



# CREDIT RISK ANALYSIS

Regaip KURT

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**BASEL REGULATORIES**



**RISK ANALYSIS**



**TOOLS AND  
IMPLEMENTATION**

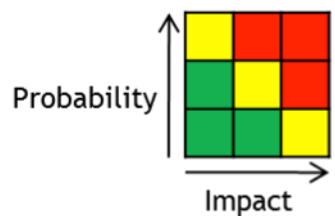


# BASEL REGULATORIES

- BIS (Bank for International Settlements)
- Basel is a list of comprehensive reforms whose goal is to strengthen the regulation, supervision and risk management of the banking sector.
- Basel I – 1989, Basel II – 2004, Basel III – 2010

## GOALS

- Capital Adequacy
- Reserve Transparency
- Monetary and Financial Stability



# RISK ANALYSIS

## What is Probability and Impact ?

- Probability – Probability of Default
- Impact – Capital Loss

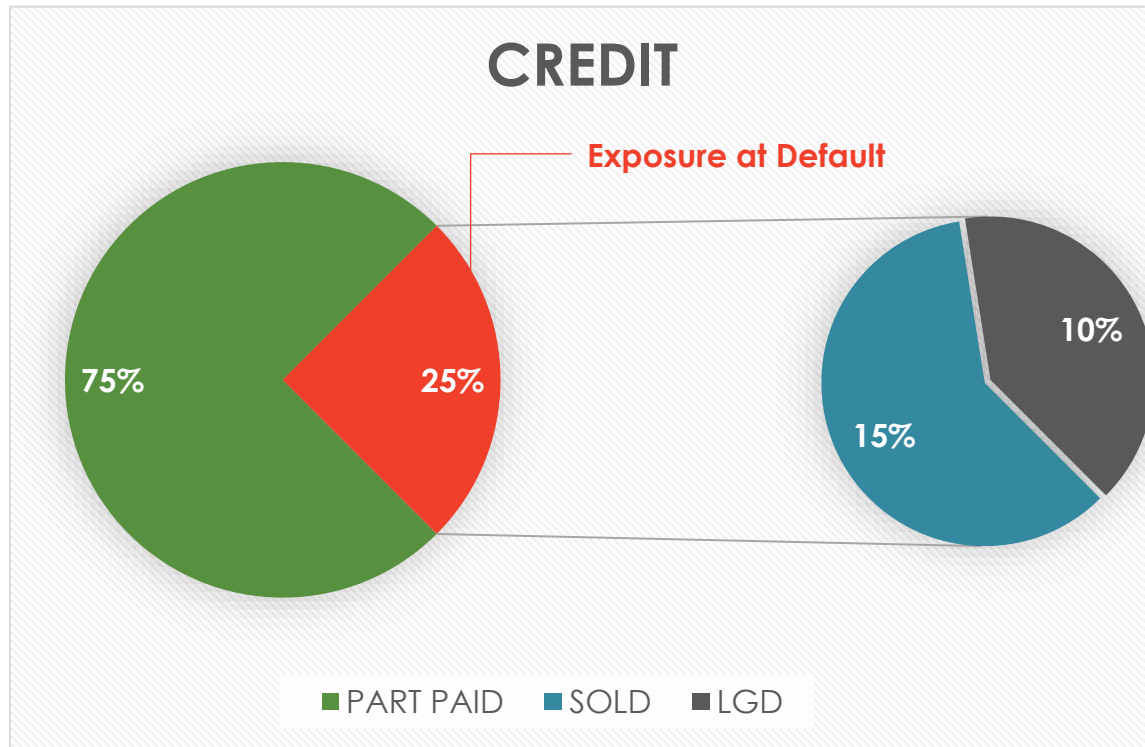
RISK	IMPACTS	PROBABILITIES
LOSS (Expexted Loss)	EXPOSURE AT DEFAULT x LOSS GIVEN DEFAULT	PROBABILITY OF DEFAULT

$$\text{Expected Loss} = \text{PD} \times \text{EAD} \times \text{LGD}$$

EAD = Exposure at Default

LGD = Loss Given Default

PD = Probability of Default



**Exposure at Default: Not paid part when borrower defaults. (quantity)**

**Loss Given Default: Unsold part of EAD. (ratio, proportion)**





# Basel Approaches

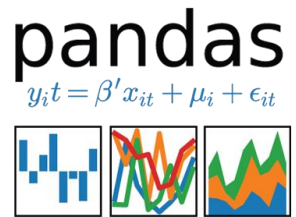
**Standardized Approach:** The banks are required to use ratings from External Credit Rating Agencies to quantify required capital for credit risk.

**F-IRB:** Banks calculate their own PD parameter while the other risk parameters are provided by the bank's national supervisor.

**A-IRB:** An advanced internal rating-based (AIRB) approach to credit risk measurement is a method that requests that all risk components be calculated internally within a financial institution.

	PD	EAD	LGD
SA	×	×	×
F-IRB	✓	×	×
A-IRB	✓	✓	✓

# TOOLS AND IMPLEMENTATION



[Click for Github Repository](#)