8.3%  | 9.1%  | 7.7%  | 7.1%  | 0.0%  | 0.0%  | 0.0%  | 18.2% | 18.2% | 10.0% | 11.1% | 9.1%  | 0.0%   | 10.0% | 22.2% | 0.0%  | 9.1%  | 8.3%  |      |
| NG               | 4.65%                | 25.0% | 0.0%   | 0.0%  | 0.0%  | 33.3% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 11.1% | 20.0% | 0.0%  | 0.0%  | 8.7%  | 3.6%  | 7.7%  | 0.0%  | 3.2%  | 9.7%  | 0.0%  | 2.6%  | 5.4%  | 6.6%  | 9.5%  | 5.0%  | 1.6%   | 1.8%  | 5.2%  | 1.9%  | 3.9%  | 4.0%  |      |
| NI               | 2.95%                |       |        |       |       |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 33.3% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 18.2% | 11.1% | 0.0%  | 0.0%  | 8.3%  | 8.3%  | 0.0%  | 0.0%  | 0.0%  | 6.3%  | 4.4%   | 6.5%  | 0.0%  | 0.0%  | 5.0%  | 0.0%  |      |
| NP               | 4.48%                | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 33.3% | 50.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 33.3% | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| OT               | 2.78%                |       |        | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 50.0% | 0.0%  |       | 0.0%  | 0.0%  | 0.0%  | 4.2%  | 3.2%  | 4.8%  | 9.4%  | 1.8%  | 6.0%  | 6.3%  | 1.1%  | 2.3%  | 3.2%  | 2.1%  | 2.0%   | 2.0%  | 1.9%  | 0.0%  | 1.6%  | 2.8%  |      |
| PA               | 2.52%                | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 14.3% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 12.5% | 0.0%  | 0.0%  | 6.9%  | 0.0%  | 2.8%  | 2.9%  | 0.0%   | 2.9%  | 9.7%  | 0.0%  | 3.2%  | 0.0%  |      |
| PE               | 2.49%                | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 9.1%  | 16.7% | 7.7%  | 6.7%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 5.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 2.0%  | 4.3%  | 0.0%  | 0.0%   | 3.1%  | 2.9%  | 2.3%  | 7.8%  | 4.3%  |      |
| PH               | 5.45%                | 0.0%  | 8.3%   | 0.0%  | 11.1% | 0.0%  | 0.0%  | 7.1%  | 7.1%  | 15.4% | 38.5% | 18.2% | 0.0%  | 6.3%  | 9.1%  | 9.1%  | 0.0%  | 6.3%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 9.1%  | 0.0%  | 18.8%  | 6.3%  | 7.1%  | 0.0%  | 0.0%  | 0.0%  |      |
| PK               | 4.58%                | 0.0%  | 0.0%   | 0.0%  | 2.9%  | 44.4% | 5.0%  | 0.0%  | 0.0%  | 5.9%  | 6.7%  | 30.0% | 0.0%  | 10.0% | 0.0%  | 16.7% | 18.8% | 0.0%  | 0.0%  | 4.5%  | 0.0%  | 4.0%  | 0.0%  | 2.3%  | 0.0%  | 1.9%  | 2.0%   | 0.0%  | 0.0%  | 0.0%  | 10.6% | 0.0%  |      |
| PL               | 1.65%                | 9.4%  | 3.3%   | 3.1%  | 0.0%  | 0.0%  | 4.3%  | 0.0%  | 3.7%  | 3.7%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 5.0%  | 0.0%  | 0.0%  | 5.6%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 6.5%  | 0.0%  | 0.0%   | 2.2%  | 0.0%  | 0.0%  | 3.6%  | 0.0%  |      |
| PS               | 9.36%                |       |        |       |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 25.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 66.7% | 0.0%  | 50.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 14.3% | 0.0%  | 20.0% | 16.7% | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 26.7% | 15.4% |      |
| PY               | 0.30%                |       |        |       |       |       |       |       |       |       |       |       |       | 0.0%  | 0.0%  |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 3.3%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| REG              | 3.11%                | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 8.3%  | 6.7%  | 0.0%  | 3.8%  | 8.6%  | 0.0%  | 0.0%  | 0.0%  | 2.3%  | 9.1%  | 4.2%  | 0.0%  | 1.6%  | 2.7%  | 6.3%  | 3.7%  | 3.9%  | 4.4%  | 2.4%  | 2.2%   | 2.2%  | 3.0%  | 0.0%  | 5.1%  | 3.3%  |      |
| RO               | 1.00%                | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 5.6%  | 0.0%  | 4.3%  | 4.5%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 2.1%  | 2.1%  | 5.6%  | 0.0%  | 0.0%  | 0.0%  | 5.1%  | 2.1%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| RS               | 1.82%                |       |        |       |       |       |       |       |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 5.4%  | 0.0%  | 5.3%  | 3.4%  | 6.5%  | 1.9%  | 0.0%  | 2.0%  | 0.0%  | 0.0%   | 4.0%  | 0.0%  | 0.0%  | 0.0%  | 2.1%  |      |
| RU               | 2.39%                | 0.0%  | 0.0%   | 6.5%  | 2.7%  | 24.4% | 10.8% | 4.7%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.8%  | 2.1%  | 2.5%  | 3.0%  | 2.5%  | 1.2%  | 0.0%  | 3.4%  | 5.1%  | 2.1%  | 4.3%  | 0.0%  | 0.0%   | 4.2%  | 0.0%  | 0.0%  | 28.6% | 0.0%  |      |
| RW               | 7.00%                |       | 100.0% |       |       |       |       |       |       |       |       |       |       |       | 0.0%  | 0.0%  | 33.3% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 18.8% | 5.0%  | 0.0%  | 0.0%  | 28.6%  | 0.0%  | 0.0%  | 0.0%  | 9.1%  | 10.0% |      |
| SI               | 0.89%                | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 11.1% | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 20.0% |      |
| SK               | 0.40%                |       | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 10.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| SN               | 7.31%                | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 16.7% | 0.0%  | 11.1% | 0.0%  | 7.1%  | 0.0%  | 7.1%  | 0.0%  | 5.9%  | 6.3%  | 30.0% | 17.6% | 0.0%  | 12.5% | 4.3%  | 0.0%  | 11.1% | 6.9%  | 0.0%  | 11.4% | 5.9%  | 6.1%   | 12.2% | 5.3%  | 7.1%  | 8.9%  | 8.0%  |      |
| SV               | 0.16%                |       | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 1.7%  | 0.0%  | 0.0%  |      |
| TG               | 6.25%                | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 50.0% | 0.0%  | 0.0%  | 0.0%  | 25.0% | 0.0%  | 0.0%  | 20.0% | 0.0%  | 0.0%  | 25.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 25.0% | 12.5% | 0.0%  | 11.1% | 0.0%  | 12.5%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 11.1% | 0.0% |
| TH               | 2.86%                | 0.0%  | 8.3%   | 0.0%  | 11.8% | 20.0% | 0.0%  | 16.7% | 0.0%  | 0.0%  | 20.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 7.1%  | 5.3%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| TJ               | 4.40%                |       |        |       |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 25.0% | 0.0%  | 0.0%  | 22.2% | 9.1%  | 0.0%  | 6.3%  | 5.9%  | 10.0% | 5.0%  | 0.0%  | 4.5%  | 3.8%  | 11.1% | 9.1%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 4.5%  | 5.3%  |      |
| TM               | 13.64%               |       |        |       |       |       |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |       |       |       | 0.0%  | 0.0%  | 8.3%  | 0.0%  | 6.3%  | 6.7%  | 0.0%  | 0.0%  | 0.0%  | 33.3%  | 12.5% | 31.8% | 64.7% | 0.0%  | 0.0%  |      |
| TN               | 2.22%                | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 33.3% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 5.3%  | 5.9%  | 0.0%  | 0.0%  | 0.0%  | 4.5%  | 0.0%  | 4.3%  | 0.0%  | 9.4%  | 3.2%  | 0.0%  | 2.5%  | 2.5%   | 4.7%  | 0.0%  | 0.0%  | 2.6%  | 0.0%  |      |
| TR               | 2.18%                | 3.4%  | 6.9%   | 0.0%  | 5.3%  | 0.0%  | 7.1%  | 0.0%  | 4.3%  | 0.0%  | 9.5%  | 0.0%  | 4.7%  | 0.0%  | 0.0%  | 6.0%  | 2.1%  | 1.8%  | 0.0%  | 1.1%  | 0.0%  | 1.5%  | 1.3%  | 2.5%  | 0.6%  | 4.0%  | 3.0%   | 6.6%  | 1.1%  | 0.0%  | 0.6%  | 1.2%  |      |
| TT               | 6.72%                | 33.3% | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 20.0% | 0.0%  | 0.0%  | 0.0%  | 25.0% | 0.0%  | 60.0% | 0.0%  | 0.0%  | 0.0%  |       |       |       | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| TZ               | 6.53%                | 0.0%  | 16.7%  | 0.0%  | 33.3% | 20.0% | 0.0%  | 16.7% | 0.0%  | 66.7% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 6.7%  | 0.0%  | 12.0% | 0.0%  | 7.4%  | 10.7%  | 20.8% | 5.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| UA               | 7.05%                |       |        | 20.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 3.2%  | 4.4%  | 6.8%  | 1.4%  | 0.0%  | 3.1%  | 12.0% | 12.1% | 4.9%  | 0.0%  | 1.1%  | 7.4%   | 20.0% | 0.0%  | 39.6% | 3.7%  | 3.5%  |      |
| UG               | 3.96%                | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 16.7% | 14.3% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 33.3% | 0.0%  | 6.7%  | 0.0%  | 18.8% | 0.0%  | 10.5% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 10.3% | 0.0%  | 6.1%   | 2.8%  | 7.9%  | 0.0%  | 3.1%  | 0.0%  |      |
| UY               | 2.22%                | 0.0%  | 33.3%  | 0.0%  | 0.0%  | 20.0% | 0.0%  | 0.0%  | 0.0%  | 60.0% | 33.3% | 0.0%  | 0.0%  | 50.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| UZ               | 5.09%                | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 50.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 16.7% | 10.0% | 20.0% | 8.3%  | 46.2% | 0.0%  | 0.0%  | 4.5%  | 0.0%  | 0.0%  | 0.0%  | 12.5% | 0.0%  | 0.0%   | 0.0%  | 4.2%  | 5.9%  | 2.2%  | 1.7%  |      |
| VE               | 6.06%                | 10.0% | 30.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 20.0% | 0.0%  | 0.0%  | 0.0%  | 16.7% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 100.0% |       |       |       |       |       |      |
| VN               | 3.20%                |       | 0.0%   | 0.0%  | 0.0%  | 14.3% | 0.0%  | 12.5% | 33.3% | 0.0%  | 20.0% | 0.0%  | 0.0%  | 0.0%  | 14.3% | 11.1% | 0.0%  | 0.0%  | 14.3% | 0.0%  | 4.2%  | 8.7%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 2.4%  | 0.0%  | 1.9% |
| XK               | 2.13%                |       |        |       |       |       |       |       |       |       |       |       |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 11.1% | 15.4% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 7.7%  | 0     |        |       |       |       |       |       |      |

## 3.7 Default rates by country and sector

### 3.7.1 Default rates by country and GICS sector

Table 18 shows the average default rates by country and GICS sector, and Tables 19-25 present the average annual default rates by country and sector groupings.

Table 18: Default rates by country and GICS sector

| ISO country code and ISO country name | Administration | Communication services | Consumer discretionary | Consumer staples | Energy | Financials | Health care | Industrials | Information technology | Materials | Real estate | Utilities | Others |
|---------------------------------------|----------------|------------------------|------------------------|------------------|--------|------------|-------------|-------------|------------------------|-----------|-------------|-----------|--------|
| AL-Albania                            |                |                        |                        |                  |        | 0.87%      |             |             |                        |           |             |           |        |
| AM-Armenia                            |                |                        |                        |                  |        | 0.00%      |             |             |                        |           |             |           |        |
| AR-Argentina                          |                |                        |                        | 4.60%            |        | 6.52%      |             |             |                        | 4.59%     |             | 5.24%     |        |
| AZ-Azerbaijan                         |                |                        |                        |                  |        | 3.83%      |             |             |                        |           |             |           |        |
| BA-Bosnia and Herzegovina             |                |                        |                        |                  |        | 0.85%      |             |             |                        |           |             |           |        |
| BD-Bangladesh                         |                |                        |                        |                  |        | 1.92%      |             |             |                        |           |             | 0.00%     |        |
| BF-Burkina Faso                       |                |                        |                        |                  |        | 4.51%      |             |             |                        |           |             |           |        |
| BG-Bulgaria                           |                |                        |                        |                  |        | 0.34%      |             |             |                        |           |             |           |        |
| BR-Brazil                             |                |                        | 2.88%                  | 3.29%            |        | 0.26%      |             | 1.70%       |                        | 2.22%     |             | 2.03%     |        |
| CI-Cote D'Ivoire                      |                |                        |                        | 13.91%           |        | 3.83%      |             |             |                        |           |             | 4.49%     |        |
| CL-Chile                              |                |                        |                        |                  |        | 1.46%      |             |             |                        |           |             | 10.46%    |        |
| CN-China                              |                |                        | 4.76%                  | 2.45%            |        | 0.00%      | 2.13%       |             |                        | 5.53%     |             | 1.05%     |        |
| EC-Ecuador                            |                |                        |                        | 2.42%            |        | 0.00%      |             |             |                        |           |             |           |        |
| EG-Egypt                              |                |                        |                        |                  |        | 0.63%      |             |             |                        | 3.63%     |             | 0.00%     |        |
| GE-Georgia                            |                |                        |                        | 5.13%            |        | 0.56%      |             |             |                        |           |             |           |        |
| GH-Ghana                              |                |                        |                        |                  |        | 4.12%      |             |             |                        |           |             |           |        |
| GT-Guatemala                          |                |                        |                        |                  |        | 0.43%      |             |             |                        |           |             |           |        |
| HN-Honduras                           |                |                        |                        |                  |        | 0.44%      |             |             |                        |           |             | 4.73%     |        |
| ID-Indonesia                          |                |                        |                        | 2.94%            |        | 5.71%      |             |             |                        |           |             |           |        |
| IN-India                              |                |                        | 5.51%                  | 4.41%            |        | 1.02%      | 4.95%       | 3.09%       |                        | 2.63%     |             | 2.30%     |        |
| JO-Jordan                             |                |                        |                        |                  |        | 0.59%      |             |             |                        |           |             | 0.52%     |        |
| KE-Kenya                              |                |                        |                        |                  |        | 2.34%      |             |             |                        |           |             | 1.88%     |        |
| KG-Kyrgyzstan                         |                |                        |                        |                  |        | 0.00%      |             |             |                        |           |             |           |        |
| KH-Cambodia                           |                |                        |                        |                  |        | 0.50%      |             |             |                        |           |             |           |        |
| KZ-Kazakhstan                         |                |                        |                        | 0.82%            |        | 2.15%      |             |             |                        |           |             | 0.00%     |        |
| LB-Lebanon                            |                |                        |                        |                  |        | 10.39%     |             |             |                        |           |             |           |        |
| LK-Sri Lanka                          |                |                        |                        |                  |        | 7.26%      |             |             |                        |           |             |           |        |
| MA-Morocco                            |                |                        |                        |                  |        | 1.66%      |             |             |                        |           |             |           |        |

Table 18: Default rates by country and GICS sector (continued)

| ISO country code and ISO country name | Administration | Communication services | Consumer discretionary | Consumer staples | Energy | Financials | Health care | Industrials | Information technology | Materials | Real estate | Utilities | Others |
|---------------------------------------|----------------|------------------------|------------------------|------------------|--------|------------|-------------|-------------|------------------------|-----------|-------------|-----------|--------|
| MD-Moldova                            |                |                        |                        |                  |        | 0.57%      |             |             |                        |           |             |           |        |
| MN-Mongolia                           |                |                        |                        |                  |        | 1.55%      |             |             |                        |           |             |           |        |
| MX-Mexico                             |                |                        | 2.67%                  | 3.88%            |        | 5.72%      |             | 4.35%       |                        | 2.79%     |             | 2.82%     |        |
| NG-Nigeria                            |                |                        |                        |                  |        | 2.22%      |             |             |                        |           |             |           |        |
| NI-Nicaragua                          |                |                        |                        |                  |        | 1.40%      |             |             |                        |           |             |           |        |
| OT-Other*                             |                |                        | 0.74%                  | 2.74%            |        | 2.01%      |             |             |                        |           |             | 5.71%     | 4.58%  |
| PA-Panama                             |                |                        |                        |                  |        | 0.69%      |             |             |                        |           |             |           |        |
| PE-Peru                               |                |                        |                        | 5.41%            |        | 2.73%      |             |             |                        |           |             | 1.49%     |        |
| PH-Philippines                        |                |                        |                        |                  |        | 5.60%      |             |             |                        |           |             |           |        |
| PK-Pakistan                           |                |                        |                        |                  |        | 7.78%      |             |             |                        |           |             | 1.21%     |        |
| PL-Poland                             |                |                        |                        |                  |        | 0.00%      |             |             |                        |           |             | 1.70%     | 2.22%  |
| Palestine, State of**                 |                |                        |                        |                  |        | 8.33%      |             |             |                        |           |             |           |        |
| PY-Paraguay                           |                |                        |                        |                  |        | 0.00%      |             |             |                        |           |             |           |        |
| REG-Regional                          |                |                        | 7.07%                  | 1.64%            |        | 2.38%      |             | 4.73%       |                        |           |             |           |        |
| RO-Romania                            |                |                        |                        | 0.75%            |        | 0.67%      |             |             |                        |           |             |           |        |
| RS-Serbia                             |                |                        |                        | 6.06%            |        | 0.19%      |             |             |                        |           |             |           |        |
| RU-Russia                             |                |                        | 2.56%                  | 1.00%            |        | 2.19%      |             | 2.96%       |                        | 2.18%     |             |           | 3.81%  |
| SN-Senegal                            |                |                        |                        |                  |        | 6.54%      |             |             |                        |           |             | 5.71%     |        |
| SV-El Salvador                        |                |                        |                        |                  |        | 0.00%      |             |             |                        |           |             |           |        |
| TH-Thailand                           |                |                        |                        |                  |        |            |             |             |                        |           |             | 1.24%     |        |
| TJ-Tajikistan                         |                |                        |                        |                  |        | 2.54%      |             |             |                        |           |             |           |        |
| TM-Turkmenistan                       |                |                        |                        | 14.05%           |        |            |             |             |                        |           |             |           |        |
| TN-Tunisia                            |                |                        |                        |                  |        | 1.52%      |             |             |                        |           |             |           |        |
| TR-Türkiye                            |                |                        | 2.88%                  | 3.90%            |        | 0.20%      | 5.97%       | 3.72%       |                        | 1.38%     |             | 3.01%     |        |
| TZ-Tanzania                           |                |                        |                        |                  |        | 5.42%      |             |             |                        |           |             |           |        |
| UA-Ukraine                            |                |                        | 2.16%                  | 6.59%            |        | 3.80%      |             | 6.82%       |                        | 7.43%     |             | 21.60%    |        |
| UG-Uganda                             |                |                        |                        |                  |        | 3.02%      |             |             |                        |           |             | 4.38%     |        |
| UZ-Uzbekistan                         |                |                        |                        |                  |        | 1.36%      |             |             |                        |           |             | 0.00%     |        |
| VN-Viet Nam                           |                |                        |                        |                  |        | 0.70%      |             |             |                        |           |             | 1.32%     |        |
| ZA-South Africa                       |                |                        | 2.38%                  |                  |        | 2.75%      |             | 1.14%       |                        |           |             |           |        |
| ZM-Zambia                             |                |                        |                        |                  |        | 8.04%      |             |             |                        |           |             |           |        |

\*Such as supranational organisations, cannot be allocated to one country.

\*\*This designation shall not be construed as recognition of a State of Palestine and is without prejudice to the individual positions of the Member States on this issue.

### 3.7.2 Default rates by country and sector groupings

Table 19: Annual default rates by country and sector grouping – financial institutions

| ISO country code | Average default rate | 1994 | 1995 | 1996  | 1997 | 1998  | 1999  | 2000  | 2001   | 2002  | 2003   | 2004  | 2005  | 2006  | 2007  | 2008  | 2009  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  | 2019  | 2020  | 2021  | 2022  | 2023  | 2024  |       |      |
|------------------|----------------------|------|------|-------|------|-------|-------|-------|--------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| AL               | 0.87%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 16.7% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |       |      |
| AM               | 0.00%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |       |      |
| AR               | 6.52%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 66.7% | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 14.3% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 14.3% | 0.0%  | 20.0% | 9.1%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| AZ               | 3.83%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 3.7%  | 2.8%  | 0.0%  | 2.8%  | 0.0%  | 0.0%  | 0.0%  | 7.5%  | 14.3% | 17.4% | 8.3%  | 10.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| BA               | 0.85%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 20.0% | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 5.6%  | 0.0%  | 0.0%  | 4.2%  | 0.0%  | 0.0%  | 0.0%  | 4.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| BD               | 1.92%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 100.0% | 0.0%  | 0.0%   | 25.0% | 0.0%  | 25.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 8.3%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| BF               | 4.51%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 50.0% | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 11.1% | 0.0%  | 0.0%  | 25.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 25.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 25.0% |      |
| BG               | 0.34%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 33.3% | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| BR               | 0.26%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 3.3%  | 0.0%  | 0.0%  |       |      |
| CI               | 3.83%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 25.0% | 0.0%  | 20.0% | 0.0%  | 0.0%  | 11.1% | 0.0%  | 5.9%  | 0.0%  | 12.5% | 0.0%  | 0.0%  |      |
| CL               | 1.46%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 12.5% | 0.0%  | 7.1%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| CN               | 0.00%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| CO               | 2.14%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 50.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 6.7%  | 6.3%  | 0.0%  | 0.0%  | 0.0%  | 4.8%  | 0.0%  | 4.5%  | 0.0%  | 0.0%  | 0.0%  |      |
| CR               | 0.85%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 2.4%  | 0.0%  | 2.2%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 7.7%  | 0.0%  |      |
| DO               | 1.79%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 33.3%  | 0.0%  | 33.3%  | 66.7% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% |
| EC               | 0.00%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| EG               | 0.63%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 20.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| GE               | 0.56%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 25.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 13.3% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| GH               | 4.12%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 25.0% | 0.0%  | 0.0%  | 12.5% | 11.1% | 10.0% | 0.0%  | 0.0%  | 8.3%  | 0.0%  | 0.0%  | 6.7%  | 6.3%  | 12.5% | 6.7%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 10.0% | 0.0%  |      |
| GT               | 0.43%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 3.8%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| HN               | 0.44%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 3.3%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| ID               | 5.71%                | 0.0% | 0.0% | 0.0%  | 0.0% | 80.0% | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 14.3% | 33.3% | 0.0%  | 0.0%  | 0.0%  | 14.3% | 0.0%  |      |
| IN               | 1.02%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 9.1%   | 0.0%  | 12.5%  | 25.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 2.6%  | 2.4%  | 0.0%  | 0.0%  | 1.1%  | 1.0%  | 0.0%  |      |
| JO               | 0.59%                | 0.0% | 0.0% | 50.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| KE               | 2.34%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 50.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 9.4%  | 3.3%  | 7.1%  | 0.0%  | 0.0%  | 3.3%  | 0.0%  | 3.3%  | 0.0%  | 0.0%  |      |
| KG               | 0.00%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| KH               | 0.50%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 5.0%  | 0.0%  |      |
| KZ               | 2.15%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 12.5% | 0.0%  | 0.0%  | 8.3%  | 0.0%  | 11.1% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 11.1% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| LB               | 10.39%               | 0.0% | 0.0% | 0.0%  | 0.0% | 11.1% | 0.0%  | 0.0%  | 0.0%   | 20.0% | 0.0%   | 12.5% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 7.7%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 5.0%  | 0.0%  | 0.0%  | 31.0% | 77.3% | 60.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| LK               | 7.26%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 8.3%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 9.1%  | 68.2% | 0.0%  | 0.0%  | 0.0%  |      |
| MA               | 1.66%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 11.1% | 0.0%  | 16.7% | 0.0%  | 0.0%  | 7.1%  | 0.0%  | 0.0%  | 0.0%  | 4.5%  | 0.0%  | 0.0%  | 6.3%  | 0.0%  | 0.0%  | 0.0%  |      |
| MD               | 0.57%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 6.7%  | 0.0%  | 0.0%  | 0.0%  | 4.8%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| MN               | 1.55%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 7.7%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 7.1%  | 0.0%  | 8.3%  | 0.0%  | 0.0%  | 0.0%  |      |
| MX               | 5.72%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 37.5% | 25.0% | 0.0%  | 20.0% | 0.0%  | 20.0% | 0.0%  | 0.0%  | 0.0%  | 3.4%  | 5.7%  | 14.3% | 8.3%  | 9.4%  | 2.9%  | 5.1%  | 0.0%  |      |
| NG               | 2.22%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 14.3%  | 14.3% | 0.0%  | 0.0%  | 5.9%  | 0.0%  | 5.3%  | 0.0%  | 0.0%  | 5.0%  | 0.0%  | 0.0%  | 0.0%  | 5.6%  | 5.6%  | 5.7%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 3.4%  | 0.0%  | 0.0%  |      |
| NI               | 1.40%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 28.6% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 4.0%  | 0.0%  | 0.0%  | 0.0%  | 4.5%  | 0.0%  | 0.0%  | 0.0%  |      |
| OT               | 2.01%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 8.3%  | 5.9%  | 0.0%  | 9.4%  | 0.0%  | 2.6%  | 0.0%  | 2.1%  | 0.0%  | 4.3%  | 2.2%  | 0.0%  | 4.3%  | 0.0%  | 0.0%  | 0.0%  | 3.1%  | 0.0%  |      |
| PA               | 0.69%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 4.0%  | 0.0%  | 3.7%  | 0.0%  | 0.0%  | 0.0%  |      |
| PE               | 2.73%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 33.3%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 8.3%  | 8.3%  | 0.0%  | 16.7% | 6.3%  | 0.0%  | 0.0%  |      |
| PH               | 5.60%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 50.0% | 0.0%   | 0.0%  | 100.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 20.0% | 0.0%  | 20.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 37.5% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% |
| PK               | 7.78%                | 0.0% | 0.0% | 0.0%  | 0.0% | 20.0% | 0.0%  | 0.0%  | 0.0%   | 8.3%  | 12.5%  | 66.7% | 0.0%  | 33.3% | 0.0%  | 50.0% | 50.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 25.0% | 0.0%  | 0.0%  | 0.0%  | 14.3% | 0.0%  | 0.0%  |      |
| PL               | 0.00%                | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |

Table 19: Annual default rates by country and sector grouping – financial institutions (continued)

| ISO<br>country<br>code | Average<br>default<br>rate | 1994 | 1995 | 1996  | 1997  | 1998  | 1999  | 2000   | 2001  | 2002  | 2003 | 2004  | 2005  | 2006  | 2007  | 2008  | 2009  | 2010  | 2011  | 2012  | 2013 | 2014  | 2015  | 2016  | 2017  | 2018 | 2019  | 2020  | 2021  | 2022  | 2023  | 2024  |
|------------------------|----------------------------|------|------|-------|-------|-------|-------|--------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| PS                     | 8.33%                      | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 66.7% | 0.0%  | 50.0% | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 25.0% | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 26.7% | 16.7% |
| PY                     | 0.00%                      | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| REG                    | 2.38%                      | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 12.5%  | 0.0%  | 0.0%  | 0.0% | 16.7% | 0.0%  | 0.0%  | 0.0%  | 7.7%  | 7.7%  | 0.0%  | 0.0%  | 0.0%  | 5.0% | 4.8%  | 0.0%  | 4.5%  | 2.5%  | 4.3% | 2.2%  | 2.2%  | 0.0%  | 0.0%  | 3.2%  | 1.5%  |
| RO                     | 0.67%                      | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 16.7% | 0.0%   | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 7.7%  | 0.0% | 0.0%  | 0.0%  | 4.2%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| RS                     | 0.19%                      | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 3.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| RU                     | 2.19%                      | 0.0% | 0.0% | 0.0%  | 0.0%  | 23.1% | 23.1% | 0.0%   | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 1.4%  | 1.6%  | 3.3%  | 1.5%  | 0.0% | 6.5%  | 3.6%  | 2.5%  | 7.1%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 50.0% |
| SN                     | 6.54%                      | 0.0% | 0.0% | 0.0%  | 0.0%  | 25.0% | 0.0%  | 0.0%   | 0.0%  | 12.5% | 0.0% | 0.0%  | 0.0%  | 14.3% | 0.0%  | 33.3% | 20.0% | 0.0%  | 14.3% | 0.0%  | 0.0% | 16.7% | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 9.1%  | 10.0% | 0.0%  | 16.7% | 6.7%  |
| SV                     | 0.00%                      | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| TJ                     | 2.54%                      | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 16.7% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 21.4% | 10.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| TN                     | 1.52%                      | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 33.3% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 5.9%  | 6.3%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 3.7% | 3.6%  | 6.5%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| TR                     | 0.20%                      | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 3.4%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| TZ                     | 5.42%                      | 0.0% | 0.0% | 0.0%  | 50.0% | 0.0%  | 0.0%  | 100.0% | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 8.3%  | 0.0%  | 0.0% | 12.5% | 23.1% | 8.3%  | 0.0%  | 0.0%  | 0.0%  |
| UA                     | 3.80%                      | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 5.3%  | 4.3%  | 0.0%  | 0.0%  | 0.0%  | 9.5% | 5.3%  | 11.1% | 10.0% | 0.0%  | 0.0% | 16.7% | 0.0%  | 0.0%  | 12.5% | 0.0%  | 7.1%  |
| UG                     | 3.02%                      | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 33.3% | 0.0%  | 0.0%  | 0.0%  | 25.0% | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 18.2% | 0.0% | 0.0%  | 7.7%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| UZ                     | 1.36%                      | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 16.7% | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 5.9%  |
| VN                     | 0.70%                      | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 50.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| ZA                     | 2.75%                      | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 22.2% | 0.0% | 0.0%  | 0.0%  | 14.3% | 20.0% | 0.0%  | 0.0%  | 7.1%  | 0.0%  | 0.0%  | 0.0% | 5.6%  | 0.0%  | 0.0%  | 4.8%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 9.1%  | 5.3%  |
| ZM                     | 8.04%                      | 0.0% | 0.0% | 50.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0% | 28.6% | 50.0% | 20.0% | 0.0%  | 20.0% | 0.0%  | 0.0%  | 7.1%  | 16.7% | 0.0% | 0.0%  | 10.0% | 0.0%  | 9.1%  | 0.0% | 10.0% | 11.1% | 0.0%  | 0.0%  | 0.0%  | 16.7% |

Table 20: Annual default rates by country and sector grouping – non-financial institutions

