






\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \& \& \multicolumn{20}{|l|}{25th \(=25\) th percentile;} \\
\hline  \& \multirow[t]{3}{*}{EUROPEAN BANKING AUTHORITY} \& \multicolumn{20}{|c|}{\begin{tabular}{l}
Table 1 \\
Risk Parameters statistics by country of the counterparty \\
EU and main non-EU countries \\
2017 Q4 \\
(Source COREP C 9.02) \\
Only statistics for countries having more than 3 banks reporting in that particular country are shown
\end{tabular}} \\
\hline \& \& \multicolumn{5}{|c|}{Default rate} \& \multicolumn{5}{|c|}{Loss rate} \& \multicolumn{5}{|c|}{PD - adjusted} \& \multicolumn{5}{|c|}{LGD} \\
\hline \& \& N \& 25th \& 50th \& 75th \& W.A \& N \& 25th \& 50th \& 75th \& W.A \& N \& 25th \& 50th \& 75th \& W.A \& N \& 25th \& 50th \& 75th \& W.A \\
\hline Canada \& \begin{tabular}{l}
Corporates \\
Corporates - Of Which: Specialised Lending \\
Corporates - Of Which: SME \\
Retail \\
Retail - Secured on real estate property \\
Retail - Qualifying Revolving \\
Retail - Other Retail
\end{tabular} \& 4
42
22
5
11
14 \& \[
\begin{aligned}
\& \hline 0.35 \% \\
\& \\
\& 0.23 \% \\
\& 2.49 \% \\
\& 0.43 \% \\
\& 0.64 \%
\end{aligned}
\] \& \(0.44 \%\)
\(0.89 \%\)
\(3.66 \%\)
\(0.84 \%\)
\(1.79 \%\) \& \(0.71 \%\)
\(4.04 \%\)
\(5.48 \%\)
\(1.29 \%\)
\(4.79 \%\) \& 0.46\%

$0.35 \%$
$0.21 \%$
$0.71 \%$
$1.15 \%$ \& 19
6
9

12 \& $$
\begin{array}{r}
17.47 \% \\
\\
\\
5.61 \% \\
2.08 \% \\
44.16 \% \\
26.94 \%
\end{array}
$$ \& \[

$$
\begin{array}{r}
\hline \mathbf{1 8 . 8 6 \%} \\
\\
\\
\mathbf{2 6 . 3 1 \%} \\
5.49 \% \\
46.86 \% \\
31.00 \% \\
\hline
\end{array}
$$

\] \& \[

$$
\begin{array}{r}
21.71 \% \\
\\
46.26 \% \\
5.95 \% \\
66.85 \% \\
41.19 \%
\end{array}
$$
\] \& $18.10 \%$

$11.27 \%$
$0.71 \%$
$17.51 \%$
$23.60 \%$ \& 51
22
22
61
50
24

50 \& \[
$$
\begin{aligned}
& \hline 0.18 \% \\
& 0.21 \% \\
& 0.34 \% \\
& 0.54 \% \\
& 0.35 \% \\
& 0.39 \% \\
& 0.80 \%
\end{aligned}
$$

\] \& | 0.53\% |
| :--- |
| 0.44\% |
| 1.35\% |
| 1.04\% |
| 0.94\% |
| 1.18\% |
| 1.73\% | \& \[

$$
\begin{aligned}
& 1.37 \% \\
& 0.73 \% \\
& 2.37 \% \\
& 2.04 \% \\
& 1.63 \% \\
& 2.16 \% \\
& 2.95 \%
\end{aligned}
$$

\] \& \[

$$
\begin{aligned}
& 1.33 \% \\
& 1.09 \% \\
& 1.93 \% \\
& 0.73 \% \\
& 0.54 \% \\
& 1.95 \% \\
& 2.18 \%
\end{aligned}
$$
\] \& 52

23
23
62
50
25

50 \& | 27.46\% |
| :--- |
| 15.00\% |
| 22.49\% |
| 16.22\% |
| 12.31\% |
| 47.28\% |
| 25.85\% | \& \[

$$
\begin{aligned}
& \hline 40.74 \% \\
& 25.58 \% \\
& 41.00 \% \\
& 19.43 \% \\
& 14.48 \% \\
& 59.13 \% \\
& 44.33 \%
\end{aligned}
$$

