Risk Weighted Assets Value calculation

Probability of Default (PD)	Quality of the counterparty and country risk. Number of defaults during last 12 month / Number of counterparties 12 months ago
Loss Given Default (LGD)	Defined by credit risk mitigation techniques. May include recovery costs, discount effects of time lag between default and recovery, efficiency of recovery process, funding costs for defaulted exposure affected by legal environment, presence of Risk Mitigants, cost structure of the bank.
Exposure Amount	On-balance sheet items, at least the current outstanding amount, no average exposure for amortising loans. Off-balance sheet items, EAD for revolving loans must include portion of undrawnamount, EAD for other items must consider future changes in market price. For Traded products cf Current Exposure Method or Internal Model Method. For Loans the Total outstanding amount or CCF times undrawn committed amount.
Exposure at Default (EAD)	Exposure Amount × UGD
Usage Given Default (UGD)	Exposure Amount conversion factor
Credit Conversion Factor (CCF)	
Expected Loss (EL)	PD × LGD (Regular exposure) PD × Best Estimate (Defaulted exposure)
Expected Loss Amount (ELA)	EL × EAD

§147, §291

Effective LGD (LGD*)
$$LGD \times \frac{EAD - (Cash\,deposit + Financial\,Collateral\,relief)}{EAD}$$

Asset Correlation
$$R = 0,24 - 0,12 \times \frac{1 - e^{-50 \times PD}}{1 - e^{-50}} - 0,04 \times \left(1 - \frac{S-5}{45}\right)$$

§273

SME Firm-size adjustment (Consolidated annual turn-over or total assets)
$$5 \leqslant S \leqslant 50\,M\,EUR$$

§272

Capital requirement
$$K = LGD \times N\left(\frac{G(PD) + \sqrt{R} \times G(0,999)}{\sqrt{1-R}}\right) \times \frac{1 + (M - 2,5) \times b}{1 - 1,5 \times b}$$

Slope
$$b = (0,08451 - 0,05898 \times \ln(PD))^2$$

Effective Maturity
$$M = \frac{\sum_{t=1}^{n} t \times CF_t}{\sum_{t=0}^{n} CF_t}$$

§44, §272

Risk Weighted Assets value
$$RWA = K \times 12,5 \times EAD \times 1,06$$

Paragraph numbers refer to BIS Basel II Part 2 (http://www.bis.org/publ/bcbs107b.pdf)
N(x) is the Cumulative Distributed Standard Normal function
G(x) is the Inverse Cumulative Standard Normal Distribution function