| ISO country code | Average default rate | 1994  | 1995  | 1996  | 1997   | 1998  | 1999  | 2000  | 2001  | 2002  | 2003   | 2004  | 2005  | 2006  | 2007  | 2008  | 2009  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  | 2019  | 2020  | 2021   | 2022  | 2023  | 2024  |       |      |
|------------------|----------------------|-------|-------|-------|--------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|------|
| AL               | 9.34%                | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 50.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 25.0% | 0.0%  | 6.3%  | 11.1% | 6.3%  | 14.3% | 27.3% | 37.5% | 0.0%  | 0.0%  | 0.0%  | 100.0% | 0.0%  | 0.0%  | 0.0%  |       |      |
| AM               | 3.58%                |       |       |       |        |       |       |       | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 9.5%  | 9.1%  | 0.0%  | 5.6%  | 0.0%  | 5.9%  | 5.6%  | 0.0%  | 0.0%  | 6.3%  | 11.8%  | 0.0%  | 0.0%  | 6.3%  | 0.0%  |      |
| AR               | 3.98%                | 0.0%  | 1.5%  | 0.0%  | 1.5%   | 2.1%  | 4.3%  | 7.5%  | 2.5%  | 24.4% | 28.6%  | 4.5%  | 4.5%  | 12.5% | 0.0%  | 11.8% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 8.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 5.9%  | 7.7%  | 4.3%  | 2.3%   | 0.0%  | 0.0%  | 2.3%  |       |      |
| AZ               | 4.81%                |       |       |       |        | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 10.0% | 0.0%  | 9.1%  | 16.7% | 0.0%  | 0.0%  | 15.0% | 17.6% | 7.1%  | 0.0%  | 6.3%  | 0.0%   | 13.3% | 8.3%  | 0.0%  |       |      |
| BA               | 6.59%                |       |       |       |        | 0.0%  | 0.0%  | 37.5% | 33.3% | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 16.7% | 0.0%  | 20.0% | 0.0%  | 28.6% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  |       |      |
| BD               | 1.92%                | 0.0%  | 0.0%  | 0.0%  | 100.0% |       |       | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 12.5% | 12.5% | 0.0%  | 0.0%  | 12.5% | 0.0%  | 9.1%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 3.7%  | 4.2%   | 0.0%  | 0.0%  | 0.0%  |       |      |
| BF               | 12.98%               | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 33.3% | 0.0%  | 0.0%  | 0.0%   | 20.0% | 50.0% | 50.0% | 33.3% | 0.0%  | 16.7% | 0.0%  | 12.5% | 28.6% | 20.0% | 50.0% | 0.0%  | 0.0%  | 50.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 10.0% | 9.1%  |       |      |
| BG               | 3.92%                |       |       |       | 0.0%   | 33.3% | 25.0% | 33.3% | 0.0%  | 0.0%  | 25.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 10.0% | 0.0%  | 0.0%  | 7.7%  | 0.0%  | 3.6%  | 10.0% | 0.0%  | 3.1%  | 6.1%  | 0.0%  | 0.0%  | 7.1%  | 0.0%   | 0.0%  | 0.0%  | 7.1%  |       |      |
| BO               | 7.69%                | 0.0%  | 0.0%  | 0.0%  | 25.0%  | 0.0%  | 0.0%  | 0.0%  | 12.5% | 20.0% | 40.0%  | 0.0%  | 20.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 20.0% | 40.0% | 0.0%  | 0.0%  | 0.0%  | 50.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  |       |      |
| BR               | 2.66%                | 0.0%  | 0.0%  | 0.0%  | 5.3%   | 0.0%  | 0.0%  | 1.8%  | 0.0%  | 6.0%  | 6.3%   | 0.0%  | 1.9%  | 0.0%  | 2.3%  | 2.2%  | 8.0%  | 0.0%  | 0.0%  | 4.9%  | 5.7%  | 9.4%  | 2.6%  | 12.5% | 5.9%  | 0.0%  | 0.0%  | 4.5%  | 2.1%   | 0.0%  | 0.0%  | 1.9%  |       |      |
| BY               | 6.42%                |       |       |       |        |       |       |       |       |       |        |       |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 20.0% | 0.0%  | 0.0%  | 6.3%  | 7.1%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 5.3%   | 43.8% | 16.7% | 0.0%  |       |      |
| CI               | 10.73%               | 10.0% | 0.0%  | 0.0%  | 11.8%  | 13.3% | 18.8% | 25.0% | 21.4% | 18.2% | 30.0%  | 14.3% | 0.0%  | 28.6% | 16.7% | 28.6% | 0.0%  | 12.5% | 12.5% | 0.0%  | 7.1%  | 14.3% | 14.3% | 9.1%  | 0.0%  | 4.3%  | 12.5% | 10.3% | 9.7%   | 6.9%  | 10.7% | 3.3%  |       |      |
| CL               | 6.52%                | 0.0%  | 8.3%  | 7.7%  | 0.0%   | 8.3%  | 0.0%  | 0.0%  | 0.0%  | 20.0% | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 10.0% | 0.0%  | 25.9% | 19.0% | 5.6%  | 5.9%  | 13.3% | 0.0%   | 0.0%  | 8.3%  | 0.0%  |       |      |
| CM               | 6.25%                | 0.0%  | 0.0%  | 16.7% | 0.0%   | 0.0%  | 20.0% | 0.0%  | 20.0% | 0.0%  | 0.0%   | 11.1% | 0.0%  | 42.9% | 22.2% | 0.0%  | 10.0% | 11.1% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 18.8% | 7.1%  | 0.0%  | 5.0%  | 0.0%  | 0.0%   | 8.3%  | 18.2% | 0.0%  |       |      |
| CN               | 3.56%                | 0.0%  | 16.7% | 16.7% | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 7.7%  | 5.3%  | 5.9%   | 0.0%  | 6.3%  | 13.6% | 6.5%  | 0.0%  | 4.0%  | 3.9%  | 1.9%  | 0.0%  | 3.7%  | 11.1% | 8.0%  | 2.2%  | 0.0%  | 2.1%  | 4.1%  | 4.0%  | 1.8%   | 0.0%  | 2.0%  | 2.2%  |       |      |
| CO               | 3.17%                | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 20.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 7.1%  | 4.3%  | 20.0% | 16.7% | 0.0%   | 0.0%  | 2.9%  | 0.0%  |       |      |
| CR               | 2.50%                | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 25.0% | 0.0%  | 0.0%  | 33.3%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 50.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 20.0% | 0.0%  | 6.7%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 5.6%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  |       |      |
| CZ               | 2.68%                | 0.0%  | 11.1% | 8.3%  | 0.0%   | 0.0%  | 0.0%  | 16.7% | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |       |        |       |       | 0.0%  |       |      |
| DO               | 3.37%                | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 20.0% | 0.0%  | 11.1% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 7.7%  | 0.0%  | 0.0%  | 22.2% | 0.0%  | 16.7% | 12.5% | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  |       |      |
| EC               | 1.79%                | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 33.3% | 20.0% | 0.0%  | 25.0% | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 25.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 5.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  |       |      |
| EG               | 2.68%                | 16.7% | 0.0%  | 11.1% | 0.0%   | 0.0%  | 7.1%  | 0.0%  | 9.1%  | 23.1% | 7.7%   | 0.0%  | 5.6%  | 0.0%  | 0.0%  | 4.2%  | 4.5%  | 5.6%  | 5.3%  | 0.0%  | 0.0%  | 10.0% | 4.8%  | 4.2%  | 3.8%  | 2.7%  | 3.1%  | 2.1%  | 1.1%   | 1.1%  | 10.0% | 0.0%  |       |      |
| GA               | 5.13%                | 0.0%  | 0.0%  | 0.0%  | 50.0%  |       |       |       | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 50.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 9.1%  |       |      |
| GE               | 4.83%                |       |       |       |        | 0.0%  | 0.0%  | 0.0%  | 25.0% | 33.3% | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 5.3%  | 4.3%  | 8.3%  | 11.5% | 0.0%  | 0.0%  | 0.0%  | 8.3%  | 0.0%  | 6.3%  | 12.0% | 0.0%  | 10.3% | 5.7%   | 0.0%  | 3.7%  | 0.0%  |       |      |
| GH               | 7.81%                | 20.0% | 20.0% | 0.0%  | 0.0%   | 33.3% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 100.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 9.1%  | 0.0%  | 6.3%  | 12.5% | 11.8% | 0.0%  | 4.3%  | 0.0%  | 4.5%  | 11.5%  | 8.7%  | 20.8% | 13.0% |       |      |
| GT               | 3.45%                | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 9.1%  | 9.1%  | 30.0% | 11.1% | 14.3% | 0.0%   | 0.0%  | 0.0%  |       |       |      |
| HN               | 3.62%                |       | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 33.3%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 3.6%  | 11.5% | 0.0%  | 4.0%  | 4.2%  | 0.0%  | 0.0%   | 0.0%  | 17.6% | 0.0%  |       |      |
| HR               | 2.16%                |       |       | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 10.0% | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 10.0% | 0.0%  | 9.1%  | 11.1% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 5.6%  | 10.0%  | 0.0%  | 0.0%  | 0.0%  |       |      |
| HU               | 3.09%                | 0.0%  | 0.0%  | 6.7%  | 8.3%   | 0.0%  | 0.0%  | 0.0%  | 12.5% | 14.3% | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 16.7% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 25.0% |       |      |
| ID               | 4.00%                | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 33.3% | 6.3%  | 6.7%  | 7.7%  | 8.3%  | 0.0%   | 15.4% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 6.7%  | 0.0%  | 0.0%  | 0.0%  | 5.3%  | 4.5%  | 0.0%  | 7.7%  | 4.3%   | 0.0%  | 0.0%  | 0.0%  |       |      |
| IN               | 3.55%                | 0.0%  | 0.0%  | 0.0%  | 10.5%  | 14.3% | 0.0%  | 0.0%  | 10.0% | 23.1% | 12.5%  | 7.7%  | 5.6%  | 0.0%  | 0.0%  | 6.1%  | 4.3%  | 1.8%  | 6.2%  | 0.0%  | 4.9%  | 6.6%  | 1.0%  | 4.5%  | 0.0%  | 4.9%  | 6.9%  | 6.6%  | 3.2%   | 1.0%  | 1.0%  | 0.0%  |       |      |
| JM               | 0.50%                | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 16.7% | 0.0%  |       |      |
| JO               | 2.00%                | 0.0%  | 0.0%  | 50.0% | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 20.0% | 0.0%   | 10.0% | 14.3% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 6.7%  | 0.0%  | 0.0%  | 0.0%  | 2.1%  | 0.0%  | 2.1%  | 2.0%  | 2.0%   | 2.1%  | 2.2%  | 0.0%  |       |      |
| KE               | 5.23%                | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 25.0% | 0.0%  | 16.7% | 22.2% | 0.0%  | 12.5%  | 0.0%  | 11.1% | 0.0%  | 0.0%  | 10.0% | 0.0%  | 0.0%  | 0.0%  | 10.0% | 0.0%  | 16.7% | 0.0%  | 0.0%  | 5.0%  | 4.8%  | 6.7%  | 10.8% | 0.0%   | 0.0%  | 9.8%  | 2.1%  |       |      |
| KG               | 0.57%                |       |       | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 7.7%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  |       |      |
| KZ               | 1.37%                |       |       |       |        | 0.0%  | 0.0%  | 0.0%  | 16.7% | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 12.5% | 13.3% | 5.9%  | 0.0%  | 3.1%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 2.4%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  |       |      |
| LK               | 0.00%                |       |       |       |        | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  |       |      |
| MA               | 2.55%                | 20.0% | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 25.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 50.0% | 0.0%  | 0.0%  | 0.0%  | 11.1% | 0.0%  | 0.0%  | 4.8%  | 0.0%  | 0.0%   | 4.3%  | 0.0%  |       |       |      |
| MD               | 2.91%                |       |       |       | 0.0%   | 0.0%  | 50.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 14.3% | 0.0%  | 0.0%  | 0.0%  | 18.2% | 9.1%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  |       |      |
| MG               | 8.02%                | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 16.7% | 0.0%   | 0.0%  | 60.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 12.5% | 0.0%  | 25.0% | 0.0%  | 0.0%  | 75.0% | 0.0%  | 33.3% | 0.0%  | 0.0%  | 33.3%  | 0.0%  | 0.0%  | 0.0%  |       |      |
| MK               | 1.06%                |       |       |       |        | 0.0%  | 0.0%  | 20.0% | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 16.7% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  |       |      |
| ML               | 15.00%               | 0.0%  | 0.0%  | 0.0%  | 12.5%  | 11.1% | 22.2% | 0.0%  | 0.0%  | 18.2% | 20.0%  | 33.3% | 14.3% | 20.0% | 0.0%  | 0.0%  | 0.0%  | 16.7% | 20.0% | 0.0%  | 0.0%  | 20.0% | 0.0%  | 0.0%  | 0.0%  | 23.1% | 27.3% | 14.3% | 12.5%  | 33.3% | 33.3% | 42.9% |       |      |
| MM               | 12.78%               |       |       |       |        |       |       |       |       |       |        |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 0.0%  | 0.0%  | 0.0%   | 4.2%  | 8.7%  | 40.0% | 28.6% | 0.0% |
| MN               | 4.27%                |       |       |       |        |       |       |       |       |       |        |       |       |       |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 4.0%  | 9.7%  | 7.1%  | 6.9%  | 0.0%  | 10.0% | 0.0%  | 16.1% | 0.0%   | 0.0%  | 3.3%  | 0.0%  |       |      |
| MX               | 3.60%                | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 3.2%  | 10.3% | 3.7%   | 10.3% | 4.2%  | 0.0%  | 8.0%  | 0.0%  | 11.1% | 6.3%  | 0.0%  | 0.0%  | 16.0% | 0.0%  | 2.7%  | 6.5%  | 8.9%  | 0.0%  | 4.5%  | 4.1%  | 5.6%   | 0.0%  | 2.0%  | 2.1%  |       |      |
| MZ               | 6.99%                | 0.0%  | 0.0%  | 0.0%  | 33.3%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 14.3% | 0.0%   | 0.0%  | 10.0% | 0.0%  | 0.0%  | 10.0% | 9.1%  | 9.1%  | 0.0%  | 0.0%  | 0.0%  | 25.0% | 33.3% | 0.0%  | 0.0%  | 14.3% | 0.0%  | 11.1% | 25.0%  | 0.0%  | 9.1%  | 8.3%  |       |      |
| NG               | 8.48%                | 50.0% | 0.0%  | 0.0%  | 0.0%   | 50.0% |       |       |       |       |        |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |        |       |       |       |       |      |



Table 20: Annual default rates by country and sector grouping – non-financial institutions (continued)

| ISO country code | Average default rate | 1994  | 1995   | 1996  | 1997  | 1998   | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  | 2007  | 2008  | 2009   | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  | 2019   | 2020  | 2021  | 2022  | 2023  | 2024  |      |
|------------------|----------------------|-------|--------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|------|
| PH               | 5.40%                | 0.0%  | 9.1%   | 0.0%  | 12.5% | 0.0%   | 0.0%  | 0.0%  | 7.7%  | 16.7% | 33.3% | 20.0% | 0.0%  | 9.1%  | 16.7% | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 13.3% | 0.0%  | 0.0%   | 11.1% | 14.3% | 0.0%  | 0.0%  | 0.0%  |      |
| PK               | 3.86%                | 0.0%  | 0.0%   | 0.0%  | 4.5%  | 61.9%  | 14.3% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 14.3% | 0.0%  | 0.0%  | 0.0%  | 7.1%  | 14.3%  | 0.0%  | 0.0%  | 5.3%  | 0.0%  | 4.2%  | 0.0%  | 2.4%  | 0.0%  | 2.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 10.2% | 0.0%  |      |
| PL               | 2.54%                | 9.7%  | 3.6%   | 3.3%  | 0.0%  | 0.0%   | 4.5%  | 0.0%  | 4.3%  | 5.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 11.1% | 0.0%  | 0.0%   | 12.5% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 12.0% | 0.0%  | 0.0%   | 4.2%  | 0.0%  | 0.0%  | 5.3%  | 0.0%  |      |
| PY               | 0.88%                |       |        |       |       |        |       |       |       |       |       |       |       | 0.0%  | 0.0%  |       | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 12.5% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| REG              | 3.61%                | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 12.5% | 0.0%  | 5.9%  | 4.3%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 9.7%   | 5.9%  | 0.0%  | 2.2%  | 1.9%  | 6.9%  | 6.3%  | 3.4%  | 5.9%  | 0.0%  | 2.1%   | 2.1%  | 6.1%  | 0.0%  | 6.6%  | 4.8%  |      |
| RO               | 1.31%                | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 5.9%  | 6.7%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 4.2%  | 4.5%  | 3.6%  | 0.0%  | 0.0%  | 0.0%  | 5.7%  | 4.3%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| RS               | 4.18%                |       |        |       |       |        |       |       |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 12.5% | 0.0%  | 13.0% | 8.7%  | 16.7% | 0.0%  | 0.0%  | 5.0%  | 0.0%  | 0.0%   | 9.5%  | 0.0%  | 0.0%  | 0.0%  | 5.3%  |      |
| RU               | 2.52%                | 0.0%  | 0.0%   | 9.5%  | 4.0%  | 25.0%  | 4.2%  | 6.1%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 1.4%  | 3.8%  | 3.4%   | 4.0%  | 2.1%  | 1.0%  | 0.0%  | 1.1%  | 6.1%  | 1.8%  | 2.4%  | 0.0%  | 0.0%   | 0.0%  | 9.1%  | 0.0%  | 0.0%  | 20.0% |      |
| RW               | 10.71%               |       | 100.0% |       |       |        |       |       |       |       |       |       |       |       |       | 0.0%  | 50.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 33.3% | 9.1%  | 0.0%  | 0.0%  | 41.7%  | 0.0%  | 0.0%  | 0.0%  | 20.0% | 0.0%  |      |
| SI               | 1.71%                | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 20.0% | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 33.3% |      |
| SN               | 7.66%                | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 25.0% | 0.0%  | 0.0%  | 0.0%  | 12.5% | 0.0%  | 0.0%  | 10.0% | 27.3% | 16.7%  | 0.0%  | 11.8% | 6.7%  | 0.0%  | 9.5%  | 8.7%  | 0.0%  | 12.9% | 7.7%  | 7.7%   | 13.3% | 3.6%  | 10.0% | 6.1%  | 8.6%  |      |
| SV               | 0.43%                |       | 0.0%   | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 4.3%  | 0.0%  | 0.0%  |      |
| TG               | 9.43%                | 0.0%  |        | 0.0%  | 0.0%  | 100.0% |       | 0.0%  | 0.0%  | 50.0% | 0.0%  | 50.0% | 0.0%  | 0.0%  | 50.0% | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 28.6% | 14.3% | 0.0%  | 14.3% | 0.0%  | 16.7% | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 14.3% | 0.0% |
| TH               | 3.11%                | 0.0%  | 9.1%   | 0.0%  | 7.7%  | 25.0%  | 0.0%  | 22.2% | 0.0%  | 0.0%  | 33.3% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 7.7%  | 6.3%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% |
| TJ               | 6.13%                |       |        |       |       | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 25.0% | 0.0%  | 0.0%  | 33.3% | 25.0% | 0.0%  | 33.3%  | 16.7% | 25.0% | 14.3% | 0.0%  | 12.5% | 9.1%  | 0.0%  | 8.3%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 7.7%  | 7.7%  |      |
| TM               | 14.08%               |       |        |       |       |        |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |       |       |        | 0.0%  | 0.0%  | 9.1%  | 0.0%  | 6.7%  | 7.1%  | 0.0%  | 0.0%  | 0.0%  | 33.3%  | 12.5% | 31.8% | 64.7% | 0.0%  | 0.0%  |      |
| TN               | 4.17%                | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  |       |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 20.0% | 0.0%  | 14.3% | 0.0%  | 33.3% | 14.3% | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 6.7%  | 0.0%  |      |
| TR               | 3.19%                | 4.5%  | 8.7%   | 0.0%  | 8.3%  | 0.0%   | 12.0% | 0.0%  | 7.1%  | 0.0%  | 13.8% | 0.0%  | 6.3%  | 0.0%  | 0.0%  | 8.1%  | 3.1%   | 3.0%  | 0.0%  | 2.0%  | 0.0%  | 2.4%  | 2.2%  | 4.1%  | 0.9%  | 5.9%  | 4.3%   | 7.9%  | 1.6%  | 0.0%  | 0.9%  | 1.8%  |      |
| TZ               | 7.60%                | 0.0%  | 20.0%  | 0.0%  | 25.0% | 25.0%  | 0.0%  | 0.0%  | 0.0%  | 66.7% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 12.5% | 0.0%  | 15.4% | 0.0%  | 16.7% | 8.3%   | 18.2% | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| UA               | 7.81%                |       |        | 25.0% | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 2.3%  | 4.4%   | 9.6%  | 1.8%  | 0.0%  | 1.3%  | 13.6% | 12.3% | 4.2%  | 0.0%  | 1.3%  | 6.7%   | 21.6% | 0.0%  | 44.7% | 4.9%  | 2.3%  |      |
| UG               | 4.58%                | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%   | 25.0% | 20.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 33.3% | 0.0%  | 14.3% | 0.0%   | 12.5% | 0.0%  | 20.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 5.6%  | 0.0%  | 9.1%   | 0.0%  | 12.5% | 0.0%  | 4.8%  | 0.0%  |      |
| UY               | 1.85%                | 0.0%  | 50.0%  | 0.0%  | 0.0%  | 33.3%  | 0.0%  | 0.0%  | 0.0%  | 33.3% | 33.3% | 0.0%  | 0.0%  | 50.0% | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |
| UZ               | 7.32%                | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%   | 50.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 33.3% | 20.0% | 33.3% | 14.3%  | 71.4% | 0.0%  | 0.0%  | 5.3%  | 0.0%  | 0.0%  | 0.0%  | 20.0% | 0.0%  | 0.0%   | 0.0%  | 7.1%  | 8.7%  | 3.2%  | 0.0%  |      |
| VE               | 6.25%                | 11.1% | 33.3%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 20.0% | 0.0%  | 0.0%  | 0.0%  | 16.7% | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 100.0% |       |       |       |       |       |      |
| VN               | 4.28%                |       | 0.0%   | 0.0%  | 0.0%  | 14.3%  | 0.0%  | 12.5% | 33.3% | 0.0%  | 25.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 16.7% | 0.0%   | 0.0%  | 21.4% | 0.0%  | 6.7%  | 13.3% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 3.7%  | 0.0%  | 2.9% |
| ZA               | 2.04%                |       |        |       |       |        | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 20.0% | 20.0% | 16.7% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%  | 0.0%  | 7.7%  | 10.0% | 0.0%  | 5.0%  | 4.3%  | 5.2%  | 1.6%  | 0.0%   | 0.0%  | 1.3%  | 0.0%  | 1.1%  | 2.0%  |      |
| ZM               | 6.81%                | 0.0%  | 40.0%  | 0.0%  | 0.0%  | 0.0%   | 33.3% | 0.0%  | 25.0% | 0.0%  | 25.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 16.7%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 22.2% | 0.0%  | 0.0%  | 0.0%   | 21.4% | 8.3%  | 0.0%  | 7.7%  | 0.0%  |      |
| ZW               | 6.60%                | 8.3%  | 7.1%   | 0.0%  | 7.7%  | 0.0%   | 12.5% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 50.0% | 0.0%  | 0.0%  | 100.0% |       |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 50.0% | 0.0%  | 0.0%  | 0.0%   |       |       |       | 0.0%  | 0.0%  |      |

Table 21: Annual default rates by country and sector grouping – banking

| ISO country code | Average default rate | 1994 | 1995 | 1996  | 1997  | 1998  | 1999  | 2000   | 2001   | 2002  | 2003  | 2004  | 2005  | 2006  | 2007  | 2008  | 2009  | 2010  | 2011  | 2012 | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  | 2019  | 2020  | 2021  | 2022  | 2023  | 2024  |
|------------------|----------------------|------|------|-------|-------|-------|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| AM               | 0.00%                |      |      |       |       |       |       |        | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |       |
| AR               | 4.19%                | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%   | 62.5% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 20.0% | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 8.3%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| AZ               | 3.23%                |      |      |       |       |       |       | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 4.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 6.1%  | 13.3% | 18.2% | 9.1%  | 10.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| BA               | 0.73%                |      |      |       |       |       |       | 0.0%   | 0.0%   | 20.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 6.3%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 4.3%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| BD               | 0.00%                | 0.0% | 0.0% | 0.0%  |       |       |       |        |        | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| BG               | 0.00%                |      |      |       | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| BR               | 0.00%                | 0.0% | 0.0% | 0.0%  |       |       | 0.0%  | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| CI               | 5.22%                | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 25.0% | 0.0%  | 25.0% | 0.0%  | 0.0%  | 12.5% | 0.0%  | 6.7%  | 0.0%  | 15.8% |
| CL               | 0.00%                | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  |        |        |       |       |       |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| CO               | 0.65%                |      | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 0.0%  |       |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 6.7%  | 0.0%  | 0.0%  | 0.0%  |
| CR               | 0.33%                | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 9.1%  |
| EC               | 0.00%                |      |      |       |       |       |       |        |        |       |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |       |       |       |      | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| GE               | 0.65%                |      |      |       |       |       | 0.0%  | 0.0%   | 25.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 14.3% | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| GH               | 4.39%                | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 25.0% | 0.0%  | 0.0%  | 12.5% | 12.5% | 11.1% | 0.0%  | 0.0% | 10.0% | 0.0%  | 0.0%  | 8.3%  | 7.7%  | 15.4% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 14.3% |
| GT               | 0.00%                |      |      |       |       |       |       |        |        |       |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| ID               | 3.57%                | 0.0% | 0.0% | 0.0%  | 0.0%  | 80.0% | 0.0%  | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 14.3% |
| IN               | 2.07%                | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 12.5%  | 0.0%  | 20.0% | 66.7% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 6.9%  | 0.0%  | 0.0%  | 3.1%  | 3.3%  |       |
| KE               | 1.63%                |      |      |       |       | 0.0%  | 0.0%  | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 50.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 8.0%  | 0.0%  | 4.5%  | 0.0%  | 0.0%  | 4.3%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| KG               | 0.00%                |      |      |       |       |       |       |        |        |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| KZ               | 2.78%                |      |      |       | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 14.3% | 0.0%  | 0.0%  | 9.1% | 0.0%  | 16.7% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 16.7% | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| LB               | 10.10%               | 0.0% | 0.0% | 0.0%  | 0.0%  | 11.1% | 0.0%  | 0.0%   | 0.0%   | 20.0% | 0.0%  | 12.5% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 8.3%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 16.7% | 81.0% | 16.7% | 75.0% | 0.0%  |       |
| LK               | 6.90%                |      |      |       | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%   | 0.0%  | 0.0%  |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 9.1%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 14.3% | 64.3% | 0.0%  | 0.0%  |
| MA               | 0.00%                | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| MD               | 0.68%                |      |      | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 7.1%  | 0.0%  | 0.0% | 0.0%  | 5.9%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| MX               | 4.29%                | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |       | 0.0%  | 0.0% | 0.0%  | 50.0% | 0.0%  | 0.0%  | 0.0%  | 6.7%  | 6.7%  | 13.3% | 5.6%  | 11.1% | 0.0%  | 4.8%  |
| NG               | 1.97%                | 0.0% | 0.0% | 0.0%  | 0.0%  |       |       |        | 0.0%   | 0.0%  | 16.7% | 20.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 5.3%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 3.2%  | 5.9%  | 6.1%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 5.0%  | 0.0%  |
| NI               | 1.00%                |      |      |       |       |       | 0.0%  | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 16.7% | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 6.7%  | 0.0%  |
| OT               | 1.84%                |      |      |       |       |       |       |        |        |       |       |       | 0.0%  | 0.0%  | 0.0%  | 12.5% | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 8.0%  | 4.8%  | 0.0%  | 11.1% | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| PA               | 0.00%                | 0.0% | 0.0% | 0.0%  | 0.0%  |       | 0.0%  | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| PE               | 0.51%                | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 33.3%  | 0.0%  | 0.0%  |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| PK               | 6.25%                | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%   | 8.3%  | 12.5% | 66.7% |       | 0.0%  | 0.0%  | 33.3% | 50.0% | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  |       | 0.0%  | 0.0%  | 0.0%  | 25.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| PL               | 0.00%                | 0.0% | 0.0% | 0.0%  | 0.0%  |       | 0.0%  | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| PY               | 0.00%                |      |      |       |       |       |       |        |        |       |       |       |       |       |       |       |       |       | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| REG              | 0.78%                |      |      | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 11.1% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 2.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 7.7%  | 0.0%  |
| RO               | 0.46%                |      | 0.0% | 0.0%  | 0.0%  | 0.0%  | 20.0% | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 4.5% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| RS               | 0.20%                |      |      |       |       |       |       |        |        | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 3.2%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| RU               | 2.07%                |      | 0.0% | 0.0%  | 0.0%  | 16.7% | 23.1% | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 1.5%  | 1.7%  | 3.5%  | 1.7% | 0.0%  | 7.4%  | 2.1%  | 2.9%  | 4.2%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 50.0% |       |
| SN               | 8.02%                | 0.0% | 0.0% | 0.0%  | 0.0%  | 50.0% | 0.0%  | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 20.0% | 0.0%  | 42.9% | 25.0% | 0.0%  | 16.7% | 0.0% | 0.0%  | 20.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 10.0% | 12.5% | 0.0%  | 20.0% | 10.0% |       |
| SV               | 0.00%                |      |      |       |       |       |       | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| TN               | 1.11%                |      |      |       |       |       | 0.0%  | 0.0%   | 100.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 5.0%  | 4.8%  | 4.8%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| TR               | 0.25%                | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| TZ               | 5.41%                | 0.0% | 0.0% | 0.0%  | 50.0% | 0.0%  | 0.0%  | 100.0% |        |       |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 9.1%  | 0.0%  | 0.0%  | 13.3% | 16.7% | 8.3%  | 0.0%  | 0.0%  | 0.0%  |
| UA               | 3.62%                |      |      | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 5.9%  | 4.8%  | 0.0%  | 0.0%  | 0.0% | 11.8% | 6.3%  | 0.0%  | 10.0% | 0.0%  | 0.0%  | 20.0% | 0.0%  | 0.0%  | 14.3% | 0.0%  | 9.1%  |
| UG               | 2.30%                | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 33.3% | 0.0%  | 0.0%  | 0.0%  | 14.3% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 18.2% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| UZ               | 0.78%                |      |      |       |       |       |       |        | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 6.7%  |
| VN               | 0.81%                |      |      |       |       |       |       |        |        |       |       |       |       |       | 50.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
| ZA               | 1.66%                |      |      |       |       | 0.0%  | 0.0%  | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 16.7% | 20.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 5.9%  | 0.0%  | 0.0%  | 0.0%  | 5.3%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 7.7%  | 0.0%  |
| ZM               | 5.36%                |      | 0.0% | 50.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%   | 0.0%   | 0.0%  | 0.0%  | 0.0%  | 60.0% | 0.0%  | 0.0%  | 20.0% | 0.0%  | 0.0%  | 0.0%  | 9.1% | 0.0%  | 0.0%  | 14.3% | 0.0%  | 12.5% | 0.0   |       |       |       |       |       |       |



Table 23: Annual default rates by country and sector grouping – non-bank financials

| ISO country code | Average default rate | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000   | 2001 | 2002 | 2003   | 2004  | 2005 | 2006 | 2007 | 2008  | 2009  | 2010  | 2011  | 2012  | 2013 | 2014 | 2015  | 2016  | 2017  | 2018 | 2019 | 2020  | 2021  | 2022 | 2023  | 2024  |      |
|------------------|----------------------|------|------|------|------|------|------|--------|------|------|--------|-------|------|------|------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|------|------|-------|-------|------|-------|-------|------|
| BR               | 1.72%                |      |      |      |      |      |      |        |      |      | 0.0%   | 0.0%  | 0.0% | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |      | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0% | 11.1% | 0.0%  |      |
| CN               | 0.00%                | 0.0% |      |      |      | 0.0% | 0.0% | 0.0%   | 0.0% | 0.0% | 0.0%   | 0.0%  | 0.0% | 0.0% |      |       | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  |      |
| CO               | 3.97%                |      | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |        |      |      | 100.0% | 0.0%  | 0.0% | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0% | 10.0% | 12.5% | 14.3% | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0% | 0.0%  | 16.7% | 0.0% |
| CR               | 1.78%                | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0%   | 0.0% |      |        |       |      |      |      |       |       |       |       |       |      |      | 6.3%  | 0.0%  | 5.9%  | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0% | 0.0%  | 6.7%  |      |
| GT               | 1.20%                |      |      |      |      |      |      |        |      |      |        |       |      |      |      |       |       |       |       |       |      |      | 7.1%  | 0.0%  | 0.0%  | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  |      |
| IN               | 0.34%                | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0%   | 0.0% | 0.0% | 0.0%   | 0.0%  | 0.0% | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0% | 3.8% | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  |      |
| MX               | 7.29%                |      |      |      |      |      |      |        |      |      | 0.0%   | 0.0%  | 0.0% | 0.0% | 0.0% | 0.0%  | 42.9% | 25.0% | 0.0%  | 33.3% | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0% | 5.0% | 15.0% | 11.1% | 7.1% | 6.7%  | 5.6%  |      |
| OT               | 2.15%                |      |      |      |      |      |      |        |      |      |        |       | 0.0% | 0.0% | 0.0% | 0.0%  | 14.3% | 0.0%  | 25.0% | 0.0%  | 7.7% | 0.0% | 4.8%  | 0.0%  | 0.0%  | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0% | 0.0%  | 4.3%  |      |
| REG              | 3.27%                |      |      |      |      |      |      | 100.0% |      | 0.0% | 0.0%   | 33.3% | 0.0% | 0.0% | 0.0% | 20.0% | 20.0% | 0.0%  | 0.0%  | 0.0%  | 7.7% | 8.3% | 0.0%  | 6.1%  | 3.2%  | 5.9% | 2.9% | 3.0%  | 0.0%  | 0.0% | 2.0%  | 1.9%  |      |
| RO               | 1.25%                |      |      |      |      |      | 0.0% | 0.0%   | 0.0% |      |        | 0.0%  | 0.0% | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 25.0% | 0.0% | 0.0% | 0.0%  | 14.3% | 0.0%  | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  |      |
| SV               | 0.00%                |      |      |      |      |      |      |        |      |      |        |       |      |      |      |       |       | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  |      |
| TR               | 0.00%                | 0.0% | 0.0% | 0.0% | 0.0% |      |      |        |      |      |        |       | 0.0% | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  |      |

Table 24: Annual default rates by country and sector grouping – renewables

| ISO<br>country<br>code | Average<br>default<br>rate | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003   | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014  | 2015  | 2016  | 2017  | 2018  | 2019 | 2020  | 2021 | 2022  | 2023  | 2024 |
|------------------------|----------------------------|------|------|------|------|------|------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|------|-------|------|-------|-------|------|
| CL                     | 12.03%                     | 0.0% | 0.0% | 0.0% | 0.0% |      |      |      |      |      |        |      |      |      |      | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 16.7% | 0.0%  | 35.0% | 23.1% | 8.3%  | 9.1% | 22.2% | 0.0% | 0.0%  | 25.0% | 0.0% |
| EG                     | 0.00%                      |      |      |      |      |      |      |      |      |      |        |      |      |      |      |      |      |      |      |      |      |       |       |       |       | 0.0%  | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0% |
| HN                     | 5.33%                      |      |      |      |      |      |      |      |      |      |        |      |      |      |      |      |      |      |      | 0.0% | 0.0% | 0.0%  | 0.0%  | 17.6% | 0.0%  | 6.3%  | 6.3% | 0.0%  | 0.0% | 0.0%  | 27.3% | 0.0% |
| IN                     | 1.87%                      | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0%   | 0.0% |      |      | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 4.8%  | 0.0%  | 5.6%  | 0.0%  | 2.6%  | 2.1% | 3.9%  | 3.9% | 0.0%  | 0.0%  | 0.0% |
| JO                     | 0.31%                      |      |      |      |      |      |      |      |      |      |        |      |      |      |      |      |      |      |      |      | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0% | 2.6%  | 0.0%  | 0.0% |
| MX                     | 2.38%                      |      |      |      |      |      |      |      |      |      |        |      |      |      |      |      |      |      | 0.0% | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 20.0% | 0.0%  | 9.1% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 5.6% |
| PK                     | 0.38%                      |      |      |      |      |      |      |      |      |      |        |      |      |      |      |      |      | 0.0% | 0.0% | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0% | 0.0%  | 2.7%  | 0.0% |
| PL                     | 2.14%                      |      |      |      |      |      |      |      |      |      |        |      |      |      |      |      |      | 0.0% | 0.0% | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 30.0% | 0.0%  | 0.0% | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0% |
| TR                     | 4.55%                      | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.0% |      | 0.0% | 0.0% |      |      |      | 0.0% | 0.0% | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 9.1%  | 7.1% | 7.1%  | 7.1% | 0.0%  | 6.7%  | 6.7% |
| UA                     | 28.57%                     |      |      |      |      |      |      |      |      |      |        |      |      |      |      |      |      | 0.0% |      | 0.0% |      | 0.0%  | 50.0% | 0.0%  | 0.0%  | 20.0% | 0.0% | 68.0% | 0.0% | 33.3% | 16.7% | 0.0% |

Table 25: Annual default rates by country and sector grouping – services

| ISO country code | Average default rate | 1994 | 1995 | 1996 | 1997 | 1998 | 1999  | 2000 | 2001 | 2002   | 2003  | 2004  | 2005 | 2006 | 2007 | 2008 | 2009  | 2010  | 2011  | 2012 | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  | 2019 | 2020  | 2021  | 2022 | 2023  | 2024 |
|------------------|----------------------|------|------|------|------|------|-------|------|------|--------|-------|-------|------|------|------|------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|------|
| BR               | 2.87%                |      |      | 0.0% | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0% | 0.0%   | 12.5% | 0.0%  | 0.0% | 0.0% | 0.0% | 0.0% | 12.5% | 0.0%  | 0.0%  | 0.0% | 10.0% | 0.0%  | 14.3% | 16.7% | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0% |
| CR               | 1.82%                | 0.0% | 0.0% |      |      |      |       |      |      |        |       |       |      |      |      |      |       |       |       |      |       | 5.6%  | 0.0%  | 5.9%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0% | 0.0%  | 6.7% |
| IN               | 3.31%                |      |      |      |      |      |       |      |      |        |       |       | 0.0% | 0.0% | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0% | 12.5% | 25.0% | 0.0%  | 8.3%  | 0.0%  | 0.0%  | 0.0% | 7.1%  | 0.0%  | 0.0% | 0.0%  | 0.0% |
| MX               | 5.10%                | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |       |      |      | 0.0%   | 0.0%  | 50.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 11.1% | 0.0%  | 0.0% | 10.0% | 25.0% | 0.0% | 0.0%  | 0.0% |
| OT               | 3.86%                |      |      |      |      |      |       |      |      | 100.0% |       |       | 0.0% | 0.0% | 0.0% | 0.0% | 12.5% | 0.0%  | 15.4% | 0.0% | 15.4% | 18.8% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0% |
| REG              | 6.21%                |      |      | 0.0% | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0% | 0.0%   | 0.0%  | 0.0%  | 0.0% | 0.0% | 0.0% | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0% | 14.3% | 16.7% | 0.0%  | 10.0% | 22.2% | 14.3% | 0.0% | 0.0%  | 0.0%  | 0.0% | 14.3% | 7.1% |
| RU               | 5.00%                |      |      |      |      |      |       | 0.0% | 0.0% | 0.0%   | 0.0%  | 0.0%  | 0.0% | 0.0% | 0.0% | 0.0% | 11.1% | 7.7%  | 9.1%  | 0.0% | 0.0%  | 0.0%  | 25.0% | 20.0% | 0.0%  | 0.0%  |      |       | 0.0%  | 0.0% | 0.0%  | 0.0% |
| SV               | 0.00%                |      | 0.0% | 0.0% | 0.0% | 0.0% | 0.0%  | 0.0% | 0.0% | 0.0%   | 0.0%  |       |      |      |      |      |       | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0%  | 0.0% | 0.0%  | 0.0% |
| TR               | 2.92%                | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 50.0% | 0.0% | 0.0% | 0.0%   | 0.0%  | 0.0%  | 0.0% | 0.0% | 0.0% | 0.0% | 16.7% | 25.0% | 0.0%  | 0.0% | 0.0%  | 12.5% | 0.0%  | 0.0%  | 0.0%  | 0.0%  | 0.0% | 8.3%  | 0.0%  | 0.0% | 0.0%  | 0.0% |

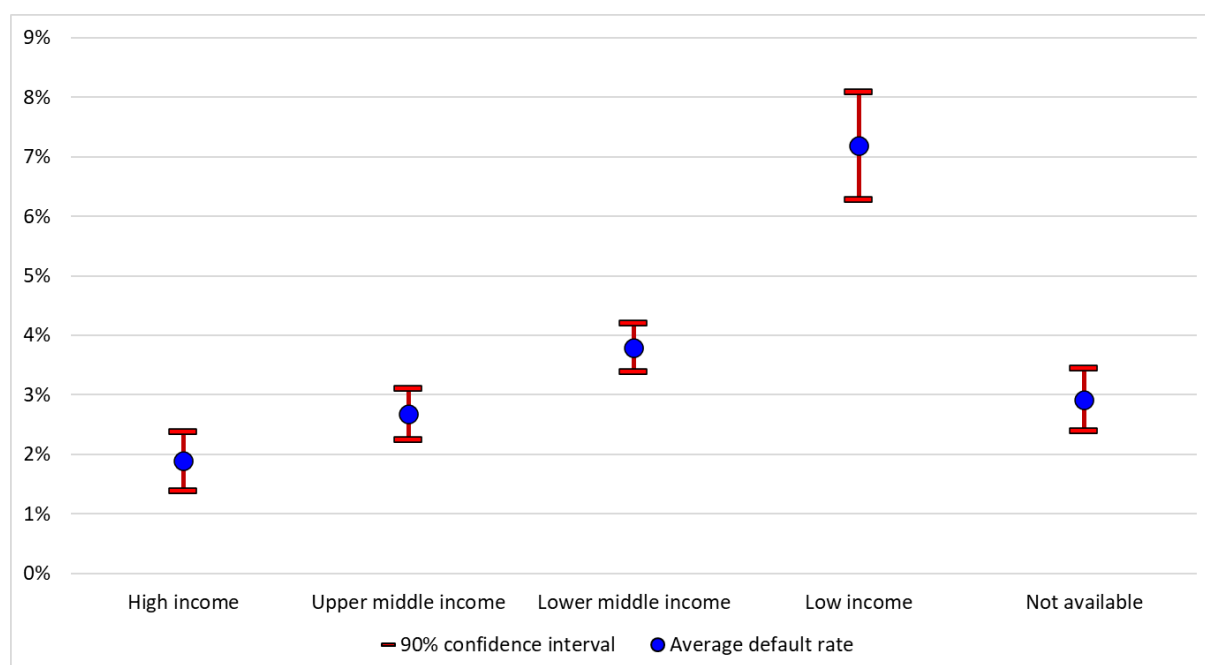
### 3.8 Default rates by income group

The default rates in this section are categorised according to the [World Bank income group classification](#). The highest default rate, 7.19%, is observed in low-income countries.