\] \& | 45.00\% |
| :--- |
| 45.00\% |
| 48.90\% |
| 31.97\% |
| 18.65\% |
| 73.50\% |
| 56.69\% | \& \[

$$
\begin{aligned}
& \text { 35.60\% } \\
& 25.75 \% \\
& 14.36 \% \\
& 19.74 \% \\
& 17.80 \% \\
& 68.17 \% \\
& 28.11 \%
\end{aligned}
$$
\] \\

\hline China \& ```
Corporates
Corporates - Of Which: Specialised Lending
Corporates - Of Which: SME
Retail
Retail - Secured on real estate property
Retail - Qualifying Revolving
Retail - Other Retail

``` & 17
7
13 & \[
\begin{aligned}
& 0.04 \% \\
& 0.74 \% \\
& 0.05 \%
\end{aligned}
\] & \[
\begin{aligned}
& 0.08 \% \\
& 0.95 \% \\
& 0.14 \%
\end{aligned}
\] & \[
\begin{aligned}
& 0.46 \% \\
& 5.87 \% \\
& 0.55 \%
\end{aligned}
\] & \[
\begin{aligned}
& 0.09 \% \\
& 0.00 \% \\
& 0.09 \%
\end{aligned}
\] & 16
5
13 & \[
\begin{aligned}
& 14.07 \% \\
& 23.25 \% \\
& 22.44 \%
\end{aligned}
\] & 30.35\%
27.52\%
35.26\% & \[
\begin{aligned}
& 56.83 \% \\
& 29.78 \% \\
& 59.35 \%
\end{aligned}
\] & \[
\begin{gathered}
15.10 \% \\
\\
27.81 \% \\
76.77 \%
\end{gathered}
\] & 44
7
71
56
46
22
47 & \[
\begin{aligned}
& \hline 0.22 \% \\
& 0.39 \% \\
& 0.25 \% \\
& 0.47 \% \\
& 0.42 \% \\
& 0.28 \% \\
& 0.46 \%
\end{aligned}
\] & \[
\begin{aligned}
& \hline 0.75 \% \\
& 0.56 \% \\
& 0.76 \% \\
& 0.68 \% \\
& 0.62 \% \\
& 0.73 \% \\
& 0.90 \%
\end{aligned}
\] & \[
\begin{aligned}
& \hline 1.20 \% \\
& 2.33 \% \\
& 3.26 \% \\
& 1.25 \% \\
& 1.21 \% \\
& 1.09 \% \\
& 1.90 \%
\end{aligned}
\] & \[
\begin{aligned}
& 1.10 \% \\
& 1.40 \% \\
& 1.76 \% \\
& 0.73 \% \\
& 0.62 \% \\
& 0.69 \% \\
& 1.04 \%
\end{aligned}
\] & 46
7
72
56
46
21
21
47 & \[
\begin{aligned}
& \hline 34.83 \% \\
& 23.01 \% \\
& 22.79 \% \\
& 13.57 \% \\
& 11.02 \% \\
& 47.00 \% \\
& 24.02 \%
\end{aligned}
\] & \[
\begin{aligned}
& \hline 42.82 \% \\
& 35.79 \% \\
& 39.06 \% \\
& 18.69 \% \\
& 13.66 \% \\
& 56.90 \% \\
& 42.77 \%
\end{aligned}
\] & \[
\begin{aligned}
& \hline 45.00 \% \\
& 40.29 \% \\
& 45.00 \% \\
& 28.61 \% \\
& 19.05 \% \\
& 74.99 \% \\
& 53.88 \% \\
& \hline
\end{aligned}
\] & \begin{tabular}{l} 
47.77\% \\
\(33.2 \%\) \\
\(31.00 \%\) \\
\(23.99 \%\) \\
