

Table 2 – IRB Risk-Based Capital Formulas for Wholesale Exposures to Non-Defaulted Obligor and Segments of Non-Defaulted Retail Exposures¹

Retail	Capital Requirement (K) Non-Defaulted Exposures	$K = \left[LGD \times N \left(\frac{N^{-1}(PD) + \sqrt{R} \times N^{-1}(0.999)}{\sqrt{1-R}} \right) - (LGD \times PD) \right]$
	Correlation Factor (R)	For residential mortgage exposures: $R = 0.15$
		For qualifying revolving exposures: $R = 0.04$
For other retail exposures: $R = 0.03 + 0.13 \times e^{-35 \times PD}$		
Wholesale	Capital Requirement (K) Non-Defaulted Exposures	$K = \left[LGD \times N \left(\frac{N^{-1}(PD) + \sqrt{R} \times N^{-1}(0.999)}{\sqrt{1-R}} \right) - (LGD \times PD) \right] \times \left(\frac{1 + (M - 2.5) \times b}{1 - 1.5 \times b} \right)$
	Correlation Factor (R)	For HVCRE exposures: $R = 0.12 + 0.18 \times e^{-50 \times PD}$
		For wholesale exposures other than HVCRE exposures: $R = 0.12 + 0.12 \times e^{-50 \times PD}$
Maturity Adjustment (b)	$b = (0.11852 - 0.05478 \times \ln(PD))^2$	

¹ $N(\cdot)$ means the cumulative distribution function for a standard normal random variable. $N^{-1}(\cdot)$ means the inverse cumulative distribution function for a standard normal random variable. The symbol e refers to the base of the natural logarithms, and the function $\ln(\cdot)$ refers to the natural logarithm of the expression within parentheses. The formulas apply when PD is greater than zero. If PD equals zero, the capital requirement K is set equal to zero.