Table 26: Default rates by income group

| Income group at year of default       | Counter-parties | Observed years | Number of defaults | Number of observations | Signed amount<br>€ million | Lower of 90%<br>confidence<br>interval | Average<br>default rate | Upper of 90%<br>confidence<br>interval |
|---------------------------------------|-----------------|----------------|--------------------|------------------------|----------------------------|--|-------------------------|--|
| High income                           | 1 568           | 31             | 69                 | 3 653                  | 66 157                     | 1.39%                                  | 1.89%                   | 2.39%                                  |
| Upper middle income                   | 4 484           | 31             | 654                | 24 407                 | 212 846                    | 2.25%                                  | 2.68%                   | 3.11%                                  |
| Lower middle income                   | 3 216           | 31             | 818                | 21 565                 | 109 975                    | 3.39%                                  | 3.79%                   | 4.20%                                  |
| Low income                            | 486             | 31             | 464                | 6 451                  | 9 076                      | 6.29%                                  | 7.19%                   | 8.10%                                  |
| Not available                         | 722             | 31             | 96                 | 3 285                  | 48 307                     | 2.39%                                  | 2.92%                   | 3.45%                                  |
| Overall, including omitted categories | 10 476          | 31             | 2 101              | 59 361                 | 446 361                    | 3.19%                                  | 3.54%                   | 3.89%                                  |

Figure 11: Default rates by income group



### 3.9 Default rates by income group and region

Table 27 shows default rates by income group and World Bank regions. The highest default rate, 10.33%, is observed in the low-income group in East Asia and the Pacific.

Table 27: Default rates by income group and World Bank region

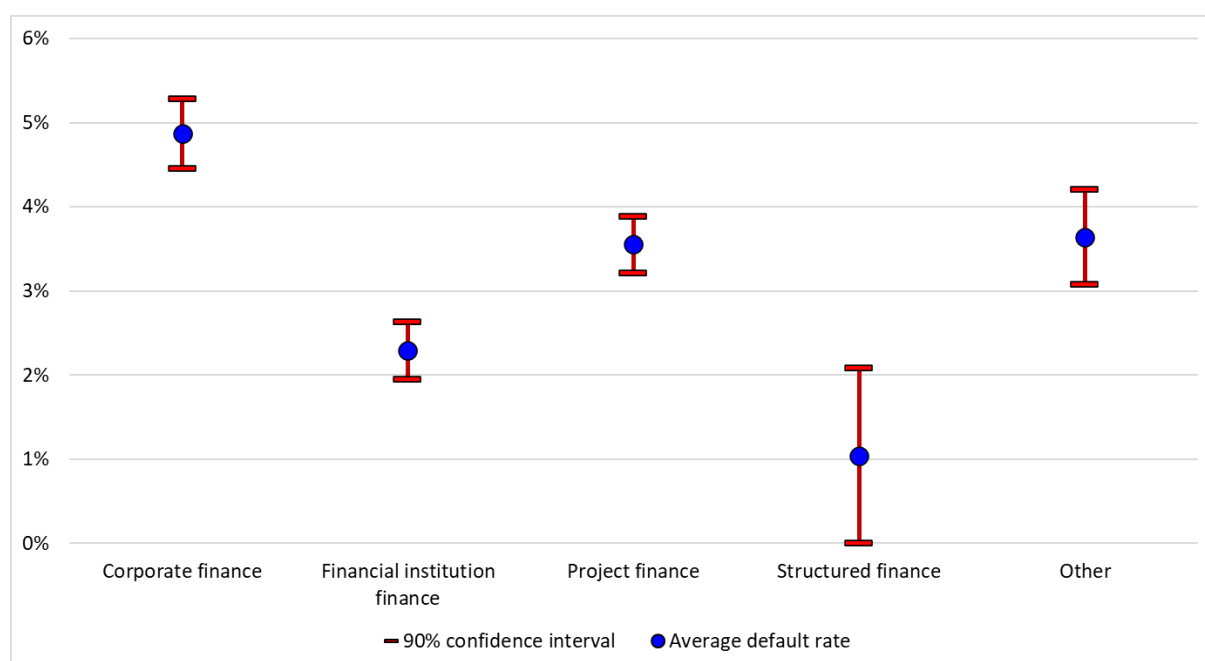
| Income group at year of default | Number of defaults | Number of observations | East Asia & Pacific | Europe & Central Asia | Latin America & Caribbean | Middle East & North Africa | South Asia | Sub-Saharan Africa |
|---------------------------------|--------------------|------------------------|---------------------|-----------------------|---------------------------|----------------------------|------------|--------------------|
| High income                     | 69                 | 3 653                  |                     | 1.29%                 | 3.30%                     | 0.69%                      |            |                    |
| Upper middle income             | 654                | 24 407                 | 2.32%               | 2.41%                 | 2.74%                     | 5.29%                      | 0.00%      | 2.93%              |
| Lower middle income             | 818                | 21 565                 | 4.07%               | 4.20%                 | 2.88%                     | 2.74%                      | 2.60%      | 5.67%              |
| Low income                      | 464                | 6 451                  | 10.33%              | 3.49%                 | 7.32%                     | 8.51%                      | 6.30%      | 7.66%              |
| Not available                   | 96                 | 3 285                  | 1.25%               | 1.52%                 | 4.23%                     | 5.04%                      |            | 4.78%              |

### 3.10 Default rates by project type

Among the private counterparties, 39% of defaults fall under the “other” category, followed by corporate finance (30%) (Table 28). The highest default rate occurs in corporate finance (4.87%), whereas the lowest default rate occurs in structured finance (1.04%).

Table 28: Default rates by project type

| Project type of contracts at time of default | Number of defaults | Number of observations | Lower of 90% confidence interval | Average default rate | Upper of 90% confidence interval |
|--|--------------------|------------------------|----------------------------------|----------------------|----------------------------------|
| Corporate finance                            | 628                | 12 891                 | 4.46%                            | <b>4.87%</b>         | 5.29%                            |
| Financial institution finance                | 351                | 15 326                 | 1.95%                            | <b>2.29%</b>         | 2.63%                            |
| Project finance                              | 278                | 7 825                  | 3.21%                            | <b>3.55%</b>         | 3.89%                            |
| Structured finance                           | 4                  | 385                    | 0.00%                            | <b>1.04%</b>         | 2.08%                            |
| Other  | 826                | 22 672                 | 3.08%                            | <b>3.64%</b>         | 4.21%                            |
| Overall, including omitted categories        | <b>2 101</b>       | <b>59 361</b>          | <b>3.19%</b>                     | <b>3.54%</b>         | <b>3.89%</b>                     |



## 3.11 Default rates by credit rating

### 3.11.1 Methodology

Default rate reporting by credit rating is based on internal ratings prepared by member institutions for their borrowers. These ratings are generated by individual internal rating systems that often use different scales and are not directly comparable. To enable consistent aggregation of ratings across different members, GEMs has developed a master scale (shown in Table 29), which serves as the benchmark in the following process.

For each institution, internal ratings are collected for every counterparty and each year in which there was lending. Using these ratings, the observed default rate for each internal rating category is calculated based on actual defaults. The observed default rates are then mapped to the GEMs master scale to establish equivalent ratings. The GEMs equivalents across all institutions are then used to consolidate the ratings data and generate the output statistics.

Only internal ratings considered of good quality by the member institutions are used for this process. However, these ratings are not consistently available for the full dataset used for the default rate statistics presented in Section 3.1. In particular, data from the earlier years of the observation period are incomplete and cannot be reliably reconstructed. As a result, the number of observations and recorded defaults by credit rating is reduced by about 15%.

Table 29: GEMs master scale

| GEMs rating | Probability of default |
|-------------|------------------------|
| Gi1         | 0.0001%                |
| Gi2         | 0.0006%                |
| Gi3         | 0.0014%                |
| Gi4         | 0.0030%                |
| Gi5         | 0.0058%                |
| Gi6         | 0.0109%                |
| Gi7         | 0.0256%                |
| Gi8         | 0.0842%                |
| Gi9         | 0.2161%                |
| Gi10        | 0.4506%                |
| Gs1         | 0.8169%                |
| Gs2         | 1.3445%                |
| Gs3         | 2.0626%                |
| Gs4         | 2.7432%                |
| Gs5         | 3.4840%                |
| Gs6         | 4.6082%                |
| Gs7         | 7.0004%                |
| Gs8         | 9.4600%                |
| Gs9         | 15.4600%               |
| Gs10        | 25.4600%               |

### 3.11.2 Default rates by GEMs rating

Figure 13 shows that most GEMs ratings (45.8%) are concentrated in the categories Gs1 to Gs3, followed by a second aggregation (32.4%) around the categories Gs5 to Gs8.

Figure 13: Frequency distribution of aligned GEMs ratings

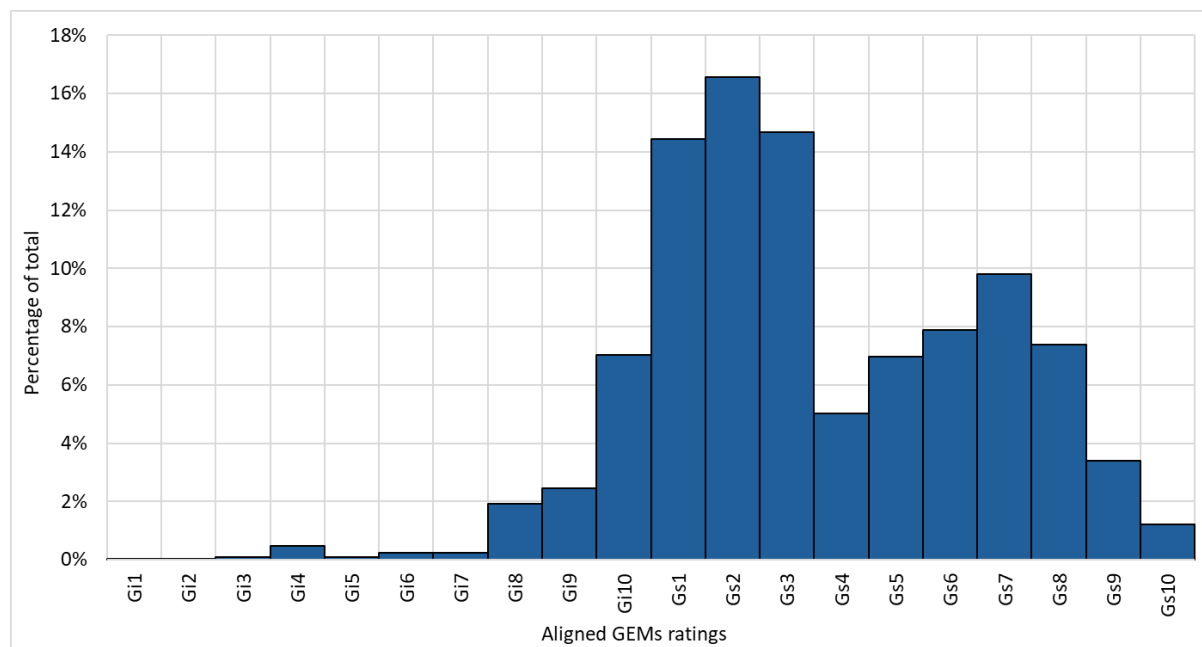


Figure 14: One-year default rates by GEMs rating

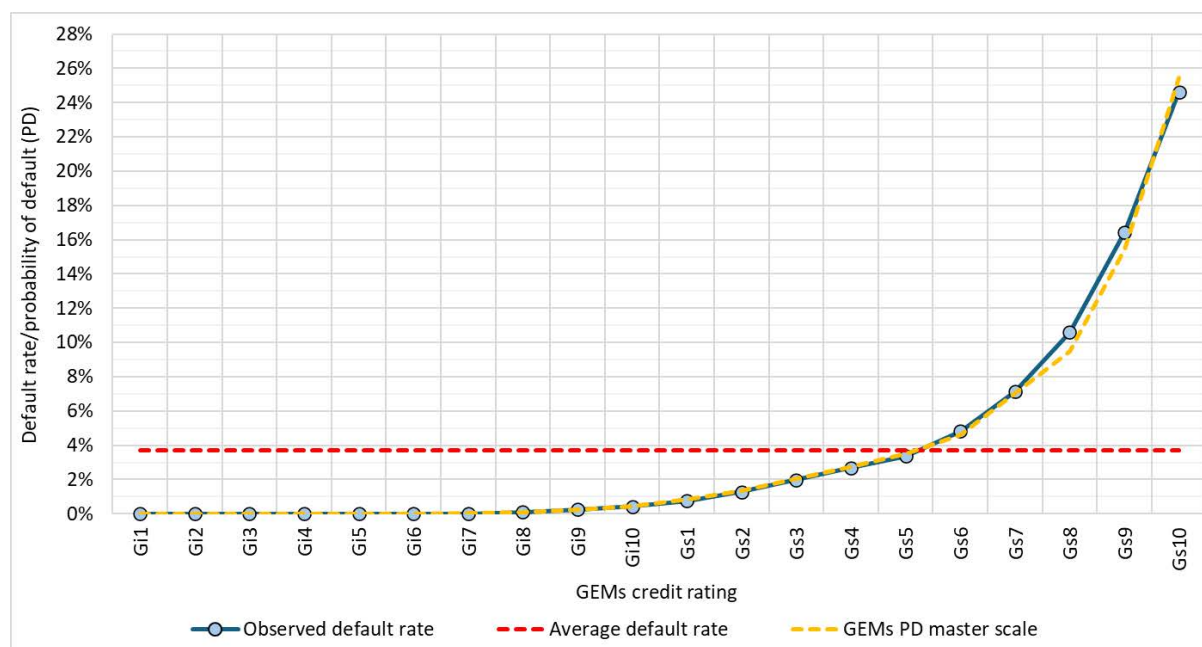




Table 30: Marginal default rates by GEMs rating and year

| Years after rating | Average default rate | Defaults | Observations | Gi1   | Gi2   | Gi3   | Gi4   | Gi5    | Gi6   | Gi7   | Gi8   | Gi9    | Gi10  | Gs1   | Gs2   | Gs3   | Gs4   | Gs5   | Gs6   | Gs7   | Gs8    | Gs9    | Gs10   |
|--------------------|----------------------|----------|--------------|-------|-------|-------|-------|--------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| 1                  | 3.72%                | 1 832    | 49 239.0     | 0.00% | 0.00% | 0.00% | 0.00% | 0.00%  | 0.00% | 0.00% | 0.10% | 0.25%  | 0.43% | 0.75% | 1.28% | 1.99% | 2.69% | 3.36% | 4.81% | 7.14% | 10.59% | 16.45% | 24.62% |
| 2                  | 3.93%                | 1 540    | 39 217.0     | 0.00% | 0.00% | 0.00% | 0.00% | 0.00%  | 0.00% | 0.00% | 0.38% | 0.30%  | 0.74% | 1.08% | 1.94% | 3.09% | 3.84% | 5.18% | 6.30% | 7.35% | 10.31% | 12.20% | 15.80% |
| 3                  | 3.81%                | 1 165    | 30 559.5     | 0.00% | 0.00% | 0.00% | 0.55% | 0.00%  | 1.20% | 1.20% | 0.15% | 0.49%  | 0.70% | 1.40% | 1.97% | 3.64% | 4.60% | 5.06% | 6.92% | 6.73% | 8.75%  | 11.30% | 14.16% |
| 4                  | 3.40%                | 793      | 23 352.0     | 0.00% | 0.00% | 0.00% | 0.00% | 0.00%  | 2.99% | 0.00% | 0.19% | 0.46%  | 0.90% | 1.45% | 2.12% | 3.26% | 5.33% | 4.71% | 5.96% | 6.26% | 6.77%  | 8.75%  | 11.94% |
| 5                  | 3.05%                | 536      | 17 583.0     | 0.00% | 0.00% | 0.00% | 0.80% | 0.00%  | 3.96% | 0.00% | 0.47% | 0.19%  | 0.84% | 1.46% | 2.81% | 2.80% | 2.93% | 4.73% | 5.69% | 5.55% | 5.34%  | 8.92%  | 7.95%  |
| 6                  | 2.68%                | 350      | 13 052.5     | 0.00% | 0.00% | 0.00% | 0.00% | 0.00%  | 5.33% | 0.00% | 0.61% | 0.48%  | 0.66% | 1.32% | 2.38% | 3.06% | 3.23% | 4.42% | 4.98% | 3.86% | 4.24%  | 8.35%  | 9.88%  |
| 7                  | 2.41%                | 231      | 9 590.5      | 0.00% | 0.00% | 0.00% | 0.00% | 0.00%  | 3.77% | 0.00% | 0.39% | 0.30%  | 0.54% | 1.68% | 1.96% | 2.82% | 3.19% | 3.75% | 4.04% | 3.47% | 4.00%  | 7.92%  | 12.50% |
| 8                  | 2.45%                | 172      | 7 033.5      | 0.00% | 0.00% | 0.00% | 0.00% | 11.76% | 0.00% | 4.65% | 0.00% | 0.75%  | 0.45% | 1.20% | 1.80% | 2.89% | 5.54% | 4.90% | 4.97% | 3.10% | 4.55%  | 6.31%  | 13.33% |
| 9                  | 2.29%                | 118      | 5 149.0      | 0.00% |       | 0.00% | 0.00% | 0.00%  | 0.00% | 0.00% | 0.00% | 0.98%  | 0.59% | 1.19% | 2.09% | 2.76% | 6.54% | 3.87% | 4.32% | 3.86% | 2.68%  | 6.21%  | 11.11% |
| 10                 | 1.82%                | 68       | 3 740.0      |       |       | 0.00% | 0.00% | 0.00%  | 0.00% | 0.00% | 0.00% | 2.62%  | 0.96% | 0.67% | 1.47% | 2.10% | 7.19% | 3.61% | 4.32% | 2.35% | 0.51%  | 7.14%  | 13.33% |
| 11                 | 1.49%                | 41       | 2 759.0      |       |       | 0.00% | 0.00% | 0.00%  | 0.00% | 0.00% | 0.00% | 2.71%  | 0.25% | 1.04% | 2.75% | 1.24% | 0.00% | 2.09% | 5.71% | 1.53% | 0.00%  | 5.41%  | 16.67% |
| 12                 | 1.39%                | 29       | 2 080.0      |       |       | 0.00% | 0.00% | 0.00%  | 0.00% | 0.00% | 0.00% | 0.00%  | 1.32% | 1.53% | 1.72% | 1.15% | 2.35% | 3.08% | 4.35% | 0.50% | 0.79%  | 4.00%  | 0.00%  |
| 13                 | 0.82%                | 13       | 1 583.5      |       |       | 0.00% | 0.00% |        | 0.00% | 0.00% | 0.00% | 1.94%  | 0.00% | 1.36% | 0.00% | 0.41% | 0.00% | 2.35% | 2.38% | 1.23% | 0.00%  | 5.00%  | 0.00%  |
| 14                 | 0.98%                | 12       | 1 223.0      |       |       | 0.00% | 0.00% |        |       | 0.00% | 0.00% | 2.67%  | 0.00% | 1.01% | 0.00% | 0.53% | 0.00% | 0.00% | 5.08% | 0.81% | 0.00%  | 19.35% | 0.00%  |
| 15                 | 0.74%                | 7        | 950.5        |       |       | 0.00% | 0.00% |        |       | 0.00% | 0.00% | 0.00%  | 0.69% | 0.80% | 0.00% | 0.00% | 0.00% | 0.00% | 2.53% | 1.16% | 0.00%  | 25.00% | 0.00%  |
| 16                 | 0.54%                | 4        | 736.0        |       |       | 0.00% | 0.00% |        |       | 0.00% | 0.00% | 6.90%  | 0.00% | 1.43% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00%  | 0.00%  | 0.00%  |
| 17                 | 0.71%                | 4        | 562.0        |       |       | 0.00% | 0.00% |        |       | 0.00% | 0.00% | 13.33% | 0.00% | 1.70% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00%  | 0.00%  | 0.00%  |
| 18                 | 0.47%                | 2        | 426.5        |       |       | 0.00% | 0.00% |        |       |       | 0.00% | 0.00%  | 0.00% | 1.33% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00%  |        | 0.00%  |
| 19                 | 0.30%                | 1        | 330.0        |       |       | 0.00% | 0.00% |        |       |       | 0.00% |        | 0.00% | 0.78% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00%  |        |        |
| 20                 | 0.80%                | 2        | 251.5        |       |       | 0.00% | 0.00% |        |       |       | 0.00% |        | 0.00% | 0.95% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 2.90%  |        |        |
| 21                 | 1.05%                | 2        | 190.5        |       |       | 0.00% |       |        |       |       | 0.00% |        | 0.00% | 1.15% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 3.57%  |        |        |
| 22                 | 1.39%                | 2        | 143.5        |       |       |       |       |        |       |       | 0.00% |        | 0.00% | 1.45% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 4.55%  |        |        |
| 23                 | 1.84%                | 2        | 108.5        |       |       |       |       |        |       |       | 0.00% |        | 0.00% | 1.83% | 0.00% | 0.00% | 0.00% | 0.00% |       | 0.00% | 6.25%  |        |        |
| 24                 | 1.23%                | 1        | 81.0         |       |       |       |       |        |       |       | 0.00% |        | 0.00% | 0.00% |       | 0.00% | 0.00% | 0.00% |       | 0.00% | 8.00%  |        |        |
| 25                 | 1.71%                | 1        | 58.5         |       |       |       |       |        |       |       |       |        | 0.00% | 0.00% |       |       | 0.00% | 0.00% |       | 0.00% | 10.53% |        |        |
| 26                 | 2.30%                | 1        | 43.5         |       |       |       |       |        |       |       |       |        | 0.00% | 0.00% |       |       | 0.00% | 0.00% |       |       | 13.33% |        |        |
| 27                 | 3.28%                | 1        | 30.5         |       |       |       |       |        |       |       |       |        | 0.00% | 0.00% |       |       | 0.00% |       |       |       | 18.18% |        |        |
| 28                 | 0.00%                | -        | 19.5         |       |       |       |       |        |       |       |       |        | 0.00% | 0.00% |       |       | 0.00% |       |       |       | 0.00%  |        |        |
| 29                 | 0.00%                | -        | 9.5          |       |       |       |       |        |       |       |       |        | 0.00% | 0.00% |       |       | 0.00% |       |       |       | 0.00%  |        |        |
| 30                 | 0.00%                | -        | 3.0          |       |       |       |       |        |       |       |       |        |       | 0.00% |       |       |       |       |       |       | 0.00%  |        |        |

Table 31: Cumulative default rates by GEMs rating and year

| Years<br>after<br>rating | Gi1   | Gi2   | Gi3   | Gi4   | Gi5    | Gi6    | Gi7   | Gi8   | Gi9    | Gi10  | Gs1    | Gs2    | Gs3    | Gs4    | Gs5    | Gs6    | Gs7    | Gs8    | Gs9    | Gs10   |
|--------------------------|-------|-------|-------|-------|--------|--------|-------|-------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1                        | 0.00% | 0.00% | 0.00% | 0.00% | 0.00%  | 0.00%  | 0.00% | 0.10% | 0.25%  | 0.43% | 0.75%  | 1.28%  | 1.99%  | 2.69%  | 3.36%  | 4.81%  | 7.14%  | 10.59% | 16.45% | 24.62% |
| 2                        | 0.00% | 0.00% | 0.00% | 0.00% | 0.00%  | 0.00%  | 0.00% | 0.48% | 0.55%  | 1.17% | 1.82%  | 3.20%  | 5.02%  | 6.43%  | 8.37%  | 10.81% | 13.97% | 19.81% | 26.64% | 36.53% |
| 3                        | 0.00% | 0.00% | 0.00% | 0.55% | 0.00%  | 1.20%  | 1.20% | 0.63% | 1.04%  | 1.86% | 3.20%  | 5.10%  | 8.48%  | 10.73% | 13.00% | 16.98% | 19.76% | 26.82% | 34.93% | 45.52% |
| 4                        | 0.00% | 0.00% | 0.00% | 0.55% | 0.00%  | 4.15%  | 1.20% | 0.82% | 1.49%  | 2.74% | 4.60%  | 7.11%  | 11.46% | 15.49% | 17.10% | 21.93% | 24.78% | 31.78% | 40.63% | 52.02% |
| 5                        | 0.00% | 0.00% | 0.00% | 1.35% | 0.00%  | 7.95%  | 1.20% | 1.28% | 1.68%  | 3.56% | 5.99%  | 9.72%  | 13.94% | 17.97% | 21.02% | 26.37% | 28.95% | 35.42% | 45.92% | 55.84% |
| 6                        | 0.00% | 0.00% | 0.00% | 1.35% | 0.00%  | 12.86% | 1.20% | 1.89% | 2.15%  | 4.20% | 7.23%  | 11.87% | 16.57% | 20.61% | 24.51% | 30.04% | 31.70% | 38.16% | 50.44% | 60.20% |
| 7                        | 0.00% | 0.00% | 0.00% | 1.35% | 0.00%  | 16.14% | 1.20% | 2.27% | 2.44%  | 4.71% | 8.79%  | 13.60% | 18.92% | 23.15% | 27.34% | 32.86% | 34.07% | 40.63% | 54.36% | 65.18% |
| 8                        | 0.00% | 0.00% | 0.00% | 1.35% | 11.76% | 16.14% | 5.79% | 2.27% | 3.18%  | 5.14% | 9.89%  | 15.16% | 21.27% | 27.41% | 30.90% | 36.20% | 36.11% | 43.33% | 57.24% | 69.82% |
| 9                        | 0.00% |       | 0.00% | 1.35% | 11.76% | 16.14% | 5.79% | 2.27% | 4.12%  | 5.70% | 10.96% | 16.93% | 23.44% | 32.15% | 33.58% | 38.96% | 38.58% | 44.85% | 59.90% | 73.17% |
| 10                       |       |       | 0.00% | 1.35% | 11.76% | 16.14% | 5.79% | 2.27% | 6.64%  | 6.61% | 11.56% | 18.15% | 25.05% | 37.03% | 35.98% | 41.59% | 40.02% | 45.13% | 62.76% | 76.75% |
| 11                       |       |       | 0.00% | 1.35% | 11.76% | 16.14% | 5.79% | 2.27% | 9.17%  | 6.84% | 12.48% | 20.40% | 25.98% | 37.03% | 37.31% | 44.93% | 40.94% | 45.13% | 64.78% | 80.62% |
| 12                       |       |       | 0.00% | 1.35% | 11.76% | 16.14% | 5.79% | 2.27% | 9.17%  | 8.07% | 13.81% | 21.77% | 26.83% | 38.51% | 39.24% | 47.32% | 41.23% | 45.57% | 66.18% | 80.62% |
| 13                       |       |       | 0.00% | 1.35% |        | 16.14% | 5.79% | 2.27% | 10.93% | 8.07% | 14.99% | 21.77% | 27.13% | 38.51% | 40.67% | 48.58% | 41.96% | 45.57% | 67.88% | 80.62% |
| 14                       |       |       | 0.00% | 1.35% |        |        | 5.79% | 2.27% | 13.31% | 8.07% | 15.85% | 21.77% | 27.52% | 38.51% | 40.67% | 51.19% | 42.43% | 45.57% | 74.09% | 80.62% |
| 15                       |       |       | 0.00% | 1.35% |        |        | 5.79% | 2.27% | 13.31% | 8.70% | 16.52% | 21.77% | 27.52% | 38.51% | 40.67% | 52.42% | 43.09% | 45.57% | 80.57% | 80.62% |
| 16                       |       |       | 0.00% | 1.35% |        |        | 5.79% | 2.27% | 19.29% | 8.70% | 17.71% | 21.77% | 27.52% | 38.51% | 40.67% | 52.42% | 43.09% | 45.57% | 80.57% | 80.62% |
| 17                       |       |       | 0.00% | 1.35% |        |        | 5.79% | 2.27% | 30.05% | 8.70% | 19.11% | 21.77% | 27.52% | 38.51% | 40.67% | 52.42% | 43.09% | 45.57% | 80.57% | 80.62% |
| 18                       |       |       | 0.00% | 1.35% |        |        |       | 2.27% | 30.05% | 8.70% | 20.19% | 21.77% | 27.52% | 38.51% | 40.67% | 52.42% | 43.09% | 45.57% |        | 80.62% |
| 19                       |       |       | 0.00% | 1.35% |        |        |       | 2.27% |        | 8.70% | 20.81% | 21.77% | 27.52% | 38.51% | 40.67% | 52.42% | 43.09% | 45.57% |        |        |
| 20                       |       |       | 0.00% | 1.35% |        |        |       | 2.27% |        | 8.70% | 21.56% | 21.77% | 27.52% | 38.51% | 40.67% | 52.42% | 43.09% | 47.15% |        |        |
| 21                       |       |       | 0.00% |       |        |        |       | 2.27% |        | 8.70% | 22.46% | 21.77% | 27.52% | 38.51% | 40.67% | 52.42% | 43.09% | 49.03% |        |        |
| 22                       |       |       |       |       |        |        |       | 2.27% |        | 8.70% | 23.59% | 21.77% | 27.52% | 38.51% | 40.67% | 52.42% | 43.09% | 51.35% |        |        |
| 23                       |       |       |       |       |        |        |       | 2.27% |        | 8.70% | 24.99% | 21.77% | 27.52% | 38.51% | 40.67% |        | 43.09% | 54.39% |        |        |
| 24                       |       |       |       |       |        |        |       | 2.27% |        | 8.70% | 24.99% |        | 27.52% | 38.51% | 40.67% |        | 43.09% | 58.04% |        |        |
| 25                       |       |       |       |       |        |        |       |       |        | 8.70% | 24.99% |        |        | 38.51% | 40.67% |        | 43.09% | 62.46% |        |        |
| 26                       |       |       |       |       |        |        |       |       |        | 8.70% | 24.99% |        |        | 38.51% | 40.67% |        |        | 67.46% |        |        |
| 27                       |       |       |       |       |        |        |       |       |        | 8.70% | 24.99% |        |        | 38.51% |        |        |        | 73.38% |        |        |
| 28                       |       |       |       |       |        |        |       |       |        | 8.70% | 24.99% |        |        | 38.51% |        |        |        | 73.38% |        |        |
| 29                       |       |       |       |       |        |        |       |       |        | 8.70% | 24.99% |        |        | 38.51% |        |        |        | 73.38% |        |        |
| 30                       |       |       |       |       |        |        |       |       |        |       | 24.99% |        |        |        |        |        |        | 73.38% |        |        |

## 4 Recovery rate statistics

### 4.1 Recovery rate methodology

#### 4.1.1 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, interest, penalties and fees and can originate from the debtor or potential guarantors or from the sale of collateral.

#### 4.1.2 Calculations

The GEMs database captures exposure at three levels: counterparty, contract and tranche. This structure shows that a single counterparty may have several contracts, each comprising several tranches with varying currencies and/or interest rates. For private and public counterparties, 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 data. 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 5: Recovery rates (RR) calculation

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

Where:

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 = Post-default disbursed amounts, discounted to the chosen discount date.

#### 4.1.3 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.

## 4.2 Overall results

Table 32 shows the recovery rates by year of default. The average recovery rate is 72.9%. The year with the highest recovery rate is 2003 (86.9%), and the year with the lowest recovery rate is 1995 (52%).

Table 32: Recovery rates by year of default

| Year | Defaults | Recovery rate |
|------|----------|---------------|
| 1994 | 18       | 72.4%         |
| 1995 | 16       | 52.0%         |
| 1996 | 16       | 59.6%         |
| 1997 | 27       | 59.5%         |
| 1998 | 77       | 77.3%         |
| 1999 | 35       | 73.5%         |
| 2000 | 39       | 61.7%         |
| 2001 | 49       | 65.2%         |
| 2002 | 63       | 72.7%         |
| 2003 | 70       | 86.9%         |
| 2004 | 39       | 76.8%         |
| 2005 | 36       | 71.2%         |
| 2006 | 36       | 72.5%         |
| 2007 | 32       | 80.0%         |
| 2008 | 60       | 79.9%         |
| 2009 | 69       | 71.6%         |

| Year         | Defaults    | Recovery rate |
|--------------|-------------|---------------|
| 2010         | 83          | 77.6%         |
| 2011         | 73          | 78.7%         |
| 2012         | 58          | 73.6%         |
| 2013         | 54          | 64.1%         |
| 2014         | 85          | 64.4%         |
| 2015         | 97          | 70.9%         |
| 2016         | 129         | 60.7%         |
| 2017         | 75          | 77.8%         |
| 2018         | 66          | 61.8%         |
| 2019         | 84          | 70.7%         |
| 2020         | 119         | 80.1%         |
| 2021         | 64          | 79.4%         |
| 2022         | 57          | 86.0%         |
| 2023         | 45          | 78.7%         |
| 2024         | 30          | 79.8%         |
| <b>Total</b> | <b>1801</b> | <b>72.9%</b>  |

Table 33 shows that over half of all defaulted contracts (51.7%) had recovery rates between 90% and 100%, indicating a strong overall recovery performance. In contrast, only 9.7% of contracts had recovery rates below 10%. This highlights that low recoveries are relatively rare in the dataset.

Table 33: Distribution of recovery rates

| Recovery rate       | From | 0%   | 10%  | 20%  | 30%  | 40%  | 50%  | 60%  | 70%  | 80%  | 90%   | Total  |
|---------------------|------|------|------|------|------|------|------|------|------|------|-------|--------|
|                     | To   | 10%  | 20%  | 30%  | 40%  | 50%  | 60%  | 70%  | 80%  | 90%  | 100%  |        |
| Defaulted contracts |      | 173  | 64   | 78   | 60   | 70   | 74   | 82   | 103  | 166  | 931   | 1 801  |
| % of Total          |      | 9.6% | 3.6% | 4.3% | 3.3% | 3.9% | 4.1% | 4.6% | 5.7% | 9.2% | 51.7% | 100.0% |

Table 34 shows the time to resolution of defaults, with 68% of the defaulted contracts with private counterparties being recovered within the first four years of the default event. Only 30 contracts (representing 1.7% of the dataset) took longer than 20 years to recover.

Table 34: Time to resolution

|             | Resolution of default during year |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      | Total |
|-------------|-----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-------|
|             | 1                                 | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | >=20 |       |
| Resolutions | 472                               | 267 | 244 | 235 | 144 | 91  | 66  | 50  | 60  | 33  | 26  | 22  | 19  | 10  | 8   | 6   | 5   | 5   | 8   | 30   | 1 801 |
| % resolved  | 26%                               | 41% | 55% | 68% | 76% | 81% | 84% | 87% | 90% | 92% | 94% | 95% | 96% | 97% | 97% | 97% | 98% | 98% | 98% | 100% |       |

## 4.3 Recovery rates by region

### 4.3.1 Recovery rates by World Bank region

Using the [World Bank classification of countries](#) to regions, this section presents the recovery rates per geographical region, providing information on the regional distribution of the statistics.

The highest average recovery rate is in sub-Saharan Africa, while the lowest is in Latin America and the Caribbean (Table 35 and Figure 15). This contrasts with the default rates analysis presented in Section 3.1.3, where sub-Saharan Africa displayed the highest default rate among regions.