\(12.07 \%\) \\
\(85.46 \%\) \\
\(13.08 \%\) \\
\hline
\end{tabular} \\
\hline Hong Kong & ```
Corporates
    Corporates - Of Which: Specialised Lending
    Corporates - Of Which: SME
Retail
    Retail - Secured on real estate property
    Retail - Qualifying Revolving
    Retail - Other Retail
``` & 4
5
5 & \[
\begin{gathered}
\hline 0.60 \% \\
0.02 \% \\
0.06 \%
\end{gathered}
\] & \[
\begin{aligned}
& \hline 0.92 \% \\
& 0.07 \% \\
& 0.07 \%
\end{aligned}
\] & \[
\begin{aligned}
& \hline 1.34 \% \\
& 0.51 \% \\
& 0.31 \%
\end{aligned}
\] & \[
\begin{aligned}
& \hline 0.49 \% \\
& 0.05 \% \\
& 0.06 \%
\end{aligned}
\] & 5 & 15.01\% & 16.48\% & 18.74\% & 1.19\% & \[
\begin{aligned}
& 44 \\
& 14 \\
& 20 \\
& 50 \\
& 43 \\
& 16 \\
& 46
\end{aligned}
\] & \[
\begin{aligned}
& \hline 0.19 \% \\
& 0.21 \% \\
& 0.62 \% \\
& 0.27 \% \\
& 0.17 \% \\
& 0.16 \% \\
& 0.29 \%
\end{aligned}
\] & \[
\begin{aligned}
& \hline 0.70 \% \\
& 1.01 \% \\
& 0.86 \% \\
& 0.51 \% \\
& 0.39 \% \\
& 0.61 \% \\
& 0.73 \%
\end{aligned}
\] & \begin{tabular}{l|}
\(1.93 \%\) \\
\(3.84 \%\) \\
\(4.29 \%\) \\
\(1.21 \%\) \\
\(0.96 \%\) \\
\(1.68 \%\) \\
\(1.89 \%\)
\end{tabular} & \[
\begin{aligned}
& 1.26 \% \\
& 2.77 \% \\
& 2.56 \% \\
& 0.65 \% \\
& 0.42 \% \\
& 0.98 \% \\
& 1.24 \%
\end{aligned}
\] & 44
15
21
49
43
15
44
44 & \[
\begin{aligned}
& \hline \mathbf{2 8 . 1 3 \%} \\
& 15.32 \% \\
& 31.28 \% \\
& \mathbf{1 2 . 5 5 \%} \\
& 10.00 \% \\
& 43.52 \% \\
& 20.99 \% \\
& \hline
\end{aligned}
\] & \[
\begin{aligned}
& \hline \mathbf{3 7 . 6 4 \%} \\
& 25.99 \% \\
& 45.00 \% \\
& \mathbf{1 8 . 1 5 \%} \\
& 13.79 \% \\
& 56.90 \% \\
& 41.50 \%
\end{aligned}
\] & \[
\begin{aligned}
& \hline 45.00 \% \\
& 40.02 \% \\
& 47.34 \% \\
& 33.32 \% \\
& 20.57 \% \\
& 75.71 \% \\
& 55.25 \%
\end{aligned}
\] & \[
\begin{aligned}
& \hline 36.36 \% \\
& 27.34 \% \\
& 31.66 \% \\
& 36.69 \% \\
& 10.14 \% \\
& 89.94 \% \\
& 39.37 \%
\end{aligned}
\] \\
\hline India & ```
Corporates
    Corporates - Of Which: Specialised Lending
    Corporates - Of Which: SME
Retail
    Retail - Secured on real estate property