Table 35: Recovery rates by World Bank region

| World Bank region                     | Number of defaults | Signed amount € million | Average recovery rate | Minimum observation | 10th percentile | 25th percentile | Median       | 75th percentile | 90th percentile | Maximum observation |
|---------------------------------------|--------------------|-------------------------|-----------------------|---------------------|-----------------|-----------------|--------------|-----------------|-----------------|---------------------|
| East Asia & Pacific                   | 137                | 2 200                   | <b>70.7%</b>          | 0.0%                | 14.2%           | 45.2%           | <b>89.2%</b> | 99.2%           | 100.0%          | 100.0%              |
| Europe & Central Asia                 | 523                | 8 655                   | <b>72.2%</b>          | 0.0%                | 15.6%           | 50.4%           | <b>86.5%</b> | 98.3%           | 100.0%          | 100.0%              |
| Latin America & Caribbean             | 325                | 6 321                   | <b>67.9%</b>          | 0.0%                | 5.8%            | 37.5%           | <b>83.9%</b> | 99.9%           | 100.0%          | 100.0%              |
| Middle East & North Africa            | 110                | 2 284                   | <b>71.7%</b>          | 0.0%                | 16.7%           | 43.0%           | <b>93.2%</b> | 100.0%          | 100.0%          | 100.0%              |
| South Asia                            | 130                | 2 395                   | <b>72.1%</b>          | 0.0%                | 3.4%            | 48.4%           | <b>93.9%</b> | 100.0%          | 100.0%          | 100.0%              |
| Sub-Saharan Africa                    | 543                | 5 155                   | <b>78.4%</b>          | 0.0%                | 14.1%           | 65.5%           | <b>97.8%</b> | 100.0%          | 100.0%          | 100.0%              |
| Overall, including omitted categories | <b>1 801</b>       | <b>27 450</b>           | <b>72.9%</b>          | <b>0.0%</b>         | <b>11.1%</b>    | <b>50.6%</b>    | <b>91.1%</b> | <b>99.8%</b>    | <b>100.0%</b>   | <b>100.0%</b>       |

Figure 15: Recovery rates by World Bank region

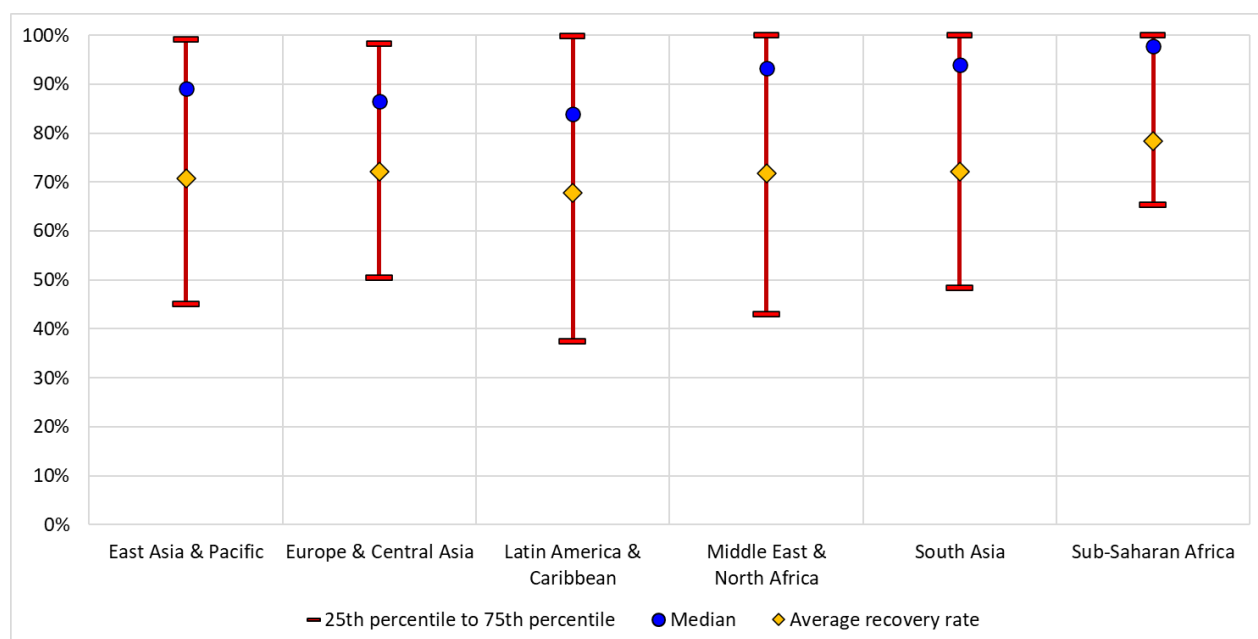


Table 36: Recovery rates by year of default and World Bank region

|                       | East Asia & Pacific | Europe & Central Asia | Latin America & Caribbean | Middle East & North Africa | South Asia | Sub-Saharan Africa |
|-----------------------|---------------------|-----------------------|---------------------------|----------------------------|------------|--------------------|
| Defaults              | 137                 | 523                   | 325                       | 110                        | 130        | 543                |
| Average recovery rate | 70.7%               | 72.2%                 | 67.9%                     | 71.7%                      | 72.1%      | 78.4%              |
| 1994                  | 31.2%               | 37.6%                 | 96.8%                     | 29.6%                      |            | 96.3%              |
| 1995                  | 20.9%               | 93.5%                 | 91.9%                     |                            |            | 20.6%              |
| 1996                  | 38.5%               | 46.9%                 | 27.4%                     | 76.3%                      |            | 75.3%              |
| 1997                  | 52.6%               | 81.2%                 | 54.3%                     |                            | 49.2%      | 59.1%              |
| 1998                  | 62.1%               | 66.9%                 | 65.3%                     | 67.4%                      | 94.2%      | 89.2%              |
| 1999                  | 76.2%               | 79.4%                 | 22.1%                     | 95.3%                      | 100.0%     | 79.3%              |
| 2000                  | 60.2%               | 59.3%                 | 34.5%                     |                            | 34.6%      | 89.3%              |
| 2001                  | 55.4%               | 66.6%                 | 45.8%                     | 86.4%                      | 69.4%      | 76.1%              |
| 2002                  | 64.4%               | 54.9%                 | 77.2%                     | 77.5%                      | 83.4%      | 69.0%              |
| 2003                  | 82.1%               | 73.4%                 | 90.6%                     | 81.5%                      | 99.0%      | 89.5%              |
| 2004                  | 99.0%               | 99.2%                 | 74.8%                     | 65.6%                      | 73.5%      | 74.2%              |
| 2005                  | 47.9%               | 86.8%                 | 97.2%                     | 86.0%                      | 33.4%      | 68.3%              |
| 2006                  | 86.0%               | 63.4%                 | 76.5%                     | 39.7%                      | 51.8%      | 76.9%              |
| 2007                  | 100.0%              | 62.7%                 | 65.6%                     | 70.6%                      | 100.0%     | 89.8%              |
| 2008                  | 81.3%               | 77.5%                 | 80.2%                     | 98.4%                      | 87.2%      | 78.2%              |
| 2009                  | 73.1%               | 72.3%                 | 77.0%                     | 66.7%                      | 57.2%      | 75.4%              |
| 2010                  | 89.6%               | 75.2%                 | 76.6%                     | 75.6%                      | 78.6%      | 84.0%              |
| 2011                  | 91.1%               | 75.3%                 | 100.0%                    | 77.0%                      | 58.2%      | 85.5%              |
| 2012                  | 52.2%               | 72.3%                 | 61.1%                     | 65.0%                      | 95.1%      | 83.2%              |
| 2013                  | 81.5%               | 53.1%                 | 73.9%                     | 41.1%                      | 21.3%      | 81.0%              |
| 2014                  | 74.2%               | 58.4%                 | 58.8%                     | 81.2%                      | 61.0%      | 70.5%              |
| 2015                  | 61.7%               | 78.1%                 | 63.8%                     | 48.2%                      | 55.9%      | 70.6%              |
| 2016                  | 70.5%               | 65.1%                 | 62.8%                     | 48.7%                      | 44.3%      | 60.9%              |
| 2017                  | 1.4%                | 76.2%                 | 67.6%                     | 26.6%                      |            | 88.1%              |
| 2018                  | 62.6%               | 78.2%                 | 54.8%                     | 100.0%                     | 22.1%      | 54.7%              |
| 2019                  | 74.9%               | 73.9%                 | 63.2%                     | 78.5%                      | 45.3%      | 83.7%              |
| 2020                  | 85.2%               | 81.2%                 | 69.0%                     | 62.6%                      | 92.5%      | 87.2%              |
| 2021                  | 81.5%               | 87.8%                 | 59.0%                     | 90.7%                      | 78.9%      | 73.4%              |
| 2022                  | 92.6%               | 77.8%                 | 72.2%                     | 100.0%                     | 97.6%      | 91.2%              |
| 2023                  | 32.2%               | 95.6%                 | 46.4%                     | 99.8%                      | 91.0%      | 93.2%              |
| 2024                  |                     |                       | 32.8%                     | 50.5%                      |            | 93.2%              |

## 4.3.2 Recovery rates by continent

Table 37 presents recovery rates categorised by year of default and continent. The assignment of individual countries to their respective continents is detailed in Annex 1.

Table 37: Recovery rates by year of default and continent

|                       | Africa | Asia  | Europe | North America | Oceania | South America |
|-----------------------|--------|-------|--------|---------------|---------|---------------|
| Defaults              | 576    | 394   | 447    | 147           |         | 154           |
| Average recovery rate | 78.3%  | 72.5% | 72.2%  | 68.7%         |         | 69.7%         |
| 1994                  | 79.6%  | 31.2% | 37.6%  | 96.0%         |         | 100.0%        |
| 1995                  | 20.6%  | 20.9% | 93.5%  |               |         | 91.9%         |
| 1996                  | 72.6%  | 70.4% | 46.9%  |               |         | 27.4%         |
| 1997                  | 59.1%  | 50.6% | 81.2%  | 99.7%         |         | 39.2%         |
| 1998                  | 89.2%  | 77.6% | 66.9%  | 68.0%         |         | 61.4%         |
| 1999                  | 80.7%  | 93.1% | 78.0%  |               |         | 22.1%         |
| 2000                  | 89.3%  | 56.0% | 59.3%  | 63.8%         |         | 22.0%         |
| 2001                  | 78.3%  | 70.8% | 73.7%  | 79.8%         |         | 9.1%          |
| 2002                  | 72.5%  | 71.6% | 54.9%  | 80.3%         |         | 76.7%         |
| 2003                  | 89.9%  | 83.1% | 73.4%  | 85.3%         |         | 92.4%         |
| 2004                  | 74.2%  | 80.6% | 99.2%  | 72.5%         |         | 67.8%         |
| 2005                  | 68.6%  | 62.8% | 86.8%  |               |         | 97.2%         |
| 2006                  | 75.5%  | 62.7% | 99.1%  | 74.1%         |         | 99.8%         |
| 2007                  | 89.2%  | 76.1% | 67.5%  | 54.1%         |         | 100.0%        |
| 2008                  | 80.0%  | 83.3% | 77.8%  | 82.8%         |         | 75.2%         |
| 2009                  | 79.8%  | 48.7% | 80.0%  | 80.2%         |         | 80.0%         |
| 2010                  | 82.0%  | 81.9% | 76.0%  | 66.7%         |         | 99.5%         |
| 2011                  | 83.0%  | 69.9% | 79.5%  |               |         | 100.0%        |
| 2012                  | 81.1%  | 62.6% | 74.8%  | 65.1%         |         | 93.5%         |
| 2013                  | 81.0%  | 56.1% | 40.8%  | 81.6%         |         | 85.6%         |
| 2014                  | 70.1%  | 64.2% | 63.1%  | 84.3%         |         | 15.0%         |
| 2015                  | 68.7%  | 68.5% | 78.3%  | 64.8%         |         | 61.5%         |
| 2016                  | 61.7%  | 60.7% | 62.5%  | 66.9%         |         | 57.2%         |
| 2017                  | 88.1%  | 50.0% | 74.1%  | 98.2%         |         | 49.0%         |
| 2018                  | 51.5%  | 46.1% | 78.2%  | 67.3%         |         | 30.0%         |
| 2019                  | 83.9%  | 69.8% | 66.1%  | 42.0%         |         | 96.4%         |
| 2020                  | 89.2%  | 74.2% | 82.5%  | 57.9%         |         | 81.5%         |
| 2021                  | 75.6%  | 87.6% | 80.0%  | 47.3%         |         | 76.6%         |
| 2022                  | 92.1%  | 95.3% | 68.4%  | 48.1%         |         | 96.4%         |
| 2023                  | 93.5%  | 77.4% | 95.6%  | 42.2%         |         | 86.1%         |
| 2024                  | 93.0%  | 50.5% |        |               |         | 98.5%         |

## 4.4 Recovery rates by sector

Like the annual default rates analysed in Section 3, the recovery rates by sector are classified according to the GICS 2018 framework.

### 4.4.1 Recovery rates by GICS sector

Recovery rates across GICS sectors are evenly distributed among private counterparties. The lowest recovery rates are observed in the information technology sector, which also has a limited number of observations. In contrast, the highest recovery rates are recorded in the financials sector, which accounts for 25% of total defaults.

Table 38: Recovery rates by GICS sector

| GICS sector                           | Number of defaults | Signed amount<br>€ million | Average recovery rate | Minimum observation | 10th percentile | 25th percentile | Median | 75th percentile | 90th percentile | Maximum observation |
|---------------------------------------|--------------------|----------------------------|-----------------------|---------------------|-----------------|-----------------|--------|-----------------|-----------------|---------------------|
| Administration                        |                    |                            |                       |                     |                 |                 |        |                 |                 |                     |
| Communication services                | 50                 | 1 439                      | 77.1%                 | 0.0%                | 12.4%           | 67.4%           | 92.8%  | 100.0%          | 100.0%          | 100.0%              |
| Consumer discretionary                | 191                | 1 520                      | 68.8%                 | 0.0%                | 8.3%            | 38.0%           | 87.5%  | 100.0%          | 100.0%          | 100.0%              |
| Consumer staples                      | 275                | 2 246                      | 69.5%                 | 0.0%                | 9.5%            | 36.2%           | 88.3%  | 99.7%           | 100.0%          | 100.0%              |
| Energy                                | 141                | 3 057                      | 65.6%                 | 0.0%                | 1.9%            | 27.7%           | 84.7%  | 99.8%           | 100.0%          | 100.0%              |
| Financials                            | 453                | 4 682                      | 79.1%                 | 0.0%                | 18.5%           | 71.1%           | 96.8%  | 99.8%           | 100.0%          | 100.0%              |
| Health care                           | 49                 | 1 133                      | 73.1%                 | 0.0%                | 18.5%           | 49.8%           | 88.4%  | 100.0%          | 100.0%          | 100.0%              |
| Industrials                           | 141                | 3 057                      | 65.6%                 | 0.0%                | 1.9%            | 27.7%           | 84.7%  | 99.8%           | 100.0%          | 100.0%              |
| Information technology                | 10                 | 207                        | 61.3%                 | 5.5%                | 7.9%            | 25.2%           | 79.0%  | 94.6%           | 99.9%           | 100.0%              |
| Materials                             | 205                | 4 555                      | 72.8%                 | 0.0%                | 10.9%           | 48.8%           | 91.7%  | 100.0%          | 100.0%          | 100.0%              |
| Real estate                           | 31                 | 516                        | 74.8%                 | 0.1%                | 32.9%           | 62.7%           | 88.0%  | 97.6%           | 99.5%           | 100.0%              |
| Utilities                             | 192                | 5 293                      | 72.0%                 | 0.0%                | 6.7%            | 56.4%           | 84.4%  | 98.8%           | 100.0%          | 100.0%              |
| Others                                | 166                | 1 687                      | 74.6%                 | 0.0%                | 25.0%           | 54.2%           | 88.6%  | 99.1%           | 100.0%          | 100.0%              |
| Overall, including omitted categories | 1 801              | 27 450                     | 72.9%                 | 0.0%                | 11.1%           | 50.6%           | 91.1%  | 99.8%           | 100.0%          | 100.0%              |

Figure 16: Recovery rates by GICS sector

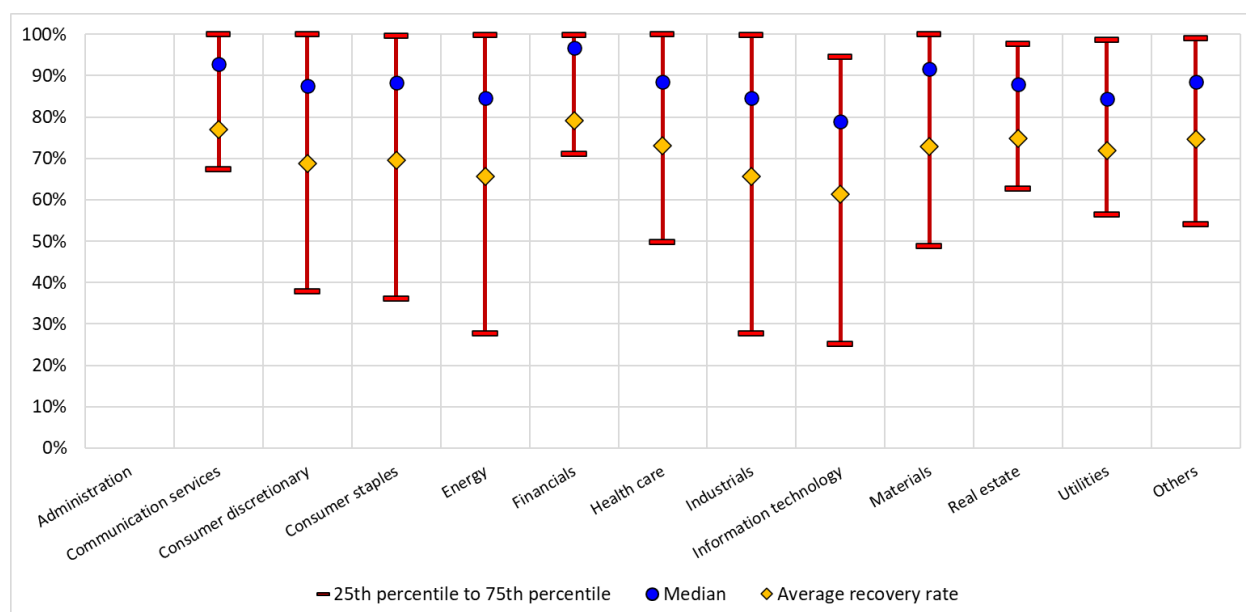




Table 39: Recovery rates by year of default and GICS sector

|                       | Administration | Communication services | Consumer discretionary | Consumer staples | Energy | Financials | Health care | Industrials | Information technology | Materials | Real estate | Utilities | Other |
|-----------------------|----------------|------------------------|------------------------|------------------|--------|------------|-------------|-------------|------------------------|-----------|-------------|-----------|-------|
| Defaults              |                | 50                     | 191                    | 275              | 38     | 453        | 49          | 141         | 10                     | 205       | 31          | 192       | 166   |
| Average recovery rate |                | 77.1%                  | 68.8%                  | 69.5%            | 66.8%  | 79.1%      | 73.1%       | 65.6%       | 61.3%                  | 72.8%     | 74.8%       | 72.0%     | 74.6% |
| 1994                  |                |                        | 93.4%                  | 69.4%            |        |            |             | 32.4%       |                        | 73.1%     |             |           | 76.8% |
| 1995                  |                |                        | 15.9%                  | 57.7%            |        |            | 100.0%      | 36.0%       |                        | 66.7%     |             |           | 87.0% |
| 1996                  |                |                        | 46.1%                  | 24.6%            |        |            | 100.0%      |             |                        |           |             | 100.0%    | 65.0% |
| 1997                  |                |                        | 65.1%                  | 51.1%            |        | 35.5%      |             | 25.6%       |                        | 67.4%     |             | 99.7%     | 82.0% |
| 1998                  |                | 100.0%                 | 93.0%                  | 35.3%            | 100.0% | 82.3%      | 73.9%       | 50.5%       |                        | 73.4%     |             |           | 77.0% |
| 1999                  |                | 91.7%                  | 79.1%                  | 40.4%            |        | 75.1%      | 16.4%       | 73.6%       |                        | 86.2%     |             | 100.0%    | 90.5% |
| 2000                  |                | 93.6%                  | 43.3%                  | 63.0%            |        | 61.9%      |             | 64.2%       |                        | 74.7%     |             |           | 43.6% |
| 2001                  |                | 26.4%                  | 74.7%                  | 50.1%            |        | 72.5%      | 40.9%       | 88.1%       |                        | 56.3%     |             |           | 71.1% |
| 2002                  |                | 96.3%                  | 60.7%                  | 50.4%            |        | 84.3%      | 54.4%       | 43.1%       |                        | 86.7%     |             | 90.9%     | 72.6% |
| 2003                  |                | 89.2%                  | 69.3%                  | 95.2%            | 56.5%  | 94.7%      | 66.4%       | 91.2%       |                        | 91.7%     | 69.9%       | 90.8%     | 91.2% |
| 2004                  |                | 99.7%                  | 99.8%                  | 82.6%            | 67.6%  | 82.2%      |             | 93.5%       | 52.7%                  | 51.4%     | 94.2%       |           | 42.2% |
| 2005                  |                | 79.7%                  | 60.9%                  | 64.7%            | 100.0% | 63.3%      | 47.9%       | 60.5%       |                        | 53.2%     |             | 97.2%     | 84.2% |
| 2006                  |                | 100.0%                 | 73.1%                  | 76.3%            |        | 71.5%      |             |             |                        | 68.7%     |             | 46.5%     | 74.7% |
| 2007                  |                | 45.9%                  | 75.6%                  | 44.7%            | 97.8%  | 96.0%      |             | 100.0%      |                        | 69.0%     |             | 93.1%     | 87.4% |
| 2008                  |                | 87.2%                  | 62.1%                  | 74.8%            | 98.4%  | 90.7%      |             | 50.2%       |                        | 69.4%     |             | 88.0%     | 74.6% |
| 2009                  |                | 72.8%                  | 87.1%                  | 80.6%            | 51.8%  | 78.1%      | 99.1%       | 49.3%       |                        | 72.0%     |             | 83.1%     | 56.6% |
| 2010                  |                |                        | 89.2%                  | 73.6%            | 91.8%  | 83.1%      | 86.6%       | 63.5%       |                        | 71.1%     | 42.3%       | 100.0%    | 97.3% |
| 2011                  |                | 56.9%                  | 0.0%                   | 93.7%            | 9.9%   | 93.1%      | 100.0%      | 60.4%       |                        | 78.0%     | 60.2%       | 83.1%     | 73.1% |
| 2012                  |                | 97.3%                  | 50.0%                  | 55.7%            | 0.0%   | 88.0%      | 50.0%       | 84.1%       |                        | 54.3%     | 89.6%       | 73.5%     | 77.9% |
| 2013                  |                | 80.5%                  | 50.5%                  | 64.1%            | 66.0%  | 38.0%      | 83.0%       | 34.3%       |                        | 83.3%     |             | 61.2%     | 81.9% |
| 2014                  |                | 95.8%                  | 82.6%                  | 51.8%            | 58.3%  | 65.7%      | 53.7%       | 50.0%       |                        | 55.9%     |             | 88.9%     | 63.7% |
| 2015                  |                | 93.8%                  | 69.9%                  | 71.8%            | 52.7%  | 77.0%      | 74.5%       | 49.9%       | 28.5%                  | 87.8%     |             | 75.7%     | 66.4% |
| 2016                  |                | 25.1%                  | 72.0%                  | 58.8%            | 71.2%  | 69.7%      | 66.7%       | 36.3%       | 24.0%                  | 36.1%     | 31.2%       | 60.7%     | 61.9% |
| 2017                  |                | 56.1%                  | 35.5%                  | 80.0%            | 17.4%  | 83.3%      | 99.7%       | 100.0%      |                        | 86.9%     | 97.2%       | 70.5%     | 69.8% |
| 2018                  |                |                        | 33.4%                  | 31.7%            | 65.9%  | 52.6%      | 99.6%       | 88.2%       | 51.5%                  | 61.4%     | 73.1%       | 55.4%     | 77.1% |
| 2019                  |                | 79.5%                  | 50.7%                  | 80.8%            |        | 75.1%      | 28.4%       | 94.0%       | 90.7%                  | 82.1%     | 98.7%       | 49.9%     | 61.5% |
| 2020                  |                |                        | 97.0%                  | 67.4%            | 74.6%  | 74.0%      | 57.7%       | 84.7%       | 80.6%                  | 98.9%     | 98.5%       | 79.2%     | 98.6% |
| 2021                  |                | 60.0%                  | 65.1%                  | 92.9%            | 100.0% | 75.0%      | 98.1%       | 79.5%       | 100.0%                 | 96.1%     | 42.5%       | 69.1%     | 79.5% |
| 2022                  |                |                        | 93.0%                  | 93.1%            | 99.4%  | 92.4%      | 95.7%       | 91.3%       |                        | 81.5%     | 94.9%       | 57.0%     |       |
| 2023                  |                | 64.8%                  | 100.0%                 | 38.7%            | 100.0% | 80.8%      |             | 99.0%       |                        |           | 99.6%       | 91.1%     |       |
| 2024                  |                |                        |                        | 100.0%           |        | 82.5%      |             | 97.5%       |                        |           |             | 58.3%     | 98.0% |

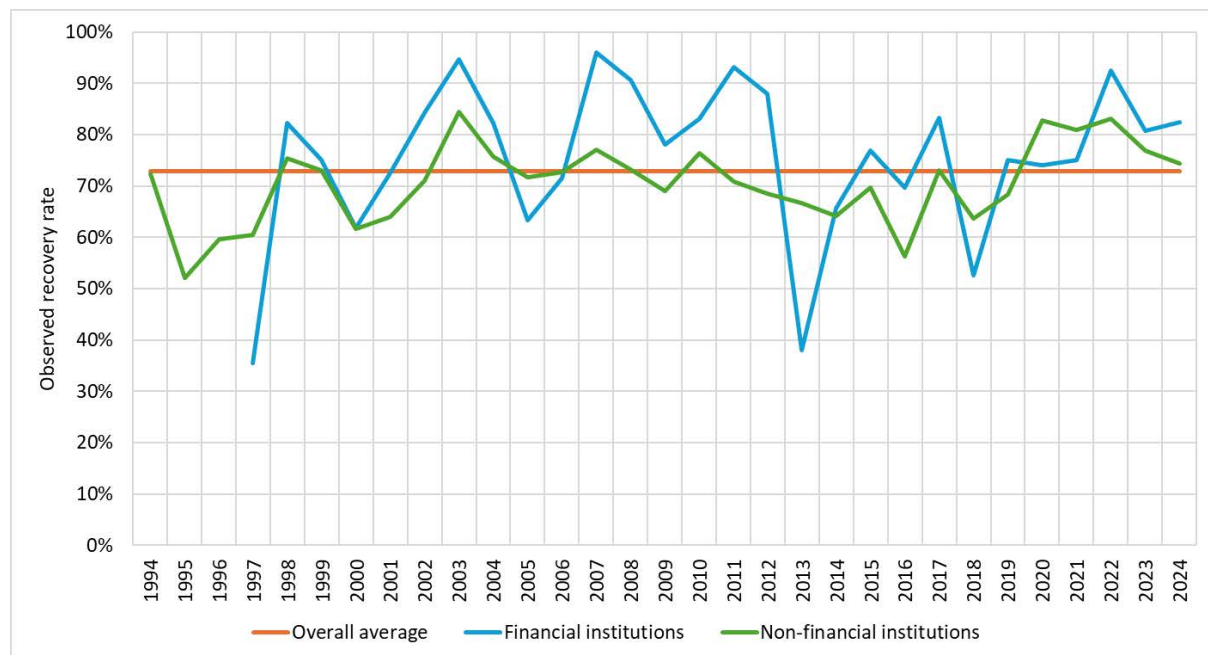
## 4.4.2 Recovery rates by sector groupings

Table 40 presents recovery rates by sector groupings. The assignment of individual GICS and NACE sectors to their respective sector groupings is detailed in Annex 2.

Table 40: Recovery rates by year of default for sector groupings

|                       | Financial institutions | Non-financial institutions | Banking | Infrastructure | Non-bank financials | Renewables | Services |
|-----------------------|------------------------|----------------------------|---------|----------------|---------------------|------------|----------|
| Defaults              | 453                    | 1 348                      | 339     | 304            | 114                 | 114        | 143      |
| Average recovery rate | 79.1%                  | 70.9%                      | 82.2%   | 72.3%          | 69.9%               | 70.0%      | 69.0%    |
| 1994                  |                        | 72.4%                      |         | 57.7%          |                     |            |          |
| 1995                  |                        | 52.0%                      |         |                |                     |            | 36.0%    |
| 1996                  |                        | 59.6%                      |         |                |                     |            |          |
| 1997                  | 35.5%                  | 60.4%                      |         |                | 35.5%               |            | 25.6%    |
| 1998                  | 82.3%                  | 75.4%                      | 86.7%   | 100.0%         | 63.6%               |            | 55.9%    |
| 1999                  | 75.1%                  | 73.0%                      | 83.7%   | 89.0%          | 5.8%                |            | 91.7%    |
| 2000                  | 61.9%                  | 61.7%                      | 61.9%   | 63.8%          |                     |            | 84.0%    |
| 2001                  | 72.5%                  | 64.0%                      | 72.5%   | 68.8%          |                     |            | 26.4%    |
| 2002                  | 84.3%                  | 71.0%                      | 84.3%   | 60.7%          |                     |            | 97.9%    |
| 2003                  | 94.7%                  | 84.4%                      | 99.3%   | 83.3%          | 60.8%               | 98.5%      | 93.3%    |
| 2004                  | 82.2%                  | 75.6%                      | 79.2%   | 99.1%          | 100.0%              |            | 71.7%    |
| 2005                  | 63.3%                  | 71.7%                      | 63.3%   | 77.2%          |                     |            | 79.7%    |
| 2006                  | 71.5%                  | 72.7%                      | 82.9%   | 50.0%          | 3.5%                | 0.0%       | 100.0%   |
| 2007                  | 96.0%                  | 77.1%                      | 99.8%   | 86.5%          | 80.5%               |            | 63.2%    |
| 2008                  | 90.7%                  | 73.2%                      | 88.8%   | 81.1%          | 99.3%               | 100.0%     | 89.5%    |
| 2009                  | 78.1%                  | 69.0%                      | 82.0%   | 78.7%          | 73.3%               | 79.7%      | 66.6%    |
| 2010                  | 83.1%                  | 76.4%                      | 81.5%   | 75.7%          | 85.0%               | 100.0%     | 73.0%    |
| 2011                  | 93.1%                  | 70.8%                      | 98.2%   | 62.5%          | 79.3%               |            | 62.9%    |
| 2012                  | 88.0%                  | 68.6%                      | 88.4%   | 83.1%          | 86.7%               | 73.5%      | 85.9%    |
| 2013                  | 38.0%                  | 66.7%                      | 63.4%   | 61.8%          | 0.0%                | 62.3%      | 52.8%    |
| 2014                  | 65.7%                  | 64.2%                      | 71.2%   | 86.7%          | 0.0%                | 88.7%      | 64.9%    |
| 2015                  | 77.0%                  | 69.8%                      | 79.7%   | 61.5%          | 74.8%               | 72.0%      | 60.1%    |
| 2016                  | 69.7%                  | 56.2%                      | 72.5%   | 54.9%          | 61.8%               | 61.0%      | 58.0%    |
| 2017                  | 83.3%                  | 73.0%                      | 84.4%   | 81.8%          | 79.8%               | 74.2%      | 56.7%    |
| 2018                  | 52.6%                  | 63.6%                      | 50.3%   | 74.8%          | 58.6%               | 63.5%      | 86.4%    |
| 2019                  | 75.1%                  | 68.3%                      | 74.5%   | 65.0%          | 75.7%               | 61.6%      | 84.5%    |
| 2020                  | 74.0%                  | 82.8%                      | 80.4%   | 76.0%          | 41.9%               | 75.2%      | 92.3%    |
| 2021                  | 75.0%                  | 80.9%                      | 74.9%   | 74.0%          | 75.3%               | 66.1%      | 83.6%    |
| 2022                  | 92.4%                  | 83.1%                      | 89.3%   | 64.9%          | 97.4%               | 47.8%      | 96.9%    |
| 2023                  | 80.8%                  | 76.8%                      | 84.9%   | 83.9%          | 63.2%               | 93.0%      | 48.6%    |
| 2024                  | 82.5%                  | 74.3%                      | 91.2%   | 87.0%          | 33.2%               | 100.0%     | 0.0%     |

Figure 17: Recovery rates by year of default for financial and non-financial institutions



## 4.5 Recovery rates by World Bank region and sector

Disaggregating recovery rates by sector and country provides insights into the sectors that form the default and recovery profile for each region. Communication services appear exclusively in sub-Saharan Africa, while real estate is only represented in Europe and Central Asia. Recovery rates for the consumer discretionary, financials and materials sectors are available across all six regions.

### 4.5.1 Recovery rates by World Bank region and GICS sector

Table 41: Recovery rates by World Bank region and GICS sector

|                            | Item                | Administration | Communication services | Consumer discretionary | Consumer staples | Energy | Financials | Health care | Industrials | Information technology | Materials | Real estate | Utilities | Others |
|----------------------------|---------------------|----------------|------------------------|------------------------|------------------|--------|------------|-------------|-------------|------------------------|-----------|-------------|-----------|--------|
| East Asia & Pacific        | Recovery rate       |                |                        | 67.1%                  | 66.7%            |        | 69.1%      |             |             |                        | 68.1%     |             |           | 73.4%  |
|                            | Minimum observation |                |                        | 0.0%                   | 0.0%             |        | 3.0%       |             |             |                        | 0.0%      |             |           | 0.0%   |
|                            | 10th percentile     |                |                        | 18.6%                  | 0.0%             |        | 30.9%      |             |             |                        | 18.0%     |             |           | 25.1%  |
|                            | 25th percentile     |                |                        | 39.2%                  | 14.1%            |        | 41.6%      |             |             |                        | 45.0%     |             |           | 69.5%  |
|                            | Median              |                |                        | 79.7%                  | 98.3%            |        | 83.0%      |             |             |                        | 75.9%     |             |           | 89.1%  |
|                            | 75th percentile     |                |                        | 99.9%                  | 100.0%           |        | 94.2%      |             |             |                        | 99.5%     |             |           | 93.6%  |
|                            | 90th percentile     |                |                        | 100.0%                 | 100.0%           |        | 99.8%      |             |             |                        | 100.0%    |             |           | 97.5%  |
|                            | Maximum observation |                |                        | 100.0%                 | 100.0%           |        | 100.0%     |             |             |                        | 100.0%    |             |           | 99.2%  |
| Europe & Central Asia      | Recovery rate       |                |                        | 69.2%                  | 72.6%            | 53.0%  | 77.0%      | 66.4%       | 66.9%       |                        | 75.0%     | 71.2%       | 67.5%     | 76.4%  |
|                            | Minimum observation |                |                        | 0.0%                   | 0.0%             | 0.0%   | 0.0%       | 7.5%        | 0.1%        |                        | 3.8%      | 0.1%        | 0.0%      | 0.0%   |
|                            | 10th percentile     |                |                        | 21.5%                  | 13.9%            | 0.0%   | 25.6%      | 21.9%       | 15.1%       |                        | 22.1%     | 29.5%       | 11.1%     | 11.6%  |
|                            | 25th percentile     |                |                        | 50.5%                  | 50.9%            | 7.4%   | 67.2%      | 45.9%       | 29.9%       |                        | 58.4%     | 52.9%       | 44.8%     | 72.5%  |
|                            | Median              |                |                        | 77.4%                  | 88.5%            | 62.4%  | 91.3%      | 78.7%       | 83.7%       |                        | 88.9%     | 82.2%       | 84.2%     | 91.2%  |
|                            | 75th percentile     |                |                        | 93.9%                  | 99.7%            | 88.7%  | 98.5%      | 95.5%       | 98.2%       |                        | 99.2%     | 95.7%       | 91.0%     | 98.0%  |
|                            | 90th percentile     |                |                        | 99.9%                  | 100.0%           | 95.9%  | 100.0%     | 99.4%       | 100.0%      |                        | 100.0%    | 98.6%       | 99.5%     | 100.0% |
|                            | Maximum observation |                |                        | 100.0%                 | 100.0%           | 99.6%  | 100.0%     | 100.0%      | 100.0%      |                        | 100.0%    | 100.0%      | 100.0%    | 100.0% |
| Latin America & Caribbean  | Recovery rate       |                |                        | 63.5%                  | 63.7%            |        | 55.9%      | 90.3%       | 69.5%       |                        | 85.2%     |             | 73.3%     | 69.3%  |
|                            | Minimum observation |                |                        | 0.0%                   | 0.0%             |        | 0.0%       | 54.4%       | 0.0%        |                        | 10.2%     |             | 0.0%      | 0.0%   |
|                            | 10th percentile     |                |                        | 15.8%                  | 11.1%            |        | 0.2%       | 78.3%       | 7.7%        |                        | 34.6%     |             | 20.2%     | 29.2%  |
|                            | 25th percentile     |                |                        | 24.7%                  | 29.1%            |        | 13.6%      | 84.6%       | 37.8%       |                        | 99.6%     |             | 59.7%     | 52.0%  |
|                            | Median              |                |                        | 83.1%                  | 81.8%            |        | 64.5%      | 98.6%       | 97.0%       |                        | 100.0%    |             | 84.5%     | 72.6%  |
|                            | 75th percentile     |                |                        | 99.9%                  | 98.9%            |        | 95.8%      | 100.0%      | 100.0%      |                        | 100.0%    |             | 99.5%     | 99.2%  |
|                            | 90th percentile     |                |                        | 100.0%                 | 100.0%           |        | 100.0%     | 100.0%      | 100.0%      |                        | 100.0%    |             | 100.0%    | 100.0% |
|                            | Maximum observation |                |                        | 100.0%                 | 100.0%           |        | 100.0%     | 100.0%      | 100.0%      |                        | 100.0%    |             | 100.0%    | 100.0% |
| Middle East & North Africa | Recovery rate       |                |                        | 66.2%                  |                  |        | 70.7%      |             | 46.7%       |                        | 84.5%     |             |           | 75.0%  |
|                            | Minimum observation |                |                        | 0.0%                   |                  |        | 0.0%       |             | 4.2%        |                        | 2.7%      |             |           | 0.0%   |
|                            | 10th percentile     |                |                        | 26.3%                  |                  |        | 15.3%      |             | 6.9%        |                        | 56.2%     |             |           | 26.1%  |
|                            | 25th percentile     |                |                        | 43.7%                  |                  |        | 34.3%      |             | 19.3%       |                        | 78.1%     |             |           | 60.5%  |
|                            | Median              |                |                        | 68.5%                  |                  |        | 95.7%      |             | 41.1%       |                        | 99.5%     |             |           | 98.5%  |
|                            | 75th percentile     |                |                        | 99.7%                  |                  |        | 99.9%      |             | 65.4%       |                        | 100.0%    |             |           | 100.0% |
|                            | 90th percentile     |                |                        | 100.0%                 |                  |        | 100.0%     |             | 99.9%       |                        | 100.0%    |             |           | 100.0% |
|                            | Maximum observation |                |                        | 100.0%                 |                  |        | 100.0%     |             | 100.0%      |                        | 100.0%    |             |           | 100.0% |
| South Asia                 | Recovery rate       |                |                        | 66.2%                  |                  |        | 83.3%      |             |             |                        | 77.4%     |             | 68.0%     |        |
|                            | Minimum observation |                |                        | 0.0%                   |                  |        | 0.0%       |             |             |                        | 0.0%      |             | 0.0%      |        |
|                            | 10th percentile     |                |                        | 1.5%                   |                  |        | 31.2%      |             |             |                        | 38.4%     |             | 1.9%      |        |
|                            | 25th percentile     |                |                        | 27.5%                  |                  |        | 92.7%      |             |             |                        | 53.4%     |             | 61.6%     |        |
|                            | Median              |                |                        | 98.8%                  |                  |        | 98.6%      |             |             |                        | 100.0%    |             | 84.2%     |        |
|                            | 75th percentile     |                |                        | 100.0%                 |                  |        | 100.0%     |             |             |                        | 100.0%    |             | 92.1%     |        |
|                            | 90th percentile     |                |                        | 100.0%                 |                  |        | 100.0%     |             |             |                        | 100.0%    |             | 99.6%     |        |
|                            | Maximum observation |                |                        | 100.0%                 |                  |        | 100.0%     |             |             |                        | 100.0%    |             | 100.0%    |        |
| Sub-Saharan Africa         | Recovery rate       |                | 87.1%                  | 72.6%                  | 69.2%            | 70.8%  | 90.7%      |             | 70.1%       |                        | 61.2%     |             | 81.9%     | 78.8%  |
|                            | Minimum observation |                | 26.4%                  | 0.0%                   | 0.0%             | 3.2%   | 0.0%       |             | 0.0%        |                        | 0.0%      |             | 0.0%      | 0.0%   |
|                            | 10th percentile     |                | 67.9%                  | 3.6%                   | 9.8%             | 16.0%  | 73.0%      |             | 0.6%        |                        | 0.0%      |             | 38.5%     | 37.8%  |
|                            | 25th percentile     |                | 80.7%                  | 43.1%                  | 38.2%            | 43.9%  | 96.8%      |             | 33.4%       |                        | 9.9%      |             | 79.8%     | 66.1%  |
|                            | Median              |                | 96.1%                  | 97.0%                  | 93.7%            | 98.6%  | 99.5%      |             | 96.4%       |                        | 85.5%     |             | 97.0%     | 93.8%  |
|                            | 75th percentile     |                | 100.0%                 | 100.0%                 | 99.7%            | 100.0% | 100.0%     |             | 100.0%      |                        | 99.4%     |             | 100.0%    | 99.2%  |
|                            | 90th percentile     |                | 100.0%                 | 100.0%                 | 100.0%           | 100.0% | 100.0%     |             | 100.0%      |                        | 100.0%    |             | 100.0%    | 100.0% |
|                            | Maximum observation |                | 100.0%                 | 100.0%                 | 100.0%           | 100.0% | 100.0%     |             | 100.0%      |                        | 100.0%    |             | 100.0%    | 100.0% |

## 4.5.2 Recovery rates by World Bank region and sector groupings

Table 42: Recovery rates by World Bank region and sector groupings

|                            | Item                | Financial institutions | Non-financial institutions | Banking | Infrastructure | Non-bank financials | Renewables | Services |
|----------------------------|---------------------|------------------------|----------------------------|---------|----------------|---------------------|------------|----------|
| East Asia & Pacific        | Recovery rate       | 69.1%                  | 71.0%                      | 73.7%   | 75.3%          |                     |            | 71.2%    |
|                            | Minimum observation | 3.0%                   | 0.0%                       | 3.0%    | 3.0%           |                     |            | 0.0%     |
|                            | 10th percentile     | 30.9%                  | 12.2%                      | 43.9%   | 49.8%          |                     |            | 2.5%     |
|                            | 25th percentile     | 41.6%                  | 47.8%                      | 60.3%   | 52.2%          |                     |            | 62.0%    |
|                            | Median              | 83.0%                  | 90.9%                      | 88.0%   | 89.9%          |                     |            | 92.8%    |
|                            | 75th percentile     | 94.2%                  | 99.4%                      | 94.2%   | 97.8%          |                     |            | 98.7%    |
|                            | 90th percentile     | 99.8%                  | 100.0%                     | 99.3%   | 100.0%         |                     |            | 99.9%    |
|                            | Maximum observation | 100.0%                 | 100.0%                     | 100.0%  | 100.0%         |                     |            | 100.0%   |
| Europe & Central Asia      | Recovery rate       | 77.0%                  | 70.7%                      | 78.3%   | 68.5%          | 71.7%               | 63.9%      | 79.6%    |
|                            | Minimum observation | 0.0%                   | 0.0%                       | 0.0%    | 0.0%           | 0.0%                | 0.0%       | 9.9%     |
|                            | 10th percentile     | 25.6%                  | 14.4%                      | 28.2%   | 17.2%          | 26.1%               | 5.2%       | 48.8%    |
|                            | 25th percentile     | 67.2%                  | 48.8%                      | 68.4%   | 45.2%          | 45.5%               | 38.2%      | 63.6%    |
|                            | Median              | 91.3%                  | 85.4%                      | 91.5%   | 84.4%          | 81.5%               | 84.0%      | 91.8%    |
|                            | 75th percentile     | 98.5%                  | 98.1%                      | 98.5%   | 95.7%          | 96.7%               | 89.3%      | 99.8%    |
|                            | 90th percentile     | 100.0%                 | 100.0%                     | 100.0%  | 100.0%         | 99.8%               | 97.5%      | 100.0%   |
|                            | Maximum observation | 100.0%                 | 100.0%                     | 100.0%  | 100.0%         | 100.0%              | 100.0%     | 100.0%   |
| Latin America & Caribbean  | Recovery rate       | 55.9%                  | 70.7%                      | 53.2%   | 70.7%          | 58.0%               | 62.4%      | 55.4%    |
|                            | Minimum observation | 0.0%                   | 0.0%                       | 0.0%    | 0.0%           | 0.0%                | 0.0%       | 0.0%     |
|                            | 10th percentile     | 0.2%                   | 13.4%                      | 2.9%    | 11.0%          | 0.0%                | 3.6%       | 0.0%     |
|                            | 25th percentile     | 13.6%                  | 44.5%                      | 12.8%   | 46.5%          | 14.1%               | 29.8%      | 2.5%     |
|                            | Median              | 64.5%                  | 87.0%                      | 54.4%   | 86.3%          | 71.8%               | 70.9%      | 78.0%    |
|                            | 75th percentile     | 95.8%                  | 100.0%                     | 92.3%   | 100.0%         | 97.5%               | 97.3%      | 99.5%    |
|                            | 90th percentile     | 100.0%                 | 100.0%                     | 99.4%   | 100.0%         | 100.0%              | 100.0%     | 100.0%   |
|                            | Maximum observation | 100.0%                 | 100.0%                     | 100.0%  | 100.0%         | 100.0%              | 100.0%     | 100.0%   |
| Middle East & North Africa | Recovery rate       | 70.7%                  | 72.1%                      | 63.9%   | 65.3%          | 81.4%               |            | 67.2%    |
|                            | Minimum observation | 0.0%                   | 0.0%                       | 0.0%    | 4.2%           | 15.3%               |            | 4.2%     |
|                            | 10th percentile     | 15.3%                  | 20.5%                      | 6.8%    | 18.0%          | 30.3%               |            | 15.3%    |
|                            | 25th percentile     | 34.3%                  | 49.0%                      | 25.2%   | 44.8%          | 75.0%               |            | 37.7%    |
|                            | Median              | 95.7%                  | 91.9%                      | 85.0%   | 64.8%          | 99.0%               |            | 80.5%    |
|                            | 75th percentile     | 99.9%                  | 100.0%                     | 100.0%  | 100.0%         | 99.8%               |            | 99.8%    |
|                            | 90th percentile     | 100.0%                 | 100.0%                     | 100.0%  | 100.0%         | 100.0%              |            | 100.0%   |
|                            | Maximum observation | 100.0%                 | 100.0%                     | 100.0%  | 100.0%         | 100.0%              |            | 100.0%   |
| South Asia                 | Recovery rate       | 83.3%                  | 67.4%                      | 81.6%   | 64.3%          | 86.4%               | 72.7%      | 69.4%    |
|                            | Minimum observation | 0.0%                   | 0.0%                       | 0.0%    | 0.0%           | 3.5%                | 0.0%       | 2.1%     |
|                            | 10th percentile     | 31.2%                  | 2.1%                       | 21.1%   | 2.0%           | 53.8%               | 50.6%      | 3.8%     |
|                            | 25th percentile     | 92.7%                  | 33.6%                      | 93.1%   | 45.1%          | 92.8%               | 68.9%      | 39.5%    |
|                            | Median              | 98.6%                  | 84.3%                      | 98.5%   | 79.2%          | 98.7%               | 79.2%      | 92.2%    |
|                            | 75th percentile     | 100.0%                 | 100.0%                     | 99.5%   | 92.8%          | 100.0%              | 86.9%      | 98.0%    |
|                            | 90th percentile     | 100.0%                 | 100.0%                     | 100.0%  | 99.9%          | 100.0%              | 98.4%      | 100.0%   |
|                            | Maximum observation | 100.0%                 | 100.0%                     | 100.0%  | 100.0%         | 100.0%              | 100.0%     | 100.0%   |
| Sub-Saharan Africa         | Recovery rate       | 90.7%                  | 72.7%                      | 92.8%   | 80.9%          | 72.9%               | 84.5%      | 74.0%    |
|                            | Minimum observation | 0.0%                   | 0.0%                       | 0.0%    | 0.0%           | 0.0%                | 0.0%       | 0.0%     |
|                            | 10th percentile     | 73.0%                  | 6.5%                       | 88.5%   | 27.8%          | 0.0%                | 51.2%      | 3.3%     |
|                            | 25th percentile     | 96.8%                  | 49.3%                      | 97.5%   | 78.1%          | 52.2%               | 78.1%      | 56.7%    |
|                            | Median              | 99.5%                  | 93.8%                      | 99.5%   | 98.7%          | 96.9%               | 99.7%      | 95.9%    |
|                            | 75th percentile     | 100.0%                 | 100.0%                     | 100.0%  | 100.0%         | 99.6%               | 100.0%     | 99.9%    |
|                            | 90th percentile     | 100.0%                 | 100.0%                     | 100.0%  | 100.0%         | 100.0%              | 100.0%     | 100.0%   |
|                            | Maximum observation | 100.0%                 | 100.0%                     | 100.0%  | 100.0%         | 100.0%              | 100.0%     | 100.0%   |

## 4.6 Recovery rates by country

Table 43: Recovery rates by country

| ISO country code and ISO country name | Number of defaults | Signed amount<br>€ million | Average recovery rate | Minimum observation | 10th percentile | 25th percentile | Median | 75th percentile | 90th percentile | Maximum observation |
|---------------------------------------|--------------------|----------------------------|-----------------------|---------------------|-----------------|-----------------|--------|-----------------|-----------------|---------------------|
| AL-Albania                            | 15                 | 222                        | 80.2%                 | 33.0%               | 44.2%           | 71.3%           | 89.1%  | 96.1%           | 99.6%           | 100.0%              |
| AM-Armenia                            | 10                 | 66                         | 61.8%                 | 0.0%                | 10.0%           | 38.7%           | 71.5%  | 90.3%           | 99.8%           | 100.0%              |
| AR-Argentina                          | 54                 | 965                        | 76.2%                 | 0.0%                | 19.0%           | 65.3%           | 89.9%  | 99.1%           | 100.0%          | 100.0%              |
| AZ-Azerbaijan                         | 43                 | 350                        | 66.2%                 | 0.0%                | 7.0%            | 48.1%           | 74.9%  | 91.5%           | 98.7%           | 100.0%              |
| BA-Bosnia and Herzegovina             | 14                 | 46                         | 70.7%                 | 4.0%                | 26.9%           | 52.5%           | 82.1%  | 93.4%           | 98.7%           | 100.0%              |
| BF-Burkina Faso                       | 33                 | 135                        | 90.5%                 | 25.3%               | 56.3%           | 97.7%           | 98.2%  | 100.0%          | 100.0%          | 100.0%              |
| BG-Bulgaria                           | 23                 | 411                        | 80.9%                 | 5.8%                | 51.9%           | 75.5%           | 87.0%  | 100.0%          | 100.0%          | 100.0%              |
| BJ-Benin                              | 19                 | 138                        | 77.1%                 | 0.6%                | 21.6%           | 69.6%           | 96.8%  | 98.8%           | 100.0%          | 100.0%              |
| BR-Brazil                             | 32                 | 1 043                      | 70.5%                 | 0.0%                | 15.1%           | 31.4%           | 95.3%  | 100.0%          | 100.0%          | 100.0%              |
| BY-Belarus                            | 11                 | 144                        | 79.0%                 | 10.0%               | 32.3%           | 68.0%           | 95.8%  | 100.0%          | 100.0%          | 100.0%              |
| CI-Côte d'Ivoire                      | 50                 | 351                        | 92.7%                 | 19.7%               | 75.3%           | 96.4%           | 98.6%  | 99.8%           | 100.0%          | 100.0%              |
| CL-Chile                              | 14                 | 1 090                      | 42.4%                 | 0.0%                | 7.6%            | 20.0%           | 32.4%  | 75.0%           | 87.7%           | 100.0%              |
| CM-Cameroon                           | 11                 | 95                         | 68.3%                 | 0.0%                | 0.0%            | 25.8%           | 100.0% | 100.0%          | 100.0%          | 100.0%              |
| CN-China                              | 25                 | 377                        | 67.5%                 | 0.0%                | 9.3%            | 42.6%           | 87.3%  | 99.1%           | 100.0%          | 100.0%              |
| CO-Colombia                           | 10                 | 281                        | 55.5%                 | 6.2%                | 11.8%           | 23.8%           | 53.4%  | 93.2%           | 99.7%           | 100.0%              |
| DO-Dominican Republic                 | 11                 | 106                        | 80.9%                 | 0.0%                | 48.3%           | 72.2%           | 99.1%  | 99.9%           | 100.0%          | 100.0%              |
| EG-Egypt                              | 23                 | 636                        | 70.9%                 | 0.0%                | 10.0%           | 51.7%           | 89.7%  | 100.0%          | 100.0%          | 100.0%              |
| GE-Georgia                            | 29                 | 224                        | 80.3%                 | 21.5%               | 42.9%           | 78.9%           | 84.5%  | 100.0%          | 100.0%          | 100.0%              |
| GH-Ghana                              | 19                 | 138                        | 75.8%                 | 0.0%                | 22.2%           | 61.9%           | 98.7%  | 100.0%          | 100.0%          | 100.0%              |
| HT-Haiti                              | 11                 | 57                         | 73.0%                 | 23.6%               | 41.7%           | 44.6%           | 81.7%  | 99.6%           | 100.0%          | 100.0%              |
| ID-Indonesia                          | 28                 | 340                        | 62.7%                 | 0.0%                | 10.7%           | 17.9%           | 71.7%  | 98.9%           | 99.9%           | 100.0%              |
| IN-India                              | 58                 | 943                        | 58.5%                 | 0.0%                | 1.1%            | 12.7%           | 74.6%  | 97.7%           | 100.0%          | 100.0%              |
| JO-Jordan                             | 13                 | 251                        | 79.9%                 | 27.7%               | 36.7%           | 69.0%           | 94.2%  | 100.0%          | 100.0%          | 100.0%              |
| KE-Kenya                              | 19                 | 175                        | 67.7%                 | 0.0%                | 0.0%            | 31.3%           | 99.5%  | 100.0%          | 100.0%          | 100.0%              |
| KZ-Kazakhstan                         | 11                 | 231                        | 85.4%                 | 59.1%               | 62.8%           | 69.2%           | 96.9%  | 99.0%           | 100.0%          | 100.0%              |
| LB-Lebanon                            | 29                 | 457                        | 70.3%                 | 0.0%                | 20.2%           | 34.8%           | 98.2%  | 100.0%          | 100.0%          | 100.0%              |
| LK-Sri Lanka                          | 16                 | 405                        | 97.7%                 | 92.2%               | 94.7%           | 95.4%           | 98.7%  | 100.0%          | 100.0%          | 100.0%              |
| ME-Montenegro                         | 10                 | 58                         | 93.9%                 | 68.2%               | 85.8%           | 90.8%           | 98.6%  | 100.0%          | 100.0%          | 100.0%              |
| MG-Madagascar                         | 13                 | 671                        | 71.1%                 | 6.5%                | 7.3%            | 30.9%           | 95.4%  | 98.3%           | 99.9%           | 100.0%              |
| ML-Mali                               | 54                 | 149                        | 86.7%                 | 0.5%                | 52.3%           | 91.0%           | 99.2%  | 100.0%          | 100.0%          | 100.0%              |
| MM-Myanmar                            | 13                 | 320                        | 86.6%                 | 42.2%               | 59.7%           | 89.2%           | 94.8%  | 98.9%           | 99.9%           | 100.0%              |
| MN-Mongolia                           | 12                 | 253                        | 84.3%                 | 56.9%               | 64.6%           | 72.4%           | 89.2%  | 99.4%           | 99.7%           | 100.0%              |
| MR-Mauritania                         | 10                 | 27                         | 78.3%                 | 11.6%               | 15.2%           | 79.6%           | 95.9%  | 99.5%           | 100.0%          | 100.0%              |
| MX-Mexico                             | 41                 | 1 012                      | 68.6%                 | 0.4%                | 4.7%            | 39.3%           | 86.3%  | 98.9%           | 100.0%          | 100.0%              |
| MZ-Mozambique                         | 23                 | 302                        | 75.4%                 | 0.0%                | 6.1%            | 58.6%           | 98.2%  | 99.9%           | 100.0%          | 100.0%              |
| NE-Niger                              | 19                 | 86                         | 92.4%                 | 50.0%               | 82.4%           | 89.9%           | 99.6%  | 100.0%          | 100.0%          | 100.0%              |
| NG-Nigeria                            | 31                 | 425                        | 72.2%                 | 0.0%                | 4.4%            | 40.6%           | 94.9%  | 99.8%           | 100.0%          | 100.0%              |
| NI-Nicaragua                          | 21                 | 141                        | 69.7%                 | 0.0%                | 7.6%            | 60.4%           | 78.0%  | 100.0%          | 100.0%          | 100.0%              |
| OT-Other                              | 33                 | 439                        | 61.8%                 | 0.0%                | 0.6%            | 6.6%            | 76.1%  | 94.5%           | 100.0%          | 100.0%              |
| PE-Peru                               | 16                 | 149                        | 71.1%                 | 0.0%                | 1.1%            | 27.8%           | 99.2%  | 100.0%          | 100.0%          | 100.0%              |
| PH-Philippines                        | 22                 | 347                        | 68.4%                 | 0.0%                | 5.0%            | 33.9%           | 88.0%  | 97.6%           | 100.0%          | 100.0%              |
| PK-Pakistan                           | 39                 | 793                        | 86.1%                 | 3.5%                | 51.0%           | 89.1%           | 98.8%  | 100.0%          | 100.0%          | 100.0%              |
| PL-Poland                             | 13                 | 255                        | 46.1%                 | 0.0%                | 2.3%            | 20.5%           | 53.0%  | 61.9%           | 88.1%           | 98.8%               |
| REG-Regional                          | 45                 | 933                        | 49.6%                 | 0.0%                | 0.0%            | 24.0%           | 42.6%  | 93.8%           | 100.0%          | 100.0%              |
| RO-Romania                            | 11                 | 120                        | 81.0%                 | 25.3%               | 51.1%           | 71.4%           | 90.2%  | 100.0%          | 100.0%          | 100.0%              |
| RS-Serbia                             | 15                 | 308                        | 60.2%                 | 12.8%               | 16.3%           | 21.6%           | 67.3%  | 92.4%           | 97.7%           | 100.0%              |
| RU-Russian Federation                 | 65                 | 1 305                      | 76.0%                 | 0.0%                | 14.2%           | 69.1%           | 91.8%  | 98.5%           | 100.0%          | 100.0%              |
| RW-Rwanda                             | 10                 | 39                         | 76.5%                 | 28.4%               | 35.5%           | 79.8%           | 80.6%  | 94.7%           | 98.6%           | 99.1%               |
| SN-Senegal                            | 68                 | 513                        | 87.7%                 | 0.0%                | 52.9%           | 91.5%           | 99.3%  | 100.0%          | 100.0%          | 100.0%              |
| TH-Thailand                           | 11                 | 275                        | 76.5%                 | 35.5%               | 41.9%           | 56.4%           | 89.9%  | 99.8%           | 100.0%          | 100.0%              |
| TJ-Tajikistan                         | 18                 | 52                         | 55.8%                 | 0.0%                | 3.4%            | 10.9%           | 64.0%  | 97.1%           | 99.8%           | 100.0%              |
| TM-Turkmenistan                       | 33                 | 83                         | 87.3%                 | 23.5%               | 68.7%           | 88.6%           | 93.2%  | 99.2%           | 100.0%          | 100.0%              |
| TR-Türkiye                            | 45                 | 2 306                      | 70.6%                 | 11.7%               | 28.9%           | 47.3%           | 86.2%  | 96.6%           | 100.0%          | 100.0%              |
| TT-Trinidad and Tobago                | 12                 | 108                        | 85.3%                 | 53.8%               | 61.6%           | 65.5%           | 97.3%  | 100.0%          | 100.0%          | 100.0%              |
| TZ-Tanzania                           | 20                 | 113                        | 72.3%                 | 0.0%                | 29.5%           | 50.8%           | 81.1%  | 99.6%           | 100.0%          | 100.0%              |
| UA-Ukraine                            | 83                 | 1 746                      | 68.4%                 | 0.0%                | 8.8%            | 40.1%           | 85.4%  | 98.2%           | 100.0%          | 100.0%              |
| UG-Uganda                             | 20                 | 224                        | 85.2%                 | 0.0%                | 56.0%           | 87.1%           | 100.0% | 100.0%          | 100.0%          | 100.0%              |
| UZ-Uzbekistan                         | 17                 | 100                        | 77.0%                 | 15.1%               | 26.7%           | 50.1%           | 94.7%  | 100.0%          | 100.0%          | 100.0%              |
| VN-Viet Nam                           | 13                 | 123                        | 81.2%                 | 23.4%               | 51.1%           | 79.1%           | 93.3%  | 100.0%          | 100.0%          | 100.0%              |
| ZA-South Africa                       | 13                 | 404                        | 73.1%                 | 0.0%                | 22.9%           | 59.5%           | 85.5%  | 98.1%           | 99.1%           | 100.0%              |
| ZM-Zambia                             | 27                 | 286                        | 69.2%                 | 0.0%                | 9.8%            | 45.2%           | 92.2%  | 99.2%           | 100.0%          | 100.0%              |
| ZW-Zimbabwe                           | 11                 | 20                         | 36.6%                 | 0.0%                | 0.0%            | 1.9%            | 35.8%  | 56.9%           | 99.1%           | 100.0%              |
| Overall, including omitted categories | 1 801              | 27 450                     | 72.9%                 | 0.0%                | 11.1%           | 50.6%           | 91.1%  | 99.8%           | 100.0%          | 100.0%              |

Table 44: Recovery rates by year of default and country

| ISO country code | Average default rate | 1994   | 1995  | 1996   | 1997   | 1998   | 1999   | 2000  | 2001   | 2002   | 2003   | 2004   | 2005   | 2006   | 2007   | 2008   | 2009   | 2010   | 2011   | 2012   | 2013   | 2014  | 2015   | 2016  | 2017   | 2018   | 2019   | 2020   | 2021   | 2022   | 2023   | 2024   |       |
|------------------|----------------------|--------|-------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| AL               | 80.2%                |        |       |        |        | 95.6%  |        |       |        |        |        |        |        |        |        |        |        | 94.0%  | 92.3%  | 95.9%  | 43.4%  | 85.1% | 58.3%  | 77.3% | 80.3%  |        |        |        |        |        |        |        |       |
| AM               | 61.8%                |        |       |        |        |        |        |       |        |        |        |        |        |        |        |        |        | 53.6%  | 78.0%  |        | 0.0%   |       | 81.2%  | 11.1% |        |        | 68.6%  | 93.3%  |        |        | 100.0% |        |       |
| AR               | 76.2%                |        | 97.4% |        | 47.9%  | 100.0% | 21.1%  | 37.5% | 10.2%  | 81.8%  | 88.6%  |        | 96.0%  |        |        | 75.2%  |        |        |        |        | 90.9%  |       |        |       |        | 0.0%   | 97.8%  | 97.6%  |        |        |        | 98.5%  |       |
| AZ               | 66.2%                |        |       |        |        |        |        |       |        |        |        |        |        |        |        | 74.8%  | 74.9%  | 3.8%   | 97.6%  | 60.4%  | 41.5%  |       | 95.5%  | 56.7% | 72.6%  | 83.8%  | 72.2%  | 79.4%  |        |        |        |        |       |
| BA               | 70.7%                |        |       |        |        |        |        | 41.6% | 79.4%  |        |        |        |        |        | 99.7%  |        |        | 93.5%  |        | 100.0% |        | 44.1% |        |       |        |        |        |        |        |        |        |        |       |
| BF               | 90.5%                |        |       |        |        |        |        | 97.5% |        |        |        | 50.5%  | 60.9%  | 62.7%  | 100.0% | 97.0%  | 100.0% |        | 99.1%  | 97.7%  | 90.9%  |       |        |       | 31.3%  |        | 100.0% |        |        |        |        | 98.5%  |       |
| BG               | 80.9%                |        |       |        |        | 31.3%  | 41.1%  | 80.4% |        |        | 86.7%  |        |        |        |        | 84.4%  |        |        | 94.6%  | 80.1%  | 81.2%  | 86.2% |        | 63.6% | 100.0% |        |        | 100.0% |        |        |        |        |       |
| BJ               | 77.1%                |        |       |        |        | 100.0% |        | 82.9% | 80.8%  |        | 82.6%  |        |        |        | 73.0%  |        |        | 2.3%   | 0.6%   | 91.8%  |        |       |        | 77.3% |        |        |        |        |        |        | 97.4%  | 100.0% |       |
| BR               | 70.5%                |        |       |        | 34.8%  |        |        | 15.1% |        | 60.1%  | 98.0%  | 100.0% | 100.0% |        | 100.0% |        | 50.0%  |        |        | 93.5%  | 80.3%  | 15.0% | 86.8%  | 62.5% | 23.3%  |        |        | 99.0%  | 100.0% |        |        |        |       |
| BY               | 79.0%                |        |       |        |        |        |        |       |        |        |        |        |        |        |        |        |        |        | 100.0% | 97.6%  |        | 89.5% | 99.7%  |       |        |        |        |        | 95.8%  | 29.6%  |        |        |       |
| CI               | 92.7%                | 98.3%  |       |        | 87.9%  | 96.7%  | 98.0%  | 84.4% | 59.3%  | 60.2%  | 98.4%  | 100.0% |        | 57.4%  | 97.8%  | 99.6%  |        | 100.0% | 100.0% |        | 100.0% | 99.5% | 99.9%  | 90.4% | 93.1%  |        | 88.1%  | 98.3%  |        | 99.4%  | 99.6%  | 97.7%  |       |
| CL               | 42.4%                |        |       |        |        |        |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |       |        | 48.8% | 24.9%  | 20.0%  | 88.6%  | 20.1%  |        |        |        |        |       |
| CM               | 68.3%                |        |       | 100.0% |        |        | 100.0% |       |        |        |        | 100.0% |        | 100.0% | 100.0% |        |        | 8.4%   |        |        |        |       |        | 14.4% |        |        |        |        |        |        |        |        |       |
| CN               | 67.5%                |        | 0.0%  | 38.5%  |        |        |        |       |        | 54.2%  | 100.0% |        | 47.9%  | 83.6%  | 100.0% |        | 61.2%  | 100.0% | 90.9%  |        | 85.7%  | 69.5% | 48.1%  | 0.0%  |        | 91.5%  |        | 99.1%  |        |        |        |        |       |
| CO               | 55.5%                |        |       |        |        |        | 25.0%  |       |        |        |        |        |        |        |        |        |        |        |        |        |        |       |        |       | 23.4%  | 64.7%  | 100.0% |        | 70.4%  | 6.2%   |        | 65.7%  |       |
| DO               | 80.9%                |        |       |        |        |        |        |       | 74.1%  |        | 100.0% | 82.8%  |        | 100.0% |        |        |        |        |        |        | 0.0%   |       |        | 93.8% |        | 99.4%  |        |        |        |        |        |        |       |
| EG               | 70.9%                | 7.2%   |       | 61.9%  |        |        | 95.3%  |       | 100.0% | 85.2%  | 99.6%  |        | 47.5%  |        |        | 98.4%  | 100.0% | 44.8%  | 0.0%   |        |        | 62.4% | 70.2%  | 21.4% |        |        | 87.7%  | 81.8%  | 100.0% | 100.0% |        |        |       |
| GE               | 80.3%                |        |       |        |        |        |        |       | 70.0%  |        |        |        |        |        |        | 94.5%  |        | 76.9%  | 84.9%  |        |        |       | 100.0% |       | 60.7%  | 66.5%  |        | 91.3%  | 53.0%  |        |        |        |       |
| GH               | 75.8%                | 91.0%  | 1.9%  |        |        |        |        |       |        |        | 95.3%  |        | 99.0%  |        |        | 46.4%  |        | 99.6%  |        |        | 100.0% | 66.7% | 61.8%  | 81.8% |        | 31.0%  | 100.0% | 98.7%  | 100.0% |        |        |        |       |
| HT               | 73.0%                |        |       |        |        |        |        |       |        |        |        |        |        |        |        |        |        |        |        |        | 99.1%  |       |        | 81.7% | 100.0% |        | 38.6%  | 100.0% |        |        | 84.4%  |        |       |
| ID               | 62.7%                |        |       |        |        | 53.7%  | 79.8%  | 96.7% | 18.6%  | 63.7%  |        | 99.5%  |        |        |        |        |        |        |        |        | 52.2%  |       |        | 94.3% |        | 0.0%   | 99.7%  | 66.5%  | 100.0% |        |        |        |       |
| IN               | 58.5%                |        |       |        | 34.9%  | 74.4%  |        |       | 69.4%  | 95.1%  | 99.0%  | 49.7%  |        |        |        | 87.3%  | 33.3%  | 78.6%  | 48.9%  |        | 21.3%  | 61.0% | 81.4%  | 40.2% |        | 46.3%  | 37.5%  | 89.1%  | 40.6%  | 95.7%  | 97.0%  |        |       |
| JO               | 79.9%                |        |       | 81.1%  |        |        |        |       |        | 32.3%  |        | 94.2%  | 99.4%  |        |        |        |        |        |        |        |        | 41.1% |        |       |        |        |        | 87.3%  | 100.0% | 99.9%  | 100.0% |        |       |
| KE               | 67.7%                |        |       |        |        | 100.0% |        |       | 85.0%  |        | 100.0% |        | 100.0% |        | 99.5%  | 0.0%   |        |        | 28.7%  | 100.0% |        | 83.7% |        | 11.3% | 99.8%  |        | 7.1%   | 99.8%  | 79.5%  |        |        |        |       |
| KZ               | 85.4%                |        |       |        |        |        |        |       |        |        |        |        |        |        |        |        | 75.2%  | 91.3%  | 70.2%  | 87.6%  |        |       | 98.6%  |       |        |        |        |        | 99.4%  |        |        |        |       |
| LB               | 70.3%                |        |       |        |        | 67.4%  |        |       | 76.7%  | 100.0% |        | 100.0% |        |        |        |        |        |        |        |        |        |       |        |       | 58.6%  |        |        | 73.6%  | 40.4%  | 96.7%  |        |        |       |
| LK               | 97.7%                |        |       |        |        |        |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |       |        |       |        |        |        |        | 97.1%  | 97.7%  |        |        |       |
| ME               | 93.9%                |        |       |        |        |        |        |       |        |        |        |        |        | 99.1%  |        |        |        | 68.2%  |        |        |        |       |        |       | 87.8%  |        | 97.6%  |        |        | 98.1%  |        |        |       |
| MG               | 71.1%                |        |       |        |        |        |        |       |        | 93.7%  |        |        | 82.2%  | 100.0% |        |        |        | 97.9%  |        |        |        |       |        | 37.6% |        | 10.8%  |        |        |        |        |        |        |       |
| ML               | 86.7%                |        |       |        |        | 50.5%  | 86.8%  |       | 99.9%  |        | 87.8%  | 99.8%  | 29.3%  |        |        |        |        | 100.0% | 100.0% |        |        | 64.1% | 99.0%  | 92.2% | 100.0% | 100.0% | 79.5%  |        |        |        | 81.0%  | 74.7%  |       |
| MM               | 86.6%                |        |       |        |        |        |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |       |        |       |        |        | 99.4%  | 100.0% | 80.6%  | 92.6%  | 96.5%  |        |       |
| MN               | 84.3%                |        |       |        |        |        |        |       |        |        |        |        |        |        |        |        |        |        |        |        | 56.9%  | 97.6% | 82.1%  | 86.1% |        | 65.7%  |        | 87.3%  |        |        |        |        |       |
| MR               | 78.3%                |        |       |        |        |        | 100.0% |       |        | 75.9%  |        |        | 51.2%  | 100.0% | 100.0% |        | 76.3%  |        |        |        |        |       |        |       |        |        |        |        |        |        |        |        |       |
| MX               | 68.6%                |        |       |        |        |        |        |       | 76.2%  | 73.8%  |        | 71.8%  |        |        | 100.0% |        | 95.0%  | 91.9%  |        |        |        | 83.0% | 39.3%  | 98.2% | 66.7%  | 91.5%  |        | 37.2%  | 53.4%  | 35.1%  | 48.1%  |        |       |
| MZ               | 75.4%                |        |       |        | 4.2%   |        |        |       | 99.8%  | 13.6%  |        |        |        |        | 100.0% |        | 91.0%  | 77.1%  |        |        |        | 88.4% | 53.7%  | 98.8% | 100.0% | 99.9%  | 100.0% |        | 100.0% |        |        |        |       |
| NE               | 92.4%                |        |       |        |        |        |        |       |        |        |        |        |        |        |        |        |        | 99.8%  | 74.7%  | 99.2%  |        |       |        |       |        | 94.9%  | 52.4%  |        |        |        |        |        |       |
| NG               | 72.2%                | 100.0% |       |        |        | 21.7%  |        |       |        |        | 100.0% | 3.2%   |        |        | 74.9%  | 4.4%   | 87.5%  |        | 83.6%  | 100.0% |        | 97.5% | 44.0%  | 91.8% | 60.7%  | 97.3%  | 90.7%  | 98.7%  | 8.7%   |        | 99.7%  |        |       |
| NI               | 69.7%                |        |       |        |        |        |        |       |        |        | 100.0% |        |        |        |        |        | 56.0%  | 28.1%  |        |        |        | 71.4% | 98.9%  |       |        |        | 91.6%  | 98.7%  | 100.0% |        |        | 0.0%   |       |
| OT               | 61.8%                |        |       |        |        |        |        |       |        |        |        |        |        |        |        | 74.3%  | 6.6%   | 81.1%  | 71.9%  | 73.7%  | 65.2%  | 74.6% |        |       | 0.0%   | 100.0% | 60.6%  | 0.0%   | 100.0% |        |        |        | 33.1% |
| PE               | 71.1%                |        |       |        |        |        |        | 11.1% | 8.9%   | 99.5%  | 100.0% |        |        |        |        |        |        | 99.5%  |        |        |        |       |        | 99.5% | 100.0% |        |        |        |        | 100.0% | 96.4%  | 100.0% |       |
| PH               | 68.4%                |        |       |        | 22.2%  |        |        | 3.0%  | 62.1%  | 68.0%  | 99.2%  | 98.5%  |        | 93.0%  |        | 100.0% |        | 79.2%  |        |        |        |       |        |       |        | 1.4%   |        | 53.4%  | 93.9%  | 91.6%  |        |        |       |
| PK               | 86.1%                |        |       |        | 100.0% | 99.9%  | 100.0% |       |        |        |        | 94.6%  | 33.4%  | 3.5%   |        | 99.4%  | 81.0%  |        |        |        |        | 95.1% |        |       | 97.4%  |        | 4.5%   | 95.3%  |        |        |        | 89.5%  |       |
| PL               | 46.1%                | 23.1%  |       | 0.0%   |        |        | 98.8%  |       | 42.4%  | 25.4%  |        |        |        |        | 61.9%  |        |        | 89.2%  |        |        |        |       |        |       |        | 64.1%  |        |        | 20.5%  |        |        |        |       |
| REG              | 49.6%                |        |       |        |        |        |        |       | 35.7%  |        | 100.0% | 90.9%  |        | 44.7%  |        | 100.0% | 55.7%  | 50.1%  |        | 35.4%  | 33.3%  | 12.9% | 23.2%  | 62.0% | 45.2%  | 57.6%  | 85.3%  | 47.3%  | 26.7%  |        | 46.2%  | 97.6%  |       |
| RO               | 81.0%                |        |       |        |        |        | 86.1%  |       | 90.2%  | 100.0% |        |        |        |        |        |        |        | 76.6%  | 100.0% | 88.7%  |        |       |        |       | 57.5%  |        |        |        |        |        |        |        |       |
| RS               | 60.2%                |        |       |        |        |        |        |       |        |        |        |        |        |        |        |        |        | 58.3%  |        | 36.0%  | 55.1%  | 44.0% | 83.6%  |       | 97.2%  |        |        | 85.9%  |        |        |        |        |       |
| RU               | 76.0%                |        |       | 82.6%  | 100.0% | 65.5%  | 83.9%  | 48.9% |        |        |        |        |        |        | 100.0% | 97.8%  | 81.9%  | 94.1%  | 74.5%  | 64.1%  |        | 47.8% | 80.8%  | 87.2% | 69.6%  |        |        |        | 100.0% |        |        |        |       |
| RW               | 76.5%                |        |       |        |        |        |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |       |        | 69.9% | 83.4%  |        |        | 83.1%  |        |        |        |        |       |
| SN               | 87.7%                |        |       |        |        | 99.6%  |        | 79.1% |        | 69.4%  |        | 53.8%  |        | 94.6%  | 99.9%  | 84.5%  | 76.6%  |        | 97.6%  |        |        |       |        | 51.2% |        | 98.6%  | 31.6%  | 100.0% | 87.5%  | 96.9%  | 90.1%  | 99.3%  | 98.3% |
| TH               | 76.5%                |        | 41.9% |        | 67.7%  | 88.3%  |        | 57.9% |        |        | 99.7%  |        |        |        |        |        |        |        |        |        |        |       |        |       |        |        | 93.4%  | 89.9%  |        |        |        |        |       |