    Retail - Qualifying Revolving
    Retail - Other Retail
``` & 15
4
6
9 & \[
\begin{aligned}
& \hline 0.04 \% \\
& \\
& \\
& 0.09 \% \\
& 1.36 \% \\
& 0.30 \% \\
& 1.06 \%
\end{aligned}
\] & \[
\begin{aligned}
& 1.01 \% \\
& \\
& 1.73 \% \\
& 6.74 \% \\
& 4.42 \% \\
& 4.38 \%
\end{aligned}
\] & \[
\begin{array}{r|}
\hline \mathbf{2 . 2 6 \%} \\
\\
\\
9.76 \% \\
11.30 \% \\
7.83 \% \\
8.64 \%
\end{array}
\] & \[
\begin{aligned}
& \hline 1.30 \% \\
& \\
& 0.92 \% \\
& 0.50 \% \\
& 0.07 \% \\
& 4.35 \%
\end{aligned}
\] & 10
5
7 & \[
\begin{gathered}
8.73 \% \\
\\
19.22 \% \\
24.23 \%
\end{gathered}
\] & \[
\begin{aligned}
& \mathbf{2 8 . 1 6 \%} \\
& \\
& 19.24 \% \\
& 33.04 \%
\end{aligned}
\] & \[
\begin{aligned}
& 52.42 \% \\
& 52.42 \% \\
& 52.25 \%
\end{aligned}
\] &  & 31
11
12
54
39
24
43 & \[
\begin{aligned}
& \hline 0.71 \% \\
& 1.00 \% \\
& 0.57 \% \\
& 0.44 \% \\
& 0.20 \% \\
& 0.40 \% \\
& 0.65 \% \\
& \hline
\end{aligned}
\] & \[
\begin{aligned}
& 1.26 \% \\
& 1.32 \% \\
& 3.29 \% \\
& 0.95 \% \\
& 0.66 \% \\
& 1.21 \% \\
& 1.27 \%
\end{aligned}
\] & \[
\begin{aligned}
& \text { 5.60\% } \\
& 2.90 \% \\
& 8.78 \% \\
& 2.39 \% \\
& 0.96 \% \\
& 2.53 \% \\
& 3.85 \%
\end{aligned}
\] & \[
\begin{array}{r|}
\hline 3.26 \% \\
7.94 \% \\
6.38 \% \\
4.21 \% \\
0.68 \% \\
11.71 \% \\
5.00 \%
\end{array}
\] & 34
11
11
55
39
24
44 & \[
\begin{aligned}
& \hline 31.10 \% \\
& 19.44 \% \\
& 30.65 \% \\
& 15.37 \% \\
& 11.97 \% \\
& 42.00 \% \\
& 20.14 \%
\end{aligned}
\] & \[
\begin{aligned}
& \hline 39.95 \% \\
& 29.49 \% \\
& 45.00 \% \\
& 20.92 \% \\
& 15.69 \% \\
& 56.98 \% \\
& 40.58 \%
\end{aligned}
\] & \[
\begin{aligned}
& \hline 45.00 \% \\
& 40.00 \% \\
& 57.00 \% \\
& 42.71 \% \\
& 21.60 \% \\
& 73.20 \% \\
& 54.18 \% \\
& \hline
\end{aligned}
\] & 47.48\%
28.33\%
\(42.86 \%\)
\(41.95 \%\)
\(24.63 \%\)
\(79.2 \%\)
\(55.57 \%\) \\
\hline Korea, Republic Of & ```
Corporates
    Corporates - Of Which: Specialised Lending
    Corporates - Of Which: SME
Retail
    Retail - Secured on real estate property
    Retail - Qualifying Revolving
    Retail - Other Retail
``` & 7
4 & 0.02\%