Table 44: Recovery rates by year of default and country (continued)

| ISO<br>country<br>code | Average<br>default<br>rate | 1994  | 1995   | 1996  | 1997   | 1998   | 1999   | 2000   | 2001  | 2002  | 2003   | 2004   | 2005  | 2006  | 2007   | 2008   | 2009  | 2010   | 2011  | 2012  | 2013   | 2014  | 2015   | 2016  | 2017  | 2018  | 2019  | 2020  | 2021  | 2022  | 2023  | 2024 |
|------------------------|----------------------------|-------|--------|-------|--------|--------|--------|--------|-------|-------|--------|--------|-------|-------|--------|--------|-------|--------|-------|-------|--------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| TJ                     | 55.8%                      |       |        |       |        |        |        |        |       |       |        |        |       | 49.3% | 16.5%  |        | 3.8%  | 84.5%  | 26.4% | 2.5%  |        | 5.4%  | 63.2%  | 83.3% | 98.7% |       |       |       |       |       |       |      |
| TM                     | 87.3%                      |       |        |       |        |        |        |        |       |       |        |        |       |       |        |        |       |        |       | 88.6% |        | 23.5% | 100.0% |       |       |       | 89.5% | 58.9% | 91.4% | 91.8% |       |      |
| TR                     | 70.6%                      | 81.2% | 100.0% |       | 100.0% |        | 95.5%  |        | 50.1% |       | 96.6%  |        | 86.8% |       |        | 34.7%  | 75.8% | 100.0% |       | 93.7% |        | 96.6% | 31.2%  | 58.4% | 94.2% | 71.1% | 29.6% | 70.7% |       |       | 91.2% |      |
| TT                     | 85.3%                      | 96.0% |        |       |        |        |        |        |       |       |        |        |       | 68.9% |        |        |       | 100.0% |       | 95.4% |        |       |        |       |       |       |       |       |       |       |       |      |
| TZ                     | 72.3%                      |       | 84.3%  |       | 82.0%  | 98.5%  |        | 100.0% |       | 52.8% | 100.0% | 100.0% |       |       |        |        |       |        |       |       |        | 95.2% |        | 44.9% |       | 26.7% | 79.4% | 49.1% |       |       |       |      |
| UA                     | 68.4%                      |       |        | 21.7% |        |        |        |        |       |       |        |        |       |       |        | 45.3%  | 81.4% | 57.3%  | 48.5% |       | 30.1%  | 57.6% | 73.2%  | 71.7% |       | 12.3% | 72.8% | 88.7% |       | 77.0% |       |      |
| UG                     | 85.2%                      |       |        |       |        |        | 100.0% | 100.0% |       |       |        |        |       | 50.0% |        | 100.0% |       | 98.7%  |       | 73.5% |        |       |        |       | 99.7% |       | 79.4% | 30.6% | 99.6% |       |       |      |
| UZ                     | 77.0%                      |       |        |       |        |        | 99.6%  |        |       |       |        |        |       | 59.7% | 85.0%  | 74.5%  | 15.1% | 80.0%  |       |       | 100.0% |       |        |       |       |       |       |       |       |       |       |      |
| VN                     | 81.2%                      |       |        |       |        | 100.0% |        | 85.6%  | 96.7% |       | 51.2%  |        |       |       | 100.0% | 79.1%  |       |        | 91.2% |       | 97.9%  | 23.4% |        |       |       |       |       |       |       |       |       |      |
| ZA                     | 73.1%                      |       |        |       |        |        |        |        |       | 72.5% |        |        | 90.2% | 99.2% | 98.8%  |        |       | 82.9%  |       | 85.5% |        | 59.5% | 100.0% | 16.9% |       |       |       | 89.3% |       | 0.0%  |       |      |
| ZM                     | 69.2%                      |       | 10.8%  | 67.0% |        |        | 16.4%  |        | 53.3% |       | 100.0% | 35.5%  | 89.8% |       |        |        | 96.8% |        |       |       |        |       | 0.0%   | 71.1% |       |       |       | 98.0% | 99.2% |       | 99.5% |      |
| ZW                     | 36.6%                      | 99.1% | 36.0%  |       | 0.0%   |        | 35.8%  |        |       |       |        |        | 50.0% |       |        |        | 3.9%  |        |       |       | 0.0%   |       | 69.0%  | 13.8% | 44.8% |       |       |       |       |       |       |      |



## 4.7 Recovery rates by country and sector

### 4.7.1 Recovery rates by country and GICS sector

Table 45: Recovery rates by country and GICS sector

| ISO country code and ISO country name | Administration | Communication services | Consumer discretionary | Consumer staples | Energy | Financials | Health care | Industrials | Information technology | Materials | Real estate | Utilities | Other  |
|---------------------------------------|----------------|------------------------|------------------------|------------------|--------|------------|-------------|-------------|------------------------|-----------|-------------|-----------|--------|
| AR-Argentina                          |                |                        |                        | 74.28%           |        |            |             |             |                        |           |             | 89.78%    |        |
| AZ-Azerbaijan                         |                |                        |                        |                  |        | 70.11%     |             |             |                        |           |             |           |        |
| BF-Burkina Faso                       |                |                        |                        |                  |        | 98.77%     |             |             |                        |           |             |           |        |
| CI-Côte d'Ivoire                      |                |                        |                        | 89.95%           |        | 97.10%     |             |             |                        |           |             |           |        |
| CL-Chile                              |                |                        |                        |                  |        |            |             |             |                        |           |             | 44.64%    |        |
| CN-China                              |                |                        |                        |                  |        |            |             |             |                        | 67.85%    |             |           |        |
| GE-Georgia                            |                |                        |                        | 93.22%           |        |            |             |             |                        |           |             |           |        |
| IN-India                              |                |                        |                        |                  |        |            |             |             |                        |           |             | 58.49%    |        |
| LB-Lebanon                            |                |                        |                        |                  |        | 65.93%     |             |             |                        |           |             |           |        |
| LK-Sri Lanka                          |                |                        |                        |                  |        | 97.65%     |             |             |                        |           |             |           |        |
| ML-Mali                               |                |                        |                        |                  |        | 92.80%     |             |             |                        |           |             |           |        |
| MX-Mexico                             |                |                        |                        |                  |        | 53.86%     |             |             |                        |           |             |           |        |
| REG-Regional                          |                |                        |                        |                  |        | 47.48%     |             |             |                        |           |             |           |        |
| RU-Russia                             |                |                        |                        |                  |        | 73.13%     |             | 78.41%      |                        |           |             |           |        |
| SN-Senegal                            |                |                        |                        |                  |        | 99.46%     |             |             |                        |           |             | 82.83%    |        |
| TM-Turkmenistan                       |                |                        |                        | 88.26%           |        |            |             |             |                        |           |             |           |        |
| TT-Trinidad and Tobago                |                |                        |                        |                  |        |            |             |             |                        |           |             |           | 86.25% |
| UA-Ukraine                            |                |                        |                        | 64.91%           |        | 85.79%     |             | 60.28%      |                        | 63.43%    |             | 62.71%    |        |
| ZM-Zambia                             |                |                        |                        |                  |        |            |             |             |                        |           |             |           | 70.51% |

### 4.7.2 Recovery rates by country and sector groupings

Table 46: Recovery rates by year of default and country/sector grouping – financial institutions

| ISO country code | Average default rate | 1994 | 1995 | 1996 | 1997 | 1998   | 1999  | 2000  | 2001  | 2002   | 2003  | 2004  | 2005  | 2006 | 2007 | 2008   | 2009   | 2010  | 2011  | 2012   | 2013  | 2014  | 2015  | 2016   | 2017  | 2018   | 2019   | 2020  | 2021  | 2022  | 2023  | 2024  |
|------------------|----------------------|------|------|------|------|--------|-------|-------|-------|--------|-------|-------|-------|------|------|--------|--------|-------|-------|--------|-------|-------|-------|--------|-------|--------|--------|-------|-------|-------|-------|-------|
| AZ               | 70.1%                |      |      |      |      |        |       |       |       |        |       |       |       |      |      | 74.8%  | 74.9%  |       | 97.6% |        |       |       | 95.5% | 52.1%  | 75.2% | 89.0%  | 72.2%  |       |       |       |       |       |
| BF               | 98.8%                |      |      |      |      |        |       | 99.7% |       |        |       |       |       |      |      |        |        |       | 98.9% |        |       |       |       |        |       |        | 100.0% |       |       |       |       | 98.2% |
| CI               | 97.1%                |      |      |      |      |        |       |       |       |        |       |       |       |      |      |        |        |       |       |        |       |       | 99.8% |        | 93.1% |        |        | 98.2% |       | 99.5% |       | 97.7% |
| LB               | 65.9%                |      |      |      |      |        |       |       |       | 100.0% |       |       |       |      |      |        |        |       |       |        |       |       |       | 58.6%  |       |        | 73.6%  | 20.5% | 96.7% |       |       |       |
| LK               | 97.7%                |      |      |      |      |        |       |       |       |        |       |       |       |      |      |        |        |       |       |        |       |       |       |        |       |        |        |       | 97.1% | 97.7% |       |       |
| ML               | 92.8%                |      |      |      |      | 99.2%  |       |       | 99.9% |        | 99.4% |       | 26.6% |      |      |        |        |       |       | 100.0% |       |       |       | 99.0%  | 92.2% | 100.0% |        |       |       |       |       | 74.7% |
| MX               | 53.9%                |      |      |      |      |        |       |       |       |        |       |       |       |      |      |        | 93.8%  | 83.8% |       |        |       | 39.3% |       |        |       |        | 45.4%  | 44.9% | 2.8%  | 48.1% |       |       |
| NE               | 97.2%                |      |      |      |      |        |       |       |       |        |       |       |       |      |      |        |        | 99.8% |       | 99.9%  |       |       |       |        | 94.9% |        |        |       |       |       |       |       |
| PK               | 82.3%                |      |      |      |      | 100.0% |       |       |       | 48.2%  |       | 94.6% |       | 3.5% |      | 99.4%  | 100.0% |       |       |        |       |       |       |        |       |        | 95.3%  |       |       |       |       | 87.4% |
| REG              | 47.5%                |      |      |      |      |        |       |       |       |        |       | 82.2% | 44.7% |      |      | 100.0% | 42.6%  |       |       | 40.6%  | 0.0%  | 0.0%  |       | 100.0% | 63.8% | 57.6%  | 82.3%  | 0.0%  |       |       |       |       |
| RU               | 73.1%                |      |      |      |      | 55.9%  | 81.4% |       |       |        |       |       |       |      |      |        | 69.1%  | 90.4% | 94.0% | 93.0%  |       | 57.9% | 98.8% | 87.2%  | 54.6% |        |        |       |       |       |       |       |
| SN               | 99.5%                |      |      |      |      | 99.6%  |       |       |       |        |       |       |       |      |      | 99.0%  |        |       | 99.7% |        |       |       |       |        |       |        |        | 99.9% |       |       | 99.3% | 99.1% |
| UA               | 85.8%                |      |      |      |      |        |       |       |       |        |       |       |       |      |      | 89.8%  | 100.0% | 83.0% |       |        | 45.1% | 88.7% | 91.9% | 96.2%  |       | 39.4%  |        |       |       |       |       |       |

Table 47: Recovery rates by year of default and country/sector grouping – non-financial institutions

| ISO country code | Average default rate | 1994   | 1995   | 1996   | 1997   | 1998   | 1999   | 2000   | 2001   | 2002  | 2003   | 2004   | 2005   | 2006   | 2007   | 2008  | 2009   | 2010   | 2011   | 2012   | 2013   | 2014  | 2015   | 2016   | 2017   | 2018   | 2019   | 2020   | 2021   | 2022   | 2023   | 2024   |       |
|------------------|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| AL               | 79.4%                |        |        |        |        | 95.6%  |        |        |        |       |        |        |        |        |        |       |        | 94.0%  |        | 95.9%  | 43.4%  | 85.1% | 58.3%  | 77.3%  | 80.3%  |        |        |        |        |        |        |        |       |
| AM               | 61.8%                |        |        |        |        |        |        |        |        |       |        |        |        |        |        |       |        | 53.6%  | 78.0%  |        | 0.0%   |       |        |        |        |        | 68.6%  | 93.3%  |        |        |        | 100.0% |       |
| AR               | 75.3%                |        | 97.4%  |        | 47.9%  | 100.0% | 21.1%  | 37.5%  | 10.2%  | 80.4% | 87.8%  |        | 96.0%  |        |        | 89.0% |        |        |        |        | 90.9%  |       |        |        |        |        | 0.0%   | 97.8%  | 97.2%  |        |        |        | 98.5% |
| AZ               | 56.1%                |        |        |        |        |        |        |        |        |       |        |        |        |        |        |       |        | 3.8%   |        | 60.4%  | 41.5%  |       |        | 82.1%  | 68.3%  | 73.4%  |        | 79.4%  |        |        |        |        |       |
| BA               | 65.6%                |        |        |        |        |        |        | 41.6%  | 79.4%  |       |        |        |        |        |        |       |        | 94.1%  |        | 100.0% |        | 42.0% |        |        |        |        |        |        |        |        |        |        |       |
| BF               | 81.7%                |        |        |        |        |        |        | 95.2%  |        |       |        | 50.5%  | 60.9%  | 62.7%  | 100.0% | 97.0% | 100.0% |        | 100.0% | 97.7%  | 90.9%  |       |        |        | 31.3%  |        |        |        |        |        |        | 100.0% |       |
| BG               | 84.4%                |        |        |        |        | 31.3%  | 76.4%  | 80.4%  |        |       | 86.7%  |        |        |        |        | 84.4% |        |        | 94.6%  | 80.1%  | 81.2%  | 86.2% |        | 63.6%  | 100.0% |        |        | 100.0% |        |        |        |        |       |
| BJ               | 67.3%                |        |        |        |        |        |        | 82.9%  | 63.2%  |       | 82.6%  |        |        |        | 73.0%  |       |        | 2.3%   | 0.6%   | 91.8%  |        |       |        |        | 77.3%  |        |        |        |        |        |        | 100.0% |       |
| BR               | 70.5%                |        |        |        | 34.8%  |        |        | 15.1%  |        | 60.1% | 98.0%  | 100.0% | 100.0% |        | 100.0% |       | 50.0%  |        |        | 93.5%  | 80.3%  | 15.0% | 86.8%  | 62.5%  | 23.3%  |        |        | 99.0%  | 100.0% |        |        |        |       |
| CI               | 90.7%                | 98.3%  |        |        | 87.9%  | 96.7%  | 98.0%  | 84.4%  | 59.3%  | 60.2% | 98.4%  | 100.0% |        | 57.4%  | 97.8%  | 99.6% |        | 100.0% | 100.0% |        | 100.0% | 99.5% | 99.9%  | 90.4%  |        |        | 88.1%  | 98.6%  |        | 99.4%  | 99.6%  |        |       |
| CL               | 44.6%                |        |        |        |        |        |        |        |        |       |        |        |        |        |        |       |        |        |        |        |        |       |        | 48.8%  | 30.7%  | 20.0%  | 88.6%  | 20.1%  |        |        |        |        |       |
| CM               | 68.3%                |        |        | 100.0% |        |        | 100.0% |        |        |       |        | 100.0% |        | 100.0% | 100.0% |       |        | 8.4%   |        |        |        |       |        |        |        |        |        |        |        |        |        |        |       |
| CN               | 67.5%                |        | 0.0%   | 38.5%  |        |        |        |        |        | 54.2% | 100.0% |        | 47.9%  | 83.6%  | 100.0% |       | 61.2%  | 100.0% | 90.9%  |        | 85.7%  | 69.5% | 48.1%  | 0.0%   |        | 91.5%  |        | 99.1%  |        |        |        |        |       |
| DO               | 79.1%                |        |        |        |        |        |        |        | 74.1%  |       | 100.0% | 74.6%  |        | 100.0% |        |       |        |        |        |        | 0.0%   |       |        | 93.8%  |        | 99.4%  |        |        |        |        |        |        |       |
| EG               | 70.9%                | 7.2%   |        | 61.9%  |        |        | 95.3%  |        | 100.0% | 85.2% | 99.6%  |        | 47.5%  |        |        | 98.4% | 100.0% | 44.8%  | 0.0%   |        |        | 62.4% | 70.2%  | 21.4%  |        |        | 87.7%  | 81.8%  | 100.0% | 100.0% |        |        |       |
| GE               | 79.3%                |        |        |        |        |        |        |        | 94.0%  |       |        |        |        |        |        | 78.9% |        | 76.9%  | 84.9%  |        |        |       | 100.0% |        | 60.7%  | 66.5%  |        | 91.3%  | 53.0%  |        |        |        |       |
| GH               | 80.9%                | 91.0%  | 1.9%   |        |        |        |        |        |        |       | 95.3%  |        | 99.0%  |        |        | 46.4% |        | 99.6%  |        |        |        | 66.7% | 61.8%  | 100.0% |        | 61.9%  |        | 98.7%  | 100.0% |        |        |        |       |
| ID               | 56.9%                |        |        |        |        | 38.6%  | 79.8%  | 96.7%  | 18.6%  | 63.7% |        | 99.5%  |        |        |        |       |        |        |        |        | 52.2%  |       |        |        |        |        | 0.0%   |        | 66.5%  | 100.0% |        |        |       |
| IN               | 57.3%                |        |        |        | 34.9%  | 74.4%  |        |        | 100.0% | 95.1% | 99.1%  |        |        |        |        | 87.3% | 33.3%  | 78.6%  | 48.9%  |        |        | 21.3% | 61.0%  | 81.4%  | 40.2%  | 46.3%  | 37.2%  | 85.4%  | 40.6%  | 95.7%  | 100.0% |        |       |
| JO               | 79.9%                |        |        | 81.1%  |        |        |        |        |        | 32.3% |        | 94.2%  | 99.4%  |        |        |       |        |        |        |        |        | 41.1% |        |        |        |        |        | 87.3%  | 100.0% | 99.9%  | 100.0% |        |       |
| KE               | 72.5%                |        |        |        |        | 100.0% |        |        | 85.0%  |       | 100.0% |        | 100.0% |        |        | 0.0%  |        |        | 28.7%  | 100.0% |        | 83.7% |        | 34.0%  |        |        | 7.1%   | 99.8%  | 79.5%  |        |        |        |       |
| MG               | 68.7%                |        |        |        |        |        |        |        |        | 93.7% |        |        |        |        |        |       |        | 97.9%  |        |        |        |       |        | 37.6%  |        | 10.8%  |        |        |        |        |        |        |       |
| ML               | 70.7%                |        |        |        |        | 1.9%   | 86.8%  |        |        |       | 23.9%  | 99.8%  | 32.1%  |        |        |       |        | 100.0% |        |        |        |       | 64.1%  |        |        | 100.0% | 79.5%  |        |        |        | 81.0%  |        |       |
| MM               | 93.6%                |        |        |        |        |        |        |        |        |       |        |        |        |        |        |       |        |        |        |        |        |       |        |        |        |        | 99.4%  | 100.0% | 91.0%  | 92.6%  | 96.5%  |        |       |
| MN               | 84.1%                |        |        |        |        |        |        |        |        |       |        |        |        |        |        |       |        |        |        |        |        | 56.9% | 97.6%  | 82.1%  | 85.7%  |        | 65.7%  |        | 87.3%  |        |        |        |       |
| MX               | 79.1%                |        |        |        |        |        |        |        | 76.2%  | 73.8% |        | 71.8%  |        |        | 100.0% |       | 100.0% | 100.0% |        |        | 83.0%  |       | 98.2%  | 66.7%  | 91.5%  |        | 20.8%  | 96.0%  | 99.6%  |        |        |        |       |
| MZ               | 74.3%                |        |        |        | 4.2%   |        |        |        | 99.8%  | 13.6% |        |        |        |        | 100.0% |       | 91.0%  | 77.1%  |        |        | 88.4%  | 53.7% | 98.8%  |        | 99.9%  | 100.0% |        | 100.0% |        |        |        |        |       |
| NG               | 69.6%                | 100.0% |        |        |        | 21.7%  |        |        |        |       |        | 3.2%   |        |        | 74.9%  | 4.4%  | 87.5%  |        | 83.6%  | 100.0% |        | 97.5% | 44.0%  | 99.3%  | 67.9%  | 94.9%  | 90.7%  | 98.7%  | 8.7%   |        |        |        |       |
| NI               | 87.2%                |        |        |        |        |        |        |        |        |       | 100.0% |        |        |        |        |       |        | 41.7%  |        | 71.4%  | 98.9%  |       |        |        |        | 99.4%  | 98.7%  | 100.0% |        |        |        |        |       |
| OT               | 54.8%                |        |        |        |        |        |        |        |        |       |        |        |        |        |        |       |        | 81.1%  | 58.2%  | 73.7%  | 65.2%  | 74.6% |        | 0.0%   |        | 47.9%  | 0.0%   |        |        |        |        | 33.1%  |       |
| PE               | 69.5%                |        |        |        |        |        |        | 11.1%  | 0.7%   | 99.5% | 100.0% |        |        |        |        |       |        | 99.5%  |        |        |        |       |        | 99.5%  | 100.0% |        |        |        |        | 96.4%  | 100.0% |        |       |
| PH               | 70.9%                |        |        |        | 22.2%  |        |        |        | 62.1%  | 68.0% | 99.0%  | 98.5%  |        | 93.0%  |        |       |        |        |        |        |        |       |        |        |        | 1.4%   |        | 93.9%  | 91.6%  |        |        |        |       |
| PK               | 87.4%                |        |        |        | 100.0% | 99.8%  | 100.0% |        |        |       |        |        | 33.4%  |        |        |       | 71.5%  |        |        |        | 95.1%  |       |        | 97.4%  |        | 4.5%   |        |        |        |        |        | 89.8%  |       |
| PL               | 46.1%                | 23.1%  |        | 0.0%   |        |        | 98.8%  |        | 42.4%  | 25.4% |        |        |        |        | 61.9%  |       |        | 89.2%  |        |        |        |       |        |        | 64.1%  |        |        | 20.5%  |        |        |        |        |       |
| REG              | 50.7%                |        |        |        |        |        |        |        | 35.7%  |       | 100.0% | 99.7%  |        |        |        |       | 58.3%  | 50.1%  |        | 24.9%  | 100.0% | 19.4% | 23.2%  | 24.0%  | 26.6%  |        | 88.3%  | 94.5%  | 26.7%  |        | 46.2%  | 97.6%  |       |
| RS               | 60.2%                |        |        |        |        |        |        |        |        |       |        |        |        |        |        |       |        | 58.3%  |        | 36.0%  | 55.1%  | 44.0% | 83.6%  |        | 97.2%  |        |        | 85.9%  |        |        |        |        |       |
| RU               | 78.0%                |        |        | 82.6%  | 100.0% | 73.7%  | 96.3%  | 48.9%  |        |       |        |        |        |        | 100.0% | 97.8% | 84.5%  | 95.0%  | 54.9%  | 6.3%   |        | 7.5%  | 74.9%  |        | 99.7%  |        |        |        | 100.0% |        |        |        |       |
| SN               | 75.3%                |        |        |        |        |        | 79.1%  |        | 69.4%  |       |        | 53.8%  |        | 94.6%  | 99.9%  | 61.4% | 76.6%  |        | 93.5%  |        |        |       | 51.2%  |        | 98.6%  | 31.6%  | 100.0% | 62.7%  | 96.9%  | 90.1%  |        | 97.5%  |       |
| TH               | 80.6%                |        | 41.9%  |        | 100.0% | 88.3%  |        |        |        | 57.9% |        | 99.7%  |        |        |        |       |        |        |        |        |        |       |        |        |        |        | 93.4%  | 89.9%  |        |        |        |        |       |
| TJ               | 35.6%                |        |        |        |        |        |        |        |        |       |        |        |        | 0.0%   | 16.5%  |       | 3.8%   | 84.5%  | 26.4%  | 2.5%   |        | 5.4%  | 63.2%  |        | 99.8%  |        |        |        |        |        |        |        |       |
| TM               | 87.3%                |        |        |        |        |        |        |        |        |       |        |        |        |        |        |       |        |        |        |        |        |       | 23.5%  | 100.0% |        |        |        | 89.5%  | 58.9%  | 91.4%  | 91.8%  |        |       |
| TR               | 69.9%                | 81.2%  | 100.0% |        | 100.0% |        | 95.5%  |        | 50.1%  |       | 96.6%  |        | 86.8%  |        |        | 34.7% | 75.8%  | 100.0% |        | 93.7%  |        | 96.6% | 31.2%  | 58.4%  | 94.2%  | 71.1%  | 29.6%  | 67.8%  |        |        |        | 91.2%  |       |
| TT               | 85.3%                | 96.0%  |        |        |        |        |        |        |        |       |        |        |        | 68.9%  |        |       |        | 100.0% |        |        | 95.4%  |       |        |        |        |        |        |        |        |        |        |        |       |
| TZ               | 67.5%                |        | 84.3%  |        | 82.0%  | 98.5%  |        |        |        | 52.8% | 100.0% | 100.0% |        |        |        |       |        |        |        |        |        |       | 95.2%  |        | 17.6%  |        | 26.7%  | 58.8%  | 49.1%  |        |        |        |       |
| UA               | 63.6%                |        |        | 21.7%  |        |        |        |        |        |       |        |        |        |        |        | 0.8%  | 50.5%  | 52.1%  | 48.5%  |        | 0.0%   | 52.4% | 68.5%  | 47.2%  |        | 12.3%  | 79.5%  | 88.7%  |        | 77.0%  |        |        |       |
| UG               | 85.9%                |        |        |        |        |        | 100.0% | 100.0% |        |       |        |        | 50.0%  |        | 100.0% |       |        | 98.7%  |        | 73.5%  |        |       |        |        |        |        |        | 79.4%  |        | 99.6%  |        |        |       |
| UZ               | 76.8%                |        |        |        |        |        | 99.6%  |        |        |       |        |        | 59.7%  | 85.0%  | 74.5%  | 15.1% | 80.1%  |        |        |        | 100.0% |       |        |        |        |        |        |        |        |        |        |        |       |
| VN               | 79.6%                |        |        |        |        | 100.0% |        | 85.6%  | 96.7%  |       | 51.2%  |        |        |        |        | 79.1% |        |        |        | 91.2%  |        | 97.9% | 23.4%  |        |        |        |        |        |        |        |        |        |       |
| ZM               | 70.7%                |        | 10.8%  | 67.0%  |        |        | 16.4%  |        | 53.3%  |       | 100.0% | 35.5%  | 89.8%  |        |        |       | 96.8%  |        |        |        |        |       |        |        |        |        |        | 97.4%  | 99.2%  |        | 99.5%  |        |       |

## 4.8 Recovery rates by income group

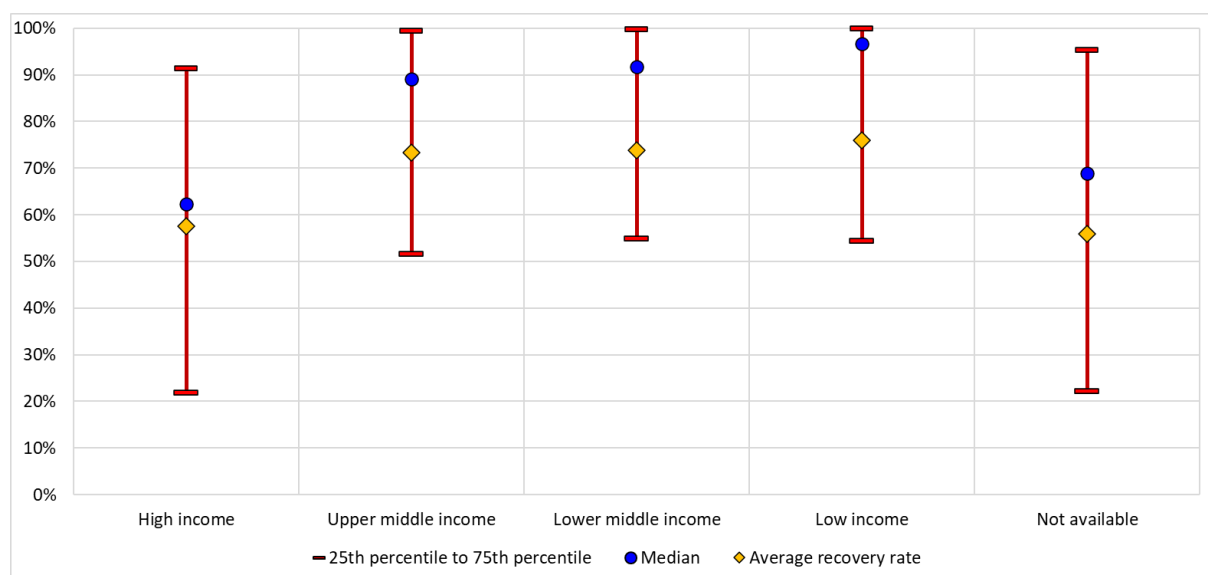
Each counterparty country has been assigned to an income group based on the [World Bank's historical income classification](#) for the year of each default.

In private lending, recovery rates are notably higher in lower-income countries, with low-income and lower-middle-income groups showing average recoveries above 73% compared with 57.5% in high-income countries. This suggests that, regardless of potentially higher default risks, recovery performance in lower-income regions is strong, possibly due to effective restructuring or enforcement mechanisms.

Table 48: Recovery rates by income group

| Historical income group               | Number of defaults | Signed amount € million | Average recovery rate | Minimum observation | 10th percentile | 25th percentile | Median | 75th percentile | 90th percentile | Maximum observation |
|---------------------------------------|--------------------|-------------------------|-----------------------|---------------------|-----------------|-----------------|--------|-----------------|-----------------|---------------------|
| High income                           | 52                 | 2 030                   | 57.6%                 | 0.0%                | 5.3%            | 21.8%           | 62.3%  | 91.3%           | 100.0%          | 100.0%              |
| Upper middle income                   | 555                | 10 596                  | 73.3%                 | 0.0%                | 14.8%           | 51.7%           | 89.2%  | 99.5%           | 100.0%          | 100.0%              |
| Lower middle income                   | 647                | 9 331                   | 73.8%                 | 0.0%                | 10.0%           | 54.8%           | 91.8%  | 99.9%           | 100.0%          | 100.0%              |
| Low income                            | 467                | 4 116                   | 75.9%                 | 0.0%                | 13.6%           | 54.4%           | 96.7%  | 100.0%          | 100.0%          | 100.0%              |
| Not available                         | 80                 | 1 376                   | 55.9%                 | 0.0%                | 0.0%            | 22.1%           | 68.9%  | 95.3%           | 100.0%          | 100.0%              |
| Overall, including omitted categories | 1 801              | 27 450                  | 72.9%                 | 0.0%                | 11.1%           | 50.6%           | 91.1%  | 99.8%           | 100.0%          | 100.0%              |

Figure 18: Recovery rates by income group



## 4.9 Recovery rates by income group and region

The highest average recovery rates can be observed in the lower-middle-income group in sub-Saharan Africa.

Table 49: Recovery rates by income group and region

| Income group at year of default | Number of defaults | Average recovery rate | East Asia & Pacific | Europe & Central Asia | Latin America & Caribbean | Middle East & North Africa | South Asia | Sub-Saharan Africa |
|---------------------------------|--------------------|-----------------------|---------------------|-----------------------|---------------------------|----------------------------|------------|--------------------|
| High income                     | 52                 | 57.6%                 |                     | 63.13%                | 55.14%                    |                            |            |                    |
| Upper middle income             | 555                | 73.3%                 | 75.32%              | 75.57%                | 70.71%                    | 75.23%                     |            | 60.43%             |
| Lower middle income             | 647                | 73.8%                 | 72.76%              | 70.97%                | 69.40%                    | 74.67%                     | 72.04%     | 81.02%             |
| Low income                      | 467                | 75.9%                 | 62.40%              | 58.02%                |                           |                            | 73.02%     | 78.84%             |
| Not Available                   | 80                 | 55.9%                 |                     |                       | 54.88%                    |                            |            | 63.37%             |

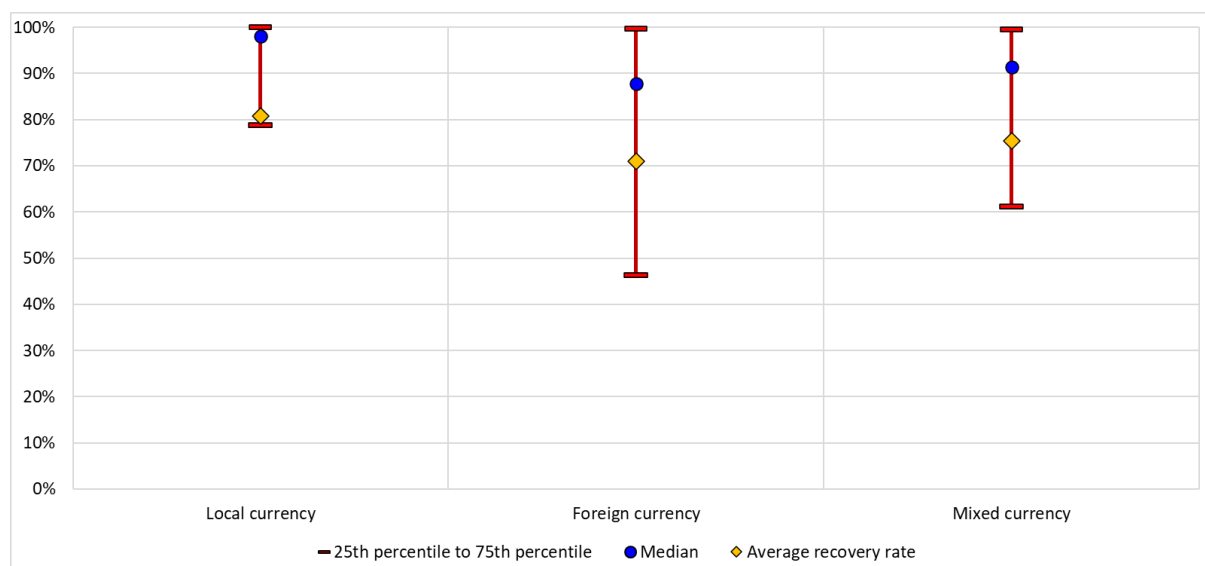
## 4.10 Recovery rates by currency type

Analysis of the recovery rates by currency type shows that local currency lending performs better than foreign or mixed currency lending, as local currency lending is less exposed to exchange rate fluctuations and external monetary policy actions. Nevertheless, the largest share of observations (77% of contracts with private counterparties) is in foreign currency.

Table 50: Recovery rates by currency type

| Currency type                         | Number of defaults | Signed amount<br>€ million | Average recovery rate | Minimum observation | 10th percentile | 25th percentile | Median | 75th percentile | 90th percentile | Maximum observation |
|---------------------------------------|--------------------|----------------------------|-----------------------|---------------------|-----------------|-----------------|--------|-----------------|-----------------|---------------------|
| Local currency                        | 329                | 3 351                      | 80.7%                 | 0.0%                | 21.0%           | 78.9%           | 98.1%  | 100.0%          | 100.0%          | 100.0%              |
| Foreign currency                      | 1 379              | 22 380                     | 70.9%                 | 0.0%                | 9.2%            | 46.4%           | 87.8%  | 99.7%           | 100.0%          | 100.0%              |
| Mixed currency                        | 93                 | 1 718                      | 75.5%                 | 0.0%                | 16.5%           | 61.1%           | 91.3%  | 99.5%           | 100.0%          | 100.0%              |
| Overall, including omitted categories | 1 801              | 27 450                     | 72.9%                 | 0.0%                | 11.1%           | 50.6%           | 91.1%  | 99.8%           | 100.0%          | 100.0%              |

Figure 19: Recovery rates by currency type



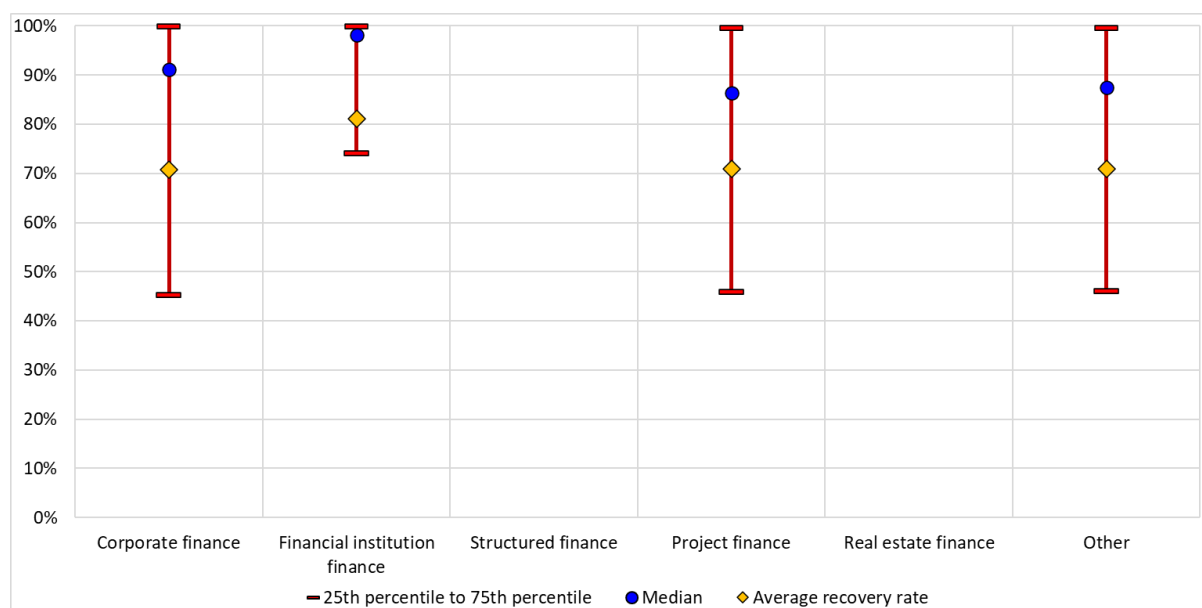
## 4.11 Recovery rates by project type

The analysis of recovery rates by project type reveals that the financial institution finance outperforms all other categories, with an average recovery rate of 81.1%.

Table 51: Recovery rates by project type

| Project type                          | Number of defaults | Signed amount<br>€ million | Average recovery rate | Minimum observation | 10th percentile | 25th percentile | Median | 75th percentile | 90th percentile | Maximum observation |
|---------------------------------------|--------------------|----------------------------|-----------------------|---------------------|-----------------|-----------------|--------|-----------------|-----------------|---------------------|
| Corporate finance                     | 455                | 5 918                      | 70.8%                 | 0.0%                | 2.2%            | 45.3%           | 91.2%  | 99.8%           | 100.0%          | 100.0%              |
| Financial institution finance         | 398                | 3 545                      | 81.1%                 | 0.0%                | 30.2%           | 74.2%           | 98.1%  | 100.0%          | 100.0%          | 100.0%              |
| Structured finance                    |                    |                            |                       |                     |                 |                 |        |                 |                 |                     |
| Project finance                       | 211                | 7 858                      | 70.9%                 | 0.0%                | 6.9%            | 45.9%           | 86.4%  | 99.7%           | 100.0%          | 100.0%              |
| Real estate finance                   |                    |                            |                       |                     |                 |                 |        |                 |                 |                     |
| Other                                 | 726                | 9 800                      | 70.9%                 | 0.0%                | 13.1%           | 46.1%           | 87.4%  | 99.7%           | 100.0%          | 100.0%              |
| Overall, including omitted categories | 1 801              | 27 450                     | 72.9%                 | 0.0%                | 11.1%           | 50.6%           | 91.1%  | 99.8%           | 100.0%          | 100.0%              |

Figure 20: Recovery rates by project type



## 4.12 Recovery rates by seniority

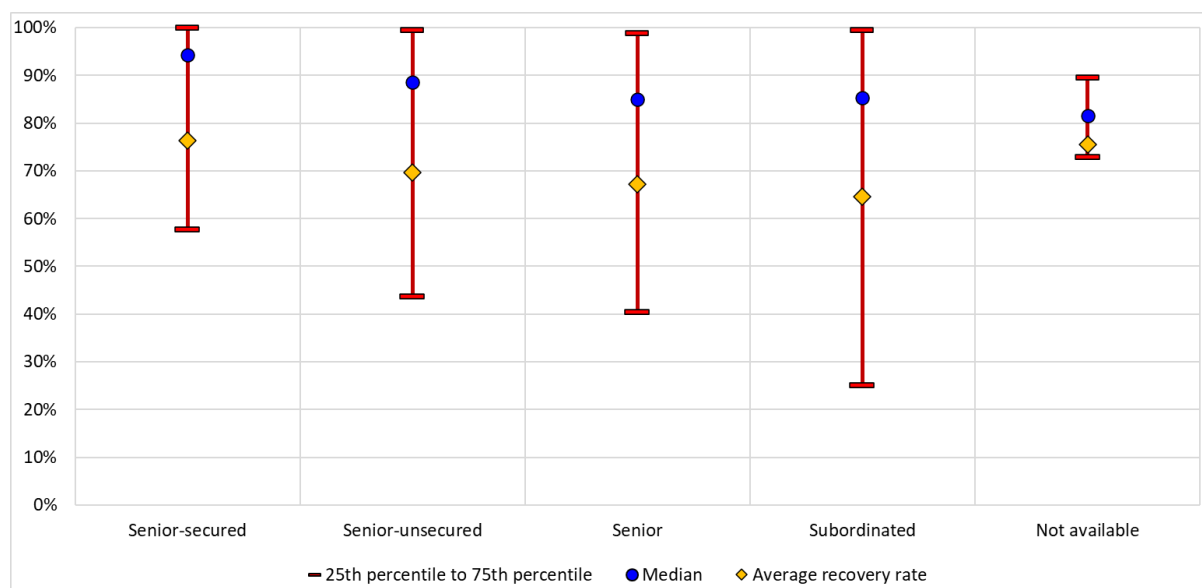
The analysis of the recovery rates by seniority shows that senior-secured instruments have the highest average recovery rate at 76.3%, with a median of 94.2%, reflecting strong collateral backing. Subordinated debt has a lower average recovery rate of 64.6%, along with a wider distribution and lower percentile values, suggesting greater loss severity in defaults. A small number of cases are marked as “not available,” with an average recovery of 75.5%. Overall, the data confirm a positive correlation between seniority and recovery rates, with secured claims offering the best protection in default scenarios.

Table 52: Recovery rates by seniority

| Seniority                             | Number of defaults | Signed amount<br>€ million | Average<br>recovery<br>rate | Minimum<br>observation | 10th<br>percentile | 25th<br>percentile | Median | 75th<br>percentile | 90th<br>percentile | Maximum<br>observation |
|---------------------------------------|--------------------|----------------------------|-----------------------------|------------------------|--------------------|--------------------|--------|--------------------|--------------------|------------------------|
| Senior-secured                        | 1 025              | 16 564                     | 76.3%                       | 0.0%                   | 20.5%              | 57.8%              | 94.2%  | 100.0%             | 100.0%             | 100.0%                 |
| Senior-unsecured                      | 512                | 7 876                      | 69.6%                       | 0.0%                   | 5.4%               | 43.7%              | 88.6%  | 99.6%              | 100.0%             | 100.0%                 |
| Senior*                               | 64                 | 864                        | 67.3%                       | 0.0%                   | 0.7%               | 40.4%              | 85.0%  | 98.9%              | 100.0%             | 100.0%                 |
| Subordinated                          | 174                | 1 937                      | 64.6%                       | 0.0%                   | 0.0%               | 25.0%              | 85.3%  | 99.4%              | 100.0%             | 100.0%                 |
| Not available                         | 26                 | 208                        | 75.5%                       | 0.0%                   | 60.9%              | 73.0%              | 81.6%  | 89.5%              | 92.0%              | 99.6%                  |
| Overall, including omitted categories | 1 801              | 27 450                     | 72.9%                       | 0.0%                   | 11.1%              | 50.6%              | 91.1%  | 99.8%              | 100.0%             | 100.0%                 |

\* Contracts are classified as *Senior* when the information regarding collateralization or any other type of credit protection is not available

Figure 21: Recovery rates by seniority



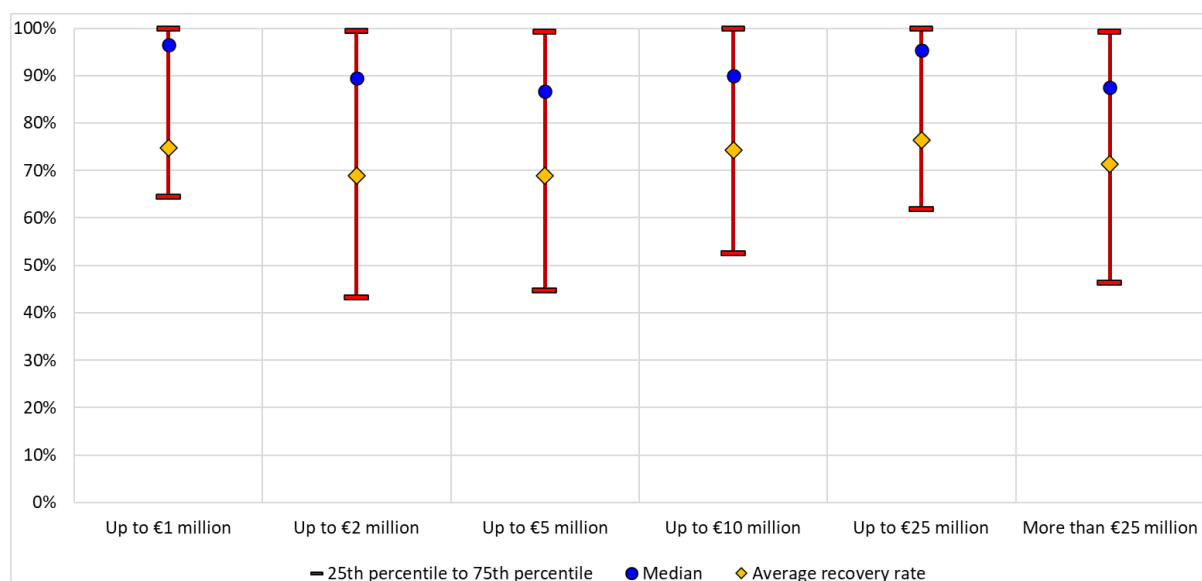
## 4.13 Recovery rates by contract size

Contract size refers to the value of each obligation at the signature date. The distribution of recovery rates across different contract sizes is relatively uniform, indicating that the contract size does not affect recovery.

Table 53: Recovery rates by contract size

| Signed amount of contract             | Number of defaults | Signed amount € million | Average recovery rate | Minimum observation | 10th percentile | 25th percentile | Median | 75th percentile | 90th percentile | Maximum observation |
|---------------------------------------|--------------------|-------------------------|-----------------------|---------------------|-----------------|-----------------|--------|-----------------|-----------------|---------------------|
| Up to €1 million                      | 191                | 102                     | 74.8%                 | 0.0%                | 1.9%            | 64.6%           | 96.5%  | 99.9%           | 100.0%          | 100.0%              |
| Up to €2 million                      | 144                | 246                     | 68.8%                 | 0.0%                | 2.1%            | 43.3%           | 89.4%  | 99.5%           | 100.0%          | 100.0%              |
| Up to €5 million                      | 355                | 1 291                   | 69.0%                 | 0.0%                | 6.9%            | 44.8%           | 86.7%  | 99.3%           | 100.0%          | 100.0%              |
| Up to €10 million                     | 370                | 2 683                   | 74.3%                 | 0.0%                | 18.9%           | 52.6%           | 90.0%  | 100.0%          | 100.0%          | 100.0%              |
| Up to €25 million                     | 457                | 7 238                   | 76.4%                 | 0.0%                | 15.2%           | 61.9%           | 95.3%  | 100.0%          | 100.0%          | 100.0%              |
| More than €25 million                 | 284                | 15 889                  | 71.3%                 | 0.0%                | 16.9%           | 46.3%           | 87.6%  | 99.3%           | 100.0%          | 100.0%              |
| Overall, including omitted categories | 1 801              | 27 450                  | 72.9%                 | 0.0%                | 11.1%           | 50.6%           | 91.1%  | 99.8%           | 100.0%          | 100.0%              |

Figure 22: Recovery rates by contract size



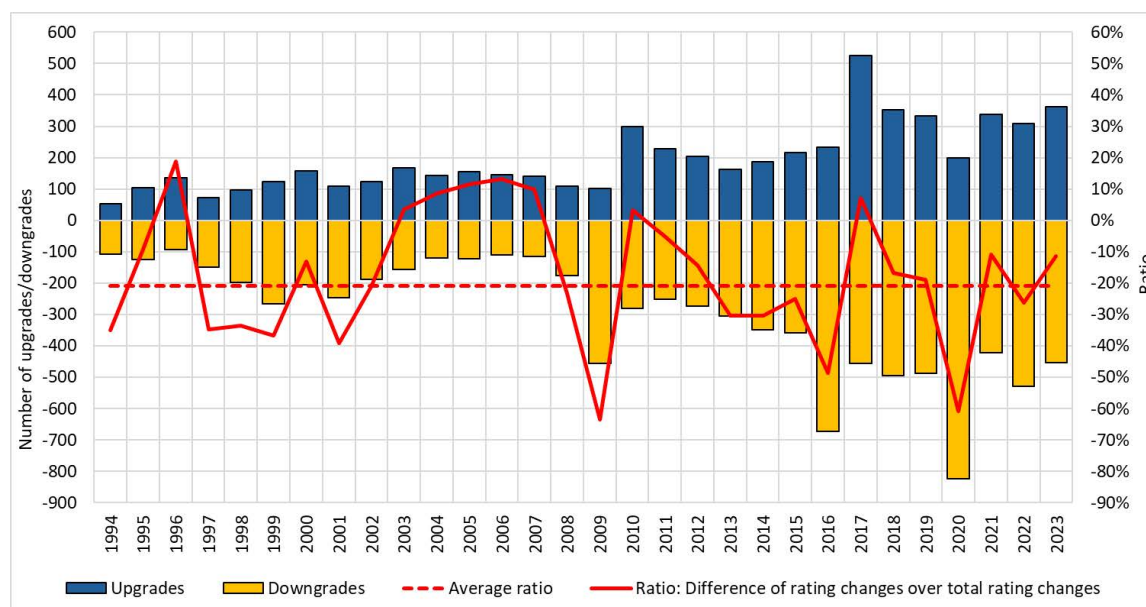
## 5 Rating migration rate statistics

The rating migrations presented in this publication are based on counterparty ratings using the GEMs scale, as described in Section 3.2. Migrations are captured as annual snapshots taken on 1 January of each year over the 31-year observation period. For example, for one-year migration rates, the rating of each counterparty for year  $i$  is compared with the ratings for year  $i + 1$ . Rating changes within the year are not considered.

### 5.1 Annual upgrade vs. downgrade ratio

Figure 23 shows the yearly credit rating upgrades and downgrades of private counterparties in the GEMs dataset. The migration of GEMs ratings over time reveals that while upgrades and downgrades have occurred consistently since 1994, downgrades have often outpaced upgrades (20% more on average), particularly in 2016 and 2020, where downgrades spiked sharply in response to crises. The solid red line represents the rating change ratio, which fluctuates significantly, reflecting volatile shifts in credit quality.

Figure 23: Annual upgrade vs. downgrade ratio GEMs ratings



## 5.2 GEMs rating migration rates

Table 54: One-year GEMs rating migrations

| From/to | Observations | Gi1    | Gi2    | Gi3   | Gi4   | Gi5   | Gi6   | Gi7   | Gi8   | Gi9   | Gi10  | Gs1   | Gs2   | Gs3   | Gs4   | Gs5   | Gs6   | Gs7   | Gs8   | Gs9   | Gs10  | D     |
|---------|--------------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Gi1     | 8            | 100.0% |        |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Gi2     | 9            |        | 100.0% |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Gi3     | 44           |        | 4.6%   | 75.0% | 6.8%  |       | 2.3%  |       |       | 6.8%  |       | 2.3%  |       | 2.3%  |       |       |       |       |       |       |       |       |
| Gi4     | 221          |        |        |       | 75.1% |       |       |       | 3.2%  | 5.4%  | 4.5%  | 4.5%  | 3.2%  | 1.8%  |       |       |       | 1.8%  | 0.5%  |       |       |       |
| Gi5     | 39           |        |        |       | 2.6%  | 74.4% | 10.3% | 2.6%  | 2.6%  |       |       |       |       |       |       | 2.6%  |       | 5.1%  |       |       |       |       |
| Gi6     | 107          |        |        |       |       | 2.8%  | 66.4% | 10.3% | 6.5%  | 1.9%  | 4.7%  | 0.9%  | 3.7%  |       |       |       | 1.9%  |       |       |       | 0.9%  |       |
| Gi7     | 107          |        |        |       |       | 0.9%  | 1.9%  | 72.0% | 9.4%  | 4.7%  | 3.7%  | 0.9%  | 1.9%  | 0.9%  |       |       | 1.9%  |       |       | 1.9%  |       |       |
| Gi8     | 824          |        |        |       | 1.2%  | 0.2%  | 1.3%  | 0.6%  | 80.6% | 2.4%  | 9.0%  | 1.5%  | 0.2%  | 1.5%  | 0.1%  |       | 0.1%  | 0.6%  | 0.1%  | 0.4%  |       | 0.1%  |
| Gi9     | 1 029        |        |        | 0.2%  | 1.1%  |       | 0.2%  | 0.2%  | 2.7%  | 75.5% | 8.3%  | 5.6%  | 4.0%  | 1.3%  | 0.1%  | 0.2%  |       | 0.1%  |       | 0.3%  |       | 0.3%  |
| Gi10    | 3 077        |        | 0.0%   | 0.0%  | 0.2%  |       | 0.1%  |       | 3.1%  | 3.2%  | 74.5% | 11.3% | 3.8%  | 1.3%  | 0.2%  | 0.4%  | 0.3%  | 0.8%  | 0.1%  | 0.0%  | 0.2%  | 0.5%  |
| Gs1     | 6 264        |        |        |       | 0.1%  |       | 0.0%  | 0.0%  | 0.4%  | 0.7%  | 5.3%  | 74.6% | 5.5%  | 6.0%  | 2.8%  | 0.6%  | 1.1%  | 1.5%  | 0.4%  | 0.3%  | 0.1%  | 0.7%  |
| Gs2     | 7 034        |        |        |       | 0.1%  |       | 0.0%  |       | 0.1%  | 0.7%  | 1.6%  | 3.5%  | 74.8% | 8.1%  | 0.8%  | 4.2%  | 1.9%  | 2.1%  | 0.8%  | 0.3%  | 0.2%  | 1.1%  |
| Gs3     | 6 452        |        |        |       | 0.0%  |       |       | 0.0%  | 0.1%  | 0.1%  | 0.4%  | 4.7%  | 9.0%  | 63.3% | 4.1%  | 6.5%  | 3.5%  | 3.9%  | 2.0%  | 0.3%  | 0.2%  | 2.0%  |
| Gs4     | 2 115        |        |        |       |       |       |       | 0.1%  |       |       | 0.1%  | 9.1%  | 1.4%  | 5.5%  | 61.4% | 0.7%  | 8.0%  | 6.2%  | 2.7%  | 1.8%  | 0.2%  | 2.8%  |
| Gs5     | 3 018        |        |        |       |       |       |       |       |       | 0.1%  | 0.3%  | 0.5%  | 9.8%  | 11.9% | 0.3%  | 50.0% | 12.4% | 7.0%  | 2.4%  | 1.3%  | 1.0%  | 3.1%  |
| Gs6     | 3 471        |        |        |       |       | 0.1%  | 0.0%  | 0.0%  |       | 0.1%  | 0.1%  | 1.5%  | 2.5%  | 4.4%  | 4.3%  | 9.9%  | 52.0% | 12.5% | 4.2%  | 3.4%  | 0.6%  | 4.4%  |
| Gs7     | 4 166        |        |        |       | 0.0%  |       |       |       | 0.1%  | 0.0%  | 0.2%  | 1.3%  | 1.3%  | 3.0%  | 3.1%  | 3.5%  | 7.4%  | 59.2% | 10.2% | 2.9%  | 0.9%  | 6.8%  |
| Gs8     | 3 081        |        |        |       |       |       |       |       | 0.0%  |       |       | 0.1%  | 0.3%  | 1.5%  | 1.2%  | 1.1%  | 3.0%  | 9.4%  | 66.3% | 5.5%  | 2.0%  | 9.5%  |
| Gs9     | 1 382        |        |        |       |       |       |       |       |       | 0.1%  |       | 0.8%  | 0.4%  | 0.7%  | 0.9%  | 0.7%  | 4.0%  | 4.1%  | 8.0%  | 60.4% | 4.3%  | 15.6% |
| Gs10    | 502          |        |        |       |       |       |       |       |       | 0.2%  | 1.0%  |       | 0.4%  | 0.2%  |       | 2.6%  | 3.2%  | 2.4%  | 3.8%  | 5.6%  | 57.2% | 23.5% |
| D       | 4 149        |        |        |       |       |       |       |       |       | 0.0%  |       | 0.1%  | 0.2%  | 0.2%  | 0.1%  | 0.2%  | 0.5%  | 0.9%  | 3.7%  | 1.1%  | 0.4%  | 92.6% |



Table 55: Two-year GEMs rating migrations

| From/to | Observations | Gi1    | Gi2    | Gi3   | Gi4   | Gi5   | Gi6   | Gi7   | Gi8   | Gi9   | Gi10  | Gs1   | Gs2   | Gs3   | Gs4   | Gs5   | Gs6   | Gs7   | Gs8   | Gs9   | Gs10  | D     |
|---------|--------------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Gi1     | 7            | 100.0% |        |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Gi2     | 7            |        | 100.0% |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Gi3     | 42           |        | 9.5%   | 54.8% | 11.9% |       | 4.8%  |       |       | 7.1%  |       | 7.1%  |       | 2.4%  |       |       |       | 2.4%  |       |       |       |       |
| Gi4     | 190          |        |        |       | 59.0% |       |       |       | 7.9%  | 5.8%  | 9.5%  | 6.3%  | 2.1%  | 4.2%  |       | 1.1%  | 0.5%  | 2.6%  | 1.1%  |       |       |       |
| Gi5     | 34           |        |        |       | 5.9%  | 58.8% | 11.8% | 5.9%  | 5.9%  |       |       |       |       |       |       | 2.9%  | 2.9%  |       |       |       | 5.9%  |       |
| Gi6     | 85           |        |        |       |       | 4.7%  | 50.6% | 12.9% | 7.1%  | 2.4%  | 5.9%  | 2.4%  | 8.2%  |       |       |       | 2.4%  |       |       |       | 3.5%  |       |
| Gi7     | 89           |        |        |       |       | 1.1%  | 2.3%  | 57.3% | 13.5% | 5.6%  | 4.5%  | 5.6%  | 2.3%  | 1.1%  | 1.1%  |       | 2.3%  |       |       | 3.4%  |       |       |
| Gi8     | 683          |        |        |       | 2.1%  | 0.7%  | 2.2%  | 1.0%  | 66.9% | 4.4%  | 11.9% | 5.0%  | 0.4%  | 2.1%  | 0.2%  |       | 0.2%  | 1.3%  | 0.4%  | 0.7%  |       | 0.6%  |
| Gi9     | 845          |        |        |       | 1.3%  |       | 0.4%  | 0.2%  | 4.4%  | 60.5% | 10.4% | 11.2% | 6.4%  | 2.4%  | 0.2%  | 1.1%  | 0.2%  | 0.4%  |       | 0.4%  |       | 0.6%  |
| Gi10    | 2 538        |        | 0.0%   | 0.1%  | 0.4%  |       | 0.0%  |       | 4.8%  | 4.6%  | 61.0% | 15.2% | 6.0%  | 2.5%  | 0.6%  | 0.9%  | 0.5%  | 1.4%  | 0.4%  | 0.2%  | 0.4%  | 1.2%  |
| Gs1     | 5 137        |        |        |       | 0.2%  |       | 0.0%  | 0.0%  | 0.8%  | 1.1%  | 7.8%  | 60.5% | 7.8%  | 9.7%  | 4.1%  | 0.7%  | 1.7%  | 2.6%  | 0.8%  | 0.5%  | 0.2%  | 1.5%  |
| Gs2     | 5 560        |        |        |       | 0.1%  |       | 0.1%  |       |       | 1.0%  | 2.4%  | 4.6%  | 62.5% | 9.8%  | 1.3%  | 6.5%  | 3.1%  | 3.5%  | 1.6%  | 0.7%  | 0.3%  | 2.6%  |
| Gs3     | 5 395        |        |        |       | 0.0%  |       |       | 0.0%  | 0.1%  | 0.2%  | 0.6%  | 7.8%  | 10.9% | 46.4% | 5.6%  | 7.4%  | 4.7%  | 6.8%  | 3.4%  | 0.8%  | 0.4%  | 4.9%  |
| Gs4     | 1 735        |        |        |       |       |       |       |       |       |       | 0.5%  | 12.1% | 1.7%  | 7.7%  | 44.0% | 1.0%  | 10.4% | 7.6%  | 4.7%  | 3.4%  | 0.5%  | 6.6%  |
| Gs5     | 2 456        |        |        |       |       |       |       |       |       | 0.0%  | 0.5%  | 1.0%  | 13.1% | 13.7% | 0.5%  | 34.1% | 13.6% | 8.5%  | 3.8%  | 2.0%  | 1.5%  | 7.7%  |
| Gs6     | 2 865        |        |        |       |       |       | 0.1%  | 0.1%  |       | 0.1%  | 0.2%  | 2.0%  | 4.5%  | 6.0%  | 5.6%  | 10.2% | 35.3% | 13.7% | 5.7%  | 5.8%  | 1.0%  | 9.9%  |
| Gs7     | 3 331        |        |        |       | 0.0%  | 0.1%  |       |       | 0.1%  | 0.1%  | 0.4%  | 1.9%  | 2.0%  | 4.4%  | 4.5%  | 4.7%  | 8.0%  | 44.0% | 11.9% | 3.8%  | 1.2%  | 13.0% |
| Gs8     | 2 446        |        |        | 0.0%  | 0.0%  |       |       |       | 0.0%  | 0.1%  |       | 0.4%  | 1.1%  | 2.4%  | 1.4%  | 1.9%  | 4.2%  | 8.9%  | 55.0% | 5.9%  | 2.0%  | 16.5% |
| Gs9     | 1 068        |        |        |       |       |       |       |       |       | 0.1%  | 0.1%  | 1.3%  | 0.8%  | 1.1%  | 1.8%  | 1.4%  | 6.6%  | 5.3%  | 8.3%  | 43.7% | 5.8%  | 23.6% |
| Gs10    | 382          |        |        |       |       |       |       |       |       | 0.5%  | 0.8%  |       | 0.3%  | 1.1%  |       | 3.1%  | 1.6%  | 2.6%  | 5.8%  | 7.6%  | 42.2% | 34.6% |
| D       | 3 114        |        |        |       |       |       |       |       |       | 0.0%  | 0.1%  | 0.2%  | 0.3%  | 0.6%  | 0.3%  | 0.5%  | 0.6%  | 1.3%  | 6.1%  | 1.5%  | 0.7%  | 87.9% |

Table 56: Ten-year GEMs rating migrations

| From/to | Observations | Gi1 | Gi2 | Gi3 | Gi4   | Gi5  | Gi6   | Gi7   | Gi8   | Gi9   | Gi10  | Gs1   | Gs2   | Gs3   | Gs4   | Gs5   | Gs6   | Gs7   | Gs8   | Gs9   | Gs10 | D     |
|---------|--------------|-----|-----|-----|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| Gi1     | 0            |     |     |     |       |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |      |       |
| Gi2     | 0            |     |     |     |       |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |      |       |
| Gi3     | 9            |     |     |     |       |      | 11.1% |       |       |       | 33.3% | 33.3% |       |       | 11.1% |       |       | 11.1% |       |       |      |       |
| Gi4     | 30           |     |     |     | 13.3% |      | 3.3%  |       | 6.7%  | 23.3% | 16.7% | 23.3% | 10.0% |       |       |       |       |       | 3.3%  |       |      |       |
| Gi5     | 2            |     |     |     |       |      | 50.0% |       | 50.0% |       |       |       |       |       |       |       |       |       |       |       |      |       |
| Gi6     | 10           |     |     |     |       |      |       | 20.0% | 10.0% |       | 40.0% |       | 30.0% |       |       |       |       |       |       |       |      |       |
| Gi7     | 6            |     |     |     |       |      |       | 16.7% |       |       | 33.3% |       |       | 50.0% |       |       |       |       |       |       |      |       |
| Gi8     | 107          |     |     |     | 2.8%  | 8.4% | 9.4%  |       | 23.4% | 5.6%  | 20.6% | 15.9% |       | 11.2% |       |       |       | 2.8%  |       |       |      |       |
| Gi9     | 126          |     |     |     |       |      | 1.6%  |       | 4.0%  | 11.1% | 11.9% | 19.1% | 10.3% | 11.9% | 8.7%  | 4.8%  | 3.2%  | 0.8%  | 1.6%  | 0.8%  | 3.2% | 7.1%  |
| Gi10    | 420          |     |     |     | 1.2%  |      | 0.5%  |       | 11.4% | 8.1%  | 33.8% | 10.7% | 5.2%  | 8.8%  | 3.8%  | 0.7%  | 4.1%  | 2.9%  | 3.3%  | 0.5%  | 0.7% | 4.3%  |
| Gs1     | 596          |     |     |     | 0.5%  |      |       |       | 4.0%  | 5.2%  | 14.8% | 23.3% | 4.2%  | 20.8% | 5.9%  | 1.3%  | 2.5%  | 3.2%  | 3.4%  | 0.8%  | 0.8% | 9.2%  |
| Gs2     | 375          |     |     |     |       |      |       |       |       | 1.3%  | 5.1%  | 2.9%  | 32.5% | 16.0% | 0.8%  | 14.1% | 4.8%  | 1.3%  | 2.1%  | 0.8%  | 0.5% | 17.6% |
| Gs3     | 719          |     |     |     |       |      |       |       | 0.3%  | 0.7%  | 3.2%  | 10.0% | 7.4%  | 26.0% | 5.7%  | 4.9%  | 3.2%  | 6.1%  | 8.5%  | 0.7%  | 0.6% | 22.8% |
| Gs4     | 99           |     |     |     |       |      |       |       |       | 1.0%  | 3.0%  | 4.0%  |       | 8.1%  | 21.2% | 1.0%  | 14.1% | 3.0%  |       | 6.1%  |      | 38.4% |
| Gs5     | 191          |     |     |     |       |      |       |       |       | 1.1%  |       | 1.1%  | 17.8% | 11.5% | 0.5%  | 13.1% | 10.0% | 4.2%  | 3.1%  | 2.6%  | 3.1% | 31.9% |
| Gs6     | 298          |     |     |     |       |      |       |       |       | 2.4%  | 0.7%  | 1.3%  | 11.7% | 8.7%  | 5.4%  | 9.7%  | 13.8% | 4.7%  | 3.4%  | 5.4%  | 1.3% | 31.5% |
| Gs7     | 394          |     |     |     |       | 0.5% |       |       |       | 0.5%  | 1.5%  | 8.4%  | 0.8%  | 15.5% | 9.6%  | 1.8%  | 3.1%  | 16.8% | 12.2% | 0.5%  | 0.8% | 28.2% |
| Gs8     | 259          |     |     |     |       |      |       |       | 0.8%  | 1.2%  | 1.2%  | 1.5%  | 0.8%  | 7.3%  |       | 0.4%  | 1.2%  | 4.6%  | 59.5% | 5.0%  | 1.2% | 15.4% |
| Gs9     | 90           |     |     |     |       |      |       |       |       |       |       | 2.2%  |       | 4.4%  | 7.8%  | 1.1%  | 5.6%  | 3.3%  | 10.0% | 21.1% | 3.3% | 41.1% |
| Gs10    | 23           |     |     |     |       |      |       |       |       |       |       |       |       |       |       | 8.7%  | 4.4%  |       | 21.7% | 4.4%  | 4.4% | 56.5% |
| D       | 245          |     |     |     |       |      |       |       | 0.4%  | 1.2%  | 2.9%  | 2.5%  | 0.8%  | 0.8%  | 0.4%  | 0.4%  | 2.0%  | 1.6%  | 20.0% | 1.6%  |      | 65.3% |