\(0.28 \%\) & 0.55\%

2.24\% & \begin{tabular}{l}
1.78\% \\
28.25\%
\end{tabular} & \[
\begin{gathered}
0.04 \% \\
0.55 \%
\end{gathered}
\] & 4 & 19.39\%

\(23.84 \%\) & 41.15\%
\(41.53 \%\) & \(74.11 \%\)
\(75.65 \%\) & \(31.95 \%\)

\(36.06 \%\) & 34
4
44
29
21
36 & \begin{tabular}{l}
0.05\% \\
0.23\% \\
0.22\% \\
0.16\% \\
\(0.30 \%\)
\(0.21 \%\)
\end{tabular} & \[
\begin{aligned}
& 0.22 \% \\
& 1.81 \% \\
& 0.46 \% \\
& 0.28 \% \\
& 0.69 \% \\
& 0.55 \%
\end{aligned}
\] & \begin{tabular}{l|}
\hline \(\mathbf{1 . 0 9 \%}\) \\
\\
\(7.99 \%\) \\
\(\mathbf{1 . 1 5 \%}\) \\
\(\mathbf{0 . 4 6 \%}\) \\
\(1.48 \%\) \\
\(1.93 \%\)
\end{tabular} & \[
\begin{aligned}
& 0.76 \% \\
& 3.20 \% \\
& 0.63 \% \\
& 0.26 \% \\
& 0.54 \% \\
& 1.49 \%
\end{aligned}
\] & 34
4
4
44
29
20
35
35 & \[
\begin{array}{r|}
\hline \mathbf{2 9 . 0 2 \%} \\
4.75 \% \\
12.49 \% \\
\mathbf{1 7 . 6 0 \%} \\
10.92 \% \\
55.45 \% \\
26.12 \%
\end{array}
\] & \[
\begin{aligned}
& \hline \mathbf{3 5 . 3 2 \%} \\
& 11.34 \% \\
& 32.26 \% \\
& \mathbf{2 6 . 5 0 \%} \\
& 14.51 \% \\
& 63.34 \% \\
& 43.72 \%
\end{aligned}
\] & \[
\begin{aligned}
& \hline 45.00 \% \\
& 27.28 \% \\
& 45.00 \% \\
& 45.04 \% \\
& 19.29 \% \\
& 74.71 \% \\
& 57.67 \% \\
& \hline
\end{aligned}
\] & \[
\begin{array}{r}
\hline \mathbf{3 4 . 1 6 \%} \\
4.46 \% \\
19.62 \% \\
\mathbf{3 2 . 3 8 \%} \\
10.04 \% \\
75.07 \% \\
73.84 \% \\
\hline
\end{array}
\] \\
\hline Russian Federation & ```
Corporates
Corporates - Of Which: Specialised Lending
    Corporates - Of Which: SME
Retail
    Retail - Secured on real estate property
    Retail - Qualifying Revolving
    Retail - Other Retail
``` & \[
\begin{array}{r}
24 \\
13 \\
9 \\
17 \\
\hline
\end{array}
\] & \[
\begin{aligned}
& 0.20 \% \\
& 2.05 \% \\
& 0.68 \% \\
& 0.07 \%
\end{aligned}
\] & \[
\begin{aligned}
& 2.13 \% \\
& 2.94 \% \\
& 0.91 \% \\
& 0.42 \%
\end{aligned}
\] & \[
\begin{array}{r}
4.20 \% \\
5.42 \% \\
18.63 \% \\
3.51 \%
\end{array}
\] & \[
\begin{aligned}
& 5.88 \% \\
& 2.86 \% \\
& 1.48 \% \\
& 1.41 \%
\end{aligned}
\] & \[
\begin{array}{r}
20 \\
10 \\
6 \\
15 \\
\hline
\end{array}
\] & \[
\begin{array}{r}
7.87 \% \\
3.90 \% \\
25.71 \% \\
24.94 \%
\end{array}
\] & \[
\begin{array}{r}
24.82 \% \\
6.61 \% \\
53.49 \% \\
41.22 \%
\end{array}
\] & \[
\begin{aligned}
& 32.76 \% \\
& 11.58 \% \\
& 60.89 \% \\
& 60.47 \%
\end{aligned}
\] & \[
\begin{array}{r}
17.78 \% \\
7.16 \% \\
48.14 \% \\
41.10 \%
\end{array}
\] & 50
12
15
52
50
22
50 & \[
\begin{aligned}
& \hline 0.54 \% \\
& 0.57 \% \\
& 1.83 \% \\
& 0.69 \% \\
& 0.44 \% \\
& 0.49 \% \\
& 0.74 \%
\end{aligned}
\] & \[
\begin{aligned}
& \hline 1.09 \% \\
& 0.92 \% \\
& 2.96 \% \\
& 1.58 \% \\
& 1.39 \% \\
& 1.82 \% \\
& 1.78 \% \\
& \hline
\end{aligned}
\] & \(\mathbf{2 . 2 9 \%}\)
\(2.18 \%\)
\(5.63 \%\)
\(2.44 \%\)
\(2.21 \%\)
\(5.52 \%\)
\(3.32 \%\) & \[
\begin{aligned}
& 1.16 \% \\
& 1.82 \% \\
& 2.611 \% \\
& 1.75 \% \\
& 1.79 \% \\
& 1.111 \% \\
& 1.18 \%
\end{aligned}
\] & \begin{tabular}{l}
49 \\
12 \\
17 \\
55 \\
51 \\
23 \\
49 \\
\hline
\end{tabular} & \[
\begin{array}{r}
\hline 32.36 \% \\
14.69 \% \\
3.69 \% \\
15.41 \% \\
12.42 \% \\
48.81 \% \\
26.28 \% \\
\hline
\end{array}
\] & \[
\begin{aligned}
& \hline 44.31 \% \\
& 23.78 \% \\
& 27.71 \% \\
& 20.71 \% \\
& 15.39 \% \\
& 60.84 \% \\
& 46.36 \%
\end{aligned}
\] & 45.00\%
\(32.86 \%\)
\(42.82 \%\)
\(29.31 \%\)
\(22.03 \%\)
\(76.61 \%\)
\(55.93 \%\) & \[
\begin{aligned}
& \hline 39.87 \% \\
& 22.96 \% \\
& 34.58 \% \\
& 29.44 \% \\
& 27.93 \% \\
& 63.35 \% \\
& 34.10 \% \\
& \hline
\end{aligned}
\] \\
\hline
\end{tabular}


The aim of this disclosure is to increase transparency regarding credit risk parameters of EU banks based on supervisory reporting data that the EBA collects on a quarterly basis.
Given the differences in the definition and computation of the risk parameters outlined below, a comparison between PD and DR or between LGD and LR is not straightforward and any conclusions should be interpreted with caution.

\section*{- Scope (COREP 9.02)}

\section*{- IRB banks}
- PDs (adjusted), LGDs, Default rates (DR), Loss rates (LR)
- Asset classes: Corporate, Retail (breakdown)
- By country of the counterparty (EU and main non eu countries)
- Frequency: Quarterly (starting from Q1 2015)*
- Stats: n obs, \(25^{\text {th }}, 50^{\text {th }}, 75^{\text {th }}\) and Weighted Average (by non defaulted exposure for PDs and LGDs).
*DR and LR from 2015 Q1 to 2015 Q3 are not provided as they are computed as the sum of the last 4 quarters (see below).

\section*{- PD_Adjusted (on non defaulted)}

PDs reported in COREP (C9.02) - Geographical breakdown of exposures by residence of the obligor (IRB exposures) - are computed as a weighted average of Defaulted and no Defaulted exposures and are expressed on a yearly basis.

PD_Corep= "PD ASSIGNED TO THE OBLIGOR GRADE OR POOL (\%)" (c. 080)
\[
P D_{\text {Corep }}=\frac{P D_{\text {non_default } * \text { Exposure }_{\text {non_default }}+P D_{\text {default }} * \text { Exposure }_{\text {default }}}^{\text {Exposure }_{\text {Total }}} \text {. }}{\text { 保 }}
\]
where \(P D_{\text {default }}=1\);

We can derive the PD on non defaulted (that we call PD_Adjusted) as follows:
\[
P D_{-} \text {Adjusted }=P D_{\text {non_default }}=\frac{\text { Exposure }_{\text {Total }} * P D_{\text {Corep }- \text { Exposure }_{\text {default }}}^{\text {Exposure }_{\text {non_default }}}=\frac{\text { column } 010 * \text { column } 080-\text { column } 030}{\text { column } 010-\text { column } 030}}{\text { colut }}
\]

For the PD_Adjusted the weighted average shown in the tables with the other statistics is computed using the No-defaulted exposure.

\section*{- LGD}

We don't apply any transformation to the LGDs shown in the tables as they are computed on no-Defaulted exposure.
LGD: "EXPOSURE WEIGHTED AVERAGE LGD (\%)" (c. 090)

\section*{- Default rate}

The default rate is not provided in COREP so it is computed as follows:
\[
\mathrm{DR}=\frac{\text { Observed new defaults for the period }}{\text { Original exposure }- \text { Defaulted exposure }}=\frac{\text { column } 040}{\text { column } 010-\text { column } 030}
\]

Where the Observed new defaulted of the periods are the ones at the end of the period And the Defaulted exposures are the ones at the beginning of the period.

The Default rate is computed on a yearly basis, that is, we consider the sum of the last four quarters for the numerator (flows) and the average of the last four quarters for the denominator (stocks). For instance the Default rate for 2016 Q3 will be :
\[
=\frac{\sum_{i=0}^{3} \text { Obser.new defaults }_{Q-i}}{\sum_{i=0}^{\sum_{0}^{3} \text { No deafulted exposure } Q-i}}
\]

Where No defaulted exp = (Original exposure - Defaulted exposure)
and \(\quad(Q-i)=\) Quarter expressed as a lag of the actual one.

\section*{- Loss rate}

Loss rate is not provided in COREP so it is computed as follows:
\[
\mathrm{LR}=\frac{\text { Credit risk adjustments (write-offs for observed new defaults) }}{\text { Observed new defaults for the period }}=\frac{\text { column } 070}{\text { column } 040}
\]

To express it on yearly basis we apply:
\[
=\frac{\sum_{i=0}^{3} \text { "Credit risk adjustments }{ }_{Q-i}}{\sum_{i=0}^{3} \text { Obser.new defaults }{ }_{Q-i}}
\]

Where the Observed new defaulted of the periods are the ones at the end of the period.
and \(\quad(Q-i)=\) Quarter expressed as a lag of the actual one.```