## 6 Annexes

### Annex 1 – Mapping of countries to regions and continents

| ISO country code and ISO country name | Region                     | Continent     |
|---------------------------------------|----------------------------|---------------|
| AE-United Arab Emirates               | Middle East & North Africa | Asia          |
| AF-Afghanistan                        | South Asia                 | 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        |
| AR-Argentina                          | Latin America & Caribbean  | South America |
| AT-Austria                            | Europe & Central Asia      | Europe        |
| AW-Aruba                              | Latin America & Caribbean  | North America |
| 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 | 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 |
| BO-Bolivia                            | Latin America & Caribbean  | South America |
| BR-Brazil                             | Latin America & Caribbean  | South America |
| BS-Bahamas                            | Latin America & Caribbean  | North America |
| BT-Bhutan                             | South Asia                 | Asia          |
| 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 |
| CD-Congo, The 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-Côte d'Ivoire                      | Sub-Saharan Africa         | Africa        |
| 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 |

| ISO country code and ISO country name | Region                     | Continent     |
|---------------------------------------|----------------------------|---------------|
| CR-Costa Rica                         | Latin America & Caribbean  | North America |
| CV-Cape Verde                         | Sub-Saharan Africa         | Africa        |
| CW-Curaçao                            | Latin America & Caribbean  | North America |
| CY-Cyprus                             | Europe & Central Asia      | Europe        |
| CZ-Czechia                            | Europe & Central Asia      | Europe        |
| DE-Germany                            | Europe & Central Asia      | Europe        |
| DJ-Djibouti                           | Middle East & North Africa | 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 | Africa        |
| EC-Ecuador                            | Latin America & Caribbean  | South America |
| EE-Estonia                            | Europe & Central Asia      | Europe        |
| EG-Egypt                              | Middle East & North Africa | Africa        |
| 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 (Malvinas)        | Latin America & Caribbean  | South America |
| FM-Micronesia, Federated States of    | East Asia & Pacific        | Oceania       |
| 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        |
| GH-Ghana                              | Sub-Saharan Africa         | Africa        |
| GI-Gibraltar                          | Europe & Central Asia      | Europe        |
| GM-Gambia                             | Sub-Saharan Africa         | Africa        |
| GN-Guinea                             | Sub-Saharan Africa         | Africa        |
| GQ-Equatorial Guinea                  | Sub-Saharan Africa         | Africa        |
| GR-Greece                             | Europe & Central Asia      | Europe        |
| GT-Guatemala                          | Latin America & Caribbean  | North America |
| GW-Guinea-Bissau                      | Sub-Saharan Africa         | Africa        |
| GY-Guyana                             | Latin America & Caribbean  | South America |
| HK-Hong Kong                          | East Asia & Pacific        | Asia          |
| 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 | Asia          |
| IN-India                              | South Asia                 | Asia          |
| IQ-Iraq                               | Middle East & North Africa | Asia          |

| ISO country code and ISO country name         | Region                     | Continent     |
|---|----------------------------|---------------|
| IR-Iran, Islamic Republic of                  | Middle East & North Africa | 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 | 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 & Nevis                        | Latin America & Caribbean  | North America |
| KR-Korea, Republic of                         | East Asia & Pacific        | Asia          |
| KW-Kuwait                                     | Middle East & North Africa | Asia          |
| KY-Cayman Islands                             | Latin America & Caribbean  | North America |
| KZ-Kazakhstan                                 | Europe & Central Asia      | Europe        |
| LA-Lao, People's Democratic Republic          | East Asia & Pacific        | Asia          |
| LB-Lebanon                                    | Middle East & North Africa | Asia          |
| LC-Saint Lucia                                | Latin America & Caribbean  | North America |
| 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        |
| MA-Morocco                                    | Middle East & North Africa | Africa        |
| MD-Moldova, Republic of                       | Europe & Central Asia      | Europe        |
| ME-Montenegro                                 | Europe & Central Asia      | Europe        |
| MG-Madagascar                                 | Sub-Saharan Africa         | Africa        |
| MK-Macedonia, The Former Yugoslav Republic of | Europe & Central Asia      | Europe        |
| ML-Mali                                       | Sub-Saharan Africa         | Africa        |
| MM-Myanmar                                    | East Asia & Pacific        | Asia          |
| MN-Mongolia                                   | East Asia & Pacific        | Asia          |
| MR-Mauritania                                 | Sub-Saharan Africa         | Africa        |
| MS-Montserrat                                 | Latin America & Caribbean  | North America |
| MT-Malta                                      | Middle East & North Africa | 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        |

| ISO country code and ISO country name | Region                     | Continent     |
|---------------------------------------|----------------------------|---------------|
| NC-New Caledonia                      | East Asia & Pacific        | Oceania       |
| NE-Niger                              | Sub-Saharan Africa         | Africa        |
| 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          |
| OM-Oman                               | Middle East & North Africa | Asia          |
| OT-Other                              | 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                           | South Asia                 | Asia          |
| PL-Poland                             | Europe & Central Asia      | Europe        |
| PS-Palestine, State of <sup>3</sup>   | Middle East & North Africa | 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 | Asia          |
| REG-Regional                          | Regional                   | Regional      |
| RO-Romania                            | Europe & Central Asia      | Europe        |
| RS-Republic of Serbia                 | Europe & Central Asia      | Europe        |
| RU-Russia                             | Europe & Central Asia      | Europe        |
| RW-Rwanda                             | Sub-Saharan Africa         | Africa        |
| SA-Saudi Arabia                       | Middle East & North Africa | Asia          |
| SB-Solomon Islands                    | East Asia & Pacific        | Oceania       |
| SC-Seychelles                         | Sub-Saharan Africa         | Africa        |
| SD-Sudan                              | Sub-Saharan Africa         | Africa        |
| SE-Sweden                             | Europe & Central Asia      | Europe        |
| SG-Singapore                          | East Asia & Pacific        | Asia          |
| SI-Slovenia                           | Europe & Central Asia      | Europe        |
| SK-Slovakia                           | Europe & Central Asia      | Europe        |
| SL-Sierra Leone                       | Sub-Saharan Africa         | Africa        |
| SN-Senegal                            | Sub-Saharan Africa         | Africa        |
| SO-Somalia                            | Sub-Saharan Africa         | Africa        |
| SR-Suriname                           | Latin America & Caribbean  | South America |
| SS-South Sudan                        | Sub-Saharan Africa         | Africa        |
| SV-El Salvador                        | Latin America & Caribbean  | North America |
| SY-Syrian Arab Republic               | Middle East & North Africa | Asia          |
| SZ-Swaziland                          | Sub-Saharan Africa         | Africa        |

<sup>3</sup> This designation shall not be construed as recognition of a State of Palestine and is without prejudice to the individual positions of the Member States on this issue.

| ISO country code and ISO country name   | Region                     | Continent     |
|---|----------------------------|---------------|
| TC-Turks and Caicos Islands             | Latin America & Caribbean  | North America |
| TD-Chad                                 | Sub-Saharan Africa         | Africa        |
| TG-Togo                                 | Sub-Saharan Africa         | Africa        |
| TH-Thailand                             | East Asia & Pacific        | Asia          |
| TJ-Tajikistan                           | Europe & Central Asia      | Asia          |
| TL-Timor-Leste                          | East Asia & Pacific        | Asia          |
| TM-Turkmenistan                         | Europe & Central Asia      | Asia          |
| TN-Tunisia                              | Middle East & North Africa | Africa        |
| TO-Tonga                                | East Asia & Pacific        | Oceania       |
| TR-TürkiyeTurkey                        | Europe & Central Asia      | Europe        |
| TT-Trinidad and Tobago                  | Latin America & Caribbean  | North America |
| TV-Tuvalu                               | East Asia & Pacific        | Oceania       |
| TW-Taiwan, Province of China            | East Asia & Pacific        | Asia          |
| TZ-Tanzania, United Republic of         | Sub-Saharan Africa         | Africa        |
| UA-Ukraine                              | Europe & Central Asia      | Europe        |
| UG-Uganda                               | Sub-Saharan Africa         | Africa        |
| US-United States                        | North America              | North America |
| UY-Uruguay                              | Latin America & Caribbean  | South America |
| UZ-Uzbekistan                           | Europe & Central Asia      | Asia          |
| VC-Saint Vincent and the Grenadines     | Latin America & Caribbean  | North America |
| VE-Venezuela                            | Latin America & Caribbean  | South America |
| VG-Virgin Islands, British              | Latin America & Caribbean  | North America |
| VN-Viet Nam                             | East Asia & Pacific        | Asia          |
| VU-Vanuatu                              | East Asia & Pacific        | Oceania       |
| WS-Samoa                                | East Asia & Pacific        | Oceania       |
| XK-Kosovo <sup>4</sup> (temporary code) | Europe & Central Asia      | Europe        |
| YE-Yemen                                | Middle East & North Africa | Asia          |
| ZA-South Africa                         | Sub-Saharan Africa         | Africa        |
| ZM-Zambia                               | Sub-Saharan Africa         | Africa        |
| ZW-Zimbabwe                             | Sub-Saharan Africa         | Africa        |

<sup>4</sup>This designation is without prejudice to positions on status, and it is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

## Annex 2 – Mapping of GICS, NACE and NAICS sectors to sector groupings

| Sector group: infrastructure |             |   |
|------------------------------|-------------|---|
| Sector categorisation        | Sector code | Description   |
| GICS 2018                    | 10102040    | Oil & gas storage & transport   |
| GICS 2018                    | 20201050    | Environmental & facilities 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                    | 35102020    | Health care facilities  |
| GICS 2018                    | 50101010    | Alternative carriers  |
| GICS 2018                    | 50101020    | Integrated telecommunication services                                   |
| GICS 2018                    | 50102010    | Wireless telecommunication services                                     |
| GICS 2018                    | 50201030    | Cable & satellite   |
| GICS 2018                    | 50202010    | Movies & entertainment  |
| GICS 2018                    | 50202020    | Interactive home entertainment  |
| GICS 2018                    | 50203010    | Interactive media & services  |
| GICS 2018                    | 55102010    | Gas utilities   |
| GICS 2018                    | 55103010    | Multiutilities  |
| GICS 2018                    | 55104010    | Water utilities   |
| GICS 2018                    | 55105010    | Independent power producers & energy traders                            |
| GICS 2018                    | 55105020    | Renewable electricity   |
| NACE 2                       | 18.2        | Reproduction of recorded media  |
| NACE 2                       | 18.2        | Reproduction of recorded media  |
| NACE 2                       | 35.14       | Trade of electricity  |
| 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                       | 35.3        | Steam and air conditioning supply                                       |
| NACE 2                       | 36          | Water collection, treatment and supply                                  |
| NACE 2                       | 37          | Sewerage  |
| NACE 2                       | 38          | Waste collection, treatment and disposal activities; materials recovery |
| NACE 2                       | 38.1        | Waste collection  |
| NACE 2                       | 38.11       | Collection of non-hazardous waste                                       |
| NACE 2                       | 38.12       | Collection of hazardous waste   |
| NACE 2                       | 38.2        | Waste treatment and disposal  |
| NACE 2                       | 38.21       | Treatment and disposal of non-hazardous waste                           |
| NACE 2                       | 38.22       | Treatment and disposal of hazardous waste                               |
| NACE 2                       | 38.3        | Materials recovery  |



| Sector group: infrastructure |             |   |
|------------------------------|-------------|---|
| Sector categorisation        | Sector code | Description   |
| 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                       | 46.71       | Wholesale of solid, liquid and gaseous fuels and related products |
| NACE 2                       | 49          | Land transport and transport via pipelines                        |
| NACE 2                       | 49.1        | Passenger rail transport, interurban                              |
| NACE 2                       | 49.1        | Passenger rail transport, interurban                              |
| NACE 2                       | 49.2        | Freight rail transport  |
| NACE 2                       | 49.2        | Freight rail transport  |
| NACE 2                       | 49.3        | Other passenger land 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.                             |
| NACE 2                       | 49.4        | Freight transport by road and removal services                    |
| NACE 2                       | 49.41       | Freight transport by road   |
| NACE 2                       | 49.42       | Removal services  |
| NACE 2                       | 49.5        | Transport via pipeline  |
| NACE 2                       | 49.5        | Transport via pipeline  |
| NACE 2                       | 50          | Water transport   |
| NACE 2                       | 50.1        | Sea and coastal passenger water transport                         |
| NACE 2                       | 50.1        | Sea and coastal passenger water transport                         |
| NACE 2                       | 50.2        | Sea and coastal freight water transport                           |
| NACE 2                       | 50.2        | Sea and coastal freight water transport                           |
| NACE 2                       | 50.3        | Inland passenger water transport                                  |
| NACE 2                       | 50.3        | Inland passenger water transport                                  |
| NACE 2                       | 50.4        | Inland freight water transport                                    |
| NACE 2                       | 50.4        | Inland freight water transport                                    |
| NACE 2                       | 51          | Air transport   |
| NACE 2                       | 51.1        | Passenger air transport   |
| NACE 2                       | 51.1        | Passenger air transport   |
| NACE 2                       | 51.2        | Freight air transport and space transport                         |
| NACE 2                       | 51.21       | Freight air transport   |
| NACE 2                       | 52          | Warehousing and support activities for transport                  |
| NACE 2                       | 52.2        | Support activities for transport                                  |
| NACE 2                       | 52.21       | Service activities incidental to land transport                   |
| NACE 2                       | 52.22       | Service activities incidental to water transport                  |
| NACE 2                       | 52.23       | Service activities incidental to air transport                    |
| NACE 2                       | 52.24       | Cargo handling  |
| NACE 2                       | 52.29       | Other transport support activities                                |
| NACE 2                       | 53          | Postal and courier activities                                     |
| NACE 2                       | 53.1        | Postal activities under universal service obligation              |
| NACE 2                       | 53.1        | Postal activities under universal service obligation              |
| NACE 2                       | 53.2        | Other postal and courier activities                               |

| Sector group: infrastructure |             |   |
|------------------------------|-------------|---|
| Sector categorisation        | Sector code | Description   |
| NACE 2                       | 53.2        | Other postal and courier activities   |
| NACE 2                       | 58.21       | Publishing of computer games  |
| 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                       | 59.2        | Sound recording and music publishing activities                                       |
| NACE 2                       | 61.1        | Wired telecommunications activities   |
| NACE 2                       | 61.1        | Wired telecommunications activities   |
| NACE 2                       | 61.2        | Wireless telecommunications activities  |
| NACE 2                       | 61.2        | Wireless telecommunications activities  |
| NACE 2                       | 61.9        | Other telecommunications activities   |
| NACE 2                       | 61.9        | Other telecommunications activities   |
| NACE 2                       | 63.12       | Web portals   |
| NACE 2                       | 63.99       | Other information service activities n.e.c.   |
| NACE 2                       | 75          | Veterinary activities   |
| NACE 2                       | 77.11       | Renting and leasing of cars and light motor vehicles                                  |
| NACE 2                       | 77.12       | Renting and leasing of trucks   |
| NACE 2                       | 77.34       | Renting and leasing of water transport equipment                                      |
| NACE 2                       | 81.1        | Combined facilities support activities  |
| NACE 2                       | 81.1        | Combined facilities support activities  |
| NACE 2                       | 81.21       | General cleaning of buildings   |
| NACE 2                       | 81.29       | Other cleaning activities   |
| NACE 2                       | 81.3        | Landscape service activities  |
| NACE 2                       | 81.3        | Landscape service activities  |
| NACE 2                       | 86          | Human health activities   |
| NACE 2                       | 86.1        | Hospital activities   |
| NACE 2                       | 86.1        | Hospital activities   |
| NACE 2                       | 87          | Residential care activities   |
| NACE 2                       | 87.1        | Residential nursing care 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                       | 87.2        | 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                       | 87.3        | Residential care activities for the elderly and disabled                              |
| NACE 2                       | 87.9        | Other residential care activities   |
| NACE 2                       | 87.9        | Other residential care activities   |
| NACE 2                       | 88          | Social work activities without accommodation  |
| NACE 2                       | 88.1        | Social work activities without accommodation for the elderly and disabled             |
| NACE 2                       | 88.1        | Social work activities without accommodation for the elderly and disabled             |

| Sector group: infrastructure |             |   |
|------------------------------|-------------|---|
| Sector categorisation        | Sector code | Description                                 |
| NACE 2                       | 90          | Creative, arts and entertainment activities |
| NACE 2                       | 90          | Creative, arts and entertainment activities |
| NACE 2                       | 90.01       | Performing arts                             |
| NACE 2                       | 90.02       | Support activities to performing arts       |
| NACE 2                       | 90.03       | Artistic creation                           |
| NACE 2                       | 93.12       | Activities of sport clubs                   |
| NACE 2                       | 93.19       | Other sports activities                     |
| NAICS 2017                   | 221111      | Hydroelectric 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                   | 221210      | Gas utilities                               |
| NAICS 2017                   | 221310      | Water utilities                             |
| NAICS 2017                   | 221320      | Water utilities                             |
| NAICS 2017                   | 221330      | Multiutilities                              |
| NAICS 2017                   | 336510      | Railroads                                   |
| NAICS 2017                   | 336611      | Marine ports & services                     |
| NAICS 2017                   | 481111      | Airlines                                    |
| NAICS 2017                   | 481112      | Airlines                                    |
| NAICS 2017                   | 481211      | Airlines                                    |
| NAICS 2017                   | 481212      | Airlines                                    |
| NAICS 2017                   | 481219      | Airlines                                    |
| NAICS 2017                   | 482111      | Railroads                                   |
| NAICS 2017                   | 482112      | Railroads                                   |
| NAICS 2017                   | 483111      | Marine                                      |
| NAICS 2017                   | 483112      | Marine                                      |
| NAICS 2017                   | 483113      | Marine                                      |
| NAICS 2017                   | 483114      | Marine                                      |
| NAICS 2017                   | 483211      | Marine                                      |
| NAICS 2017                   | 483212      | Marine                                      |
| NAICS 2017                   | 484110      | Trucking                                    |
| NAICS 2017                   | 484122      | Trucking                                    |
| NAICS 2017                   | 485111      | Airport services                            |
| NAICS 2017                   | 485112      | Airport services                            |
| NAICS 2017                   | 485113      | Airport services                            |
| NAICS 2017                   | 485119      | Airport services                            |
| NAICS 2017                   | 485210      | Airport services                            |
| NAICS 2017                   | 485310      | Airport services                            |
| NAICS 2017                   | 485320      | Airport services                            |
| NAICS 2017                   | 485410      | Airport services                            |
| NAICS 2017                   | 485510      | Airport services                            |
| NAICS 2017                   | 485991      | Airport services                            |

| Sector group: infrastructure |             |                                       |
|------------------------------|-------------|---------------------------------------|
| Sector categorisation        | Sector code | Description                           |
| NAICS 2017                   | 485999      | Airport services                      |
| NAICS 2017                   | 486110      | Oil & gas storage & transport         |
| NAICS 2017                   | 486210      | Oil & gas storage & transport         |
| NAICS 2017                   | 486910      | Oil & gas storage & transport         |
| NAICS 2017                   | 486990      | Oil & gas storage & transport         |
| NAICS 2017                   | 488119      | Air freight & logistics               |
| NAICS 2017                   | 488210      | Air freight & logistics               |
| NAICS 2017                   | 488310      | Marine ports & services               |
| NAICS 2017                   | 488490      | Highways & railtracks                 |
| NAICS 2017                   | 488999      | Air freight & logistics               |
| NAICS 2017                   | 517311      | Alternative carriers                  |
| NAICS 2017                   | 517312      | Wireless telecommunication services   |
| NAICS 2017                   | 517911      | Integrated telecommunication services |
| NAICS 2017                   | 562111      | Environmental & facilities services   |
| NAICS 2017                   | 562112      | Environmental & facilities services   |
| NAICS 2017                   | 562119      | Environmental & facilities services   |
| NAICS 2017                   | 562211      | Environmental & facilities services   |
| NAICS 2017                   | 562212      | Environmental & facilities services   |
| NAICS 2017                   | 562213      | Environmental & facilities services   |
| NAICS 2017                   | 562219      | Environmental & facilities services   |
| NAICS 2017                   | 562910      | Environmental & facilities services   |
| NAICS 2017                   | 562920      | Environmental & facilities services   |
| NAICS 2017                   | 562998      | Environmental & facilities services   |
| NAICS 2017                   | 62141       | Health care facilities                |
| NAICS 2017                   | 62142       | Health care facilities                |
| NAICS 2017                   | 62149       | Health care facilities                |
| NAICS 2017                   | 622110      | Health care facilities                |
| NAICS 2017                   | 622210      | Health care facilities                |
| NAICS 2017                   | 622310      | Health care facilities                |

| Sector group: non-bank financials |             |  |
|-----------------------------------|-------------|--|
| Sector categorisation             | Sector code | Description  |
| GICS 2018                         | 40102010    | Thriffs & mortgage finance   |
| GICS 2018                         | 40201020    | Other diversified financial services   |
| GICS 2018                         | 40201030    | Multisector holdings   |
| GICS 2018                         | 40201040    | Specialised 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 and data   |
| GICS 2018                         | 40204010    | Mortgage real estate investment trusts   |
| GICS 2018                         | 40301010    | Insurance brokers  |
| GICS 2018                         | 40301020    | Life & health insurance  |
| GICS 2018                         | 40301030    | Multiline insurance  |
| GICS 2018                         | 40301040    | Property & casualty insurance  |
| GICS 2018                         | 40301050    | Reinsurance  |
| NACE 2                            | 64          | Financial service activities, except insurance and pension funding                     |
| NACE 2                            | 64.1        | Monetary intermediation  |
| NACE 2                            | 64.11       | Central banking  |
| NACE 2                            | 64.3        | Trusts, funds and similar financial entities   |
| NACE 2                            | 64.3        | Trusts, funds and similar financial entities   |
| NACE 2                            | 64.9        | Other financial service activities, except insurance and pension funding               |
| 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          | Insurance, reinsurance and pension funding, except compulsory social security          |
| NACE 2                            | 65.1        | Insurance  |
| NACE 2                            | 65.11       | Life insurance   |
| NACE 2                            | 65.12       | Non-life insurance   |
| NACE 2                            | 65.2        | Reinsurance  |
| NACE 2                            | 65.2        | Reinsurance  |
| NACE 2                            | 65.3        | Pension funding  |
| NACE 2                            | 65.3        | Pension funding  |
| NACE 2                            | 66          | Activities auxiliary to financial services and insurance activities                    |
| NACE 2                            | 66.1        | Activities auxiliary to financial services, except insurance and 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                            | 66.2        | Activities auxiliary to 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                            | 66.3        | Fund management activities   |

| Sector group: non-bank financials |             |  |
|-----------------------------------|-------------|--|
| Sector categorisation             | Sector code | Description  |
| NAICS 2017                        | 332311      | Industrial real estate investment trusts                                     |
| NAICS 2017                        | 522291      | Consumer lending   |
| NAICS 2017                        | 522292      | Thriffs & mortgage finance   |
| NAICS 2017                        | 522293      | International trade financing  |
| NAICS 2017                        | 522298      | Thriffs & mortgage finance   |
| NAICS 2017                        | 522310      | Specialised finance  |
| NAICS 2017                        | 522320      | Other diversified financial services   |
| NAICS 2017                        | 522390      | Other diversified financial services   |
| NAICS 2017                        | 523110      | Investment banking & brokerage   |
| NAICS 2017                        | 523120      | Securities brokerage   |
| NAICS 2017                        | 523210      | Specialised finance  |
| NAICS 2017                        | 523920      | Asset management & custody banks   |
| NAICS 2017                        | 523930      | Other diversified financial services   |
| NAICS 2017                        | 523991      | Trust, fiduciary and custody activities                                      |
| NAICS 2017                        | 52411       | Life & health insurance  |
| NAICS 2017                        | 524113      | Insurance brokers  |
| NAICS 2017                        | 524114      | Insurance brokers  |
| NAICS 2017                        | 52412       | Property & casualty insurance  |
| NAICS 2017                        | 524126      | Insurance brokers  |
| NAICS 2017                        | 524127      | Insurance brokers  |
| NAICS 2017                        | 524128      | Insurance brokers  |
| NAICS 2017                        | 52413       | Reinsurance  |
| NAICS 2017                        | 525910      | Asset management & custody banks   |
| NAICS 2017                        | 525990      | Specialised finance  |
| NAICS 2017                        | 531110      | Real estate services   |
| NAICS 2017                        | 531111      | Real estate services   |
| NAICS 2017                        | 531120      | Diversified real estate activities   |
| NAICS 2017                        | 531130      | Lessors of mini warehouses and self-storage units                            |
| NAICS 2017                        | 531190      | Lessors of other real estate property  |
| NAICS 2017                        | 531312      | Diversified real estate activities   |
| NAICS 2017                        | 532111      | Passenger car rental   |
| NAICS 2017                        | 532112      | Passenger car leasing  |
| NAICS 2017                        | 53212       | Truck, utility trailer and recreational vehicle rental and leasing           |
| NAICS 2017                        | 532120      | Truck, utility trailer and 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 centres   |
| NAICS 2017                        | 532411      | Commercial air, rail and water transport 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                        | 561450      | Specialised finance  |

| Sector group: renewables |             |  |
|--------------------------|-------------|--|
| Sector categorisation    | Sector code | Description                                  |
| GICS 2018                | 55105010    | Independent power producers & energy traders |
| GICS 2018                | 55105020    | Renewable electricity                        |
| NAICS 2017               | 221111      | Hydroelectric 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            |

| Sector group: services |             |  |
|------------------------|-------------|--|
| Sector categorisation  | Sector code | Description  |
| GICS 2018              | 10101020    | Oil & gas equipment & services                     |
| GICS 2018              | 20201050    | Environmental & facilities services                |
| GICS 2018              | 20201070    | Diversified support services                       |
| GICS 2018              | 20201080    | Security & alarm services                          |
| GICS 2018              | 20202010    | Human resource & employment services               |
| GICS 2018              | 20202020    | Research & consulting services                     |
| GICS 2018              | 20305010    | Airport services                                   |
| GICS 2018              | 25302010    | Education services                                 |
| GICS 2018              | 25302020    | Specialised consumer services                      |
| GICS 2018              | 35102015    | Health care services                               |
| GICS 2018              | 35102030    | Managed health care                                |
| GICS 2018              | 35203010    | Life sciences tools & services                     |
| GICS 2018              | 40201020    | Other diversified financial services               |
| GICS 2018              | 50101010    | Alternative carriers                               |
| GICS 2018              | 50101020    | Integrated telecommunication services              |
| GICS 2018              | 50102010    | Wireless telecommunication services                |
| 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                       |
| NACE 2                 | 18.2        | Reproduction of recorded media                     |
| NACE 2                 | 18.2        | Reproduction of recorded media                     |
| NACE 2                 | 21.2        | Manufacture of pharmaceutical preparations         |
| NACE 2                 | 21.2        | Manufacture of pharmaceutical preparations         |
| 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                 | 33.19       | Repair of other equipment                          |
| NACE 2                 | 33.2        | Installation of industrial machinery and equipment |

| Sector group: services |             |  |
|------------------------|-------------|--|
| Sector categorisation  | Sector code | Description  |
| NACE 2                 | 33.2        | Installation of industrial machinery and equipment   |
| 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                 | 45.2        | Maintenance and repair of motor vehicles   |
| NACE 2                 | 45.2        | Maintenance and repair of motor vehicles   |
| NACE 2                 | 52.1        | Warehousing and storage  |
| NACE 2                 | 52.1        | Warehousing and storage  |
| NACE 2                 | 52.23       | Service activities incidental to air transport   |
| NACE 2                 | 58          | Publishing activities  |
| NACE 2                 | 58.1        | Publishing of books, periodicals and other publishing 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                 | 58.2        | Software publishing  |
| NACE 2                 | 58.21       | Publishing of computer games   |
| NACE 2                 | 59          | Motion picture, video and television programme production, sound recording and music publishing activities |
| NACE 2                 | 59.1        | Motion picture, video and television programme activities  |
| 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                 | 59.2        | Sound recording and music publishing activities  |
| NACE 2                 | 60          | Programming and broadcasting activities  |
| NACE 2                 | 60.1        | Radio broadcasting   |
| NACE 2                 | 60.1        | Radio broadcasting   |
| NACE 2                 | 60.2        | Television programming and broadcasting activities   |
| NACE 2                 | 60.2        | Television programming and broadcasting activities   |
| NACE 2                 | 61          | Telecommunications   |
| NACE 2                 | 61.1        | Wired telecommunications activities  |
| NACE 2                 | 61.1        | Wired telecommunications activities  |
| NACE 2                 | 61.2        | Wireless telecommunications activities   |
| NACE 2                 | 61.2        | Wireless telecommunications activities   |
| NACE 2                 | 61.3        | Satellite telecommunications activities  |



| Sector group: services |             |  |
|------------------------|-------------|--|
| Sector categorisation  | Sector code | Description  |
| NACE 2                 | 61.3        | Satellite telecommunications activities  |
| NACE 2                 | 61.9        | Other telecommunications activities  |
| NACE 2                 | 61.9        | Other telecommunications activities  |
| NACE 2                 | 63.12       | Web portals  |
| NACE 2                 | 63.9        | Other information service activities   |
| NACE 2                 | 63.91       | News agency activities   |
| NACE 2                 | 64          | Financial service activities, except insurance and pension funding               |
| NACE 2                 | 64.1        | Monetary intermediation  |
| NACE 2                 | 64.3        | Trusts, funds and similar financial entities                                     |
| NACE 2                 | 64.3        | Trusts, funds and similar financial entities                                     |
| NACE 2                 | 64.9        | Other financial service activities, except insurance and pension funding         |
| NACE 2                 | 65.1        | Insurance  |
| NACE 2                 | 66          | Activities auxiliary to financial services and insurance activities              |
| NACE 2                 | 66.1        | Activities auxiliary to financial services, except insurance and pension funding |
| NACE 2                 | 66.29       | Other activities auxiliary to insurance and pension funding                      |
| NACE 2                 | 69.1        | Legal activities   |
| NACE 2                 | 69.1        | Legal activities   |
| NACE 2                 | 69.2        | Accounting, bookkeeping and auditing activities; tax consultancy                 |
| NACE 2                 | 69.2        | Accounting, bookkeeping and auditing activities; tax consultancy                 |
| NACE 2                 | 70.1        | Activities of head offices   |
| NACE 2                 | 70.1        | Activities of head offices   |
| NACE 2                 | 70.2        | Management consultancy activities  |
| 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                 | 71.2        | Technical testing and analysis   |
| NACE 2                 | 71.2        | Technical testing and analysis   |
| NACE 2                 | 72.19       | Other research and experimental development on natural sciences and engineering  |
| NACE 2                 | 72.2        | Research and experimental development on social sciences and humanities          |
| NACE 2                 | 72.2        | Research and experimental development on social sciences and humanities          |
| NACE 2                 | 73          | Advertising and market research  |
| NACE 2                 | 73.1        | Advertising  |
| NACE 2                 | 73.11       | Advertising agencies   |
| NACE 2                 | 73.12       | Media representation   |
| NACE 2                 | 73.2        | Market research and public opinion polling                                       |
| NACE 2                 | 73.2        | Market research and public opinion polling                                       |
| NACE 2                 | 74.1        | Specialised design activities  |
| NACE 2                 | 74.1        | Specialised design activities  |
| NACE 2                 | 74.2        | Photographic activities  |
| NACE 2                 | 74.2        | Photographic activities  |
| NACE 2                 | 74.3        | Translation and interpretation activities  |
| NACE 2                 | 74.3        | Translation and interpretation activities  |

| Sector group: services |             |   |
|------------------------|-------------|---|
| Sector categorisation  | Sector code | Description   |
| NACE 2                 | 74.9        | Other professional, scientific and technical activities n.e.c.                    |
| NACE 2                 | 74.9        | Other professional, scientific and technical activities n.e.c.                    |
| NACE 2                 | 77          | Rental and leasing activities   |
| NACE 2                 | 77.1        | Renting and leasing of motor vehicles   |
| NACE 2                 | 77.2        | Renting and leasing of personal and household goods                               |
| NACE 2                 | 77.3        | Renting and leasing of other machinery, equipment and tangible goods              |
| NACE 2                 | 77.4        | Leasing of intellectual property and similar products, except copyrighted works   |
| NACE 2                 | 77.4        | Leasing of intellectual property and similar products, except copyrighted works   |
| NACE 2                 | 78          | Employment activities   |
| NACE 2                 | 78.1        | Activities of employment placement agencies                                       |
| NACE 2                 | 78.1        | Activities of employment placement agencies                                       |
| NACE 2                 | 78.2        | Temporary employment agency activities  |
| NACE 2                 | 78.2        | Temporary employment agency activities  |
| NACE 2                 | 78.3        | Other human resources provision   |
| NACE 2                 | 78.3        | Other human resources provision   |
| NACE 2                 | 79          | Travel agency, tour operator and other reservation service and related activities |
| NACE 2                 | 79.1        | Travel agency and tour operator activities  |
| NACE 2                 | 80          | Security and investigation activities   |
| NACE 2                 | 80.1        | Private security activities   |
| NACE 2                 | 80.1        | Private security activities   |
| NACE 2                 | 80.2        | Security systems service activities   |
| NACE 2                 | 80.2        | Security systems service activities   |
| NACE 2                 | 80.3        | Investigation activities  |
| NACE 2                 | 80.3        | Investigation activities  |
| NACE 2                 | 81          | Services to buildings and landscape activities                                    |
| NACE 2                 | 81.1        | Combined facilities support activities  |
| NACE 2                 | 81.1        | Combined facilities support activities  |
| NACE 2                 | 81.2        | Cleaning 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                 | 81.3        | Landscape service activities  |
| NACE 2                 | 82          | Office administrative, office support and other business support activities       |
| NACE 2                 | 82.1        | Office administrative and support activities                                      |
| NACE 2                 | 82.3        | Organisation of conventions and trade shows                                       |
| NACE 2                 | 82.3        | Organisation of conventions and trade shows                                       |
| NACE 2                 | 82.9        | Business support service activities n.e.c.  |
| 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  |

| Sector group: services |             |  |
|------------------------|-------------|--|
| Sector categorisation  | Sector code | Description  |
| 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                 | 84.23       | 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                 | 84.3        | Compulsory social security activities  |
| NACE 2                 | 85.1        | Pre-primary education  |
| NACE 2                 | 85.1        | Pre-primary education  |
| NACE 2                 | 85.2        | 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                 | 85.6        | Educational support 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                 | 86.9        | Other human health activities  |
| NACE 2                 | 88.91       | Child day-care activities  |
| NACE 2                 | 88.99       | Other social work activities without accommodation n.e.c.  |
| NACE 2                 | 9.1         | Support activities for petroleum and natural gas extraction  |
| NACE 2                 | 9.1         | Support activities for petroleum and natural gas extraction  |
| NACE 2                 | 90          | Creative, arts and entertainment activities  |
| NACE 2                 | 90          | Creative, arts and entertainment activities  |
| NACE 2                 | 90.01       | Performing arts  |
| NACE 2                 | 90.02       | Support activities to performing arts  |
| NACE 2                 | 90.03       | Artistic creation  |
| NACE 2                 | 93.12       | Activities of sport clubs  |
| NACE 2                 | 93.19       | Other sports activities  |
| NACE 2                 | 94          | Activities of membership organisations   |
| NACE 2                 | 94.1        | Activities of business, employers and professional membership organisations  |
| NACE 2                 | 94.11       | Activities of business and employers membership organisations  |
| NACE 2                 | 94.12       | Activities of professional membership organisations  |

| Sector group: services |             |   |
|------------------------|-------------|---|
| Sector categorisation  | Sector code | Description   |
| NACE 2                 | 94.2        | Activities of trade unions  |
| NACE 2                 | 94.2        | Activities of trade unions  |
| NACE 2                 | 94.9        | Activities of other membership organisations  |
| 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          | Repair of computers and personal and household goods  |
| NACE 2                 | 95.1        | Repair of computers and communication equipment   |
| NACE 2                 | 95.2        | Repair of personal and household goods  |
| NACE 2                 | 95.23       | Repair of footwear and leather goods  |
| NACE 2                 | 95.25       | Repair of watches, clocks and jewellery   |
| NACE 2                 | 96          | Other personal service activities   |
| NACE 2                 | 96          | Other personal service activities   |
| 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                 | 98          | Undifferentiated goods- and services-producing activities of private households for own use |
| NACE 2                 | 98.1        | Undifferentiated goods-producing activities of private households for own use               |
| 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                 | 98.2        | Undifferentiated service-producing activities of private households for own use             |
| NACE 2                 | 99          | Activities of extraterritorial organisations and bodies                                     |
| NAICS 2017             | 213112      | Oil & gas equipment & services  |
| NAICS 2017             | 485111      | Airport services  |
| NAICS 2017             | 485112      | Airport services  |
| NAICS 2017             | 485113      | Airport services  |
| NAICS 2017             | 485119      | Airport services  |
| NAICS 2017             | 485210      | Airport services  |
| NAICS 2017             | 485310      | Airport services  |
| NAICS 2017             | 485320      | Airport services  |
| NAICS 2017             | 485410      | Airport services  |
| NAICS 2017             | 485510      | Airport services  |
| NAICS 2017             | 485991      | Airport services  |
| NAICS 2017             | 485999      | Airport services  |
| NAICS 2017             | 493110      | Diversified support services  |
| NAICS 2017             | 493120      | Diversified support services  |
| NAICS 2017             | 493130      | Diversified support services  |
| NAICS 2017             | 49319       | Diversified support services  |
| NAICS 2017             | 515111      | Broadcasting  |

| Sector group: services |             |                                       |
|------------------------|-------------|---------------------------------------|
| Sector categorisation  | Sector code | Description                           |
| NAICS 2017             | 515112      | Broadcasting                          |
| NAICS 2017             | 515120      | Broadcasting                          |
| NAICS 2017             | 517311      | Alternative carriers                  |
| NAICS 2017             | 517312      | Wireless telecommunication services   |
| NAICS 2017             | 517911      | Integrated telecommunication services |
| NAICS 2017             | 522320      | Other diversified financial services  |
| NAICS 2017             | 522390      | Other diversified financial services  |
| NAICS 2017             | 523930      | Other diversified financial services  |
| NAICS 2017             | 531110      | Real estate services                  |
| NAICS 2017             | 531111      | Real estate services                  |
| NAICS 2017             | 541990      | Research and consulting services      |
| NAICS 2017             | 562111      | Environmental & facilities services   |
| NAICS 2017             | 562112      | Environmental & facilities services   |
| NAICS 2017             | 562119      | Environmental & facilities services   |
| NAICS 2017             | 562211      | Environmental & facilities services   |
| NAICS 2017             | 562212      | Environmental & facilities services   |
| NAICS 2017             | 562213      | Environmental & facilities services   |
| NAICS 2017             | 562219      | Environmental & facilities services   |
| NAICS 2017             | 562910      | Environmental & facilities services   |
| NAICS 2017             | 562920      | Environmental & facilities services   |
| NAICS 2017             | 562998      | Environmental & facilities services   |
| NAICS 2017             | 611110      | Education services                    |
| NAICS 2017             | 611310      | Education services                    |
| NAICS 2017             | 611610      | Education services                    |
| NAICS 2017             | 611620      | Education services                    |
| NAICS 2017             | 611630      | Education services                    |
| NAICS 2017             | 611691      | Education services                    |
| NAICS 2017             | 611692      | Education services                    |
| NAICS 2017             | 611699      | Education services                    |
| NAICS 2017             | 621511      | Health care services                  |





# DEFAULT AND RECOVERY STATISTICS



## PRIVATE LENDING

**1994-2024**



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